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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June 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 +3.2 in the Colorado and San Juan/Dolores Basins to a low value of +1.3 in the Gunnison Basin. All seven of the basins (South Platte, Arkansas, Rio Grande, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's values.

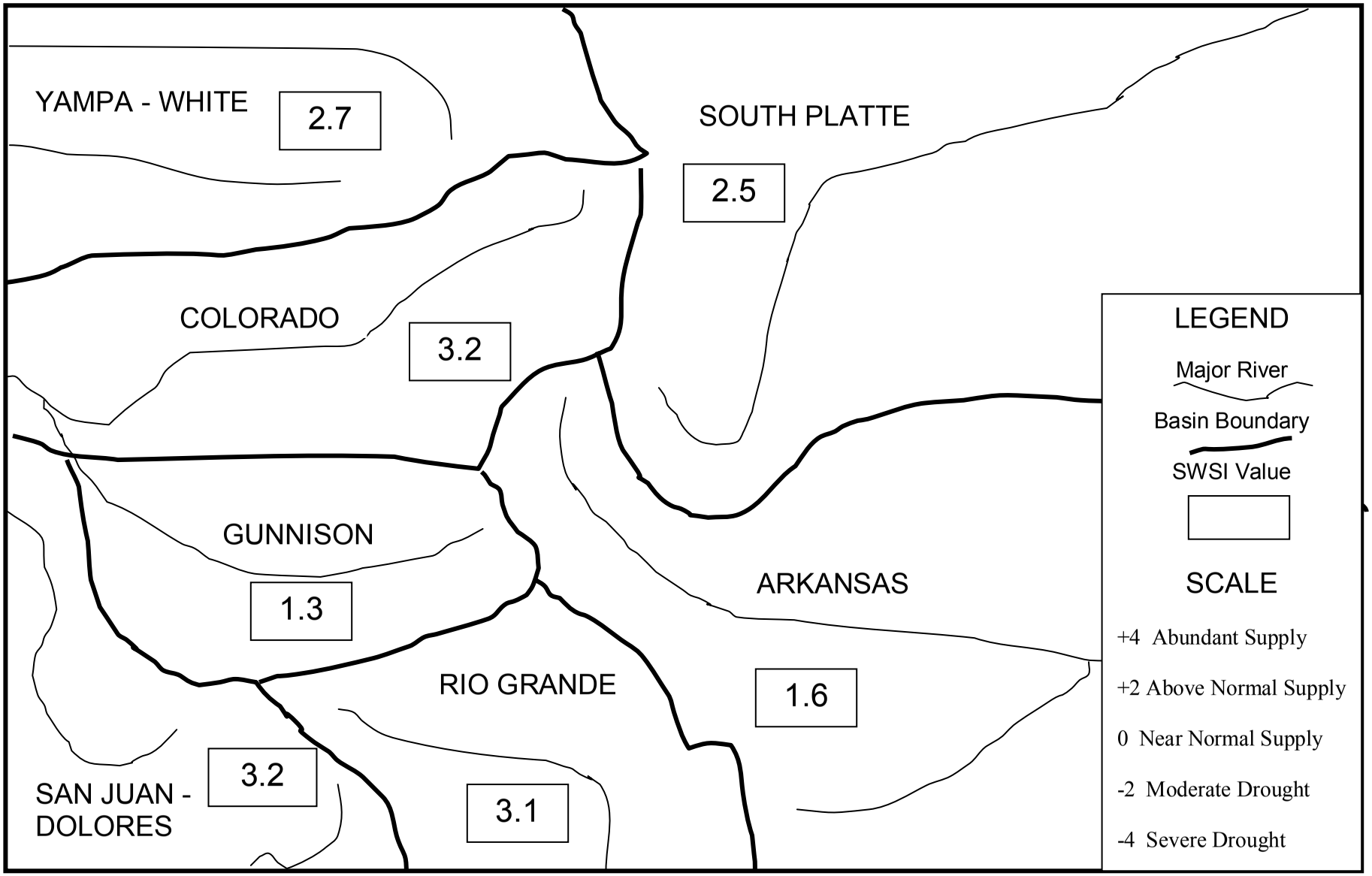
The following SWSI values were computed for each of the seven major basins for June 1, 2009, and reflect the conditions during the month of May 2009.

Basin	June 1, 2009 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	2.5	1.1	1.5
Arkansas	1.6	2.0	0.3
Rio Grande	3.1	2.0	2.3
Gunnison	1.3	1.1	- 1.1
Colorado	3.2	3.0	0.9
Yampa/White	2.7	4.0	1.5
San Juan/Dolores	3.2	3.3	1.6

