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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August 2008

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 2.8 in the Gunnison Basin to a low value of 0.8 in the South Platte Basin. Two of the basins (Gunnison, Colorado) experienced a gain from the previous month's values. Four of the basins (South Platte, Arkansas, Rio Grande, Yampa/White) experienced a loss from the previous month's values. One of the basins (San Juan/Dolores) remained unchanged from the previous month's values.

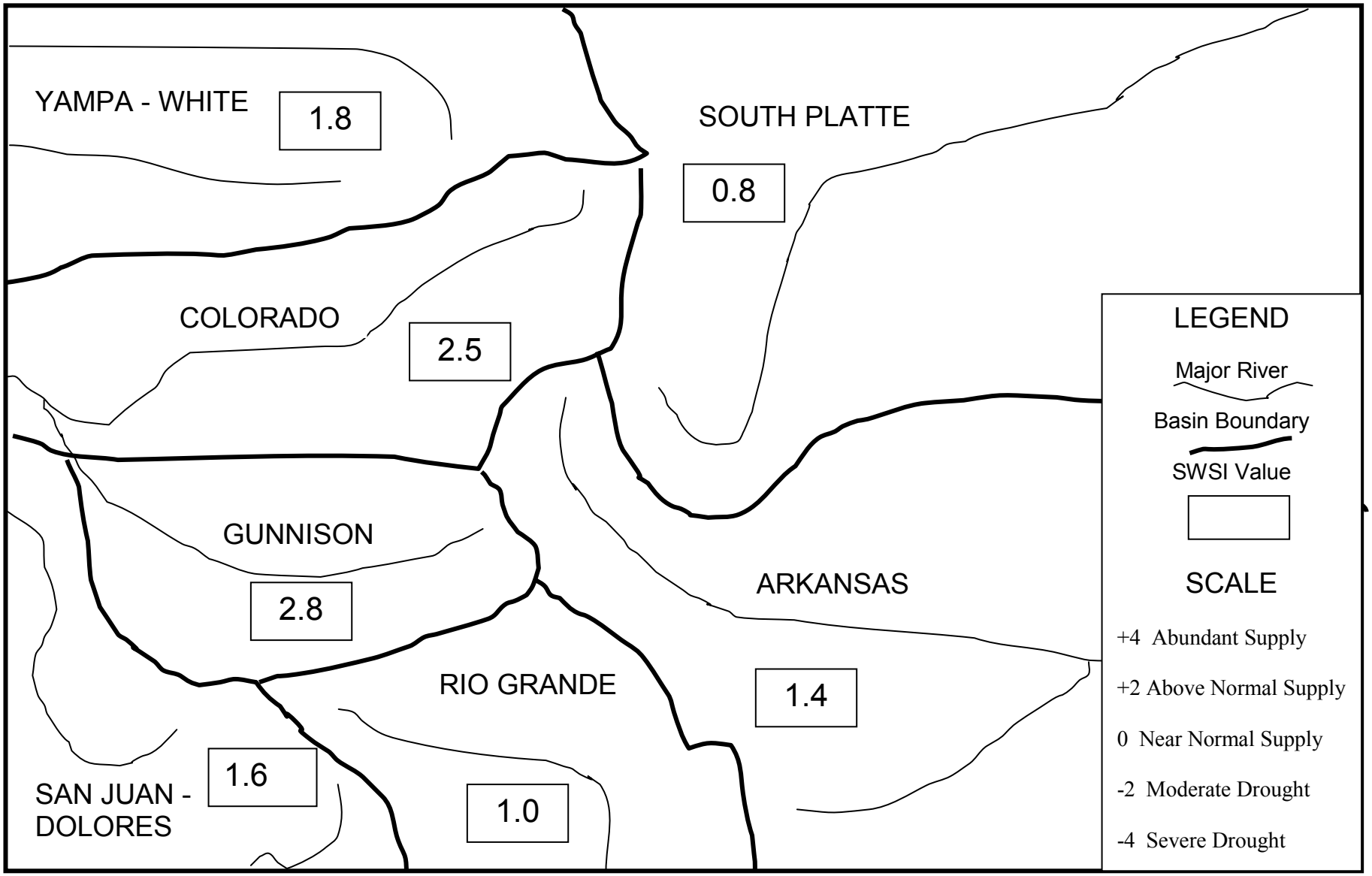
The following SWSI values were computed for each of the seven major basins for August 1, 2008, and reflect the conditions during the month of July 2008.

Basin	August 1, 2008 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+0.8	- 0.1	- 0.5
Arkansas	+1.4	- 0.4	+0.8
Rio Grande	+1.0	- 0.6	+0.5
Gunnison	+2.8	+1.0	+3.3
Colorado	+2.5	+0.5	+3.5
Yampa/White	+1.8	- 0.3	+5.5
San Juan/Dolores	+1.6	0.0	+2.0

