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 2004

The state water supplies are generally in a poorer condition than they were in last month's report. The lowest water supply index values were found in the northwest. The Yampa-White Basin and the Colorado Basin index values were computed at –3.3 and –3.0. However, the most significant changes from last month are found in the southwest. The Gunnison Basin, San Juan-Dolores Basin, and the Rio Grande Basin all have a substantially lower index value. Those southwest basins had much lower reservoir storage and stream flow values than the previous month. Precipitation values increased in all areas of the state, but the precipitation component has a low weighting value compared to stream flow and reservoir storage in the final index computation.

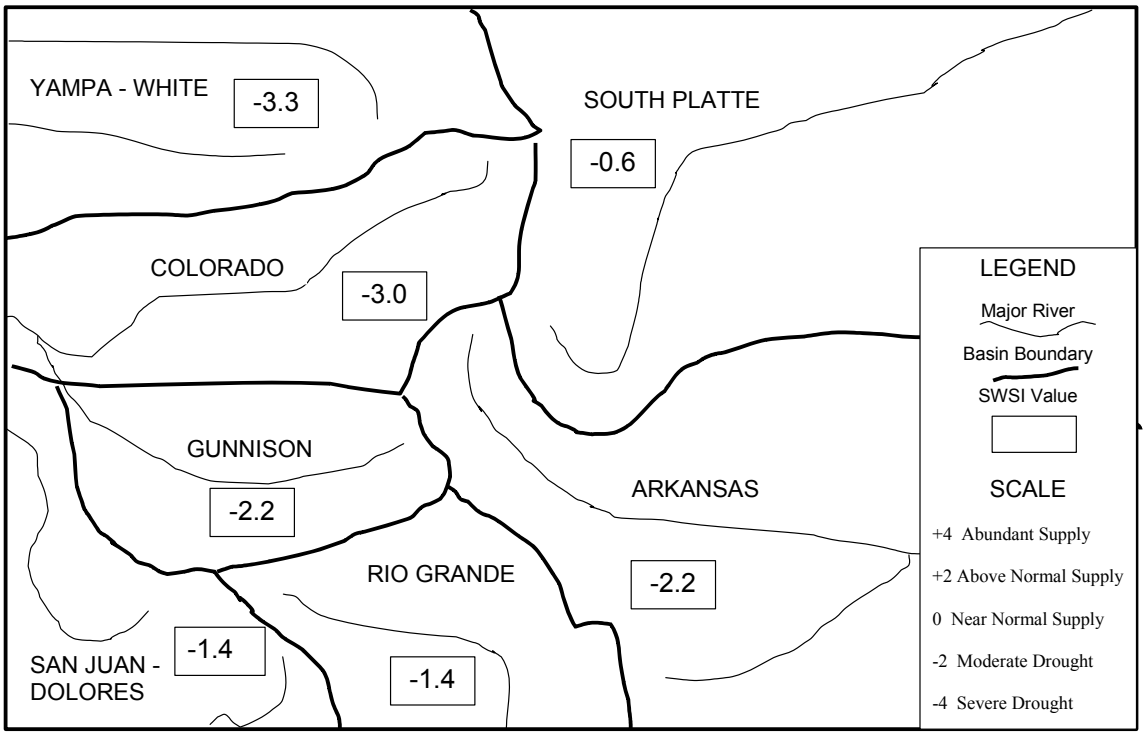
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on stream flow, reservoir storage, and precipitation for the summer 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, 2004, and reflect the conditions during the month of June.

Basin	July 1, 2004 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	-0.6	- 0.4	- 1.0
Arkansas	-2.2	+0.2	- 1.3
Rio Grande	-1.4	- 2.2	+2.0
Gunnison	-2.2	- 2.2	+0.2
Colorado	-3.0	- 1.2	- 1.4
Yampa/White	-3.3	- 0.1	- 3.3
San Juan/Dolores	-1.4	- 2.1	+1.2

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, 2004

Basinwide Conditions Assessment

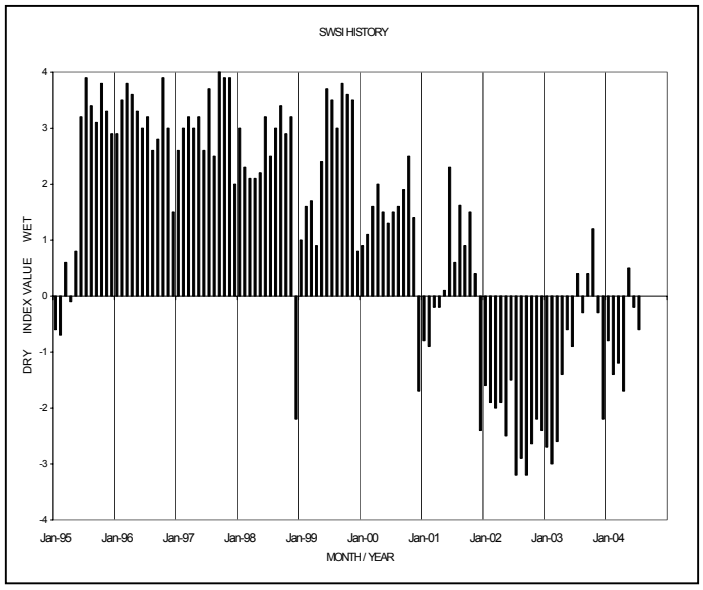
The SWSI value of –0.6 indicates that for June the basin water supplies were slightly below normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 97% of normal as of the end of June. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 63% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 75% of capacity. Flow at the gaging station South Platte River near Kersey was 444 cfs, as compared to the long-term average of 2,355 cfs. Flow at the Colorado/Nebraska state line averaged 39 cfs.

