
COLORADO

WATER SUPPLY CONDITIONS UPDATE

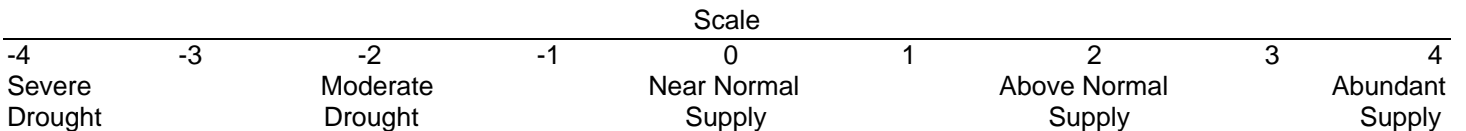
FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
 ROOM 818, 1313 SHERMAN ST., DENVER, CO 80203
 303-866-3581; www.water.state.co.us

NOVEMBER 2001

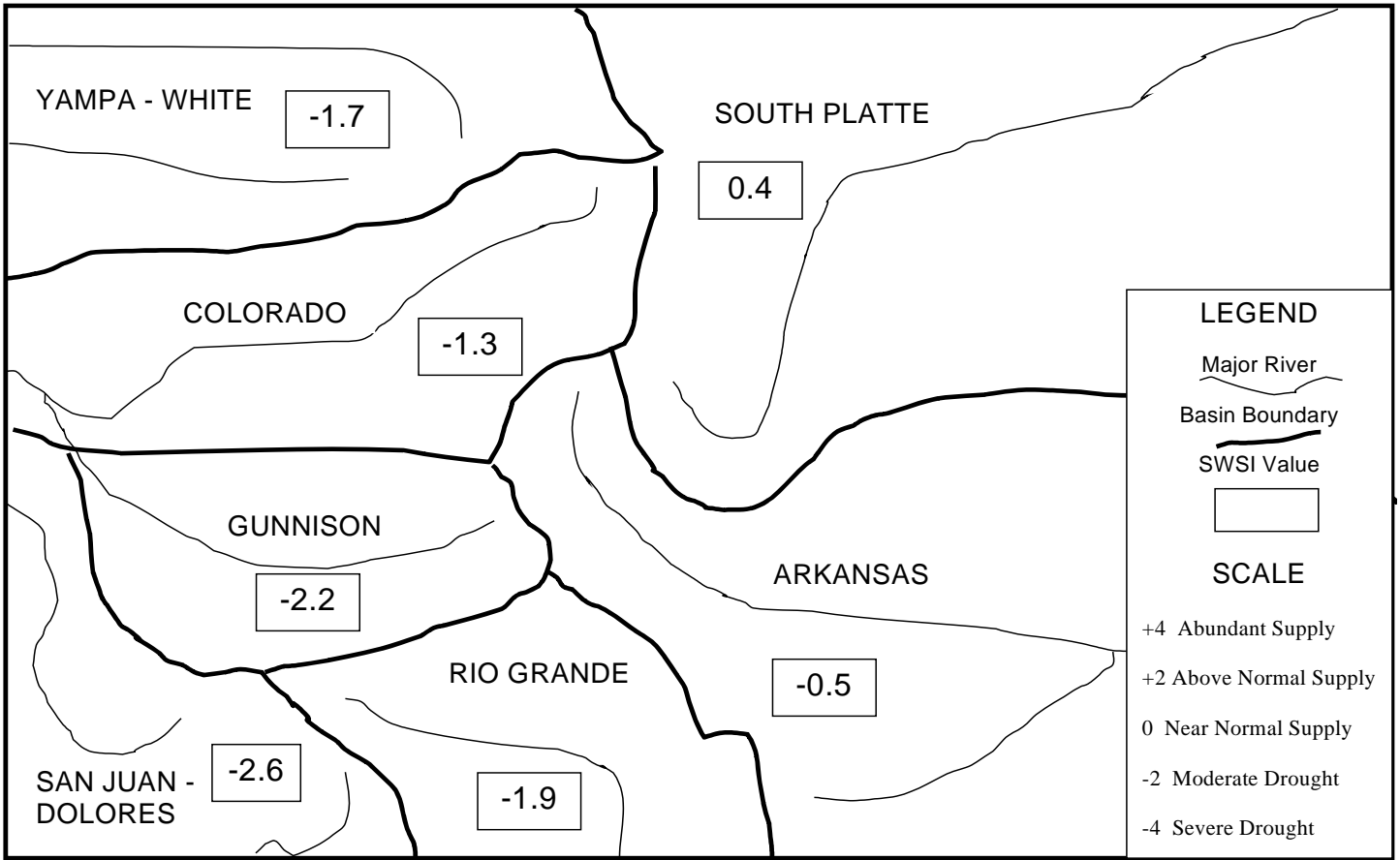
Dry conditions exist across most of Colorado, as reflected in the low SWSI values. October river flows and precipitation were below normal in all major river basins. Most demands for irrigation water end during October, which allows river flows to begin to be directed to reservoir storage and recharge. Water rights for many reservoirs are junior in priority to direct flow irrigation users, and so must typically wait for direct flow irrigation use to stop before they can take water. Recharge projects along the lower South Platte River are used to create delayed ground water return flows that augment the river during the summer. Recharge in the San Luis Valley is accomplished in order to replenish the shallow unconfined aquifer from which large numbers of irrigation wells divert.

