
COLORADO WATER SUPPLY CONDITIONS UPDATE

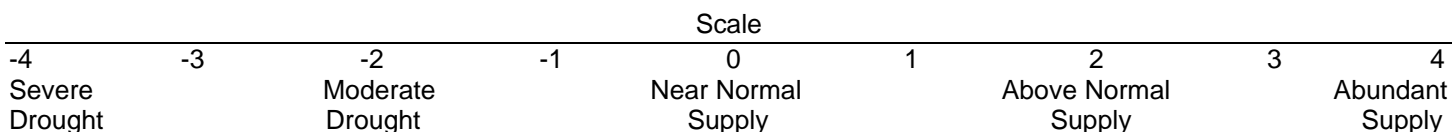
FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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July 1999

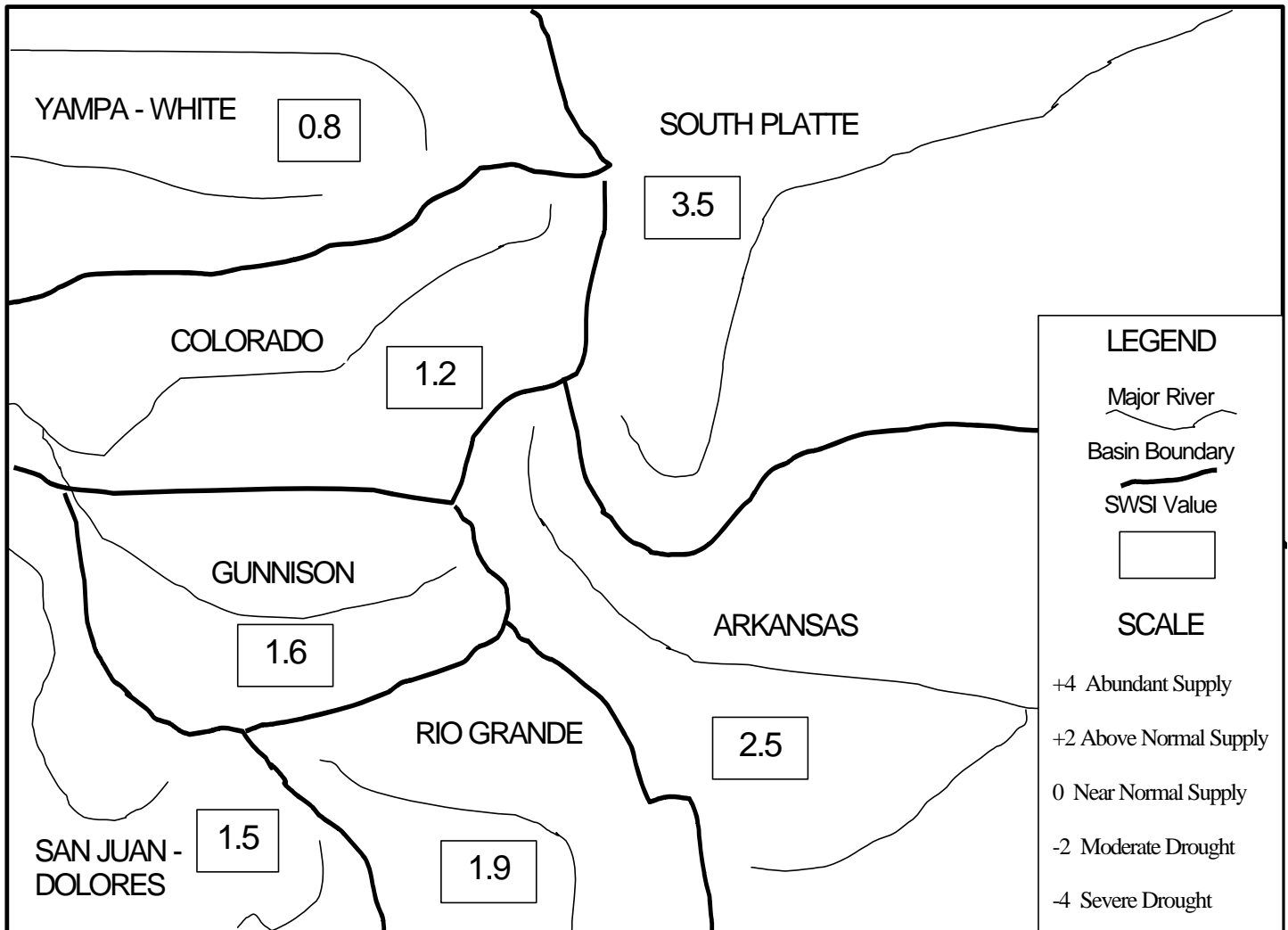
Positive SWSI values in all basins reflect normal to above normal water supply conditions in all of the state's major river drainages. The snowmelt runoff peaked in June, and while individual stream flows will vary in response to precipitation events, the trend will be for continued reduction in all flows as the summer progresses. Both stream flows and reservoir storage levels are currently above normal levels. Statewide reservoir storage at the end of June was approximately 130% of average.

