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
303-866-3581; www.water.state.co.us

October 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 South Platte Basin to a low value of -2.5 in the San Juan/Dolores Basin. All seven of the basins (South Platte, Arkansas, Rio Grande, Gunnision. Colorado, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's values.

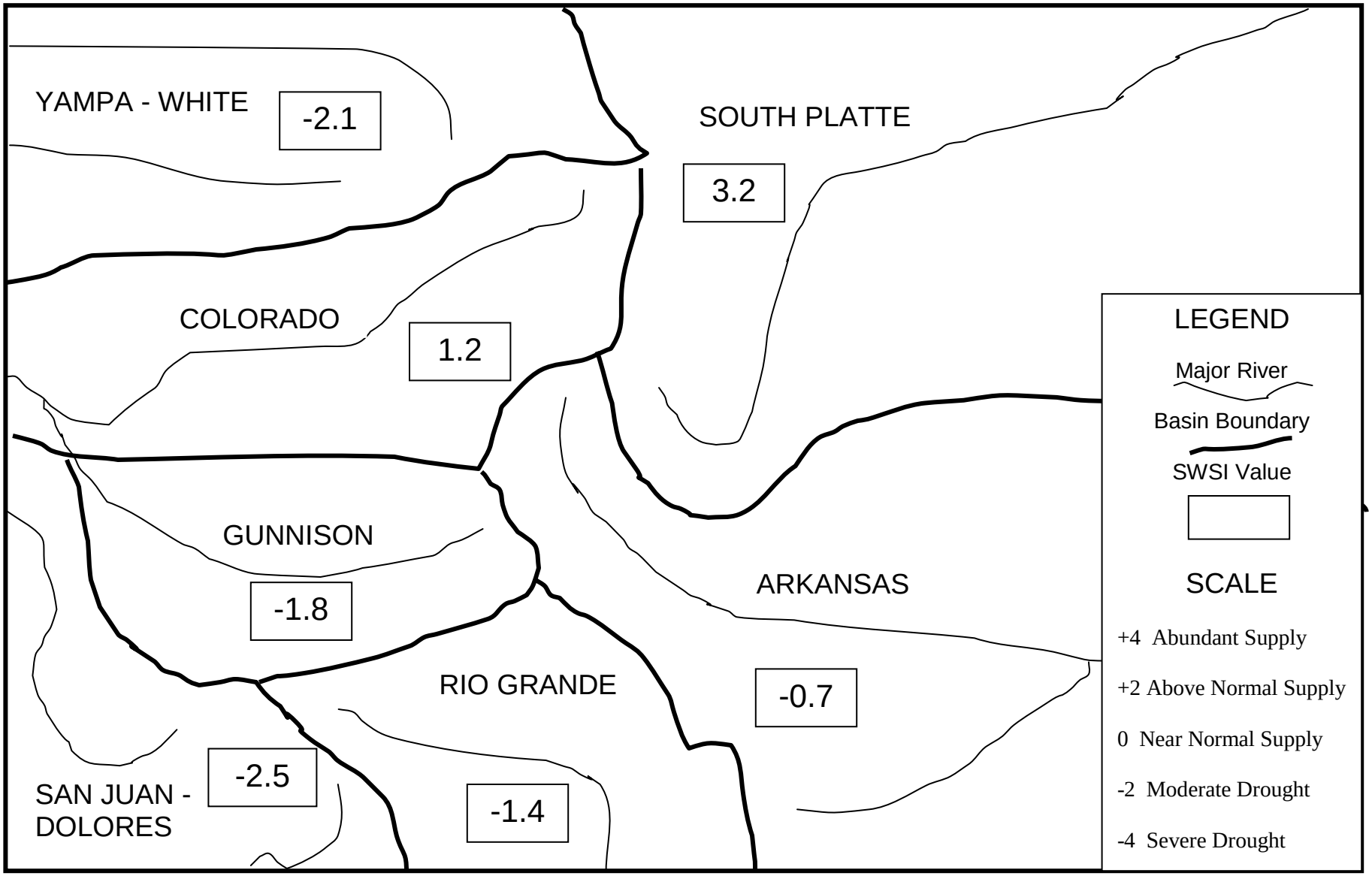
The following SWSI values were computed for each of the seven major basins for October 1, 2009, and reflect the conditions during the month of September 2009.

Basin	October 1, 2009 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+3.2	+0.7	+0.2
Arkansas	- 0.7	+0.7	- 0.2
Rio Grande	- 1.4	+0.5	- 1.6
Gunnison	- 1.8	+0.8	- 0.3
Colorado	+1.2	+0.5	- 0.8
Yampa/White	- 2.1	+0.3	- 5.1
San Juan/Dolores	- 2.5	+0.4	- 2.6