Scale

-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

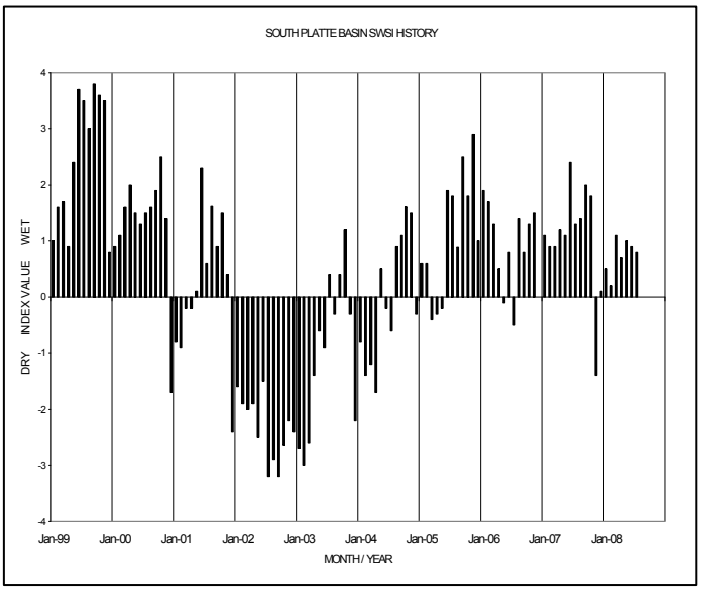
SURFACE WATER SUPPLY INDEX FOR COLORADO



August 1, 2008

Basinwide Conditions Assessment

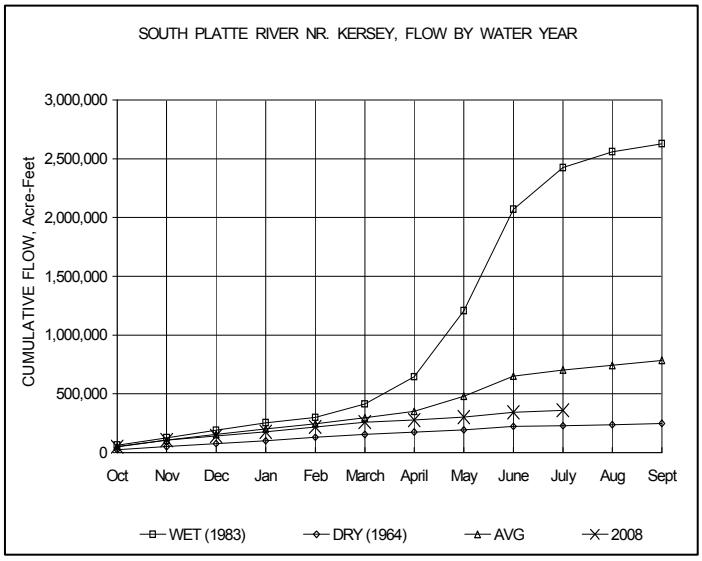
The SWSI value for the month was 0.8. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 101% of normal as of the end of July. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 48% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 99.4% of capacity. Flow at the gaging station South Platte River near Kersey was 295 cfs, as compared to the long-term average of 666 cfs. Flow at the Colorado/Nebraska state line averaged 35 cfs.



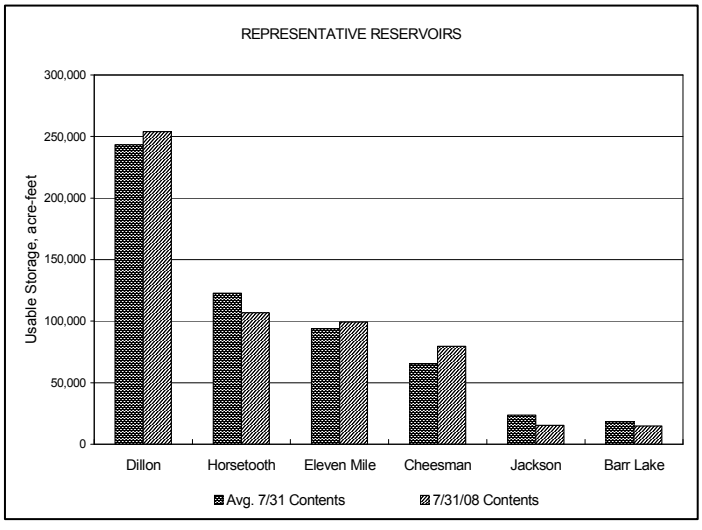
Outlook

The very dry conditions continued in July with precipitation averages of less than 75% over most of the front range. It was the third driest whether in Denver during the period of record with only 0.24 inches compared to an average of 2.16 inches of precipitation. In addition, July was extremely warm with record breaking conditions. For instance, Denver weather in July was the third warmest on record. In fact, there were 24 days with high temperatures above 90 degrees between July 13 and August 5 breaking the record of 18 days of 90 degree weather. These hot temperatures allowed crops to generally catch up from the cool spring conditions.

The call on the lower end of the main stem of the South Platte continued to be very senior. Many irrigation users in these areas were very dependent upon their supplemental reservoir supplies to provide an adequate amount of water to their crops. Because of this, it appears that the major irrigation supply reservoirs on the South Platte will be empty by the end of the irrigation season. The main concern with this is that it will require a wet spring next year in order to allow these reservoirs to fill next year. The likelihood of significant shortages for irrigation next year goes up dramatically if the major plains reservoirs do not fill.