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 November 1, 2001, and reflect the conditions during the month of October.

<u>Basin</u>	<u>November 1, 2001 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	0.4	-1.1	-1.0
Arkansas	-0.5	-0.4	-0.9
Rio Grande	-1.9	-1.4	-0.9
Gunnison	-2.2	+0.3	-0.5
Colorado	-1.3	-0.4	-1.0
Yampa/White	-1.7	+0.6	-0.7
San Juan/Dolores	-2.6	-1.5	-2.0



SURFACE WATER SUPPLY INDEX FOR COLORADO



NOVEMBER 1, 2001

Basinwide Conditions Assessment

The SWSI value of 0.4 indicates that for October the basin water supplies were near normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 84% of normal as of the end of October. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 34% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 83% of capacity. Flow at the gaging station South Platte River near Kersey was 578 cfs, as compared to the long-term average of 884 cfs. Flow at the Colorado/Nebraska state line averaged 129 cfs.

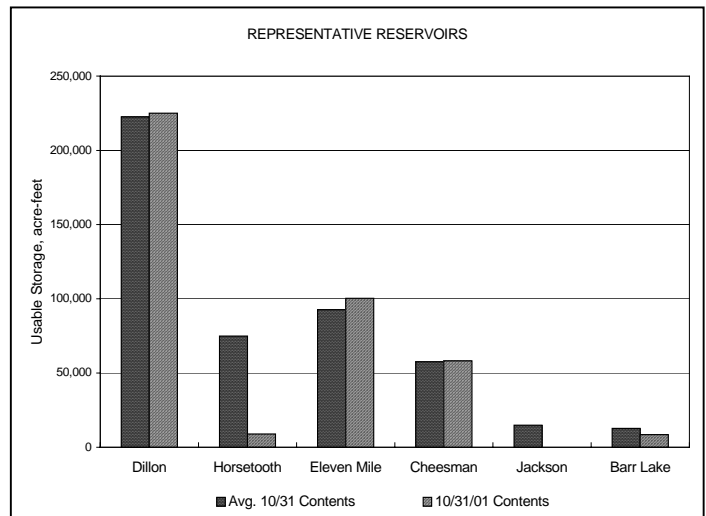
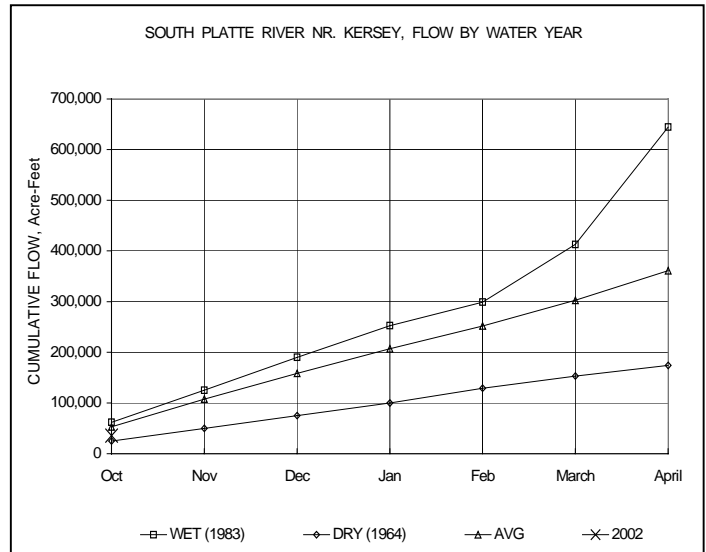
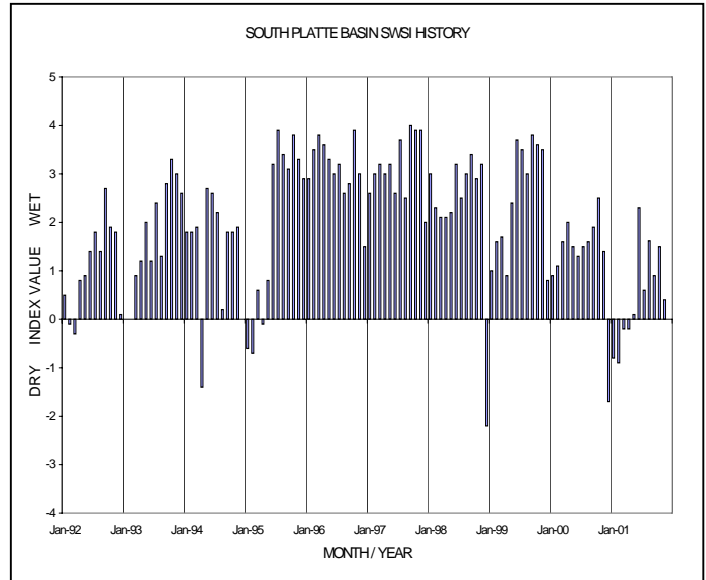
Weather conditions in October were dry and warm. Most irrigation use was concluded by the end of the month.

Outlook

As irrigation demand ended irrigation users began to store and recharge. Filling reservoirs immediately after the end of the irrigation season is not as large a concern this year as it was last year. This, it is unlikely there will be a call for reservoir storage during November as there was last year.

The relatively favorable water situation allowed significant recharge to occur during October, a month in which a major diversion generally is for recharge. There were no calls on the South Platte down stream of Denver during the month, which benefited recharge operations as they are generally the most junior water rights along the river.

As always, water supply conditions for the next year will be very dependent upon adequate snowfall this winter.



