COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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June 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 +2.4 in the Gunnison Basin to a low value of +0.8 in the Rio Grande Basin. Three of the basins (Yampa/White, South Platte, and San Juan/Dolores) experienced a gain from the previous month's values. Three of the basins (Rio Grande, Arkansas, and Gunnison) experienced a loss from the previous month's values. The Colorado Basin remained unchanged.

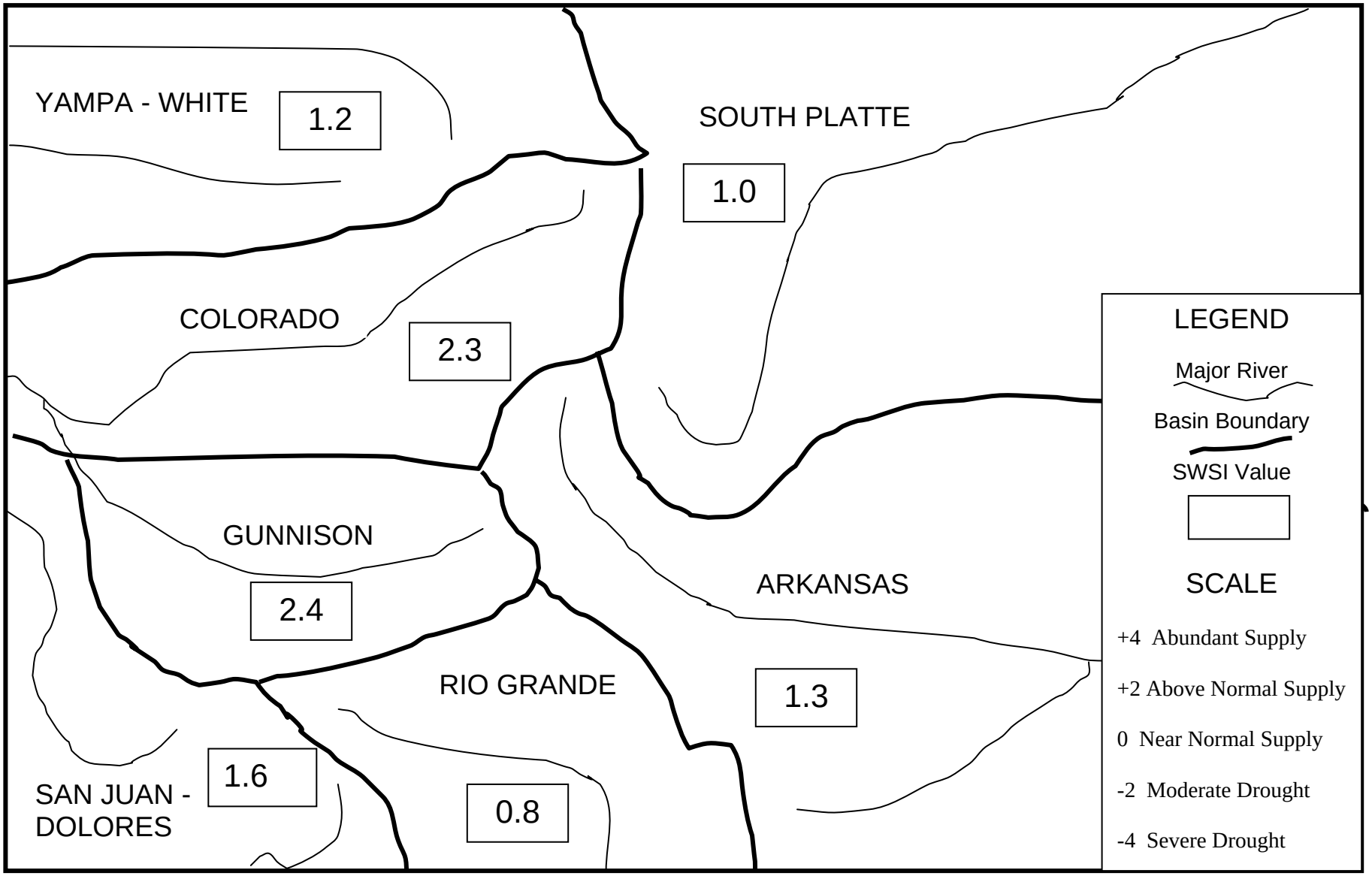
The following SWSI values were computed for each of the seven major basins for June 1, 2008, and reflect the conditions during the month of May 2008.

Basin	June 1, 2008 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+1.0	+0.3	- 0.1
Arkansas	+1.3	- 1.4	+2.1
Rio Grande	+0.8	- 1.6	- 0.2
Gunnison	+2.4	- 0.6	+3.5
Colorado	+2.3	0.0	+2.4
Yampa/White	+1.2	+1.1	+4.2
San Juan/Dolores	+1.6	+0.2	+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