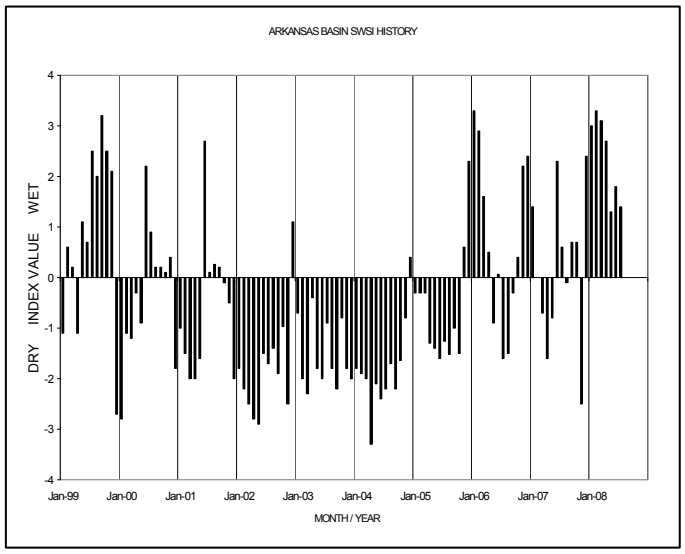
In general, the supply conditions on the mainstem above Kersey and on the tributaries continued to be average due to the remainder of the runoff from the good snowpack that had existed along the South Platte and Clear Creek above the Denver area. The Denver area municipal suppliers and other municipal suppliers along the Front Range were also in better shape because of the significant storage reserve they have compared to their demand.



Winter wheat crops were impacted this year by the dry conditions. By the end of July, there was real concern whether there would be adequate supplies for all of the other crops, especially on the main stem of the South Platte downstream of Kersey. Fortunately, the first 10 days of August have been significantly wetter with several significant widespread storms in the basin. The additional supply has provided much needed water directly to crops, reduced the need for reservoir supplies and increased stream flow allowing for junior users to come into priority and begin taking water. It has even allowed a very short period of reservoir refill on the main stem of the Platte.

Basinwide Conditions Assessment

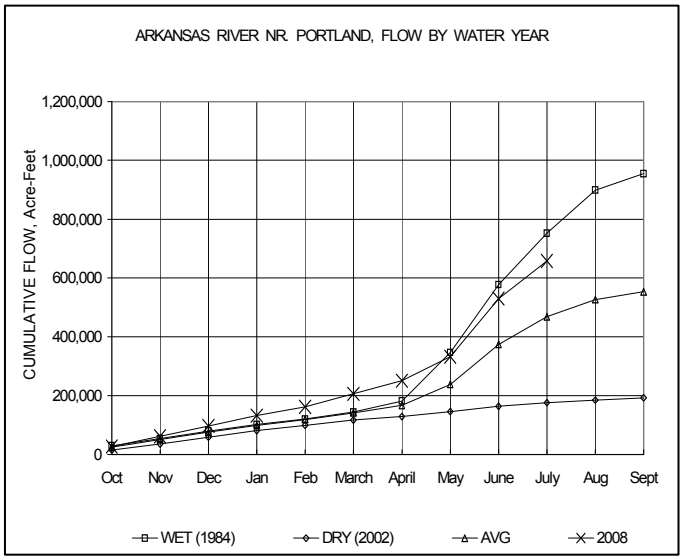
The SWSI value for the month was 1.4. Flow at the gaging station Arkansas River near Portland was 2075 cfs, as compared to the long-term average of 1533 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 52% of normal as of the end of July.



Outlook

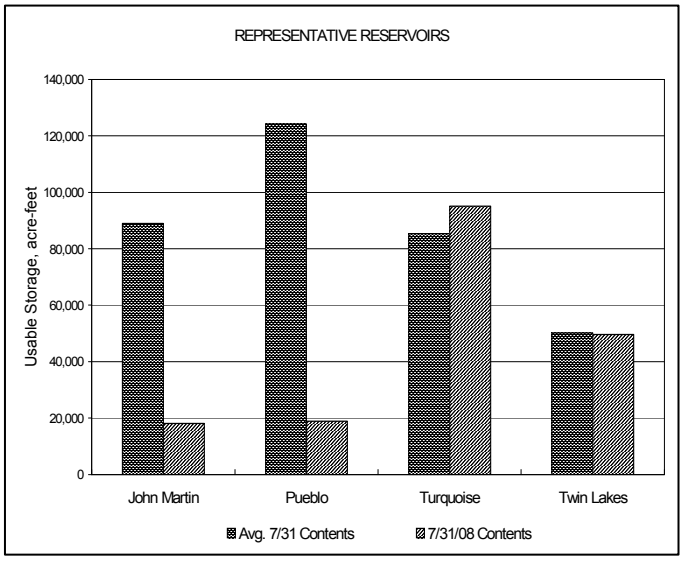
The Arkansas River call began the month set at the Colorado Canal 6/9/1890 call and ended the month set at the Fort Lyon #2 call (3/1/1887). There were about 4 days of Amity #1 call (2/21/1887) and a short period of higher flows with a split call and more junior calls below John Martin Reservoir. Overall irrigation supplies have been quite good in 2008 and that trend continued in July, but all of the supply has essentially been due to snowmelt runoff and particularly from upper basin headwaters area snowmelt runoff. Precipitation year-to-date for many parts of the Arkansas River Basin were poorer than even 2002, but the strong mainstem river conditions have provided good supplies through July. Non-irrigated pasture land and dryland areas have been particularly had hit by the lack of rain with many Arkansas River Basin counties qualifying for Federal Disaster designation.

Kansas called for a release of their stored water in John Martin Reservoir in late June and continued that delivery to ditches in western Kansas through July 23, 2008. The delivery included a release of 14,125 acre-feet of Section II water along with 272 acre-feet of transit loss water. The transit loss release was limited under an agreement between the two States signed in the fall of 2006, but the delivery experienced no additional transit loss to be made up from future inflows to storage in John Martin Reservoir. The release also included 14,555 acre-feet of Offset Account water that resulted in a net stateline delivery credit of approximately 11,000 acre-feet for the benefit of Colorado well owners in the Lower Arkansas Water Management Association (LAWMA) plan.