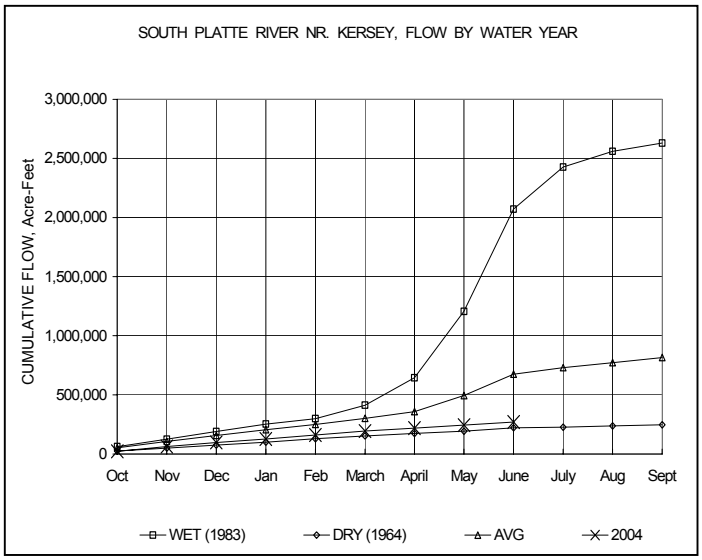
Several rainstorms tracked across all or parts of the South Platte basin during June. These storms reduced the seniority of the call both by the increase in river flow and by reducing irrigation demand along the river. However, because there was very limited snow runoff during the month due to the very low snowpack, there was not adequate water to allow significant storage. Many large irrigation reservoirs along the mainstem did not come close to filling for the first time in over 20 years. Overall, storage below Kersey for large reservoirs was only 144,000 acre-feet. Last year at this time, there was over 232,000 acre-feet in storage. Riverside Reservoir had only 34,000 acre-feet in storage compared to 60,000 acre-feet last year, North Sterling had 48,000 acre-feet in storage compared to 72,000 acre-feet last year, and Empire had 10,000 acre-feet compared to 26,000 acre-feet last year.

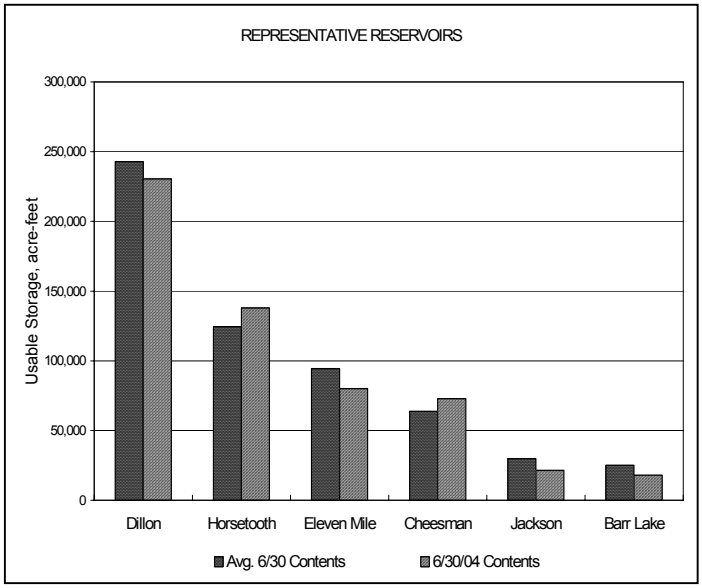
Outlook

Despite a fairly cool, wet June, the outlook for supplies for irrigators is not very good. Because of the reservoir conditions, some irrigation companies have severely limited their deliveries this year. Unless there is significant precipitation in July and August, irrigation users will empty most of the plains reservoirs this year.

Most municipalities are in much better shape than irrigators due to conservation efforts and leasing of additional supplies. Their storage supplies are at or exceed levels that were available last summer. Most of these users do not foresee severe shortages. Emblematic of this, Denver Water recently reduced their watering restriction requirements.

