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 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 November). 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 South Platte Basin to a low value of -2.5 in the San Juan/Dolores Basin. Six of the basins (Arkansas, Rio Grande, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's values, while one basin (South Platte) experienced no change.

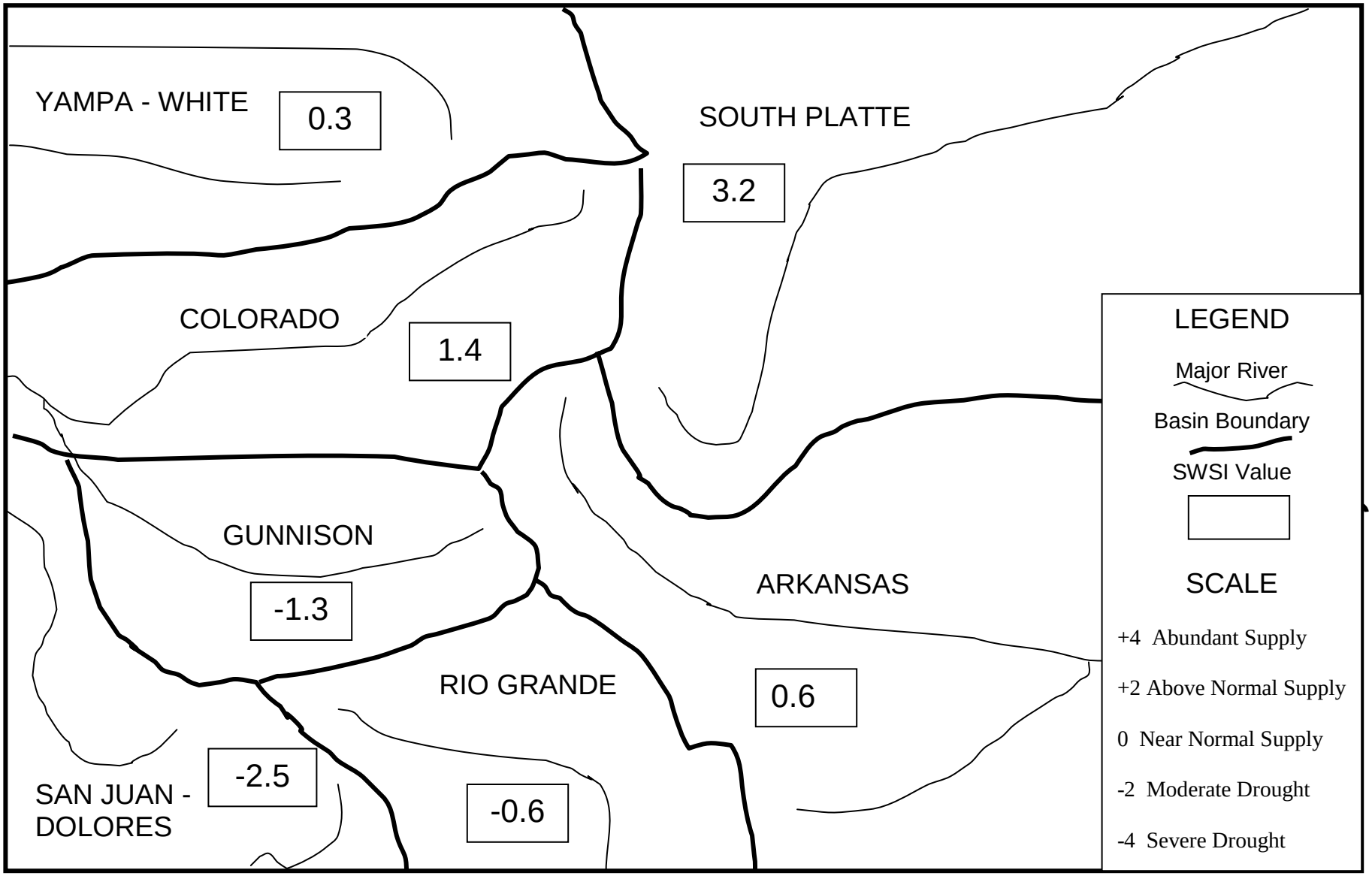
The following SWSI values were computed for each of the seven major basins for November 1, 2009, and reflect the conditions during the month of October 2009.

Basin	November 1, 2009 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+3.2	0.0	+1.0
Arkansas	+0.6	+1.3	- 0.3
Rio Grande	- 0.6	+0.8	- 1.5
Gunnison	- 1.3	+0.5	+0.4
Colorado	+1.4	+0.2	+0.2
Yampa/White	+0.3	+2.4	- 1.7
San Juan/Dolores	- 2.5	+0.0	- 1.3

