# COLORADO
# WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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July 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 2.1 in the Yampa/White Basin to a low value of 0.9 in the South Platte Basin. Three of the basins (Yampa/White, Rio Grande, Arkansas) experienced a gain from the previous month's values. Three of the basins (Gunnison, Colorado, South Platte) experienced a loss from the previous month's values. One of the basins (San Juan/Dolores) remained unchanged from the previous month's values.

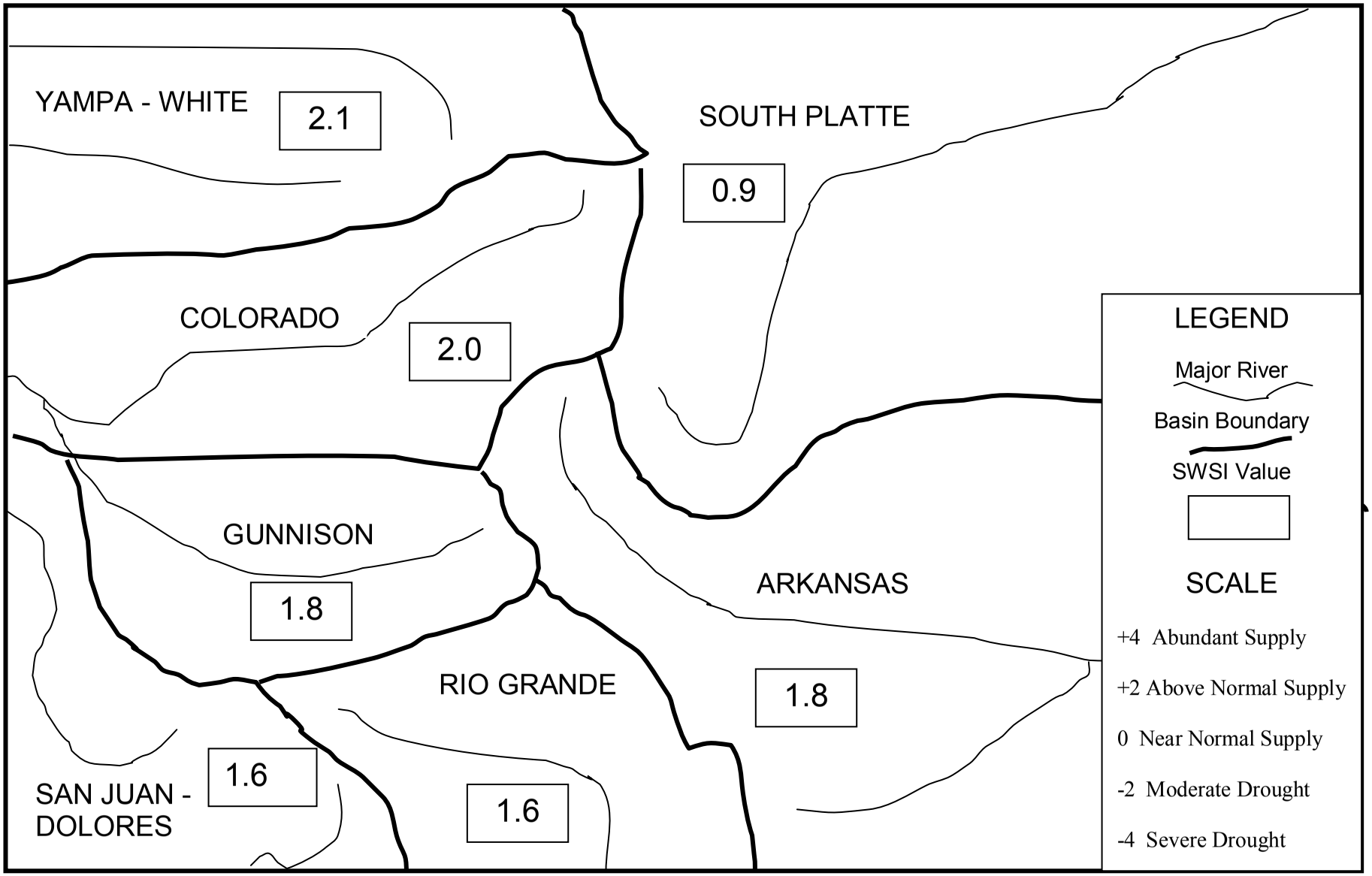
The following SWSI values were computed for each of the seven major basins for July 1, 2008, and reflect the conditions during the month of June 2008.

| Basin | July 1, 2008 SWSI Value | Change From Previous Month | Change From Previous Year |
|---|---|---|---|
| South Platte | +0.9 | - 0.1 | - 1.5 |
| Arkansas | +1.8 | +0.5 | - 0.5 |
| Rio Grande | +1.6 | +0.8 | +0.1 |
| Gunnison | +1.8 | - 0.6 | +1.1 |
| Colorado | +2.0 | - 0.3 | +2.0 |
| Yampa/White | +2.1 | +0.9 | +3.8 |
| San Juan/Dolores | +1.6 | +0.0 | +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




