COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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July 2012

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 June (July 1) range from a high value of -0.5 in the South Platte Basin to a low value of -4.1 in the Yampa/White Basin. All seven the basins (South Platte, Arkansas, Rio Grande, Gunnison, Colorado Yampa/White and San Juan/Dolores) experienced a loss from the previous month's value.

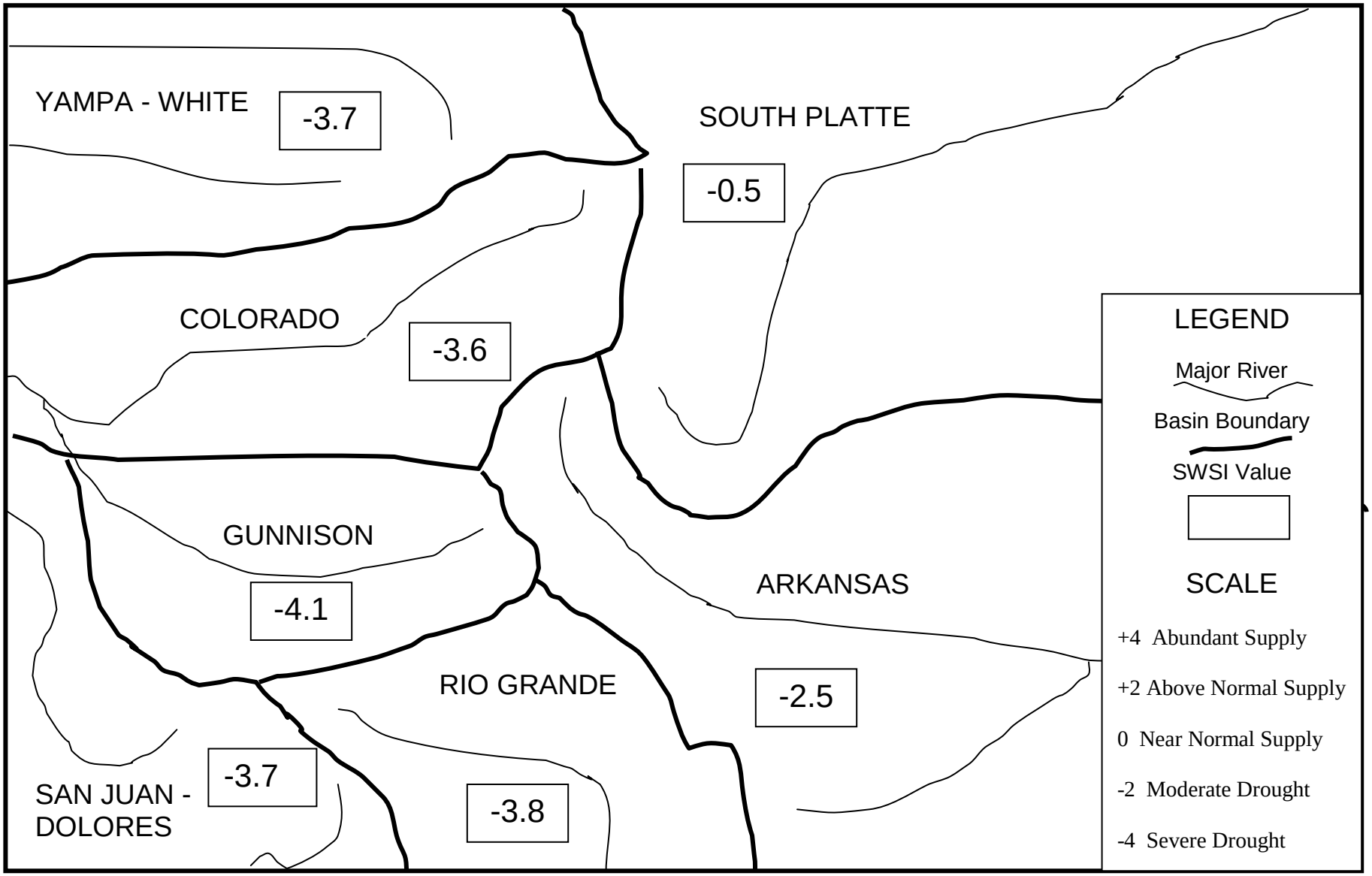
The following SWSI values were computed for each of the seven major basins for July 1, 2012, and reflect the conditions during the month of June.

Basin	July 1, 2012 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	- 0.5	- 2.0	- 3.1
Arkansas	- 2.5	- 0.7	- 3.7
Rio Grande	- 3.8	- 2.7	- 4.2
Gunnison	- 3.7	- 1.6	- 6.0
Colorado	- 3.6	- 1.7	- 6.7
Yampa/White	- 4.1	- 0.1	- 7.3
San Juan/Dolores	- 3.7	- 1.8	- 5.2

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



July 1, 2012

Basinwide Conditions Assessment

The SWSI value for the month was -0.5. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 94% of normal as of the end of June. Cumulative storage in the major plains reservoirs (Julesburg, North Sterling, and Prewitt) is at 59% of capacity. Cumulative storage in the major upper-basin reservoirs (Cheesman, Eleven Mile, Spinney, and Antero) is at 92% of capacity. Flow at the gaging station South Platte River near Kersey was 214 cfs, as compared to the long-term average of 2348 cfs. Flow at the Colorado/Nebraska state line was 55 cfs, as compared to the long-term average of 1452 cfs.