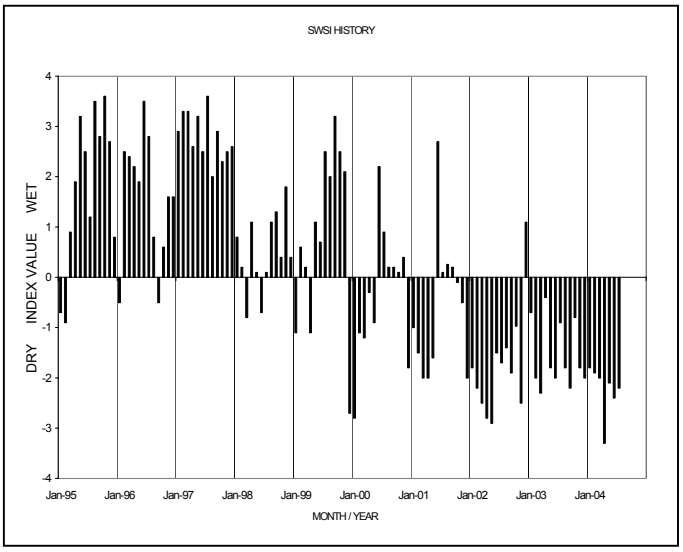






Basinwide Conditions Assessment

The SWSI value of –2.2 indicates that for June the basin water supplies were below normal. Flow at the gaging station Arkansas River near Portland was 1,194 cfs, as compared to the long-term average of 2,364 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 53% of normal as of the end of June.



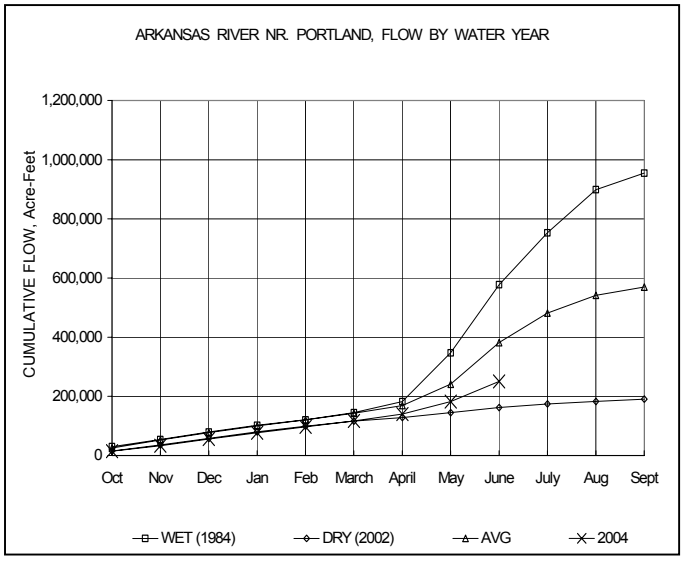
Outlook

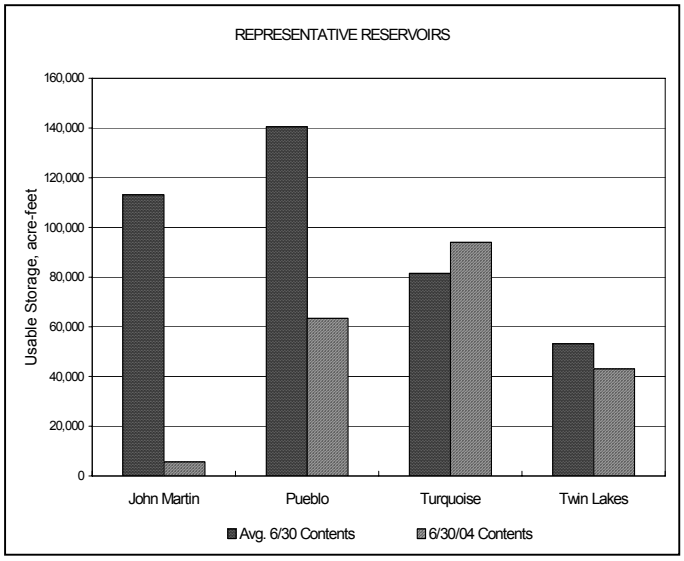
Precipitation during the month, along with flow from the latter part of the snowmelt runoff, led to fair supply conditions for most areas of the basin in June. Fryingpan-Arkansas imports exceeded the original conservative projections allowing the Southeastern Colorado Water Conservancy District to allocate an additional block of water for municipal and agricultural use.

Administrative/Management Concerns

Augmentation water available for municipalities east of Pueblo has been a concern for 2004 and the Colorado Water Protective and Development Association has been meeting with these municipalities to help plan for anticipated short supplies for future years.

John Martin Reservoir is at the lowest level in several decades and will continue to drop throughout the summer absent a conservation storage event. Operations to pass native water through the reservoir become somewhat more difficult due to uncertainty about ungaged inflows and variable losses from Las Animas into the reservoir.

