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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September 2006

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 August range from a high value of 1.0 in the San Juan/Dolores Basin to a low value of -0.9 in the Gunnison Basin. Four of the basins (Arkansas, Rio Grande, Colorado, San Juan/Dolores) experienced a gain from the previous month's values. Three of the basins (South Platte, Gunnison, and the Yampa/White) experienced a decrease from the previous month's values.

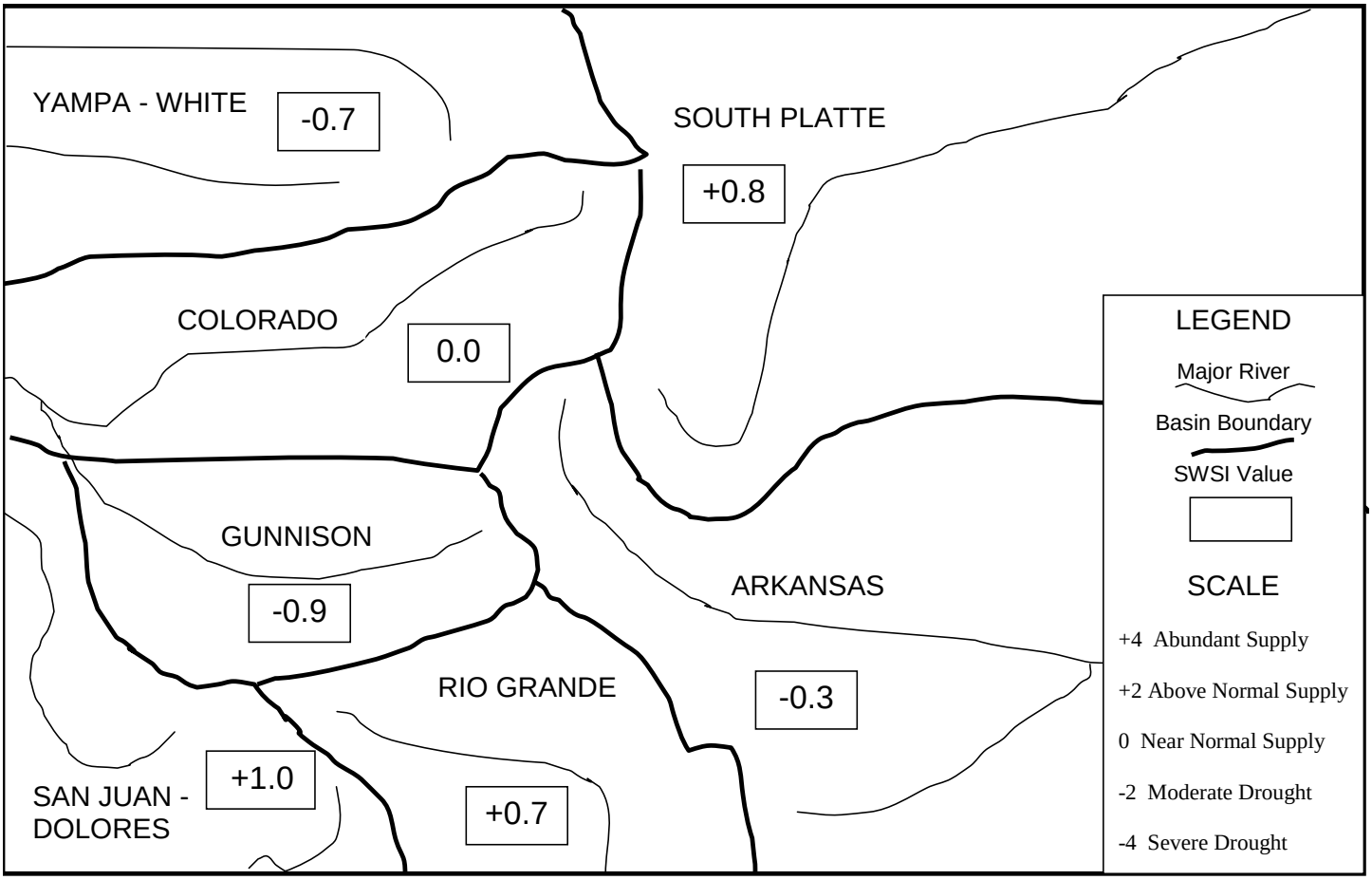
The following SWSI values were computed for each of the seven major basins for September 1, 2006, and reflect the conditions during the month of August.