July 1, 2008

Basinwide Conditions Assessment

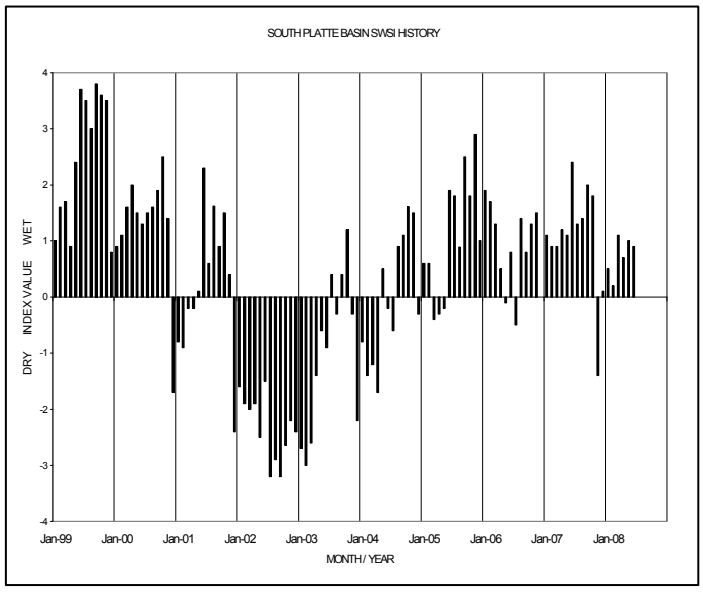
The SWSI value for the month was 0.9. Reservoir storage in Dillion, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 103% of normal as of the end of June. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 75% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 100% of capacity. Flow at the gaging station South Platte River near Kersey was 682 cfs, as compared to the long-term average of 2321 cfs. Flow at the Colorado/Nebraska state line averaged 77 cfs.

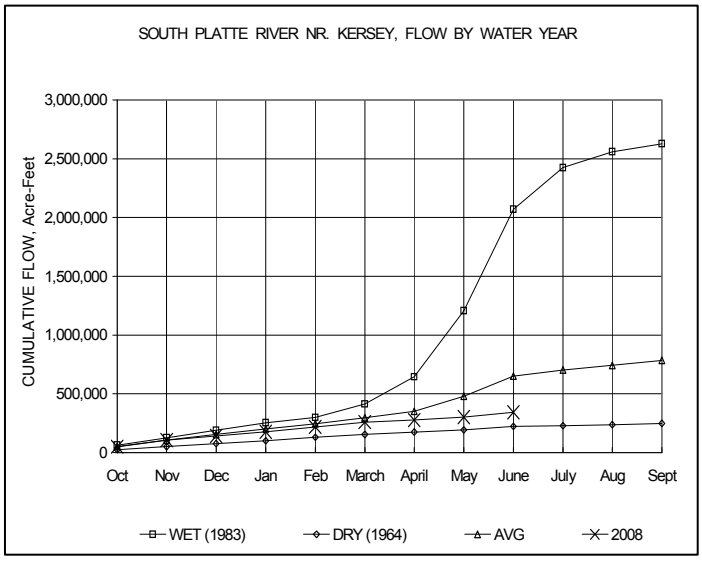
Outlook

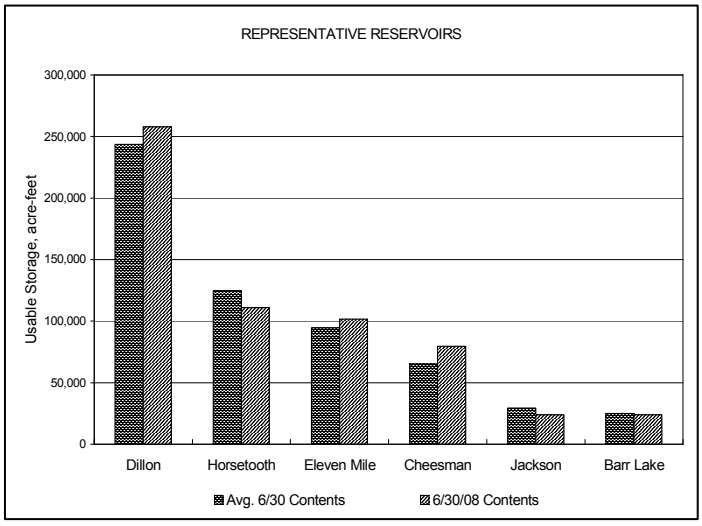
Flow conditions remained below average in June for the mainstem of the South Platte below Kersey. With the lower than average flow, there was a direct flow call almost the entire month. Some users had to use their storage supplies for crop irrigation reducing available supply later in the summer. This call impacts the ability of users to refill any storage space used for early irrigation and eliminates the ability to recharge.

The conditions on the South Platte above Kersey and tributaries were considerably better as the rights in these areas are generally senior to those on lower end of the river. We will continue to see some runoff from South Park and down Clear Creek for the first half of July. This should keep the calls from becoming too senior in the upper part of the river above Kersey.

While farmers may be short water on the lower end of the river, the supply for all the front range municipalities are in good shape with the present storage conditions.



Basinwide Conditions Assessment

The SWSI value for the month was 1.8. Flow at the gaging station Arkansas River near Portland was 3324 cfs, as compared to the long-term average of 2283 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 96% of normal as of the end of June.