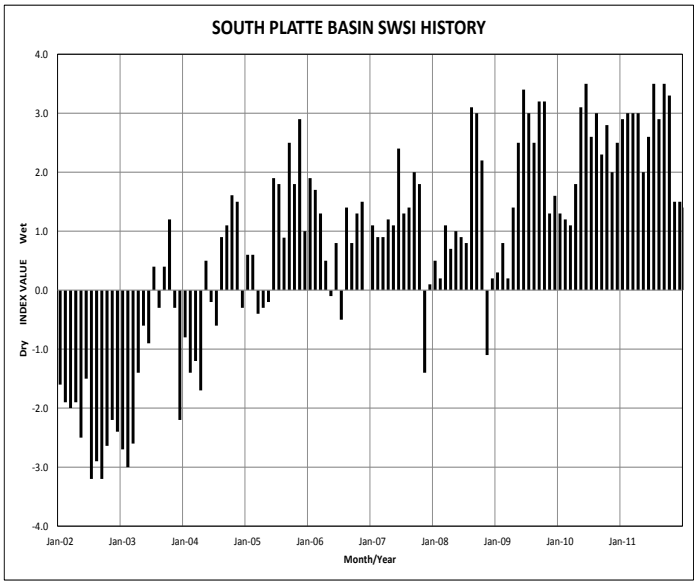
Outlook

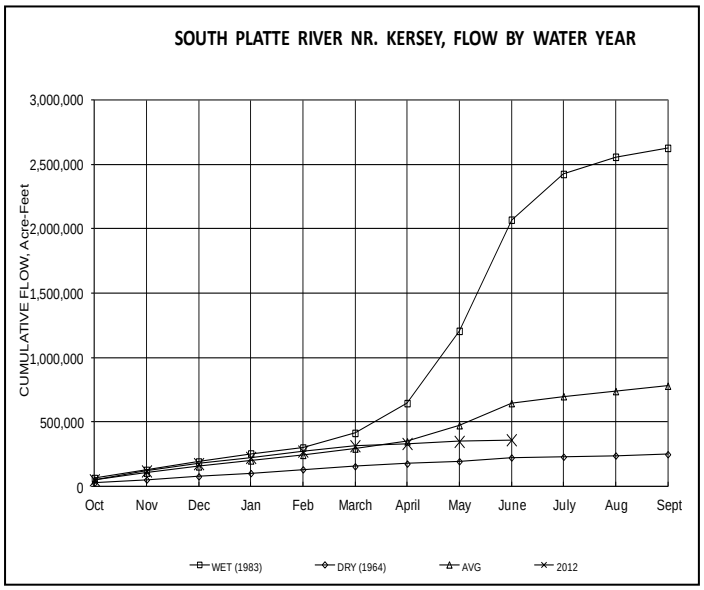
Though June is typically the peak runoff month in the South Platte, very dry conditions further exacerbated the already water short conditions throughout the South Platte basin. Precipitation over most of the basin was well below average for the month and many new high temperature records were set with Denver recording 6 days with high temperatures over 100° F. The Cache la Poudre and Big Thompson River basins also experienced the second largest and second most destructive wild fire in recorded Colorado history with the High Park fire starting on June 9. This fire ended up destroying 256 homes and burning 87,284 acres before being contained in early July.

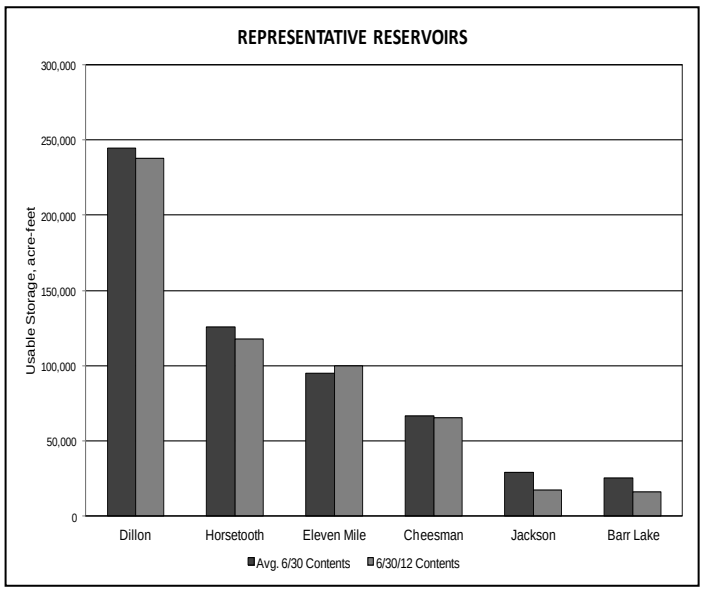
June stream flows at the Kersey and Julesburg index gages continued the trend established in April of declining flows instead of the historic trend of increasing flows. The monthly mean stream flow at the Kersey gage declined in June to 214 cfs from 264 cfs in May and 294 cfs in April (June = 9% of historic mean of 2323 cfs; May = 15% of historic mean of 1746 cfs; April = 35% of historic mean of 846 cfs). The Julesburg gage monthly mean stream flow declined in June to 55 cfs from 109 cfs in May and 146 cfs in April (June = 4% of historic mean of 1430 cfs; May = 11% of historic mean of 1003 cfs; April = 28% of historic mean of 523 cfs).

As could be expected, the river call pattern on the mainstem and tributaries remained very senior for June. In fact, many of the more senior calls in effect by the end of the month had not been in place since July and August of 2002. As could also be expected, reservoir storage declined again in June as users were forced to draw on stored water to replace the lack of stream water. Reservoir storage fell to 79% of the end of June average as compared to 95% of the end of May average and 102% of the end of April average.

The August–October National Weather Service outlook for the South Platte basin is for equal chances of below or above average precipitation but with a virtual certainty of above average temperatures.