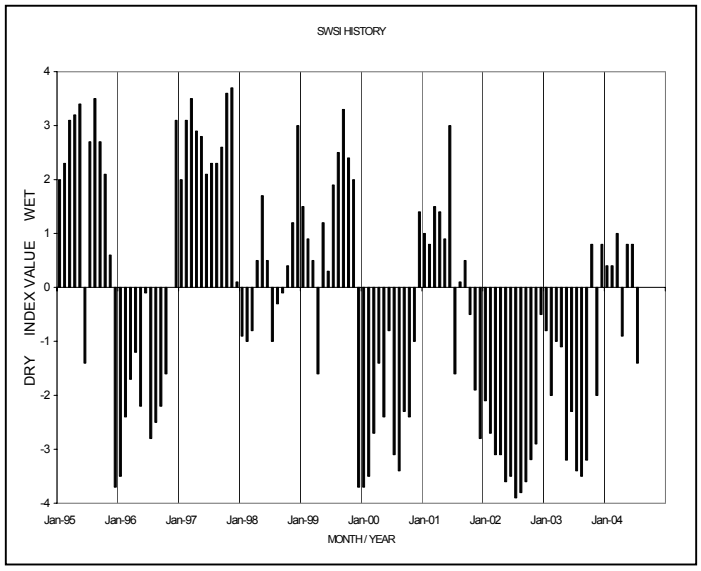




Basinwide Conditions Assessment

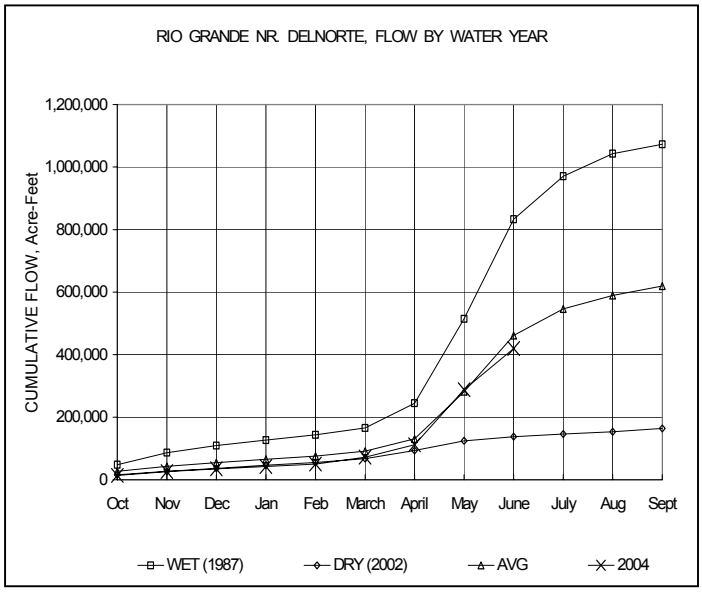
The SWSI value of –1.4 indicates that for June the basin water supplies were below normal. Flow at the gaging station Rio Grande near Del Norte averaged 2214 cfs (70% of normal). The Conejos River near Mogote had a mean flow of 849 cfs (65% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 40% of normal as of the end of June.

Precipitation in Alamosa was only 0.42 inches and most of that occurred in one event on June 30. For nearly seven weeks from May 2 through June 21, Alamosa received no measurable precipitation in town. Dry, windy conditions persisted throughout the month. Soil moisture conditions in non-irrigated areas are poor and stream flow throughout the basin was below average.



Outlook

Although some areas of the San Luis Valley did receive significant precipitation during June, generous amounts of rainfall will be needed in the near future to neutralize the damage done to crop and rangeland by the drought-like conditions.

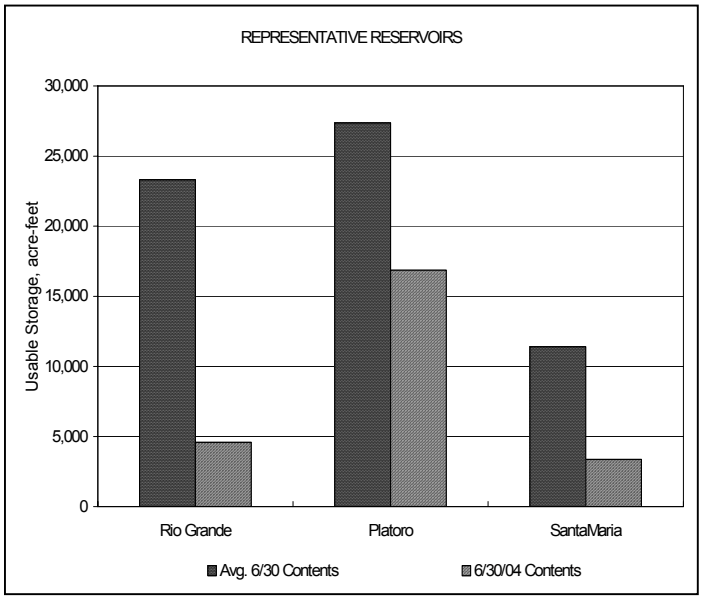


Administrative/Management Concerns

As the natural flow dropped in area streams, some ditches relied on reservoir releases to offset the dry conditions. However, by the end of the month, reservoir releases to ditches on the Rio Grande had ceased. Well use for irrigation was very high. Officials are concerned that the large amount of water pumped could reverse the early trend this year toward recharging the severely depleted aquifers. Cool and dry weather conditions will be responsible for reduced yields on first cutting of grass and alfalfa crops.

Public Use Impacts

Weather conditions in June had a great deal of local economic impact through reduced crop development and yield. The consistent wind of this late spring became irritating to most San Luis Valley inhabitants.



Basinwide Conditions Assessment

The SWSI value of –2.2 indicates that for June the basin water supplies were below normal. Flow at the gaging station Uncompahgre River near Ridgway was 479 cfs, as compared to the long-term average of 562 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 99% of normal as of the end of June.