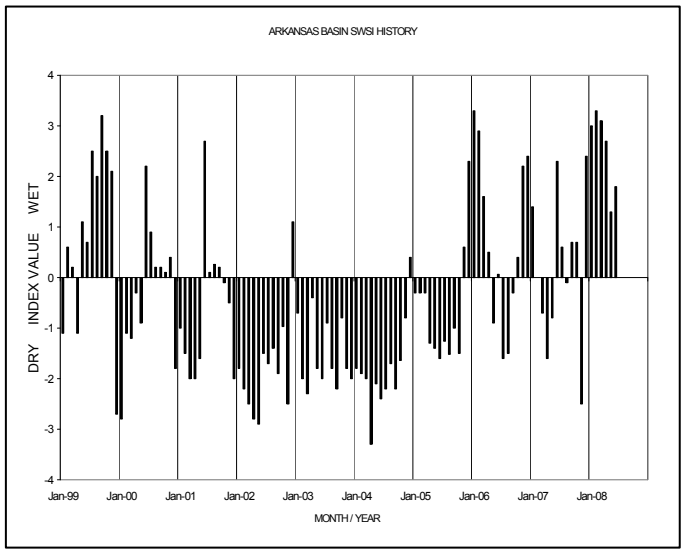
Outlook

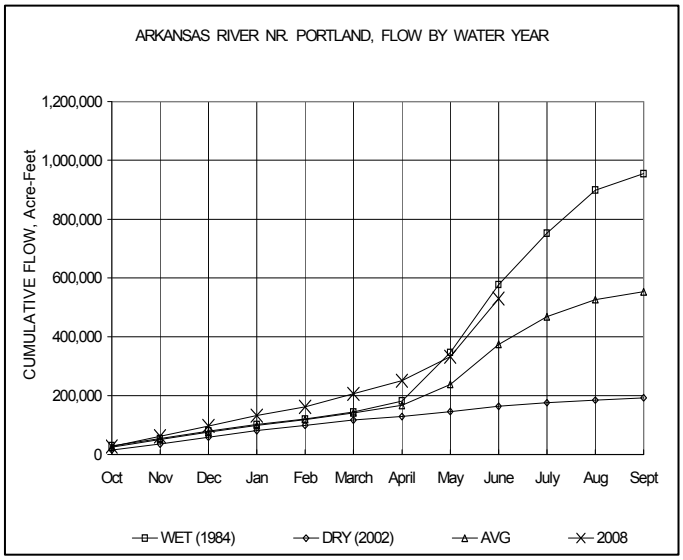
June continued to be a month of unusual disparity across the Arkansas Basin. The mainstem stream flows from headwaters snow melt contributed to an above average double peak of runoff flows through the Canon City and Portland stream gages while other portions of the basin off the mainstem experienced fairly low runoff conditions and generally suffered from lack of precipitation in June. The warming/cooling weather pattern drove mainstem runoff to a peak around June 4, 2008 at the Portland stream gage, but then slowed to half the peak flow by June 13, 2008, then rebounded for an almost identical peak around June 20, 2008.

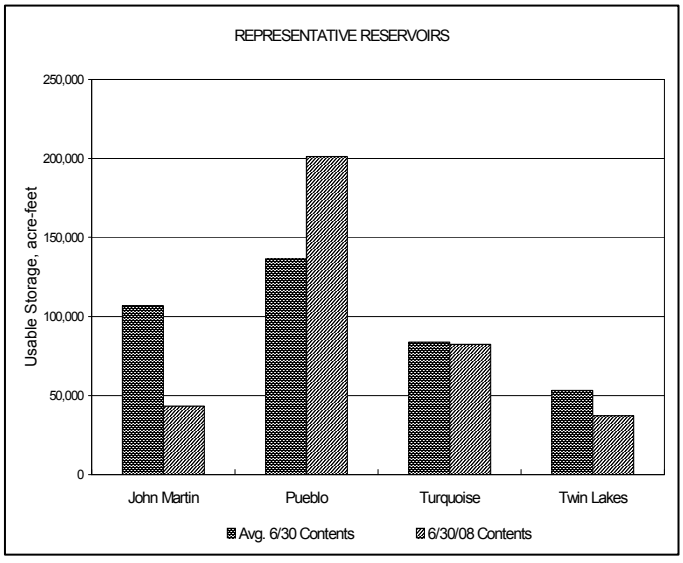
The Southeastern Colorado Water Conservancy District allocated approximately 83,000 acre-feet of Fryingpan Arkansas Project water, which is 45,500 acre-feet more than the amount allocated in 2007 due to very strong snowpack conditions in the Fryingpan drainage.

Administrative/Management Concerns

Rangeland areas and water rights on some tributary streams experienced some significant issues compared to the above average supplies on the mainstem.