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, 1999, and reflect the conditions during the month of June.

<u>Basin</u>	<u>July 1, 1999 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	3.5	-0.2	+1.0
Arkansas	2.5	+1.8	+2.4
Rio Grande	1.9	+1.6	+2.9
Gunnison	1.6	+0.9	+2.6
Colorado	1.2	+1.8	+2.8
Yampa/White	0.8	+1.4	-0.2
San Juan/Dolores	1.5	+1.1	+2.2



SURFACE WATER SUPPLY INDEX FOR COLORADO



JULY 1, 1999

Basinwide Conditions Assessment

The SWSI value of 3.5 indicates that for June the basin water supplies were above normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 109% of normal as of the end of June. Cumulative storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, is at 99% 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 at Kersey was 5,713 cfs, as compared to the long-term average of 2,853 cfs.

The wet conditions of May and resultant snowpack runoff continued to keep the flow of the mainstem of the South Platte and its tributaries far above average in June, the month that historically has the highest flows. Flows began to drop toward the end of June as snowmelt curtailed and the demand increased for irrigation diversions.

Outlook

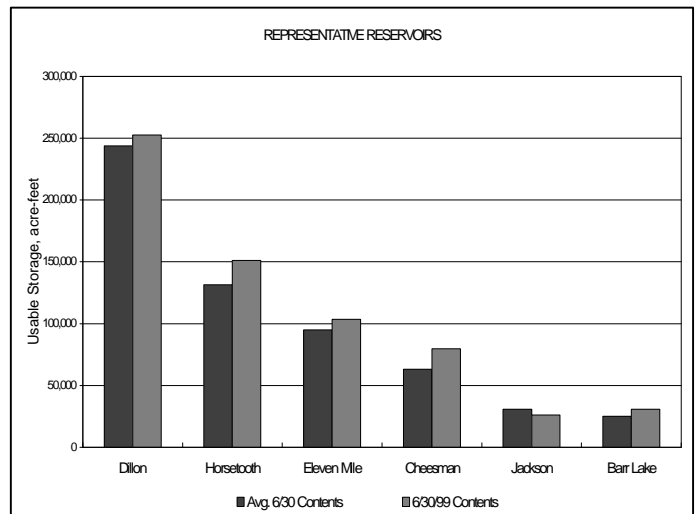
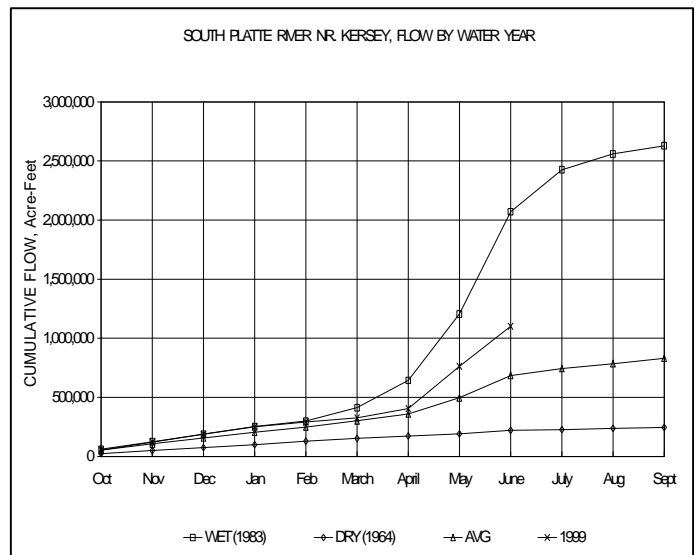
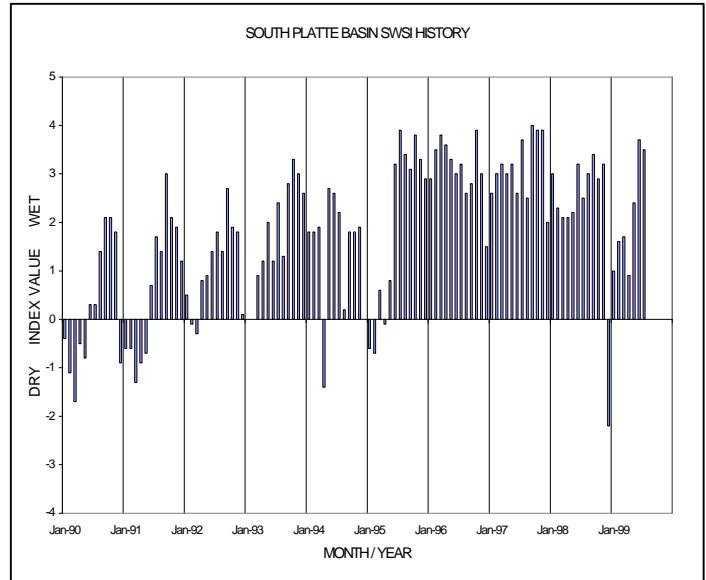
Though flows have dropped off dramatically, no widespread water shortages are expected this summer because of the excellent reservoir storage conditions and stream bank storage return flows.