Outlook

The basin did not receive the customary hot weather in May and June, and this has helped reduce the water demand. The flows and reservoir storage amounts for this summer season appear to be about the same as last year. If the monsoonal flow of moisture brings rain in late July and August, the basin should be in fairly good shape. Also, rains in the last part of June helped conditions in the mountains and bolstered the river and creek flows.

Administrative/Management Concerns

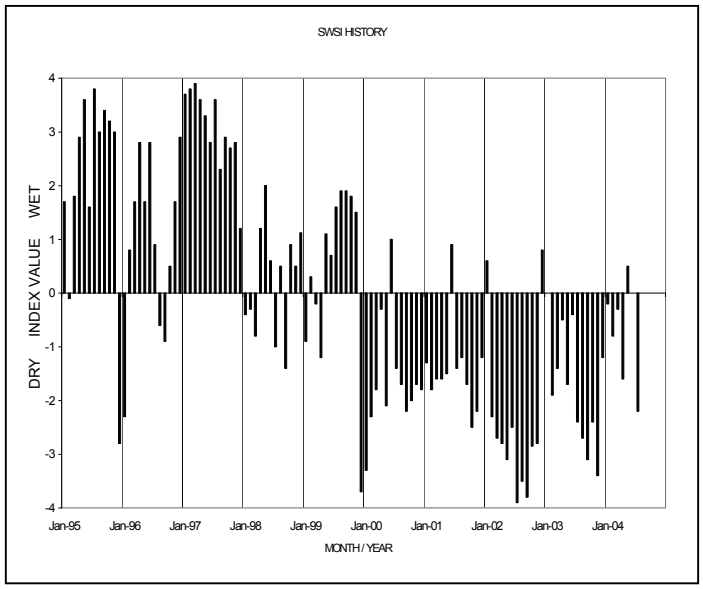
Flows in the rivers have been holding up fairly well, despite the below normal snowpack. Most irrigators have had a full supply in May and June. In the Cedaredge area, the flows have not been sufficient to fill all the priorities and irrigators have had to start drawing on reservoir water 10 days earlier than normal.

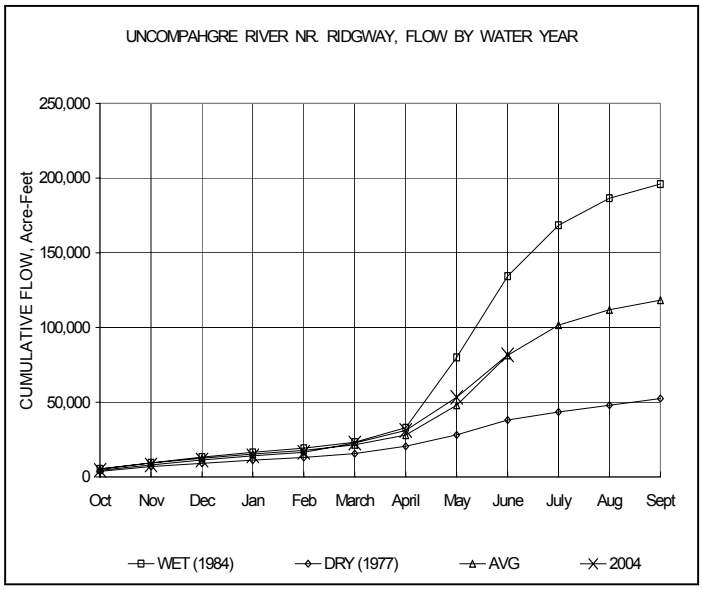
The reservoir storage on the Grand Mesa reached 85% to 90% of full capacity, about the same as last year. Both Blue Mesa and Taylor Park Reservoirs continued to fill throughout the month of June, and both are substantially higher than last year. Neither reservoir will fill this year, and both have started to come down since the first part of July.

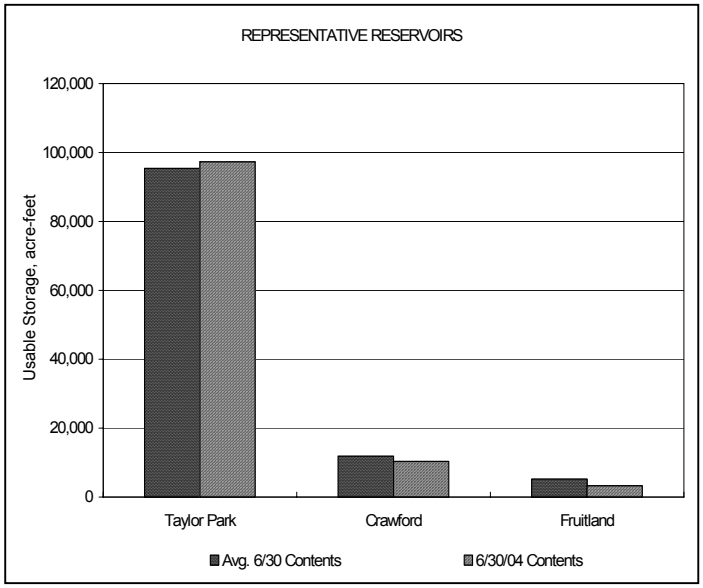
It is not anticipated that there will be a call from the Gunnison Tunnel this year, as the flows will satisfy most of their needs and they have 105,000 af in storage in Blue Mesa and Taylor Park Reservoirs to draw from. On the Uncompahgre River, there could likely be a call from the M&D Canal from the Uncompahgre Valley Water Users Association. They have 11,200 af in Ridgway Reservoir to use, but it will probably not be enough without placing a call on the river.