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



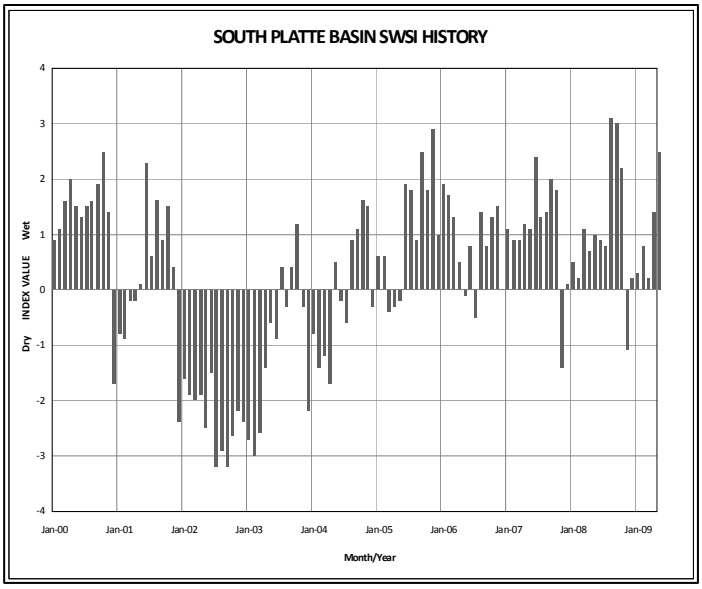
June 1, 2009

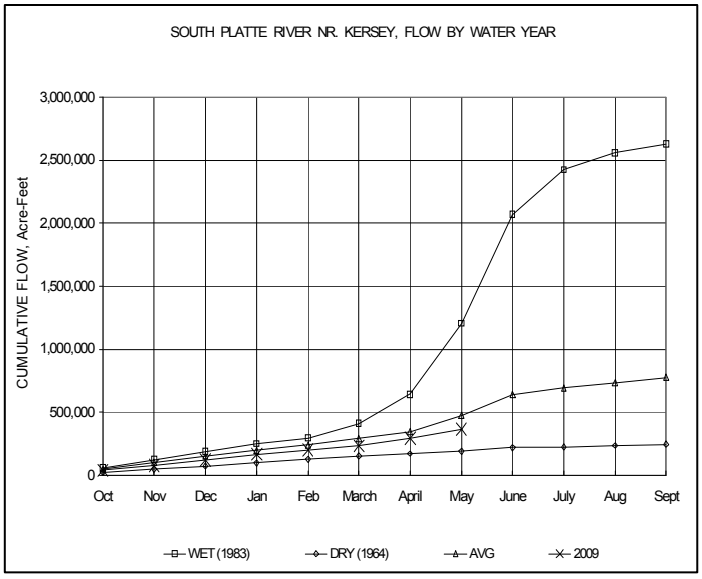
Basinwide Conditions Assessment

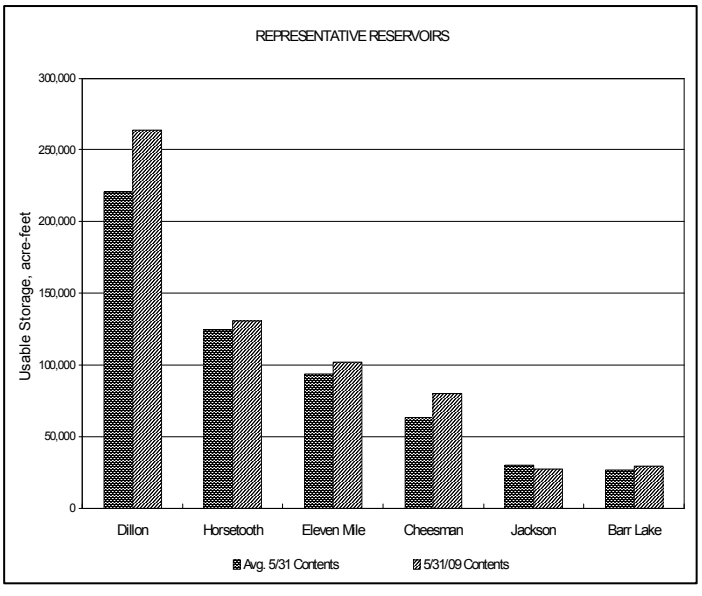
The SWSI value for the month was 2.5. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 113% of normal as of the end of September. Cumulative storage in the major plains reservoirs (Julesberg, North Sterling, and Prewitt) is at 97% 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 1,156 cfs, as compared to the long-term average of 2,060 cfs. Flow at the Colorado/Nebraska state line averaged 141 cfs.

Outlook

The call in May was generally for irrigation purposes though the supply and weather conditions were such that the call was very junior the entire month. Reservoir storage remains in good condition throughout the basin as users generally were able to finish filling their reservoirs in May if they had not already filled in earlier months, and were not required to use reservoir supplies to meet irrigation or municipal demands. With all the large reservoirs on the mainstem above Denver and along some of the tributaries near full, it is possible there will be significant above-average flows and free river on the South Platte in June, especially if there is significant rainfall in early June.







Basinwide Conditions Assessment

The SWSI value for the month was 1.6. Flow at the gaging station Arkansas River near Portland was 1,788 cfs, as compared to the long-term average of 1,167 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 113% of normal as of the end of May.

