
COLORADO

WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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July 2009

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 (May through October). 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.

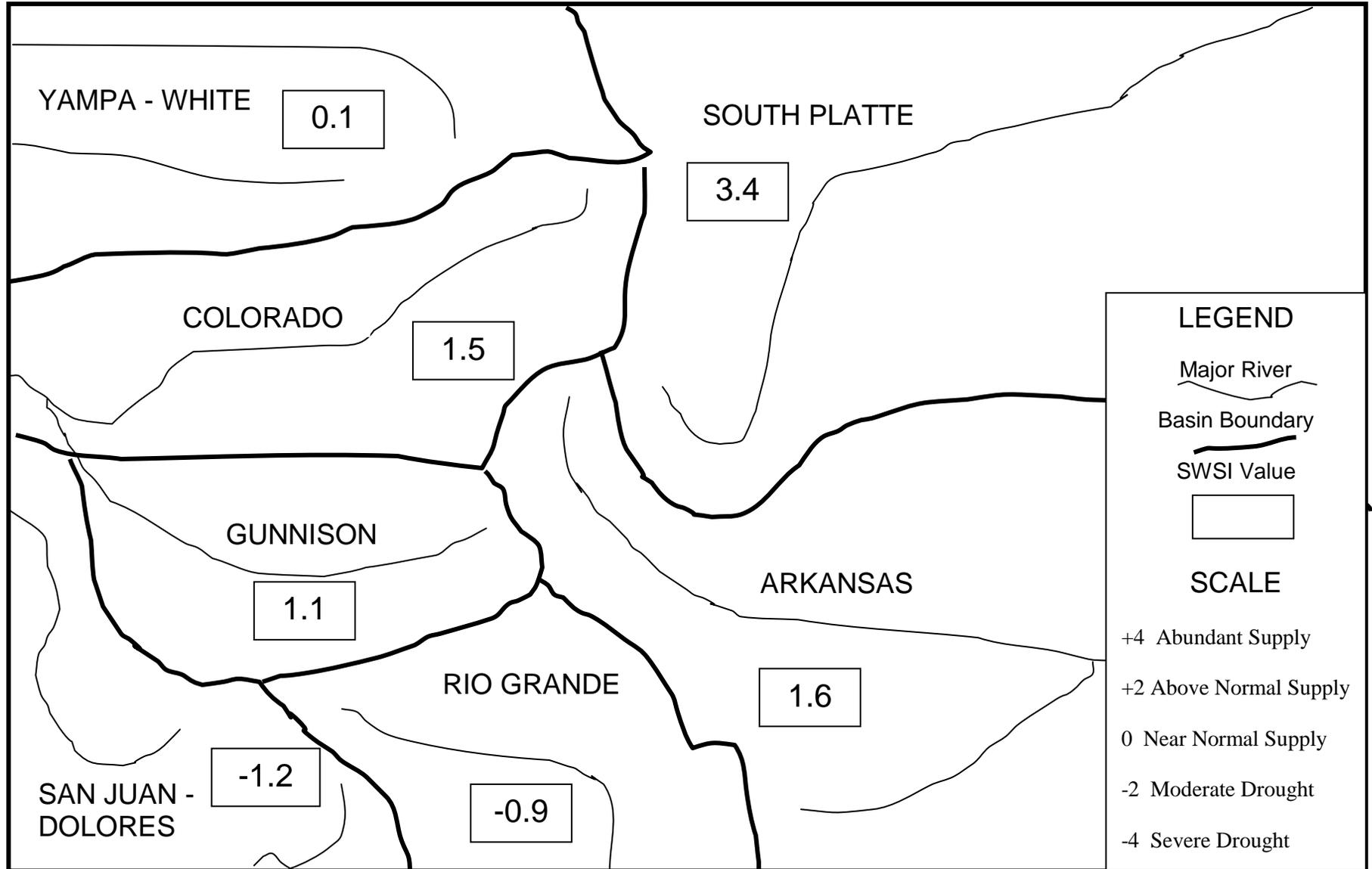
The statewide SWSI values for the month range from a high value of +3.4 in the South Platte Basin to a low value of -1.2 in the San Juan/Dolores Basin. One of the basins (South Platte) experienced a gain from the previous month's values, one (Arkansas) experienced no change, and the remaining five basins (Rio Grande, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a loss from the previous month's values.

The following SWSI values were computed for each of the seven major basins for July 1, 2009, and reflect the conditions during the month of June 2009.

<u>Basin</u>	<u>July 1, 2009 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	3.4	+0.9	+2.5
Arkansas	1.6	0.0	- 0.2
Rio Grande	- 0.9	- 4.0	- 2.5
Gunnison	1.1	- 0.2	- 0.7
Colorado	1.5	- 1.7	- 0.5
Yampa/White	0.1	- 2.6	- 2.0
San Juan/Dolores	- 1.2	- 4.4	- 2.8

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, 2009

Basinwide Conditions Assessment

The SWSI value for the month was 3.4. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 109% of normal as of the end of September. Cumulative storage in the major plains reservoirs (Julesberg, North Sterling, and Prewitt) is at 100% of capacity. Cumulative storage in the major upper-basin reservoirs (Cheesman, Eleven Mile, Spinney, and Antero) is at 102% of capacity. Flow at the gaging station South Platte River near Kersey was 4,304 cfs, as compared to the long-term average of 2,314 cfs. Flow at the Colorado/Nebraska state line averaged 2,445 cfs.