Public Use Impacts

Irrigators are doing well this year, and should have enough water to produce a full crop. The orchard areas in Cedaredge, Hotchkiss, and Paonia have a good fruit crop this year and have enough water to finish the fruit and provide crucial late season irrigation of the trees. For those camping and fishing in the many lakes in the Gunnison Basin, the lakes should stay full enough throughout the summer to provide them with a good recreational experience.





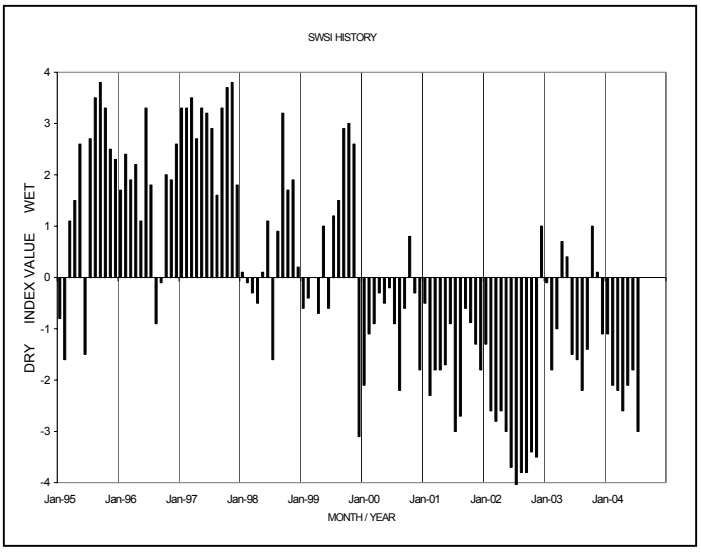


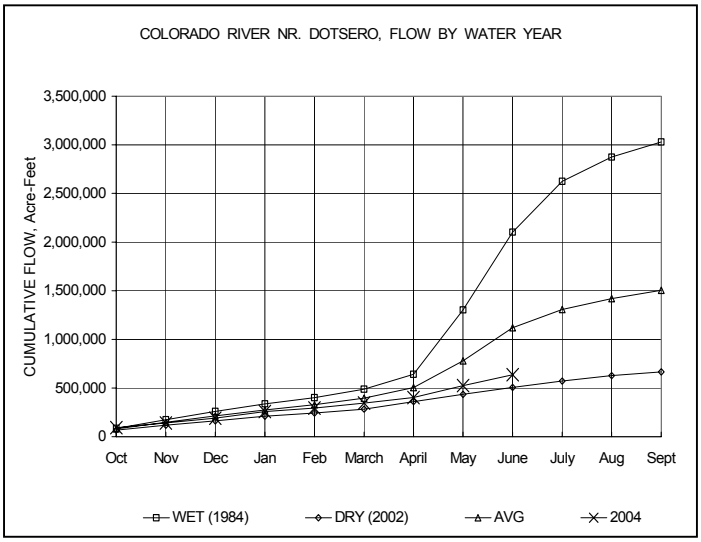
Basinwide Conditions Assessment

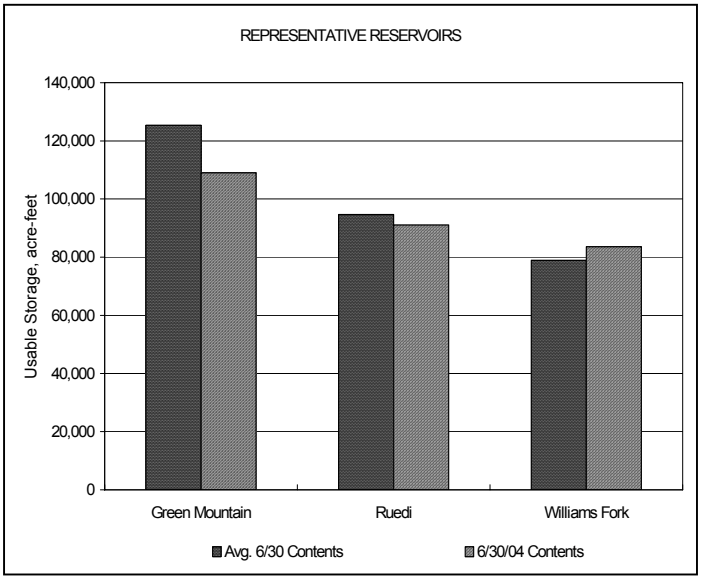
The SWSI value of –3.0 indicates that for June the basin water supplies were below normal. Flow at the gaging station Colorado River near Dotsero was 1,880 cfs, as compared to the long-term average of 5,732 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 95% of normal as of the end of June.