June 1, 2008

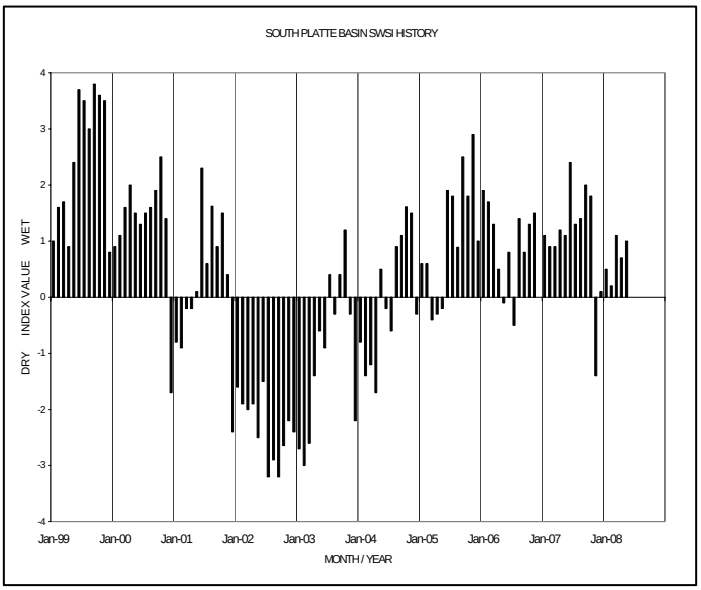
Basinwide Conditions Assessment

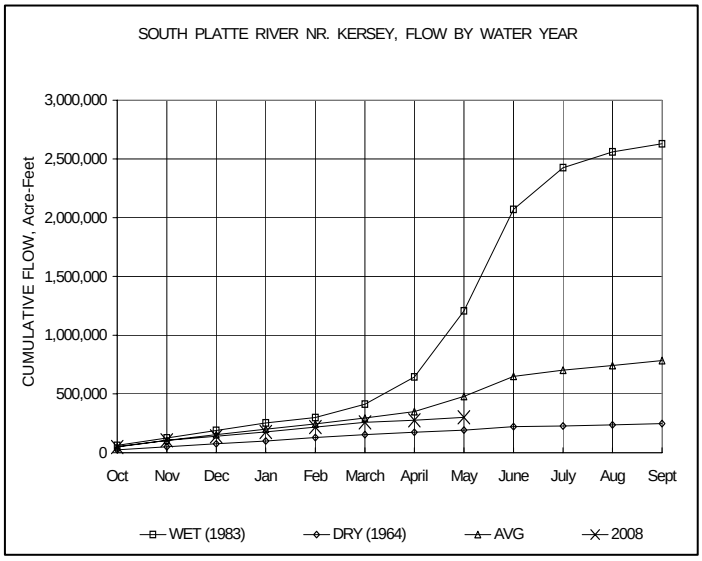
The SWSI value for the month was +1.0. Reservoir storage in Dillion, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 99% of normal as of the end of September. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 74% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 92% of capacity. Flow at the gaging station South Platte River near Kersey was 408 cfs, as compared to the long-term average of 1745 cfs. Flow at the Colorado/Nebraska state line averaged 110 cfs.

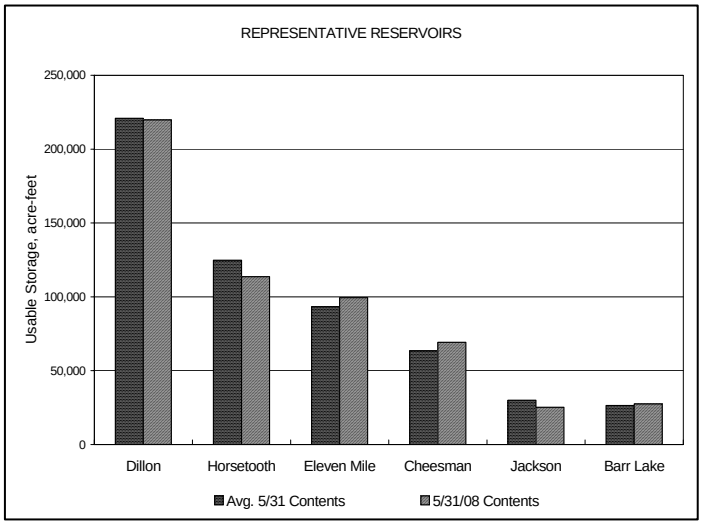
Outlook

With dry conditions on the plains during May, flows on tributaries and the mainstem remained below average. As a result, there was a direct flow call for irrigation the duration of May. While this is not unusual, it does create concerns about the adequacy of irrigation supplies later in the summer for some users, especially on the mainstem, as they had to use their reservoir supplies for their crops.

At the same time, snowpack remained above average. Nevertheless, it is questionable how high the runoff will be on the mainstem without significant rainfall. Water supply on the tributaries should be in better shape as users on the tributaries have the senior rights and will be able to use the expected runoff. Likewise, municipal users should generally be in good condition as they generally have a higher water supply safety factor.







Basinwide Conditions Assessment

The SWSI value for the month was +1.3. Flow at the gaging station Arkansas River near Portland was 1331 cfs, as compared to the long-term average of 1163 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 92% of normal as of the end of May.