Basinwide Conditions Assessment

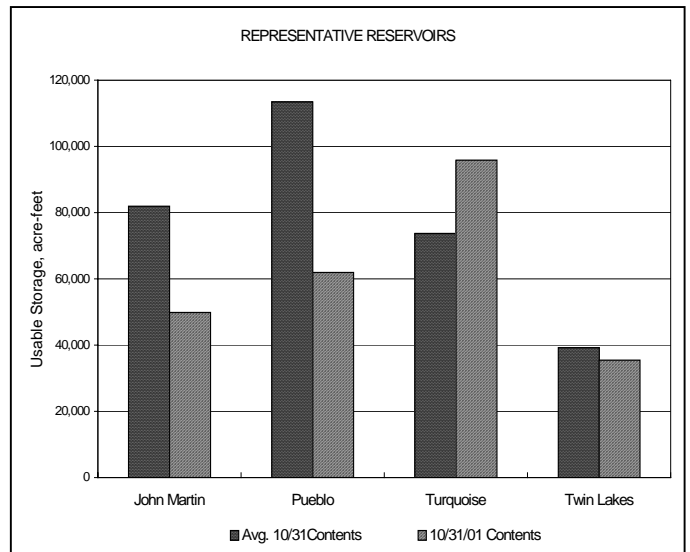
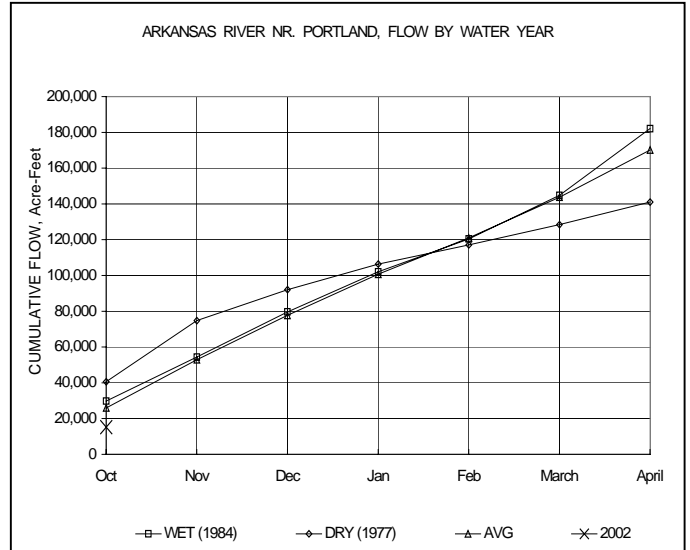
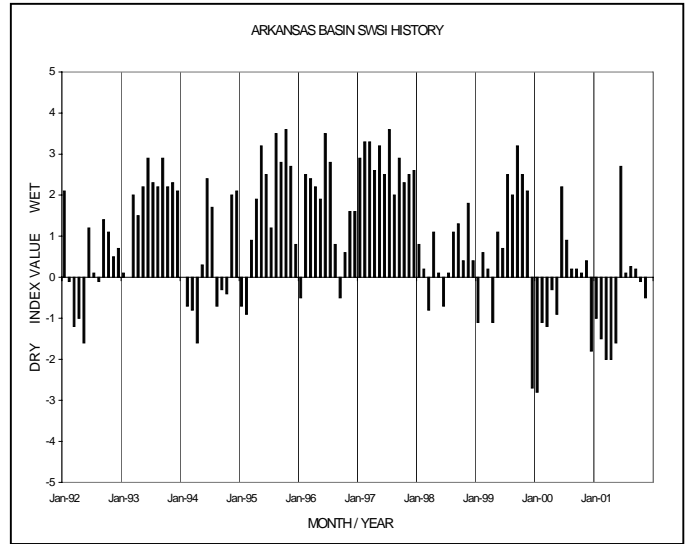
The SWSI value of -0.5 indicates that for October the basin water supplies were near normal. Flow at the gaging station Arkansas River near Portland was 248 cfs, as compared to the long-term average of 426 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 79% of normal as of the end of October.

Outlook

The Winter Water Storage Program starts November 15. Current storage levels in Pueblo and John Martin Reservoirs will provide for sufficient winter water availability. Irrigation continues throughout the Arkansas Valley with demand satisfied by direct flow diversions.

Administrative/Management Concerns

The Winter Water Storage Program board of trustees annual meeting was held in La Junta on October 16. Topics included water banking, Kansas v. Colorado litigation, review of the past water year, and discussion of the upcoming year. Approximately 40 people attended the meeting.



Basinwide Conditions Assessment

The SWSI value of -1.9 indicates that for October the basin water supplies were slightly below normal. Flow at the gaging station Rio Grande near Del Norte was 259 cfs, as compared to the long-term average of 446 cfs. The Conejos River near Mogote had a mean flow of 75 cfs (65% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 66% of normal as of the end of October.