Outlook

Rains in the latter part of June helped the Colorado River basin by lowering the fire danger somewhat (allowing for many town fireworks displays to proceed for the 4th of July) and by holding up streamflows that were dropping rapidly earlier in the month. Nevertheless, fire danger remains very high in many parts of the basin and many streams are running at near-record low flows for this time of year. Summer monsoon rains, which typically arrive later in July, are expected to be somewhat below average this year.



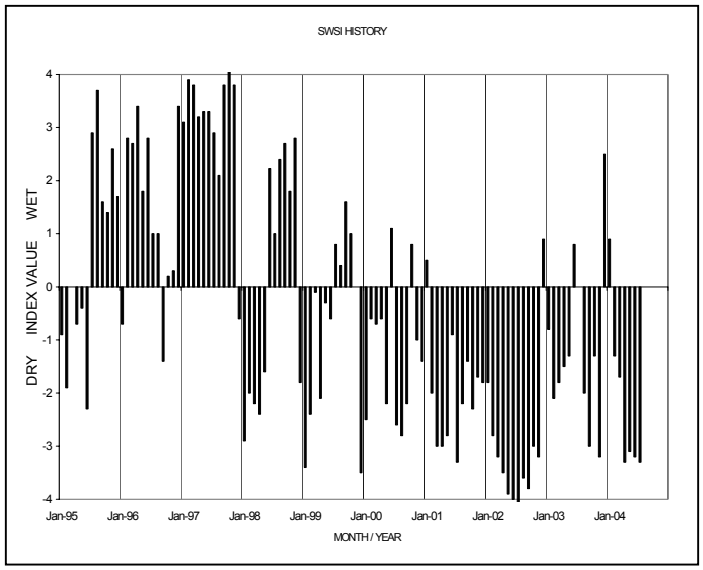




Basinwide Conditions Assessment

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 691 cfs, as compared to the long-term average of 1,764 cfs.

June brought much needed rain to much of the Division. Thunderstorms moved across the area throughout the month, often accompanied by heavy precipitation. The rains helped to keep stream flows at elevated levels. While still below average, most of the major rivers had adequate flow for all uses. Drought conditions still persist, however, in many areas. Administration continues on the Michigan and Illinois Rivers in Jackson County, on several tributaries to the Yampa River, and on Piceance Creek in the White River drainage. Reservoir levels remain good for non-irrigation uses. Reservoirs used primarily for irrigation use have been drawn down considerably in the past month.



Outlook

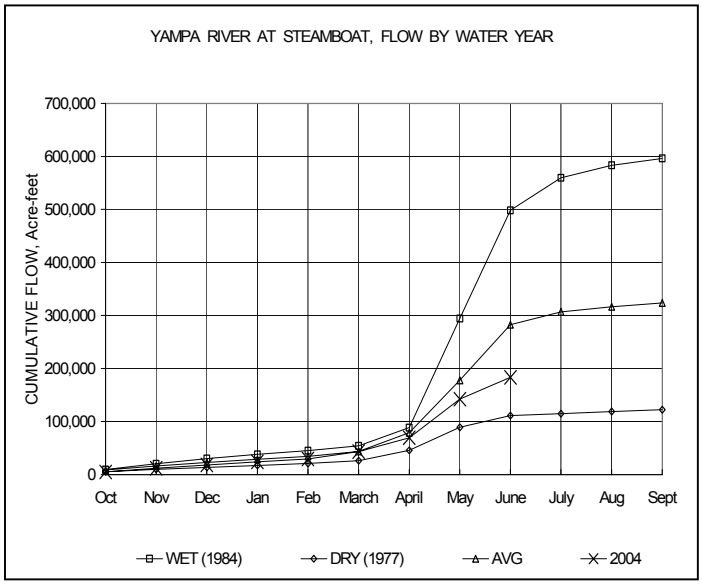
River flows began to drop noticeably in the last few days of June as dryer weather moved into the area. Many ranchers in the area are beginning to hay and this activity will increase as July proceeds. Many ditches will soon be shut off in anticipation of the harvest. This should help flows throughout the area. The precipitation forecast for the next 30 days shows an equal chance for above, or below, normal precipitation.

Administrative/Management Concerns

As the haying season begins, administration activities should lessen.

Public Use Impacts

The river flows are dropping and approaching seasonal base levels. High-water activities such as rafting have ceased in most areas. Rivers are running clear and fishing has been reported as very good.



Basinwide Conditions Assessment

The SWSI value of –1.4 indicates that for June the basin water supplies were below normal. Flow at the gaging station Animas River near Durango was 1,919 cfs, as compared to the long-term average of 2,522 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 98% of normal as of the end of June.

The month of June behaved typically for this time of year. The precipitation figures in the area are very low, but the few days with measurable precipitation at the end of the month in Durango were actually higher than normal and the total 0.69 inch added to the yearly total to make 15.8 inches to date, or 112% of average. This precipitation was not experienced in the full amount everywhere and left the area with little relief from otherwise dry conditions.

