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 2001

The general water conditions throughout the state have improved modestly during July due to above normal precipitation in most of the state. Strong thunderstorms and heavy rains are predictable in July, but this year the July storms were especially generous. The Rio Grande Basin reported that Alamosa received more rain this month than any other July in the last 30 years. Reservoir storage is above normal in most of the state, except for the Gunnison and Rio Grande Basins in the western part of Colorado. Despite the heavy rains, steam flow measurements are lower than normal in all the basins, except for the South Platte Basin. Stream flow is heavily weighted in the Colorado and Yampa/White Basin index numbers. Thus, the index shows drought conditions in both of those basins. Snow melt was earlier than normal this year, which contributes to lower July stream flows.

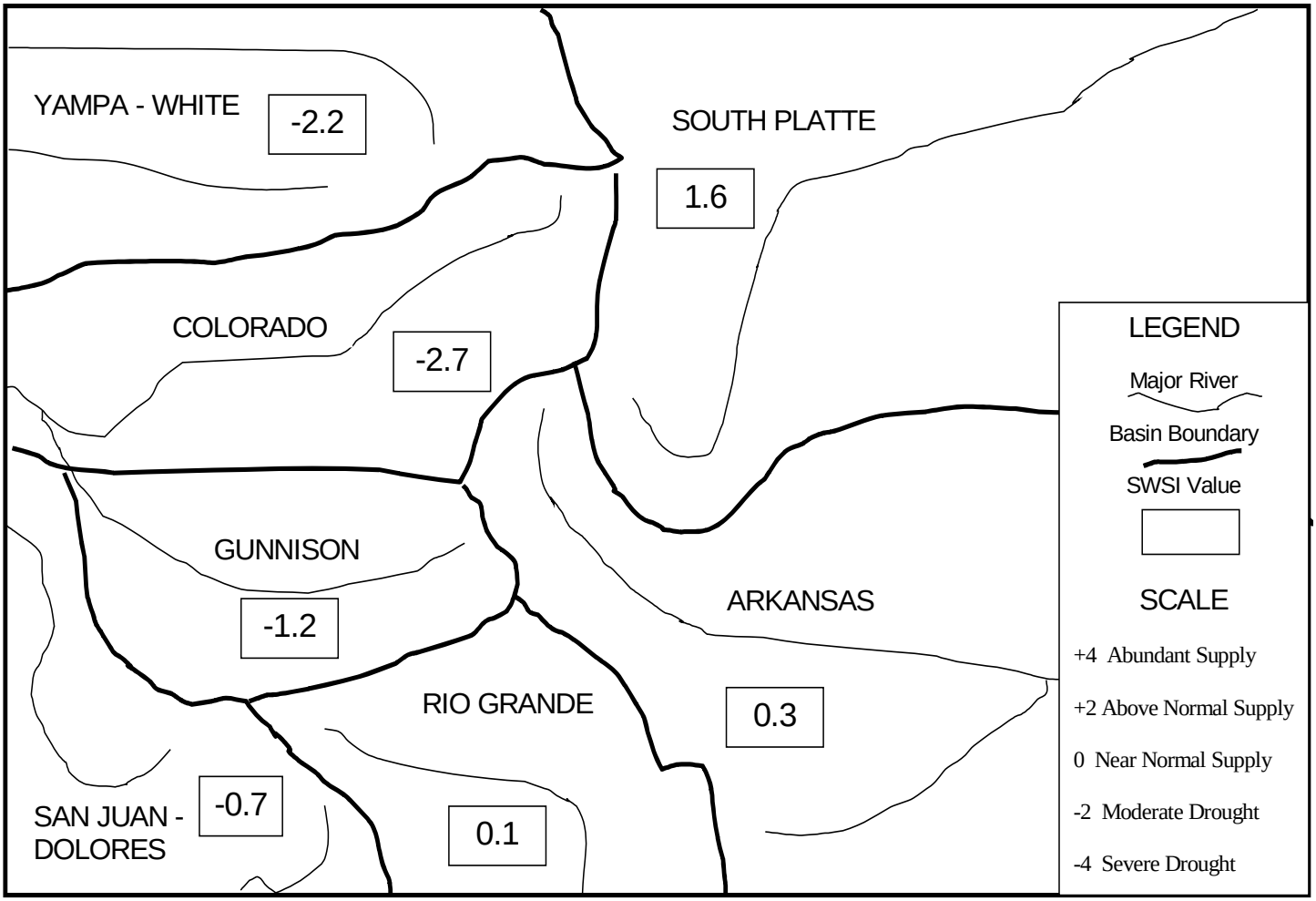
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on stream flow, reservoir storage, and precipitation for the summer 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 following SWSI values were computed for each of the seven major basins for August 1, 2001, and reflect the conditions during the month of July.