Administrative/Management Concerns

An Advisory Committee to the State Engineer on the Irrigation Consumption Rules proposed for the Arkansas River Basin met twice in July (8th and 30th) to help develop a workable set of rules to ensure that developments within surface irrigation systems in Colorado do not cause a problem with compliance with the Arkansas River Compact. The Advisory Committee is scheduled to meet approximately monthly through the end of 2008 to assist in getting a set of Rules promulgated by early 2009.



Basinwide Conditions Assessment

The SWSI value for the month was 1.0. Flow at the gaging station Rio Grande near Del Norte was 1372 cfs, as compared to the long-term average of 1320 cfs (102% of normal). The Conejos River near Mogote had a mean flow of 578 cfs (122% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 98% of normal as of the end of July.

Streamflow in the upper Rio Grande basin was erratic during July. Some areas of the basin experienced above normal streamflow, such as the Conejos River and its tributaries. Other areas produced below average flows such as Saguache Creek, as temperatures fluctuated widely, but settled to the normal slow decline as the winter snowpack melts out

In general, the higher elevations and the Valley floor received below average precipitation during July, and for now, the fifth consecutive month. However, the upper Alamosa River drainage received significant rainfall on several days, creating short-term runoff increases or "spikes" in the hydrograph. The duration of these spikes were about 24 hours apiece and, after a week of this pattern, did raise the baseflow condition.

Medano Creek, the stream that flows through the Great Sand Dunes National Park, has experienced a very nice runoff year with live flow past the visitor center since late April. Two trans-mountain diversions, the Medano and Hudson Branch Ditches, diverting water from Medano Creek eastward to the Wet Mountain Valley, had their usual shut down July 15. This increased the flow towards the Park temporarily.

Most of the other streams in the upper Rio Grande basin have not received enough rainfall to alter the trend towards below average conditions.

Outlook

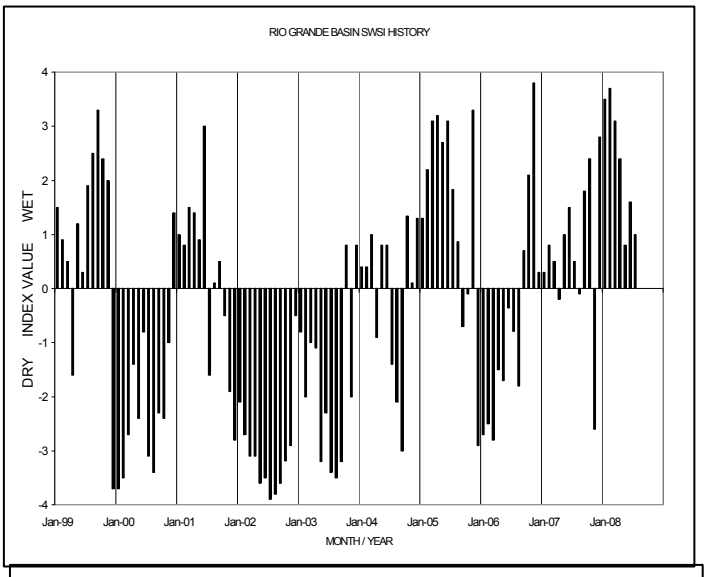
The month of July had generally warmer and drier than normal conditions. However, NOAA weather forecasts for the next month and beyond call for wetter and cooler than normal conditions with particularly high possibility for rainfall the first two weeks of August.

