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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November 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 October range from a high value of 3.9 in the San Juan/Dolores Basin to a low value of 1.4 in the Colorado Basin. All seven basins experienced a gain from the previous month's values.

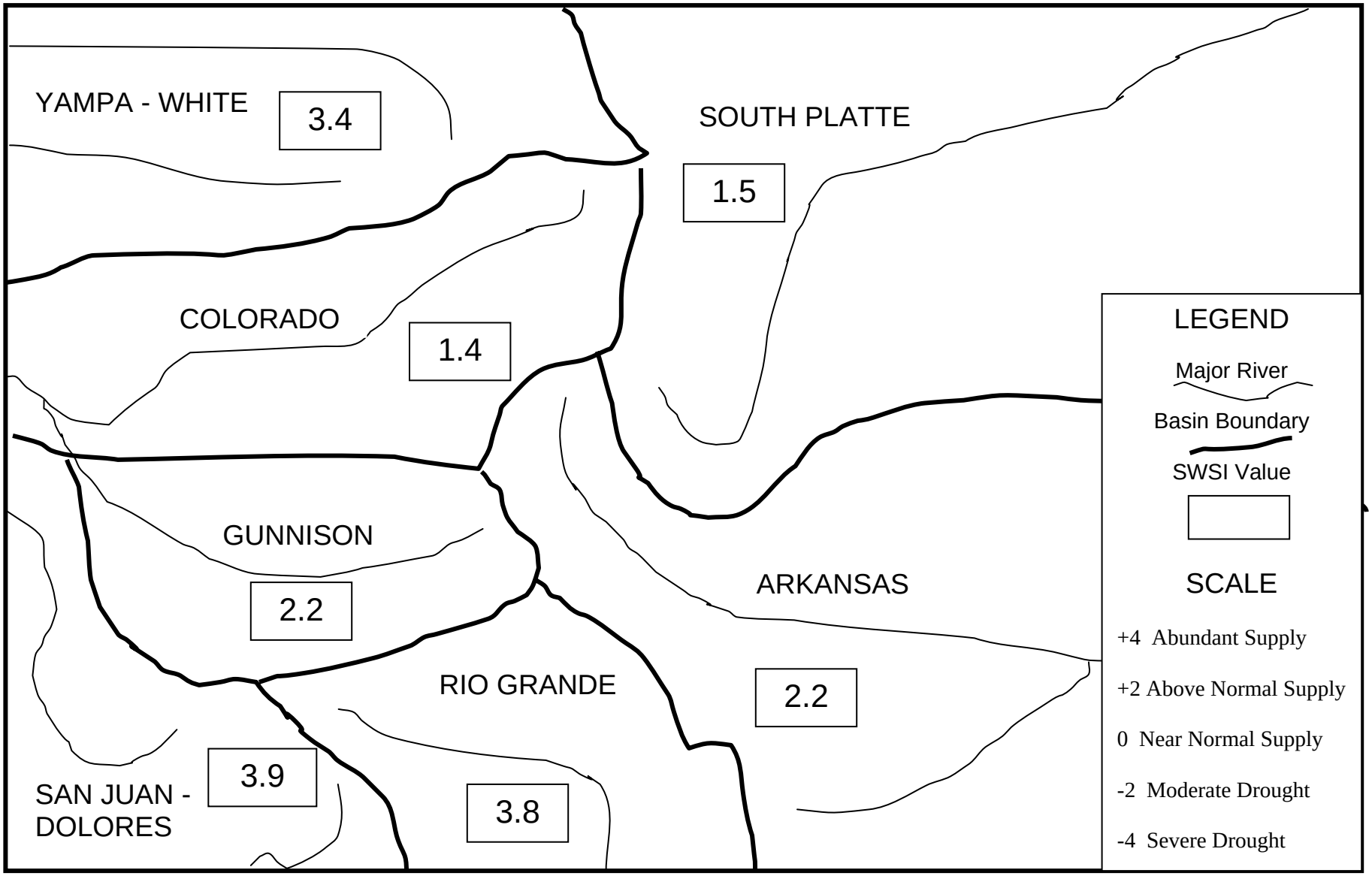
The following SWSI values were computed for each of the seven major basins for November 1, 2006, and reflect the conditions during the month of October.

Basin	November 1, 2006 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+1.5	+0.2	- 1.4
Arkansas	+2.2	+1.8	+1.6
Rio Grande	+3.8	+1.7	+0.5
Gunnison	+2.2	+3.0	+2.1
Colorado	+1.4	+0.1	- 0.2
Yampa/White	+3.4	+3.1	+2.9
San Juan/Dolores	+3.9	+2.3	+0.3

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



November 1, 2006

Basinwide Conditions Assessment

The SWSI value for the month of October was 1.5. Reservoir storage in Dillion, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 104% of normal as of the end of October. Flow at the gaging station South Platte River near Kersey was 682 cfs, as compared to the long-term average of 662 cfs. Flow at the Colorado/Nebraska state line averaged 53 cfs.