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



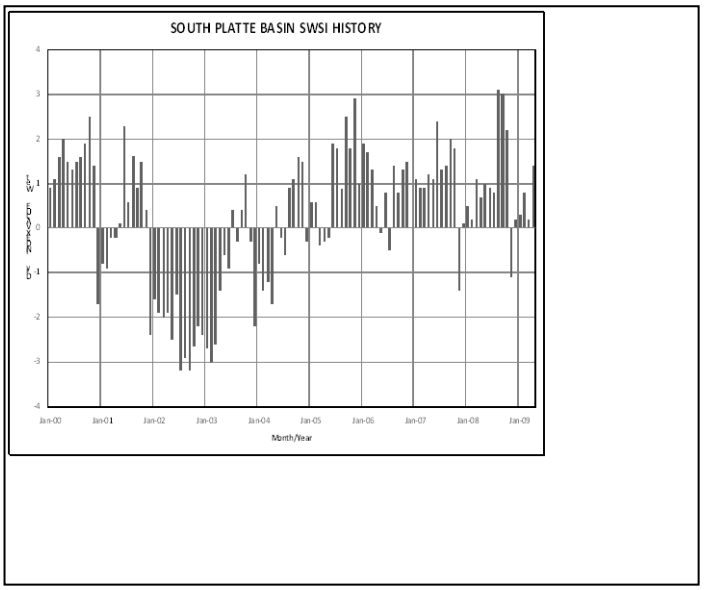
October 1, 2009

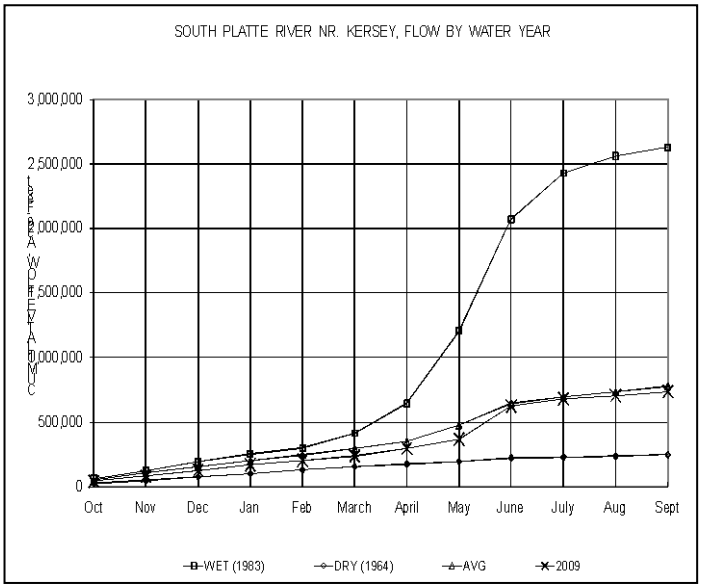
Basinwide Conditions Assessment

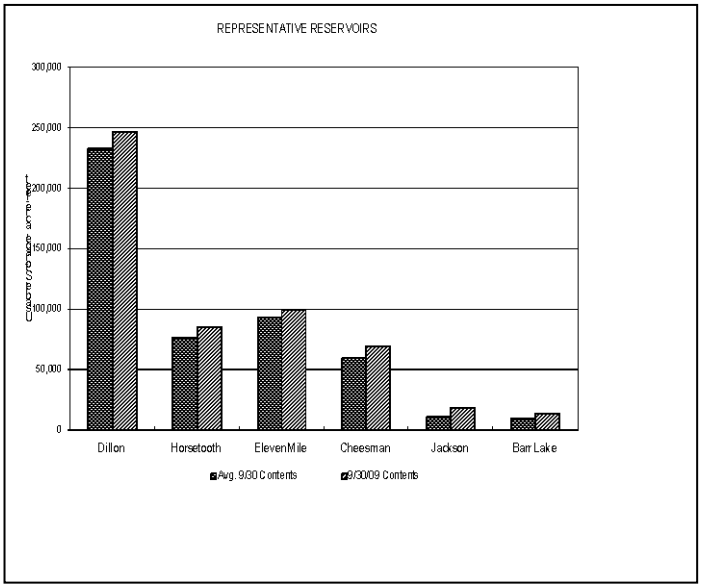
The SWSI value for the month was +3.2. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 111% of normal as of the end of September. Cumulative storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, is at 48% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 93% of capacity. Flow at the gaging station South Platte River near Kersey was 527 cfs, as compared to the long-term average of 514 cfs. Flow at the Colorado/Nebraska state line averaged 304 cfs.

Outlook

Water supply conditions remained very favorable during September due to the very wet proceeding months. Because of these conditions, the call for water on the main stem of the South Platte remained very junior and was completely removed downstream of Denver after September 24, 2009 as irrigation wound down. There were calls for water on the tributaries through-out the month, but in general these calls were less senior than in most years. Major municipal and irrigation reservoirs remain at higher storage levels than in several years. The significant carryover will provide a good start to the following water year.







Basinwide Conditions Assessment

The SWSI value for the month was -0.7. Flow at the gaging station Arkansas River near Portland was 285 cfs, as compared to the long-term average of 449 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 115% of normal as of the end of September.

