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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JULY 2001

The majority of this year's runoff occurred in May, with June stream flows then being below average. This resulted in higher May SWSI values and lower June SWSI values. By the latter part of June post-runoff stream administration was typically in effect over most of the state with the more junior water rights being curtailed.

Reports from the Rio Grande, San Juan/Dolores, and Yampa/White basins all contain reference to dry conditions and a desire for summer rains, with the Yampa/White basin being especially dry. Early reservoir use was reported in the Rio Grande and Gunnison River basins.

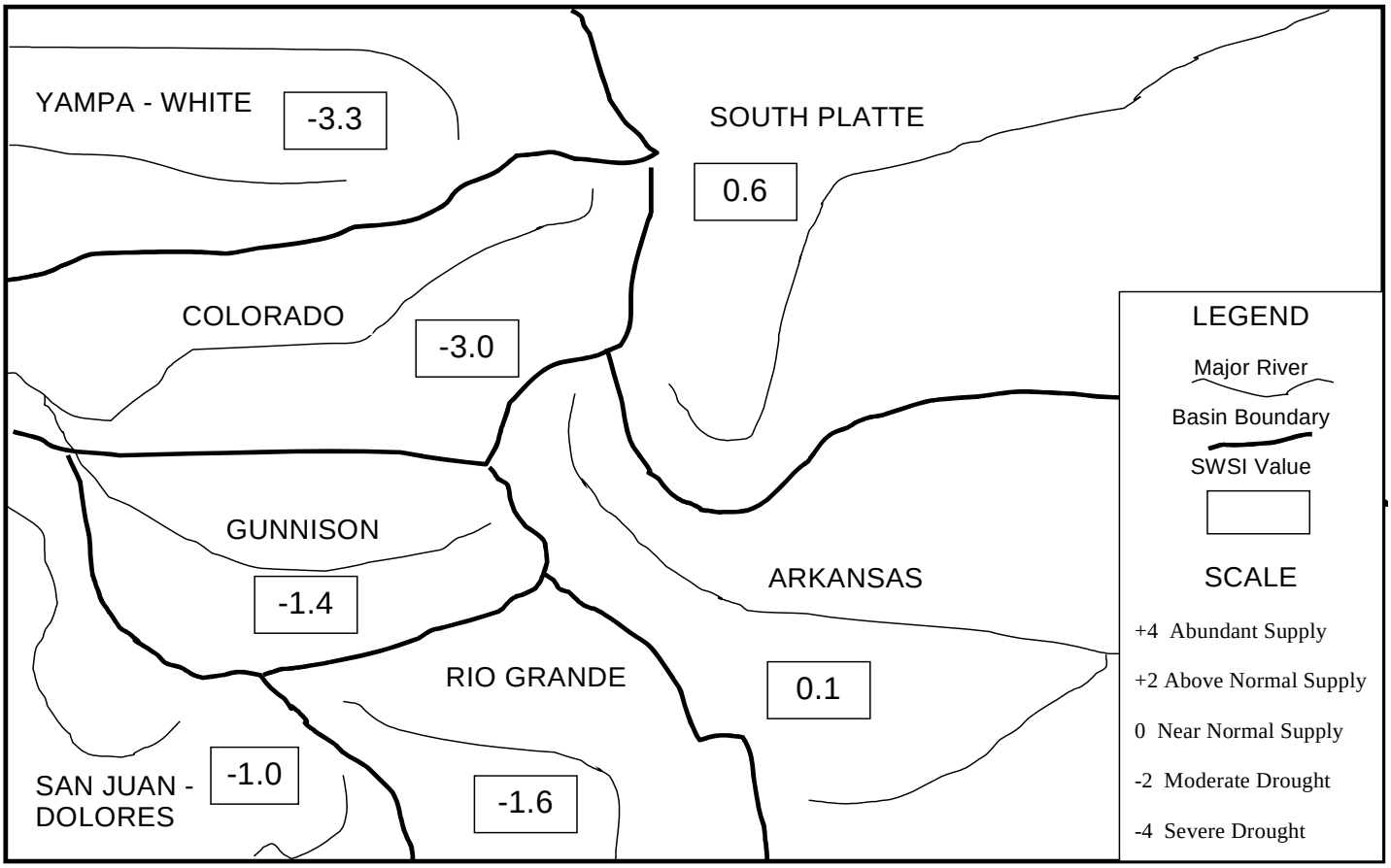
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on stream flow, reservoir storage, and precipitation for the summer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

Basin	July 1, 2001 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	0.6	-1.7	-0.9
Arkansas	0.1	-2.6	-0.8
Rio Grande	-1.6	-4.6	-1.5
Gunnison	-1.4	-2.3	0.0
Colorado	-3.0	-2.1	-2.1
Yampa/White	-3.3	-2.4	-0.7
San Juan/Dolores	-1.0	-3.8	+0.7