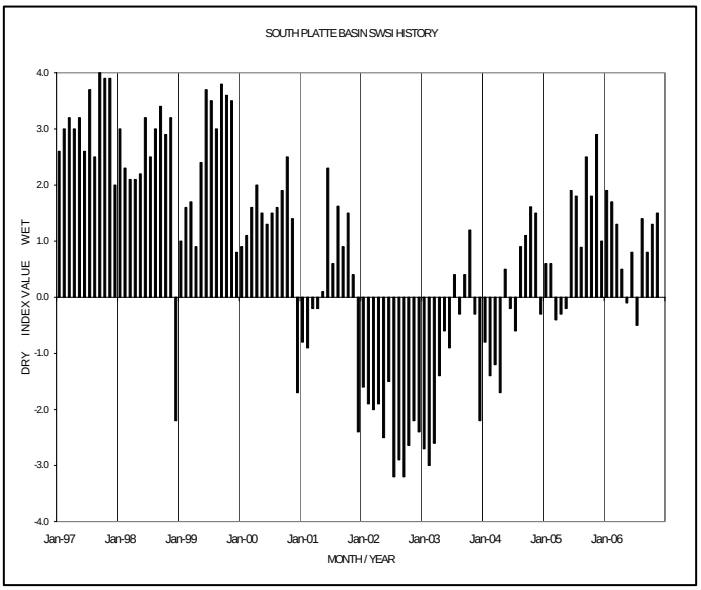
Outlook

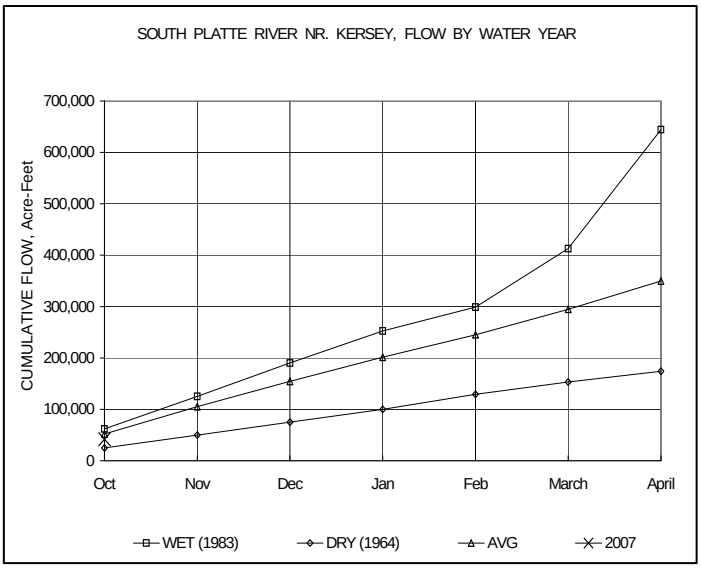
October continued warm and dry through most of the month. Thus, irrigation uses and calls continued until the last week of the month. Wetter conditions the last week allowed for some storage and recharge to occur for a few days. Nevertheless, reservoir levels for agriculture continued far below average with many of the plains reservoirs either empty or near empty by the end of the month. Overall storage in the major reservoirs east of Kersey was only 12% full at the end of the month. This is nearer the 2% full at the end of October, 2002 than it is the 36% full at the end of 2005. It will be difficult to fill all of the irrigation reservoirs next year without a significant snow pack and wet spring conditions in 2007. Of note, farmers in the Poudre basin are also very vulnerable as storage in this basin is far below average after a very dry year.

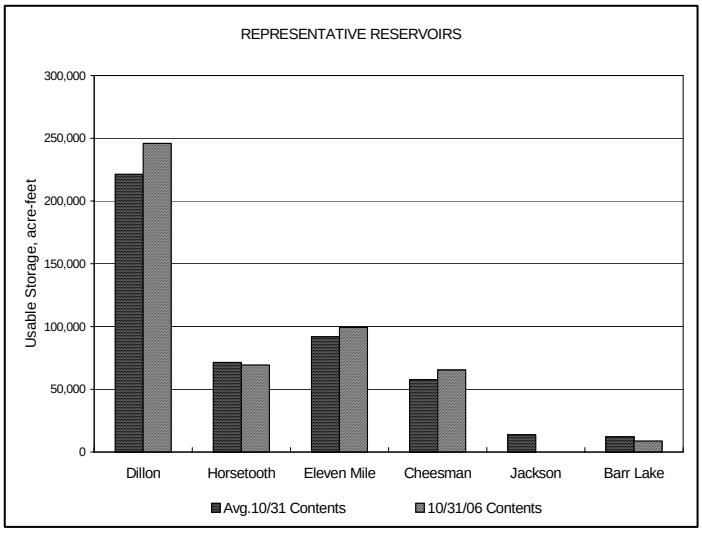
Unlike the reservoir storage for the farmers, the municipal reservoir situation is much better than 2002, especially for reservoirs that feed the Denver metro area. Major Denver Metro Supply Reservoirs were at 90% of capacity. This compares favorably to a 50% capacity at the end of October, 2002 and even with the 86% capacity at the end of October, 2005.

Administrative/Management Concerns

The better storage conditions are due to record diversions from the west slope because of the very high spring snowpack in the Colorado basin in 2006 and generally wetter conditions at the south end of the South Platte basin during the spring and summer of 2006. Municipal suppliers north of Denver metro area have adequate water storage supplies available though generally not in quite as plentiful a situation as exists for the metro area.







Basinwide Conditions Assessment

The SWSI value for the month of October was 2.2. Flow at the gaging station Arkansas River near Portland was 597 cfs, as compared to the long-term average of 404 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 83% of normal as of the end of September.