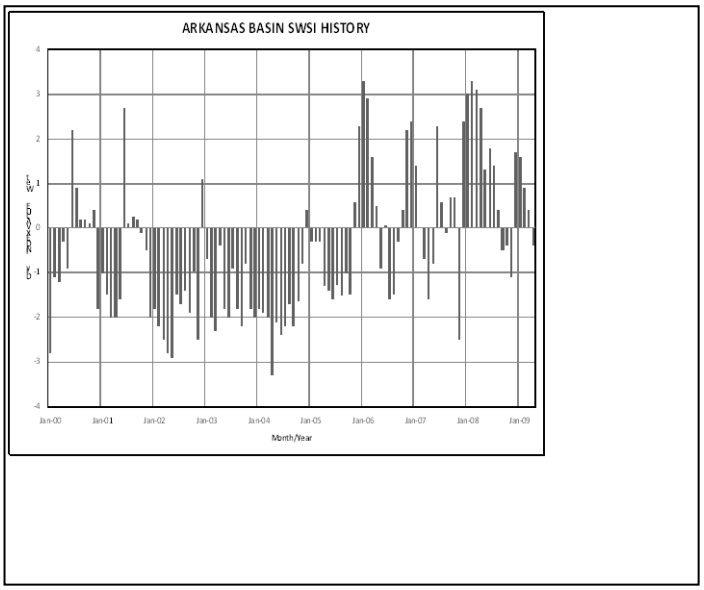
Outlook

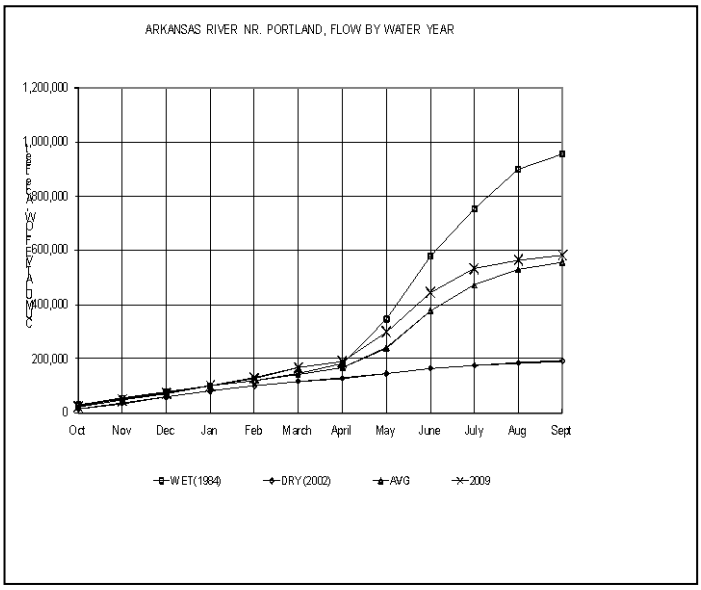
The Arkansas River call began the month set at a split call (Catlin 12/3/1884 above John Martin Reservoir and Amity #1 2/21/1887 below John Martin Reservoir and ended at the Amity #1 2/21/1887 call.

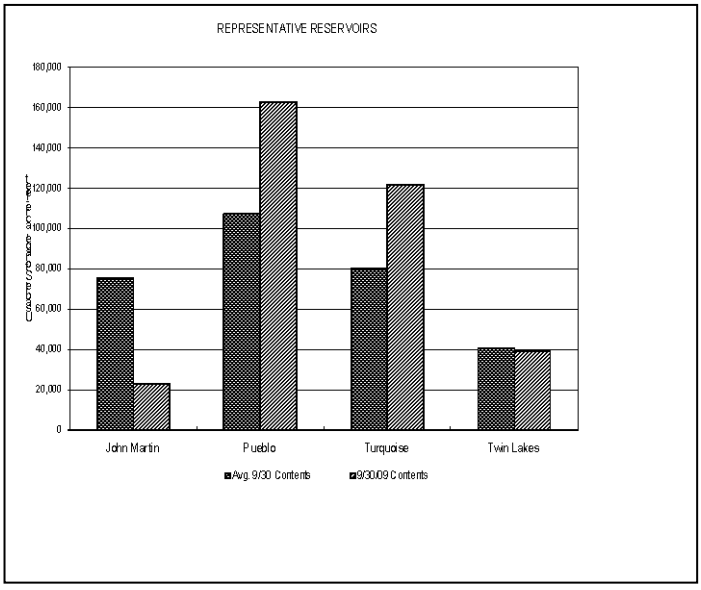
Administrative/Management Concerns

The State Engineer filed new Compact Rules Governing Improvements to Surface Water Irrigation Systems in the Arkansas River Basin in Colorado on September 30, 2009. This followed an extensive Advisory Committee process that took over a year to complete. The Advisory Committee consisted of many water users, water attorneys and engineers and representatives from various public agencies associated with efficiency improvements. More detailed information is available at http://www.water.state.co.us/wateradmin/ArkansasRiver.asp . These new rules will likely take effect in January of 2011 once the Water Court process is completed in late 2010.

The first furlough day occurred on Tuesday, September 8, 2009 following the Labor Day holiday weekend. Division 2 personnel were required to be off on unpaid leave that day and normal reservoir operations were interrupted for the furlough day.