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, 2001

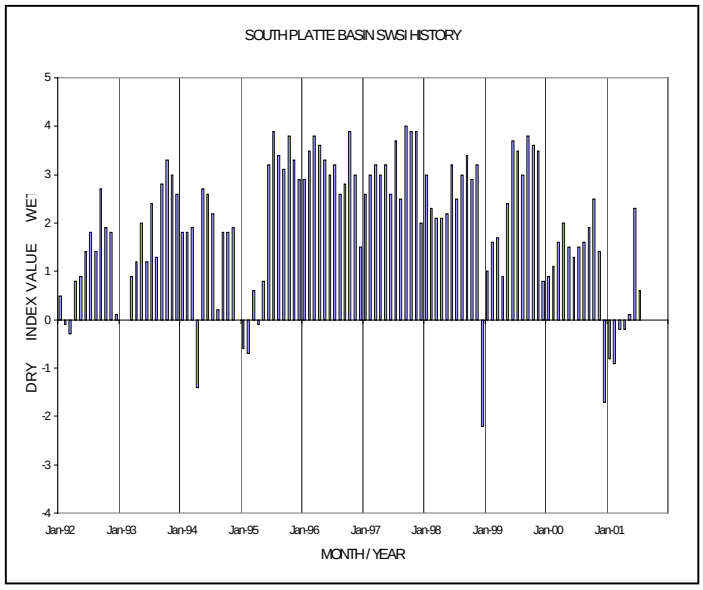
Basinwide Conditions Assessment

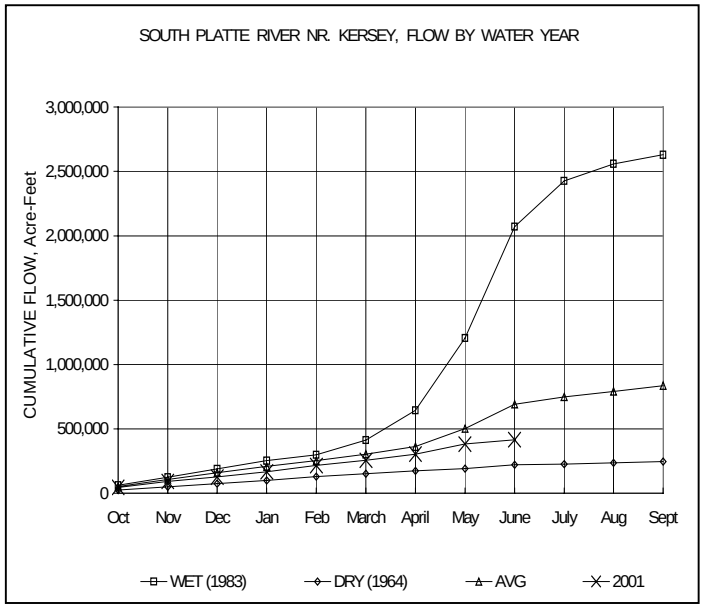
The SWSI value of 0.6 indicates that for June the basin water supplies were near normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 90% of normal as of the end of May. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 86% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 98% of capacity. Flow at the gaging station South Platte River near Kersey was 576 cfs, as compared to the long-term average of 3,498 cfs. Flow at the Colorado/Nebraska state line averaged 224 cfs.

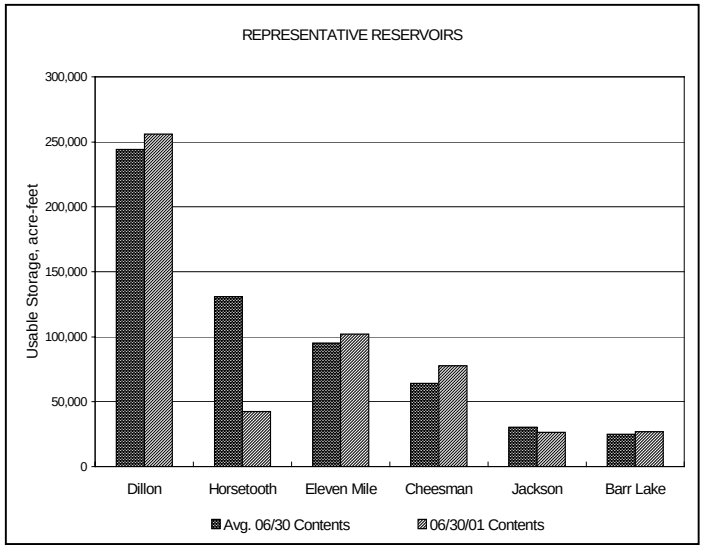
The generally dry and warm conditions continued through June. Unlike many years, there was not a significant snow runoff during June, with stream flows well below historic averages. As a result, there were calls on the river during the whole month of June, which is unlike average years when a free river exists during a portion of the month. Well timed rain did help keep the call off the South Platte downstream of Greeley during a portion of the month which allowed for continued recharge along the South Platte and continued storage along the tributaries. However, by the end of the month there were senior irrigation calls along the whole length of the South Platte.

Outlook

Stream flow conditions this summer should be helped by the fact that the major reservoirs on both plains and tributaries were able to fill this year, and the fact that there was considerable ground water recharge along the South Platte during the spring. These items will help to assure an adequate irrigation supply later in the year even if there is not significant precipitation during the rest of the summer. Municipal supplies remain in generally good condition due to adequate reservoir storage and drought planning. However, isolated physical shortages may occur in some basins, as occurred last year.