Outlook

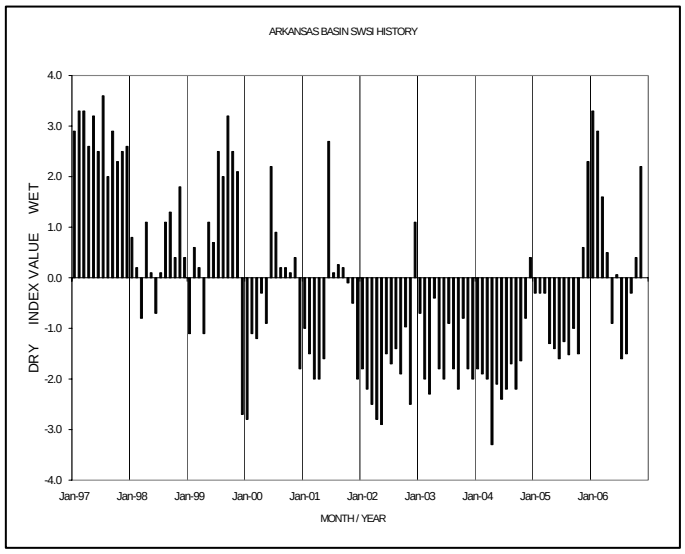
The river call for October began at the Amity #1 2/21/1887 call and ended the month at the Fort Lyon #2 3/1/1887 following a short wet period the last week of the month with Holbrook (1889) and Colorado Canal (1890) calls running for the period from 10/27/06 through 10/30/06.

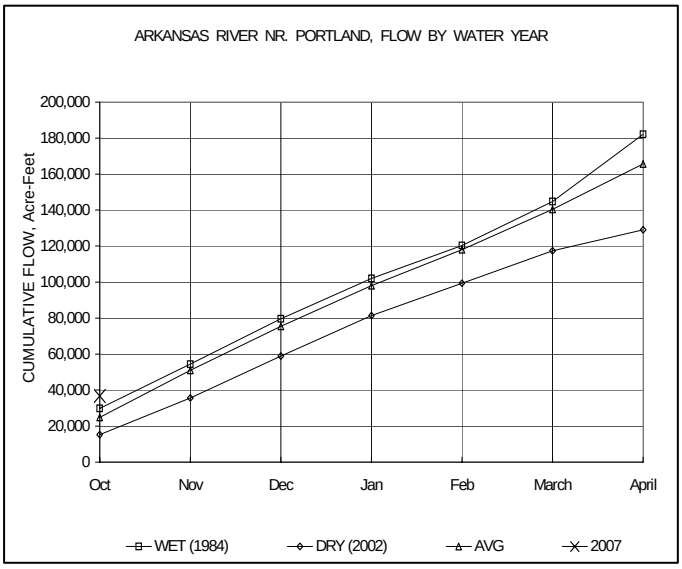
A meeting of the Winter Water Board of Directors was held in La Junta on October 24, 2006. Planning for the upcoming storage season which runs from November 15, 2006 through March 14, 2007 was the topic at this meeting.

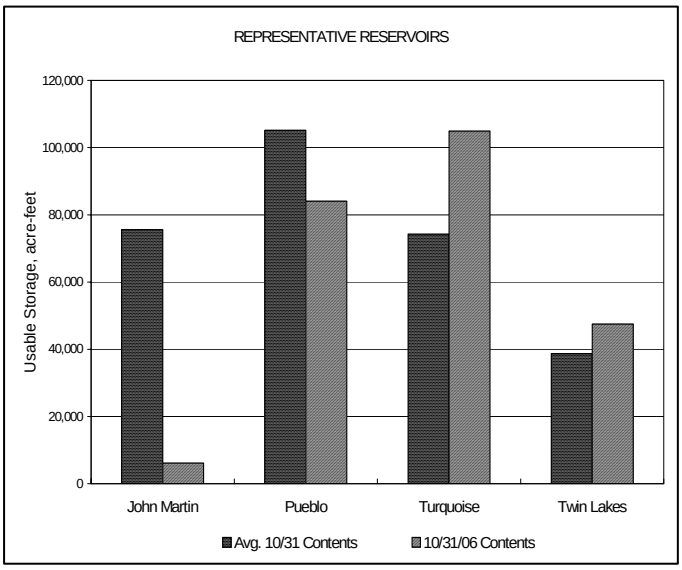
Winter Compact storage in John Martin Reservoir began at midnight on October 31, 2006.

Administrative/Management Concerns

Colorado and Kansas representatives appointed to a Special Engineering Committee by the Arkansas River Compact Administration in December 2005 concluded meetings regarding a number of accounting disputes for operations in John Martin Reservoir that have arisen over the past ten to twelve years. Several agreements were reached that will be presented at the ARCA Meeting in December in Lamar.