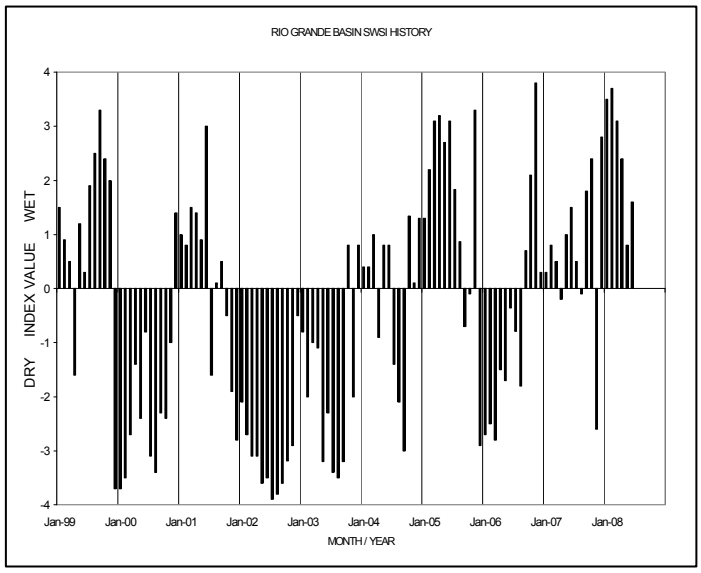


Basinwide Conditions Assessment

The SWSI value for the month was 1.6. Flow at the gaging station Rio Grande near Del Norte averaged 3829 cfs (125% of normal). The Conejos River near Mogote had a mean flow of 1452 cfs (112% of normal). Streamflow in the upper Rio Grande basin was erratic during early June as temperatures fluctuated widely, but settled to the normal slow decline as the winter snowpack melts out. The higher elevations and the Valley floor received below average precipitation during June, and for the fourth consecutive month. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 83% of normal as of the end of June.




Outlook

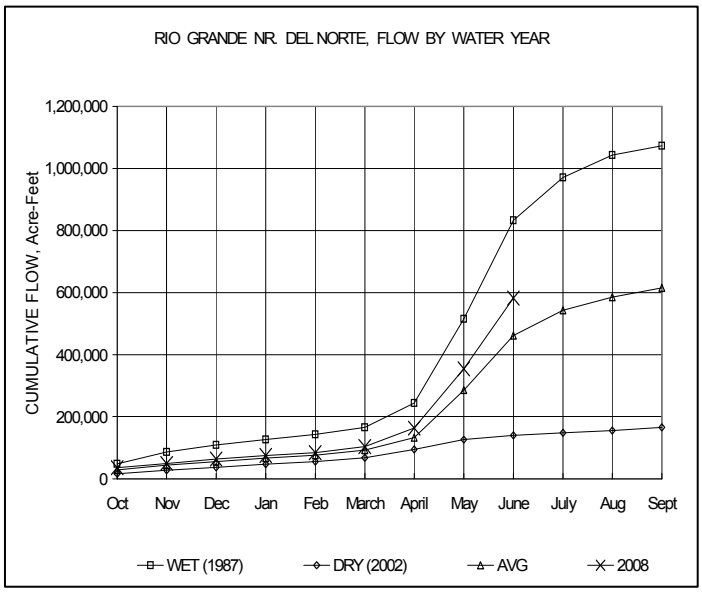
As the month of June came to a close, some monsoonal-type activity began, replacing the dry, windy conditions of April, May and early June. NWS 90-day forecasts for July through September suggest higher than normal temperatures and a chance for normal precipitation.

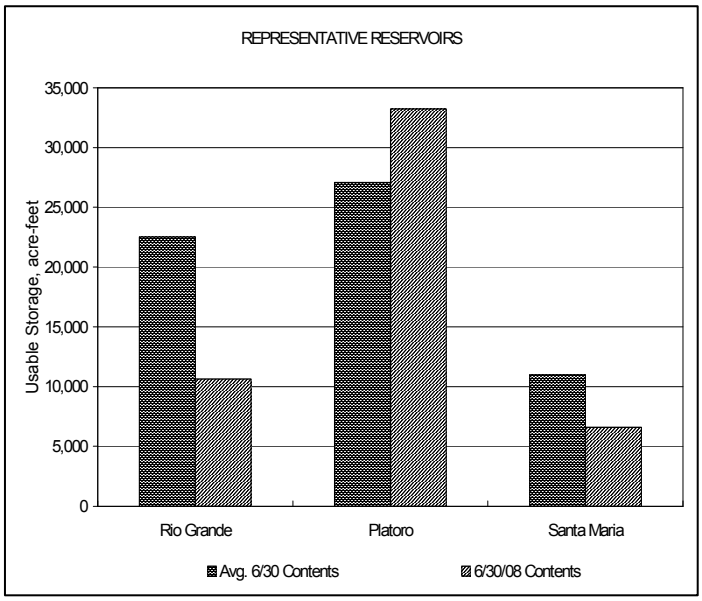
Administrative/Management Concerns

Some of the upper Rio Grande basin streamflows have not been as prolific as forecasted. The result is the lessening of water right curtailment on the Rio Grande and the Conejos to meet the Rio Grande Compact delivery obligation.

The vast network of satellite-monitored gauging stations in Division 3 is a great benefit to water administrators, farmers, ranchers, and recreators. The Colorado Division of Water Resources website at www.water.state.co.us provides easy access to over 80 satellite-monitored gauges in Division 3 alone. The gauges include 57 local creeks and rivers, 19 ditches and canals, 7 reservoirs, and access to an additional 20 stations monitored by the U.S. Geological Survey in Colorado and New Mexico essential for administration of the Rio Grande and Costilla Creek Compacts.

Current flows can be monitored against historic average daily flows, with many stations having over 50 years of data. Review of the recent streamflow data in the upper Rio Grande basin reveals a hodge-podge of conditions. The mainstem of the Rio Grande and the Conejos River and their tributaries have experienced above-average flow during the 2008 runoff. The Alamosa and LaJara Creek drainages have also been good producers. The Saguache, La Garita and Carnero area has been disappointing, with below average flows. On the east side, 2008 volumes have been very random, with some streams such as Ute, Rito Alto, and Cottonwood Creeks all above normal, yet Crestone and Sangre de Cristo Creeks below average. In summary, what was shaping up to be a very high runoff year for this portion of the state, has in reality produced spotty results.