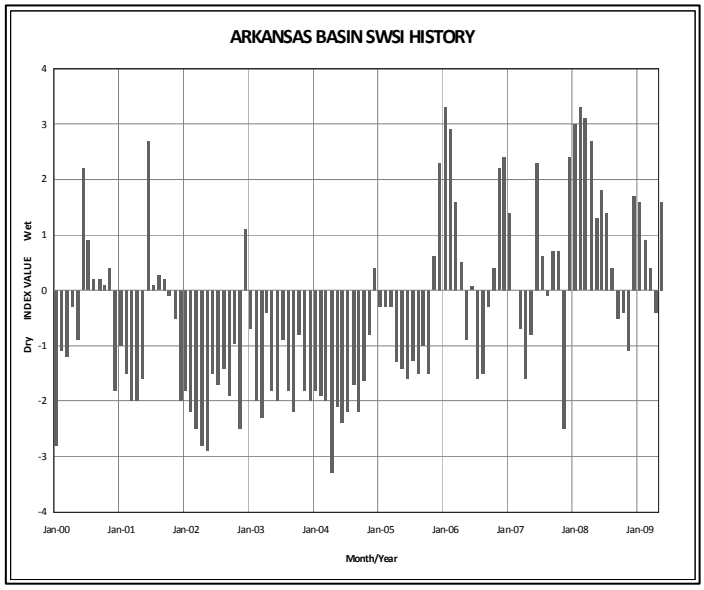
Outlook

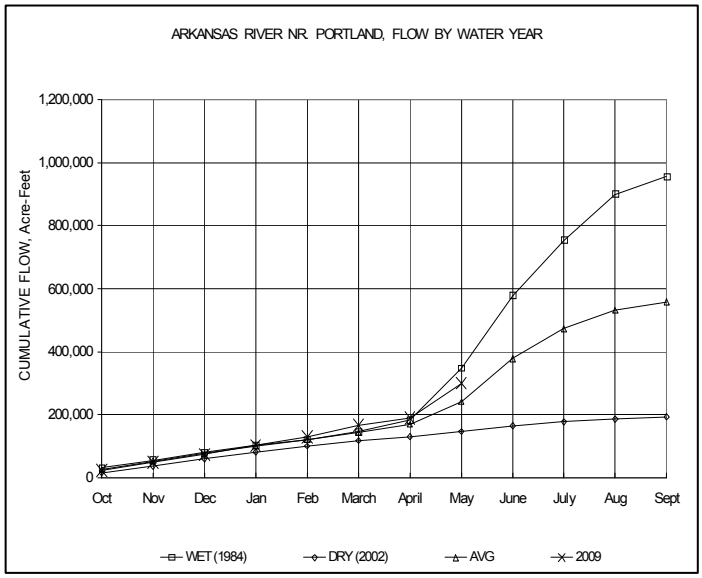
Snow melt runoff appeared to gain strength earlier this year and may have peaked on the Arkansas River during the third week in May. Timely rains also occurred during later May and helped provide sustained higher flows that seemed to meet all of the mainstem irrigation demand during May and provided some storage in off-channel reservoirs and John Martin Reservoir via the transferred Great Plains right for Amity.

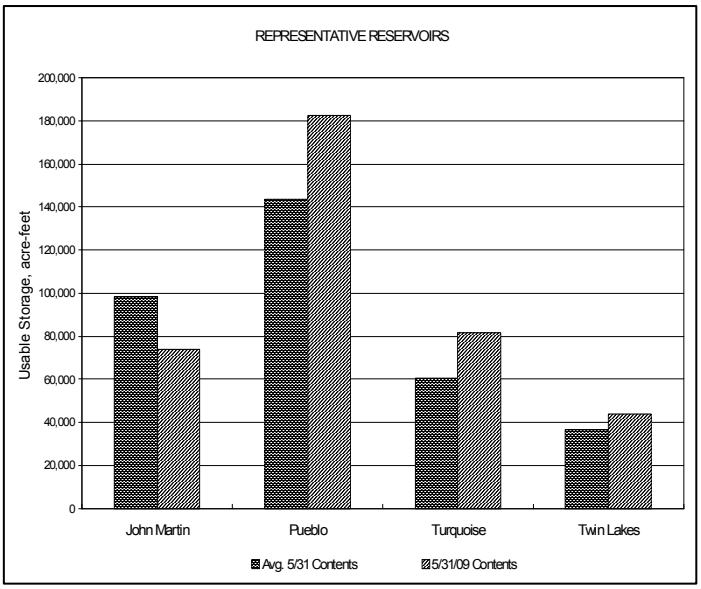
The river call at the beginning of the month was fairly senior at the Amity #1 right of 2/21/1887. As the river flows began to increase later in the month due to runoff conditions the call gradually moved to more junior water rights up through the 8/1/1896 Great Plains call.

Administrative/Management Concerns

Southeastern Colorado Water Conservancy District struggled to decide on a reasonable amount of Fryingpan Arkansas Project water to allocate as snowpack rapidly dwindled at key Snotel locations in the Fryingpan Basin. A very conservative allocation was ultimately made late in May. Mainstem ditches, municipalities and well owner organizations rely heavily on FryArk water as a supplemental source of supply.