Administrative/Management Concerns

A mainstem call is expected in the first week or two of July. A call occurs almost every year by the first of July. In dry years there would also be a call for most all of June.

Public Use Impacts

As of the end of June, all the mainstem reservoirs were either full or very near full.



Basinwide Conditions Assessment

The SWSI value of 2.5 indicates that for June the basin water supplies were above normal. Flow at the gaging station Arkansas River near Portland was 2,784 cfs, as compared to the long-term average of 2,362 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 197% of normal as of the end of June.

Outlook

The water supply situation in the Arkansas River Basin remains very good. Since May 9th there has been a general free river condition on the mainstem of the Arkansas River and on many tributaries. This condition is expected to end the second week of July.

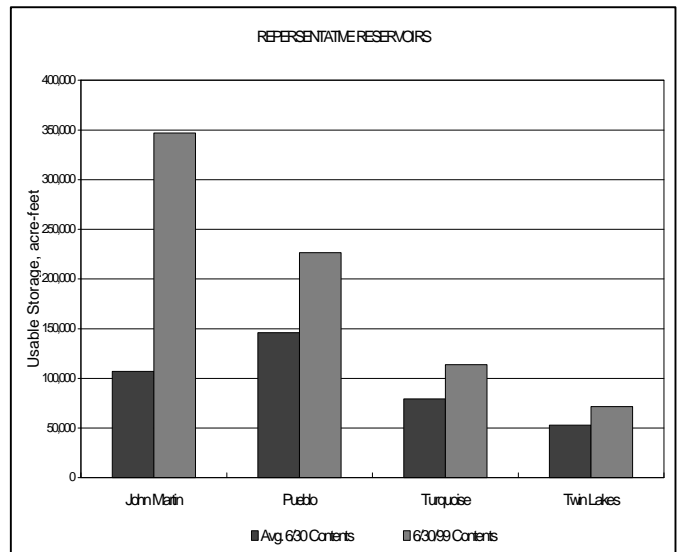
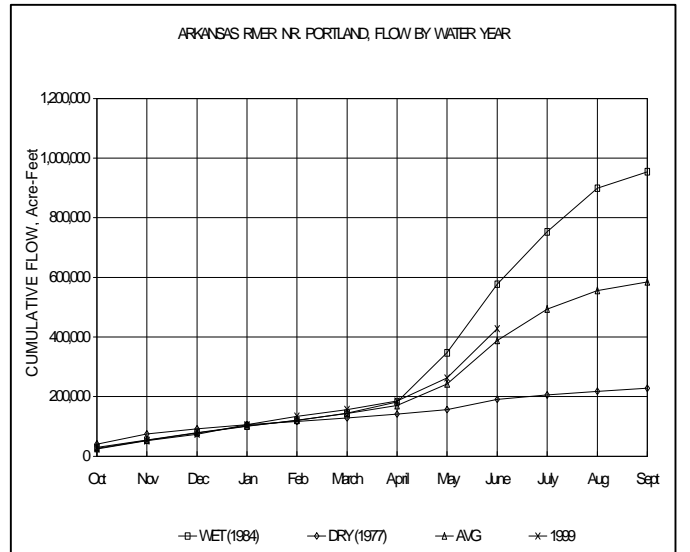
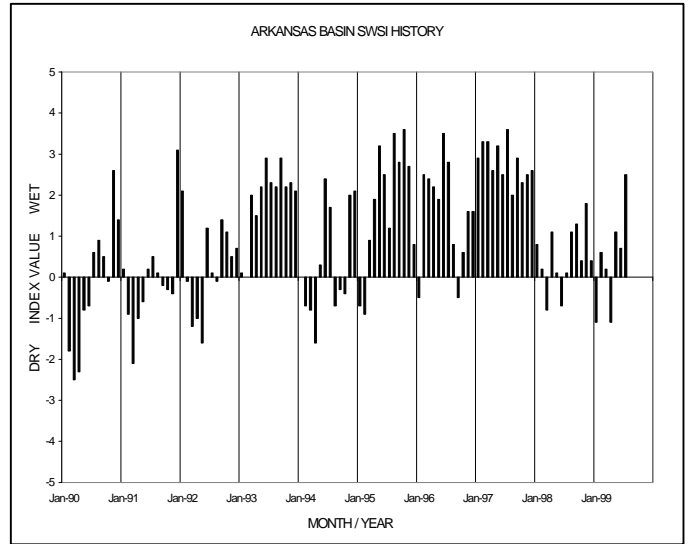
Runoff on the Arkansas River peaked at the Wellsville stream gage during the fourth week of June, reaching approximately 3,400 cfs. While this peak value is a typical high, it occurred about two weeks later than normal.