Outlook

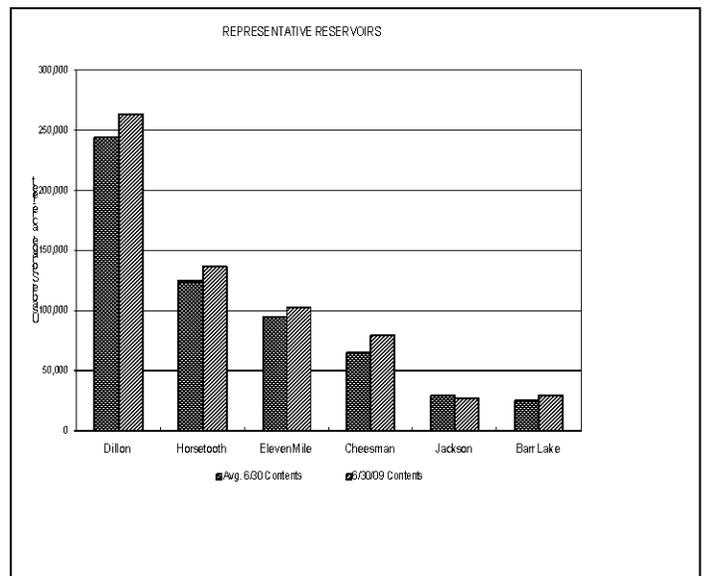
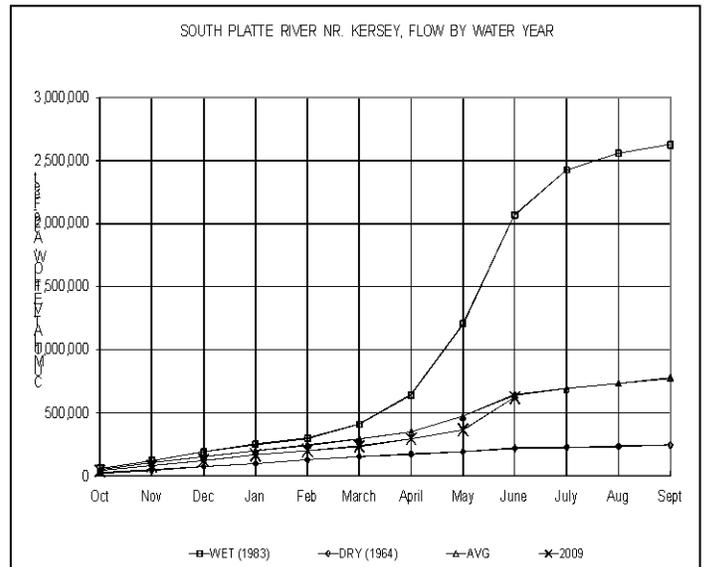
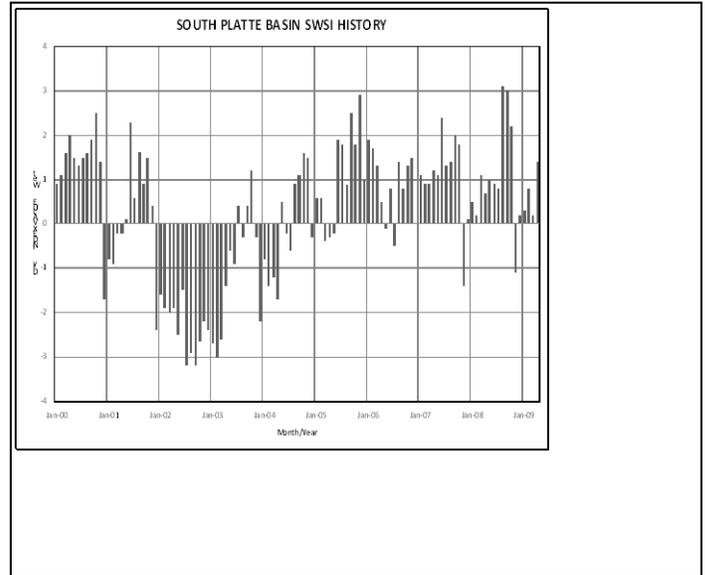
June was an incredibly wet cool month throughout the South Platte basin. As example, the 4.86 inches of rain in the Denver area was the second wettest June since they started collecting records in 1872. Because of the wet conditions, there was ample water for all users and thus no call on the mainstem of the South Platte after June 2, 2009. Likewise, there generally was not a call on most tributaries for a majority of the month. It appears that free river conditions will remain for at least a week or two into July for the mainstem and some tributaries. This is almost unheard of and last occurred in 1995, a year of sustained flooding flows on the South Platte.

Almost all major reservoirs on both the tributaries and mainstem remained full or were filled during June. Users had not been able to completely fill a few of these reservoirs in many years.

Since it was so wet, there was little irrigation demand compared to usual and a primary use of water on the mainstem was for recharge purposes. Even recharge was limited in some areas because recharge areas were full.

Of note, the available flow for users in the South Platte in Colorado flowing across the state line in excess of Colorado compact requirements was over 130,000 acre-feet in June. This is in contrast to last year when users with priorities junior to 1897 in the lower river (District 64) were curtailed almost the entire month of June because of the compact.

While there will not be shortage issues for either farmers or municipalities this year, the wet conditions have kept cut hay from properly drying out so that it can be bailed and sold for feed. This will have a negative impact on the value of the hay. Hail has also caused crop damage in certain areas.