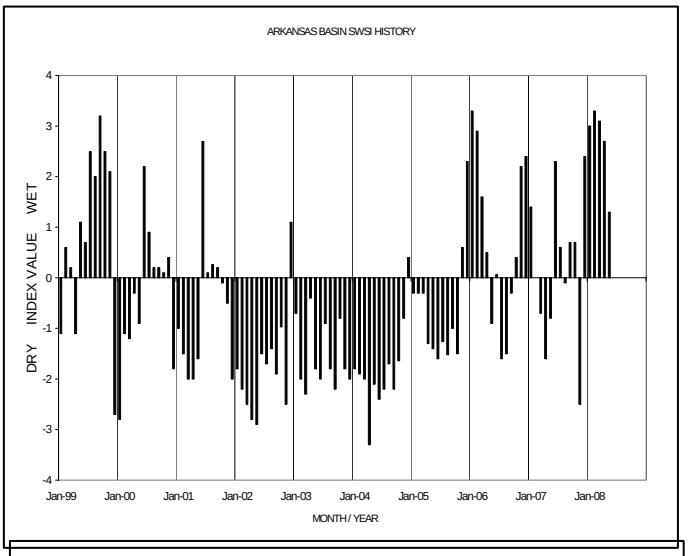
Outlook

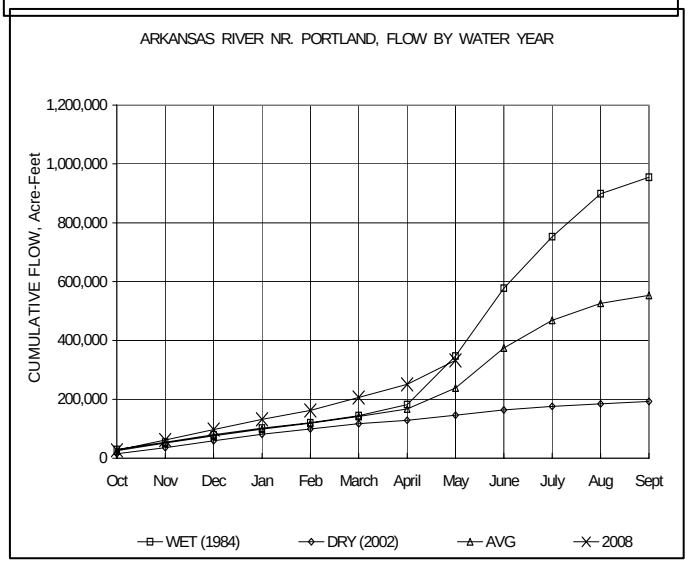
Climate conditions were very unusual in May with high expectations for a better than average runoff tempered by low amounts of precipitation and windy, dry conditions at lower elevations. Runoff was slow to start in the Arkansas Basin due to a series of periodic cool fronts that pushed through during the month. Although significant acreage was prepared and planted in May, ditch companies had to rely on large reservoir supplies where available in lieu of the anticipated higher runoff flows that were projected. The cool periods slowed crop growth and pushed back the growing season for some crops.

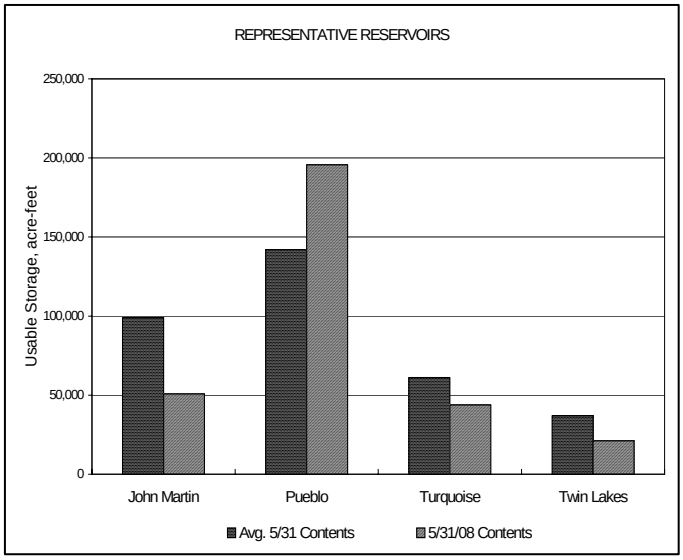
The river call at the beginning of the month was fairly senior at the Amity #1 right of 2/21/1887. The river flows began to increase later in the month to allow a modest shift to the Fort Lyon #2 water right (3/31/1887).

Administrative/Management Concerns

The Bureau of Reclamation continued to move down large quantities of water from Twin Lakes and Turquoise Reservoirs to Pueblo Reservoir to make room for Fryingpan-Arkansas imports through Boustead Tunnel which were anticipated to reach 100,000 acre-feet in 2008; much higher than imports from any of the recent years. The increase in storage in Pueblo Reservoir cause many entities to call for releases of stored water for use prior to any potential spill or to move water to storage in Lake Meredith.

