COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
ROOM 818, 1313 SHERMAN ST., DENVER, CO 80203
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August 2010

The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on stream flow, reservoir storage, and precipitation for the summer period of May through October (June 1 through November 1). During the summer period, stream flow is the primary component in all basins except the South Platte basin where reservoir storage is given the most weight.

The statewide SWSI values for July (August 1) range from a high value of +2.6 in the South Platte Basin to a low value of -2.6 in the Rio Grande Basin. All seven of the basins (South Platte, Arkansas, Rio Grande, Gunnison, Colorado, Yampa/White and San Juan/Dolores) experienced a loss from the previous month's value.

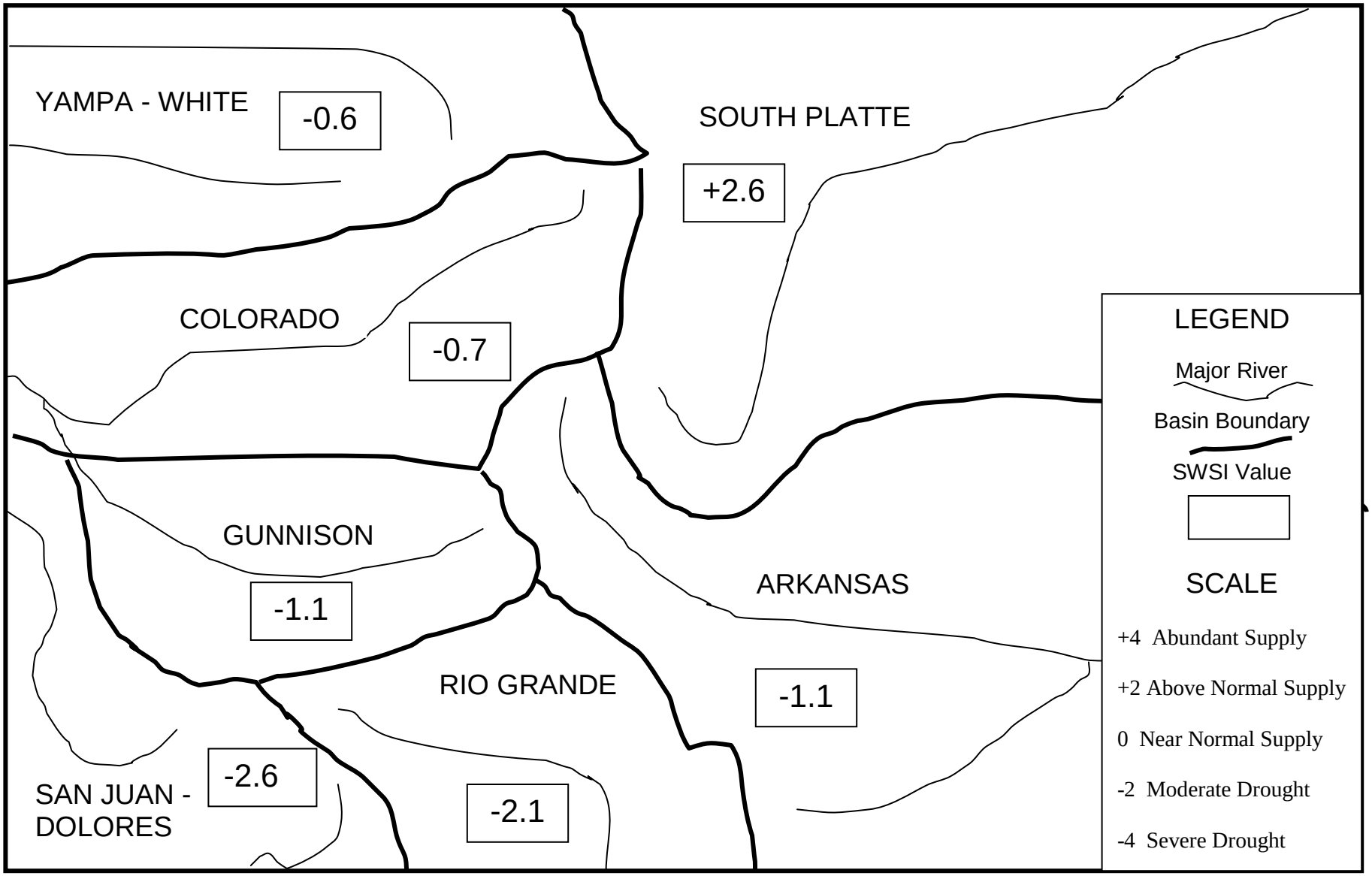
The following SWSI values were computed for each of the seven major basins for August 1, 2010, and reflect the conditions during the month of July.

Basin	August 1, 2010 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+2.6	- 0.9	- 0.4
Arkansas	- 1.1	- 2.8	- 1.9
Rio Grande	- 2.1	- 0.6	- 1.2
Gunnison	- 1.1	- 1.6	- 1.5
Colorado	- 0.7	- 2.5	- 2.4
Yampa/White	- 0.6	- 0.9	- 1.5
San Juan/Dolores	- 2.6	- 1.6	- 1.4