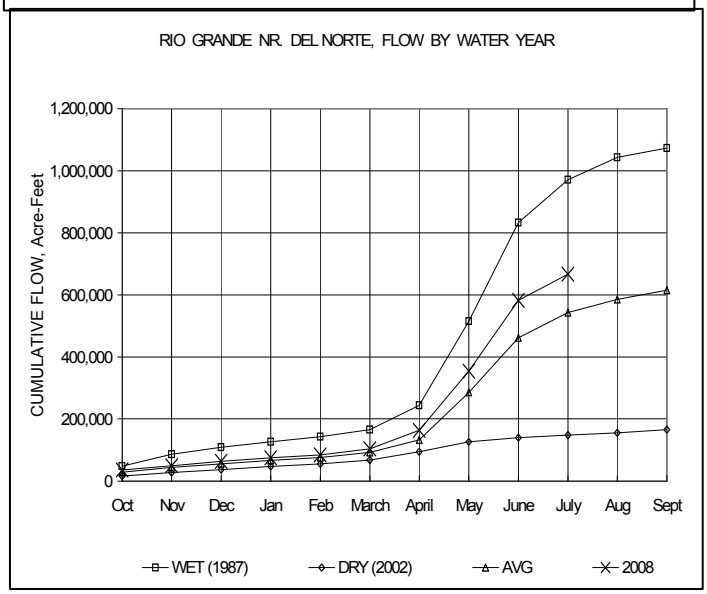
Administrative/Management Concerns

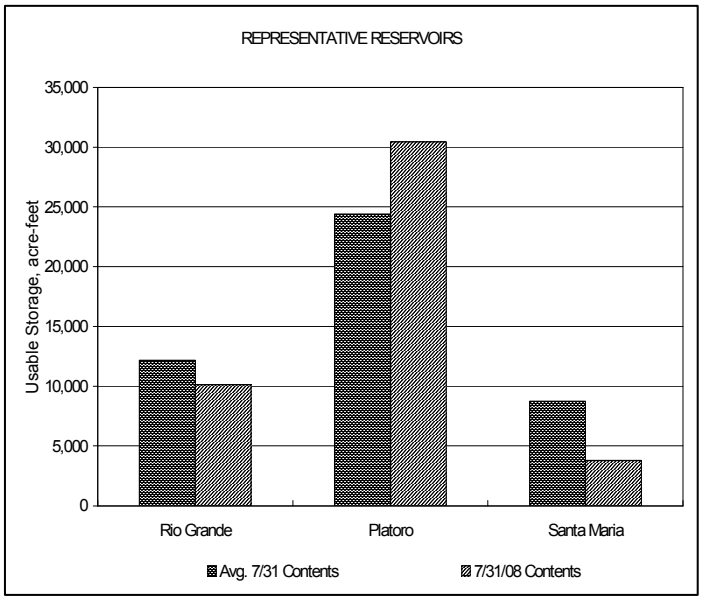
July had normal administrative duties with reservoir releases, streamflow measurement, headgate diversion record-keeping, and well measurement rule compliance checking.

Public Use Impacts

Although the runoff season was better than normal, many irrigators felt the pinch of dry conditions and ditches going out of priority. Well pumping increased as surface water supplies dwindled and temperatures rose.







Basinwide Conditions Assessment

The SWSI value for the month was 2.8. Flow at the gaging station Uncompahgre River near Ridgway was 393 cfs, as compared to the long-term average of 318 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 102% of normal as of the end of July.

Outlook

It was a very hot and dry July in the Gunnison Basin this year. Grand Junction set a record with 52 consecutive days above 90 degrees. This eclipses the record set in 1901 with 51 consecutive days above 90 degrees. And, the lack of precipitation made it seem even hotter. Even so, the flows in the Gunnison Basin have held up well, despite the weeks of extended heat, due to the high snowpack conditions this winter.

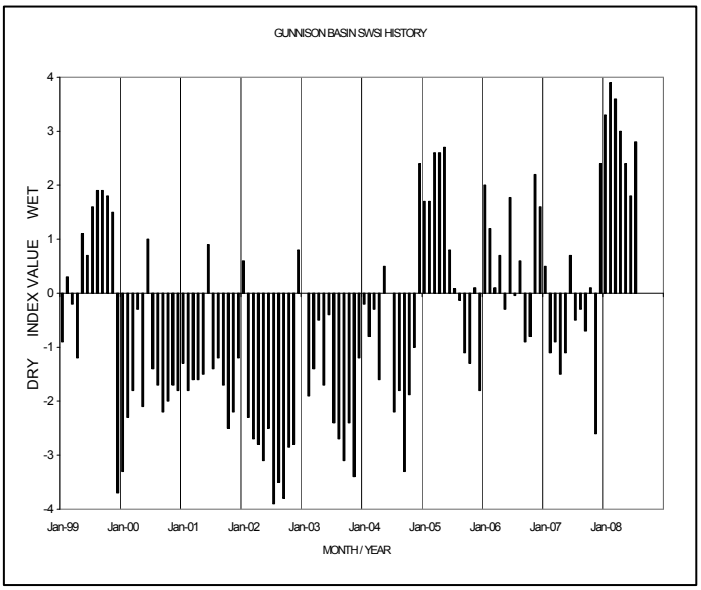
The major reservoirs in the basin have held steady as well in July, and it does not look like they will be drawn down much this fall. Now that the summer monsoonal weather patterns have started, the basin is getting afternoon showers. This will boost stream flows and decrease irrigation demands.