Administrative/Management Concerns

A few remaining non-exempt tributary wells still exist in the basin that do not have augmentation or approved replacement plans. It has been difficult to find replacement water for these wells due to a lack of replacement water sources on their specific tributaries. Finding replacement supplies to make up for depletions caused by these structures has been very difficult and has become clouded in either the political or court process.

Public Use Impacts

The slow and steady rise in flows to a runoff peak, and the lack of upstream reservoir operations, have produced an excellent river for the rafting industry so far this summer. Full reservoirs have also provided superior surface areas for boating activities.



Basinwide Conditions Assessment

The SWSI value of 1.9 indicates that for June the basin water supplies were slightly above normal. Flow at the gaging station Rio Grande near Del Norte was 4,122 cfs, as compared to the long-term average of 3,092 cfs. The Conejos River near Mogote had a mean flow of 1,352 cfs (104% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 161% of normal as of the end of June.

Precipitation in Alamosa was 0.32 inches, 0.35 inches below normal. Alamosa temperatures ranged from 29° to 88°, with an average of 58.0°, 1.4° below normal.

Outlook

It appears that the NRCS forecasts for April through September runoff will be exceeded on both the Rio Grande and Conejos Rivers. The late spring snow storms apparently brought more moisture to the basin than indicated by the snow course readings. The result was a protracted runoff that brought moderately high flows at manageable levels for an extended period.