Scale

-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

SURFACE WATER SUPPLY INDEX FOR COLORADO



August 1, 2010

Basinwide Conditions Assessment

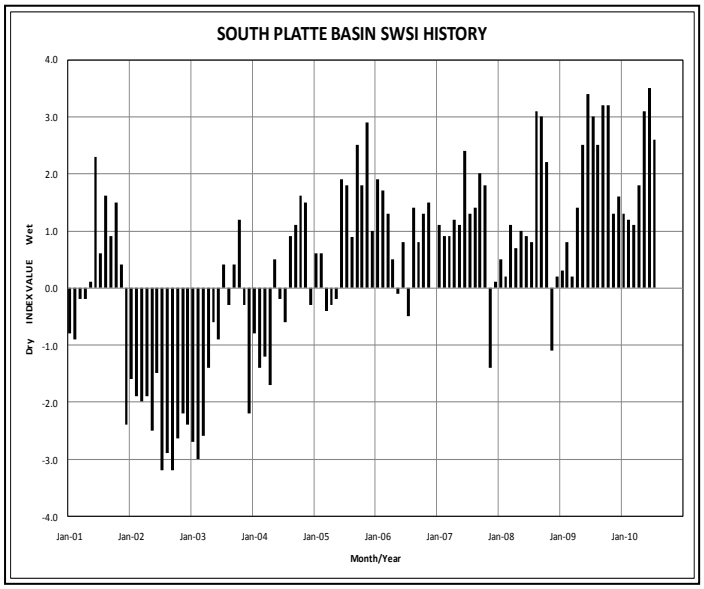
The SWSI value for the month was +2.6. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 108% of normal as of the end of July. Cumulative storage in the major plains reservoirs (Julesburg, North Sterling, and Prewitt) is at 73% of capacity. Cumulative storage in the major upper-basin reservoirs (Cheesman, Eleven Mile, Spinney, and Antero) is at 100% of capacity. Flow at the gaging station South Platte River near Kersey was 523 cfs, as compared to the long-term average of 664 cfs. Flow at the Colorado/Nebraska state line averaged 336 cfs.

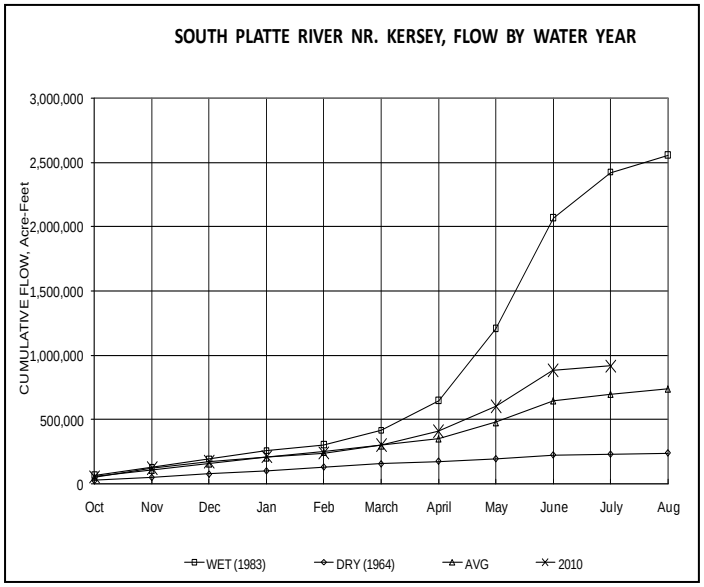
Outlook

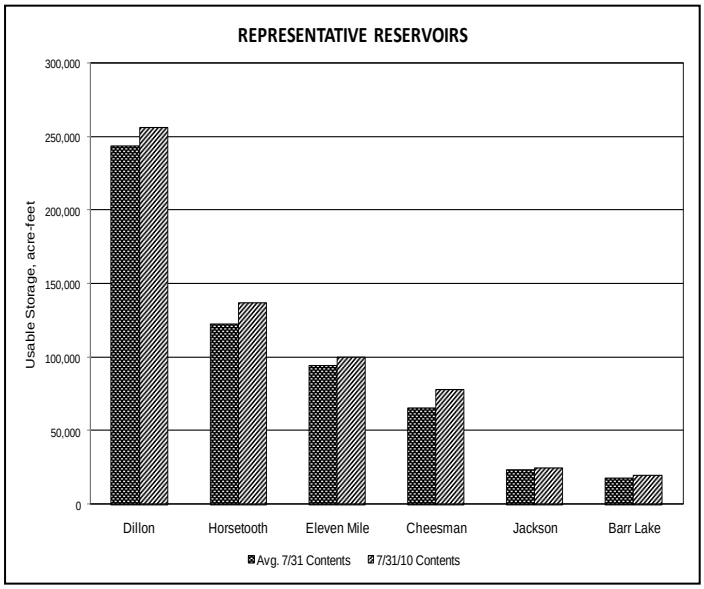
July in the South Platte basin turned out to be basically normal. Precipitation over most of the basin was very near to slightly above normal. The exceptions were the northeast portion of the basin in the Sterling-Julesburg area, which was above normal, and the South Park area, which was below normal. Temperatures over the basin were also near normal, though somewhat cooler temperatures over the Front Range delayed the maturation of some crops, especially corn.

Stream flow conditions tracked fairly well with the precipitation pattern as the mean flow at the Kersey gage was 79% of the historic mean while the mean flow at the Julesburg gage was 114% of the historic mean. Overall storage conditions remained positive, even with significant demand, as the contents of the major reservoirs remained above average.

The calls on the main stem and tributaries of the South Platte continued the normal theme. The calls started July slightly more junior than normal, but were basically normal by the middle of the month. The exception again being the lower end of the basin where above normal precipitation kept the calls a bit more junior than normal.