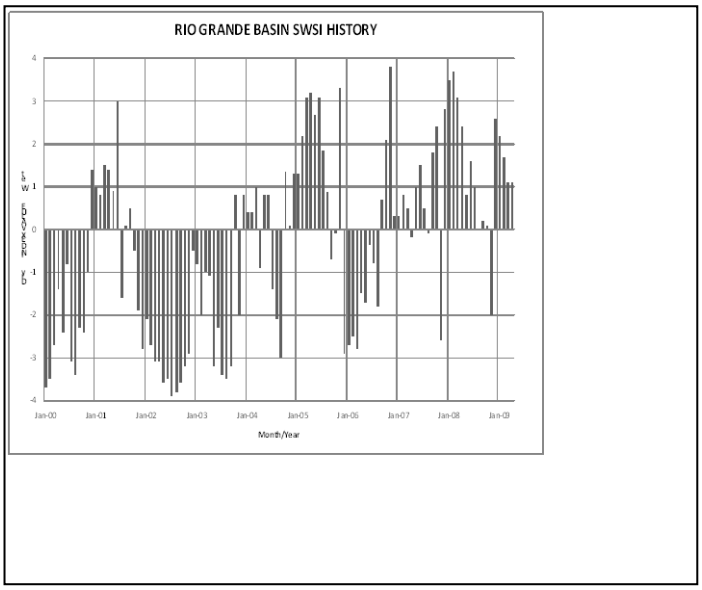




Basinwide Conditions Assessment

The SWSI value for the month was -1.4. Flow at the gaging station Rio Grande near Del Norte averaged 264 cfs (51% of normal) during September. The Conejos River near Mogote had a mean flow of 122 cfs (95% of normal). The Conejos flow was bolstered by releases from Platoro Reservoir for irrigation needs downstream. Generally, stream flow in the upper Rio Grande basin was below normal during September, continuing the trend begun in June. Rainfall during the month did help bring flows back to near normal levels in several area drainages.

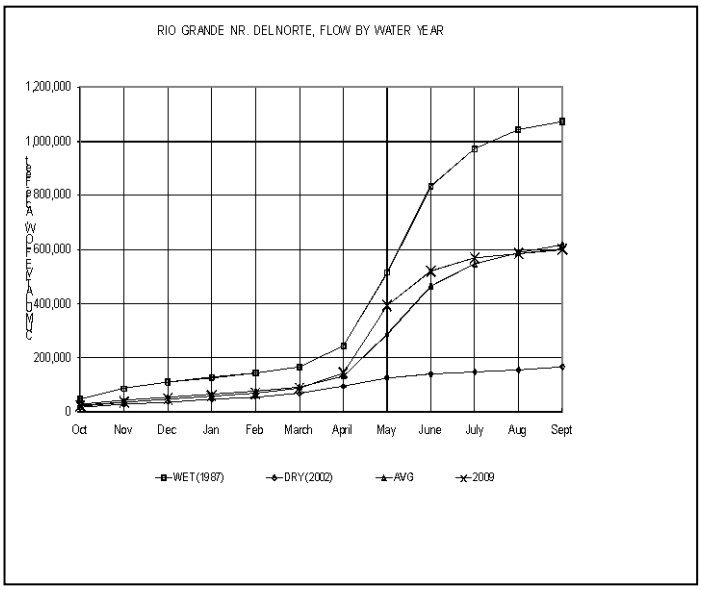
Precipitation in the basin was above normal during September, hampering the harvest of crops. The dry months of July and August offset the wet months of April and May so that accumulated precipitation in the San Luis Valley is normal for year-to-date. Storage in Rio Grande, Platoro, and Santa Maria reservoirs totaled 130% of normal as of the end of September.



Outlook

The large majority of streams in the upper Rio Grande basin have experienced below normal flow during the summer and early fall. However, there is still optimism that rain and snowfall in October and November can jump-start a snowy winter.

The National Weather Service three-month outlook predicts warmer than normal temperatures for Colorado with no tendency to a wetter or drier winter.

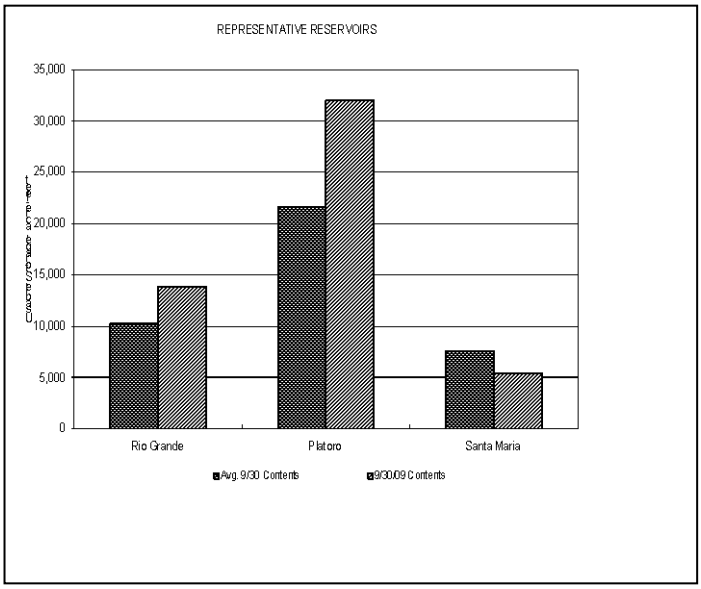


Administrative / Management Concerns

The call remains very senior on all creeks and rivers in the Division. Colorado will meet its delivery obligation to New Mexico and Texas under the Rio Grande Compact. Administrators are hoping that a mild fall will allow water diversions to continue for irrigation and recharge purposes.

Public Use Impact

The rain events slowed the fall harvest for a few days and did damage some native hay and alfalfa that had been cut.



Basinwide Conditions Assessment

The SWSI value for the month was -1.8. Flow at the gaging station Uncompahgre River near Ridgway was 69.1 cfs, as compared to the long-term average of 110 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 98% of normal as of the end of September.

Outlook

Temperatures have been below average for most of the month of September and the few summer monsoons helped to keep the high country green but left the lower elevations mostly dry. Overall the month of September produced slightly below average precipitation. However, the rain helped the very diminishing natural flows throughout the basin.