Basin	September 1, 2006 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+0.8	-0.6	-1.7
Arkansas	-0.3	+1.2	+0.7
Rio Grande	+0.7	+2.5	+1.4
Gunnison	-0.9	-1.5	+0.2
Colorado	0.0	+1.1	-0.1
Yampa/White	-0.7	-0.1	-0.3
San Juan/Dolores	+1.0	+2.9	+0.2

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



September 1, 2006

Basinwide Conditions Assessment

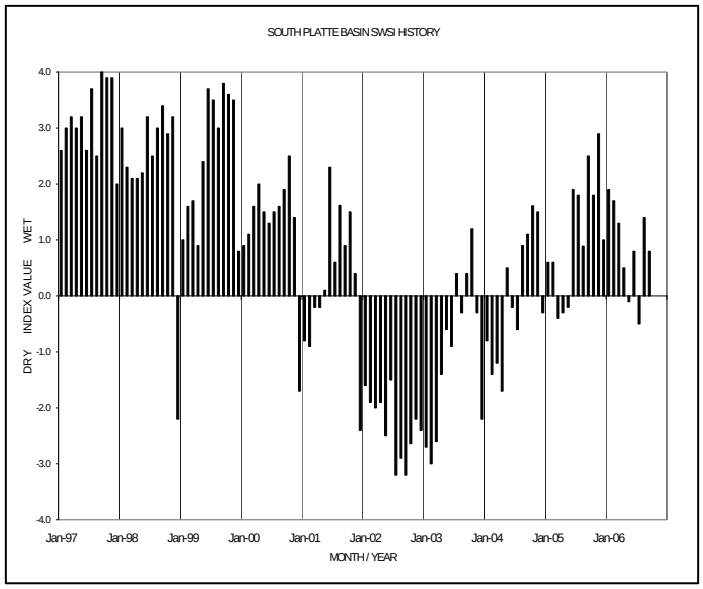
The SWSI value for August was 0.8. Reservoir storage in Barr Lake, Cheesman, Dillon, Eleven Mile, Horsetooth, and Jackson, the major component in this basin in computing the SWSI value, was 100% of normal as of the end of August. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 7.0% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 97% of capacity. Flow at the gaging station South Platte River near Kersey was 320 cfs, as compared to the long-term average of 664 cfs. Flow at the Colorado/Nebraska state line averaged 25 cfs.

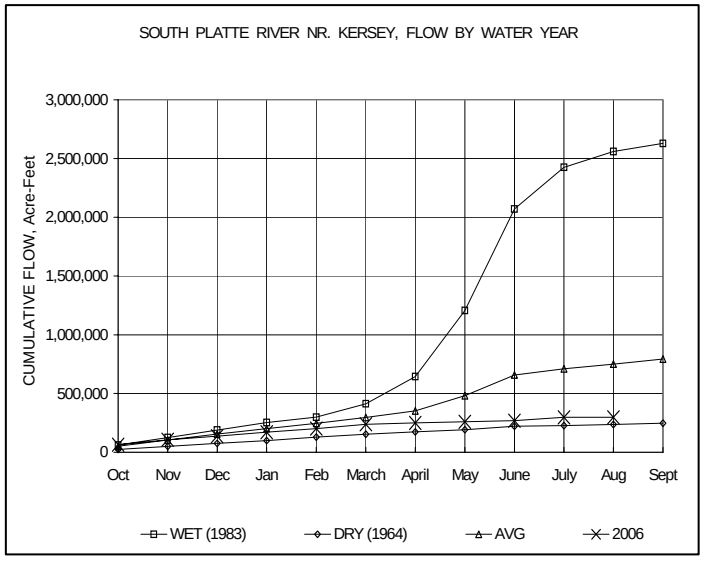
Outlook

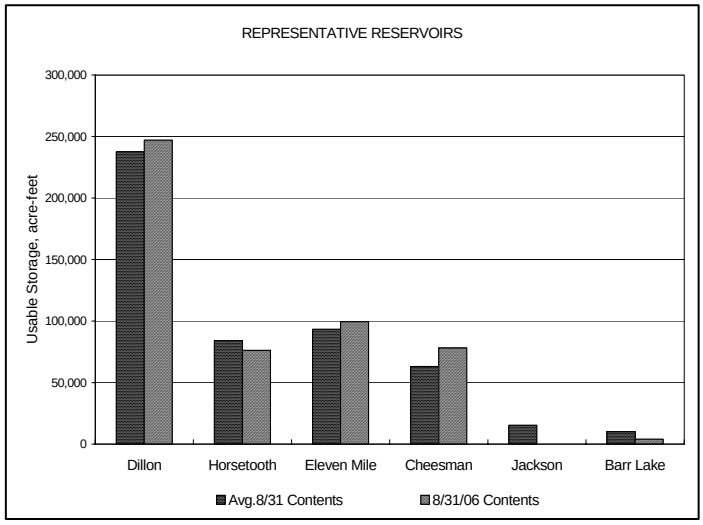
The flow in the South Platte continued below average for the month of August though it was similar to last years August flow. The flows necessitated the use of some storage water during the month for irrigation usage. With the significant storage usage during the beginning of the season in April through June, irrigation reservoirs are at extremely low levels and near empty in some cases. In contrast municipal reservoirs are in excellent shape with the near record diversions from the west slope for the Denver area this year due to more favorable conditions in the Colorado River drainage. While perhaps not in quite as good as Denver area municipalities, northern Colorado Front Range municipalities are also in a good water situation.