Basin	August 1, 2001 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	1.6	+1.0	0.0
Arkansas	0.3	+0.2	+0.1
Rio Grande	0.1	+1.5	+3.3
Gunnison	-1.2	+0.2	+0.5
Colorado	-2.7	+0.3	-0.5
Yampa/White	-2.2	+1.1	+0.6
San Juan/Dolores	-0.7	+0.3	+1.0

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

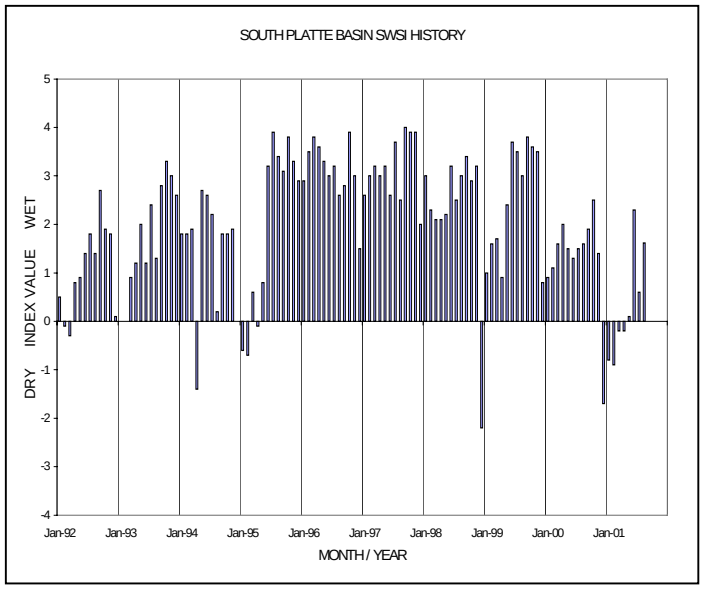


AUGUST 1, 2001

Basinwide Conditions Assessment

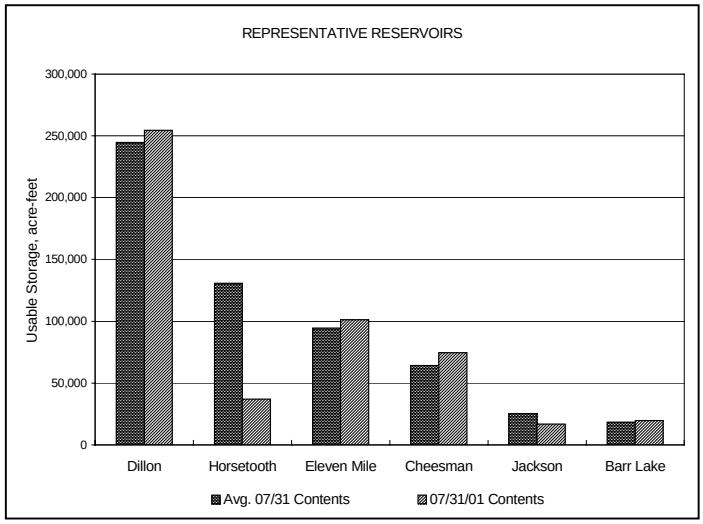
The SWSI value of 1.6 indicates that for July the basin water supplies were above normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 87% of normal as of the end of July. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 61% 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 723 cfs, as compared to the long-term average of 1,085 cfs. Flow at the Colorado/Nebraska state line averaged 92 cfs.

Early in the month, conditions were generally dry, and expectations were for an overall dry, but not a drought year. Several intense thunderstorms occurred during the first half of the month caused very high flows for short durations in the South Platte. At end of the month, there was less thunderstorm activity, and more general summer conditions returned. Flows would have been average or below average without the storms.



Outlook

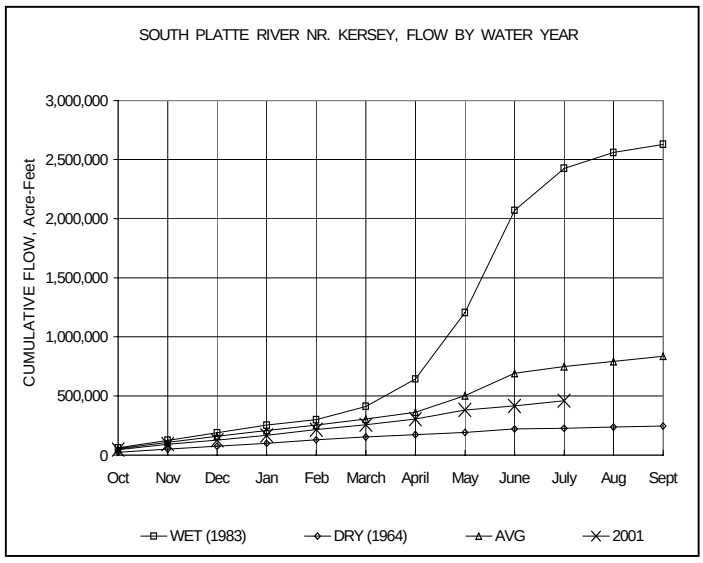
The Jackson Reservoir Company began releasing water in late July from Jackson Reservoir, a large plains reservoir west of Fort Morgan, for rehabilitation of the dam. The release will continue into August, and will provide additional water to the river system. Shortages are not expected for the remainder of the summer to irrigators, or others.