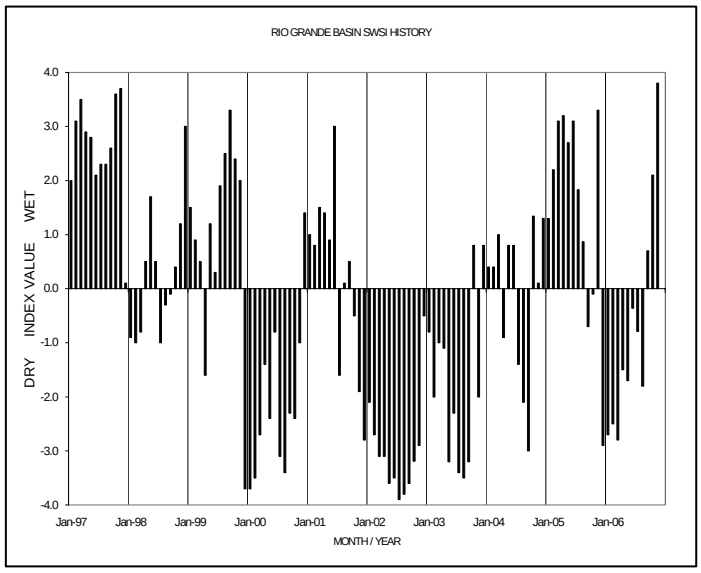


Basinwide Conditions Assessment

The SWSI value for the month of September was 3.8. Flow at the gaging station Rio Grande near Del Norte averaged 1450 cfs (300% of normal). The Conejos River near Mogote had a mean flow of 421 cfs (363% of normal). Precipitation during October in Alamosa was 1.59 inches, 0.92 inches above normal. Rain in the valley and snowfall in the mountains during October 7 through October 9 dramatically increased streamflow and got the winter snow pack off to a great start.

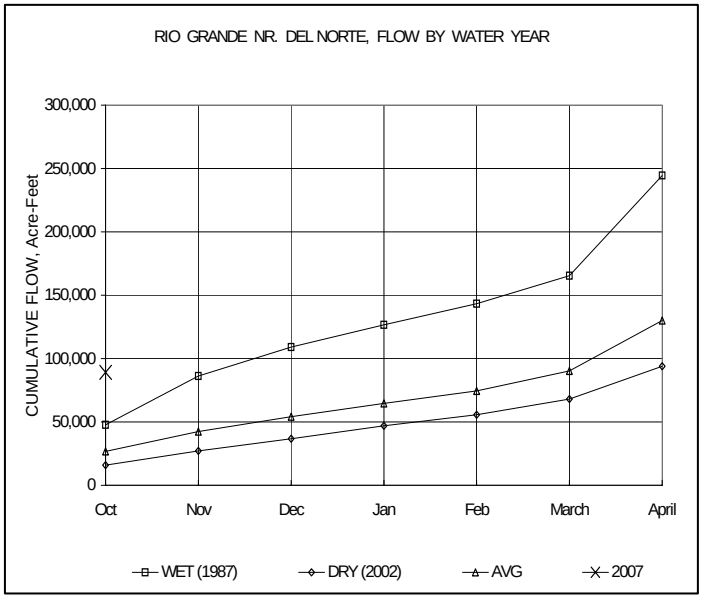
The Rio Grande near Del Norte rose from 500 cfs to nearly 2700 cfs in less than 24 hours on October 7. And higher flows lingered through the end of the month. The October total volume was nearly 90,000 acre-feet, the highest October total since 1916. Amazingly, the October amount was greater than the June runoff total this year.

That storm system also affected the Conejos River and its tributaries. The monthly total volume of nearly 26,000 acre-feet was the highest since 1904.



Outlook

After a poor runoff period of April through June, precipitation in the basin during July through October radically improved the soil moisture and stream flow conditions in the Rio Grande Basin. Despite the quick start to the winter snowpack, a glance at the conditions during the first week of November indicates most of the upper Rio Grande basin is beginning to lag behind normal.

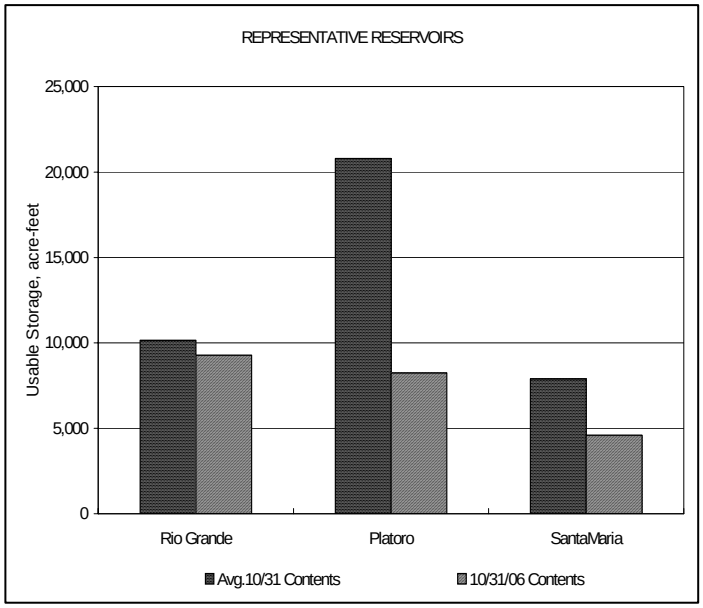


Administrative/Management Concerns

Reservoirs in the basin reduced outflows and began storing inflow as October came to a close. The early summer irrigation demand drained most of the storage in the basin's reservoirs.