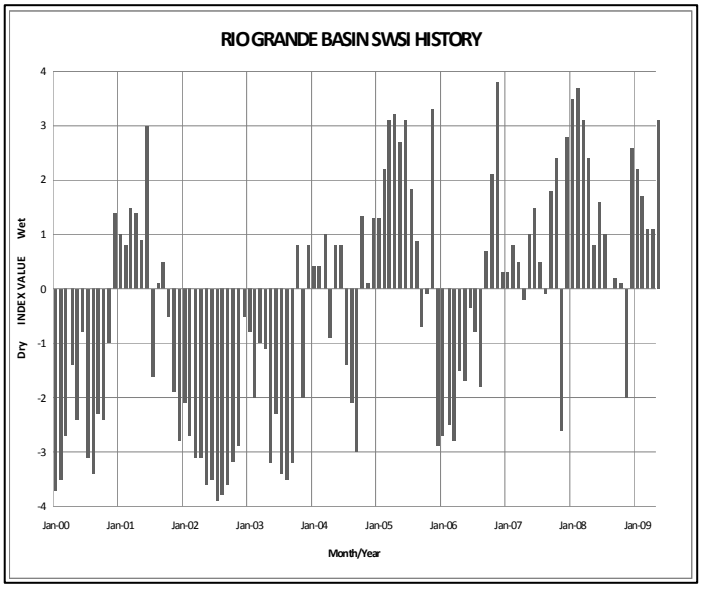


Basinwide Conditions Assessment

The SWSI value for the month was 3.1. Flow at the gaging station Rio Grande near Del Norte averaged 4,035 cfs (161% of normal). The Conejos River near Mogote had a mean flow of 1,338 cfs (121% of normal). Streamflow in the upper Rio Grande basin was generally well above normal during May as very warm temperatures early in the month jump-started the runoff. The hydrographic records for 2009 will show a quick rise in runoff during late April and early May with peaks coming about two to three weeks before normal then dropping to below normal levels in late May as the snowpack disappears.

The Valley floor received above average precipitation during May, the result of a lengthy stretch of cloudy and rainy conditions from May 19th through May 27th.

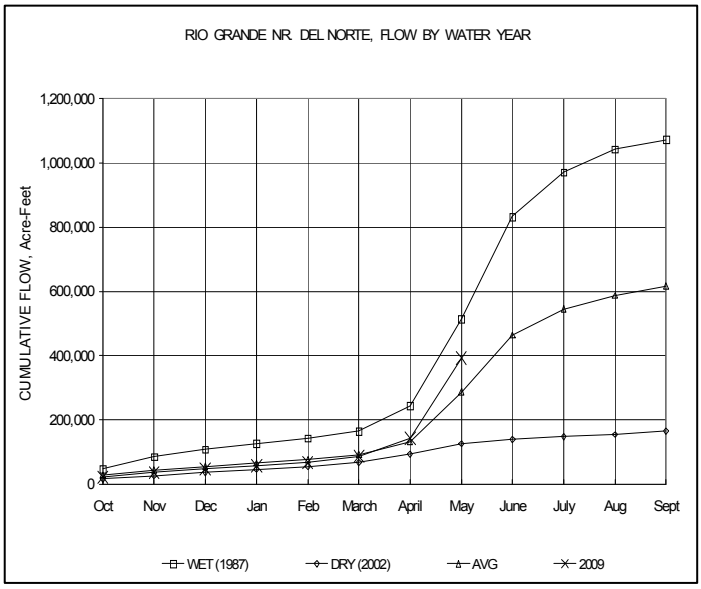
Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 163% of normal as of the end of May.



Outlook

Despite the early runoff and loss of most of the snowpack in the basin during May, the Natural Resources Conservation Service slightly increased their April through September runoff forecasts as of June 1st for many streams in the upper Rio Grande Basin. Most streams in the area are forecast in the 90 to 110% of normal range for the April through September period. However, due to the very high melt-out during May, streamflow is expected to be well below normal during the July through September period.

National Weather Service outlooks for the next 90 days call for warmer and wetter conditions in the upper Rio Grande basin.

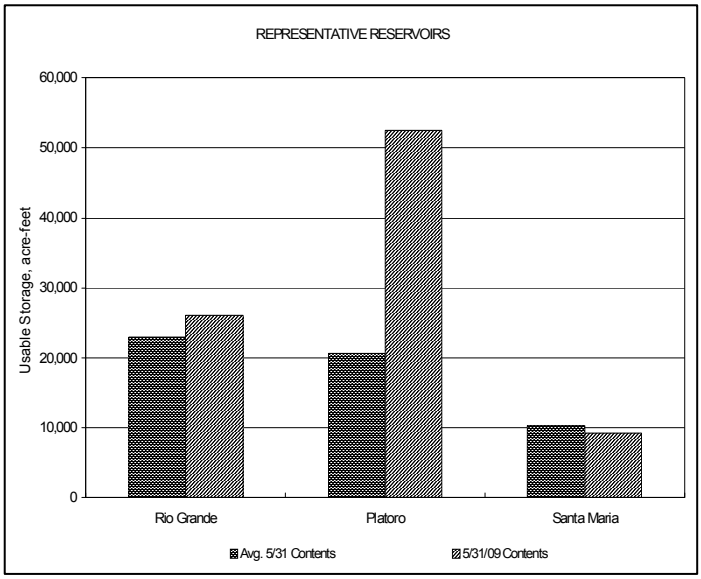


Administrative/Management Concerns

Simply stated, the runoff came very early this year. The benefits of this are much fuller reservoirs than expected and excellent deliveries to the State Line to meet the Rio Grande Compact delivery requirement in 2009. Most farmers just weren't ready for the early run of high water. Now, very little snow remains to get irrigators through the hot summer months. For those farmers and ranchers without reservoir water, reliance on groundwater pumping should be very high.

Public Use Impacts

The early warm weather was very favorable to farmers and ranchers with pasture, alfalfa and grass. Their crops are now about two weeks ahead of normal. The vegetable farmers had some difficulty getting their fields planted. As the month came to a close, Platoro and Terrace Reservoirs were very close to legal capacity.



Basinwide Conditions Assessment

The SWSI value for the month was 1.3. Flow at the gaging station Uncompahgre River near Ridgway was 681 cfs, as compared to the long-term average of 336 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 138% of normal as of the end of May.