Administrative/Management Concerns

July was a difficult month to administer water in the South Platte Basin this year. While intense storms are not uncommon in July, the magnitude, number, and location of the storms created administrative challenges. High flows caused by the storms were amplified because the rain fell in the Denver metro area where the hardened surfaces caused immediate runoff. The challenge was to allow as much water as possible to be diverted by upstream junior users while assuring that adequate flows, but not excessive flows, reached senior users downstream, who were short. As a result of staff efforts, supply during the month was good.

Downstream senior users did receive the water they were entitled to while junior users, including reservoirs and recharge, were able to take water from the peak of the high flows.



Basinwide Conditions Assessment

The SWSI value of 0.3 indicates that for July the basin water supplies were near normal. Flow at the gaging station Arkansas River near Portland was 813 cfs, as compared to the long-term average of 1,680 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 98% of normal as of the end of July.

Other than for a brief period around mid-July when Amity Canal was able to store water in John Martin Reservoir under their Great Plains Reservoir decree, July was characterized by heavy irrigation demand relying on stored water from Pueblo Reservoir and John Martin Reservoir. Kansas called for releases of water from the John Martin Reservoir at a rate of 550 cfs throughout most of July. Demand on the reservoir reduced storage from over 147,000 acre-feet to approximately 101,000 acre-feet during the month.

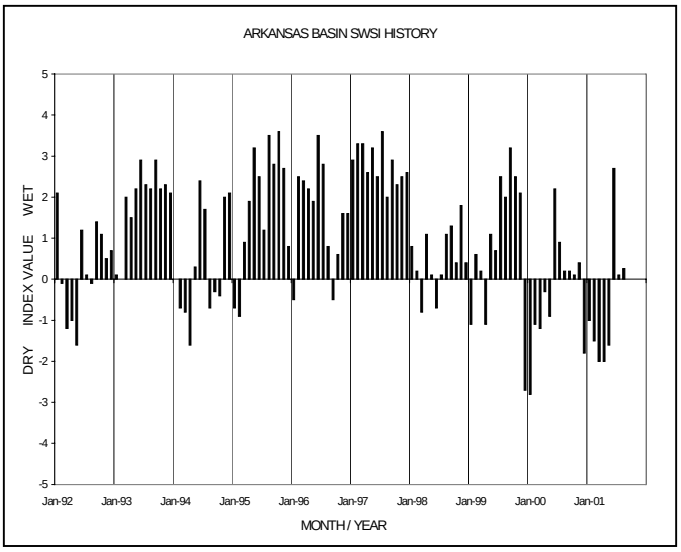
Pueblo Reservoir supplies were bolstered by delivery of water from upstream reservoirs. However, total storage in Pueblo Reservoir was significantly reduced during July. The reservoir held over 164,000 acre-feet of water at the beginning of the month and 136,000 acre-feet of water at the end of the month, which was represented by an elevation drop of over 8 feet.

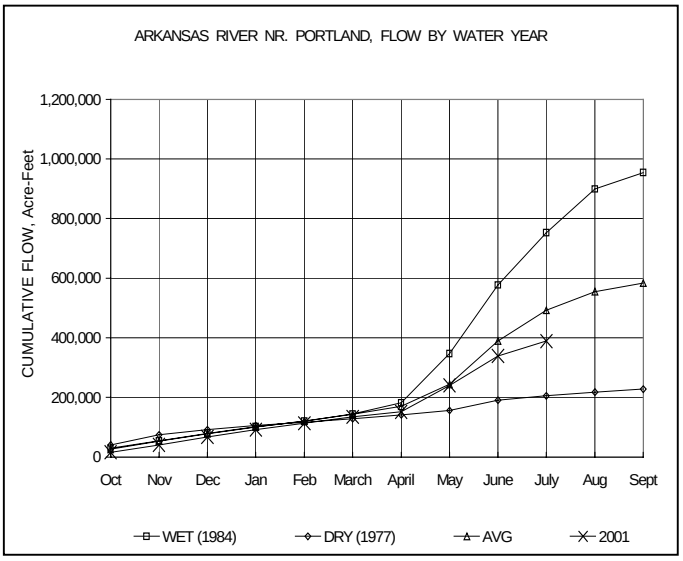
Administrative/Management Concerns

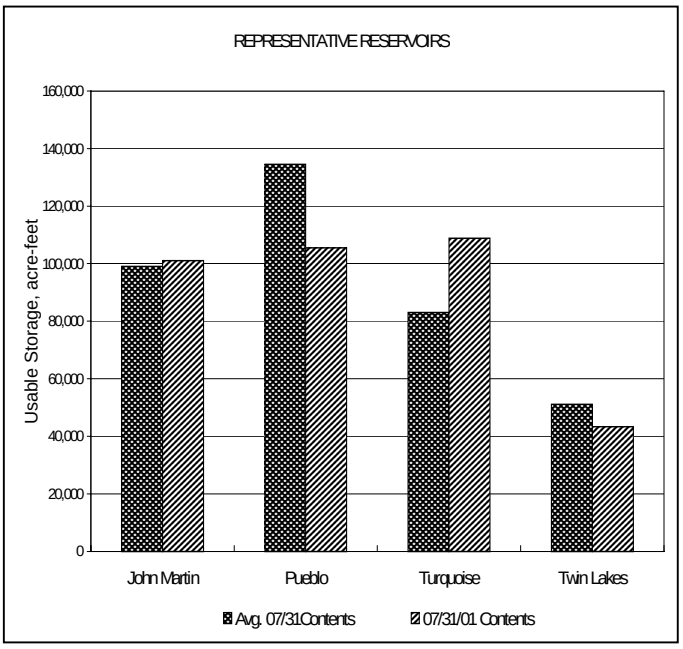
Several ditches are relying on stored water for a significant portion of their supply. Many water users are concerned about the management of the remaining stored water so that it will last throughout the growing season.