Although the huge increase this fall in the indexed streamflow under the Rio Grande Compact required many administrative adjustments, Colorado is very likely to deliver the amount required this year without much excess. The final results won't be available until January.

Compliance with the requirements for metering wells decreed or permitted over 50 gpm is a major activity in the San Luis Valley at this time. Case No. 05CW12, confirmed by the Water Court back in July, requires installation of approved measurement devices and submission of the required forms for all high capacity wells in Water Division 3 by March 1, 2007.



Basinwide Conditions Assessment

The SWSI value for the month of October was 2.2. Flow at the gaging station Uncompahgre River near Ridgway was 189 cfs, as compared to the long-term average of 87.7 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 114% of normal as of the end of October.

Outlook

The month of October continued the wet cycle that this basin has had since July.

Administrative/Management Concerns

The continued wet weather in October had increased water supplies to users and reservoir storage and all but eliminated demand for irrigation diversions.

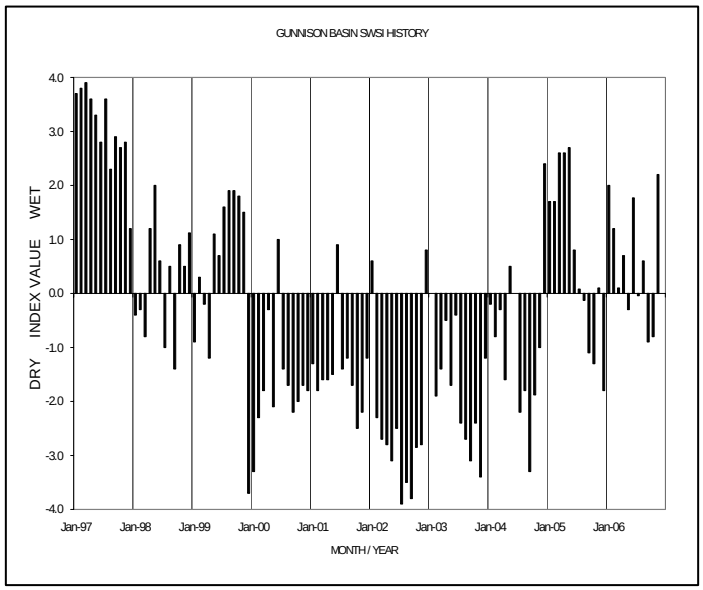
The increased storage in Ridgway Reservoir was indicative of the amount of precipitation the basin received in October. During the month, the reservoir gained 13 feet, this being a period when it usually drops several feet. The reservoir is now less than 5 feet from spilling and the releases will have to be increased to keep it from spilling and drop the elevation to eventually make room for spring runoff.

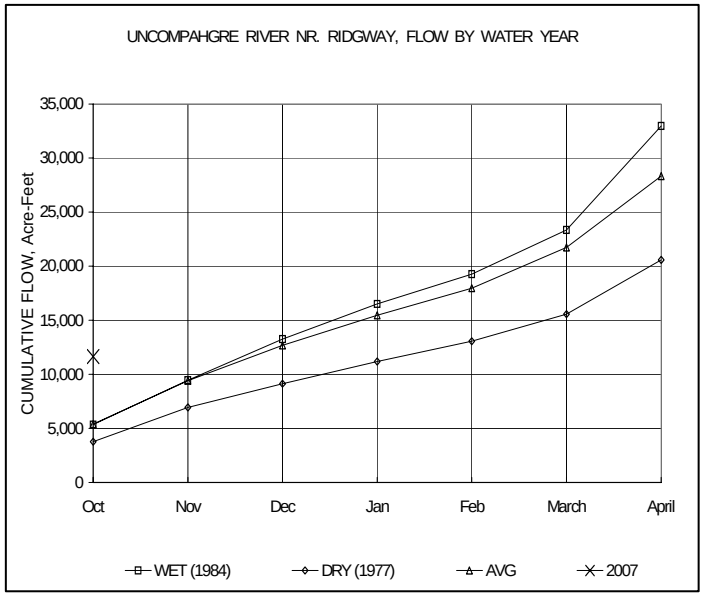
Taylor Park reservoir gained 3 feet from the October rains and snows and Blue Mesa stayed about the same elevation. Blue Mesa usually drops 5 to 7 feet during the month of October. On the Grand Mesa, they are going into the winter with 50% carryover storage in the reservoirs, the normal being about 15%.

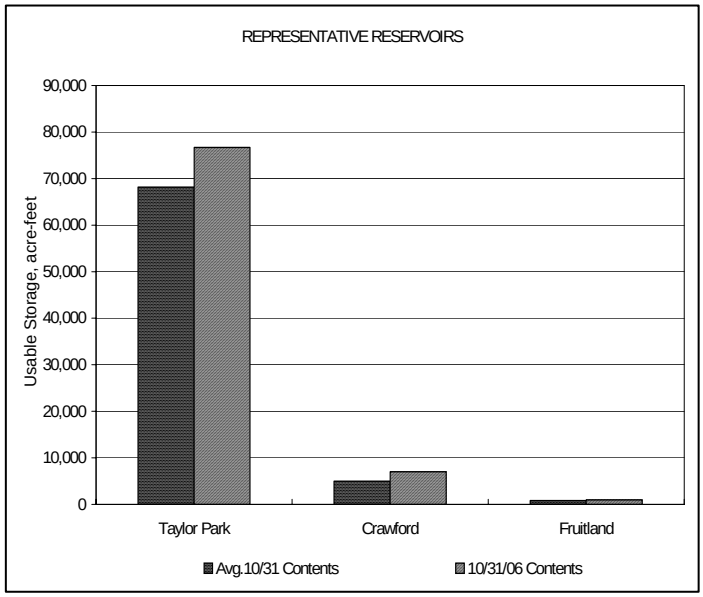
Public Use Impacts

Because of the continued rains, the farmers have been struggling to get their crops harvested. Some of the hay and small grain crops have been damaged by the moisture, and there may be very few onions able to be harvested. One farmer had kept very careful records, and has not seen this excessive summer and fall moisture since the early 70's.