Basinwide Conditions Assessment

The SWSI value for the month was 1.6. Flow at the gaging station Arkansas River near Portland was 2,489 cfs, as compared to the long-term average of 2,307 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 116% of normal as of the end of June.

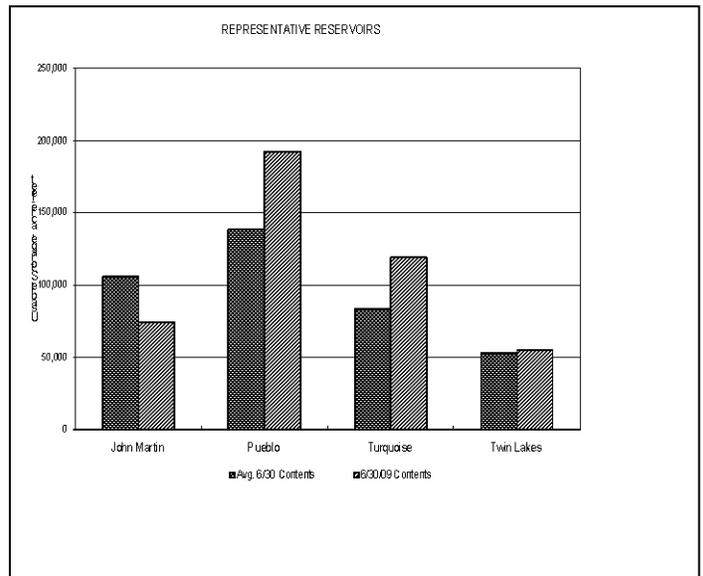
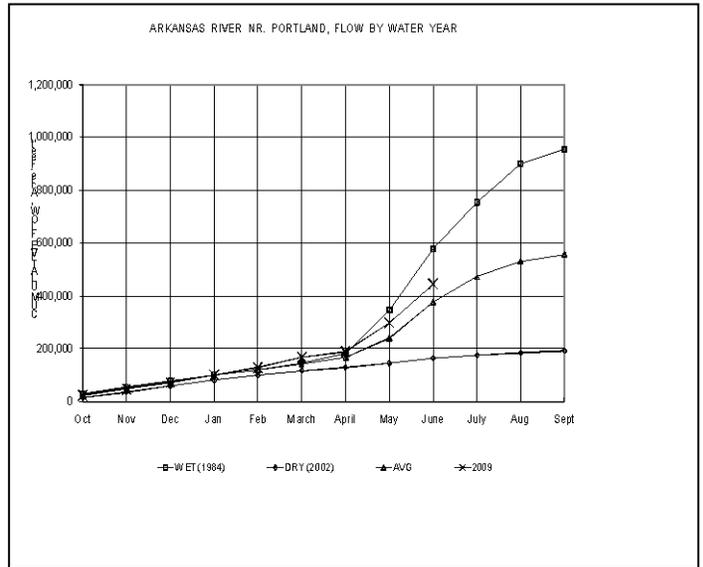
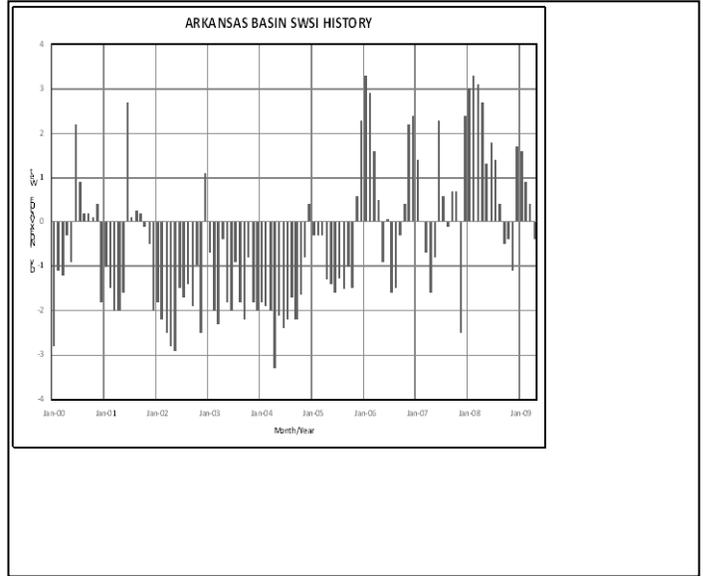
Outlook

Runoff during June picked back up after an apparent early peak around mid-May that caused many to believe the 2009 run-off had come early and would end early. The Arkansas River call was at the Otero Canal 3/3/1890 call upstream of Fort Lyon Canal and at the Amity #2 4/1/1893 below John Martin Reservoir to begin the month. The month ended with the call at Colorado Canal 6/9/1890.

The Southeastern Colorado Water Conservancy District allocated approximately 29,500 acre-feet of Fryingpan Arkansas Project water, which is 53,500 acre-feet less than the amount allocated in 2008 due to the unpredictable snowpack conditions in the Fryingpan drainage. SECWCD had already imported almost 74,000 acre-feet through the Charles H. Boustead Tunnel by the end of June making it highly likely SECWCD will have a second allocation of Fryingpan-Arkansas Project water later in the year.

Administrative/Management Concerns

The better than expected imports from transmountain tunnels discharging to Turquoise Reservoir, along with better than expected native runoff through Turquoise Reservoir caused difficulties for entities needing to move water through Lake Fork Creek to the Arkansas River due to flow restrictions.