Public Use Impacts

Recreational uses at the major reservoirs are impacted as the water levels drop. Both Pueblo Reservoir and John Martin Reservoir have experienced strong water years that allowed levels to remain fairly high in the recent past, so the change this year can be shocking to the non-agricultural community.







Basinwide Conditions Assessment

The SWSI value of 0.1 indicates that for July the basin water supplies were near normal. Flow at the gaging station Rio Grande near Del Norte was 1,182 cfs, as compared to the long-term average of 1,417 cfs. The Conejos River near Mogote had a mean flow of 370 cfs (88% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 83% of normal as of the end of July.

Precipitation in Alamosa was 2.75 inches, a generous 1.56 inches above normal. This was the rainiest July in the last 30 years. The average temperature was one degree above normal.

Outlook

Stream flow levels in the basin's streams fell off drastically during July. The high runoff in May and June must have run out the majority of the snowpack. Water users and recreators should expect below average stream flows and reservoir levels through the end of the summer.

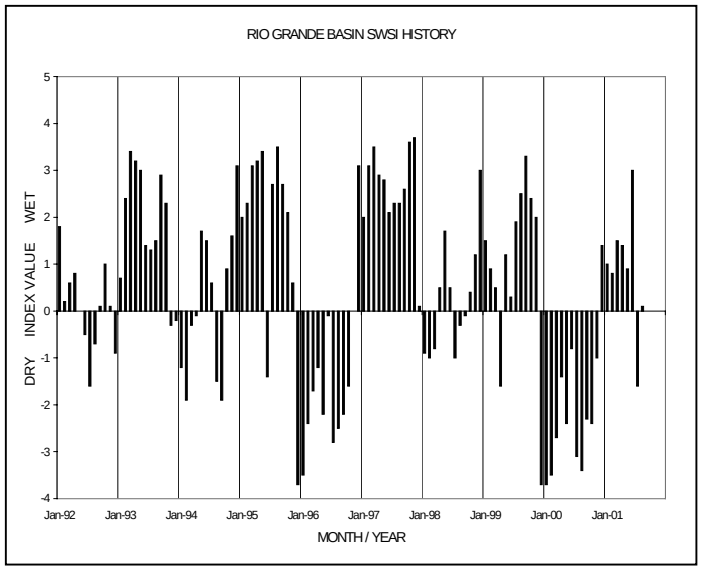
Administrative/Management Concerns

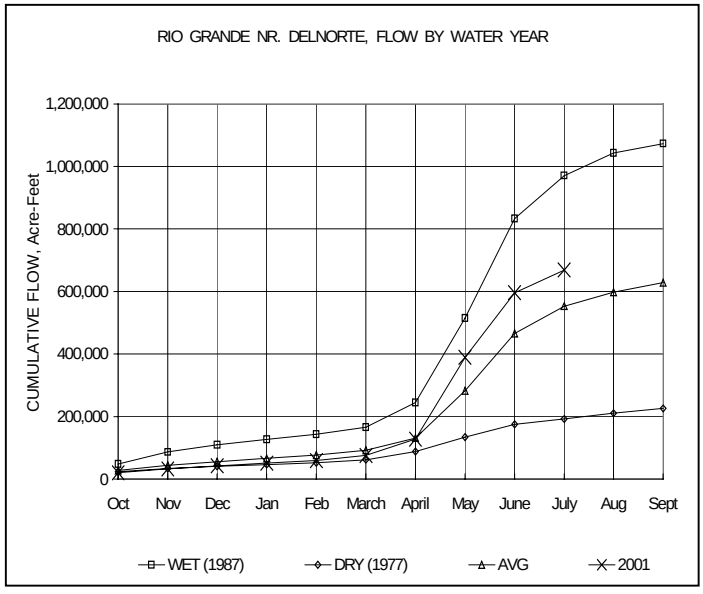
Reservoir releases in the upper Rio Grande Basin ceased in mid-July. Other basins may have a block of water left to release, but most farmers and ranchers will need help from Mother Nature if they need another irrigation run. Junior water right owners in Division 3 should expect senior calls to keep them out of priority for the rest of the irrigation season.