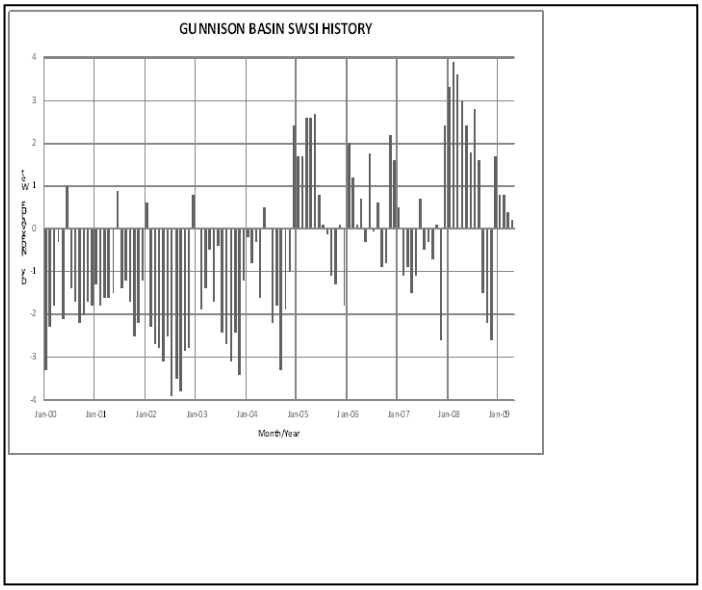
Administrative/Management Concerns

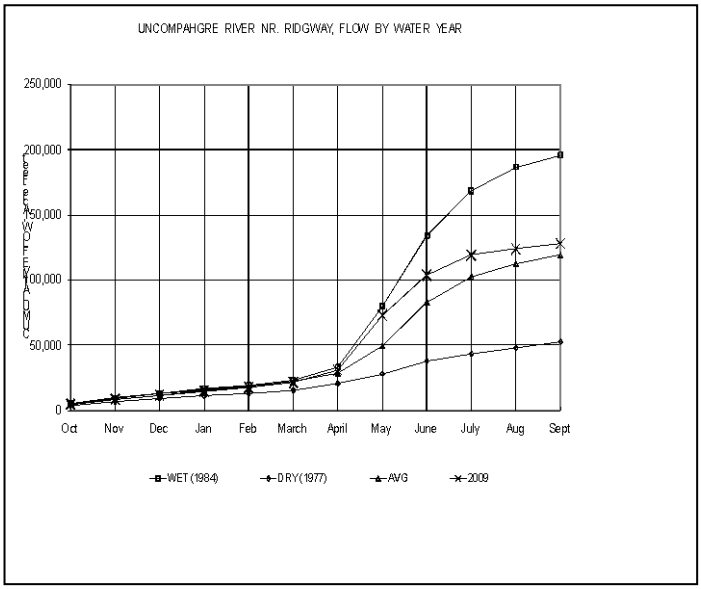
The San Miguel River basin remained on call until September 21st as seasonal rains and cooler temperatures increased natural streamflow and reduced irrigation demands. In the Uncompahgre River basin, the flows from the Aspinall Unit through the Gunnison Tunnel have remained above average due to the dry conditions and low Uncompahgre River inflows to Ridgway Reservoir. The Uncompahgre Valley Water Users Association, the largest single water user in the Gunnison River basin, was able to tightly manage their water supply and not place a call on the Uncompahgre River this irrigation season.

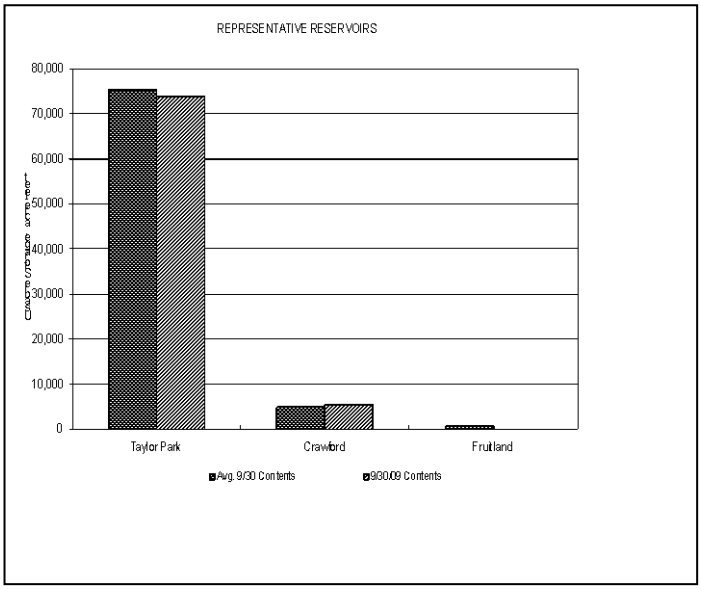
With the exception of Ridgway Reservoir, there remains good carry over storage this season throughout Division 4 and an average snowpack this winter will put the Gunnison River basin in good shape for the next water year.

Public Use Impacts

Overall, the irrigation season went fairly well as most irrigators had sufficient supply. As of this report, late September precipitation and cooler temperatures in early October should help soil moisture conditions going into the winter. Good fall precipitation helps to recharge shallow groundwater aquifers and increase streamflow during the spring runoff rather than the spring snowmelt just soaking in to the ground.