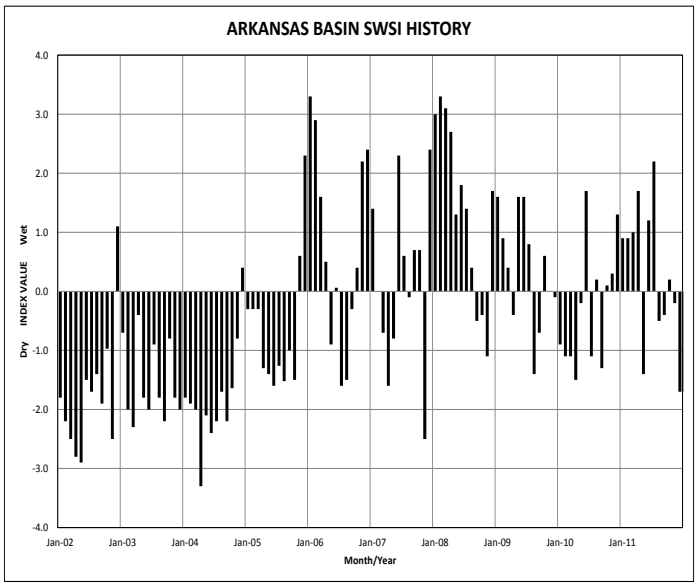
Basinwide Conditions Assessment

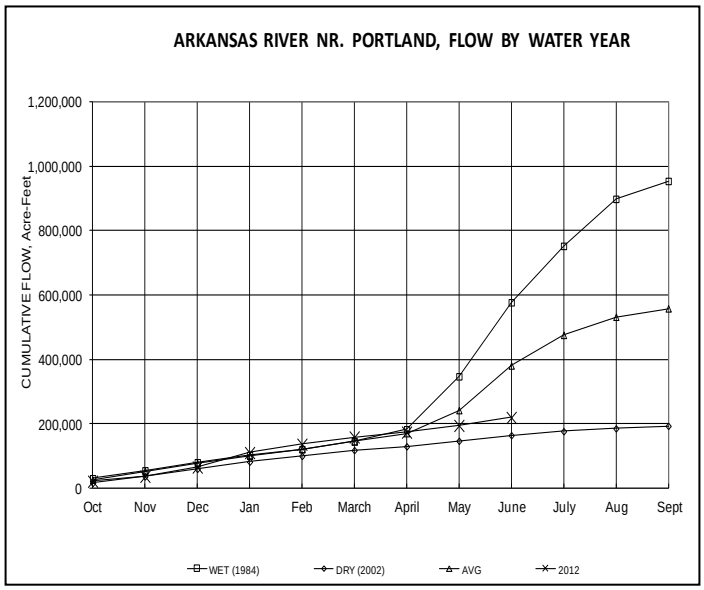
The SWSI value for the month was -2.5. Flow at the gaging station Arkansas River near Portland was 416 cfs, as compared to the long-term average of 2333 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 78% of normal as of the end of June.

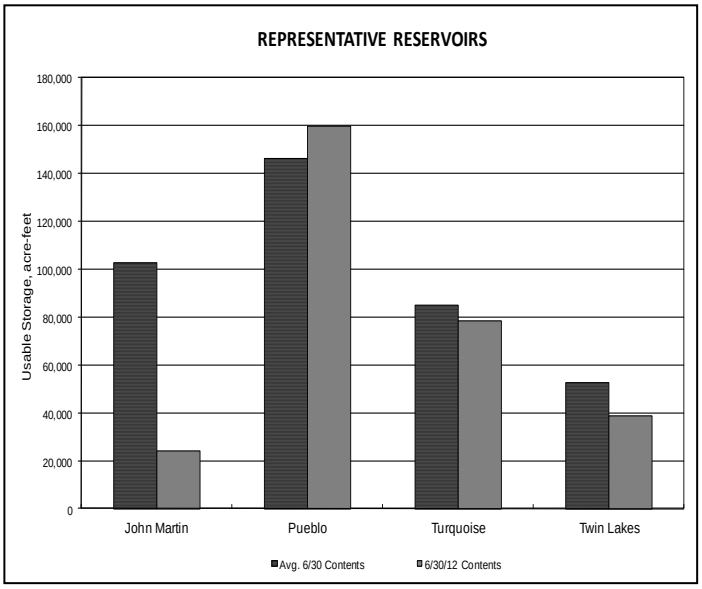
Outlook

Runoff during June continued to be quite poor with virtually no appreciable runoff peak. Additionally, high temperatures at the Pueblo weather station averaged almost 96 degrees for the month, with the final nine days all above 100 degrees and 12 out of 30 days above 100 degrees. A record period of five days above 105 degrees also occurred. Comparable temperatures existed throughout the lower Arkansas Basin.

The Southeastern Colorado Water Conservancy District allocated approximately 9,882 acre-feet of Fryingpan Arkansas Project water, with 3,514 acre-feet allocated for municipal use and 6,368 acre-feet allocated for agricultural use. This was significantly lower than the 75,000 acre-feet in the initial allocation in 2011.





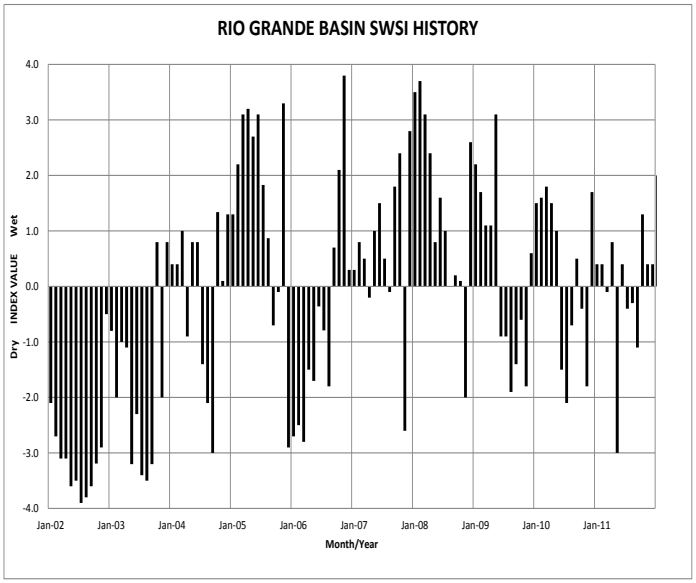


Basinwide Conditions Assessment

The SWSI value for the month was -3.8. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 58% of normal as of the end of June.

