NIDIS Weekly Climate, Water and Drought Assessment Summary
Upper Colorado River Basin Pilot Project
13 July 2010

Precipitation and Snowpack

Over the past week, precipitation in the Upper Colorado River Basin (UCRB) was mainly localized to NE Utah and SW Wyoming where precipitation amounts on the order of 0.26 – 1.00 inches fell. Similar amounts of precipitation fell over the headwaters of the UCRB in Grand and Summit counties. The Eastern Plains of Colorado also received ample precipitation over the past week which should decrease irrigation water demand from the Western Slope. Areas of SW Colorado where D0 is present also saw some precipitation over the past week, mainly in Mineral, Archuleta, Rio Grande and Conejos counties. These counties saw precipitation amounts ranging from 0.01 – 2.00".

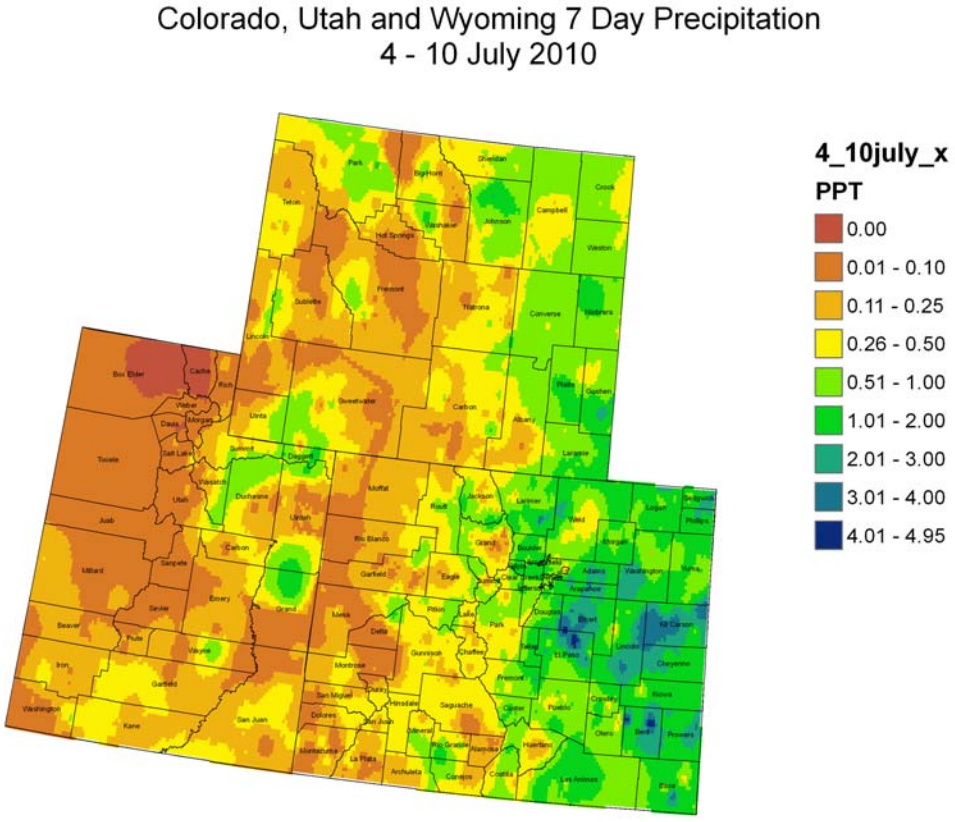

Figure 1: July 4 -10 precipitation in inches.

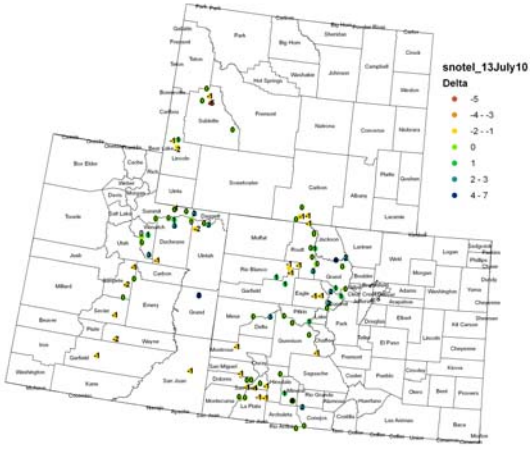

Figure 2: UCRB Snotel Water Year to Date Precipitation Percent of Average Weekly Change

Figure 2 illustrates the weekly change in water year to date (WYTD) precipitation percentage of average. As discussed above, the areas receiving the most precipitation (NE Utah, UCRB headwaters) over the past week saw increases on the order of 2-3% in the WYTD precipitation percent of average. Areas of SW Colorado in D0 drought also saw slight improvements in the counties listed above.