Basinwide Conditions Assessment

The SWSI value for the month was +1.2. Flow at the gaging station Colorado River near Dotsero was 1504 cfs, as compared to the long-term average of 1428 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 98% of normal as of the end of September.

Outlook

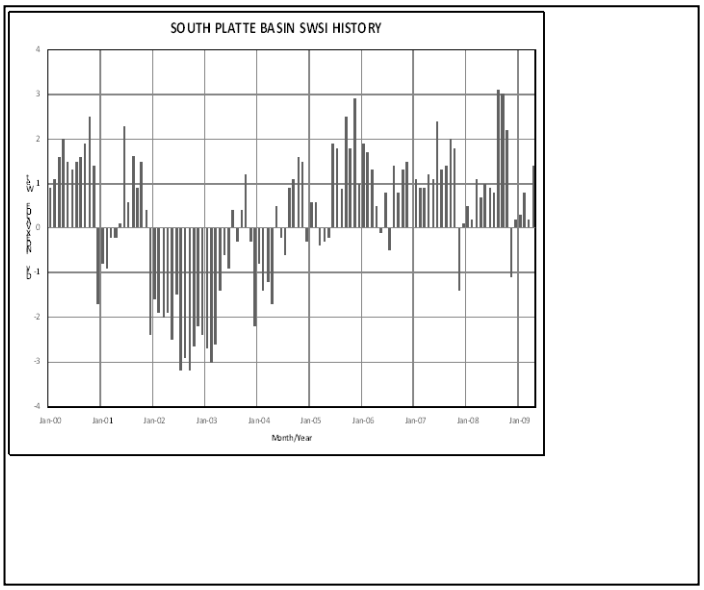
Colorado River flows have remained close to average for the past six weeks. Green Mountain Reservoir lowered releases due to reduced Dillon Reservoir releases through mid-September to fulfill their reservoir account. Ruedi Reservoir releases, cut significantly throughout September, remain well below average. Crystal River flows which were far below average throughout September will likely remain below average through October. Roaring Fork and Colorado River flows should remain around average through October. Heavy precipitation, more likely in the fall, could boost flows temporarily above average.

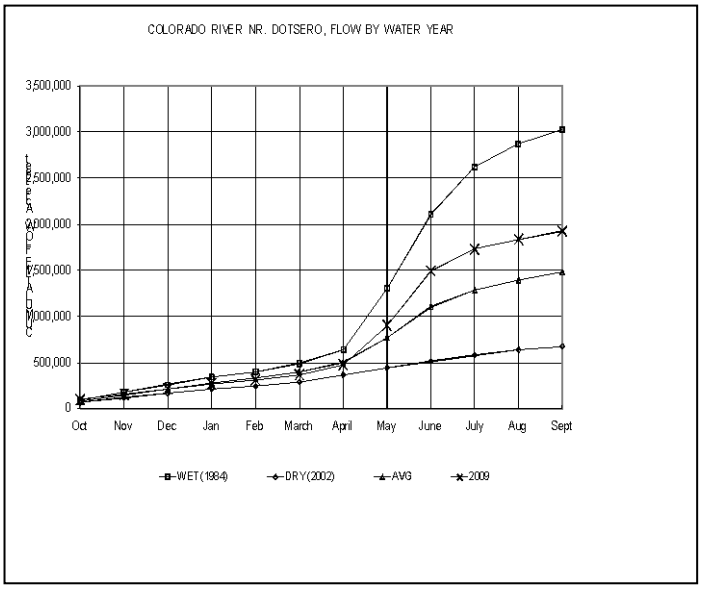
Administrative/Management Concerns

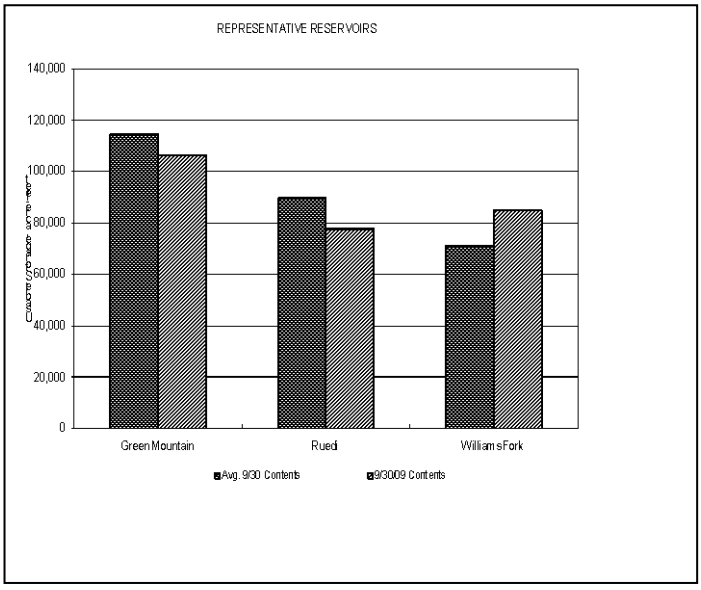
Green Mountain Reservoir releases were reduced through mid-September, however have been increased slightly to match release requirements. The currently release rate of 750 cfs will likely remain through October. Shoshone will likely remove its call in late October to shut down for maintenance work. There were no calls from Grand Valley water users in September. The outlook for near average Colorado River flows will likely maintain the basin call out above Shoshone. Grand valley irrigation demand remains below capacity, which will keep a Grand Valley Irrigation call from occurring through October 31st.