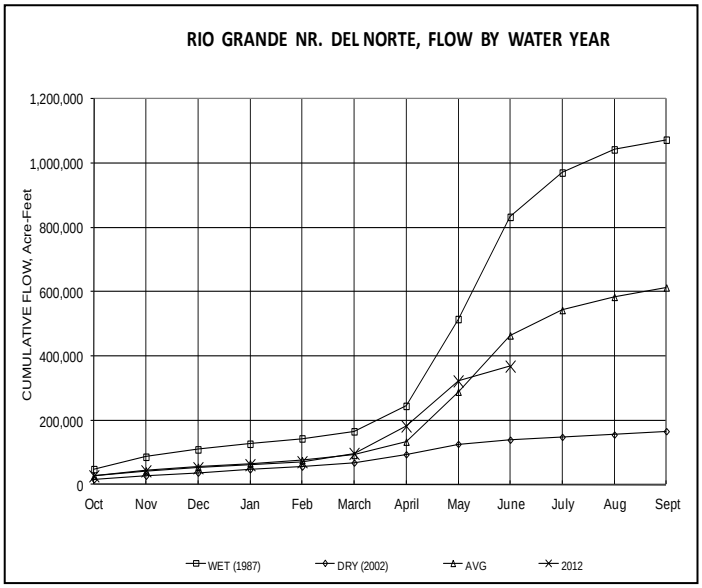
Flow at the gaging station Rio Grande near Del Norte averaged 772 cfs (25% of normal). The 46,000 acre-feet at that station for the whole month of June is very near the volume of June 1977, another benchmark drought year, but over three times the volume at that station during June 2002 (13,000 acre-feet). The Conejos River near Mogote had a mean flow of 332 cfs (25% of normal) and over twice as much flow as June of 2002. All streams in the upper Rio Grande basin are experiencing extremely low flow conditions. With the snowpack already gone, the only relief will come in the form of rain which did pick up some during the first week of July.

Precipitation in Alamosa was only 0.21 inches, 0.28 inches below normal. Year to date precipitation in Alamosa is already an inch below normal. June of 2012 became the hottest June on record in Alamosa with an average temperature of 64.4 degrees, almost five degrees above normal, and record setting high temperatures on ten days.



Outlook

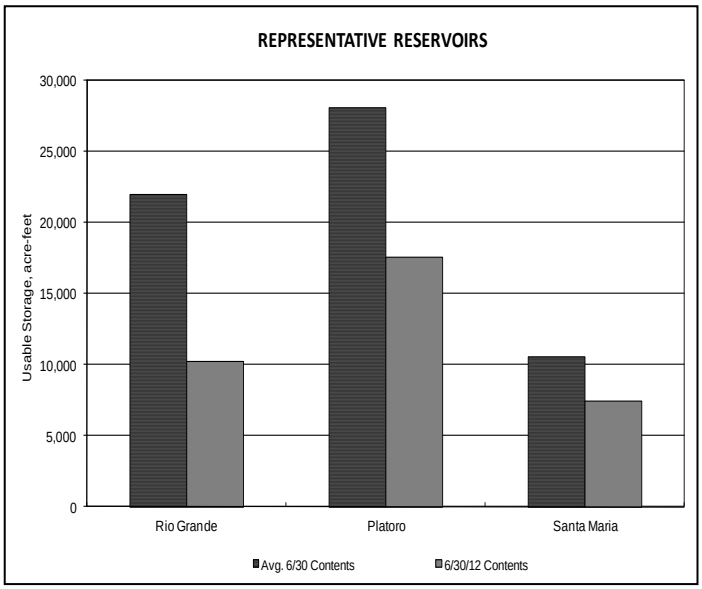
Generous amounts of rainfall will be needed in the near future to neutralize the damage done to crop and rangeland by the drought conditions. However, long-term weather forecasts don't predict any extraordinary precipitation for the next several months, just persistent above-normal temperatures.



Administrative/Management Concerns

Lack of streamflow and reservoir storage translates into extra use of the Valley's aquifers for irrigation water needs. The long-term effects of this year's pumping on the basin's aquifers are unknown. However, it is expected to exacerbate the already perilous situation and extend the period of time needed for aquifer recovery.

At the close of the month, only single-digit priorities were diverting water from the Conejos, Los Pinos, Alamosa, La Jara, Pinos, and Saguache Creek drainages. In smaller basins such as San Francisco Creek near Del Norte or those in the Sangre de Cristo Mountains, only Priority No. 1 was served. The call on the mainstem of the Rio Grande dropped all the way to No. 163, a very senior water right that is normally not impacted by available streamflow.