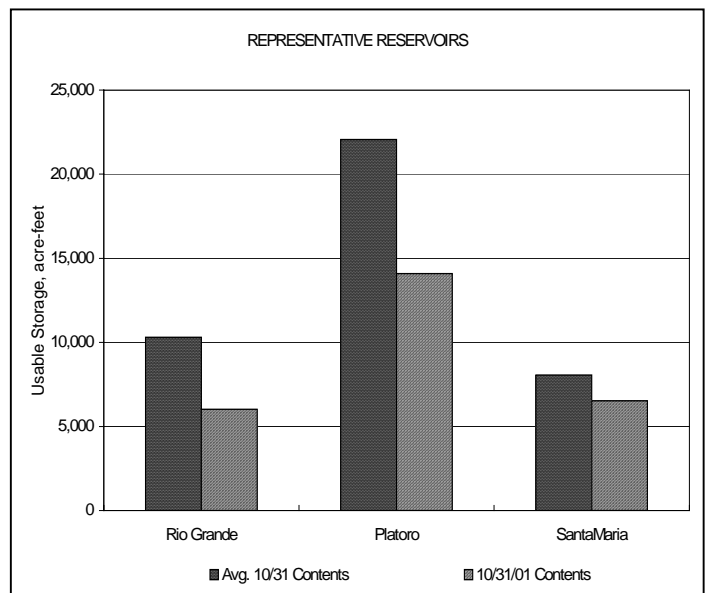
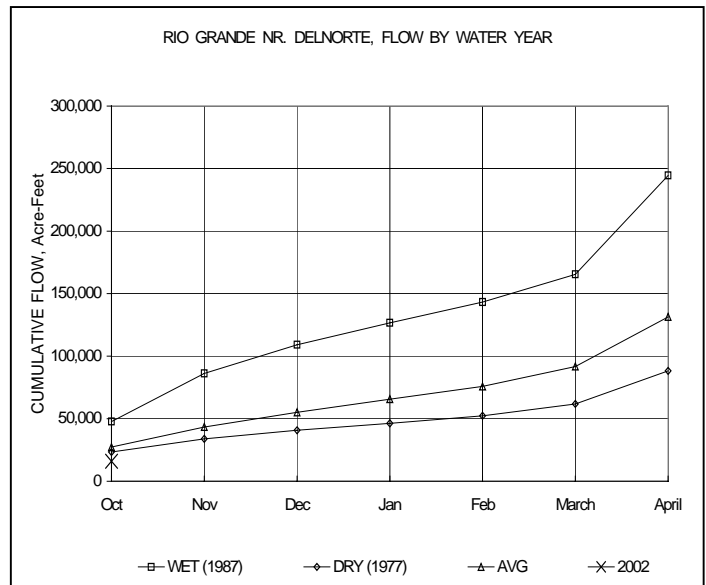
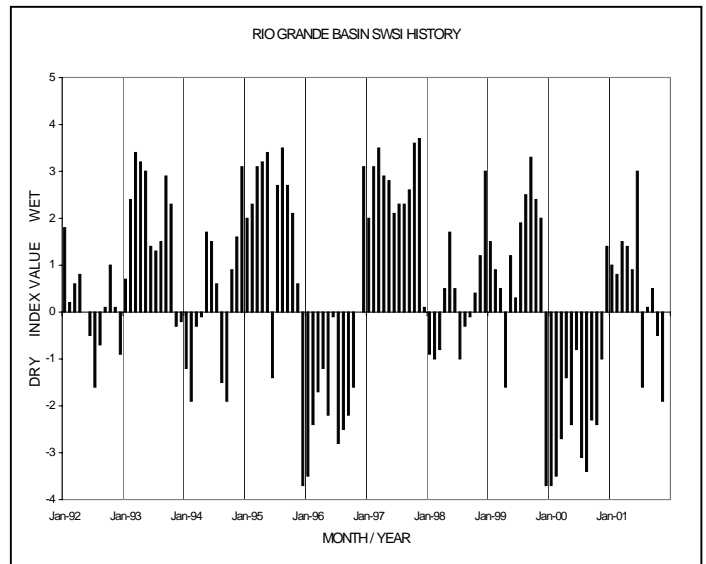
Precipitation in Alamosa was only 0.03 inches, 0.67 inches below normal. Continuing a trend that has lasted for nearly a year, temperatures in the San Luis Valley continued to be above normal.

Outlook

Below normal precipitation in the basin during October greatly affected the soil moisture and stream flow conditions, which can now be considered poor. As the month drew to a close many wells were still in use for irrigation needs. Snowfall in the higher elevations was minimal.

Administrative/Management Concerns

Reservoirs in the basin reduced outflows and began storing inflow at the end of the month. The heavy demand for irrigation water this summer left most of the upper Rio Grande basin reservoirs with very low carry over storage. While some ditches on the Rio Grande and Conejos River continued to divert for irrigation, others prepared to divert for recharge purposes; a necessity given the large draw on the underground aquifers during the past several months.