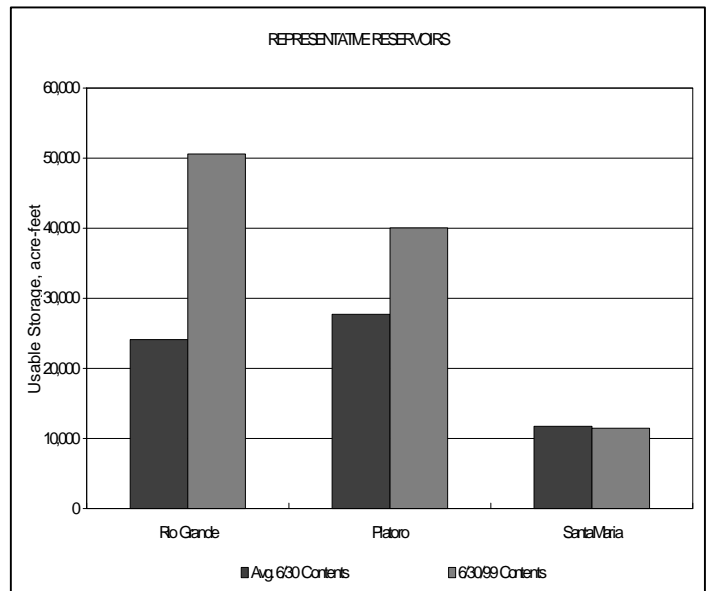
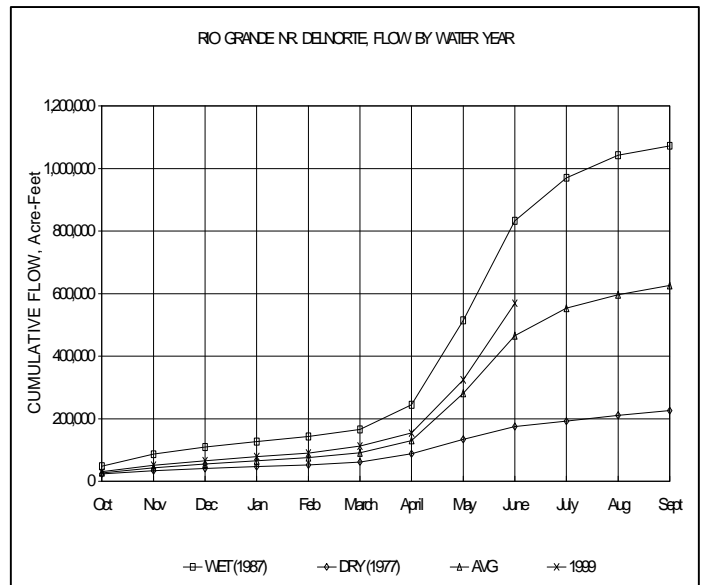
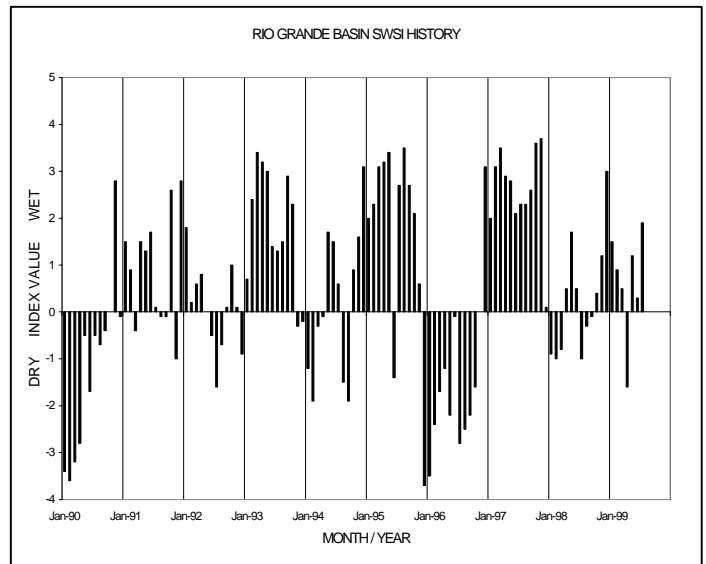
Administrative/Management Concerns

In most years administrators must place curtailments on indexed stream flows in order to meet water delivery requirements to the state line pursuant to the Rio Grande Compact. On May 7, 1999 the delivery targets were set at 17% for the Rio Grande and 20% for the Conejos River system. As of July 7 these same targets were still in effect.

Public Use Impacts

The end of June finally brought familiar summer time weather to the San Luis Valley, "the land of cool sunshine". Scattered clouds and warm temperatures replaced the wind and rain that dominated this spring.

Most reservoirs reached peak storage levels near the end of the month and will begin a slow decline as releases are made for irrigation needs.



Basinwide Conditions Assessment

The SWSI value of 1.6 indicates that for June the basin water supplies were slightly above normal. Flow at the gaging station Uncompahgre River near Ridgway was 625 cfs, as compared to the long-term average of 570 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 104% of normal as of the end of June.

The highest flows of the runoff ultimately came on June 17.

All of the main reservoirs have filled to capacity.

Outlook

Continual moisture and high reservoir storage levels keep the outlook promising. The early precipitation lessened the need to use reservoir water, which allows the remainder of the growing season to be comfortably set.