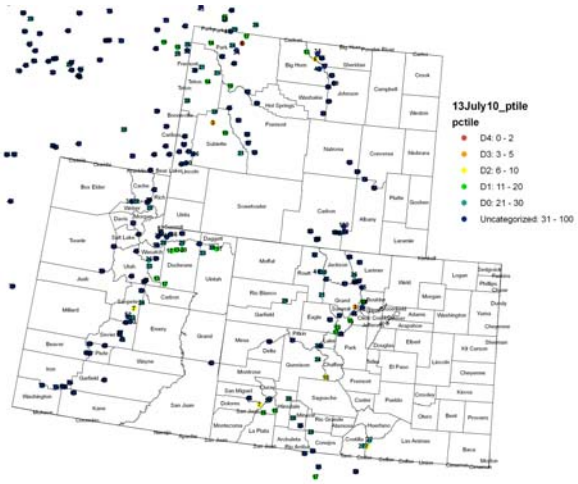

Figure 3: UCRB Water Year to Date Precipitation Percentile Ranking.

Figure 3 shows the WYTD precipitation percentile ranking from Snotel stations with percentiles defined by Dx category. This graphic illustrates that WYTD percentiles in Northern Uintah and Duchesne are D0 worthy, as well as portions of Southern Summit county in Colorado. Areas in the San Juans where D0 is already present are still in agreement with the Drought Monitor depiction.

Streamflow

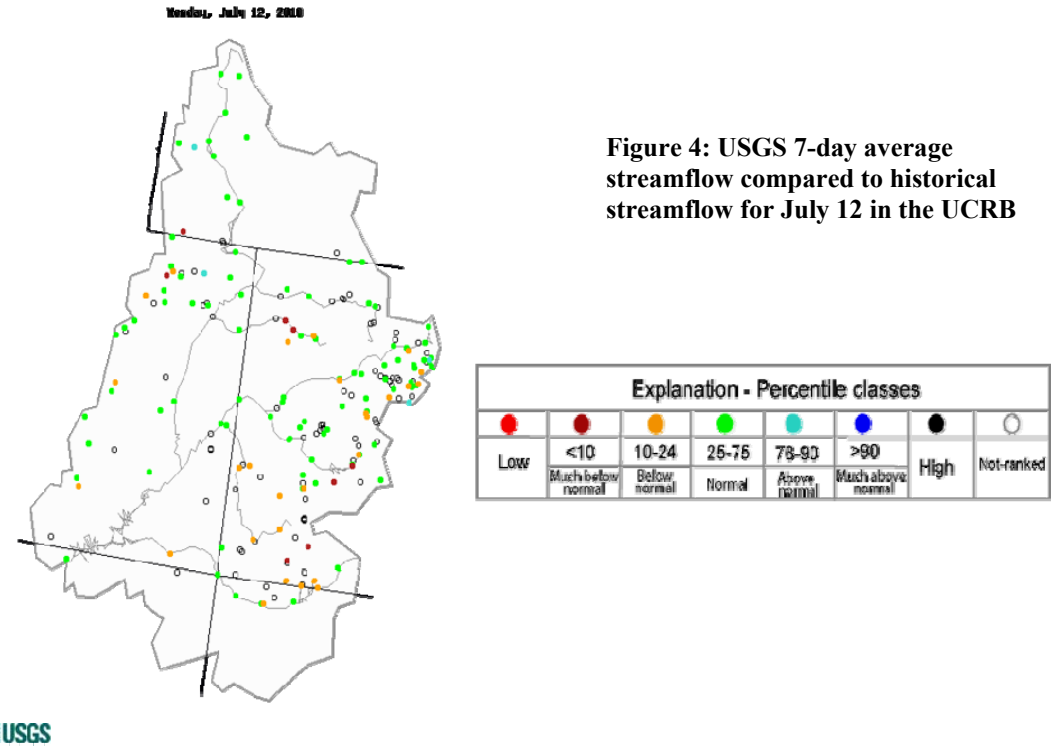

Figure 4: USGS 7-day average streamflow compared to historical streamflow for July 12 in the UCRB

Figure 4 shows most gages in the basin reporting normal conditions. Areas showing below normal 7-day average streamflow include: the upper Gunnison, White River, San Miguel/Dolores Rivers and the Animas River.