Basinwide Conditions Assessment

The SWSI value for the month was -0.9. Flow at the gaging station Rio Grande near Del Norte averaged 2130 cfs (70% of normal). The Conejos River near Mogote had a mean flow of 1005 cfs (77% of normal). Precipitation in Alamosa was 0.59 inches, right on average. Temperatures ranged from 34 degrees to 84 degrees in Alamosa where the average monthly temperature was 58.3 degrees, 1.1 degrees below normal. The cooler than normal temperatures were a first for this year. Temps had been running above average all year.

In general, streamflow in the upper Rio Grande basin was below normal; but this was expected after the huge melt-out in May. Heavy rainfall late in the month over most of the San Juan and Sangre de Cristo mountains brought streams back up to normal levels. Some smaller drainages such as LaJara Creek, Ute Creek, and Carnero Creek have mysteriously experienced normal or above normal runoff since late April. Water users on those creeks have certainly benefitted.

Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 134% of normal as of the end of June.

Outlook

National Weather Service forecasts call for above normal temperatures and precipitation for the next three months across much of Colorado. With substantial rainfall, stream flow in the Rio Grande should stay near normal levels until the end of summer. If the rains are moderate, water users in the upper Rio Grande basin should expect below normal streamflow conditions.

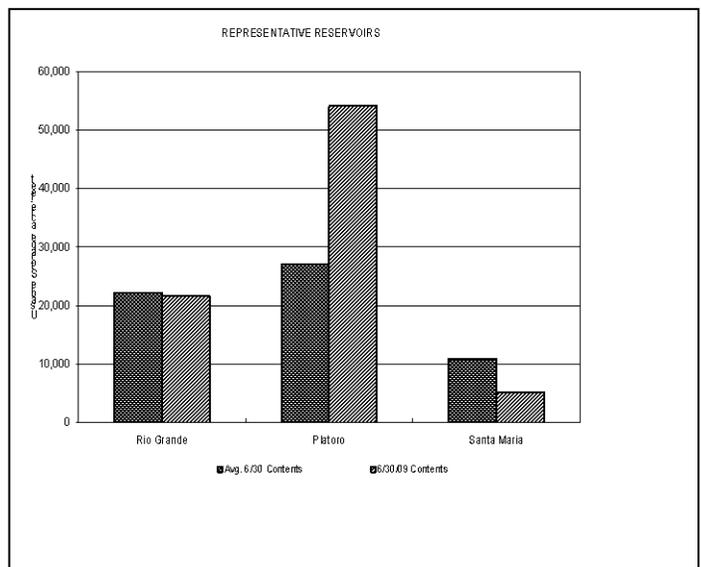
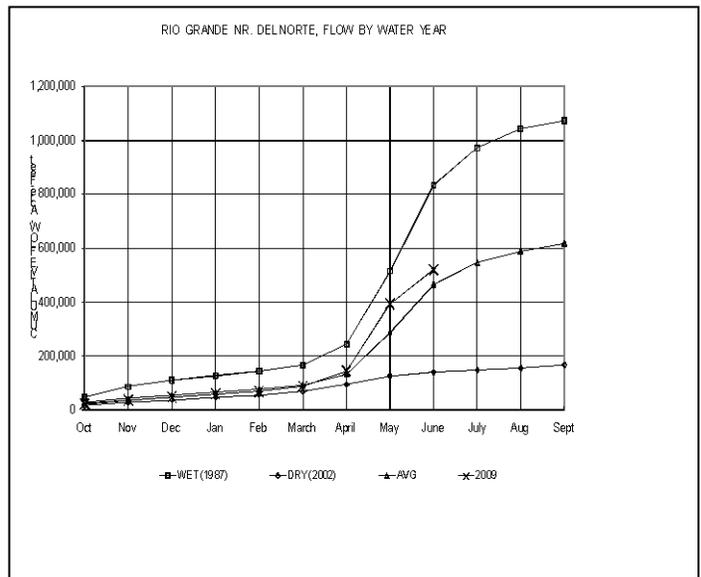
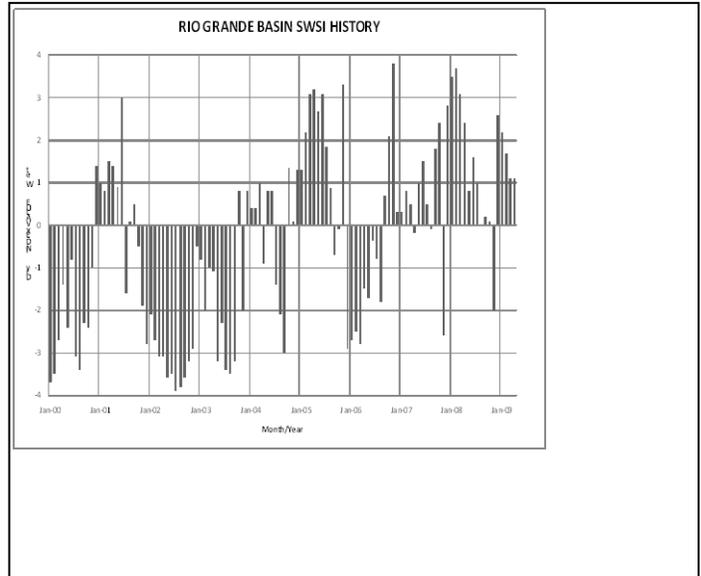
Water users on the Conejos River will benefit from storage releases out of Platoro Reservoir. It is currently very near full capacity.