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



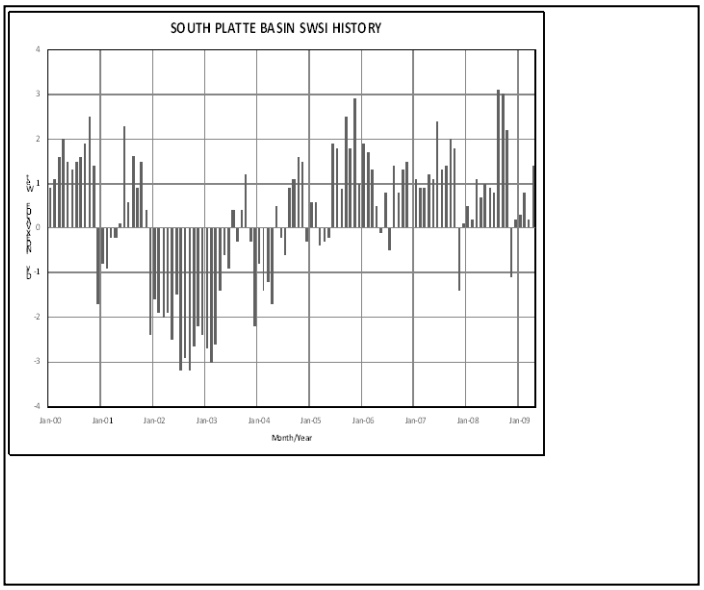
November 1, 2009

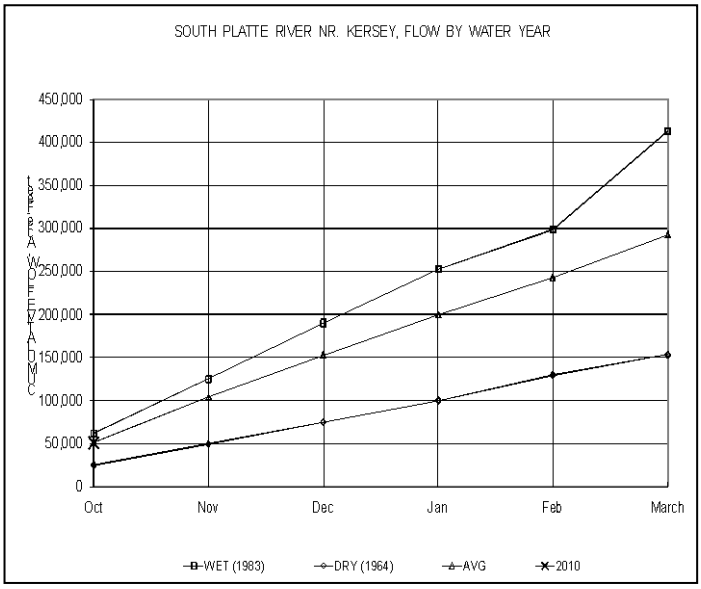
Basinwide Conditions Assessment

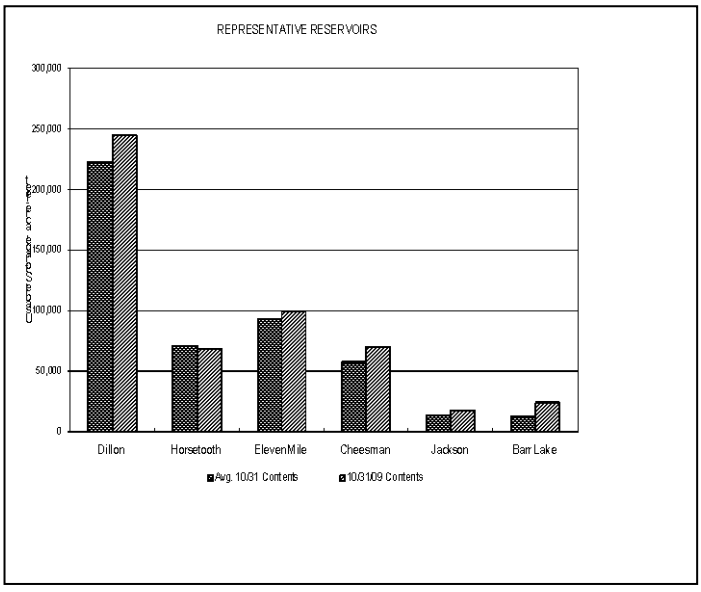
The SWSI value for the month was +3.2. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 112% of normal as of the end of October. Cumulative storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, is at 48% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 95% of capacity. Flow at the gaging station South Platte River near Kersey was 825 cfs, as compared to the long-term average of 666 cfs. Flow at the Colorado/Nebraska state line averaged 508 cfs.

Outlook

There was more than adequate water for all the uses along the mainstem downstream of Denver along the South Platte during October due to the overall wet conditions this last summer. The only call on the mainstem of the river was the Barr Lake 1909 refill right taking from the Burlington ditch. While there continued to be direct flow calls on most of the tributaries during the early part of the month, calls were generally for storage by the end of the month. With the excellent water supply conditions, the overall storage situation was the best it has been in the last ten years as the irrigation season ended. Thus, municipal suppliers are in good shape and irrigators have an outstanding start to the next irrigation season.







Basinwide Conditions Assessment

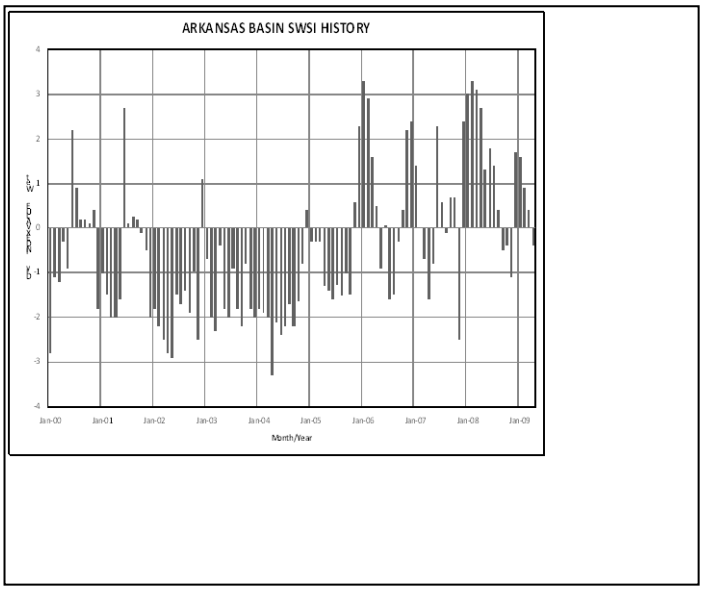
The SWSI value for the month was +0.6. Flow at the gaging station Arkansas River near Portland was 419 cfs, as compared to the long-term average of 408 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 113% of normal as of the end of October.