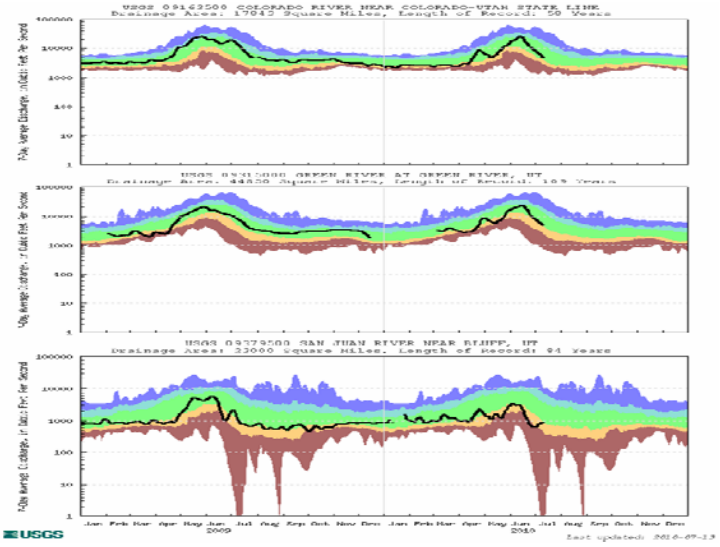

Figure 5: USGS 7-day average discharge over time for the Colorado River at the CO-UT state line (top), Green River at Green River, UT (middle), and the San Juan river near Bluff, UT (bottom).

Figure 5 illustrates that rivers are now returning to baseflow conditions following the snowmelt season. The three rivers shown here are all reporting on the low end of normal conditions/high end of below normal conditions. The San Juan River did have an increase in streamflow over the past week.

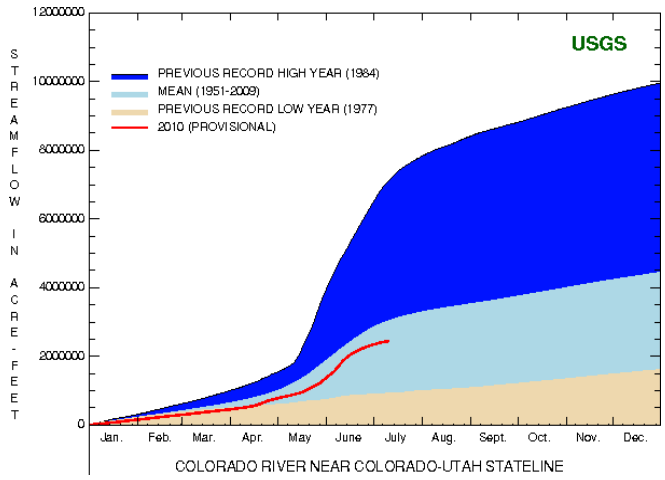

Figure 6: 2010 calendar year accumulated runoff on the Colorado River at the CO-UT state line.

Using the CO-UT state line as an indicator site, Figure 6 shows that after a slow start to the 2010 calendar year accumulated runoff that this gage is now reporting on the upper end of normal conditions. As of July 11th, 27% of the gages in the UCRB were reporting below normal conditions which is most similar to 2006 for this date.