In the mountains, there is a great start to the snowpack season, and the soil moisture conditions are the best this basin has seen in a long time.







Basinwide Conditions Assessment

The SWSI value for the month of October was 1.4. Flow at the gaging station Colorado River near Dotsero was 1245 cfs, as compared to the long-term average of 1300 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 102% of normal as of the end of October.

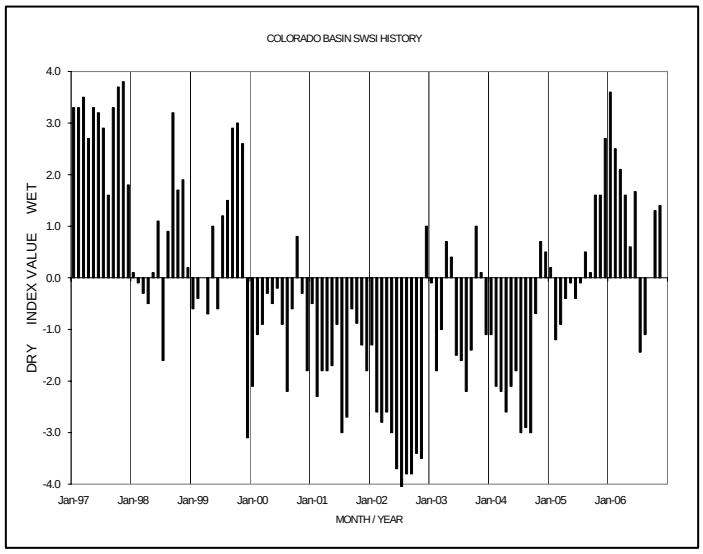
Outlook

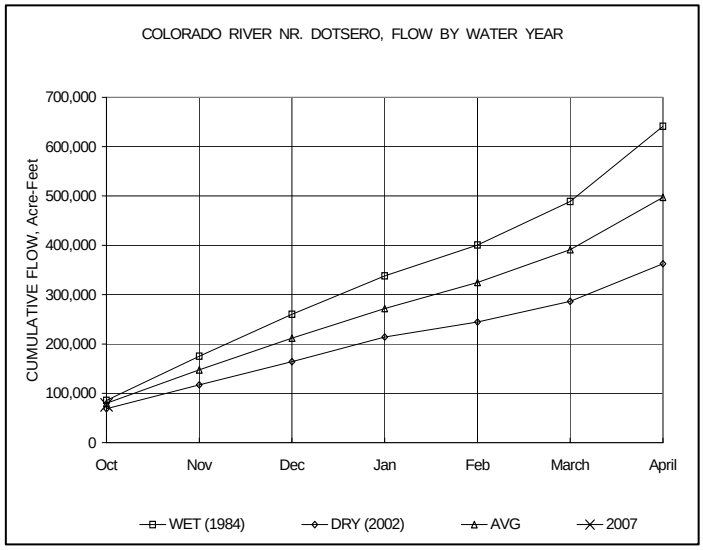
October was a wet month for the Colorado River basin, with precipitation above 150% of average for the entire basin (information from National Weather Service). Several locations on the western side of the basin received record monthly rainfalls, in large part driven by an intense storm that occurred on October 6. Twenty-four hour rainfall records were surpassed throughout far western Colorado and eastern Utah, with some locations receiving over two inches of rain over night. Flash flooding was prevalent and the mainstem Colorado River jumped from 4000 cfs to a peak of 15,000 cfs overnight at the Utah state line.

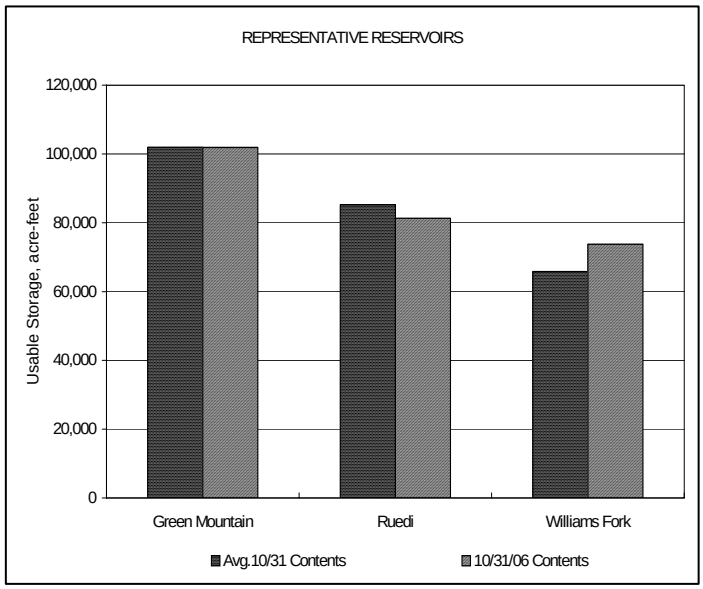
River flows are above average throughout much of the basin, with the western, lower tributaries benefiting the most from the heavy rainfall. Early mountain snowpack is average to above average for the Colorado River basin, with a few tributaries showing below average snowfall, such as the Fryingpan River basin.