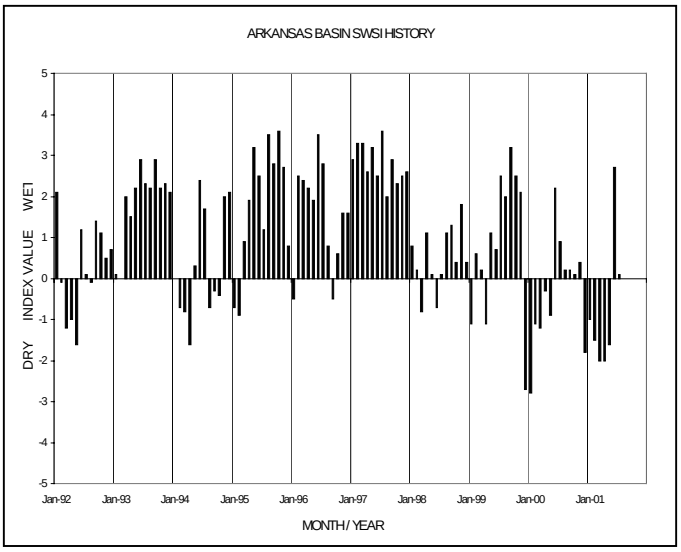




Basinwide Conditions Assessment

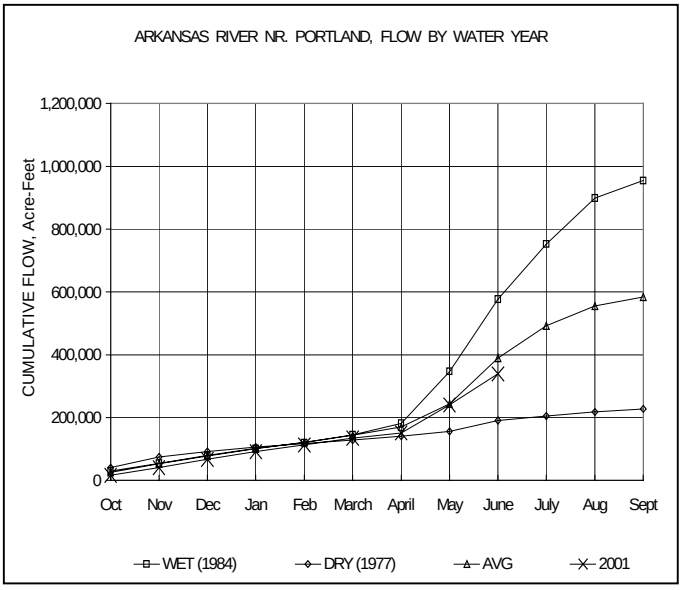
The SWSI value of 0.1 indicates that for June the basin water supplies were near normal. Flow at the gaging station Arkansas River near Portland was 1,660 cfs, as compared to the long-term average of 2,441 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 111% of normal as of the end of June.

Severe storms in the first part of June produced a localized impact on the area extending from John Martin Reservoir to the Kansas stateline and caused the initiation of a short duration summer storage event in John Martin Reservoir. Irrigation demand through June was substantial as evidenced by the decrease in content of Pueblo Reservoir (which dropped from 180,832 acre-feet on June 1 to 165,827 acre-feet on June 30) and John Martin Reservoir (which dropped from 157,894 acre-feet on June 1 to 147,534 acre-feet on June 30).



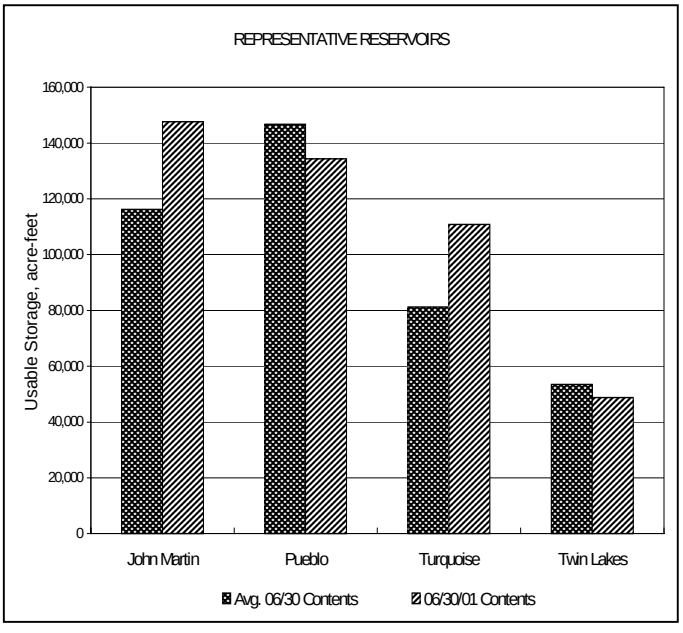
Administrative/Management Concerns

Division 2 (Arkansas Basin) staff held a meeting with Water District 67 (Arkansas River from John Martin Reservoir to the stateline) ditch company personnel on June 28, 2001 and discussed the operation of John Martin reservoir under the Arkansas River Compact and subsequent operating plans and resolutions. This meeting was very helpful to both Division 2 and the ditch company staff in terms of better communicating operational information, and identifying areas for improvement. One important outcome was coordination with U.S. Army Corps of Engineer's staff at John Martin Reservoir to provide opportunity for weekend gate changes to be made to better manage the ditch company's stored waters.