The spring runoff began in April, but the warm weather in the first half of May, combined with many dust on snow layers in the snowpack, really made a big impact on the rate of runoff, with runoff generally peaking throughout the basin approximately May 15th through May 18th. Cloudy weather with afternoon thundershowers persisted the second half of May, which slowed the runoff to more manageable levels.

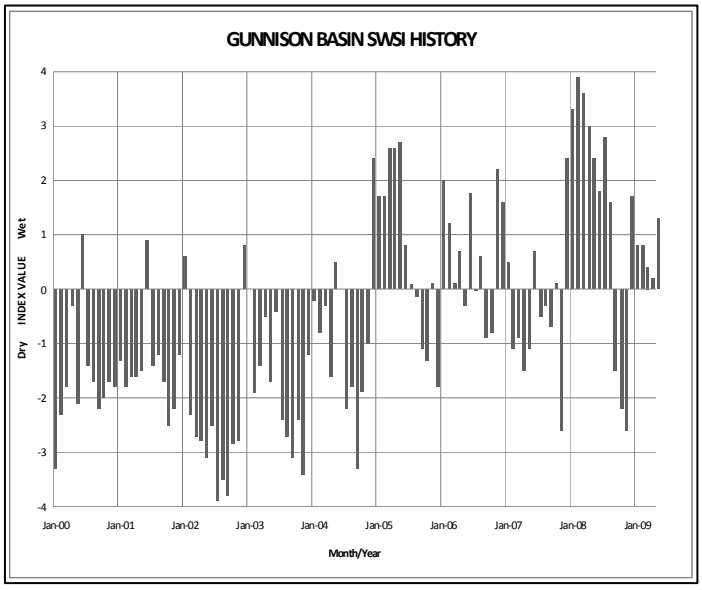
Reservoirs filled early this year with Silverjack, Ridgway, Paonia, and Crystal Reservoirs all spilling by the middle of May. Blue Mesa Reservoir and Taylor Park Reservoir are managed to prevent spills from occurring, yet were near capacity by the end of May, with Blue Mesa Reservoir gaining approximately twenty three feet of storage during May due to the accelerated runoff rate. Streamflows through the Black Canyon peaked at 6,700 cfs on May 13 and were reduced to approximately 2,000 cfs by the end of May.

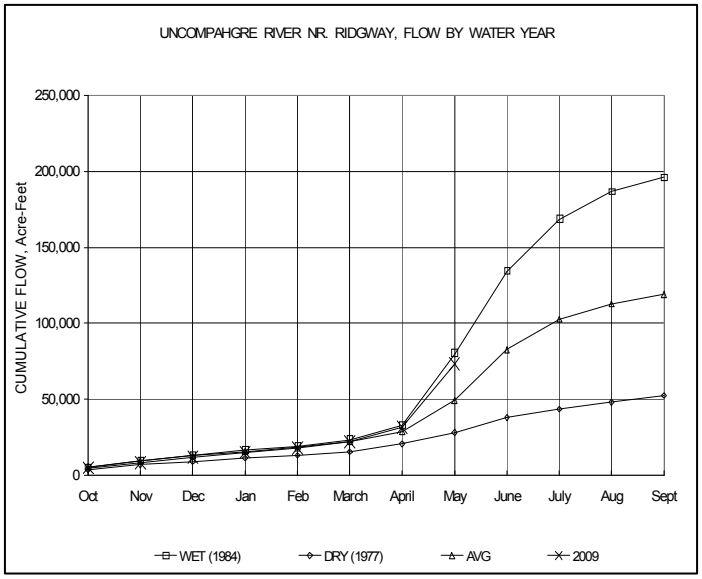
Outlook

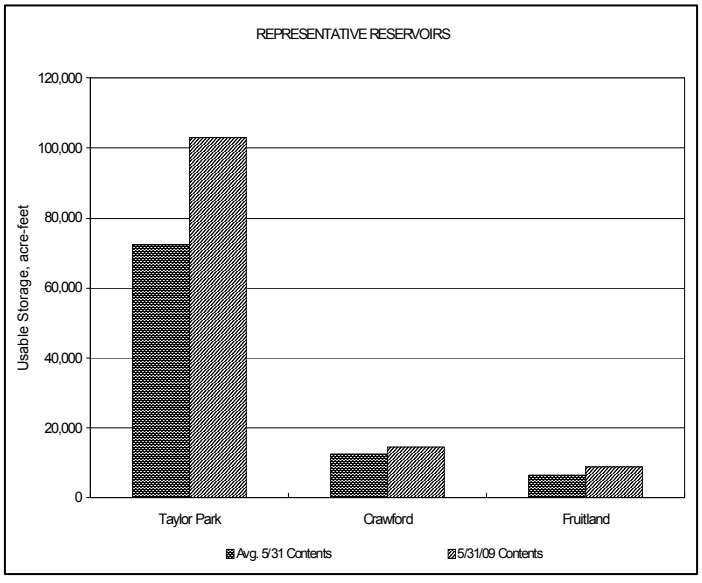
With runoff conditions above normal for this time of the year, we can expect natural flow to drop off in June and reliance on storage for the remainder of the irrigation season. However, reservoirs are all full in the basin and there has been above average precipitation the last half of May. The Natural Resources Conservation Service forecast for the summer is above average temperatures with above average rainfall for western Colorado. Hopefully that will translate into good monsoonal season rainfall, which was conspicuously absent in 2008.