Administrative/Management Concerns

Administrators have not yet had the need to place curtailments on the Conejos River and its tributaries in order to meet water delivery requirements to the state line pursuant to the Rio Grande Compact. This is very unusual. And the Rio Grande has had little or no curtailment. This is the result of a combination of good runoff and rainfall. The current delivery targets are set at 6% for the Rio Grande and 19% for the Conejos River system. These percentages of available native flow targeted for delivery to the state line.

Public Use Impacts

The weather conditions have benefited those farmers and ranchers with native grass and alfalfa crops. But, those growing grain and potatoes are catching up after a late start.



Basinwide Conditions Assessment

The SWSI value for the month was 1.1. Flow at the gaging station Uncompahgre River near Ridgway was 514 cfs, as compared to the long-term average of 562 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 113% of normal as of the end of June.

Outlook

June is typically the driest month of the year during the irrigation season in western Colorado. However, June 2009 was a big exception. Near record rainfall combined with lower than normal temperatures has kept natural flow up throughout the basin. The trend may continue as the Colorado River Basin Forecast Center predicts wetter than normal conditions this summer in western Colorado. This would be in contrast to the very dry conditions which existed last summer.

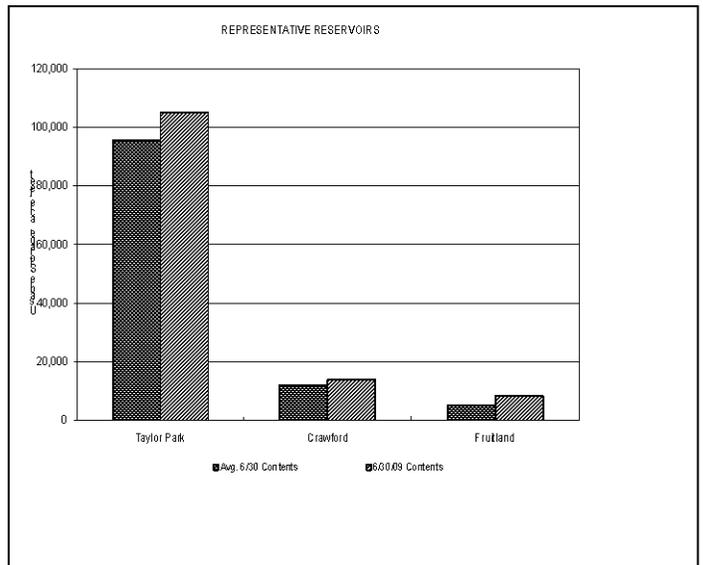
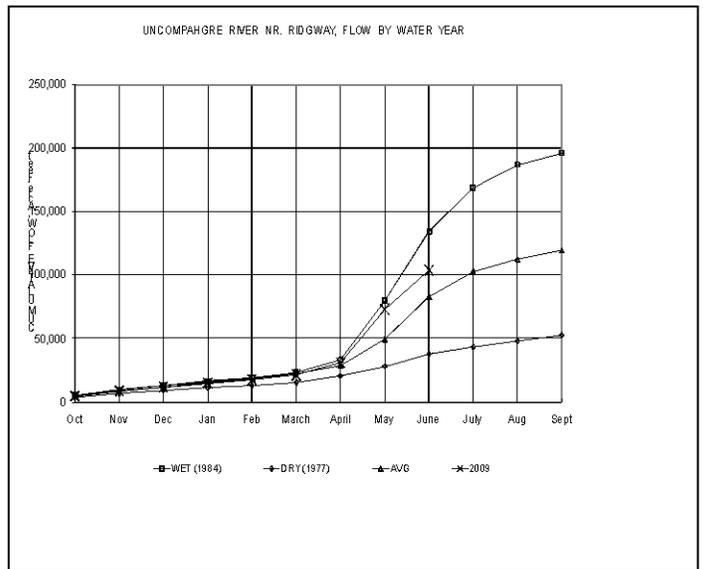
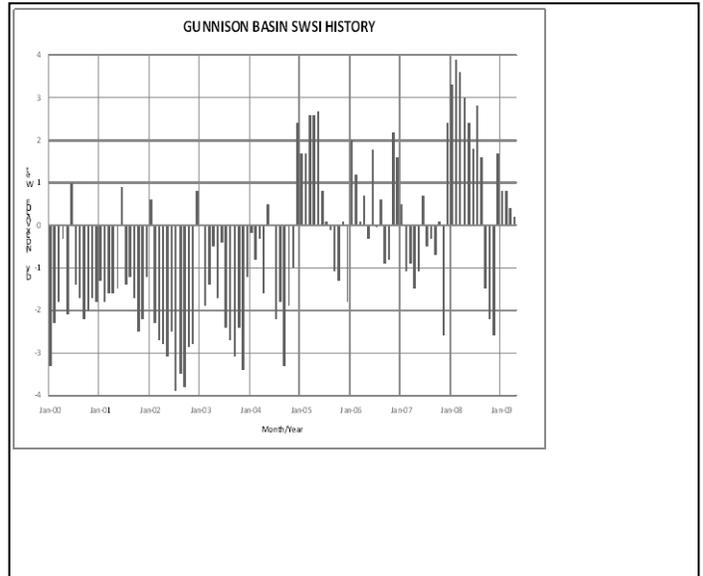
Administrative/Management Concerns

Due to the significant rainfall in June, inflows to the Aspinall Unit remained very high for the month and the Bureau of Reclamation needed to increase releases from the Aspinall Unit to prevent a spill at Blue Mesa Dam. As a result, flows in the Black Canyon below the Gunnison Tunnel were between 2,100 and 3,400 cfs during the month of June. Flows in the Black Canyon typically fall to below 1,500 cfs by the end of June.