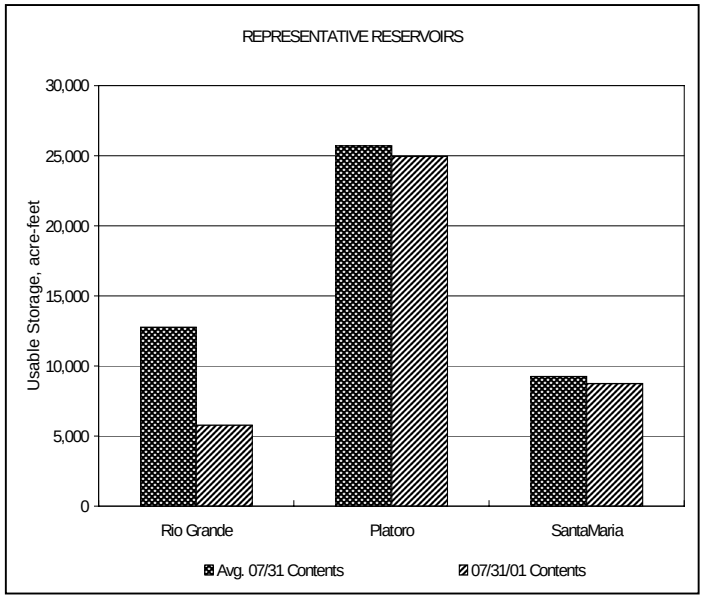
Deliveries of water to the State line required by the Rio Grande Compact have been more than adequate. Little or no curtailment of the water rights for the Compact delivery is expected after the curtailments were lifted on the Conejos and Rio Grande during July.

Public Use Impacts

The abundant rainfall and warm weather have pushed many of the crops ahead of schedule. Potatoes and grain will be harvested a bit sooner this year. However, that same rainfall hampered efforts to put up the second cutting of hay and alfalfa.







Basinwide Conditions Assessment

The SWSI value of –1.2 indicates that for July the basin water supplies were below normal. Flow at the gaging station Uncompahgre River near Ridgway was 236 cfs, as compared to the long-term average of 336 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 76% of normal as of the end of July. Precipitation for July was 1.52 inches in Montrose as compared 0.24 inches for July 2000.

Outlook

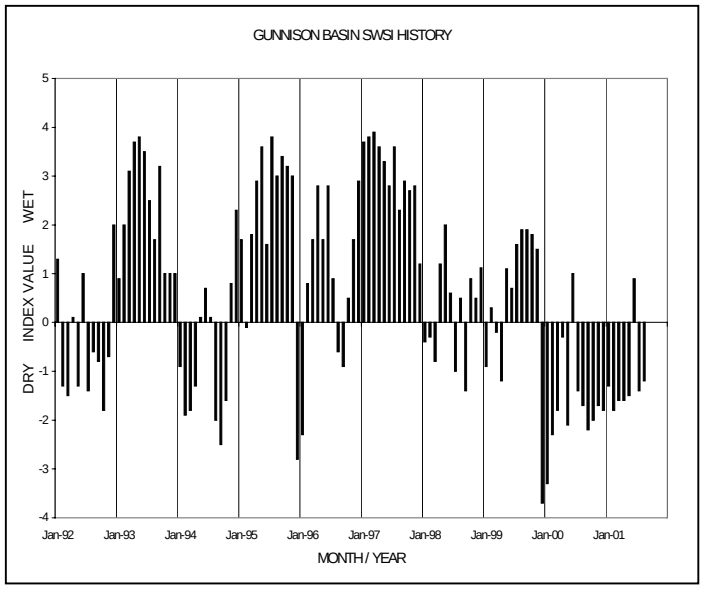
Seasonal showers have eased the demand for irrigation water toward the end of July. The harvesting of alfalfa and sweet corn, along with frequent localized thunderstorms, has reduced the irrigation demands for the Uncompahgre Valley. This in turn has relieved the need for a call on the Uncompahgre River.