Public Use Impacts

Pitkin County is considering seeking in-stream water rights for a planned Kayak Park on the Roaring Fork River in Basalt. Glenwood Springs had likewise considered seeking an in-stream right on the Colorado River for its Whitewater Park; but decided against pursuing it figuring the upstream senior Shoshone right would keep flows secure. There is concern by some, however, that the water rights held by Xcel Energy's Shoshone hydroelectric plant might not remain permanent in the future.





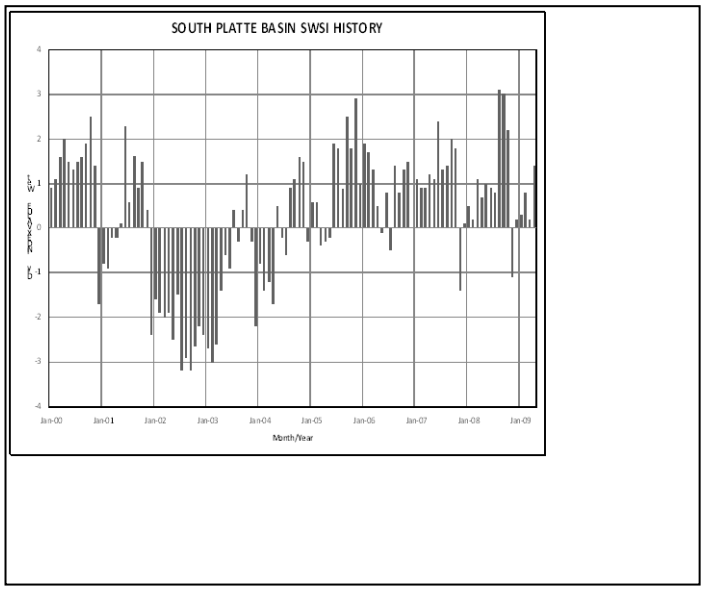


Basinwide Conditions Assessment

The SWSI value for the month was -2.1. Flow at the gaging station Yampa River at Steamboat was 87.1 cfs, as compared to the long-term average of 119 cfs.

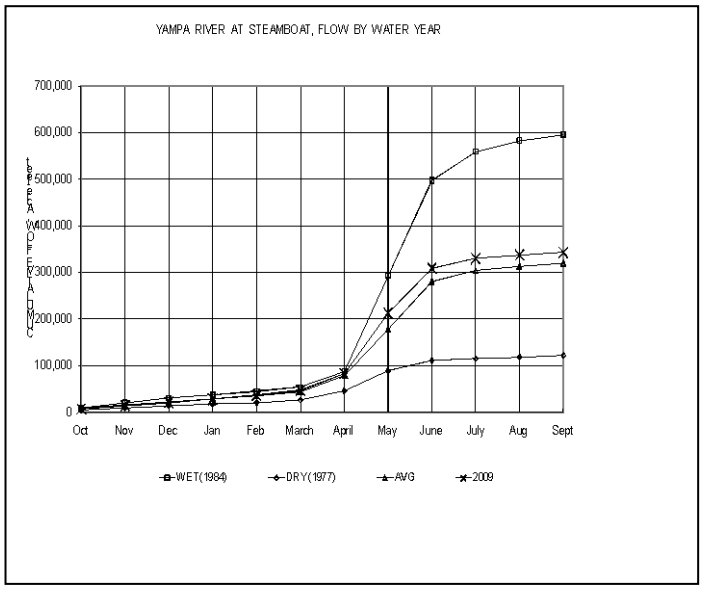
After an extremely dry August, precipitation in the Yampa, White, and North Platte River basins increased in September. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 96% of average for the Yampa/White River basin and 107% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 98% of average for the month of September and 101% of average for the water year to-date.

With the increased precipitation in September, streamflows in Division 6, in general, returned to levels typically seen this time of year.



Outlook

Storage levels in Fish Creek Reservoir, Elkhead Creek Reservoir, and Yamcolo Reservoir continued to decline throughout September and were reported at approximately 72%, 73%, and 53% of capacity, respectively, 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

Several Division 6 streams remained under administration at the end of the month, including: Bear River, Talamantes Creek, Newcomb Creek, and Soda Creek.

The third year of the fish recovery release from Elkhead Creek Reservoir was completed in September. In order to maintain adequate flows at the Yampa River near Maybell gage station, the U.S. Fish and Wildlife Service requested that the 2009 fish release from Elkhead Creek Reservoir commence on August 10 at a rate of 50 cfs. The fish release was maintained at approximately 50 cfs through September 10, at which time it was increased to 60 cfs. The release rate was decreased to 45 cfs on September 17 and releases were discontinued for the year on September 30. Flow at the Maybell station was reported at approximately 175 cfs at the end of September.

Public Use Impacts

High mountain reservoirs and State Parks in the area continue to attract many visitors enjoying the fall weather and colors. Good fishing is reported at area lakes and streams. The Yampa River through Steamboat Springs remains a popular spot for local and visiting anglers and recreationists.

Basinwide Conditions Assessment

The SWSI value for the month was -2.5. Flows at the Animas River at Durango averaged 214 cfs (46% of average). The flow at the Dolores River at Dolores averaged 106 cfs (59% of average). The La Plata River at Hesperus averaged 8.3 cfs (42% of average).

Precipitation in Durango was 1.67 inches for August, 72% of the 30-year average of 2.34 inches. Precipitation to date in Durango, for the water year, is 16.38 inches, below the average of 19.52 inches.