With the exception of Blue Mesa Reservoir and Taylor Park Reservoir, all of the Bureau of Reclamation reservoirs spilled this spring. Blue Mesa Reservoir and Taylor Park Reservoir are both managed to prevent spilling, yet both reservoirs reached full capacity in June. With full reservoirs at this time of the year, administrative and management concerns will be at a minimum for the water year 2009.

Public Use Impacts

One bonus from the wetter than normal conditions in June is a big hay crop for 2009. Unfortunately, farmers were forced to deal with rainy conditions as haying season began in June throughout the basin. As a result, the rainy weather did take a toll on the first cutting in some areas.



Basinwide Conditions Assessment

The SWSI value for the month was 1.5. Flow at the gaging station Colorado River near Dotsero was 8,018 cfs, as compared to the long-term average of 3,956 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 116% of normal as of the end of June.

Outlook

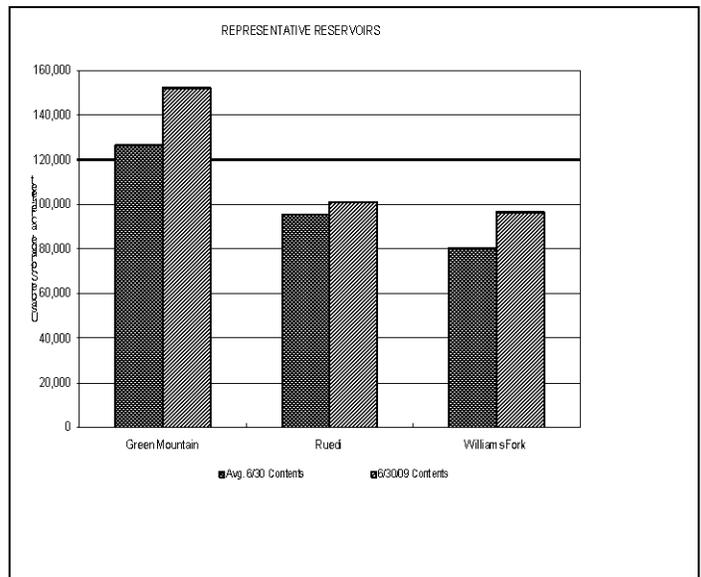
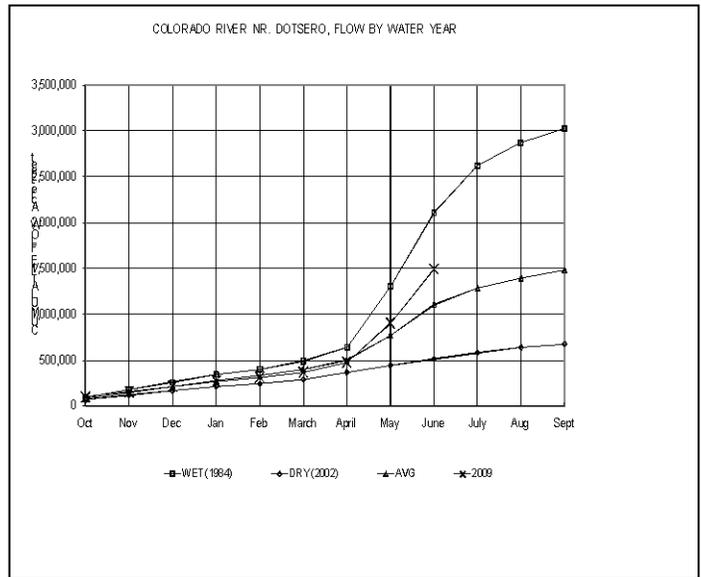
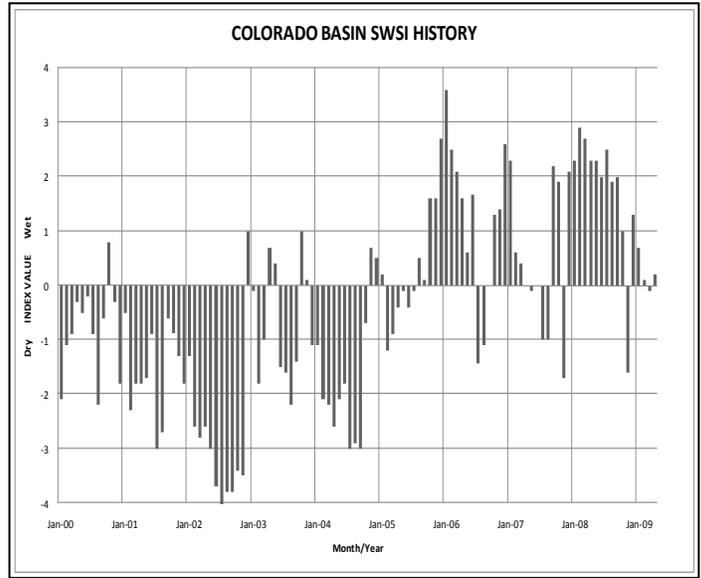
Colorado River flows remained considerably above average in early and late June. Green Mountain and Ruedi Reservoir releases increased throughout the month, pushing Colorado and Roaring Fork River flows very close to their peaks last month. Similar end-of-month highs were seen on the upper Blue and Lower Eagle Rivers, with the Eagle River below Gypsum reaching its peak on June 26th. Upper Roaring Fork and Crystal River flows remained above average through the end of the month.