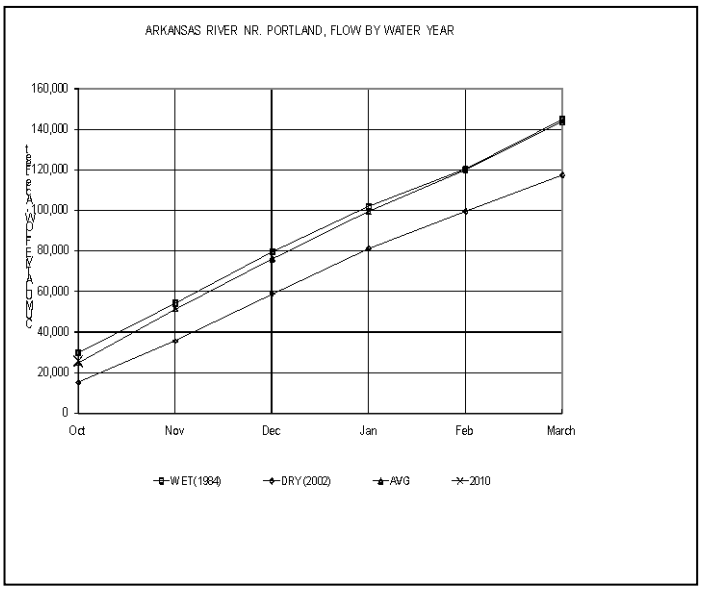
Outlook

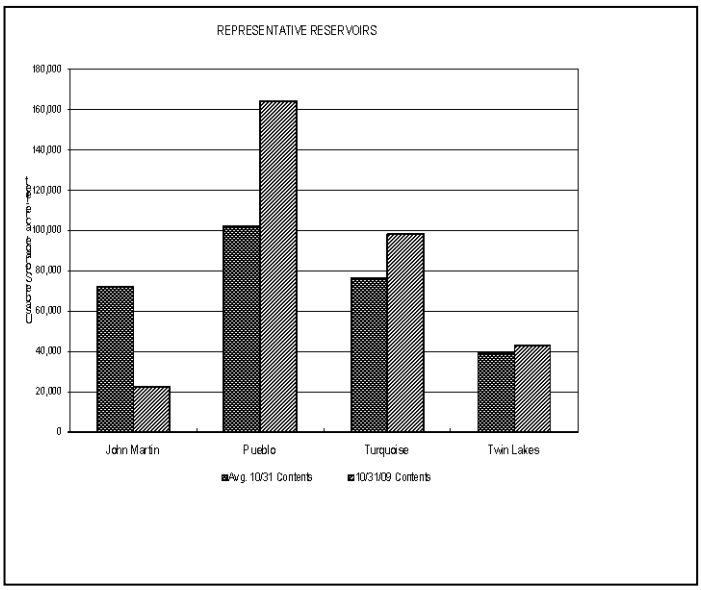
The river call for October began at the Amity #1 call of 2/21/1887 and ended with a split call with the Bessemer Ditch 5/1/1887 water calling upstream of Pueblo Reservoir and the Fort Lyon Canal 3/1/1887 call below Pueblo Reservoir. There was a period of fairly heavy rain in late October near John Martin Reservoir, but river flows did not increase enough to cause a storage event in John Martin.

A meeting of the Winter Water Board of Directors was held on October 16, 2009. Planning for the upcoming storage season which runs from November 15, 2009 through March 14, 2010 was the topic at this meeting. A presentation was also give on the Transit Loss Model update that Russ Livingston is preparing for deliveries from Pueblo Reservoir to downstream locations.

Winter Compact storage in John Martin Reservoir began at midnight on October 31, 2009. Storage in Trinidad Reservoir began on October 15, 2009.





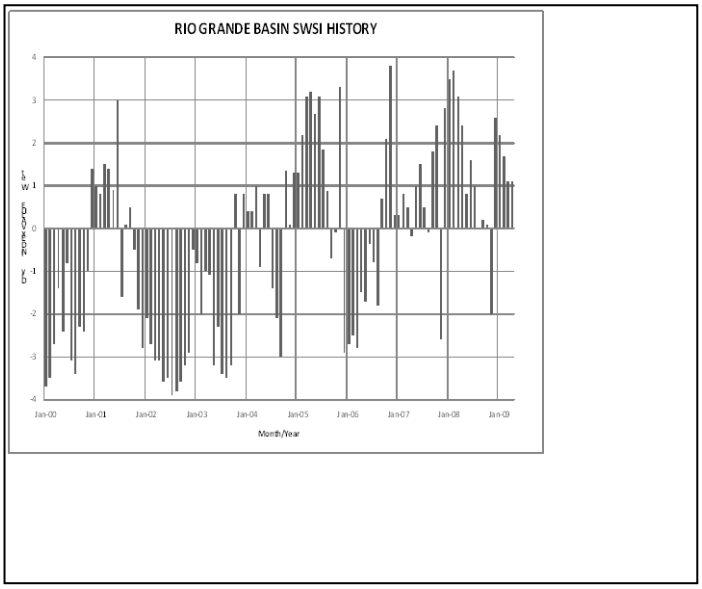


Basinwide Conditions Assessment

The SWSI value for the month was -0.6. Flow at the gaging station Rio Grande near Del Norte averaged 286 cfs (59% of normal). The Conejos River near Mogote had a mean flow of 130 cfs (112% of normal). While the above-normal streamflow in the Conejos River can be attributed to irrigation releases from Platoro Reservoir, the remainder of the basin continued to experience below normal streamflow.