Administrative/Management Concerns

While storage is low for irrigation users, the somewhat better hydrologic conditions during July and August than in previous months have allowed most irrigation users to avert a serious shortfall in water this year. With the irrigation season beginning to wind down in September and October, it is extremely important that we have favorable conditions to allow for the beginning of refilling of irrigation reservoirs and potentially recharge. Without October reservoir filling and recharge at a minimum it will be very difficult to fill all the irrigation reservoirs next year unless conditions in the spring are very wet.







Basinwide Conditions Assessment

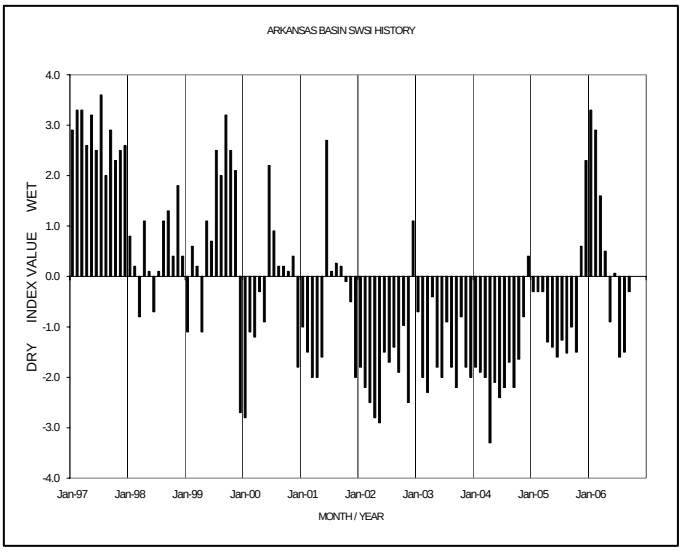
The SWSI value for August was –0.3. Flow at the gaging station Arkansas River near Portland was 719 cfs, as compared to the long-term average of 945 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 76% of normal as of the end of August.

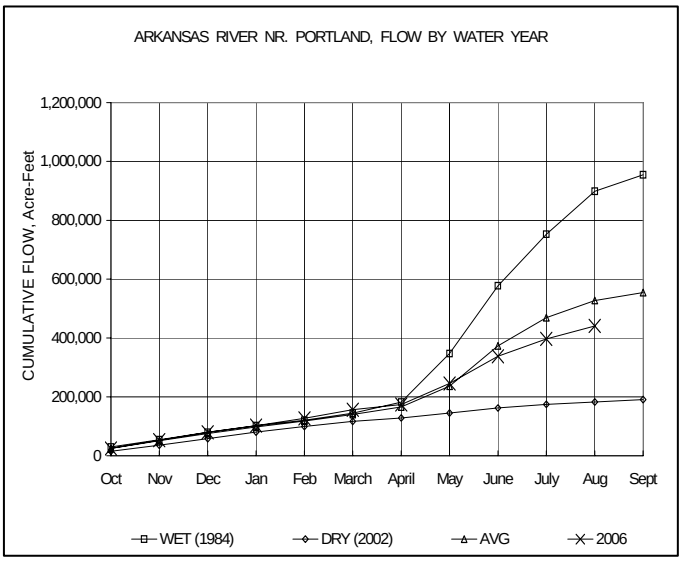
Outlook

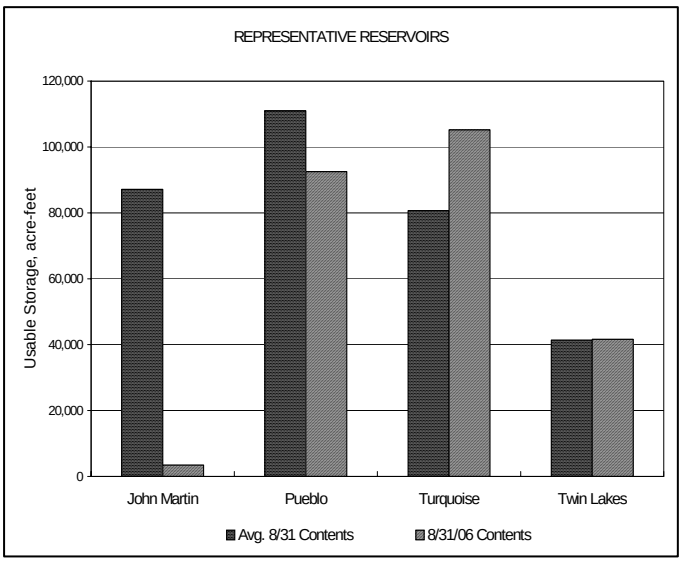
The Arkansas River call began the month set at the Catlin #1 call (12/3/1884). The river call at the end of August was the Amity call (2/21/1887). Rain events pushed the call as junior as the Great Plains Reservoir call for a brief period in August.

Administrative/Management Concerns

John Martin Reservoir contents diminished to just over 2,500 acre-feet during August causing concerns for the remaining fisheries pool. The capacity for John Martin Reservoir storage below the flood pool is approximately 346,000 acre-feet, so the current content is a significant drop from prior years. It appears that the reservoir may have reached its lowest level and may be slowly re-filled by augmentation storage by the Lower Arkansas Water Management Association and after November 1 by conservation storage during the winter season.