Public Use Impacts

Finally, some consistently sunny conditions favored the farmers and ranchers aiding the growth of crops and grazing land during the last three weeks of June. The first cutting of hay and alfalfa yielded a bit below normal due to the cold temperatures during May and early June.

Basinwide Conditions Assessment

The SWSI value for the month was 1.8. Flow at the gaging station Uncompahgre River near Ridgway was 869.1 cfs, as compared to the long-term average of 556 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 105% of normal as of the end of June.

Outlook

June is typically the driest month of the year during the irrigation season in western Colorado and June 2008 was no exception. Montrose had only 0.30 inches of precipitation compared to the monthly average of 0.54 inches. Persistent high pressure has dominated the basin most of the month, forcing temperatures into the 90's for the nearly the entire month. However, the high snowpack this year kept the natural streamflow from quickly diminishing and has provided ample irrigation supply throughout the month of June.

Snowpack conditions and weather patterns this spring have been so ideal that Irrigated lands below most of the reservoir systems, such as Grand Mesa, the Gurley System, Fruitland Reservoir, and Fruitgrowers Reservoir, relied on free river conditions and have not yet begun releasing reservoir water as of the end of June.

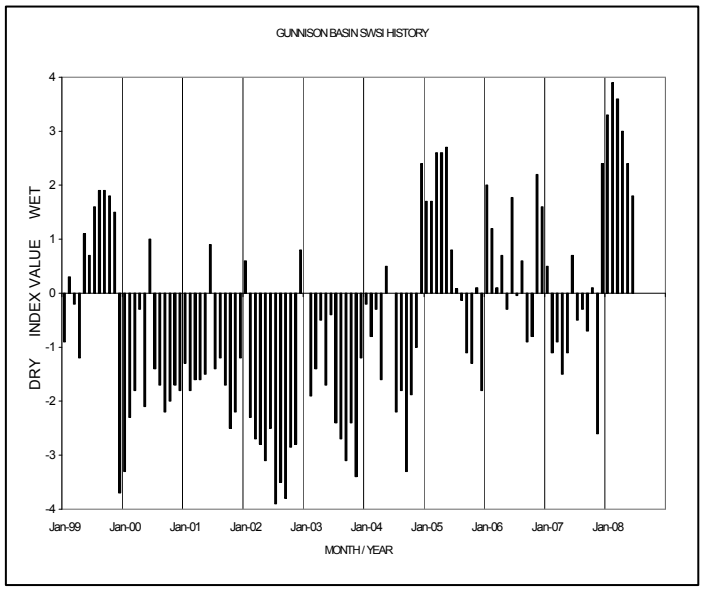
Administrative/Management Concerns

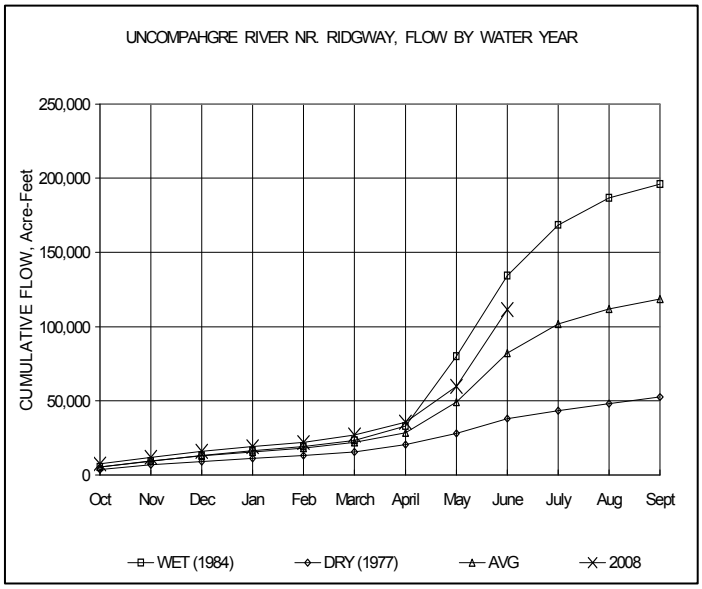
Releases at the Aspinall Unit are being decreased in response to declining inflows to Blue Mesa Reservoir. The June 15 runoff forecast for Blue Mesa is 1,120,000 ac-ft which is 156% of the normal spring runoff. As of this report, the Gunnison Tunnel is diverting around 700 cfs and flows in the Gunnison River through the Black Canyon are around 1440 cfs.

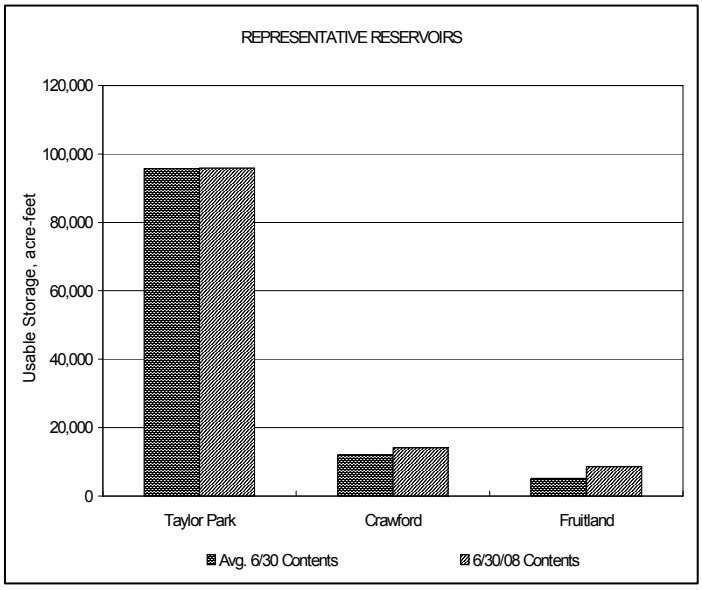
With full reservoirs at this time of the year, administrative and management concerns will be minimum for the water year 2008.