Administrative/Management Concerns

The 2006 Irrigation Water Year ended without an administrative river call from the Grand Valley. As the new Water Year begins, the Shoshone Power Plant river call remains on, with no swing right.





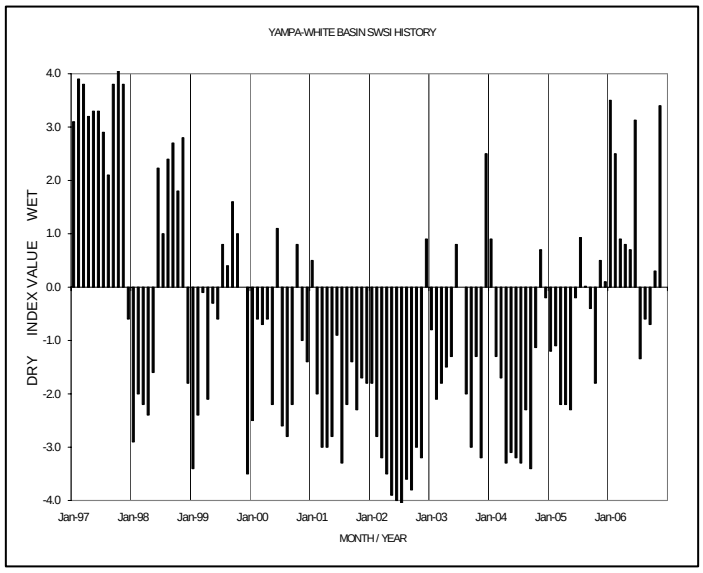


Basinwide Conditions Assessment

The SWSI value for the month of October was 3.4. Flow at the gaging station Yampa River at Steamboat was 195 cfs, as compared to the long-term average of 137 cfs.

Precipitation, as recorded at the SNOTEL sites operated by the NRCS, totaled 160% of average (average period being from 1971 to 2000) and 136% of October of last year for the Yampa, White and North Platte River Basins combined. For the Yampa and White River Basins the precipitation totaled 163% of average and 138% of October of last year and for the North Platte River basin it totaled 160% of average and 132% of October of last year. The snow water equivalent as of October 31, 2006 for the Yampa and White River Basins and Laramie and North Platte River Basin were 166% and 175% of average, respectively.

River flows in the Yampa River basin were well above average, in the White River basin they were right around average, and for the North Platte River basin they were well above average throughout the month.



Outlook

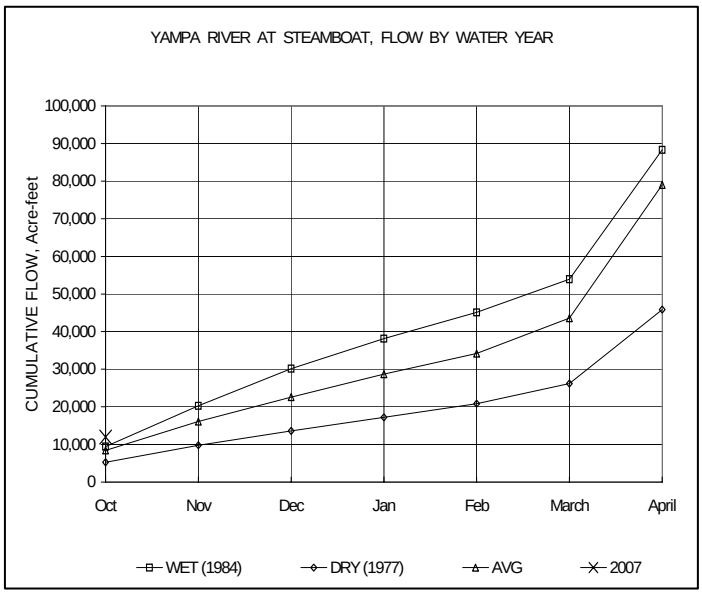
Irrigation season has come to an end and though many small reservoirs now take this opportunity to fill, the larger ones have dropped their water level in preparation for the spring 2007 runoff season.

Administrative/Management Concerns

Some streams remained on call throughout the month of October and the Michigan River was under administration to fulfill a storage right.

Public Use Impacts

Final construction inspections are in progress on Elkhead Reservoir and the reservoir should be able to begin filling in the spring of 2007.