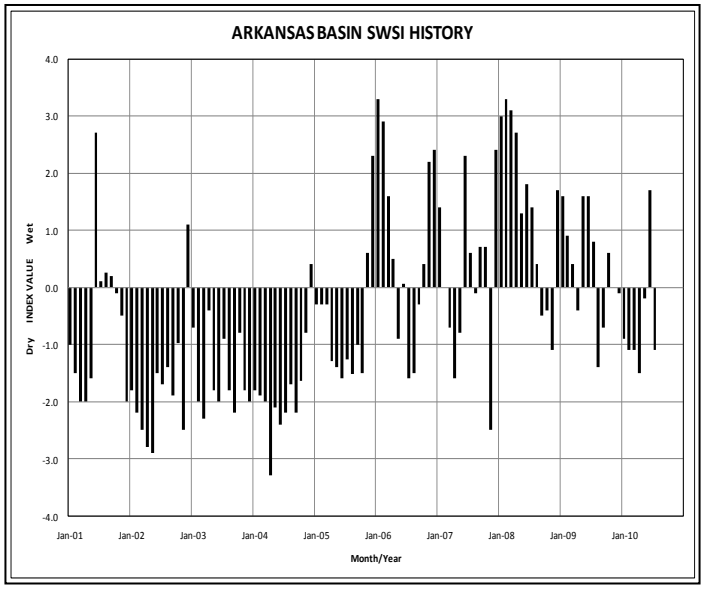


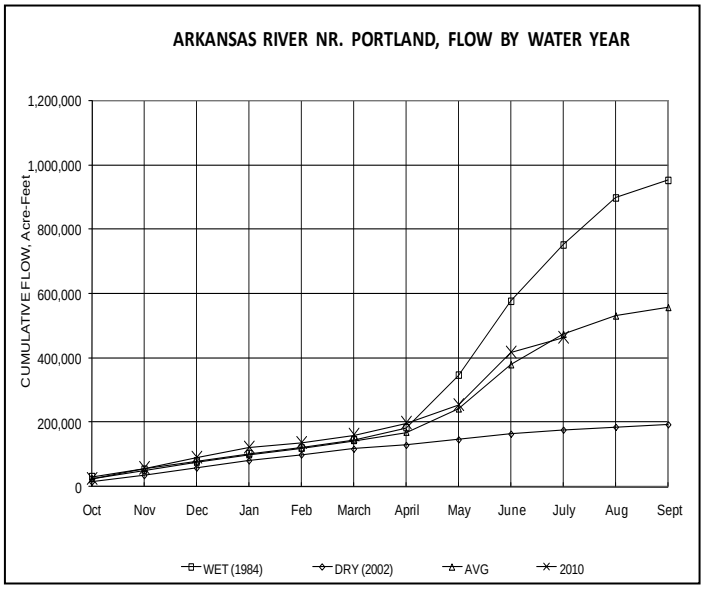
Basinwide Conditions Assessment

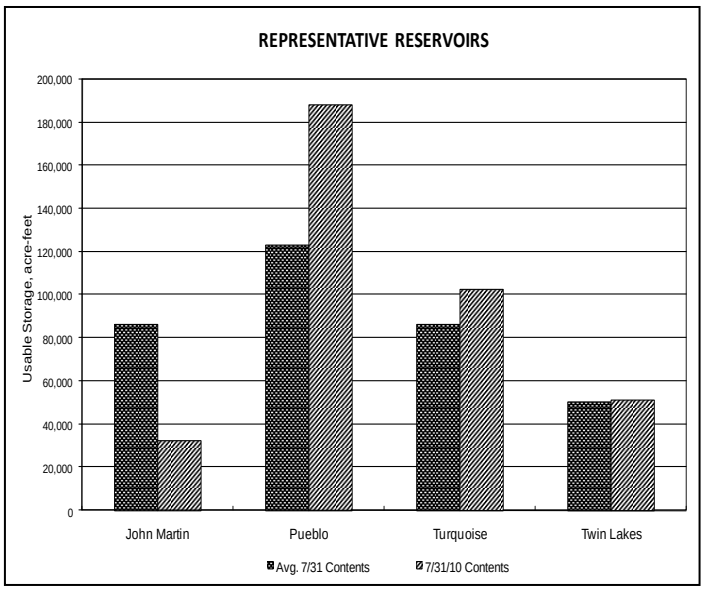
The SWSI value for the month was -1.1. Flow at the gaging station Arkansas River near Portland was 725 cfs, as compared to the long-term average of 1543 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 108% of normal as of the end of July.

Outlook

River calls during July ranged from a senior call of 12/3/1884 Catlin to 5/1/1893 Amity II depending on location above and below John Martin Reservoir and date. This represented the lowest period of river flows since the runoff peak, however, most ditch companies have used little water from storage due to good river conditions in earlier months and the outlook is quite positive to complete the critical growing season in good shape. Hail and severe storms at various locations have not seemed to be overly detrimental to a good crop of vegetables and melons in the valley as well as good production from hay and feed crops.







Basinwide Conditions Assessment

The SWSI value for the month was -2.1. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 117% of normal as of the end of July.

Flow at the gaging station Rio Grande near Del Norte averaged 439 cfs (33% of normal). The Conejos River near Mogote had a mean flow of 300 cfs (63% of normal). Stream flow levels in the basin's rivers and creeks fell off drastically during the latter part of June and throughout July as a result of the high temperatures and wind during May and early June. Most streams in the upper Rio Grande basin flowed only one-third to two-thirds of the normal amount during July.