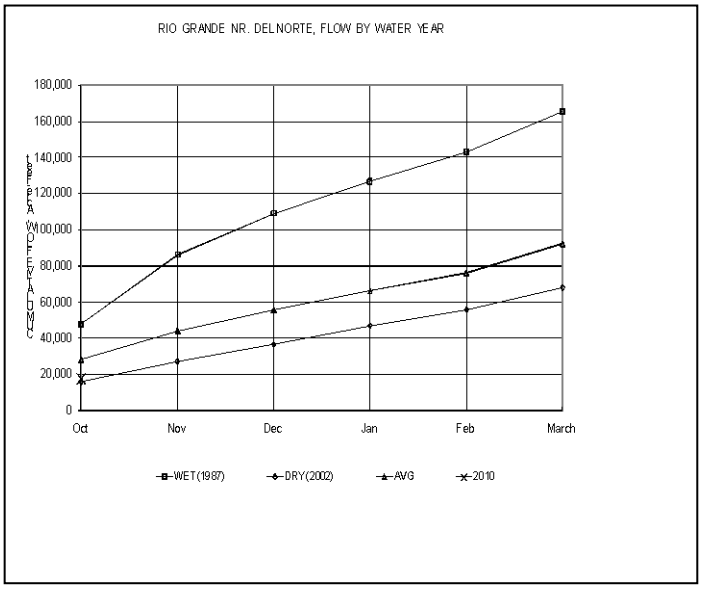
Significant rain and snowfall hit the eastern San Juan and Sangre de Cristo mountains during the third week of October. The snowfall in the higher elevations was so plentiful, Wolf Creek Ski Area opened on Halloween. There were two days of record precipitation in Alamosa during the month. Soil moisture conditions in the basin are now generally good.

Storage in Rio Grande, Platoro, and Santa Maria reservoirs totaled 126% of normal as of the end of October.



Outlook

National Weather Service forecasts call for warmer than normal temperatures this winter throughout the state. Although a band of above normal precipitation is expected across parts of Arizona, New Mexico, and Texas this winter, there is no definite prediction of unusual snowfall this winter for the southern part of Colorado.

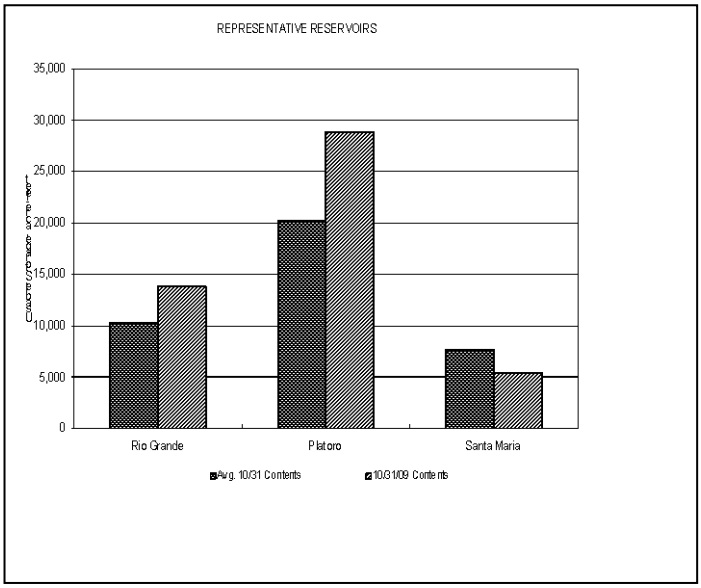


Administrative / Management Concerns

Reservoir operations in the upper Rio Grande basin deviated a bit from the norm this fall. Typically, reservoir operators reduce outflow on November 1st when the demand for irrigation ceases and the junior storage priorities of the reservoirs can be honored. This year, however, the continued demand for irrigation diversions by the senior water right owners on the Rio Grande prevented storage until November 6. Mild weather conditions after the snowfall created a demand for limited irrigation, stockwatering and recharge.

Under Article 7 of the Rio Grande Compact, the amount of water stored in Platoro Reservoir, near the headwaters of the Conejos River, will not be allowed to increase this winter because the amount of Project Storage in Elephant Butte and Caballo Reservoirs in New Mexico is below 400,000 acre-feet. Platoro Reservoir is a post-Compact reservoir, that is, it was constructed after 1929. Most of the larger reservoirs in the upper Rio Grande and its tributaries are pre-Compact.

Now that the 2009 irrigation year is over, Water Commissioners are busy preparing diversion records.



Public Use Impact

Final oral arguments were heard on Friday, October 30, 2009 for Case No. 07CW52, the groundwater management plan for Subdistrict No. 1 - the unconfined aquifer of the Closed Basin. Judge Kuenhold's ruling will assuredly affect the direction of future groundwater use management plans in the San Luis Valley. Rules and regulations for groundwater use in Water Division No. 3 are expected to be filed within the next several months.