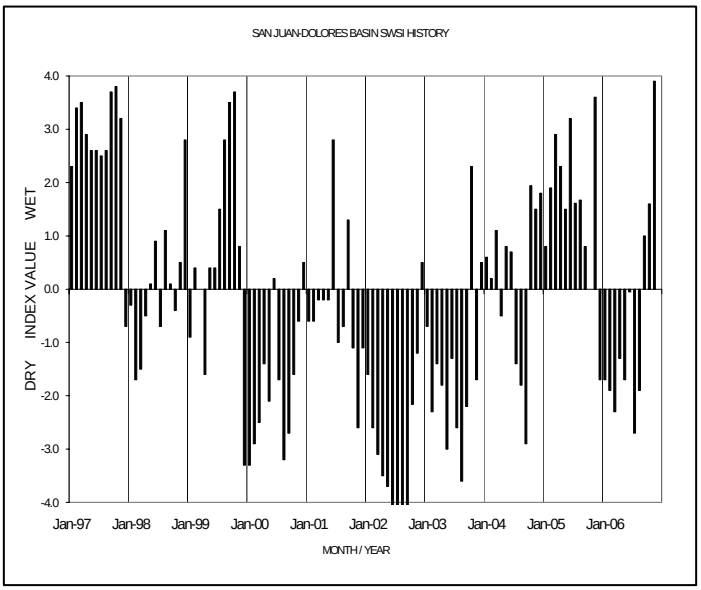


Basinwide Conditions Assessment

The SWSI value for the month of October was 3.9. Flow at the gaging station Animas River near Durango was 1600 cfs, as compared to the long-term average of 385 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 119% of normal as of the end of October.

October weather brought much more monsoon moisture to Division 7. In Durango, 4.46 inches of precipitation were recorded. For the Water Year, Durango had a total of 4.46 inches of moisture, this works out to 230% of normal precipitation.

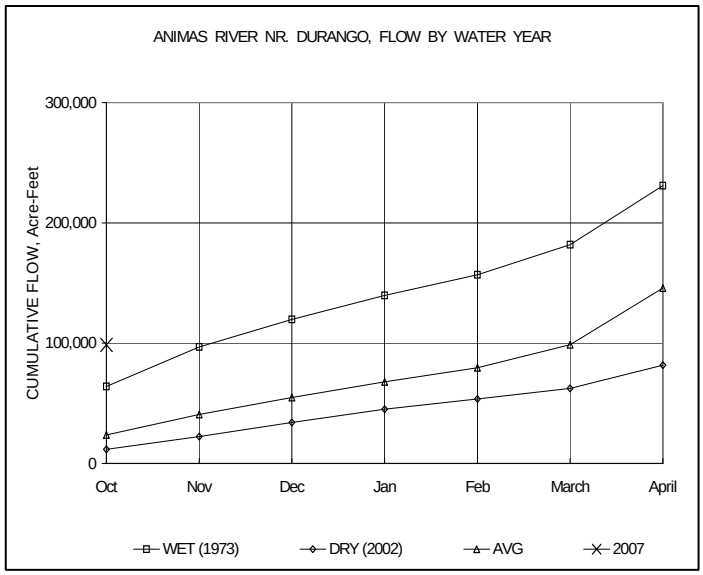
The above normal precipitation is reflected in streamflow. The Animas River maximum average daily peak was 7070 cfs on Oct. 7th and averaged 1600 cfs for the month, which is 379% of normal. The Dolores River averaged 538 cfs for the month, which is 401% of normal. The La Plata River at Hesperus averaged 72.8 cfs for the month compared with its normal flow of 15.0 cfs; this is 485% of normal.

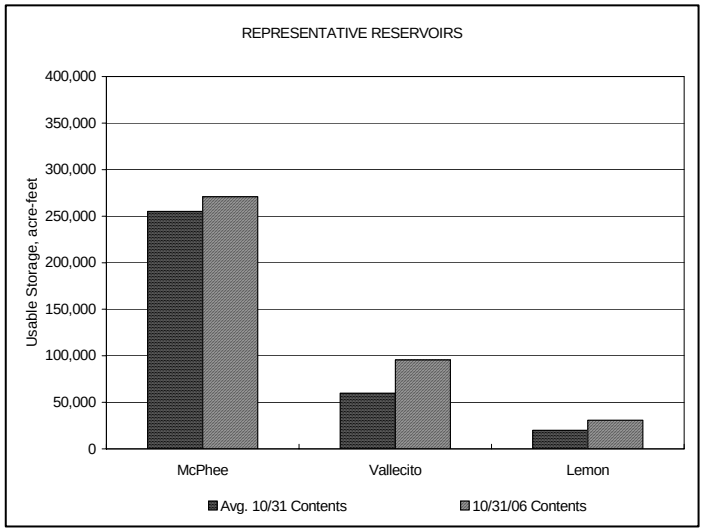


Outlook

With the higher than normal precipitation, reservoirs took the opportunity to store water. All three major reservoirs increased storage levels and contain above average storage at the end of the month. Vallecito Reservoir contained 95,535 acre-feet (highest stored amount for the end of October based on period of record 1941 - 2006) compared to its normal contents of 50,775 acre-feet. Vallecito continues to release water in order to prepare for the winter season. The goal is to reduce the reservoir level below the tainter gates so ice can't damage them. McPhee Reservoir was up to 270,852 acre-feet, 106% of normal while Lemon Reservoir was up to 30,664 acre-feet as compared to 19,544 acre-feet for the previous month.

Precipitation from the monsoons kept the high temperatures lower but maintained the low temperatures right at normal. Overall Durango was 3.5° below its 30-year average high and at its 30-year average low.





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