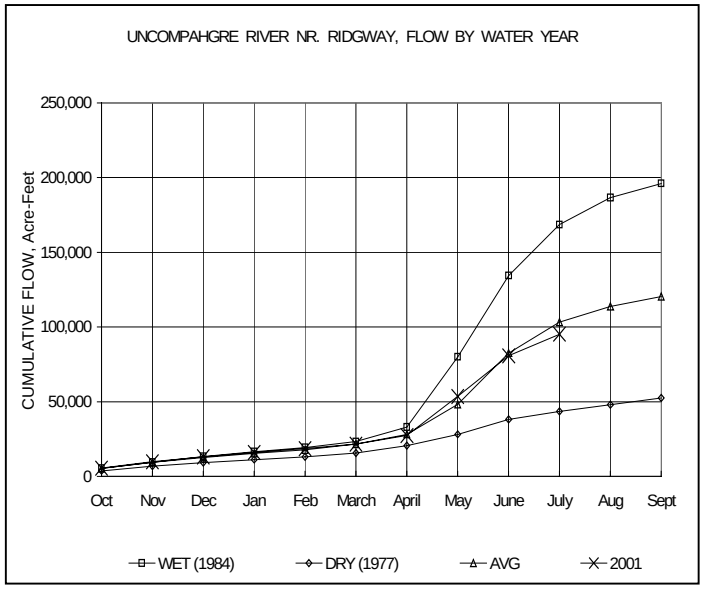
Administrative/Management Concerns

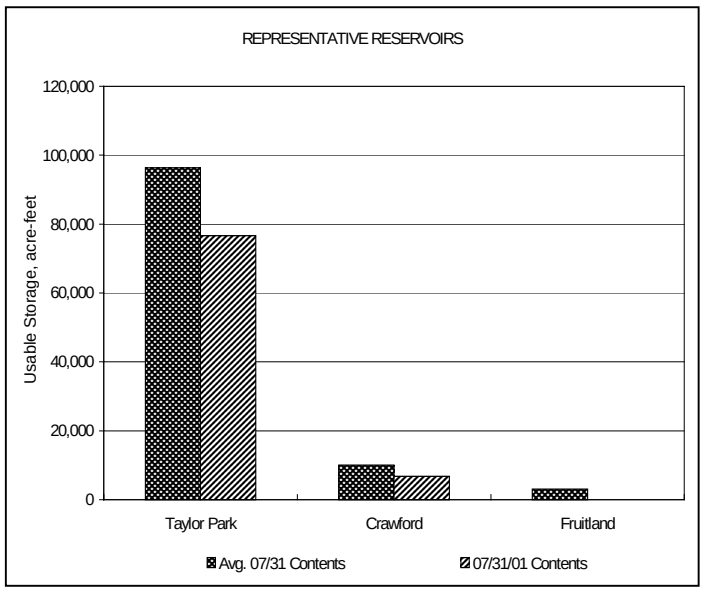
The effects of the limited winter snowfall continued, as Taylor Park and Blue Mesa Reservoirs did not fill this season. However, the water supply for the southern edge of the basin was closer to average, as Ridgway Reservoir did fill. Reservoirs on Grand Mesa were used extensively as natural streamflow was at extremely low levels for July in Water Districts 40 and 42. The Uncompahgre Valley Water Users placed a call on the Uncompahgre River in early July but the call was only for a few days as precipitation lessened the need for irrigation water.

Public Use Impacts

Thunderstorms have caused isolated damage to property. The CC Highline Ditch, a major diverter on the San Miguel River, was shut down four different times for repairs due to flood damage.







Basinwide Conditions Assessment

The SWSI value of –2.7 indicates that for July the basin water supplies were below normal. Flow at the gaging station Colorado River near Dotsero was 1,377 cfs, as compared to the long-term average of 3,128 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 94% of normal as of the end of July.

Outlook

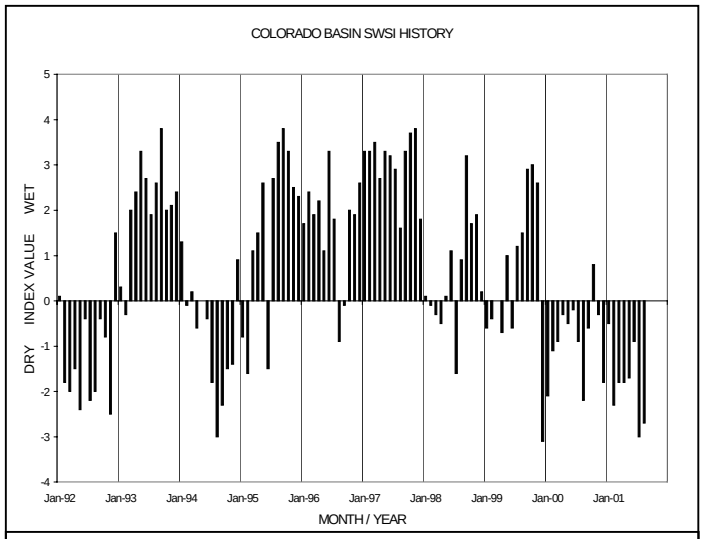
Relief from dry basin conditions is expected through early August due to the summer monsoon rains.