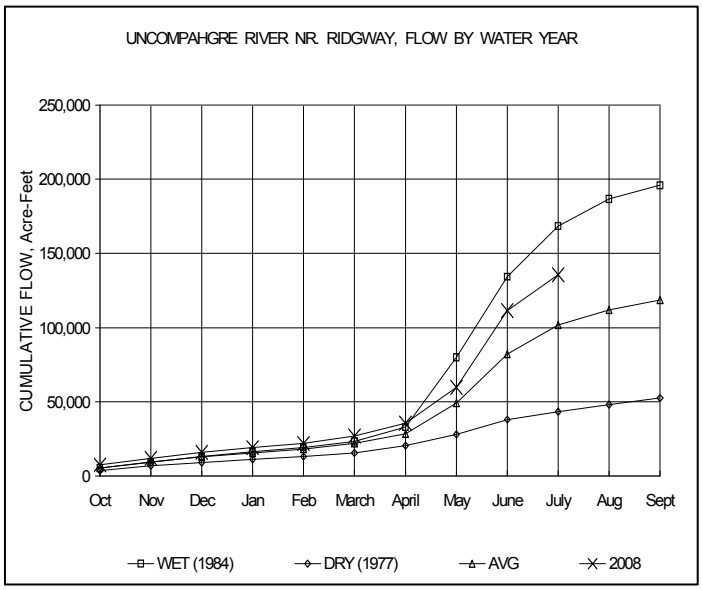
Administrative/Management Concerns

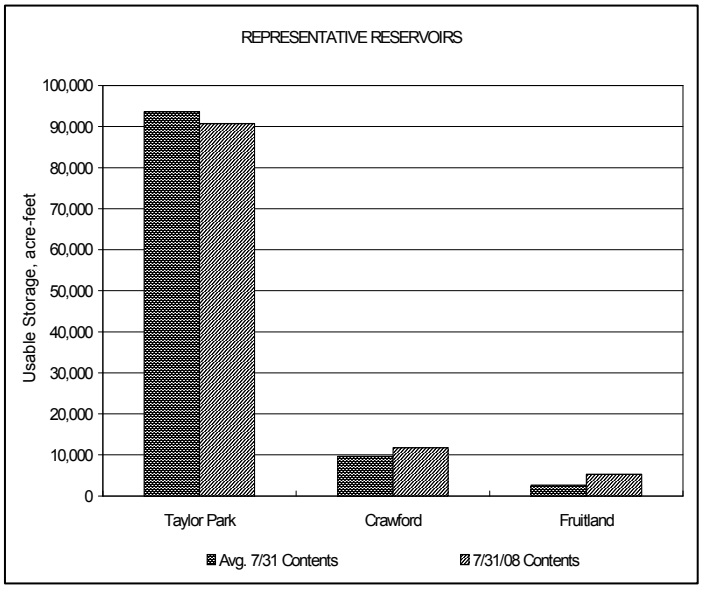
Most stream systems have continued to flow enough to keep the water rights whole. The Water Commissioners throughout the Gunnison Basin are enjoying the ability to keep the ditches running longer than usual without curtailment. There will be plenty of reservoir water to satisfy needs the rest of the irrigation season, and a large amount of carry-over storage this fall will help next year. It does not appear that there will be a river call on the Gunnison, Uncompahgre, or San Miguel Rivers this season.

Public Use Impacts

The growing season started late this year in the Gunnison Basin. However, the hot temperatures in July and abundant supplies of water have been producing good crops this year.







Basinwide Conditions Assessment

The SWSI value for the month was 2.5. Flow at the gaging station Colorado River near Dotsero was 4240 cfs, as compared to the long-term average of 2902 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 107% of normal as of the end of July.

Outlook

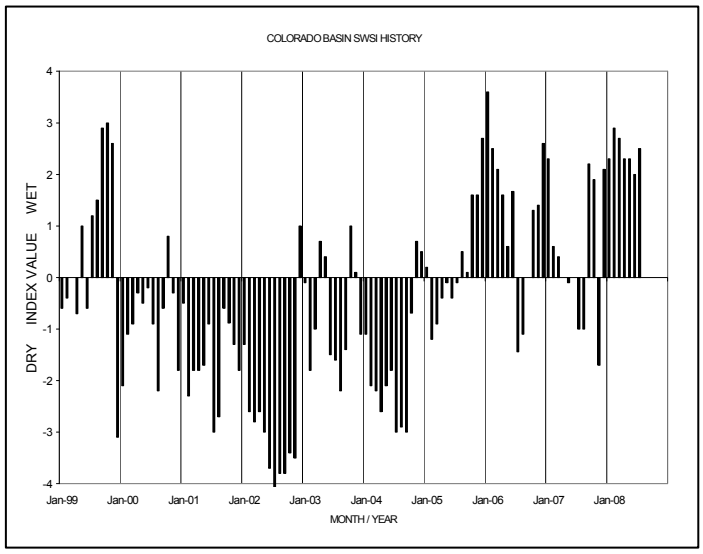
Considerably higher than average flows on the upper Fryingpan River fell sharply in late July to at or below average flows. However, Reudi Reservoir releases have maintained the lower Fryingpan River at above average flows. The Roaring Fork, Crystal, Blue, and Eagle river flows remain considerably above average as of July 31st, keeping Colorado river flows below Glenwood Springs approximately 125-130 percent of average.

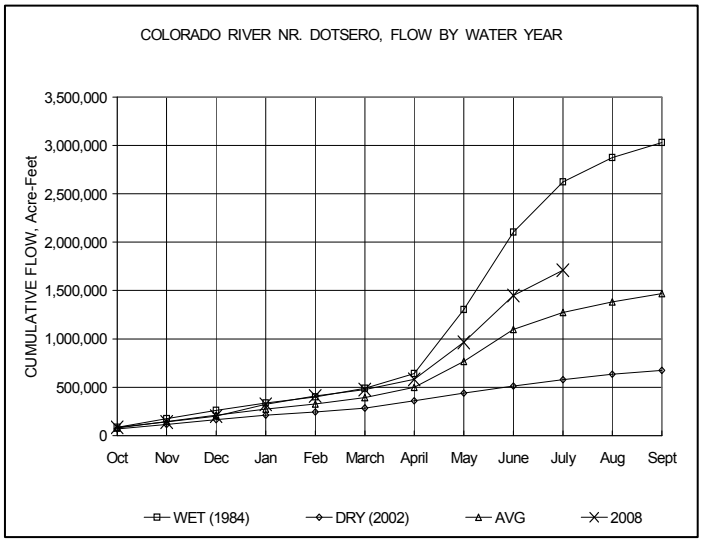
Administrative/Management Concerns

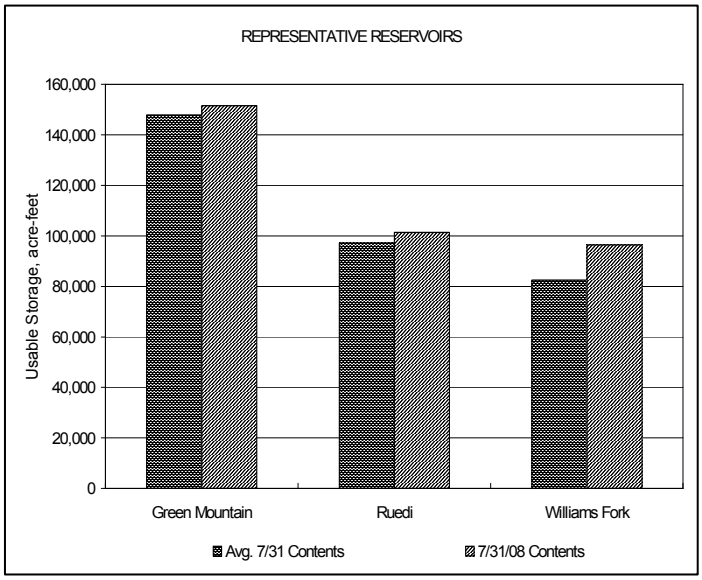
Green Mountain Reservoir reached its maximum desired content in early July requiring substantial release rate increases on July 6th and 7th. Release rates have since been reduced from 1800 to 300 cfs as inflows have dropped dramatically. Above average flows continue to prevent calls on the Colorado and Blue Rivers through July. Contrary to last months report, water users of the Colorado River and its tributaries will likely not begin calls sometime in August.