Administrative/Management Concerns

A fast and early runoff made water available early for irrigators. However, in higher elevation areas of the basin, fields were not green and growing yet, thus unable to fully take advantage of the runoff. Other areas, such as the lower Uncompahgre River system, were able to make use of the early runoff. Ample storage throughout the basin will ensure a good irrigation supply this season.

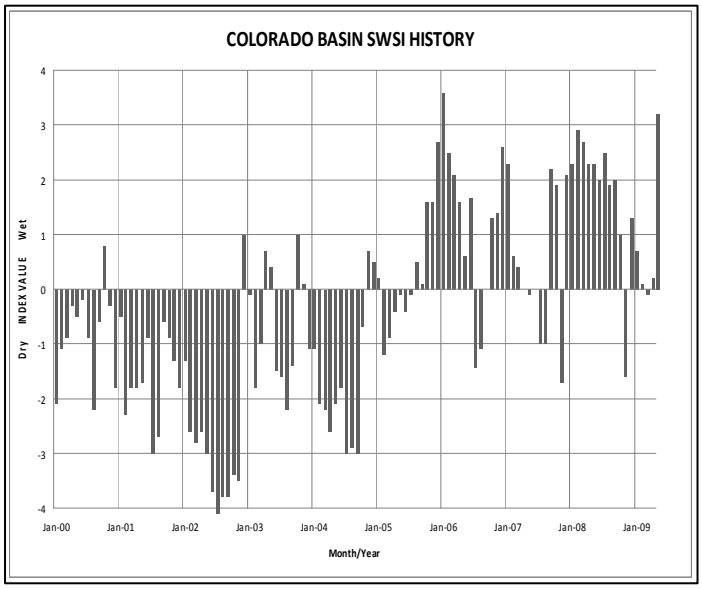






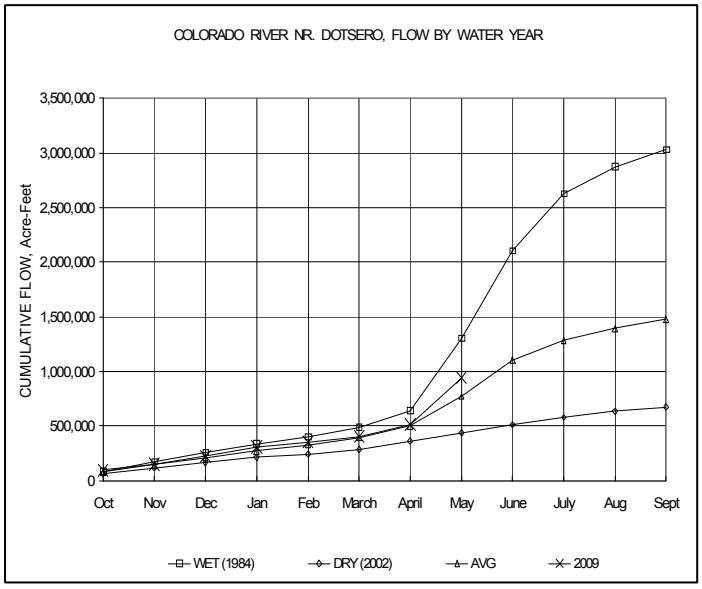
Basinwide Conditions Assessment

The SWSI value for the month was 3.2. Flow at the gaging station Colorado River near Dotsero was 6,969 cfs, as compared to the long-term average of 4,412 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 144% of normal as of the end of May.



Outlook

Warmer temperatures in early May and coordinated reservoir operations, along with heavy precipitation late in the month, resulted in Roaring Fork and Colorado River flows considerably above average throughout the month. Upper Roaring Fork River flows remained average throughout the month, while upper Blue River flows were moderately above average. Upper Colorado River basin precipitation remained close to last month's average at 105% of average as of June 1st (lower than the level of 115% observed June 1, 2008). The Roaring Fork and Crystal Rivers peaked the third week of May, and cooler temperatures over the past two weeks has significantly reduced flooding potential.

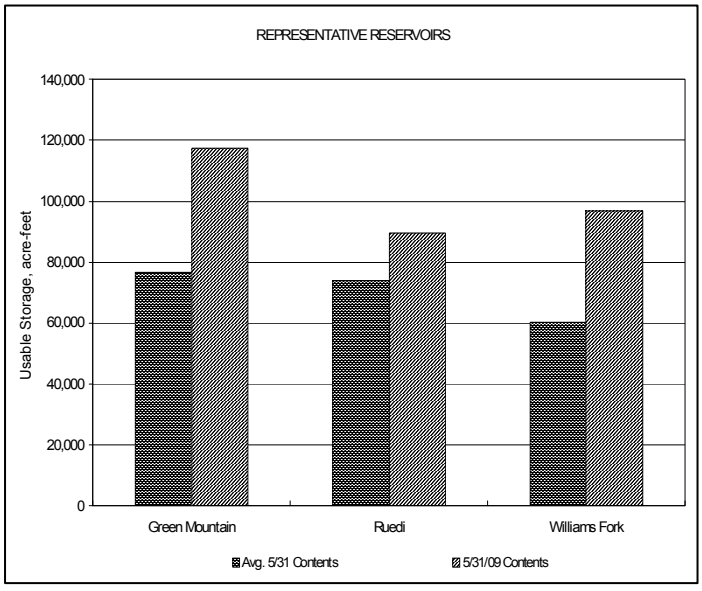


Administrative/Management Concerns

Windy Gap, Williams Fork, Green Mountain and Reudi Reservoirs participated in Coordinated Reservoir Operations to enhance the peak of the 15-mile reach increasing flows over a twelve-day period from May 14th – 26th. High Dillon Reservoir releases and subsequent increase in Green Mountain Reservoir fill rate, resulted in continued high release rate through the end of May. There is no irrigation call from Grand Valley water users.