Administrative/Management Concerns

Green Mountain and Ruedi Reservoir inflows increased throughout the month, resulting in corresponding release increases which pushed Colorado and Roaring Fork River flows very close to their peaks last month. There were no calls from Shoshone Hydro Power Plant or Grand Valley water users. Continuing above average basin wide flows will likely keep calls from occurring through July 31st.

Public Use Impacts

Despite cooler weather, sustained above average Roaring Fork and Colorado River flows continued to draw rafting and kayaking enthusiasts. Lake Powell continued to rise surpassing last year's peak. Forecasts are for the lake to reach a maximum elevation of approximately 3643 feet, an increase of 9 feet above last year's maximum.



Basinwide Conditions Assessment

The SWSI value for the month was 0.1. Flow at the gaging station Yampa River at Steamboat Springs was 2,105 cfs, as compared to the long-term average of 1,615 cfs.

After a relatively dry May, June precipitation was well above average for the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 193% of average for the Yampa/White River basin and 192% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 192% of average for the month of June and 104% of average for the water year to-date.

Spring-like conditions and above average temperatures in May and above average rainfall in June contributed to a rapid spring snowmelt. The remaining snowpack at the NRCS SNOTEL sites was mostly melted by the end of the month.

Due to the high levels of June precipitation, most streamflows in Division 6 remain above the average flows typically seen this time of year.

Outlook

Fish Creek Reservoir storage level continued to increase and reached 100% of capacity in June. The reservoir started spilling on June 26 and remained at 100% of capacity throughout the rest of the month. Elkhead Creek Reservoir remained at, or slightly below, capacity throughout June and was reported at 100% of capacity at the end of the month. The storage level at Yamcolo Reservoir declined slightly in June and was reported at 90% of capacity at the end of 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, recreation, and fish recovery releases.

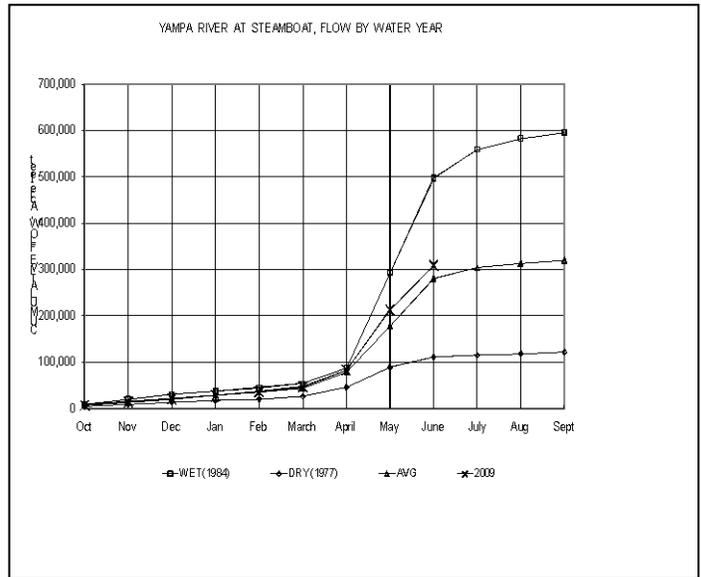
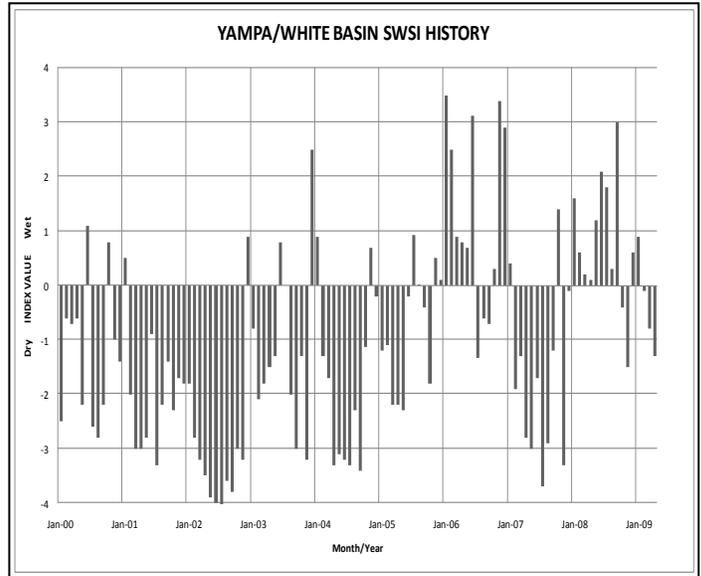
Administrative/Management Concerns

Calls were placed on the following Division 6 streams, which remained under administration at the end of the month: Bear River, Middle Hunt Creek, South Hunt Creek, Talamantes Creek, Vermillion Creek, and Piceance Creek.

The second year of the fish recovery release from Elkhead Creek Reservoir was completed successfully and data collected during the release are being compiled and reviewed by participating agencies. A transit loss study of Elkhead Creek will be conducted this summer and fall.

Public Use Impacts

High mountain reservoirs and State Parks in the area are open for the season, with good fishing reported.