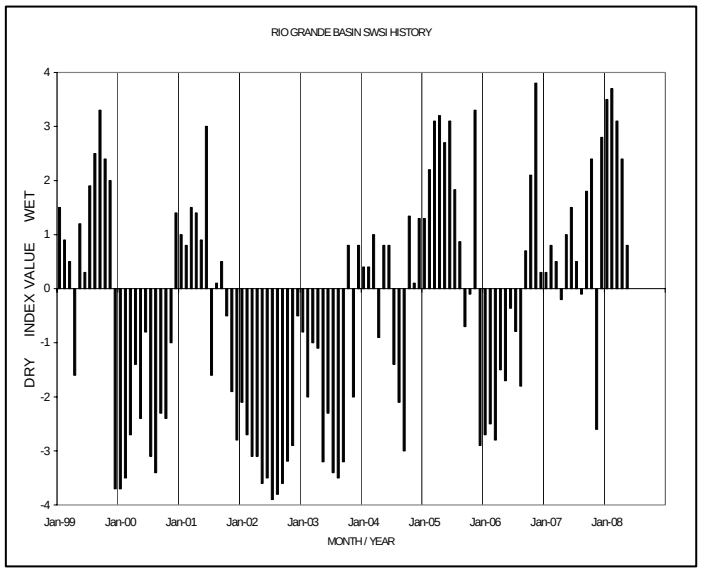






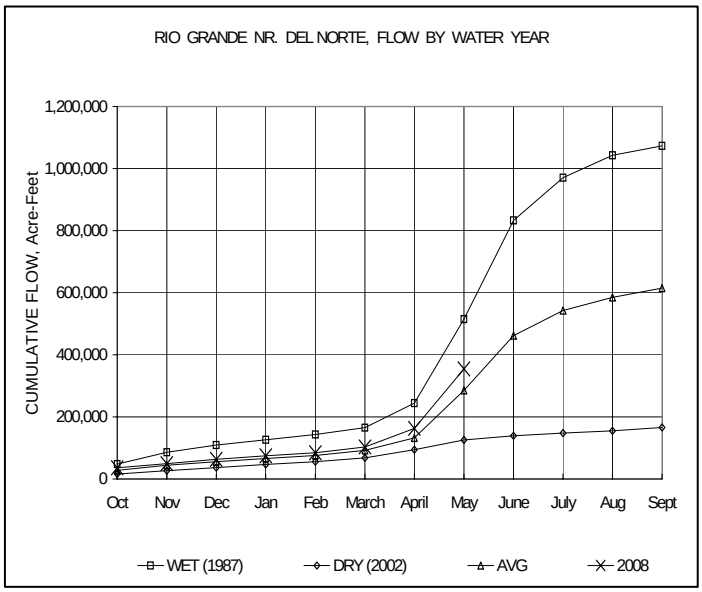
Basinwide Conditions Assessment

The SWSI value for the month was +0.8. Flow at the gaging station Rio Grande near Del Norte averaged 3113 cfs (125% of normal). The Conejos River near Mogote had a mean flow of 1074 cfs (97% of normal). Streamflow in the upper Rio Grande basin was erratic during May as temperatures fluctuated widely. The long-awaited high runoff really didn't come until May 18 but then shut down quickly as cold temperatures just before the Memorial Day weekend set in. A warming trend got things running again at the end of the month, but another cold snap dropped streamflow again on June 5. The hydrographic records for 2008 will show a classic double peak on most streams in the basin. The higher elevations and the Valley floor received below average precipitation during May. Cool and windy conditions prevailed throughout much of the month, detrimental to runoff and young plants. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 81% of normal as of the end of May.



Outlook

The precipitation and high winds resulted in the Natural Resources Conservation Service again lowering upper Rio Grande Basin forecasts on June 1st. Most streams in the area are forecast in the 110 to 130% of normal range. The San Antonio River in the southern end of the Valley near Antonito is the basin high at 159% of normal and the Culebra Creek near San Luis is the low at 87% of normal.

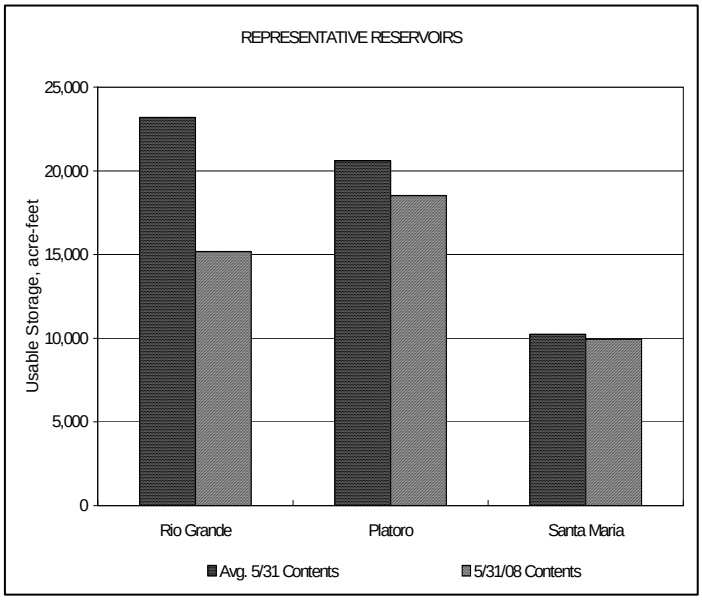


Administrative/Management Concerns

The great Memorial Day cool-off lessened the concern for damage from flooding conditions. Hot temperatures have not sustained long enough to bring out a rush of snowmelt.

Public Use Impacts

The erratic weather patterns have been unfavorable to farmers and ranchers as the growth of crops and grazing land has been stunted. Currently, reservoir storage in the basin is near normal.



Basinwide Conditions Assessment

The SWSI value for the month was +2.4. Flow at the gaging station Uncompahgre River near Ridgway was 393 cfs, as compared to the long-term average of 335 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 102% of normal as of the end of May.

Outlook

The much anticipated spring runoff finally got started in the Gunnison Basin by the third week of May. Short intervals of warm weather followed by brief cooling resulted in ideal runoff conditions, which kept flooding issues to a minimum in critical areas such as the East River at Almont and the Gunnison River at Delta. The alternating warming and cooling periods in May resulted in more than one "runoff peak", with the main peak occurring May 22nd and 23rd. The Gunnison River at Delta reached 13,600 cfs on May 22nd. The average flow for that day is 5,210 cfs. Also, a much higher than average high-elevation snowpack existed than usual for the end of May. For example, the snow water equivalent measurement at the Schofield Pass station above Crested Butte still had 41-inches on May 31st.