Basinwide Conditions Assessment

The SWSI value for the month was -1.3. Flow at the gaging station Uncompahgre River near Ridgway was 73.5 cfs, as compared to the long-term average of 90.4 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 104% of normal as of the end of October.

Outlook

Conditions throughout Water Division 4 for the month of October have been drier than normal, especially in the San Miguel Basin. Temperatures remained much lower than normal for the month of October and the entire irrigation year has seen well below average precipitation.

The main stem of the Uncompahgre, San Miguel, and Gunnison Rivers are running lower than normal for this time of the year, even with much of the irrigation demand shutoff by the end of October. Hopefully, the significant snow storm in late October is an indication of how this winter's snowpack conditions will play out for the rest of the winter and bring the basin into next spring's runoff with a good water supply for the 2010 irrigation season.

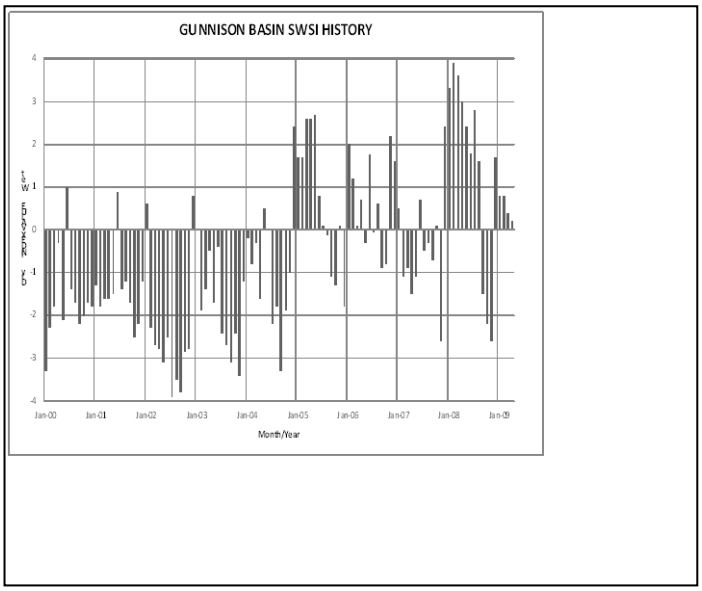
Administrative/Management Concerns

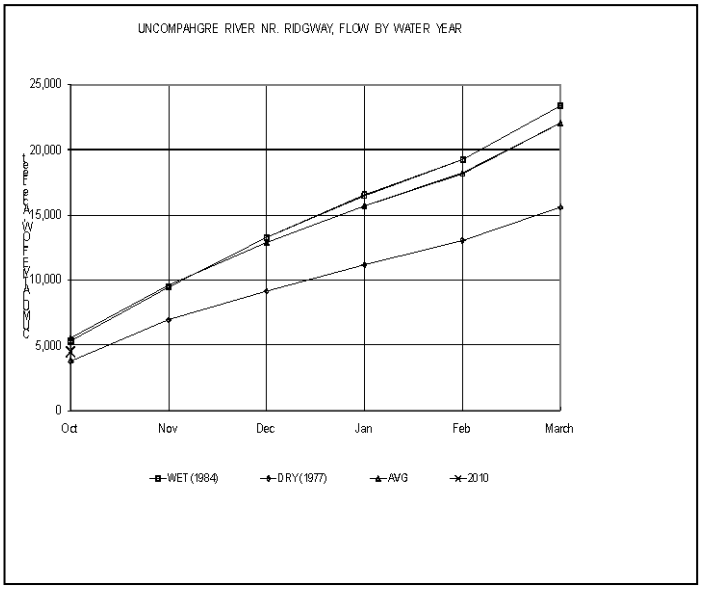
Due to the early and fast runoff this year, and lack of summer precipitation, much of the upper basin areas were at full administration during the month of October. Consequently, with the lower than normal streamflow levels throughout the upper basin areas, irrigation demand in much of those areas has been shutoff by the end of October to meet instream flow rights.

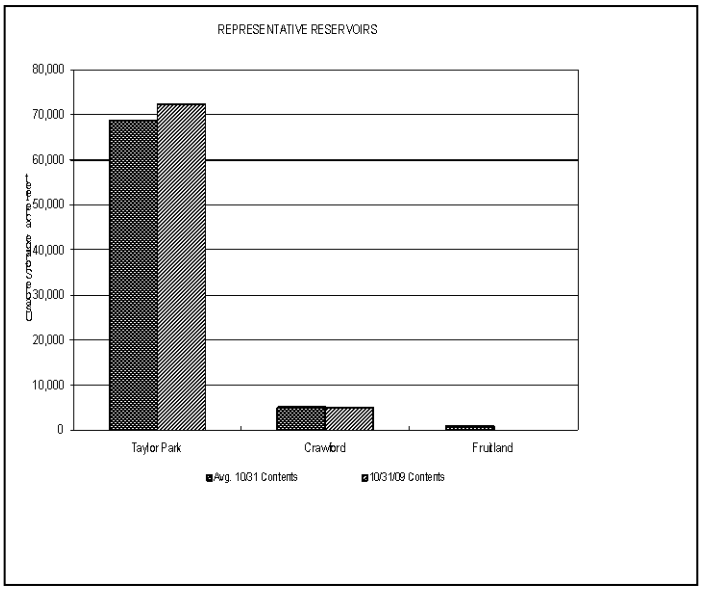
On a good note, most reservoir levels are still looking good despite the lack of precipitation the previous five months. The Grand Mesa reservoirs will be going into the winter with about 50 percent carryover storage, normal being about 15 percent. The Aspinall Unit will continue to release approximately 500 cfs through November and increase the release rate to approximately 1,400 cfs to meet December power demands and the December 31st target elevation to prevent icing problems upstream, resulting in a storage volume of 580,000 acre-feet. The median flow out of the Aspinall Unit for this time of the year is approximately 565 cfs.