Basinwide Conditions Assessment

The SWSI value for August was 0.7. Flow at the Rio Grande near Del Norte gaging station averaged 827 cfs (104% of normal). The Conejos River near Mogote had a mean flow of 258 cfs (127% of normal). Precipitation in Alamosa was 1.08 inches, just below the norm of 1.19 inches. July was a very rainy month in the San Luis Valley and August continued that trend. Measurable precipitation was recorded on 16 days. The frequent rain did not stop the trend of warmer than normal temperatures. The average temperature was nearly one and a half degree above normal.

Outlook

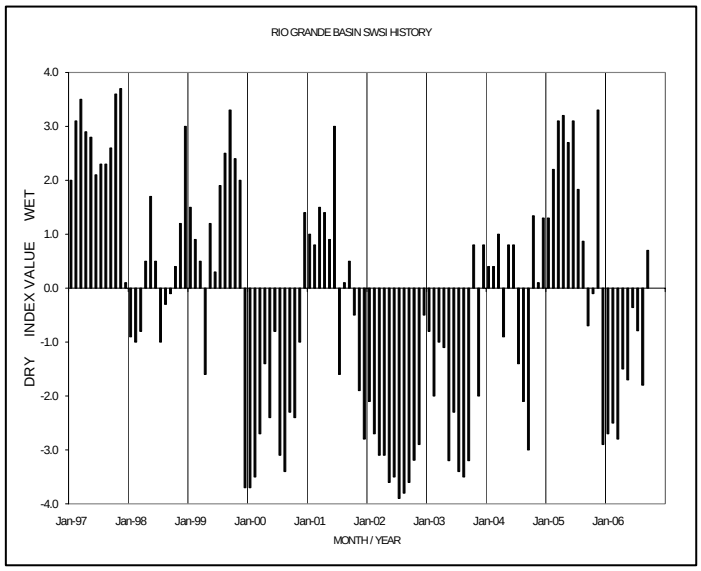
Rainfall throughout the basin benefited area stream flow levels greatly. Area streams were near or above average flow for August. A remarkable change from June and July. Soil moisture conditions in the basin are excellent.

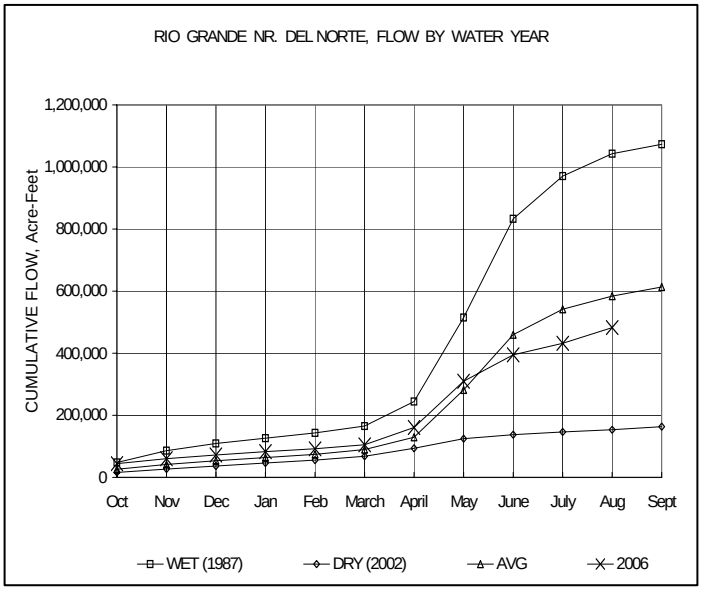
Administrative/Management Concerns

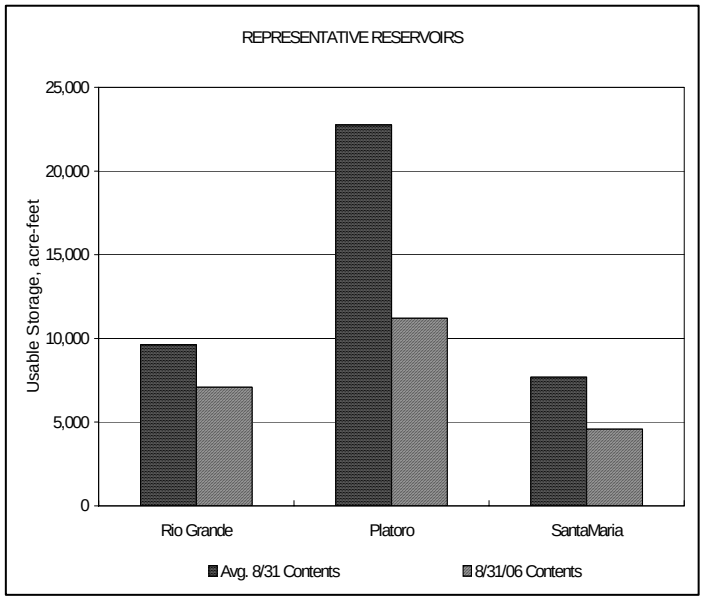
Deliveries of water to the State line required by the Rio Grande Compact have been increased due to the rain's unexpected impact on Index gage flow. The curtailment percentage was increased during August in an effort to keep up with the rising delivery obligation.