Public Use Impacts

High fuel prices have not seemed to negatively impact tourism in the Gunnison Basin. Recreational facilities at Blue Mesa Reservoir, the Grand Mesa, as well as popular river rafting areas, have experienced high use so far this summer. And with the above average flows this year, significant carryover storage is expected at the end of the irrigation season.

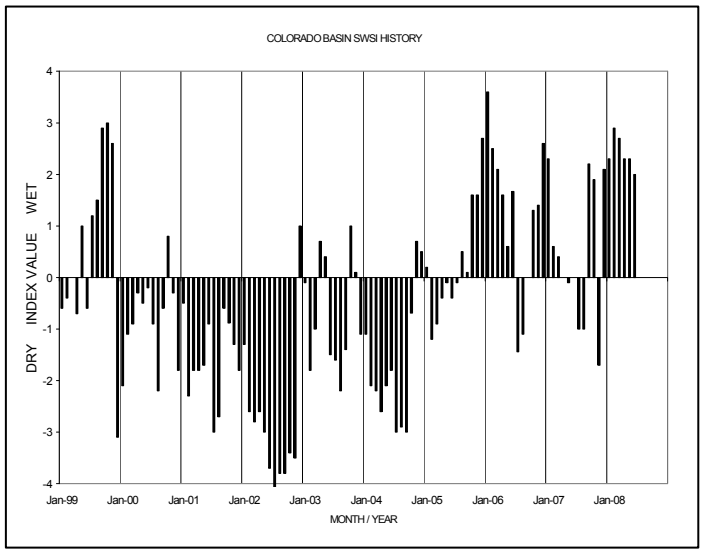


Basinwide Conditions Assessment

The SWSI value for the month was 2.0. Flow at the gaging station Colorado River near Dotsero was 8113 cfs, as compared to the long-term average of 5517 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 113% of normal as of the end of June.

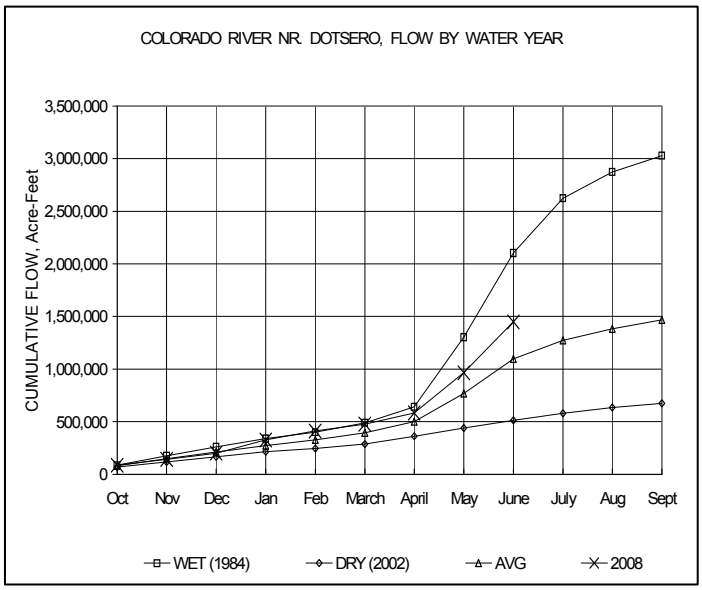



Outlook

The Colorado River and all major tributaries peaked during the month of June and remain at nearly twice the levels seen at this time last year. No significant flooding is expected. Ruedi Reservoir will not likely reach typical summer level following the large releases in early June as part of the fish recovery program near Grand Junction. Fryingpan River flows have fallen substantially since July 1st despite Fryingpan-Arkansas trans-mountain diversions through Boustead Tunnel decreasing by over one third since July 3rd.

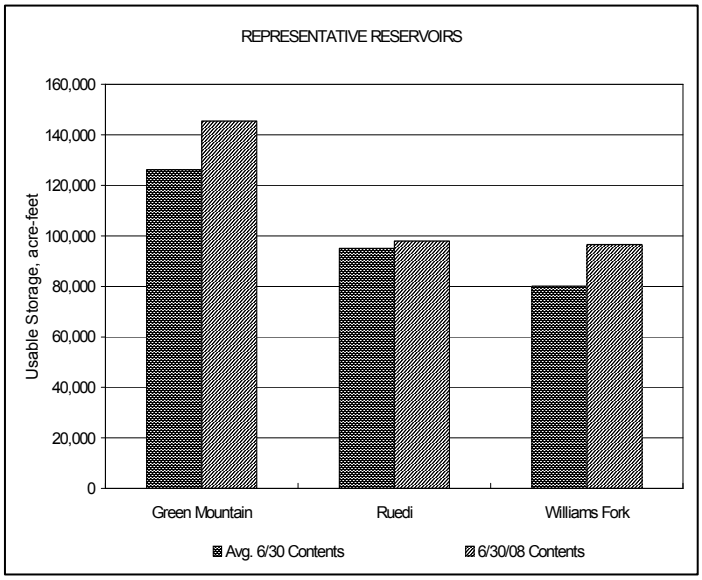
Administrative/Management Concerns

Continued above average flows continue to prevent calls on the Blue River as well as those from Shoshone and Grand Valley Irrigators. Users of tributaries to the Roaring Fork, Crystal, and Colorado Rivers will not begin calling until July.