Public Use Impacts

Division 2 river operations staff successfully coordinated with Pueblo County Search and Rescue to facilitate a short-term reduction in release from Pueblo Reservoir that enabled the completions of a search and rescue mission while minimizing impact to water rights down stream of the rescue effort.



Basinwide Conditions Assessment

The SWSI value of –1.6 indicates that for June the basin water supplies were slightly below normal. Flow at the gaging station Rio Grande near Del Norte was 3,471 cfs, as compared to the long-term average of 3,074 cfs. The Conejos River near Mogote had a mean flow of 906 cfs (70% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 87% of normal as of the end of June.

Precipitation in Alamosa was only 0.07 inches, 0.60 inches below normal. Alamosa temperatures ranged from 26° to 88°, with an average of 60.9°, 1.5° above normal.

Outlook

The calling priority on the Rio Grande is surprisingly senior for an above average water year. And, although stream flow in the Rio Grande was above normal during June, much of that was due to the reservoir releases that began earlier than in a typical year. Without substantial rainfall, stream flow in the Rio Grande will fall below normal after reservoir releases are completed in July.

Stream flow levels in the Conejos River and its tributaries are well below average at this time. Although it may not get as bad as last year, the forecast for water supply for the remainder of the irrigation season is bleak.

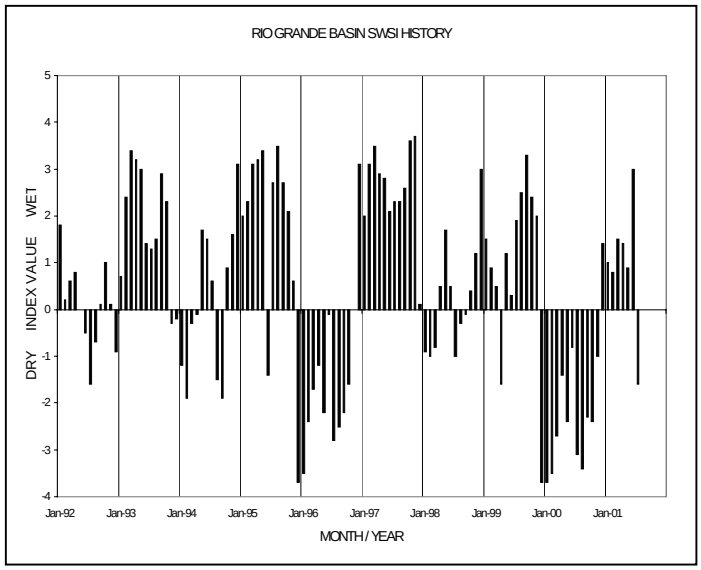
Most of the other drainages in the basin are experiencing similar conditions. Low water levels and senior calls have replaced the abundant early runoff.

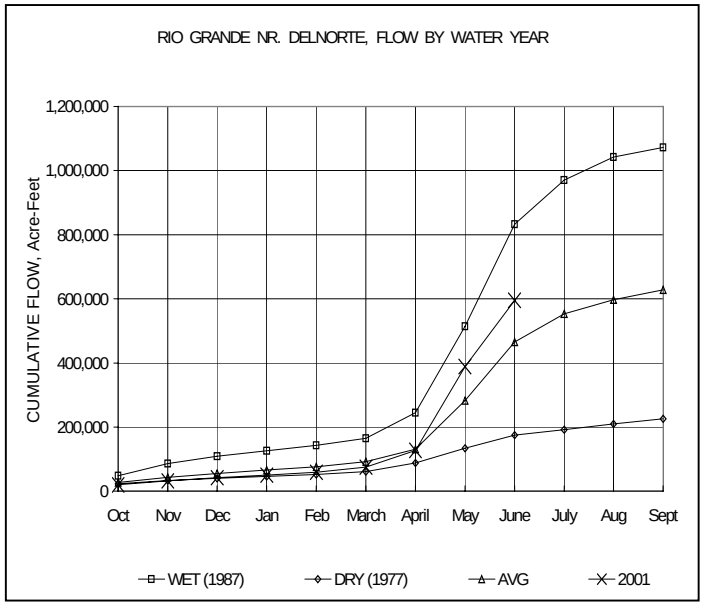
Administrative/Management Concerns

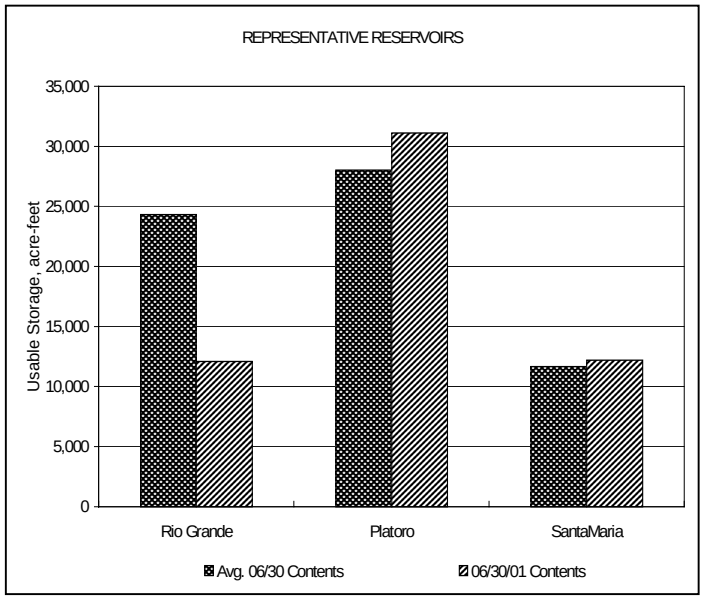
Administrators have placed curtailments on indexed stream flows in order to meet water delivery requirements to the state line pursuant to the Rio Grande Compact. The current delivery targets are set at 25% for the Rio Grande and 17% for the Conejos River system. These percentages of native flow available at the index gages are routed downstream past the ditches to the state line.