Public Use Impacts

Lake Powell's increase peaked with an approximate 46 foot elevation increase as of July 16th since March 6th. This brought the reservoir to 63 percent of its full pool content of 24.32 million acre feet.





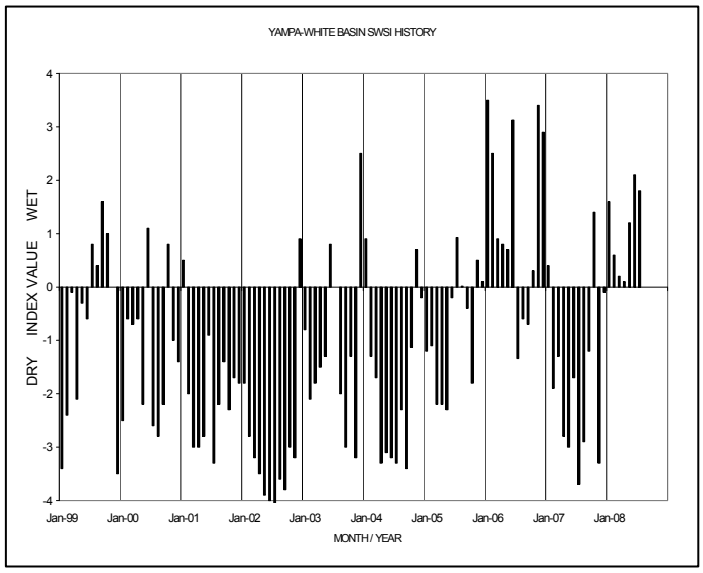


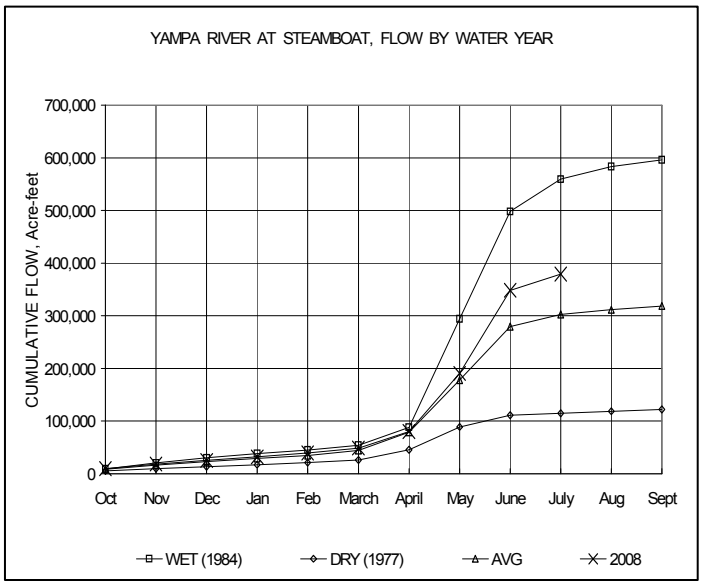
Basinwide Conditions Assessment

The SWSI value for the month was 1.8. Flow at the gaging station Yampa River at Steamboat was 498 cfs, as compared to the long-term average of 372 cfs.

July 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 35% of average for both the Yampa/White River basins and the North Platte River basin. Year-to-date precipitation remains above average, however, and is reported at 104% of average for the combined Yampa, White, and North Platte River basins.

Warm weather continued throughout July and no remaining snowpack was reported at the NRCS SNOTEL sites at the end of the month. Due to high winter snowpack, however, average to above-average runoff for the Yampa, White, and North Platte River basins was predicted by NRCS for July. Most streams were running slightly above average for the month, as predicted by NRCS, but were approaching average conditions by the end of July.





Outlook

Yamcolo Reservoir and Elkhead Reservoir were reported at approximately 65% and 95% of capacity, respectively, at the end of July. Fish Creek Reservoir reached 100% of capacity the first week in July, was spilling most of the month, and was reported at 99.8% 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 Reservoir for municipal, industrial, and recreation purposes, as well as fish recovery releases.

Administrative/Management Concerns

Calls were placed on the following streams, which remained under administration at the end of the month: Middle Hunt Creek (May 29), Bear River (June 6), Talamantes Creek (June 13), West Fish Creek (June 20), Little Bear Creek (July 7), and South Hunt Creek (July 9).
Division 6 continues to monitor streamflow on the lower Yampa River in anticipation of potential releases from Elkhead Reservoir by the Colorado River District in late summer/early fall. Releases are made to augment flows and enhance habitat for the endangered fish species in the critical habitat reach of the Yampa River (from Craig to the confluence with the Green River at Echo Park). District 44 water commissioners are responsible for protecting the water released from Elkhead Reservoir through the Yampa River critical habitat reach.