Public Use Impacts

The forecast 45-50 foot elevation increase in Lake Powell is playing out with a 43 foot rise as of June 30 since March 10th. The Castle Rock Cut marina opened on June 10th for the first time in 5 years, with the lake reaching its highest level since 2002. The Bureau of Reclamation is forecasting an additional 6.5 feet elevation increase in July.



Basinwide Conditions Assessment

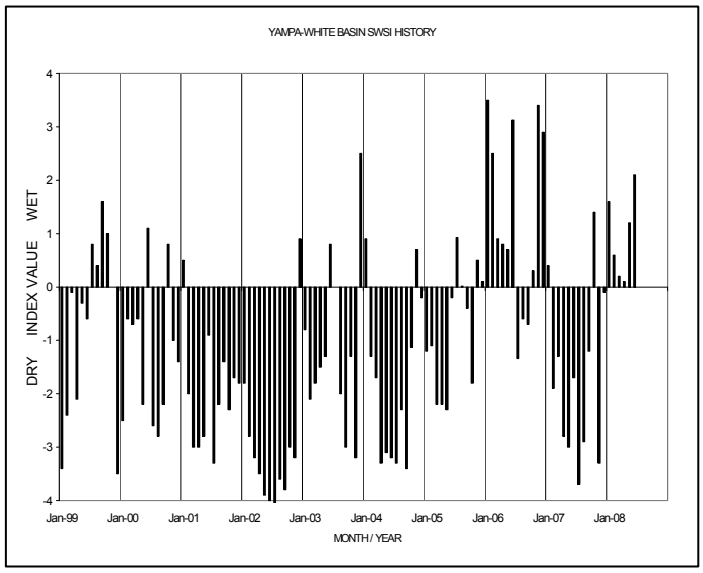
The SWSI value for the month was 2.1. Flow at the gaging station Yampa River at Steamboat was 2655 cfs, as compared to the long-term average of 1704 cfs.

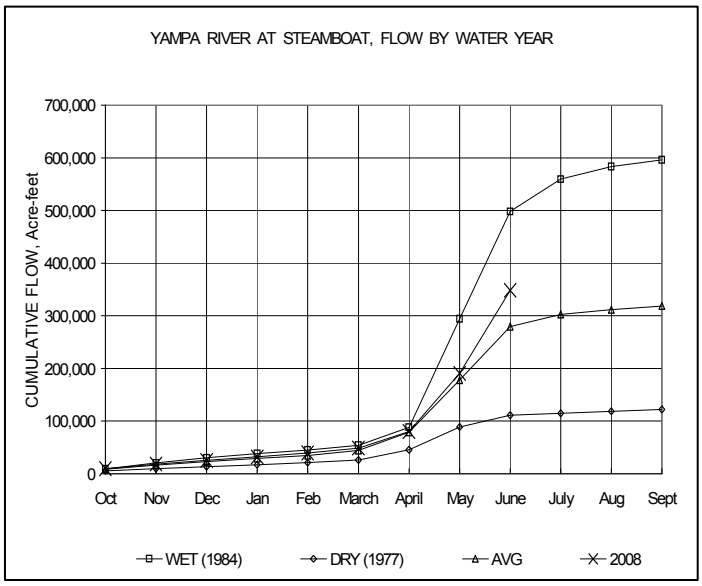
Following several months of above average precipitation, June precipitation ranged from below average to average for the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 85% of average for the Yampa and White River basins and 100% of average for the North Platte River basin. Year-to-date precipitation is reported at 107% of average for the combined Yampa, White, and North Platte River basins.

Warm weather continued throughout June, resulting in increased snowmelt and a decline in snowpack in the Yampa, White, and North Platte River basins. The snow water equivalent (SWE) was approximately 77% of average for the Yampa and White River basins and 45% of average for the North Platte River basin at the end of June.

Average to above-average runoff for the Yampa, White, and North Platte River basins is predicted for July. The latest runoff forecasts from NRCS for the June through July period are 117% of average for the North Platte River near Northgate, 122% of average for the Yampa River near Maybell, 142% of average for the Little Snake River near Lily, and 97% of average for the White River near Meeker.

All Division 6 stream gage stations are open for the season and flows at these stations remained above average at the end of June.




Outlook

Yamcolo Reservoir continued to spill throughout much of the month and was reported at approximately 98% of capacity at the end of June. Elkhead Creek Reservoir was at capacity and spilling at the beginning of the month and was reported at approximately 97% of capacity at the end of the month. Fish Creek Reservoir level was reported at approximately 89% of capacity and climbing on June 30. 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 recreation purposes, as well as fish recovery releases.

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), and West Fish Creek (June 20).

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 117% of normal as of the end of June.