Precipitation in Alamosa was 1.03 inches, 0.09 inches above normal. Annual precipitation on the floor of the San Luis Valley is only 7.5 inches per year. Year-to-date precipitation is right on track towards the average, although it's been an erratic path with very dry months of May and June and part of July. The average temperature during July was above normal for the fourth consecutive month.

Outlook

National Weather Service forecasts still call for above normal precipitation during August. But the outlook gets bleaker for the autumn and winter as temperatures are expected to be above normal and precipitation below normal.

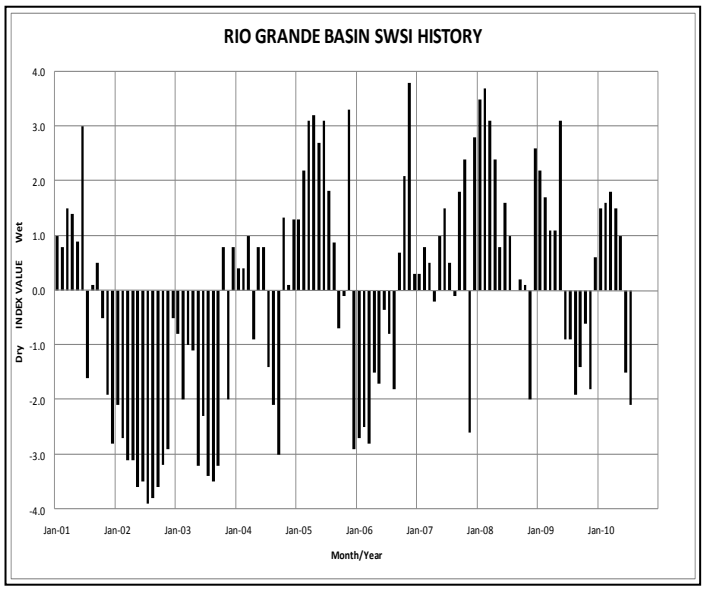
Without consistent rainfall during August and September, junior water right owners in Division 3 should expect senior calls to keep them out of priority for the rest of the irrigation season.

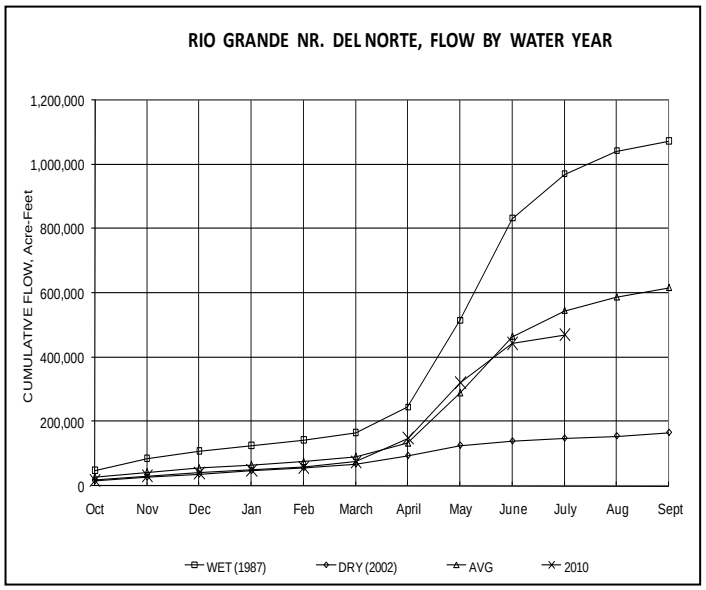
Administrative/Management Concerns

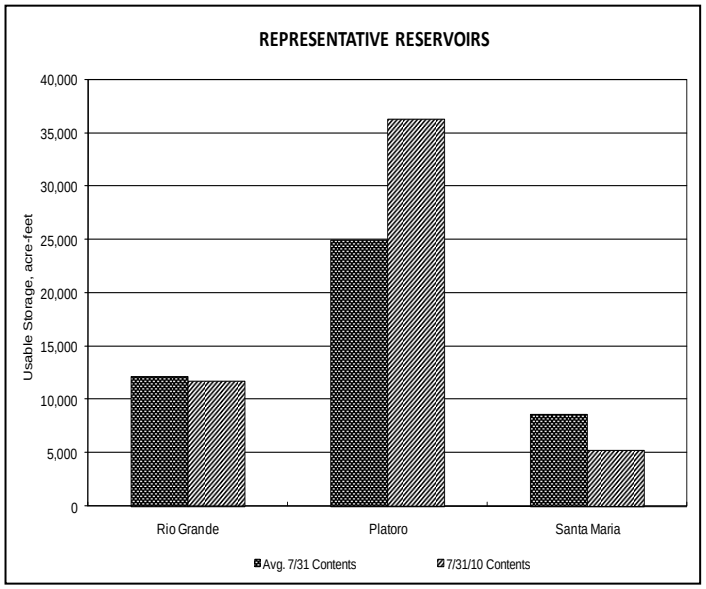
The large decrease in streamflow at the upper index gaging stations on the Rio Grande and Conejos systems enabled water administrators to reduce the amount of water curtailed from diversion to meet Compact delivery requirements during July.

Public Use Impacts

Rainfall around the San Luis Valley has been very erratic this summer. However, a monsoonal pattern moved into the region in early August, bringing much-needed precipitation and a slight increase in streamflow. Irrigators are now relying heavily on well water and reservoir releases.