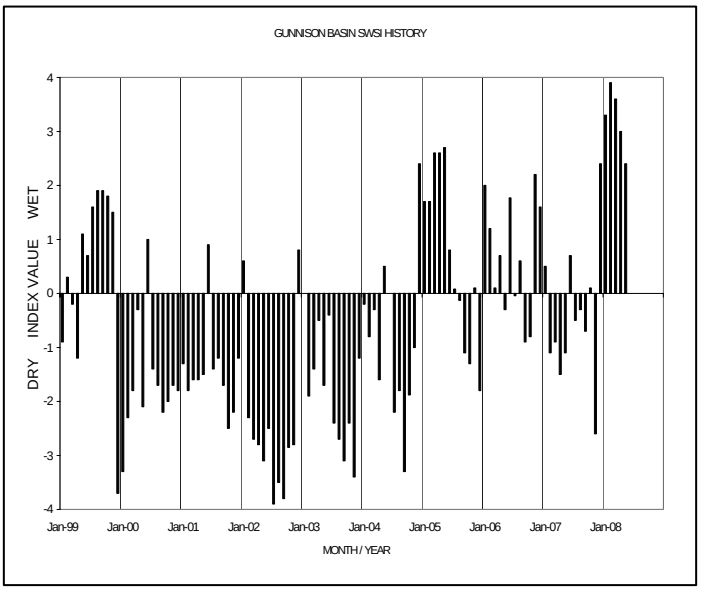
Based on updated information from the Bureau of Reclamation, the unregulated inflow to Blue Mesa reservoir during April through July is forecasted to be 1,100,000 acre-feet (153% of normal), a 40,000 acre-feet increase over the May 1st forecast. Based on this forecast, Blue Mesa Reservoir is projected to fill this season in combination with a spill from Crystal Dam, which occurred the week of May 25 through 31.

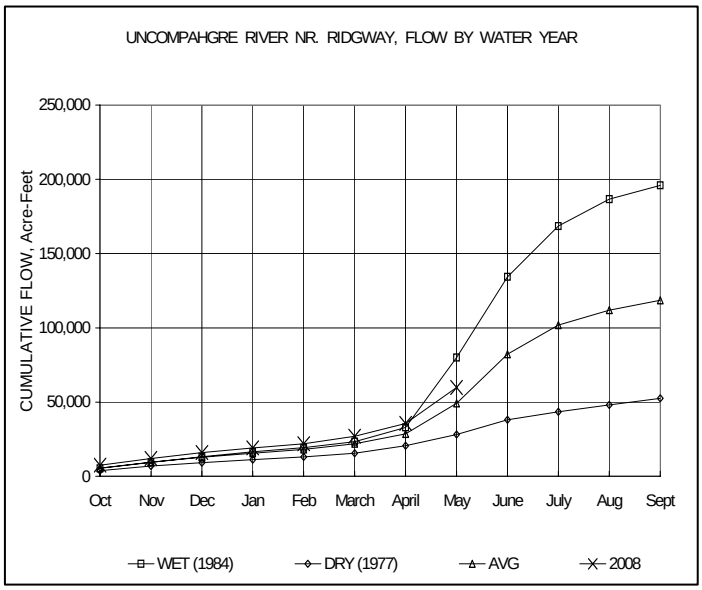
Administrative/Management Concerns

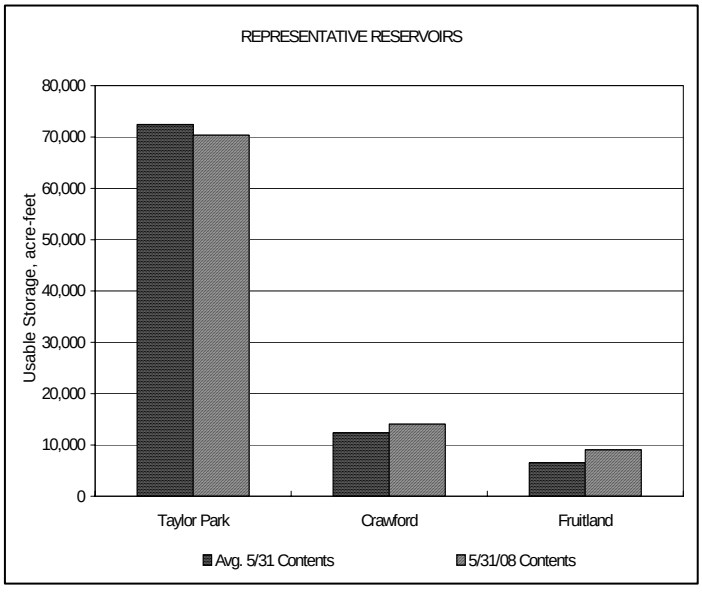
Typically, many of the irrigation systems in the basin begin to rely on reservoir water for the rest of the season by early June. This will be delayed a couple of weeks this season. As a result of the cool weather and above average snowpack, many irrigators in the basin are still relying on natural stream flow for supply. However, the periodic warming and cooling trends have presented an administrative challenge because of the substantial fluctuations in stream flows. All this is good news for irrigators as the full reservoirs basinwide will make for a good irrigation season this year.

Public Use Impacts

The big water year has affected recreational activities this spring, especially over Memorial Day weekend. Dangerously high flows at times made it difficult or impossible for fishing and rafting as well. At the same time, the water levels in the major reservoirs in the basin (Blue Mesa, Taylor Park, and Ridgway Reservoirs) were substantially lowered to accommodate the forecasted runoff. Conditions should be closer to normal for the Fourth of July holiday crowds.