Flows at the Animas River at Durango averaged 3,272 cfs (117% of normal) with a maximum average daily peak flow of 5,450 cfs on June 3rd. The Dolores River at Dolores averaged 1,613 cfs (122% of normal) with a maximum average daily peak flow of 3,040 cfs on June 3rd. The La Plata River at Hesperus averaged 155 cfs (122% of normal) with a maximum average daily peak flow of 317 cfs on June 3rd. Precipitation in Durango was 0.24 inches for June which is below the 30-year average of 0.67 inches. All the precipitation for the month occurred on June 4th. Precipitation to date in Durango, for the water year, is 15.57 inches which is above the average of 13.27 inches. Temperatures were near normal for the month.

At the end of the month Vallecito Reservoir contained 122,300 acre-feet compared to its normal contents of 103,146 acre-feet (119% of normal). McPhee Reservoir was up to 380,937 acre-feet compared to its normal contents of 320,989 acre-feet (119% of normal), while Lemon Reservoir was up to 39,720 acre-feet as compared to its normal content of 33,253 acre-feet (119% of normal).

Outlook

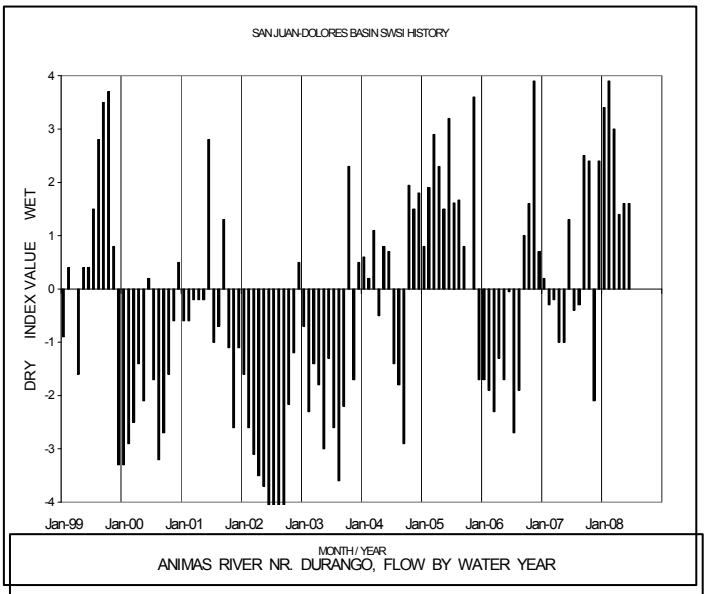
Temperatures were at normal levels for the month. A cool spell the first week of month kept the peak stream flows from occurring in June. June is the driest month of the year for the area and this year was no exception.

Administrative/Management Concerns

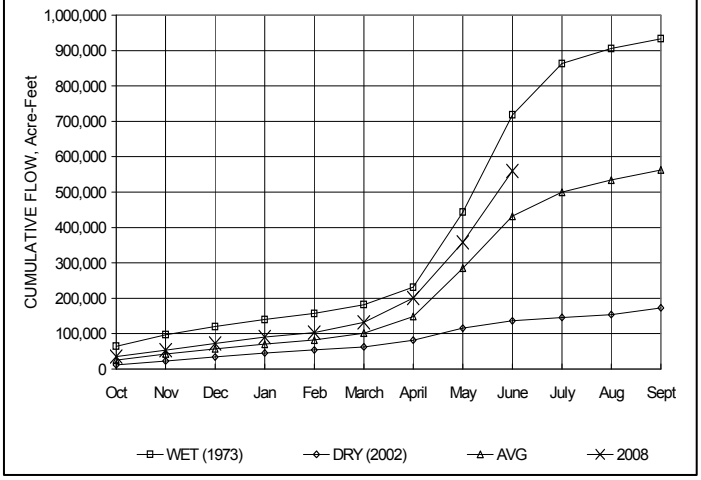
The compact period on the La Plata between Colorado and New Mexico began on February 15th. New Mexico placed a call starting on April 30th for half the flow at the upper index gage up to 80cfs.

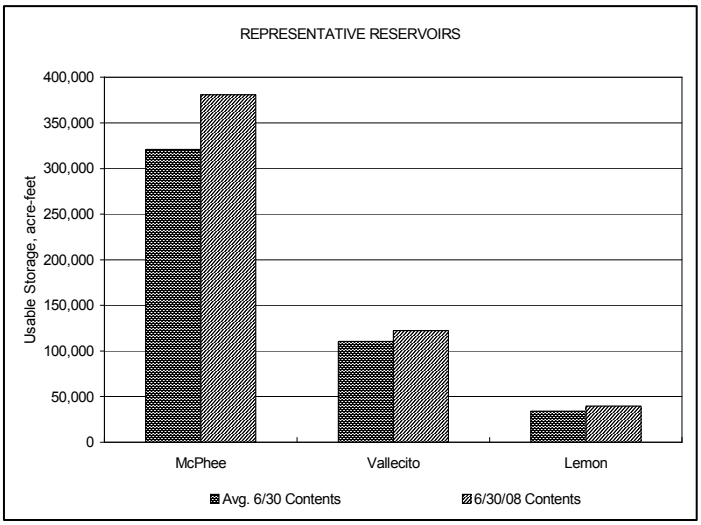
Public Use Impacts

The East Fork land slide mentioned in last months report has finally slowed its movement to about 1-ft per day. With the monsoon season just ahead local officials are still concerned that a large rain event in the area could increase the rate of land slide again.




ANIMAS RIVER NR. DURANGO, FLOW BY WATER YEAR



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