Public Use Impacts

The warm dry weather has benefited those farmers and ranchers with native grass and alfalfa crops. But, those growing grain and potatoes were hard hit by a late freeze during the second week of June. Most reservoirs reached peak storage levels near the end of May or early June and have already begun to decline as releases are made for irrigation needs. As the summer progresses, recreational opportunities will be hampered by low water levels in both reservoirs and streams.







Basinwide Conditions Assessment

The SWSI value of –1.4 indicates that for June the basin water supplies were slightly below normal. Flow at the gaging station Uncompahgre River near Ridgway was 457 cfs, as compared to the long-term average of 337 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 85% of normal as of the end of June.

Outlook

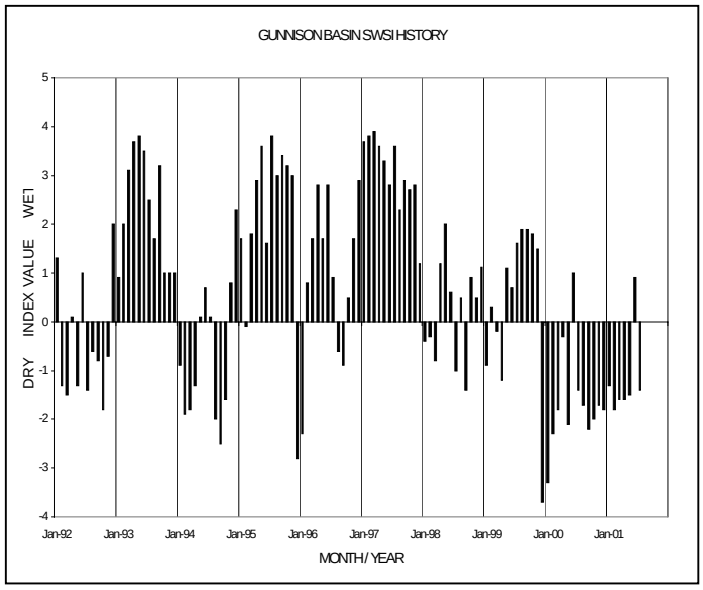
Basin administrators are expecting a call on the Uncompahgre River at any time.

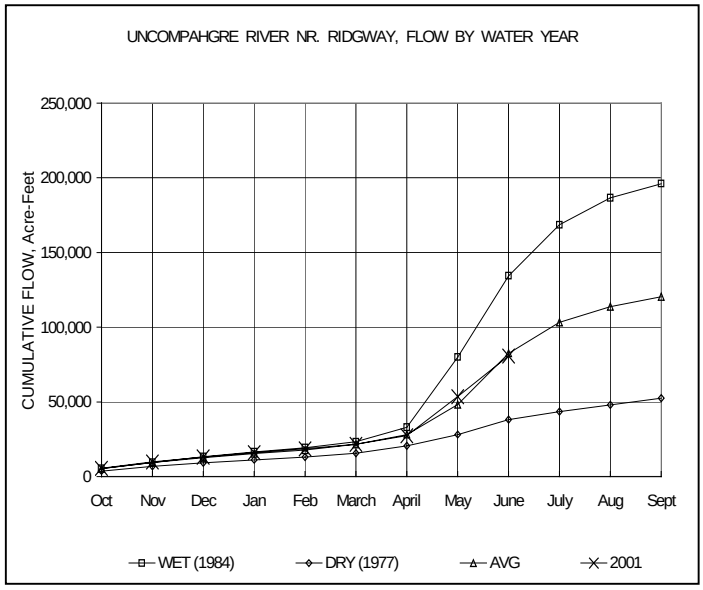
Toward the end of June irrigators were beginning to draw heavily on the reservoir storage. Grand Mesa Reservoirs did not have much carry over to begin this year, and most of the larger reservoirs on the Mesa did not fill, which is not normal.