Basinwide Conditions Assessment

The SWSI value for the month was -1.2. Flows at the Animas River at Durango averaged 1,758 cfs (63% of average). The flow at the Dolores River at Dolores averaged 628 cfs (48% of average). The La Plata River at Hesperus averaged 33 cfs (26% of average). Precipitation in Durango was 1.46 inches for May, over 200% of the 30-year average of 0.71 inches. Precipitation to date in Durango, for the water year, is 13.78 inches, above the average of 13.30 inches. The average high and low temperatures for the month of June in Durango were 74.3° and 47.4°. In comparison, the 30-year average high and low for the month is 82° and 45.6°.

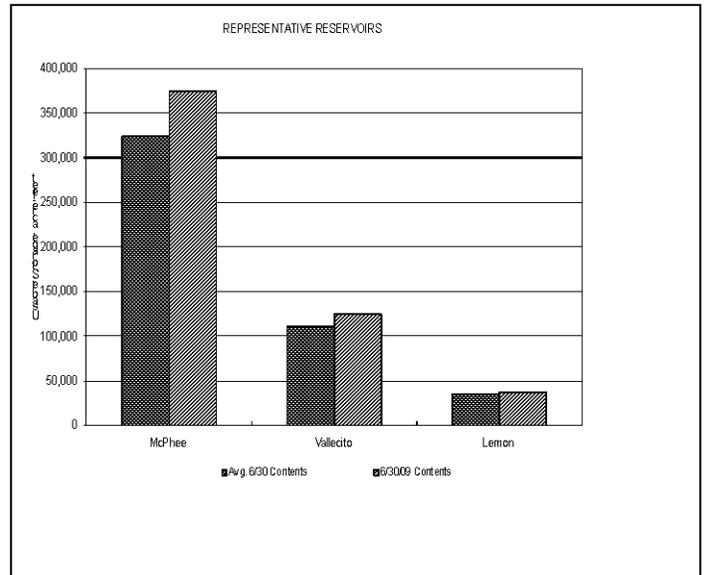
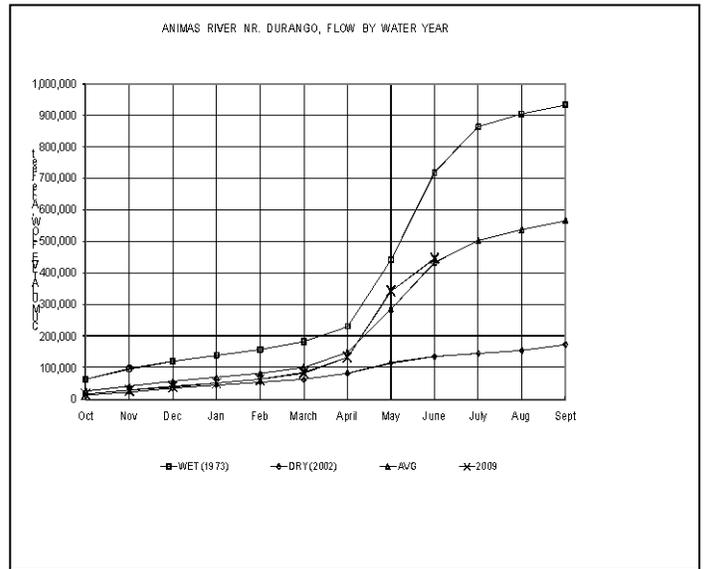
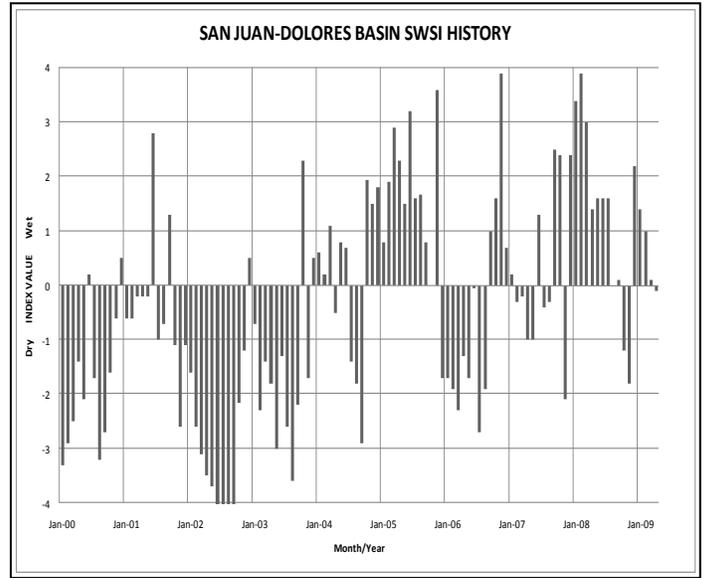
At the end of the month Vallecito Reservoir contained 124,680 acre-feet compared to its average content of 103,735 acre-feet (120% of average). McPhee Reservoir was up to 347,148 acre-feet compared to its average content of 324,301 (107% of average), while Lemon Reservoir was up to 37,160 acre-feet as compared to its average content of 33,478 acre-feet (111% of average).

Outlook

June is typically the driest month of the year, with monsoons arriving in July. However, with precipitation in June at 205% of average, it appears monsoons have arrived early. The early peak run-off in May has resulted in major rivers flowing well below average in June. As a result, the above-average precipitation for the month was a welcome surprise.

Administrative/Management Concerns

As of July 5th, 20,900 acre-feet have been pumped from the Animas River to fill Ridges Basin Reservoir, which is expected to take up to two years to fill depending on available water supplies and pumping plant capacity. Currently, the pumping rate to fill the reservoir is 285 cfs.



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