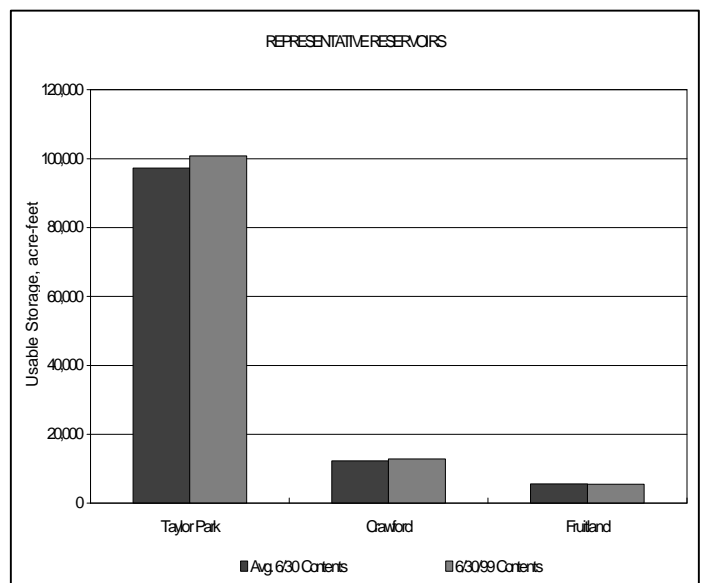
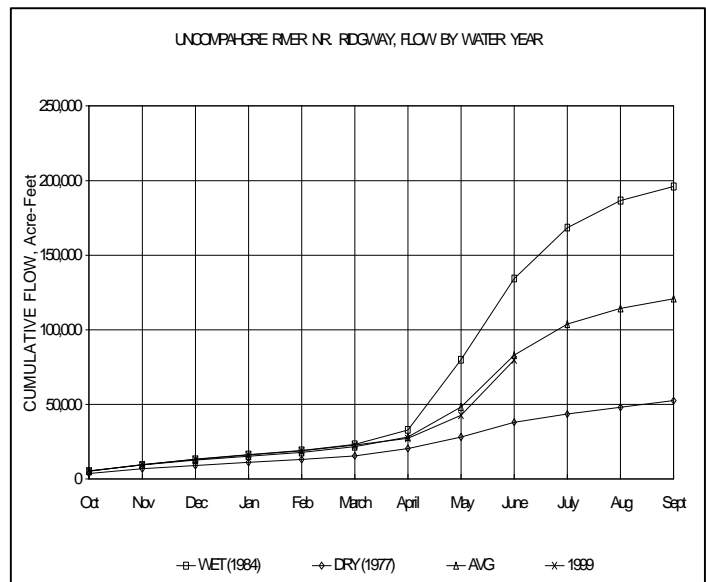
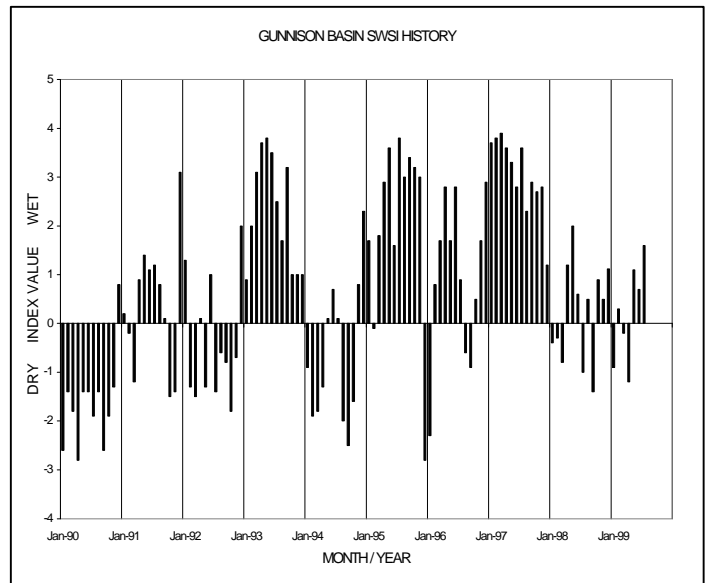
Administrative/Management Concerns

Horsefly Creek, a tributary to the Uncompahgre River, had a call placed very early this year. Then, due to the spring precipitation the call went off for an extended period of time before the call was again placed. The timing of the second call was later than usual.

Ridgway Reservoir released water to avoid spilling.

Public Use Impacts

The river runners are out in large numbers enjoying the ample flows. Boating enthusiasts are also taking advantage of the warm weather and prime playing conditions.