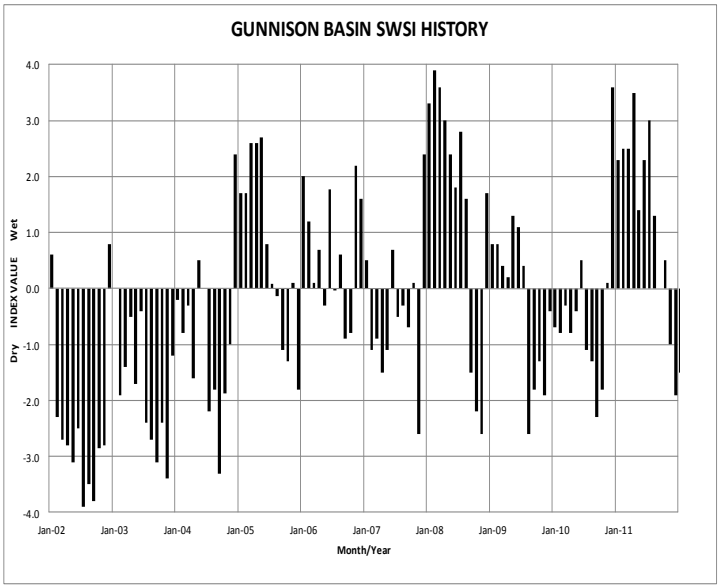
Public Use Impacts

Domestic and irrigation wells are faltering and some failing. Dozens of irrigation wells have already been replaced and hundreds more are surging or producing at a fraction of their permitted amount. Soil moisture conditions in non-irrigated areas are poor.

Basinwide Conditions Assessment

The SWSI value for the month was -3.7. Flow at the gaging station Uncompahgre River near Ridgeway was 204 cfs, as compared to the long-term average of 569 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 72% of normal as of the end of June.

Another hot and dry month in June did not bode well for streamflows in the Gunnison basin. Spring runoff was mostly complete at the beginning of June and streamflows continued to drop throughout the month with temperatures over 5 degrees above average and wind that caused increased evapotranspiration rates basin wide.



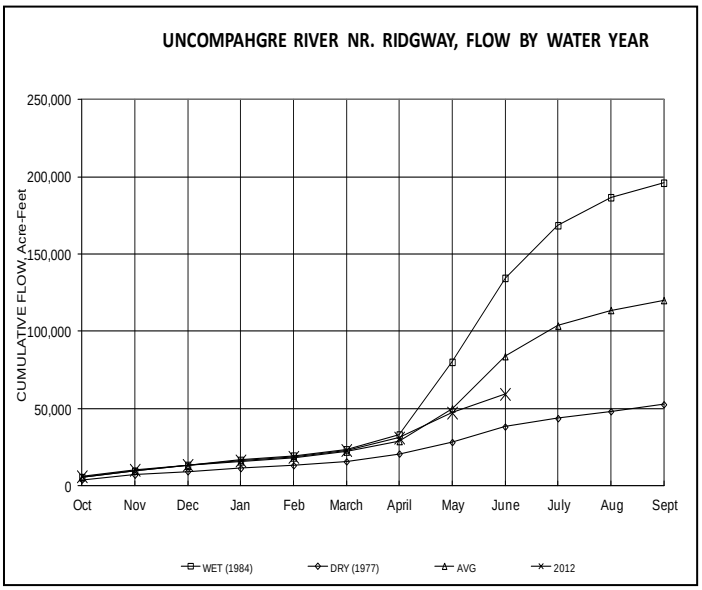
Outlook

Monsoon rains began on July 5th, which really helped those that were able to irrigate their crop earlier. For those that did not get much water to their fields earlier it appears that the rain may not help much in 2012, but should help the grass and hay start out 2013 in better condition. Forecasts for precipitation have become more encouraging as they indicate a better than average chance for precipitation in August.

Administrative/Management Concerns

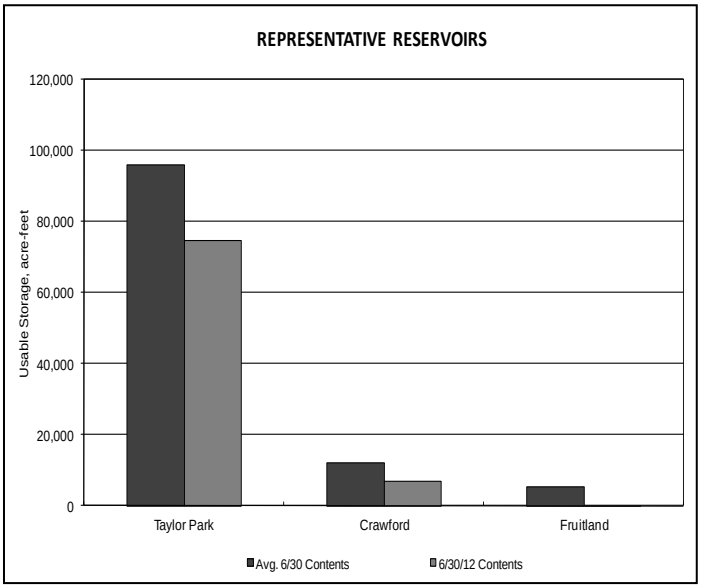
Early calls combined with hot, dry and windy conditions will prevent many irrigators from producing more than 25 percent of their normal hay crop in the upper areas of the basin regardless of monsoon rains that may fall in July and August. In areas of the upper North Fork and upper Gunnison, 2012 has been drier than anyone can remember. For example, the earliest date that the Fire Mountain Canal direct flow rights were out of priority prior to 2012 was on July 3rd, while this year the Fire Mountain Canal went out of priority on June 26th.

Due to coordination between the UVWUA, the Upper Gunnison River Water Conservancy District and the Bureau of Reclamation (BOR) in the use of Taylor Park storage accounts, it appears that a mainstem call on the basin above Blue Mesa will not occur until the first week of August at the earliest. This is good news because by this time it will have a limited impact to upper basin users because they will already be shut off to hay.