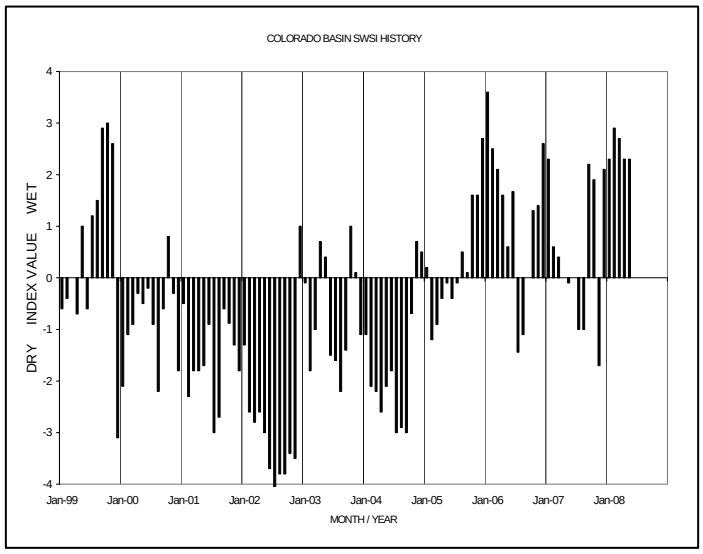






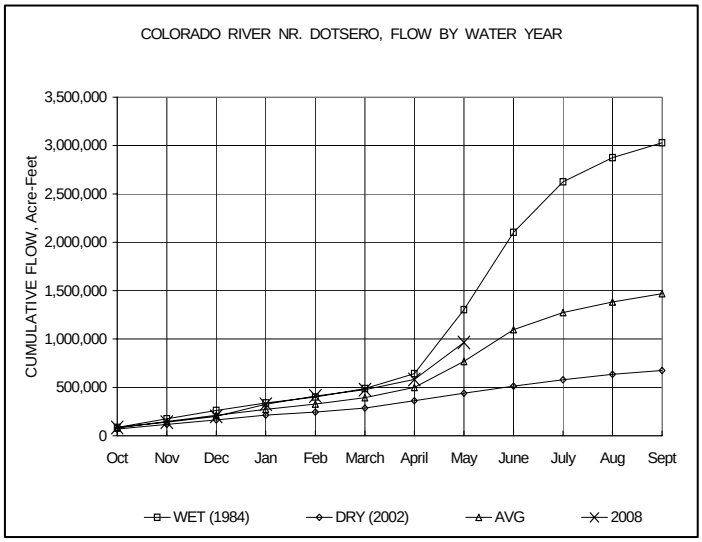
Basinwide Conditions Assessment

The SWSI value for the month was +2.3. Flow at the gaging station Colorado River near Dotsero was 6240 cfs, as compared to the long-term average of 4373 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 124% of normal as of the end of May.



Outlook

Continued above average basin snow pack and runoff, coupled with increased releases from Dillon Reservoir resulted in a 500 cfs release increase from Green Mountain Reservoir during the month of May. Ruedi Reservoir release was also increased by 75 cfs to 400 cfs in May. Releases from Ruedi will more than double to 850 cfs in early June to contribute to higher Colorado River flows required as part of the fish recovery program near Grand Junction. The higher flows will improve habitats for the pikeminnow, humpback chub, razorback sucker, and bonytail.

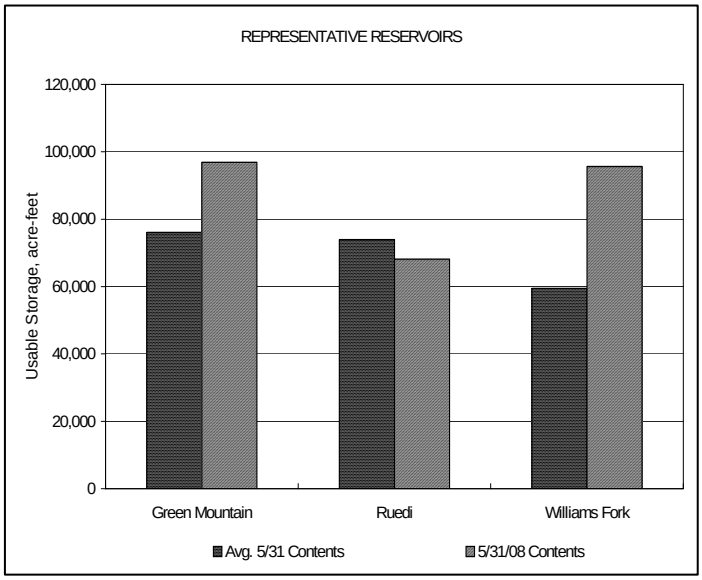


Administrative/Management Concerns

Mesa County water provider Ute Water Conservancy District is expanding the storage capacity of Jerry Creek Reservoirs by 1300 acre-feet (16 percent increase) to accommodate continued growth. The dams of each reservoir are being reinforced to increase the water surface elevation by 7 additional feet, and a new spillway has been created from 550,000 cubic yards of rock/riprap

Public Use Impacts

Glenwood Springs' whitewater park is being deemed a success thus far with waves being created even at the highest river flows so far this year. City officials are hoping the park provides another draw to Glenwood's tourism with the significant and reliable volume of water flowing down the Colorado River in late summer when other area rivers flows have receded and no longer attract attention.