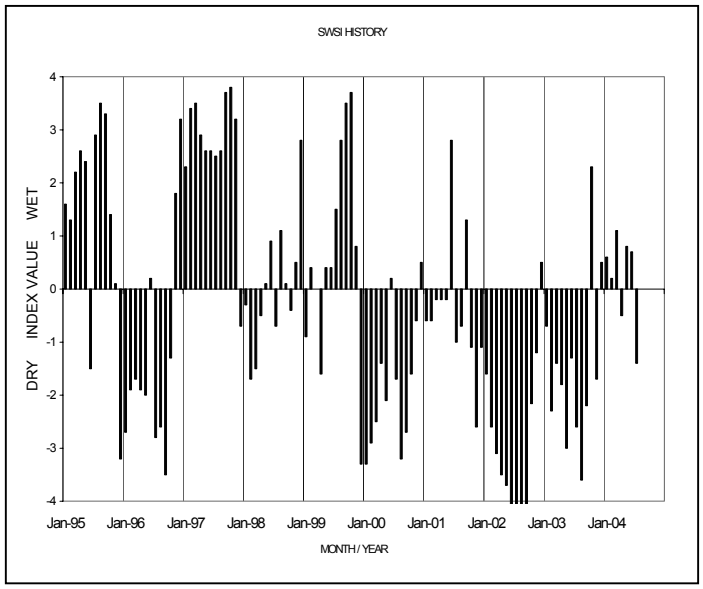
Rivers peaked during the month for the last time around the 8th. This flow on the Animas River, 3590 cfs, was not as high as last year. But, in general, the sustained runoff was much higher than last year's totals.

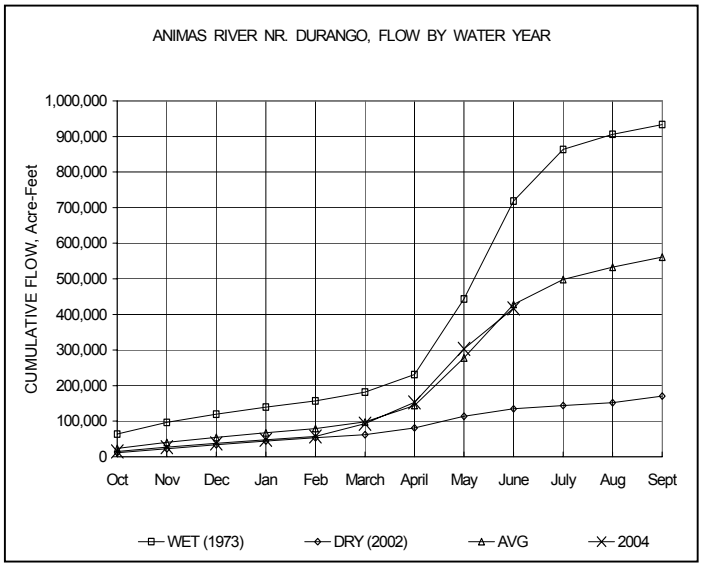
Reservoirs were able to capture the excess water as much as possible. Short flushes were made to clear debris and define the channels below Lemon Reservoir and Vallecito Reservoir. Lemon Reservoir was not quite able to fill. The remaining amount at the end of the month still exceeded the historical average. McPhee Reservoir ended the month at 93% of normal with 318,000 acre-feet. Navajo Reservoir inflow predictions were modified downward 75,000 acre-feet to 550,000 for the runoff period as of early July. This represents 69% river supply. The Dolores Project was running under a 61% supply expectation.

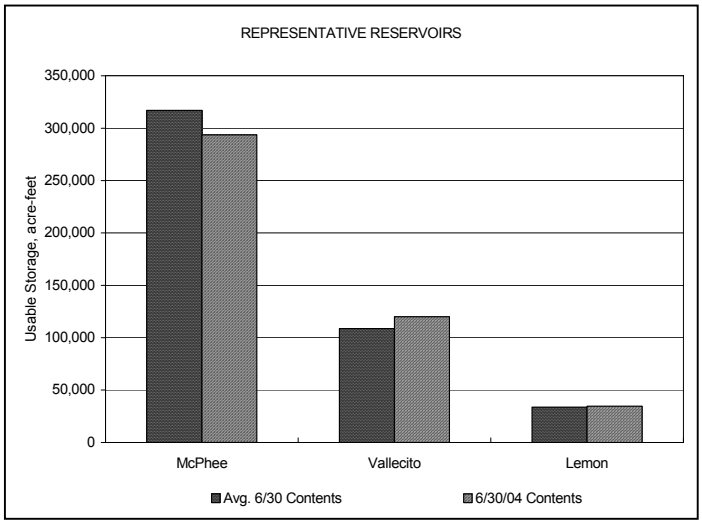
High temperatures were near the normal 81° in Durango, but the lows were well above normal at about 5°F higher on average. Durango did not experience a freeze in June.

Outlook

Expectations are for continued dry weather. Spring flows are diminishing because of poor recharge the past few years. If this continues, the relief felt by increased storage will be reduced, as reservoirs will be drawn down significantly during the irrigation season. The early snowmelt along with the dry weather has hurt crop growth. However, the growth from May was excellent and hay production appeared to be excellent as early cuttings were made in many areas.







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