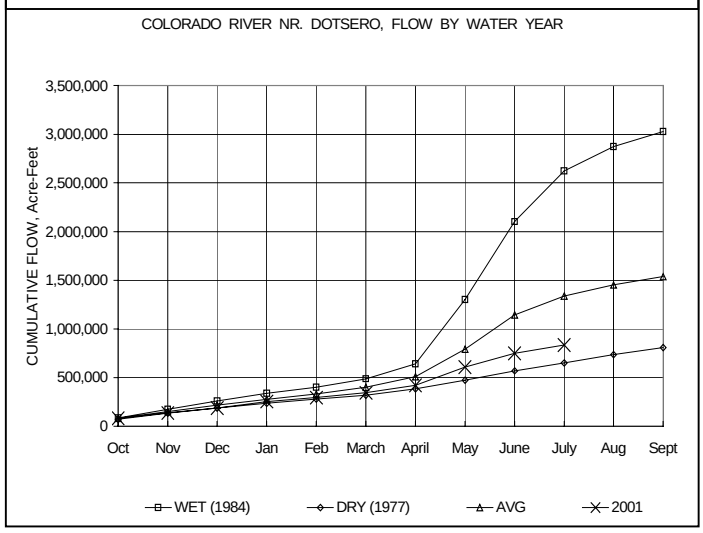
Administrative/Management Concerns

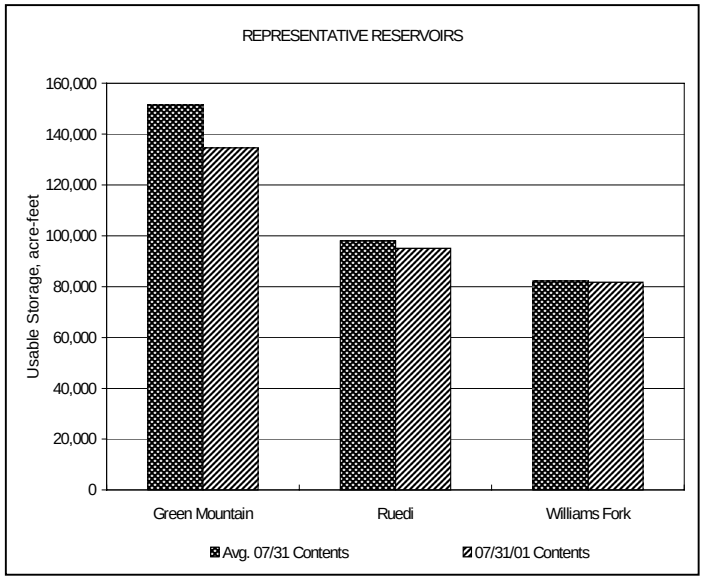
The senior Shoshone call was placed on the river in early July, but rains in early August reduced this call back to the junior call. The Cameo call is expected to be initiated later this month.

Public Use Impacts

Locally heavy rainstorms have colored the river at times during the month causing an impact to fishing.



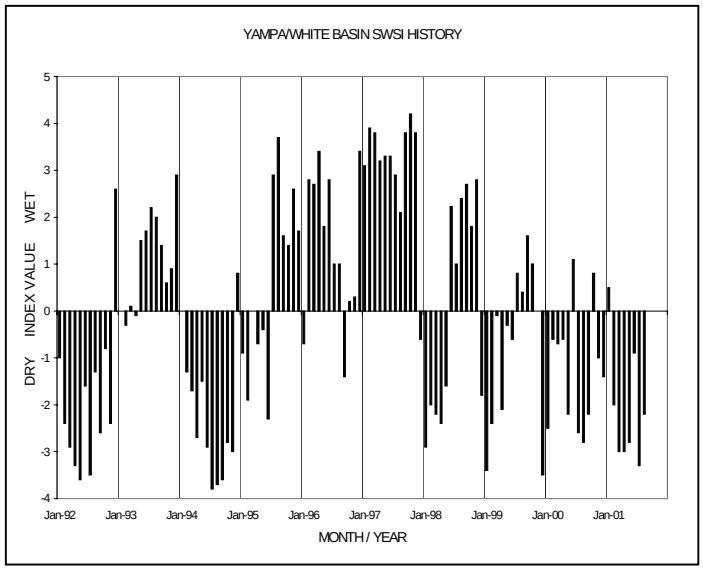




Basinwide Conditions Assessment

The SWSI value of –2.2 indicates that for July the basin water supplies were below normal. Flow at the gaging station Yampa River at Steamboat was 141 cfs, as compared to the long-term average of 410 cfs.

July continued the trend of hot day conditions. For the month, precipitation was about 81% of average. The monsoonal moisture that developed this month brought only scattered and short-lived relief to the Northwest corner of the state. While streamflows have remained fairly stable, they are well below average levels. Many irrigation reservoirs have been drawn down to their minimum levels.



Outlook

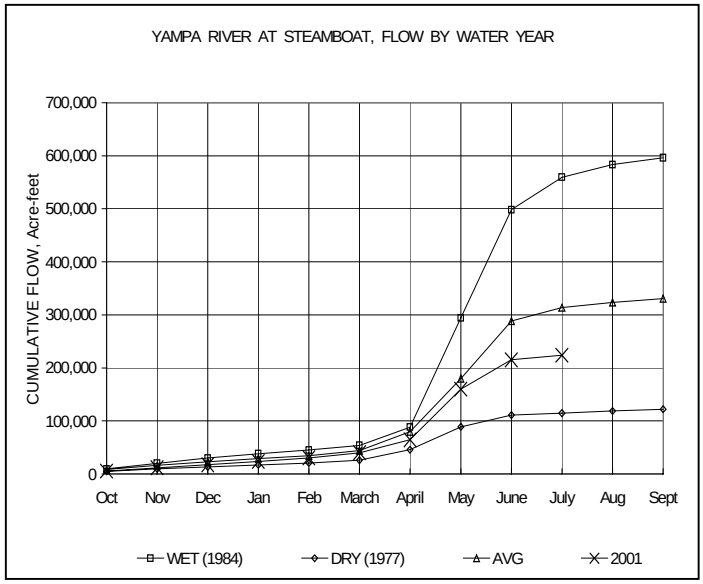
Without additional moisture, streamflows will remain below normal. Reservoirs will enter the fall well below normal fall storage levels.

Administrative/Management Concerns

Administration has continued throughout the Division with several creeks going on call this month. As the hay harvest proceeds, ditches are turning back on to irrigate for pasture. The continued diversions will keep many streams under administration for the rest of the year. This will cause serious impacts on the resources of the Division.