Public Use Impacts

Area reservoirs are open for the season, with good fishing reported.

Basinwide Conditions Assessment

The SWSI value for the month was 1.6. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 119% of normal as of the end of July.

Flows at the Animas River at Durango averaged 1,299 cfs (110% of normal) with a maximum average daily peak flow of 2,021 cfs on July 2nd. The Dolores River at Dolores averaged 393 cfs (99% of normal) with a maximum average daily peak flow of 631 cfs on July 1st. The La Plata River at Hesperus averaged 23.8 cfs (64% of normal) with a maximum average daily peak flow of 40 cfs on July 3st. Precipitation in Durango was 2.03 inches for July which is near the 30-year average of 1.88 inches. Precipitation to date in Durango, for the water year, is 17.60 inches which is above the average of 15.19 inches. Temperatures were near normal for the month.

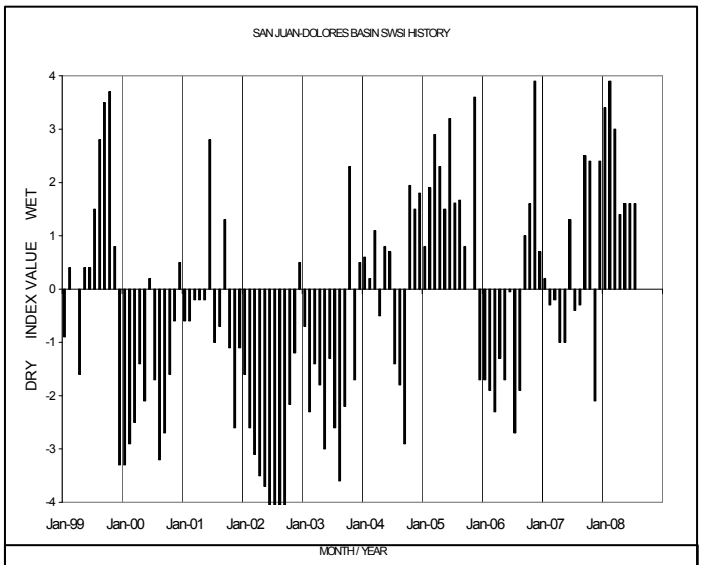
At the end of the month Vallecito Reservoir contained 114,280 acre-feet compared to its normal contents of 87,505 acre-feet (131% of normal). McPhee Reservoir was up to 348,482 acre-feet compared to its normal contents of 296,923 acre-feet (117% of normal), while Lemon Reservoir was up to 33,620 acre-feet as compared to its normal content of 27,468 acre-feet (122% of normal).

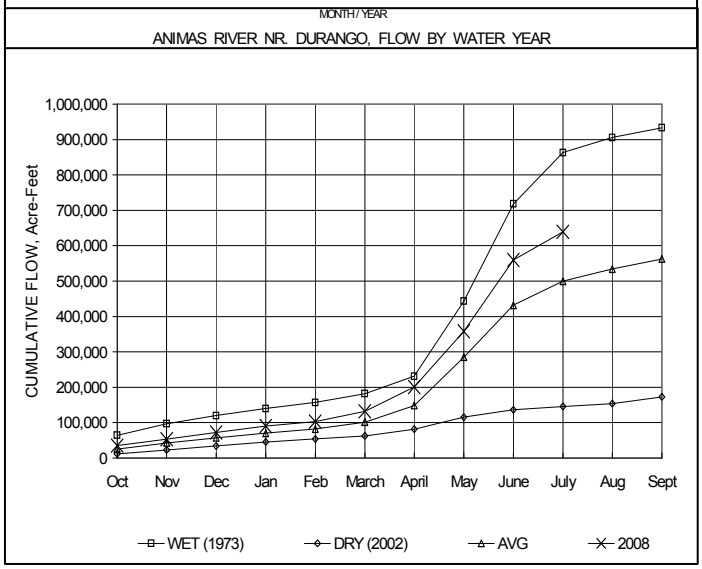
Outlook

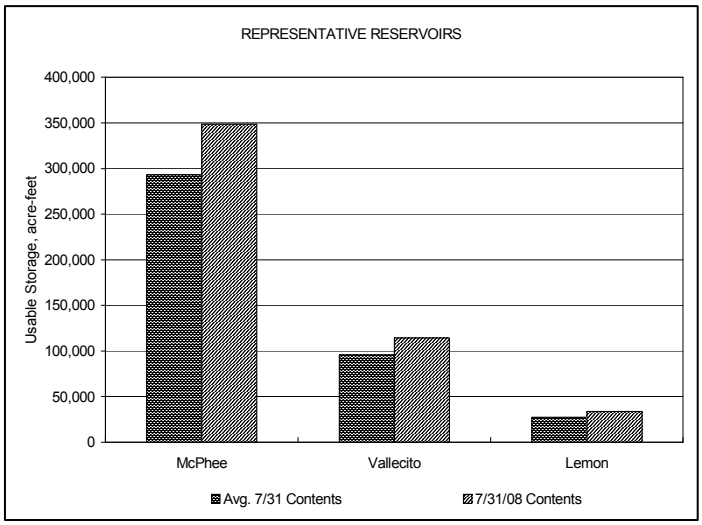
The monsoon rains of July have begun. August is the wettest month of the year in Durango and appears to be on track for average precipitation.

Administrative/Management Concerns

The compact period on the La Plata between Colorado and New Mexico began on February 15th. New Mexico placed a call starting on April 30th for half the flow at the upper index gage up to 80cfs.







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