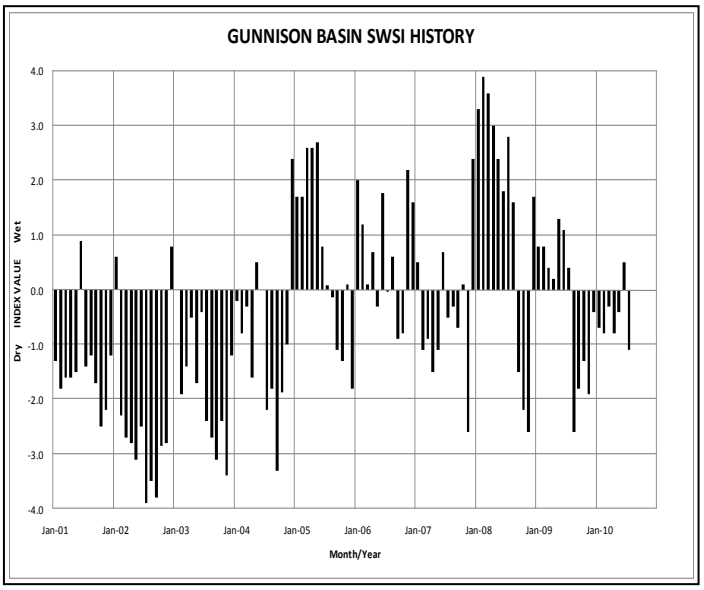


Basinwide Conditions Assessment

The SWSI value for the month was -1.1. Flow at the gaging station Uncompahgre River near Ridgway was 195 cfs, as compared to the long-term average of 319 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 94% of normal as of the end of May.

The first three weeks of July were very dry in the Gunnison and San Miguel basins, which reduced streamflows to levels not seen since 2003 in some locations. As hoped for, however, monsoon rain during the last week of July and continuing into the first two weeks of August have eased the call pressure in many locations and reduced demand from reservoir storage. In fact, some locations experienced flash flooding during early August that damaged some diversions.

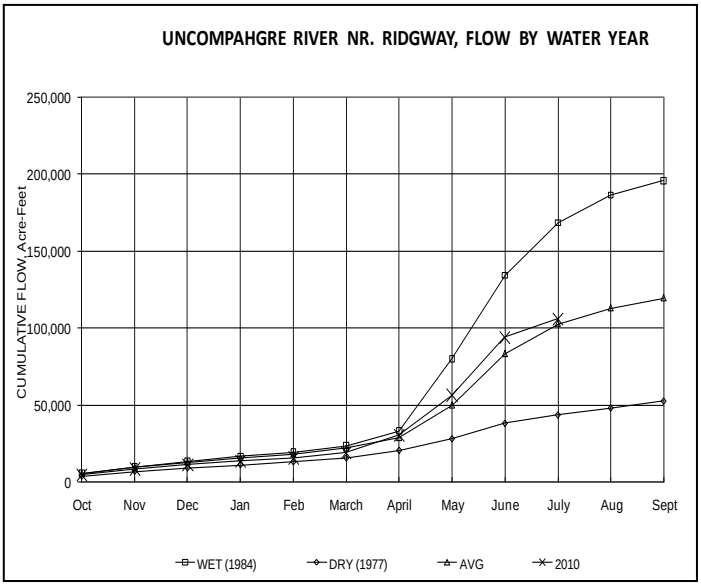
According to the Colorado Basin River Forecast Center (CBRFC), total July precipitation was below average at around 85 percent of normal, although, significant precipitation was received during the last week of July and continuing into August.



Outlook

Although many streams went on call during June and July and it appeared as though others that don't typically go on call would, monsoon rains began in late July, increasing streamflows and removing the pressure for calls in these locations. Many irrigators, especially in higher elevation areas, are in the process of harvesting and as such, the demand is not expected to again reach a point that stresses reservoir storage more than normal.

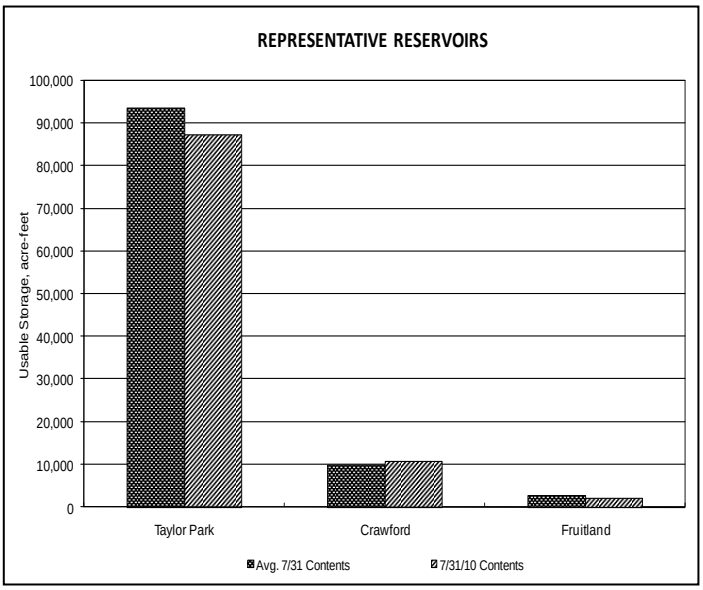
The National Weather Service Climate Prediction Center is predicting above average temperatures and below average precipitation for the Gunnison and San Miguel basins during both the 30 and 90 day outlook period.



Administrative/Management Concerns

One situation that was perceived as a potential problem in the July SWSI report was the precipitous drop in Gunnison River flow at the Redlands diversion. It does not appear that this is a concern anymore as the basin wide precipitation increased flow at this location to above average in late July and it has consistently remained above average through the middle of August.