Basinwide Conditions Assessment

The SWSI value of 1.2 indicates that for June the basin water supplies were slightly above normal. Flow at the gaging station Colorado River near Dotsero was 6,794 cfs, as compared to the long-term average of 5,674 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 113% of normal as of the end of June.

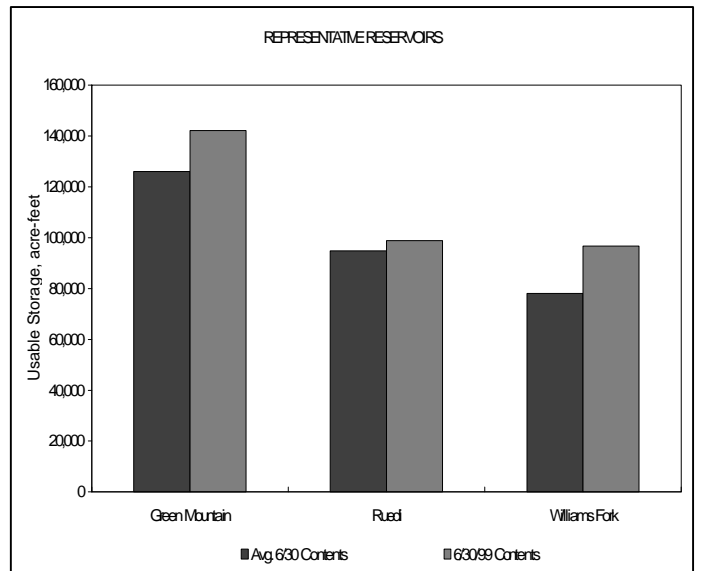
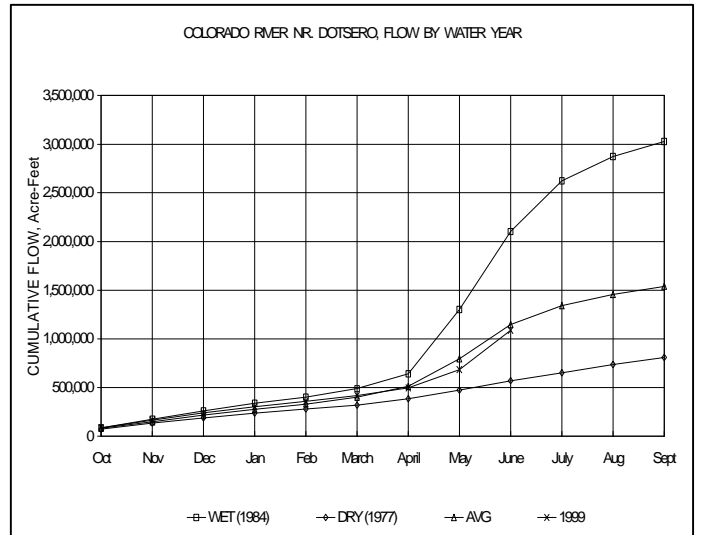
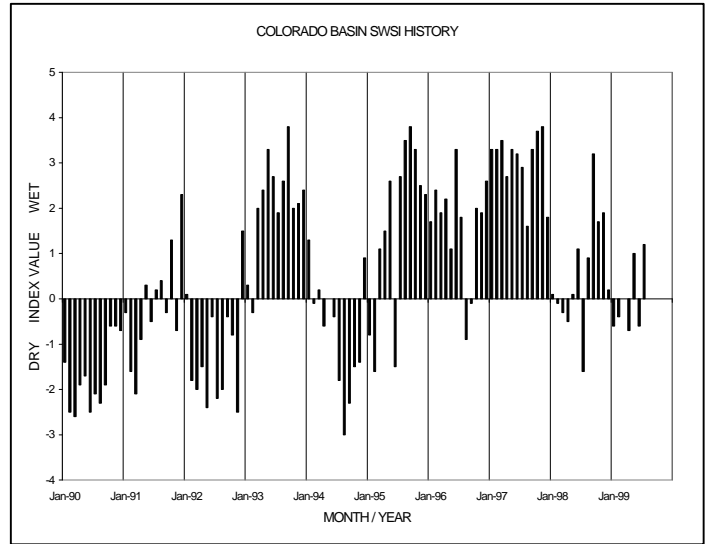
Stream flows have subsided quickly since runoff. Unofficial peaks are as follows:

<u>Stream</u>	<u>Date</u>	<u>Flow (cfs)</u>
Blue	June 26	700
Frying Pan	June 25	1,250
Roaring Fork at Glenwood	June 25	6,340
Colorado at Dosero	June 9	8,500
Colorado at Glenwood	June 9	13,000
Colorado at Cameo	June 10	16,200
Plateau	May 31	1,350
West Divide	May 24	500

All reservoirs spilled or are near full capacity.