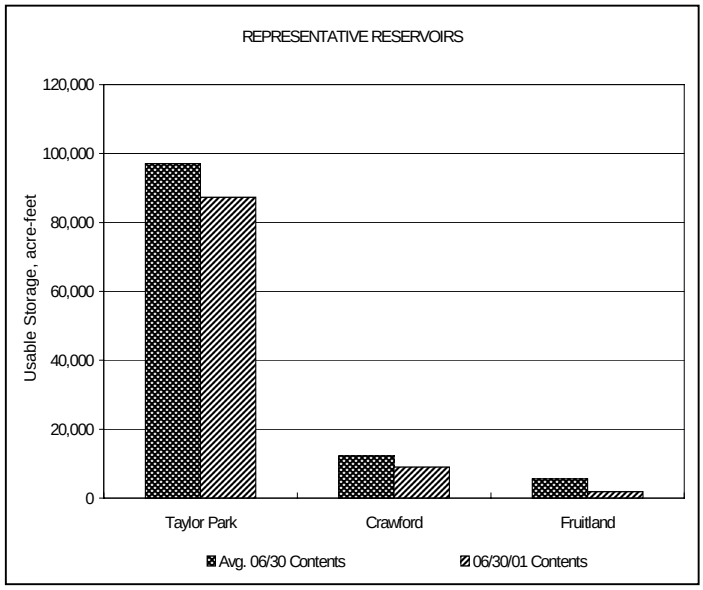
Administrative/Management Concerns

The water commissioner for the Tomichi Creek basin above Gunnison indicates that stream flows are as low as she has seen them, with many priorities being shut off that have never been curtailed before.

More replacement well permits are being applied for, as well as dry holes being reported on initial drilling of new wells.







Basinwide Conditions Assessment

The SWSI value of –3.0 indicates that for June the basin water supplies were below normal. Flow at the gaging station Colorado River near Dotsero was 2,395 cfs, as compared to the long-term average of 5,928 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 97% of normal as of the end of June.

Outlook

Among the major reservoirs only Dillon and Vega Reservoirs have filled and spilled. Ruedi, Granby, Williams Fork, Wolford, and Green Mountain Reservoirs are not anticipated to fill this year. "Monsoonal" weather patterns finally started at the end of June, brining much needed showers into early July.

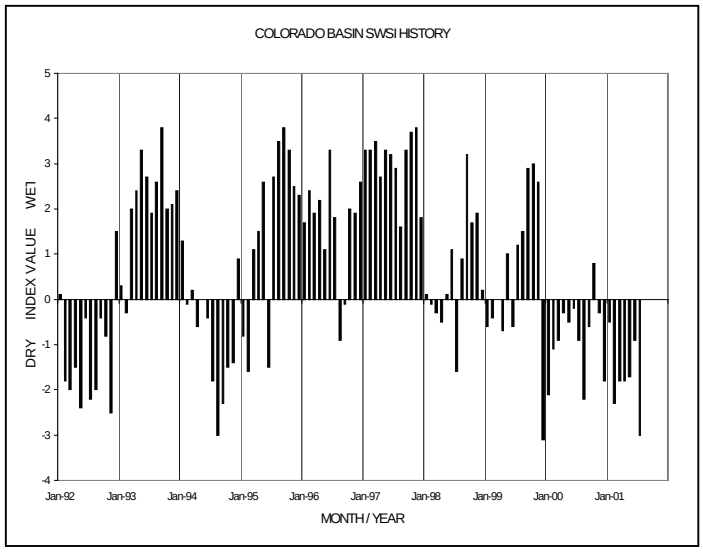
Administrative/Management Concerns

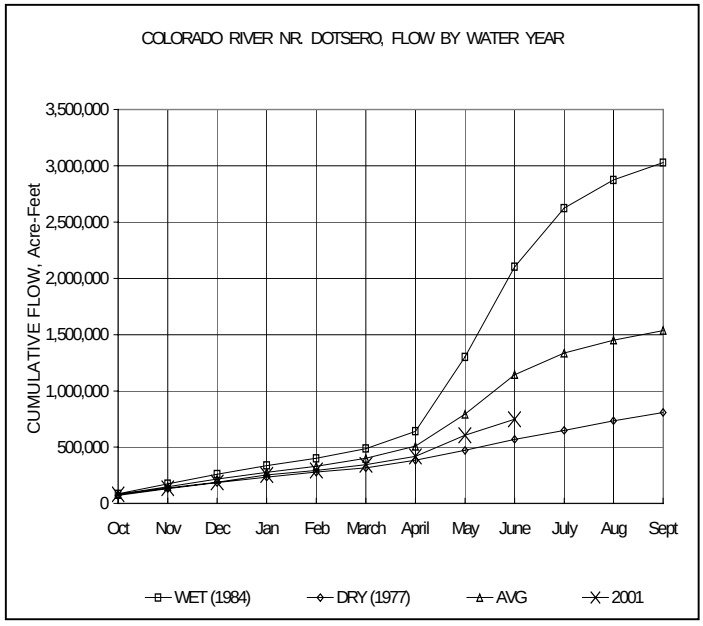
Each spring the U.S. Fish & Wildlife Service establishes a minimum target flow for the 15-Mile Reach (i.e. the Colorado River from Palisade to the mouth of the Gunnison River) depending on anticipated runoff. So far this year, the target flow of 810 cfs has been met.