Basinwide Conditions Assessment

The SWSI value for the month was +1.2. Flow at the gaging station Yampa River at Steamboat was 1796 cfs, as compared to the long-term average of 1610 cfs.

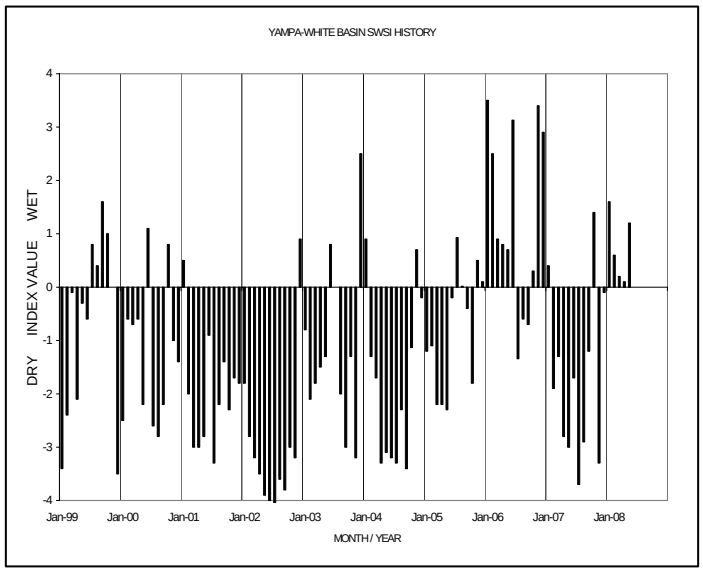
May precipitation was above average for the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 109% of average for the Yampa and White River basins and 107% of average for the North Platte River basin. Year-to-date precipitation is reported at 108% of average for the combined Yampa, White, and North Platte River basins.

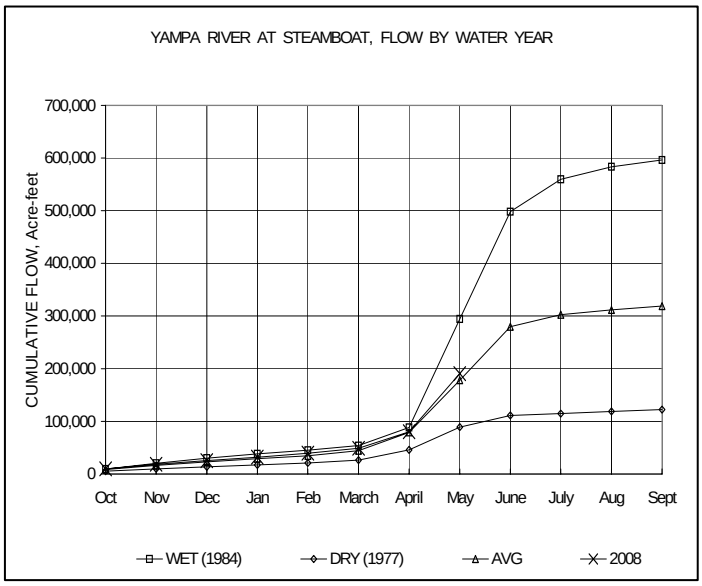
Warmer weather in mid-May resulted in increased snowmelt and a decline in snowpack in the Yampa and White River basins. Snowpack in the North Platte River basin, however, remained well above average. The snow water equivalent (SWE) was 90% of average for the Yampa and White River basins and 120% of average for the Laramie and North Platte River basins at the end of May. For the individual basins in Division 6, the snowpack at the end of the month was 121% of average for the North Platte River basin, 93% of average for the Yampa River basin, and 82% of average for the White River basin.

NRCS continues to predict near average to well above-average runoff for the Yampa, White, and North Platte River basins. 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.

The remaining Division 6 stream gages (Steamboat Lake and Pearl Lake) re-opened in May as the night temperatures increased, ice conditions diminished, and the lakes thawed. All Division 6 gage stations are now open for the season.

Yamcolo Reservoir continued to rise throughout the month and was reported at capacity and spilling the last week of May. Elkhead Creek Reservoir remained at capacity and spilling throughout the month. Fish Creek Reservoir level was reported at approximately 68% of capacity on May 31, in anticipation of upcoming snowmelt in the upper basin. 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.





Public Use Impacts

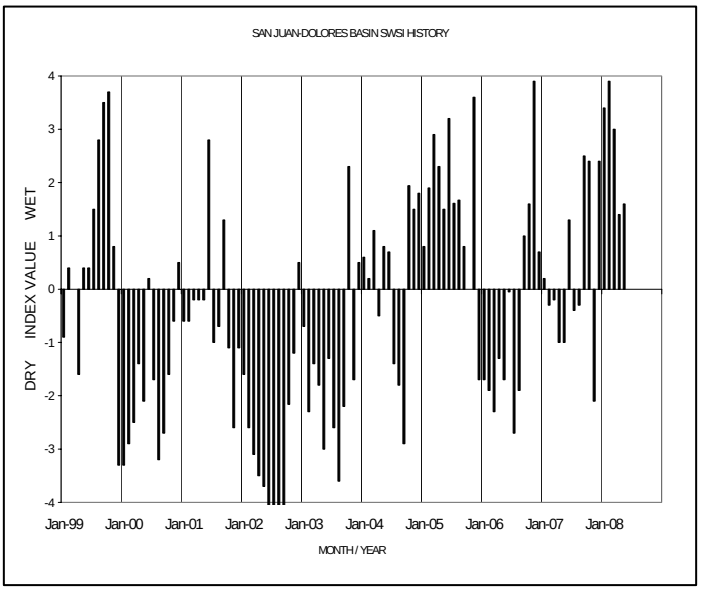
Most area reservoirs are open for the season, with good fishing reported.