Public Use Impacts

The rainfall during August became a hindrance to many farmers and ranchers. They had great difficulty finding enough dry days to get their alfalfa, grain or hay put up after it was cut.







Basinwide Conditions Assessment

The SWSI value for August was –0.9. Flow at the gaging station Uncompahgre River near Ridgway was 178 cfs, as compared to the long-term average of 165 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 91% of normal as of the end of August.

Outlook

After a very wet July, the precipitation for the month of August has been about normal.

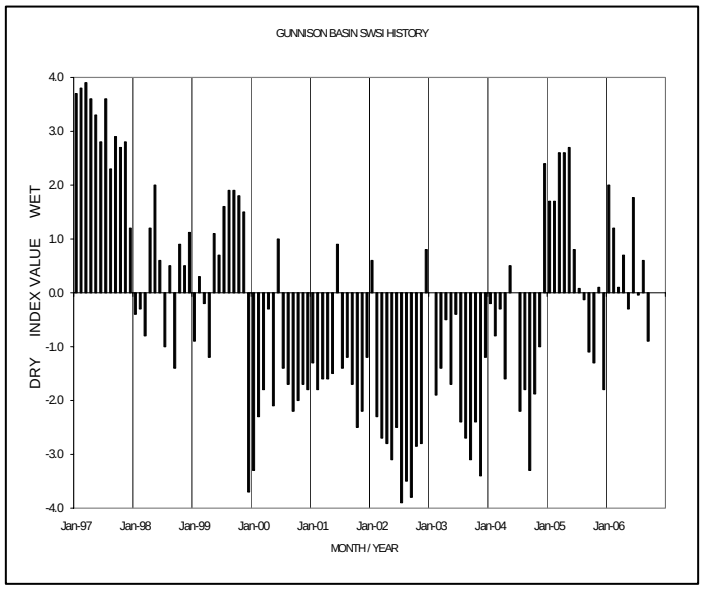
Administrative/Management Concerns

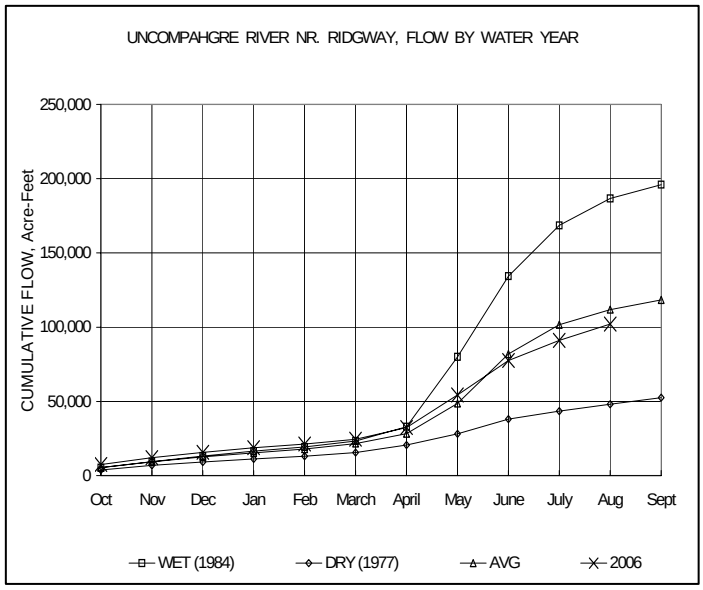
The occasional rains have been keeping the creeks and rivers at a higher level. The irrigation demands have been lower as well, all adding up to a great irrigation season. Reservoirs in the entire basin will have more carryover storage than usual going in to the winter season. The water level in Blue Mesa Reservoir has been drawn down 13 feet, after reaching a peak of 1.7 feet from the spillway in late June. The reservoir will continue to be drawn to meet the January 1 target level to prevent icing in the Gunnison River just above the reservoir.