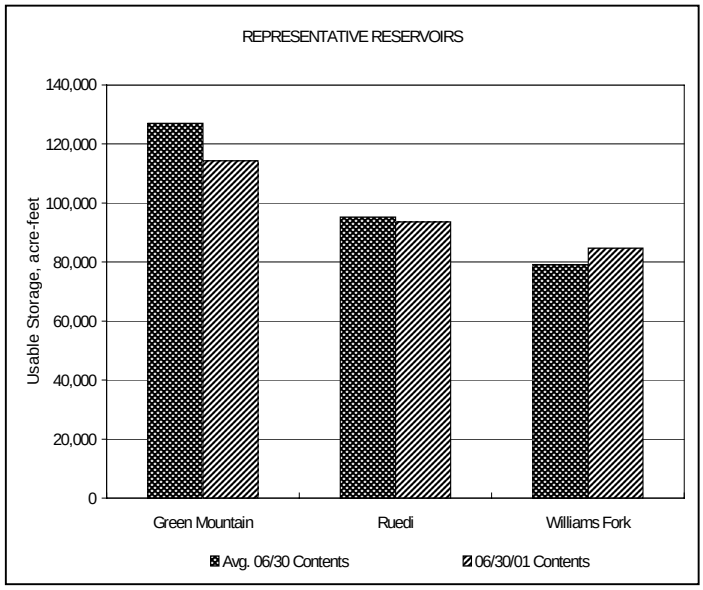
The junior Shoshone power plant call was initiated on June 30. Neither the senior Shoshone call nor the Cameo irrigation call has been placed yet this year.

Public Use Impacts

Low flows on the Colorado River between Kremmling and Dotsero have caused concern among many private boaters and commercial rafting companies that like to use that stretch of the river.



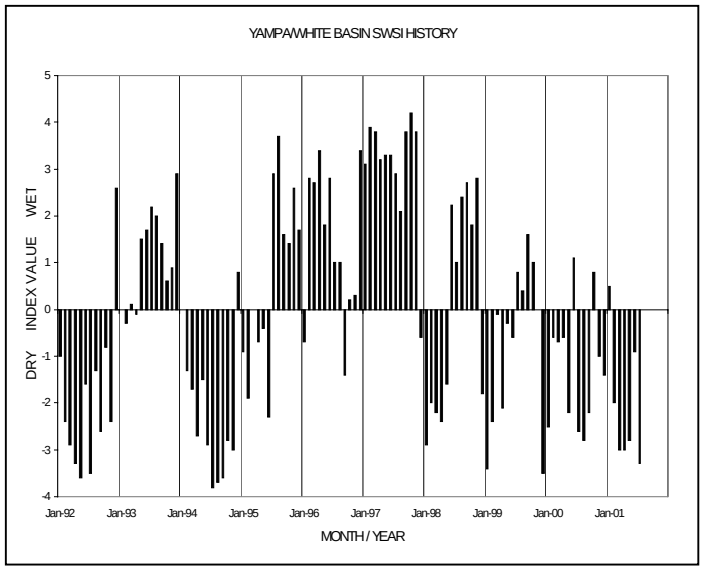




Basinwide Conditions Assessment

The SWSI value of –3.3 indicates that for June the basin water supplies were below normal. Flow at the gaging station Yampa River at Steamboat was 929 cfs, as compared to the long-term average of 1,822 cfs.

June was a continuation of the weather pattern seen this spring: hot and dry. Precipitation across the basin in June was only about 33% of average, while temperatures were above normal for the afternoon highs. Conditions are extremely dry throughout the basin with soil moisture contents well below normal. Stream flows have ranged from 30% to 45% of normal for the entire month.

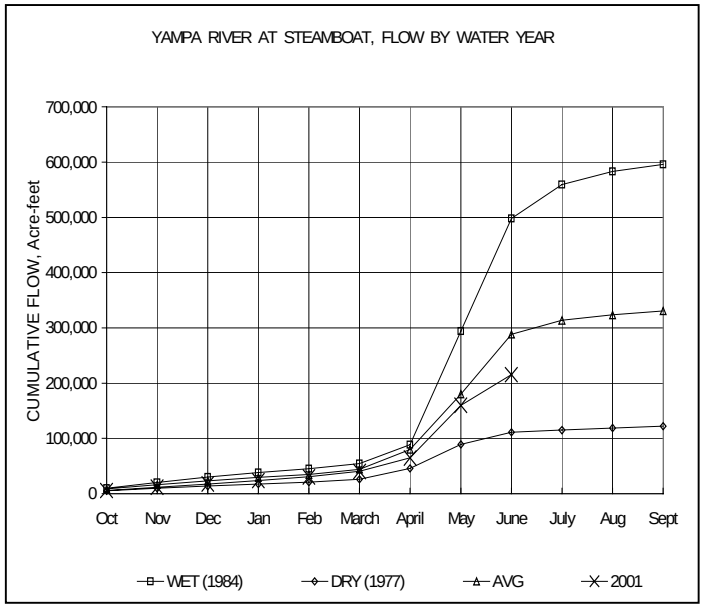


Outlook

The forecast for July calls for normal precipitation and temperatures. The monsoon flow from the Gulf of Mexico has started to enter the state, but so far has only brought scattered thunderstorms to the area.

Administrative/Management Concerns

Stream flows are extremely low for this time of year. Many streams are under administration with little water available except for the most senior water rights. On the larger rivers many ditches are unable to divert because of the low flows. Conditions may ease as ranchers begin to harvest their hay crops, allowing some creeks to go off of administration.



Public Use Impacts

River flows are nearing record lows for this time year. Releases from irrigation reservoirs have been greater than normal. Several fires have occurred in the area, mostly started by lightening strikes.