Public Use Impacts

Rivers continue to be extremely low. Water temperatures in many streams are reaching levels considered to be dangerous for the fish populations. While no fire bans have been instituted in the Division this year, conditions are extremely dry.

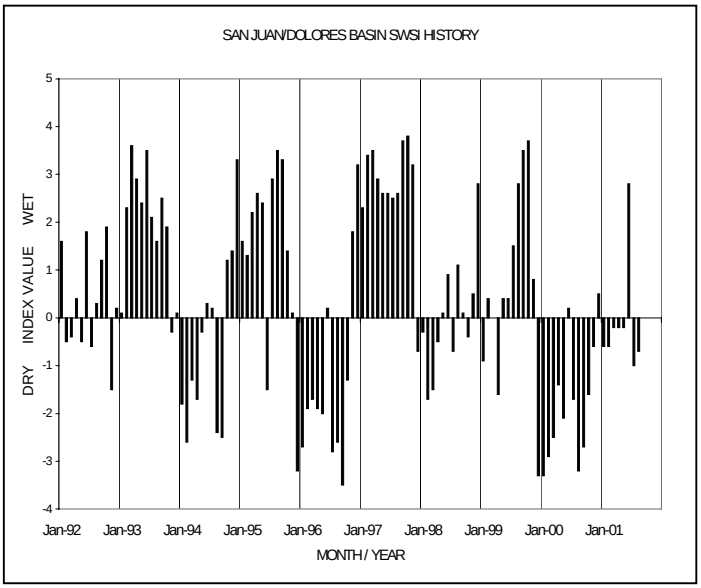


Basinwide Conditions Assessment

The SWSI value of –0.7 indicates that for July the basin water supplies were near normal. Flow at the gaging station Animas River near Durango was 752 cfs, as compared to the long-term average of 1,180 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 93% of normal as of the end of July.

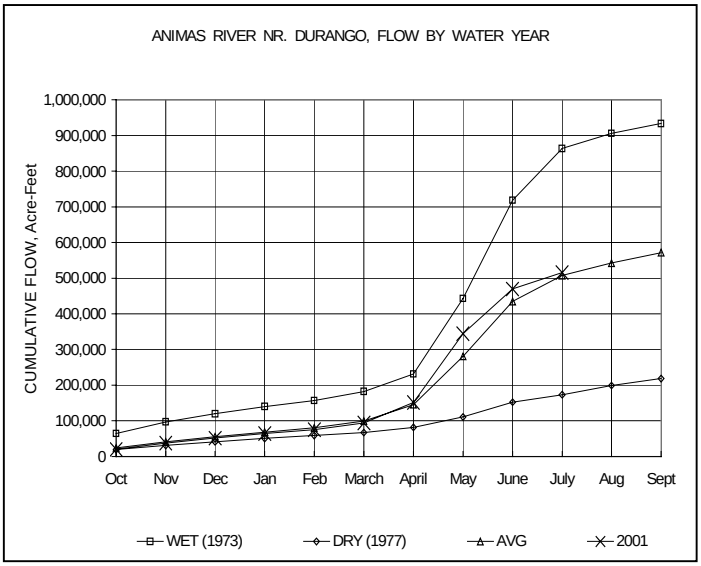
July was very dry and continued the experience of the previous months until the end of the month as monsoonal conditions developed. A total of 1.52 inches of rain fell during the month, 83% of normal and left the yearly total at 116% of normal. However, the last day of the month supplied over a third of that total.

Rivers ran below average but above last year's poor amount. The Dolores and LaPlata Rivers ran only 40% of normal. Temperatures were very warm. Several days were above 90°F in Durango and the low temperatures averaged 8° above normal.



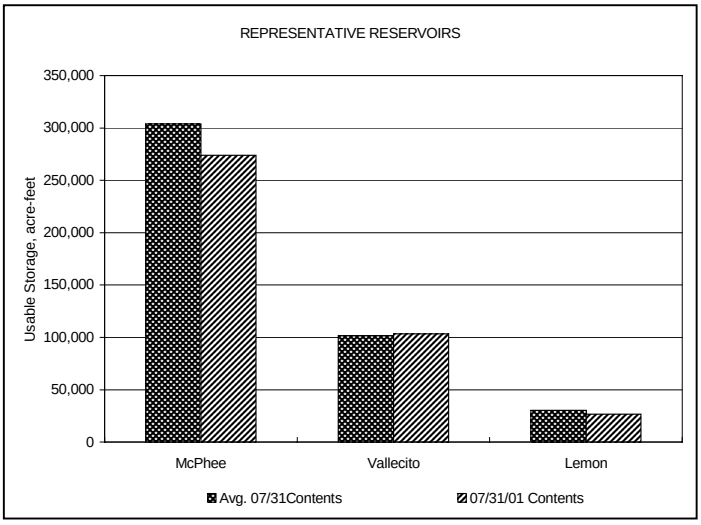
Outlook

Precipitation from thunderstorms has reduced soil moisture deficits; however, much more rain will be needed in the southern plateaus to recover from previous drought conditions.



Public Use Impacts

Reservoirs were being utilized but remain at levels near normal. Vallecito was carrying the best storage with over 100,000 acre-feet remaining for use. Rafting and boating continued throughout the month.



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