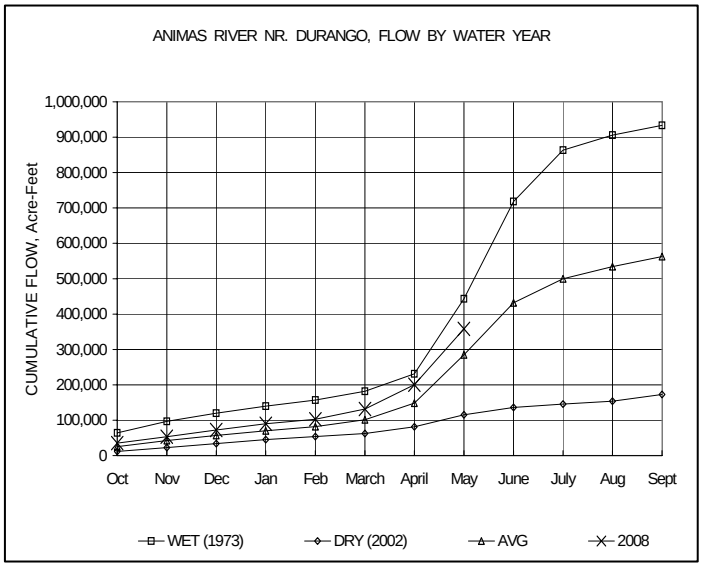
Basinwide Conditions Assessment

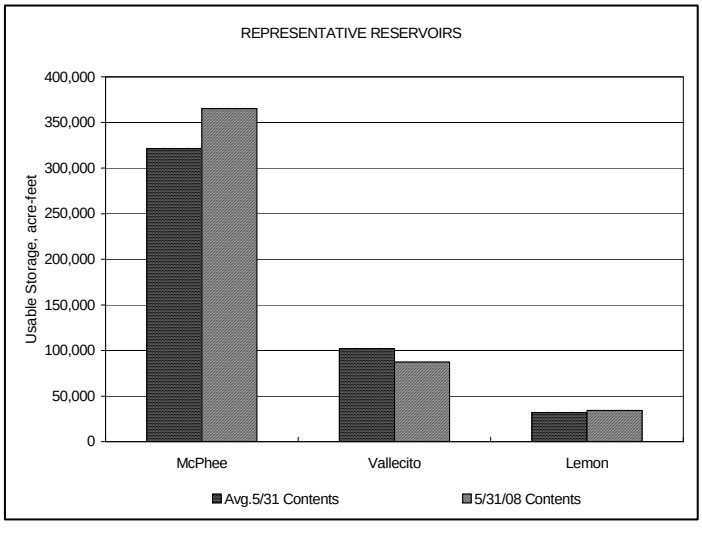
The SWSI value for the month was +1.6. Flow at the gaging station Animas River near Durango was 2570 cfs, as compared to the long-term average of 2219 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 107% of normal as of the end of May.

Flows at the Animas River at Durango averaged 2,570 cfs (111% of normal) with a maximum average daily peak flow of 5,982 cfs on May 21st. The Dolores River at Dolores averaged 2,022 cfs (117% of normal) with a maximum average daily peak flow of 4,141 cfs on May 21st. The La Plata River at Hesperus averaged 164 cfs (98% of normal) with a maximum average daily peak flow of 365 cfs on May 21st. Precipitation in Durango was 1.72 inches for May which is above the 30-year average of 1.20 inches. Precipitation to date in Durango, for the water year, is 15.33 inches which is above the average of 12.49 inches. Temperatures were near normal for the month. Durango was 0.3° below its 30-year average high and 0.5° below the 30-year average low.

At the end of the month Vallecito Reservoir contained 80,090 acre-feet compared to its normal contents of 87,378 acre-feet (92% of normal). McPhee Reservoir was up to 365,353 acre-feet compared to its normal contents of 318,941 acre-feet (115% of normal), while Lemon Reservoir was up to 34,220 acre-feet as compared to its normal content of 29,849 acre-feet (115% of normal).







Outlook

Temperature and precipitation were at normal levels for the month. The 3rd week in May brought very warm temperatures and rising rivers only to be slowed at the end of the week with a cold front that brought a foot of snow to the high mountain peaks. The NRCS data on May 31, 2008 reported a snow-water-equivalent of 100% of average in the San Miguel/Dolores/Animas and San Juan basin

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 start of run-off season has saturated the ground and started many land slides in the area. One notable slide within the region is located approximately 11 miles north of Pagosa Springs on the East Fork San Juan River. Xcel Energy first noticed the slide on May 2 when the slide severed their 8-in gas line. Throughout the month of May the slide has been moving at a rate of about 4-ft per day. At the bottom of the slide is the East Fork San Juan River. High flows in the river have been scouring the slide material down stream and maintained the river channel but diversion structures along the river must fight to keep their head gates from silting in. Water Resources personnel installed a stream gage below the slide to monitor flows in the event the slide was to block the entire flow of the river.

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