The average high and low temperatures for the month of September in Durango were 75° and 45°. In comparison, the 30-year average high and low for the month is 77° and 44°.

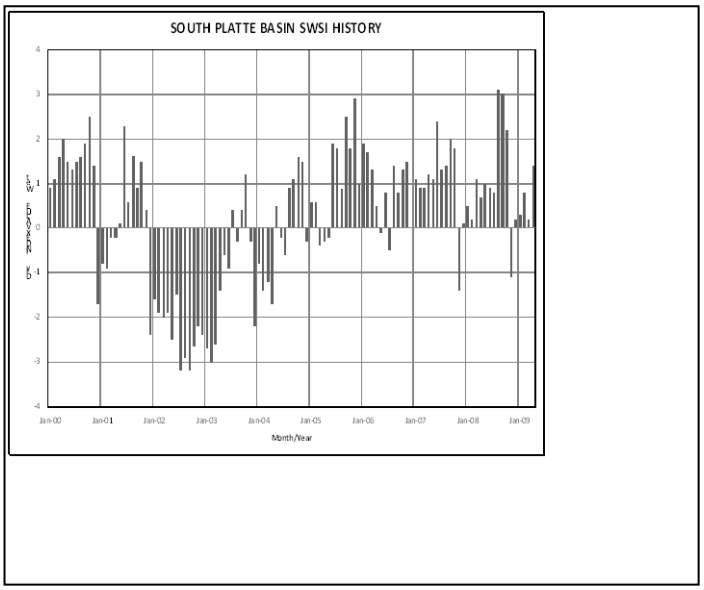
At the end of the month, Vallecito Reservoir contained 49,210 acre-feet compared to its average content of 57,425 acre-feet (86% of average). McPhee Reservoir was up to 264,755 acre-feet compared to its average content of 262,857 (101% of average), while Lemon Reservoir was up to 9,470 acre-feet as compared to its average content of 19,437 acre-feet (49% of average).

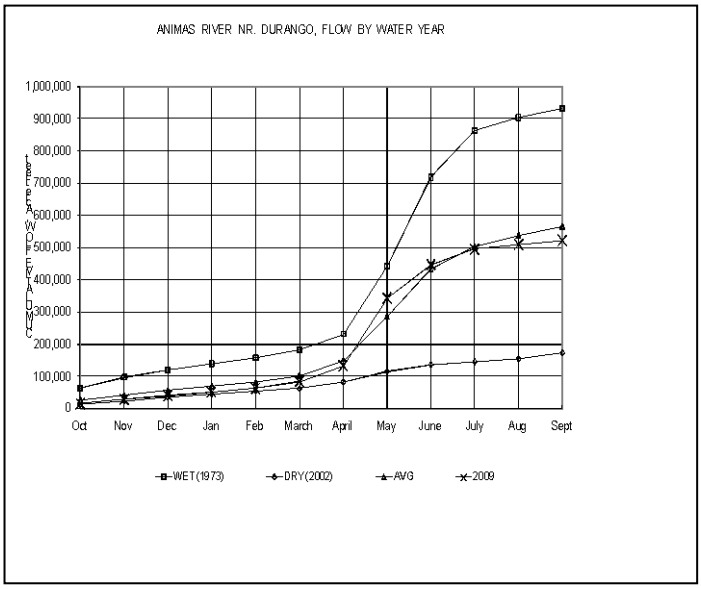
Outlook

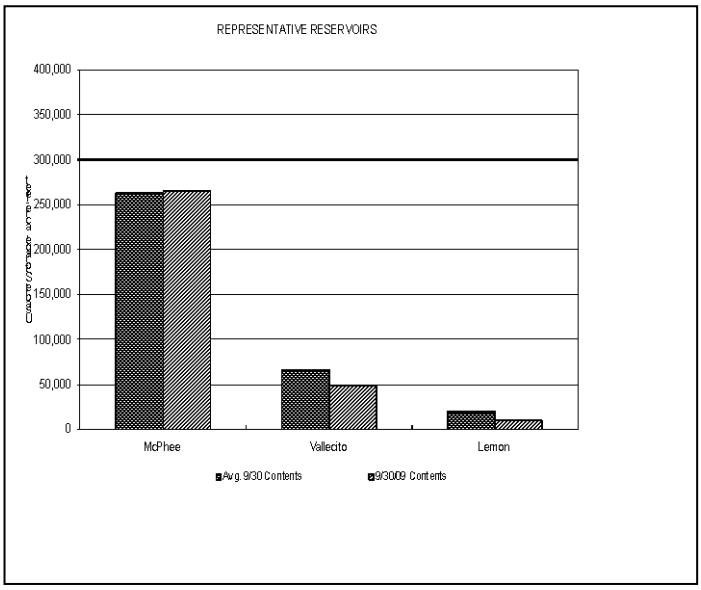
September was a little wetter than the previous two months. Reservoirs have been heavily relied upon for irrigation supplies all summer long this year. All rivers within the basin are flowing below average with the La Plata River approaching zero flow at the state line. We hope we will have an above average snowpack season to replace the water that was used in the reservoirs this summer.

Administrative/Management Concerns

The flows on the La Plata River were low such that delivery to the Stateline gage, from Hesperus remained 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 September.







OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES
1313 SHERMAN STREET ROOM 818
DENVER CO 80203