Public Use Impacts

Hunting season is in full swing by October in the Gunnison River Basin and the local economy is boosted by the large number of hunters that come to this area each year. Of course some years are better than others. This season has been dry and sunny with poor results in the earlier hunting seasons. But, the late October snow helped to bring the game down from the high country and improve success rates for the late October hunting season.







Basinwide Conditions Assessment

The SWSI value for the month was 1.4. Flow at the gaging station Colorado River near Dotsero was 1559 cfs, as compared to the long-term average of 1306 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 94% of normal as of the end of October.

Outlook

Colorado River flows, which remained slightly above average throughout October, will fall to below average in November. Green Mountain Reservoir releases have been reduced in accordance with ending HUP surplus releases associated with the endangered fish flow augmentation season. Denver Water will likely reduce Dillon Reservoir releases in November. Ruedi Reservoir releases were also incrementally reduced throughout October, and will remain below average through November. Crystal and Roaring Fork River flows should remain below average through November.

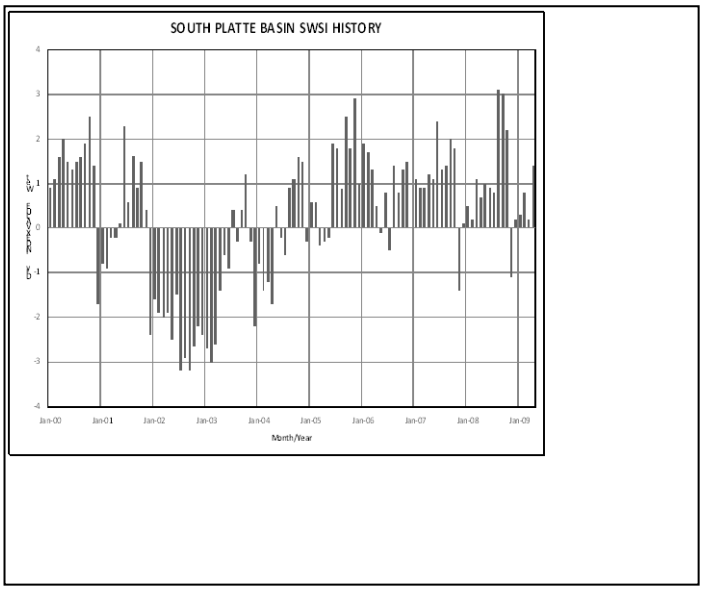
Administrative/Management Concerns

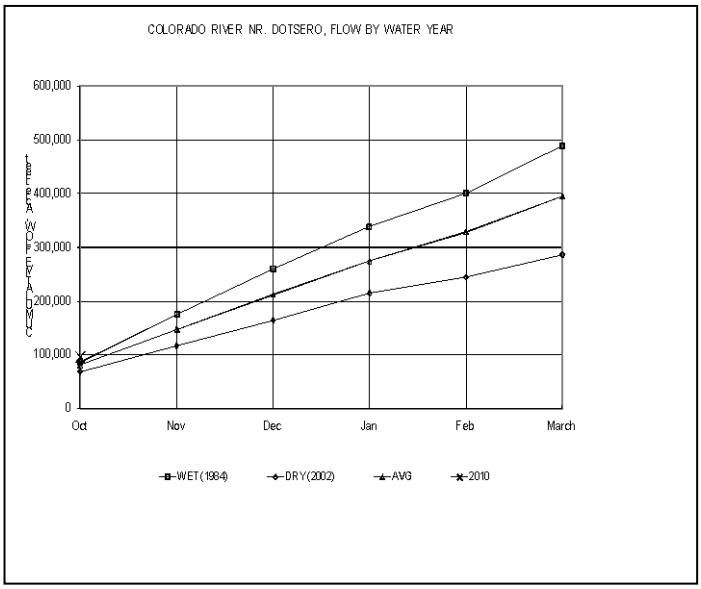
Green Mountain Reservoir releases will likely remain below 150 cfs through November. The Colorado River basin call-out above Shoshone will be temporarily off beginning October 23rd due to shut down of both turbines for maintenance work. The basin call out above Shoshone will resume in mid-November and continue throughout the winter.

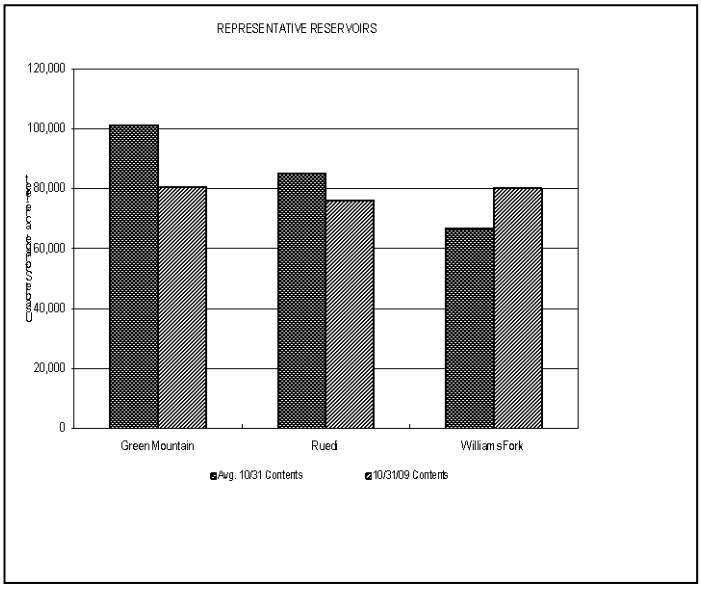
The irrigation season has ended with no calls from Grand Valley water users.