Management of some reservoirs to limit the use of storage during storm events in early July has improved conditions slightly. In fact, it appears that some reservoirs will end 2012 with more in storage than in 2002. This is not the case, however, in Blue Mesa, where the USBR projects an end of October storage content in Blue Mesa less than in 2002 due to higher projected September through November releases to meet the 900 cfs flow target specified in the Aspinall Unit Operations Record of Decision. End of October reservoir elevations for Taylor Park and Blue Mesa are projected to be 43 and 76 feet below full (37% and 33% full) respectively.

Weekly conference calls held to assist the BOR in setting releases at Crystal Dam to preserve as much storage as possible while meeting the 900 cfs flow target at the Gunnison River Whitewater Gage were expanded to include other interested parties in June. This was done to improve awareness among other entities regarding planned operations at the Aspinall Unit. So far, coordinated operations have prevented flows from dropping below the target for more than a day and have prevented the Redlands Power Canal from placing a call, which is important because it can call out rights in the entire basin.



Public Use Impacts

Despite the tinder dry conditions throughout the basin we have been lucky and escaped the kind of devastating fires that have plagued much of the rest of the state.

Basinwide Conditions Assessment

The SWSI value for the month was -3.6. Flow at the gaging station Colorado River near Dotsero was 1307 cfs, as compared to the long-term average of 5897 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 93% of normal as of the end of June.

Outlook

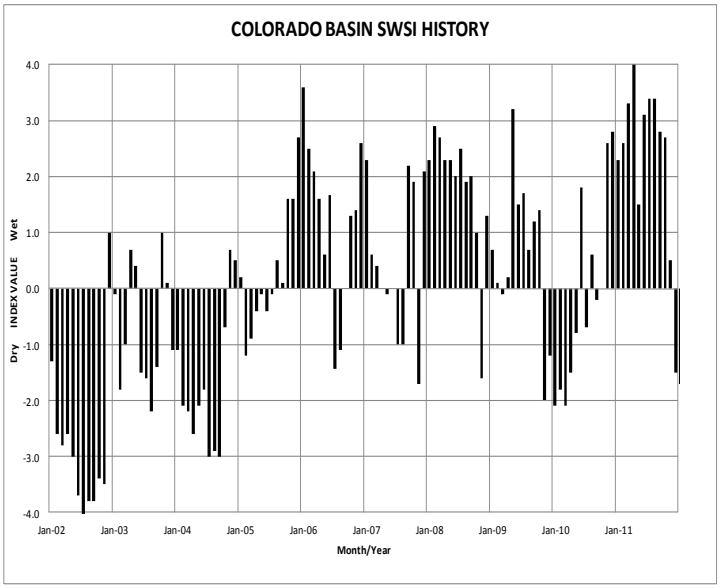
Colorado and Roaring Fork River below average flows will continue through July with small duration increases associated with monsoonal precipitation. The impending Grand Valley Water Users 730 right will drive upper Colorado River flows beginning in late July.

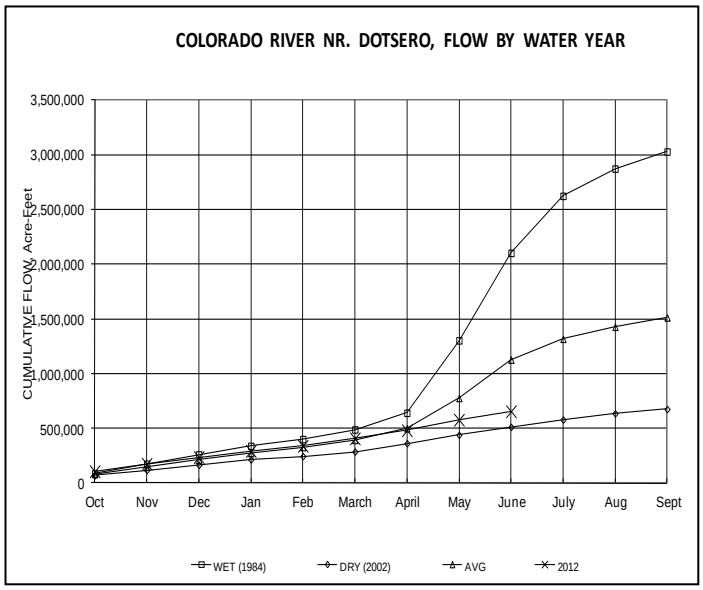
Administrative/Management Concerns

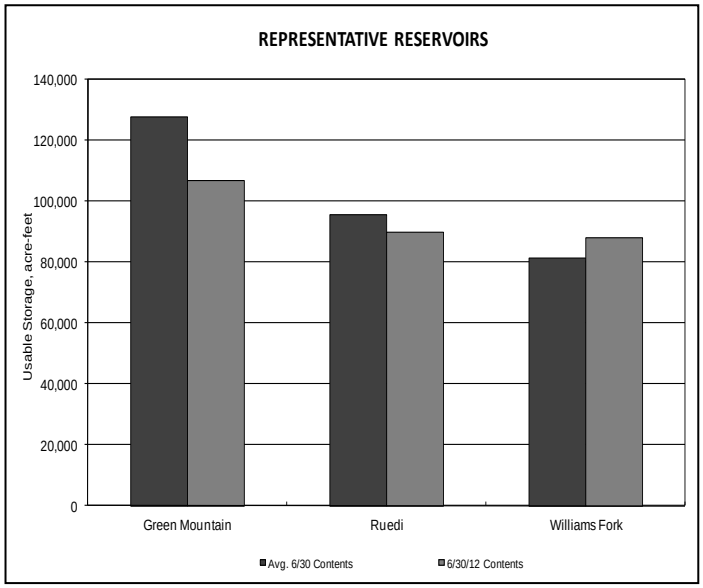
The Shoshone Outage Protocol changed with the Grand Valley Irrigation Call, which went into effect on June 21st (3 days earlier than WY2002). Green Mountain Reservoir is bypassing all inflow, making contact/HUP releases, and replacing Silt Water Project out of priority depletions. Likewise, Ruedi Reservoir is bypassing all inflow, and making contract and endangered fish support releases, the first of which was ordered by the U.S. Fish and Wildlife Service in early July to maintain flows in the 15-mile reach. The entire basin above the Grand Valley Canal and junior to the GVIC junior 119 cfs right has been called out as of July 16th. It is likely that the Grand Valley Water Users 730 right will go into effect by the end of July. Requested additional releases from Green Mountain Reservoir to satisfy the call will fluctuate based on substitute releases from Wolford Mountain and/or Williams Fork Reservoirs. Releases will also fluctuate dependent upon monsoonal moisture amount and run-off.