Public Use Impacts

Higher lower Roaring Fork and Colorado River flows continued to draw rafting and kayaking enthusiasts. Glenwood Springs Whitewater Park hosted the 2009 U.S. Freestyle Kayak Team Trials on May 30-31.



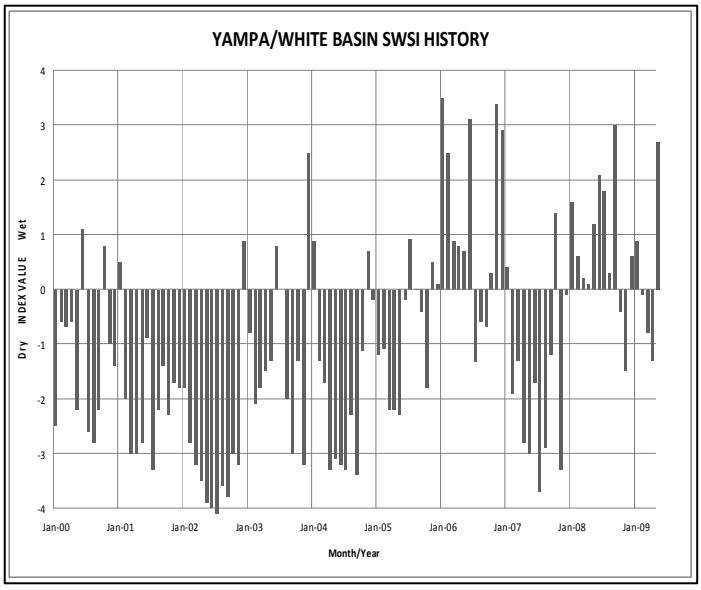
Basinwide Conditions Assessment

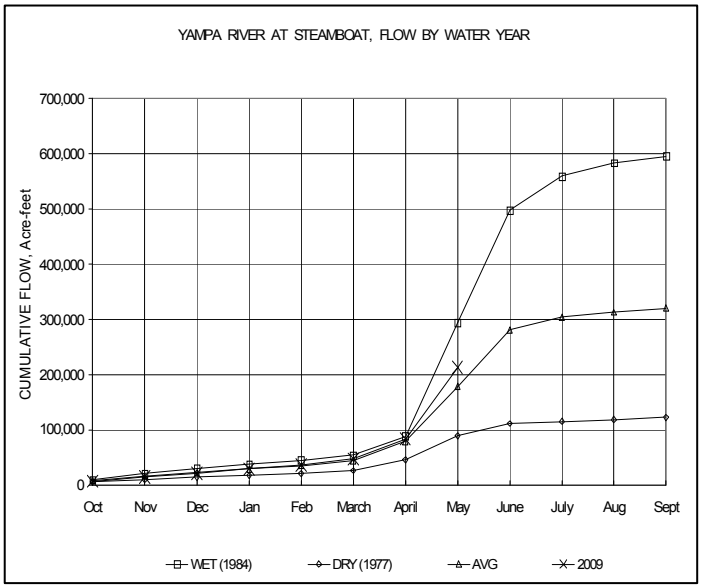
The SWSI value for the month was 2.7. Flow at the gaging station Yampa River at Steamboat Springs was 2,105 cfs, as compared to the long-term average of 1,615 cfs.

After a wet April, May precipitation was well below 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 73% of average for the Yampa/White River basin and 71% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 72% of average for the month of May and 99% of average for the water year to-date.

Spring-like conditions and above average temperatures in May contributed to a rapid spring snowmelt. The remaining snowpack, measured at the NRCS SNOTEL sites, was well below average at the end of the month. The snow water equivalent (SWE) as of May 31, 2009 for the Yampa and White River basins was 38% of average and for the Laramie and North Platte River basins was 49% of average. For the individual Division 6 basins, the snowpack at the end of the month was 47% of average for the North Platte River basin, 32% of average for the Yampa River basin, and 54% of average for the White River basin.

As a result of the rapid May snowmelt, NRCS predicts below average to well below average June/July streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the June through July period are 60% of average for the North Platte River at Northgate, 67% of average for the Yampa River near Maybell, 85% of average for the Little Snake River near Lily, and 58% of average for the White River near Meeker.





Outlook

Fish Creek Reservoir storage level continued to increase in May and was reported at approximately 86% of capacity at the end of the month. Elkhead Creek Reservoir and Yamcolo Reservoir remained at or slightly below capacity throughout May. Both reservoirs continued to spill and release water throughout much of the month and were reported at 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

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.