Reservoir levels decreased rapidly during the first three weeks of July due to irrigation requirements caused by the hot and dry weather, but decreases have since slowed due to an abundance of precipitation over most of the basin.



Public Use Impacts

Monsoon precipitation slowed the decrease in basin reservoir levels to a point where it appears that most reservoirs will have enough water throughout the summer season to provide a great recreational experience for boaters and fisherman.

Basinwide Conditions Assessment

The SWSI value for the month was -0.7. Flow at the gaging station Colorado River near Dotsero was 2068 cfs, as compared to the long-term average of 2949 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 106% of normal as of the end of July.

Outlook

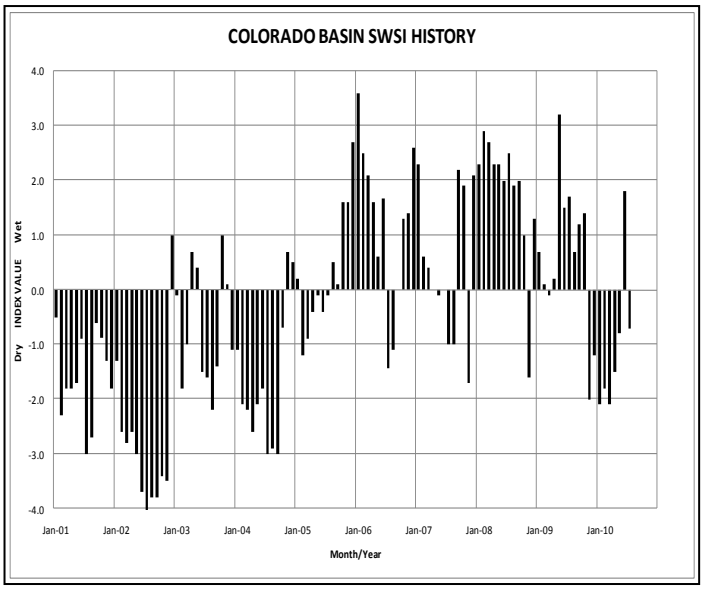
Colorado River flows should remain at or slightly above average through the month of August. The Roaring Fork River should also remain average, however could see rapid, short duration flow increases due to heavy rains associated with seasonal thunder storms. Blue River and Crystal River flows should also remain average, with potential to increase significantly with heavy seasonal thunder storm activity.

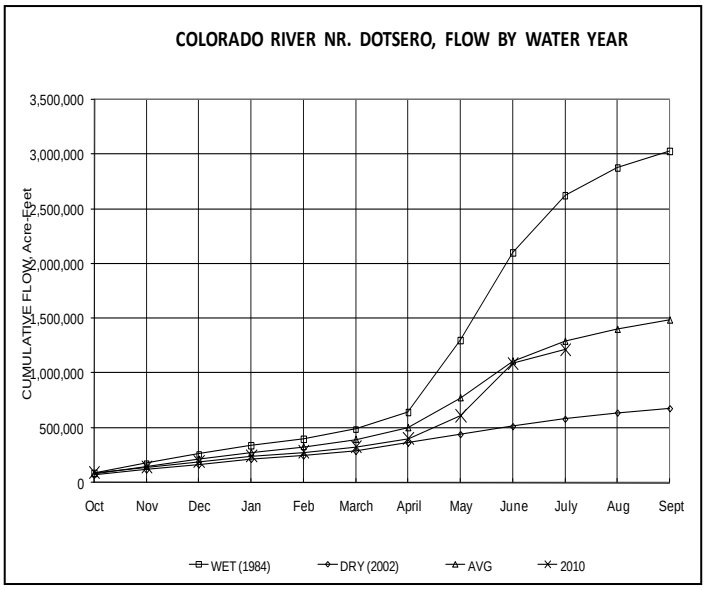
Administrative/Management Concerns

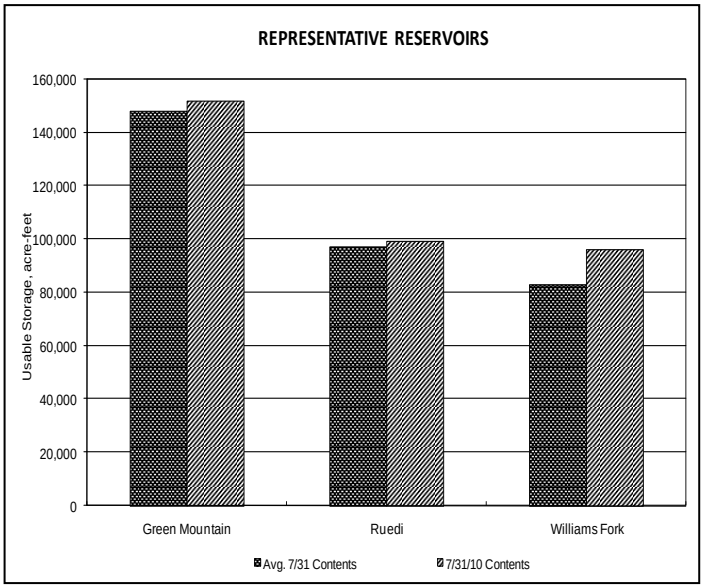
Denver Water ceased diversions through Roberts Tunnel between August 2nd and August 7th. This, combined with heavy precipitation in early August resulted in significant Green Mountain Reservoir releases. Managing entities will likely declare a Historic Users Pool (HUP) surplus which will increase Green Mountain releases in late August. Ruedi Reservoir releases were increased significantly in late July and early August topping out at 350 cfs., and will likely remain elevated throughout August. Shoshone Power Plant turbine operations remain sporadic, with the plant at reduced capacity or down for maintenance. Grand Valley Irrigators continue to have sufficient water to satisfy their needs.