Public Use Impacts

Rafting activity has been relatively steady despite lower flows and, essentially, no high water conditions early this summer.







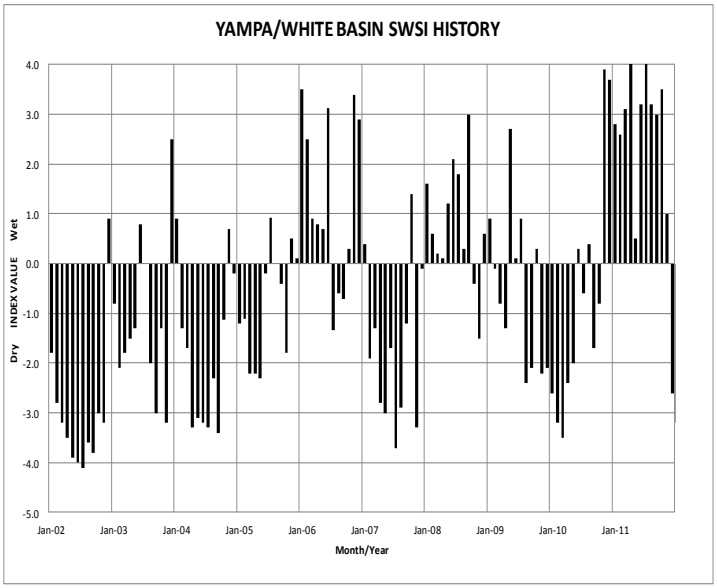
Basinwide Conditions Assessment

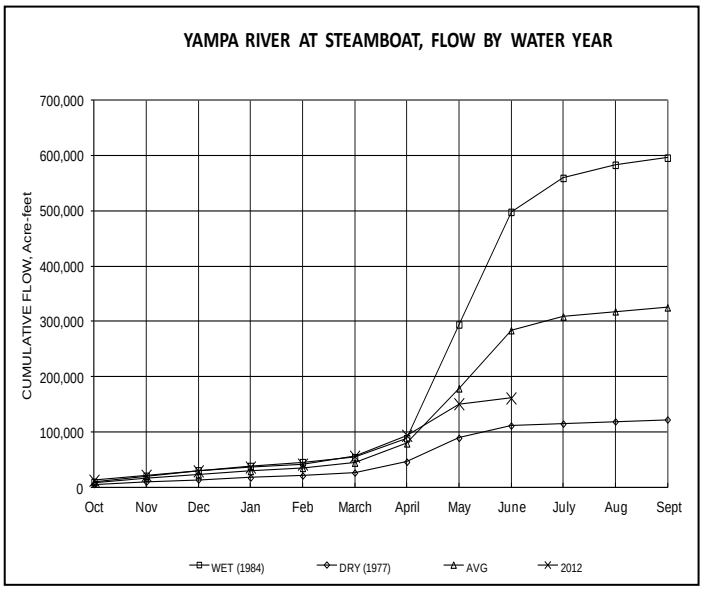
The SWSI value for the month was -4.1. Flow at the gaging station Yampa River at Steamboat was 176 cfs, as compared to the long-term average of 1769 cfs.

June precipitation was extremely below 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 5% of average for the Yampa, White, and North Platte River basins. Total precipitation for the water year as a percent of average to date in the combined basins at the end of June was 63%.

The snow water equivalent (SWE) for the water year to date on June 30, 2012 was at 8% of average for the Laramie and North Platte River basins and 7% of average for the Yampa and White River basins. However most SNOTEL courses in both basins recorded no snow water equivalent for the month as melt out had occurred before June.

Streamflows in the Yampa, White, and North Platte River basins are well below average at this time and most of the Division 6 area is experiencing extreme drought conditions as classified by the US Drought Monitor.





Outlook

As of June 30th Fish Creek Reservoir was storing 4,146 AF, 99.5% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Daily data is currently unavailable at Yamcolo Reservoir due to a broken pressure transducer at the gaging station. The transducer is currently being repaired and should be online again before the end of August if not sooner. Yamcolo is being reported at 24% of capacity by the NRCS monthly reservoir report. On June 30th Elkhead Creek Reservoir was storing 24,062 AF. At the end of June, Stagecoach Reservoir was at 92% of capacity or 33,543 AF.

Public Use Impacts

Due to dry and critical fuel conditions below 9,000 ft, Moffat, Rio Blanco and Routt Counties currently have outdoor fire bans in place. Jackson County has fire restrictions in place. Fishing at Stagecoach Reservoir tailwaters has picked up with increased flow being released from the reservoir. Fishing has slowed a bit at Steamboat Lake with the warmer weather lately. Early morning appears to be the preferred time of day for good fishing at the lake. The swim beach at Steamboat Lake is now open and a good quantity of new sand has been added.