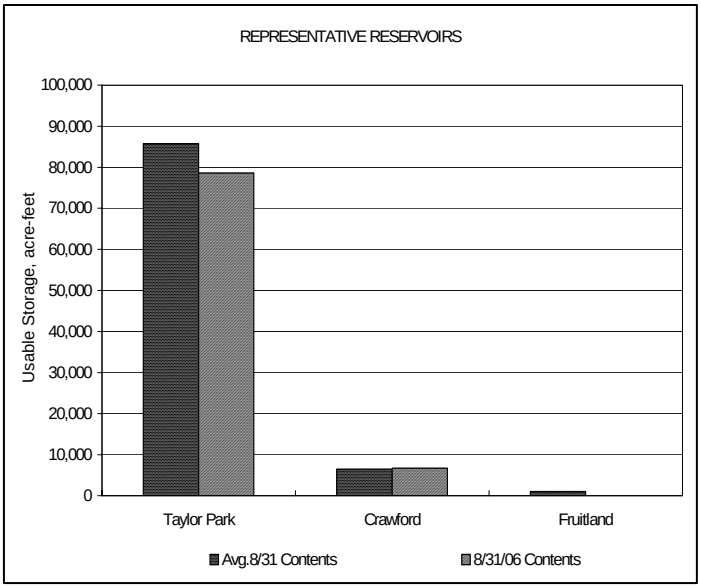
The power producers that operate the hydropower plants for the Aspinall Unit, consisting of Blue Mesa, Morrow Point and Crystal dams, are happy to have full reservoirs and higher flows. Blue Mesa and Morrow Point dams have 75 and 150 megawatt plants respectively. Because it's a three reservoir system, with the bottom reservoir being operated as a stabilization reservoir, the Aspinall Unit has become increasingly important on the power grid to produce true peaking power. The generators are ramped up during the day to match changes in power demands and shut down at night when the demand is less. Of course, the bottom reservoir is operated at a steady flow.

Public Use Impacts

The soil moisture should be high as we head into the fall season. Hopefully, the rains will continue and the basin will begin to accumulate a good snow pack.







Basinwide Conditions Assessment

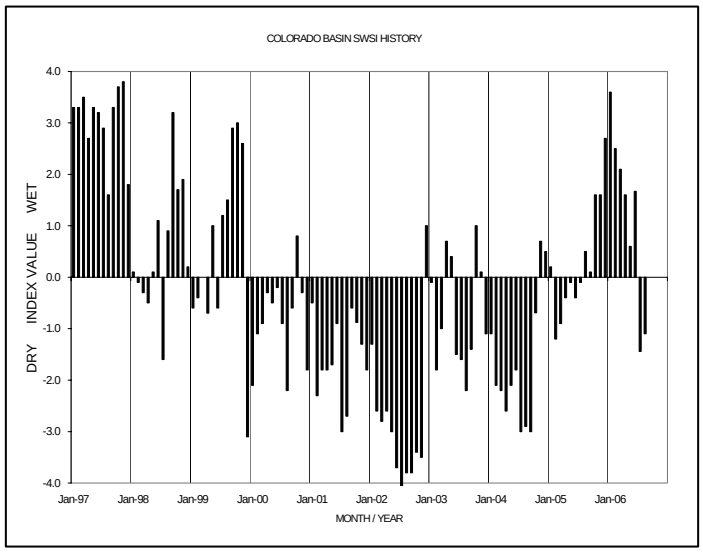
The SWSI value for August was 0.0. Flow at the gaging station Colorado River near Dotsero was 1488 cfs, as compared to the long-term average of 1783 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 103% of normal as of the end of August.

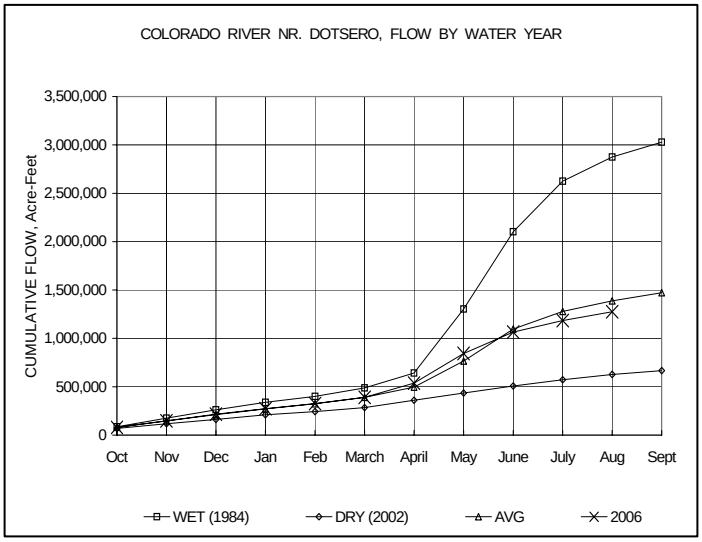
Outlook

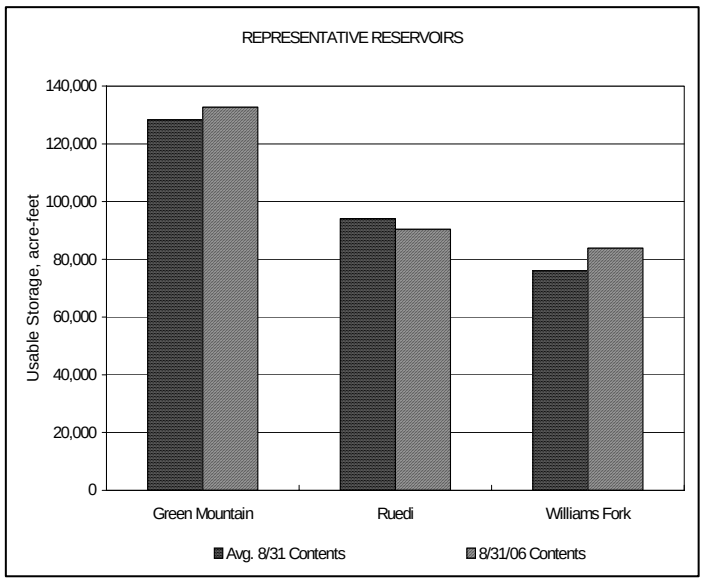
Early September rains in the Colorado River basin have kept most streams at near-average flow rates. The Shoshone power call remains on the mainstem, while the Grand Valley call has not been exercised so far this year.