Basinwide Conditions Assessment

The SWSI value of –1.0 indicates that for June the basin water supplies were slightly below normal. Flow at the gaging station Animas River near Durango was 2,101 cfs, as compared to the long-term average of 2,590 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 99% of normal as of the end of June.

June is typically a dry month, but this year it was especially so with Durango receiving only 0.14 inches of precipitation, 21% of average. Average temperatures remained high, with the lows averaging 6.4^{o} above normal. Temperatures dipped to near freezing on June 4th and 14th-16th which served to cut back river flows, eliminating a second expected runoff peak. Flows on the streams were the highest on June 1 and went steadily lower during the month. All streams were well below average for June, with the Dolores River and La Plata River running less than 50% of normal. The Animas River remained above 1,000 cfs throughout the month.

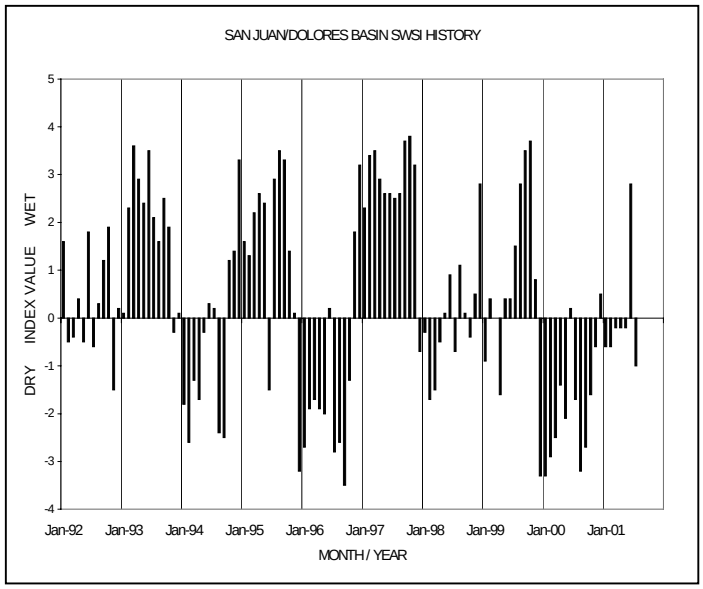
Reservoirs contained near average amounts at the end of the month.

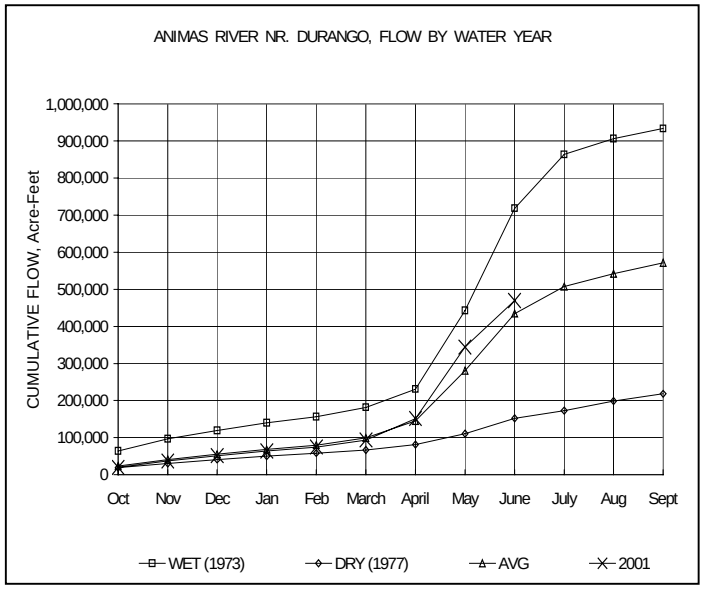
Outlook

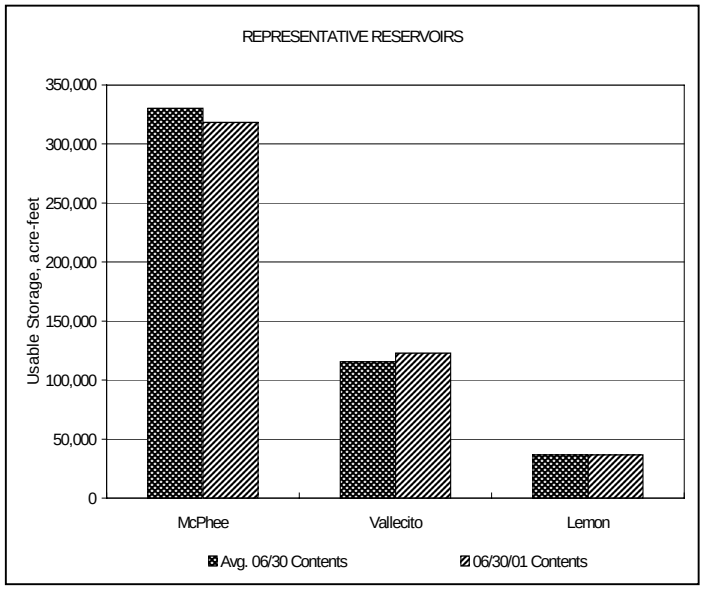
It appeared that thunderstorm activity was beginning to occur on a daily basis into July, giving a few areas welcome relief from the conditions.

Public Use Impacts

Fire danger was high.







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