Basinwide Conditions Assessment

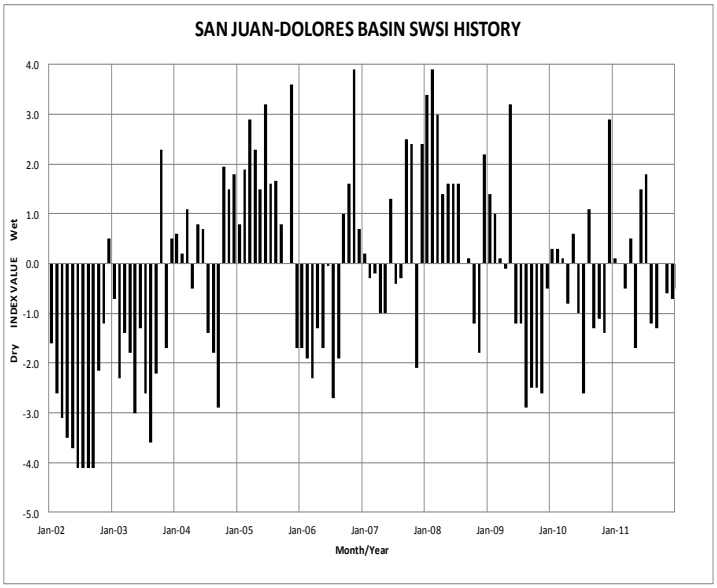
The SWSI value for the month was -3.7. Flow at the Animas River at Durango averaged 746 cfs (27% of the long-term average of 2488 cfs). The flow at the Dolores River at Dolores averaged 218 cfs (17% of average). The La Plata River at Hesperus averaged 21 cfs (17% of average).

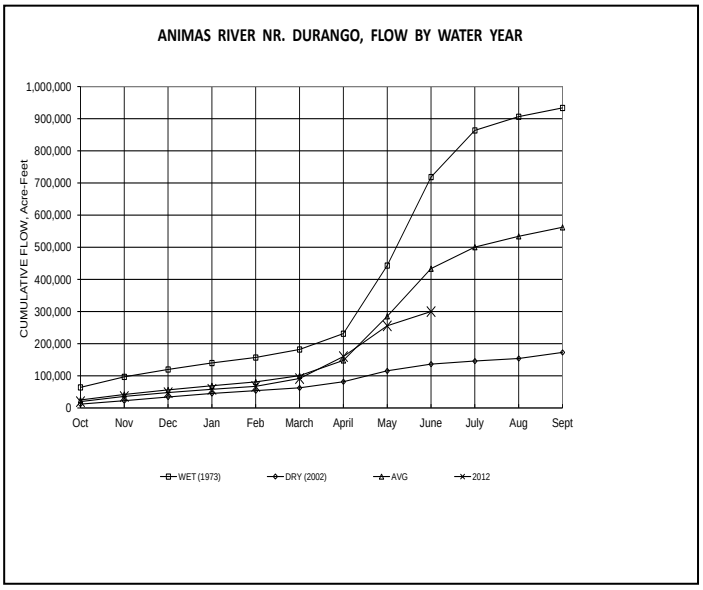
Storage in McPhee, Vallecito, and Lemon reservoirs totaled 89% of normal as of the end of June. At the end of the month Vallecito Reservoir contained 104,060 acre-feet compared to its average content of 104,988 acre-feet (99% of average). McPhee Reservoir was up to 299,646 acre-feet compared to its average content of 344,489 (87% of average), while Lemon Reservoir was up to 22,410 acre-feet as compared to its average content of 33,801 acre-feet (66% of average).Flow at the gaging station Animas River at Durango was 746 cfs, as compared to.

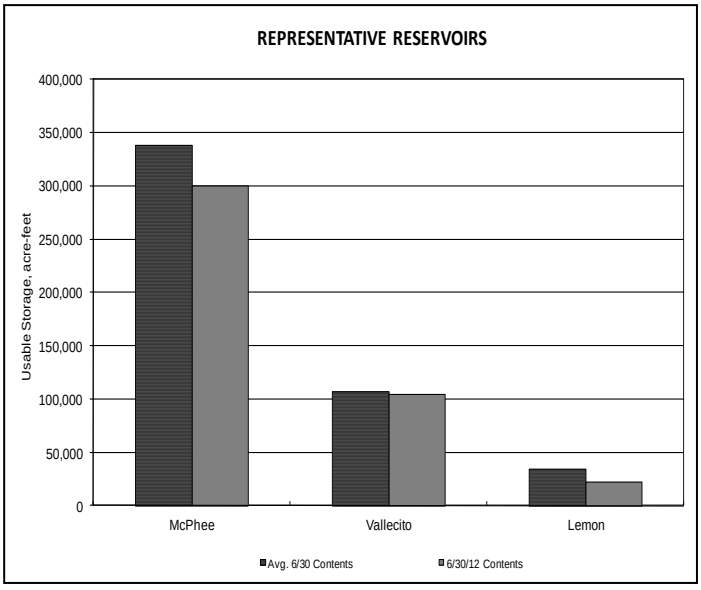
Precipitation in Durango was 0.00 inches for the month, 0% of the 30-year average of 0.77 inches. Precipitation to date in Durango, for the water year, is 10.43 inches, 79% of the 30-year average of 13.27 inches. The average high and low temperatures for the month of June in Durango were 86° and 48°. In comparison, the 30-year average high and low for the month is 82° and 46°.

Outlook

No precipitation was recorded in June for Durango. No surprise that June was dry as it is typically the driest month of the year in the basin. There are 8 years out of 118 years of record where there was no precipitation recorded. Hot, dry conditions have drastically increased the fire danger in the basin with several wild fires starting at the end of the month and continue to burn. July typically means the start of the monsoon season and the basin is in drastic need of moisture.







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