Basinwide Conditions Assessment

The SWSI value of -2.2 indicates that for October the basin water supplies were below normal. Flow at the gaging station Uncompahgre River near Ridgway was 58 cfs, as compared to the long-term average of 88 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 89% of normal as of the end of October.

Precipitation in October was near normal for the Gunnison and San Miguel basins. Storms on the 11th and 12th brought snow to the high country, with Crested Butte receiving 3.0 and 4.5 inches, respectively, on those dates.

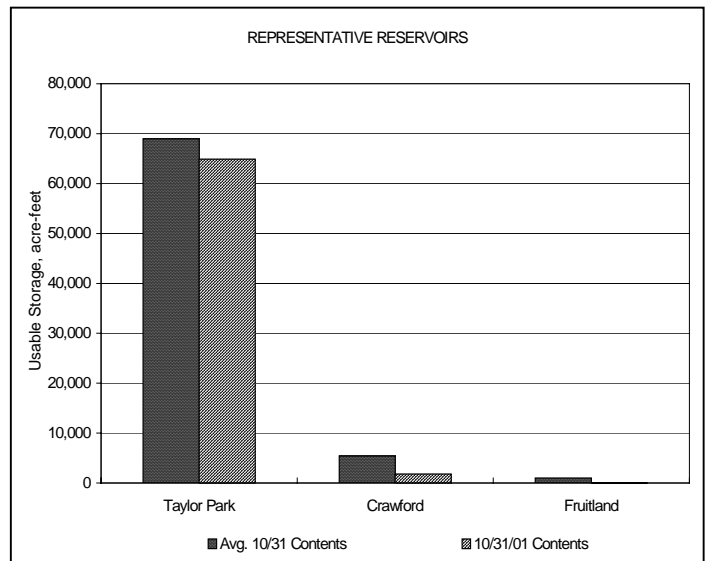
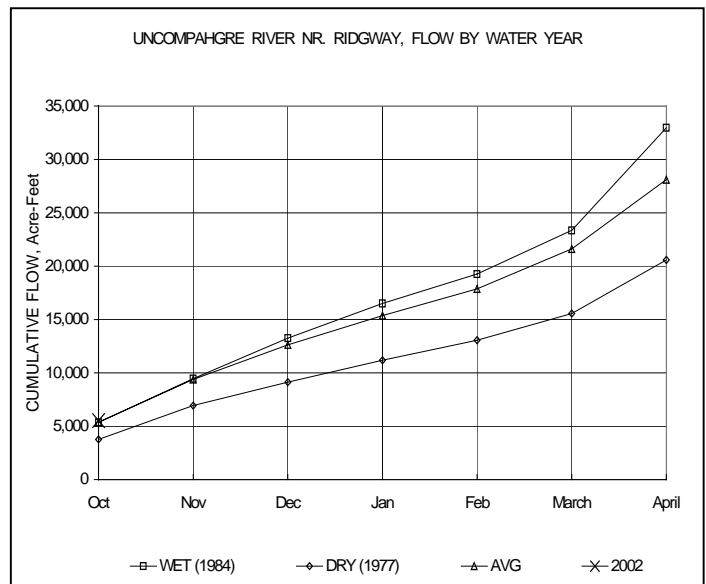
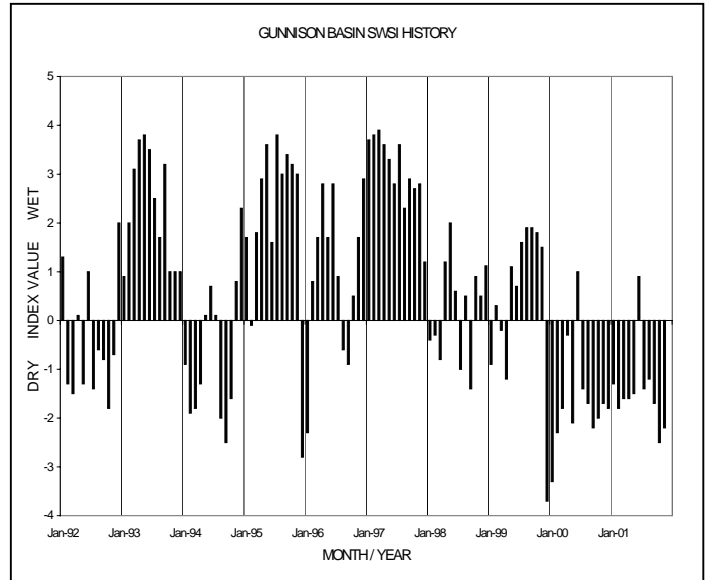
Despite the near normal precipitation irrigation demands continued to be above normal. This was due to the unseasonably warm temperatures experienced in October.