On August 24, the Colorado Water Conservation Board made a written request for administration of the instream flow on the mainstem Colorado River from Windy Gap to the confluence with Williams Fork Reservoir.

Ski areas are preparing to start up their snowmaking operations in late September or October.



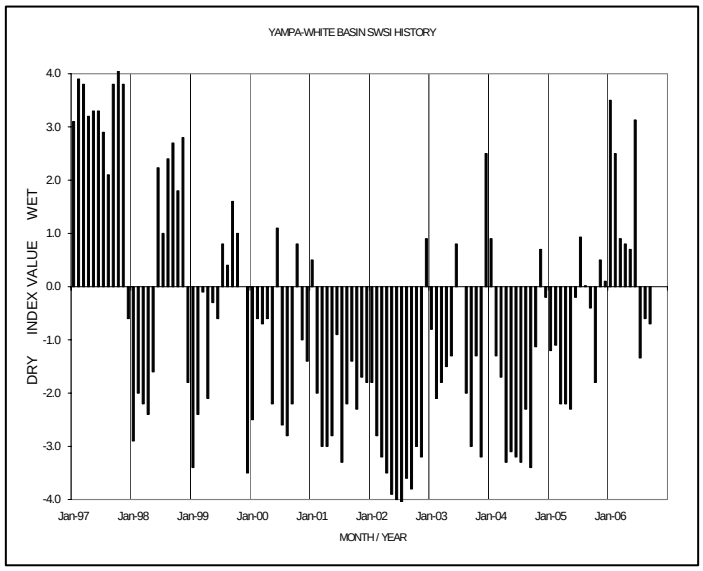




Basinwide Conditions Assessment

The SWSI value for August was –0.7. Flow at the gaging station Yampa River at Steamboat was 133 cfs, as compared to the long-term average of 151 cfs.

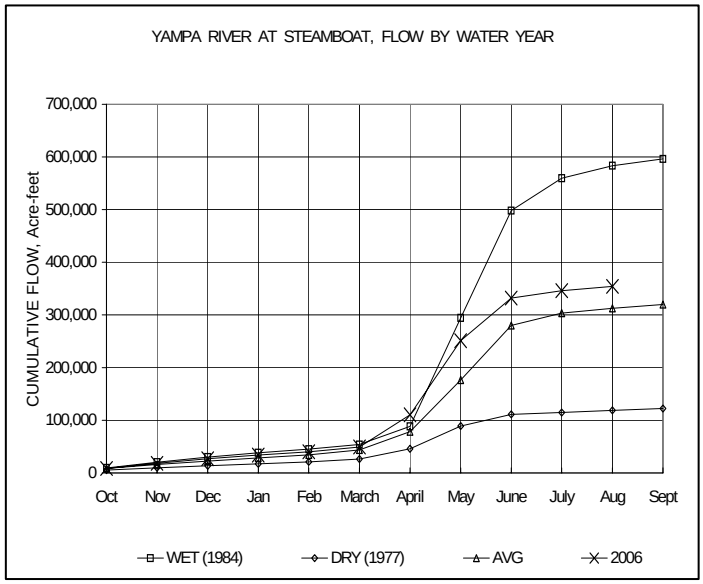
Precipitation, as recorded at the SNOTEL sites operated by the NRCS, totaled 105% of average (average period being from 1971 to 2000) and 127% of August of last year for the Yampa, White and North Platte River Basins combined. For the Yampa and White River Basin the precipitation totaled 110% of average and 138% of August of last year and for the North Platte River basin it totaled 97% of average and 101% of August of last year. River flows were below normal level on the majority of rivers and streams in the White/Yampa/North Platte river basins in August. One exception to this flow situation was the Yampa River at Steamboat Springs which is remaining just slightly above average. As a result of low flows at the Yampa River below Craig station, water was released from Stagecoach Reservoir starting at the end of August.



Outlook

Irrigation demands in some regions should begin to decrease as cooler nighttime temperatures mark an end to the growing season. Also, as native vegetation begins to go dormant for the season, streamflows should increase, though potentially not back to normal conditions.

The reservoir levels have dropped some though not significantly. Some reservoirs will begin to release water in preparation for the spring 2007 runoff season.



Administrative/Management Concerns

As irrigation winds to an end, fewer and fewer streams remain under administration. As a result of below average streamflows interest has spiked concerning minimum instream flow rights and whether administration of such rights, upon a call, could produce additional water in the stream systems.