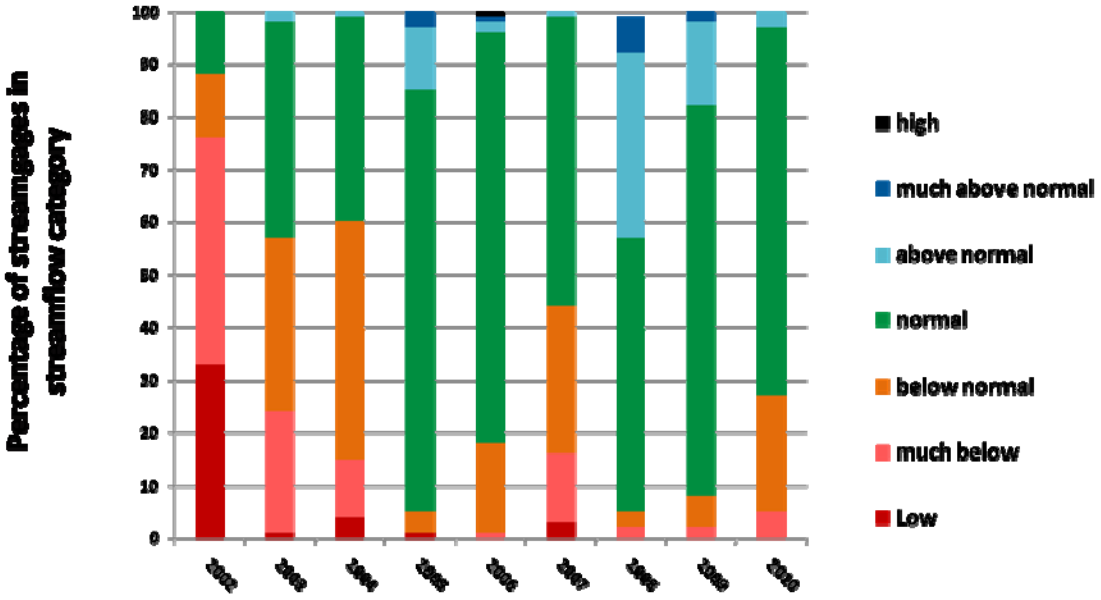

Figure 7: Percentage of stream gages in streamflow categories for the past 9 years on July 11th.

Precipitation Forecast

Weather pattern for the next week will be controlled by a large area of high pressure extending across much of the southern U.S. A limited amount of moisture moving over western Colorado on Tuesday will spark off widely scattered showers in the high terrain, while a weak frontal boundary will push into the eastern plains on Wednesday and slightly increase the chance of precipitation on the eastern slopes of the Front Range. As usual, precipitation coverage from these storms will be isolated in nature, with the southern mountains having the best chance of seeing any measurable rainfall. Sub-tropical high pressure strengthens and expands westward on Thursday. This strong area of subsidence will deflect moisture away from Colorado and limit any convective precipitation to isolated storms until late into the weekend. As the big high shifts eastward into the southern plains early next week, sub-tropical moisture will begin to make its way back into Colorado. Medium range forecast models currently indicate that this pattern could persist into next week and bring a return of the monsoon back to the area.

Drought and Water Discussion

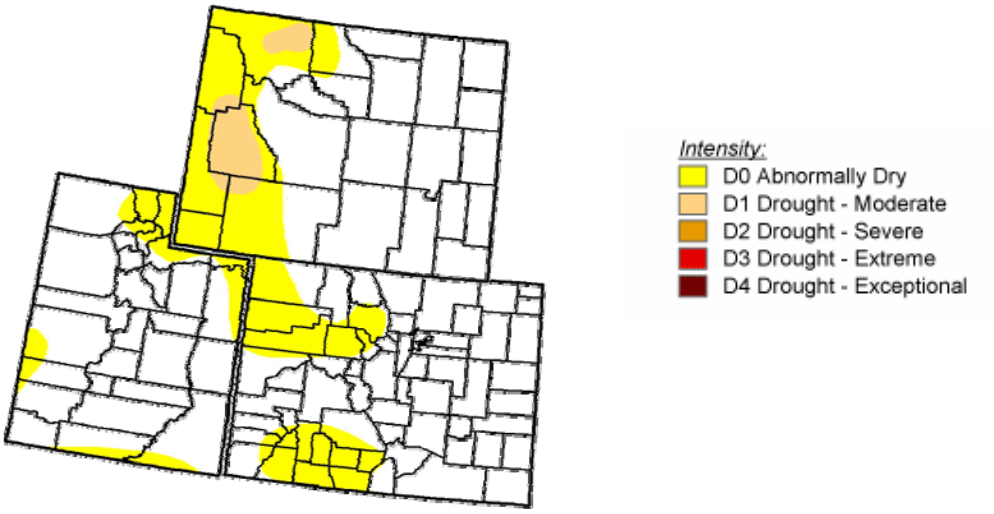

Figure 8: July 6 release of the U.S. Drought Monitor

For this week, no changes for the UCRB region have been targeted by the Drought Monitor author. Current conditions support the depiction of the Drought Monitor and status quo will be recommended for the region this week. With the precipitation forecast favoring the Southern mountains for this upcoming week, close attention will be placed on the D0 area of SW Colorado for next week.