Public Use Impacts

Rafting and kayaking activities resumed in early July following the 2-3 week period of inactivity in late June due to extremely high flows. Activity at the Glenwood Whitewater Park, which drew a large number of paddlers and surfers at high flows, has decreased significantly. Angling on the lower Fryingpan River enjoyed lower flow until late July when release rates from Ruedi Reservoir were increased.





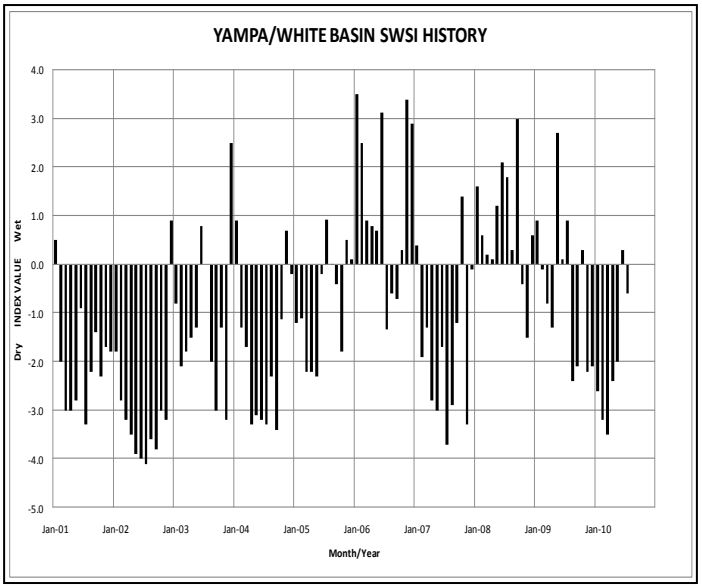


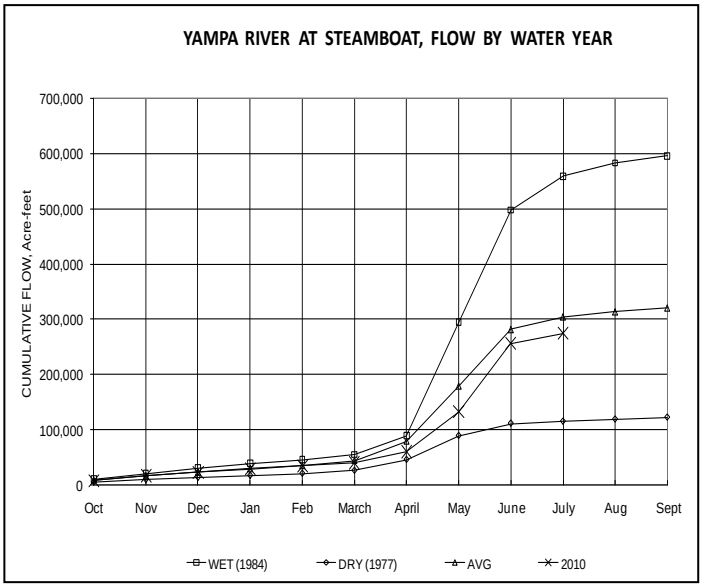
Basinwide Conditions Assessment

The SWSI value for the month was -0.6. Flow at the gaging station Yampa River at Steamboat was 292 cfs, as compared to the long-term average of 374 cfs.

July precipitation was near average in the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by NRCS, was reported at approximately 70% of average for the Yampa/White River basin and 141% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was 90% of average for the water year to-date.

Temperatures were average for the month of July. In the upper region of the Yampa River, daily high temperatures for the month rarely exceeded 90° F. Despite the well below average precipitation in the Yampa and White River basins some stream systems experienced flows above average (for example the Little Snake River near Lily) and some stream systems experienced flows at or just slightly below average. On the North Platte River, the flows at times were either above or near average.





Outlook

Fish Creek Reservoir filled early in June and remained full or near full through the month of July. Yamcolo Reservoir released a significant amount of water for irrigation use in July. At the beginning of July Yamcolo Reservoir was storing 8483 AF and at the end of July it was storing 5131 AF - a release of approximately 3352 AF. Elkhead Creek Reservoir spilled throughout the month. Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Creek Reservoir for municipal, industrial, recreational and fish recovery purposes.

Administrative/Management Concerns

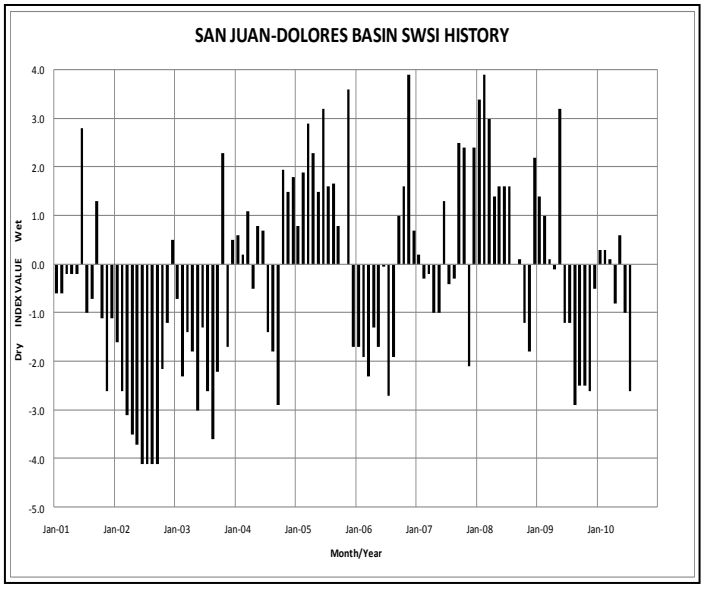
The usual administration has occurred this summer throughout all of Division 6 with the exception of Piceance Creek, which to date has not gone on call. Currently there are no streams under administration in the North Platte River or White River basins; however, there are several streams under administration in the Yampa River (and Green River) basin(s).