Public Use Impacts

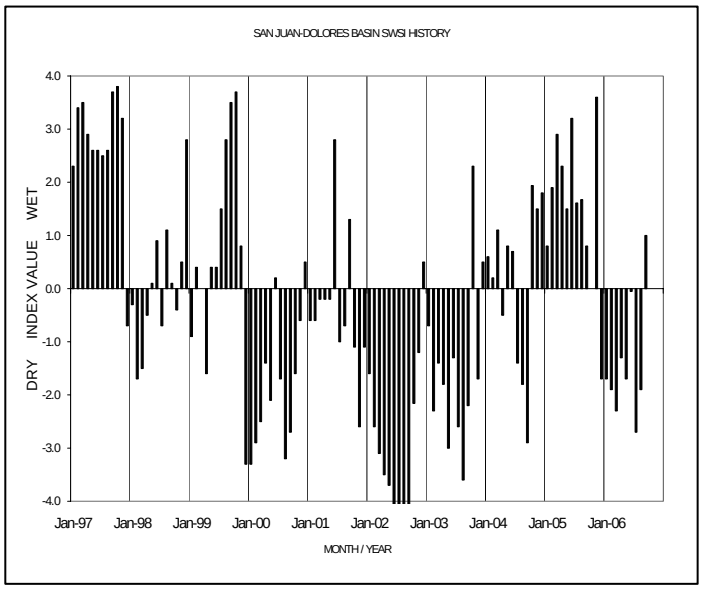
Elkhead Reservoir continues to remain closed for all recreational activities. The majority of the earthwork and spillway has been completed on the Elkhead Reservoir enlargement and it is expected that the reservoir will be ready for fill in the spring of 2007.

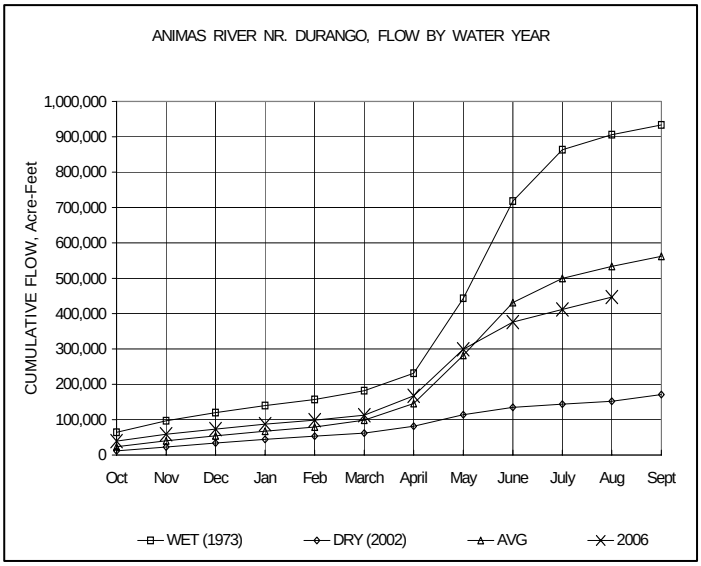
Basinwide Conditions Assessment

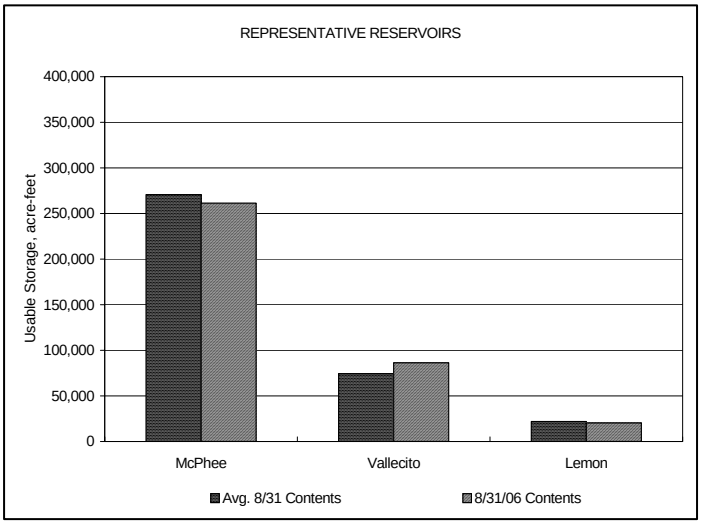
The SWSI value for August was 1.0. Flow at the gaging station Animas River near Durango was 570 cfs, as compared to the long-term average of 552 cfs. The Animas River peaked at 905 cfs on August 27. The Dolores River averaged 232 cfs for the month, which is also 97 % of normal. The La Plata River at Hesperus averaged only 10.0 cfs for the month compared with it's normal flow of 24.0 cfs, just 42% of normal. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 100% of normal as of the end of August.

August weather brought more monsoon moisture but it was limited in amount and in extent. In Durango, 1.80 inches of precipitation were recorded, only 69% of average. So far this Water Year, Durango is at 80% of normal precipitation.

The humid and cloudy weather from the monsoons kept the high temperatures lower and the low temperatures higher than normal. Overall Durango was 1.2° below its 30-year average high and 3.8° above its 30-year average low.







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