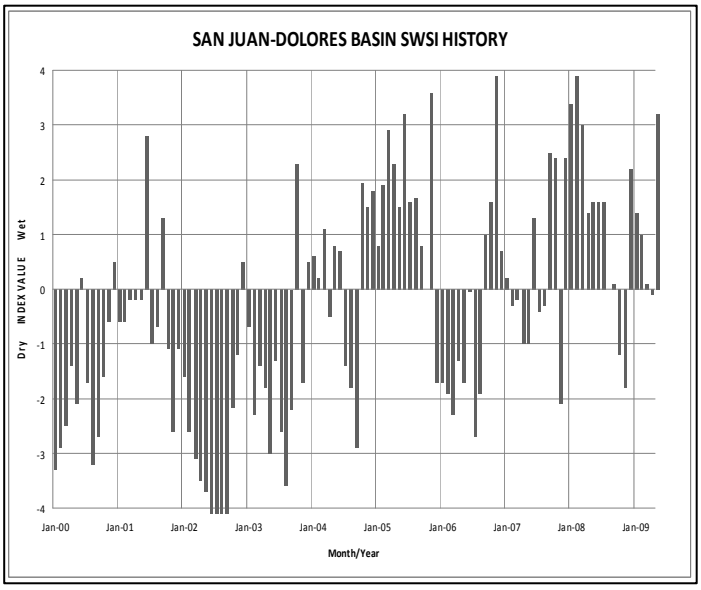
Public Use Impacts

High mountain reservoirs are beginning to thaw and State Parks in the area are preparing to open for the season.

Basinwide Conditions Assessment

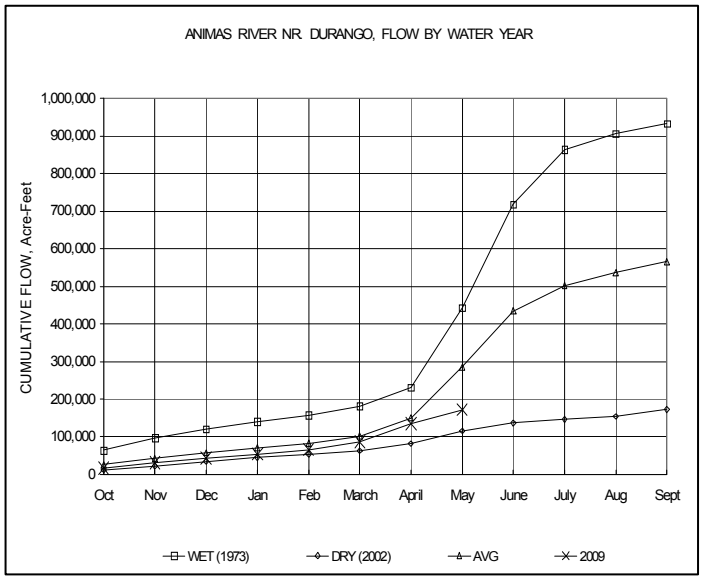
The SWSI value for the month was 3.2. Flows at the Animas River at Durango averaged 3,400 cfs (147% of average). The flow at the Dolores River at Dolores averaged 2,100 cfs (123% of average). The La Plata River at Hesperus averaged 194 cfs (115% of average). Precipitation in Durango was 1.74 inches for May which is above the 30-year average of 1.16 inches. Precipitation to date in Durango, for the water year, is 12.32 inches which is near the average of 12.52 inches. Temperatures were near normal for the month. Durango was 1° above its 30-year average high and 3.9° above the 30-year average low.

At the end of the month Vallecito Reservoir contained 124,250 acre-feet compared to its average content of 87,807 acre-feet (142% of average). McPhee Reservoir was up to 381,429 acre-feet compared to its average contend of 323,130 (118% of average), while Lemon Reservoir was up to 39,340 acre-feet as compared to its average content of 30,151 acre-feet (130% of average).



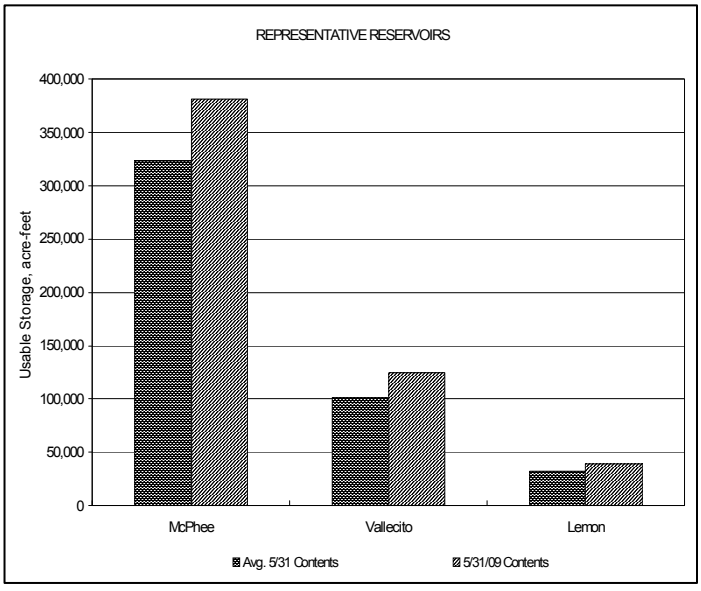
Outlook

May started the month unseasonably dry and warm but finished with wet and mild conditions. The peak runoff from snow melt occurred during the 3rd and 4th week of the month for all the major rivers within the basin. June is typically the driest month of the year with the monsoons starting in July. With most of the snow already gone the hope is for the monsoons to start sooner rather than later.



Administrative/Management Concerns

The USBR started the pumping of water into Ridges Basin Reservoir. The reservoir is expected to take up to two years to fill depending on available water supplies and pumping plant capacity. New Mexico placed a call on the LaPlata River starting on April 13th for one half (½) the flows at the upper index gage.



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