Public Use Impacts

High stream flows and reservoir storage provide for good summer recreation.



Basinwide Conditions Assessment

The SWSI value of 0.8 indicates that for June the basin water supplies were near normal. Flow at the gaging station Yampa River at Steamboat was 1,891 cfs, as compared to the long-term average of 1,802 cfs.

Precipitation for the basin was highly variable in June. Steamboat Springs received a total of 2.00 inches of precipitation for the month, which was 132% of average. Meeker, in the White River drainage, received only 0.80 inches, or 66% of average. While precipitation was near normal early in the month, the basin received very little moisture towards the end of the month.

Temperatures for June were near normal for the first half of the month and well above normal for the second half. Reservoirs throughout the basin were at or near full storage by the end of June.

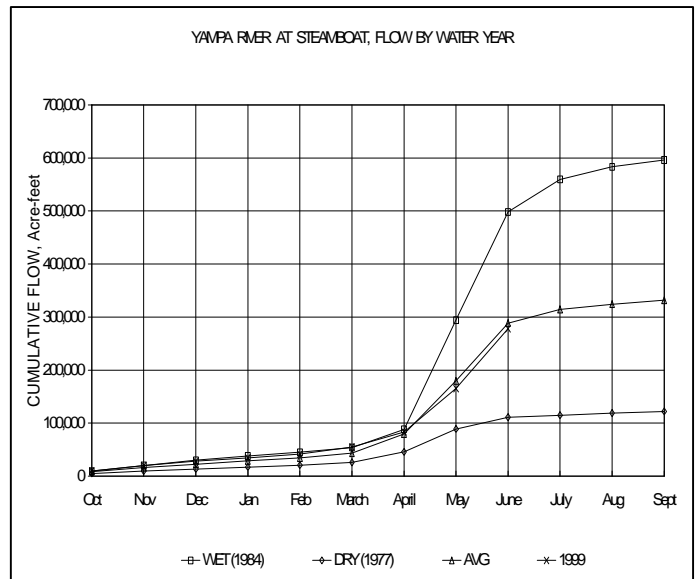
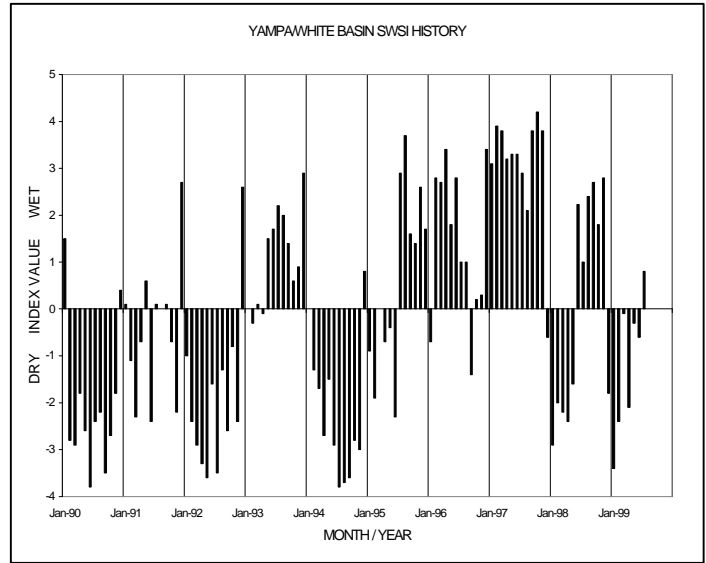
By the end of the month stream flows were approaching peak levels. Some low areas experienced localized flooding of meadows and pastures.

Outlook

Stream flows are expected to be near normal levels in July.

Administrative/Management Concerns

Some tributaries to the main rivers may experience short water supplies and will require administration. These situations are normal and should cause no major problems.



Basinwide Conditions Assessment

The SWSI value of 1.5 indicates that for June the basin water supplies were slightly above normal. Flow at the gaging station Animas River near Durango was 3,462 cfs, as compared to the long-term average of 2,556 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 116% of normal as of the end of June.