Public Use Impacts

Work has begun on the Glenwood Springs Whitewater Park improvements which include spectator seating and take outs to provided easier exit for paddlers.







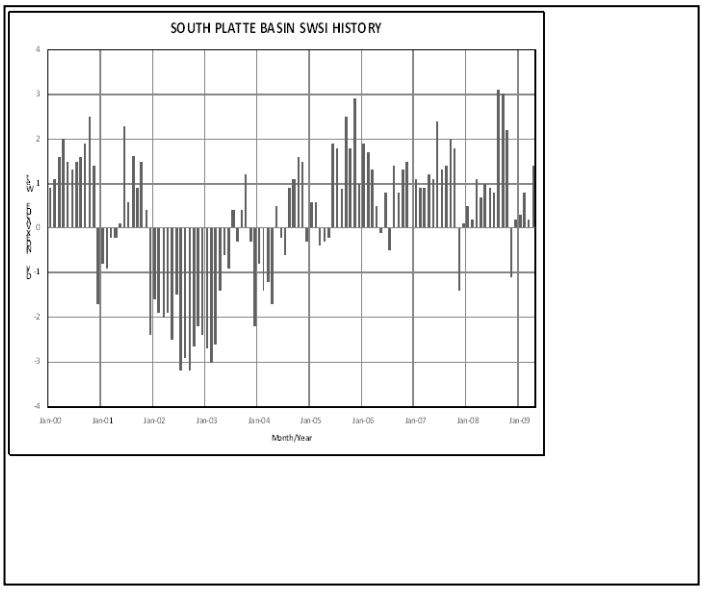
Basinwide Conditions Assessment

The SWSI value for the month was 0.3. Flow at the gaging station Yampa River at Steamboat was 118 cfs, as compared to the long-term average of 138 cfs.

October 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 133% of average for the Yampa/White River basin and 169% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 145% of average for the month of October.

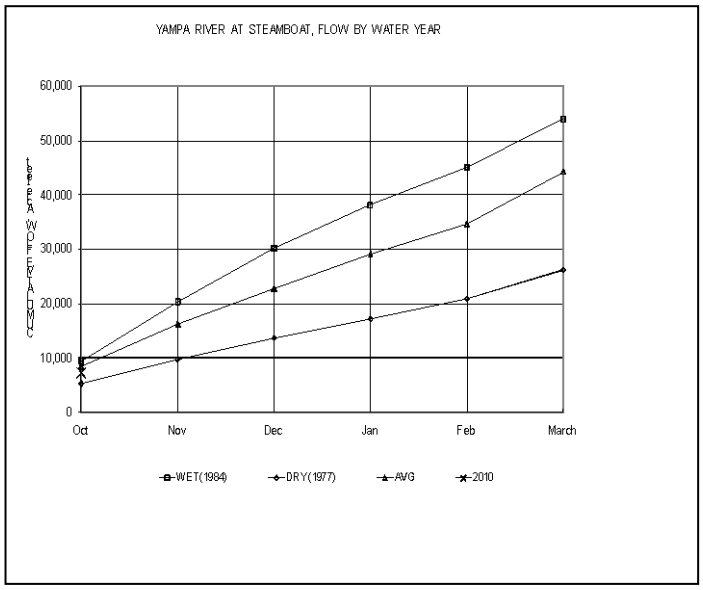
The snow water equivalent (SWE) as of October 31, 2009 was 149% of average for the North Platte River basin, 95% of average for the Yampa River basin, and 83% of average for the White River basin.

Streamflows throughout the basins were generally at average to slightly above average levels at the end of the month.



Outlook

Fish Creek Reservoir storage level remained fairly consistent throughout the month and was reported at approximately 72% of capacity at the end of October. Elkhead Creek Reservoir level rose slightly during the month and the reservoir was at approximately 74% of its enlarged capacity. Yamcolo Reservoir storage level also increased slightly in October and the reservoir was at approximately 60% 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, and recreational purposes, as well as fish recovery releases.



Administrative/Management Concerns

Remaining calls were released in October and no Division 6 streams remained under administration at the end of the month.

The third 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. The program was directed by the Colorado River District, on behalf of the Recovery Program and Division 6 is responsible for protecting this water through the Yampa River critical habitat reach (from Craig to the confluence with the Green River at Echo Park).

Public Use Impacts

Area reservoirs remain open, with good fishing reported.

Basinwide Conditions Assessment

The SWSI value for the month was -2.5. Flows at the Animas River at Durango averaged 208 cfs (50% of average). The flow at the Dolores River at Dolores averaged 57 cfs (42% of average). The La Plata River at Hesperus averaged 7.4 cfs (47% of average).