Public Use Impacts

Summer is a huge time for tubing on the Yampa River. Anglers are also seen on the Yampa River but in fewer numbers through the town of Steamboat due to the large number of tubers. This fall Stagecoach Reservoir will be under construction to enlarge the reservoir by adding 4-feet to the existing spillway. Upper Yampa Water Conservancy District is preparing for this construction by releasing additional flow out of the reservoir so as to lower the water level to approximately 15-feet below spill. These releases began on or near July 15 at a rate of approximately 142 cfs.

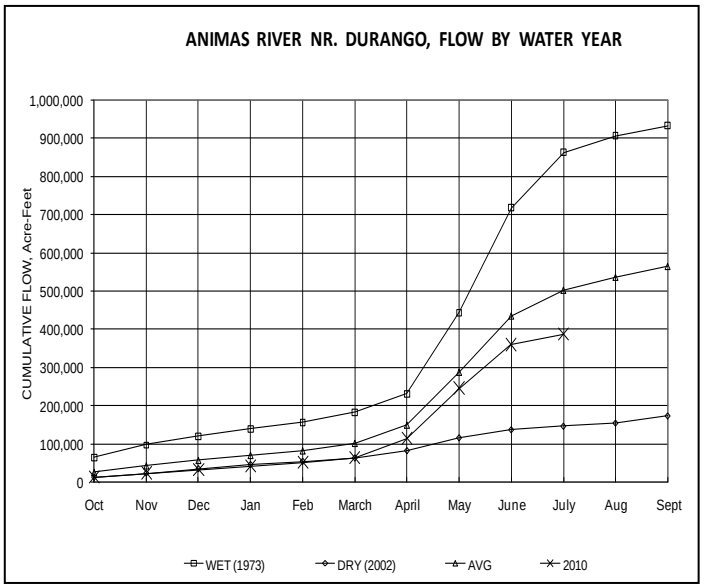
Basinwide Conditions Assessment

The SWSI value for the month was -2.6. Flows at the Animas River at Durango averaged 442 cfs (38% of average). The flow at the Dolores River at Dolores averaged 172 cfs (44% of average). The La Plata River at Hesperus averaged 11.5 cfs (31% of average). Precipitation in Durango was 2.10 inches for the month, 105% of the 30-year average of 1.99 inches. Precipitation to date in Durango, for the water year, is 16.25 inches. The average high and low temperatures for the month of June in Durango were 85° and 55°. In comparison, the 30-year average high and low for the month is 86° and 53°. At the end of the month Vallecito Reservoir contained 90,100 acre-feet compared to its average content of 88,161 acre-feet (102% of average). McPhee Reservoir was up to 325,959 acre-feet compared to its average content of 301,193 (108% of average), while Lemon Reservoir was up to 19,550 acre-feet as compared to its average content of 27,416 acre-feet (71% of average).



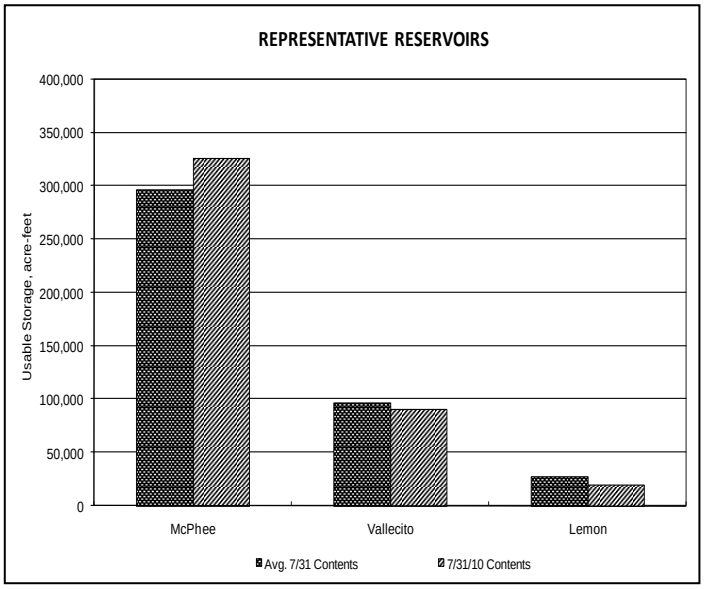
Outlook

June is typically the driest month in Division 7 with monsoon rains beginning in July. This year was no exception. The warm, dry weather of June has given way to the monsoon rains.



Administrative/Management Concerns

The La Plata River compact between Colorado and New Mexico remained on call for the entire month. The compact requires that half the flow at the upper index gages (Hesperus and above) must be delivered across the Stateline the following day. A futile call on the LaPlata River began on July 15 but may end soon with the beginning of the monsoon rains.



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