Precipitation in Durango was 1.70 inches for October, 86% of the 30-year average of 1.98 inches. Precipitation to date in Durango, for the water year, is 1.70 inches, below the average of 1.94 inches. The average high and low temperatures for the month of October in Durango were 60° and 26°. In comparison, the 30-year average high and low for the month is 65° and 34°. Unseasonably cold weather at the beginning and end of the month set or tied record low temperatures and record low-high temperatures. On October 28th and 29th the high temperatures were 8º below the lowest high temperature recorded on those days.

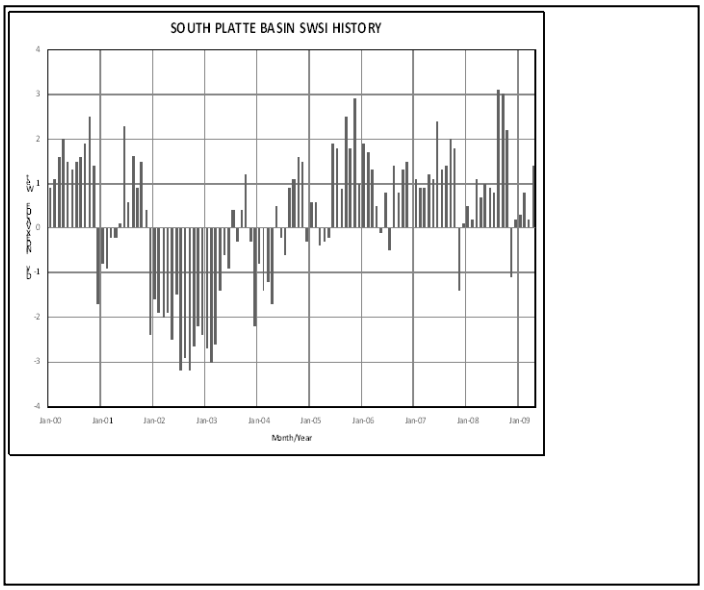
At the end of the month Vallecito Reservoir contained 44,620 acre-feet compared to its average content of 51,608 acre-feet (86% of average). McPhee Reservoir was up to 259,343 acre-feet compared to its average content of 259,798 (100% of average), while Lemon Reservoir was up to 9,970 acre-feet as compared to its average content of 19,447 acre-feet (51% of average).

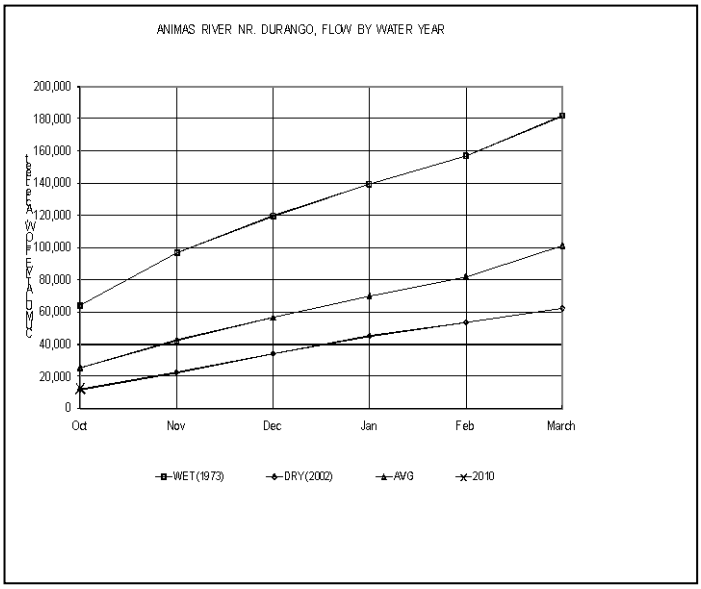
Outlook

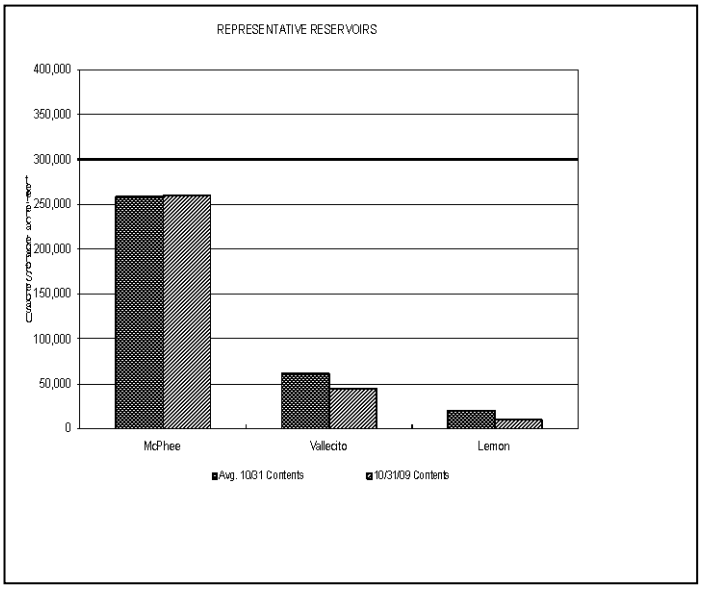
October was near average. Reservoirs have been heavily relied upon for irrigation supplies all summer long this year. We hope we will have an above average snowpack season to replace the water that was used in the reservoirs this summer. On October 31st the NRCS SNOTEL sites are reporting a 70% snow-water equivalent within the basin.

Administrative/Management Concerns

The flows on the La Plata River remain low and delivery to the Stateline gage, from Hesperus were futile for the entire month. Most of the La Plata River just below the Hesperus gage to the confluence of Long Hollow is dry. No pumping into Ridges Basin Reservoir occurred in October.







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