Outlook

Reservoir storage levels continued to drop throughout the month, leaving little carryover storage in many of the high elevation reservoirs.

Public Use Impacts

Many of the larger reservoirs were at levels below the bottom of the boat ramps, making boating difficult. Recreational uses on the Grand Mesa were adversely affected. Some of the drained reservoirs include Crawford, Carl Smith, Youngs Creek 1 & 2, and Granby 5-11.



Basinwide Conditions Assessment

The SWSI value of -1.3 indicates that for October the basin water supplies were slightly below normal. Flow at the gaging station Colorado River near Dotsero was 1,119 cfs, as compared to the long-term average of 1,317 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 80% of normal as of the end of October.

Outlook

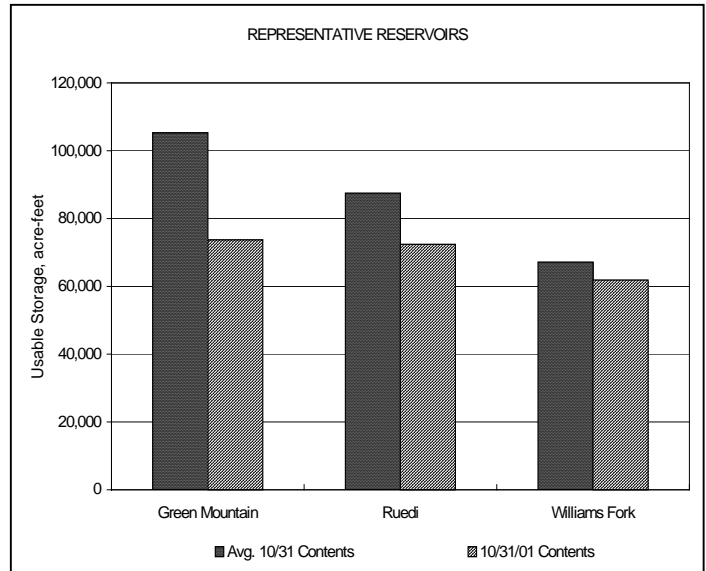
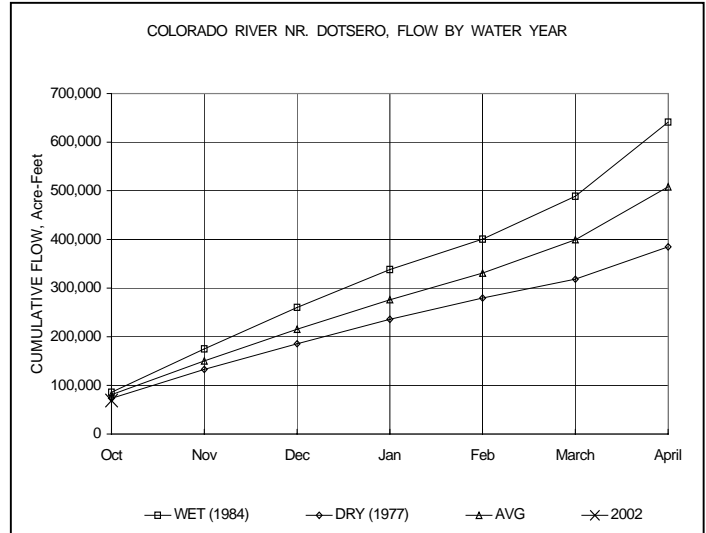
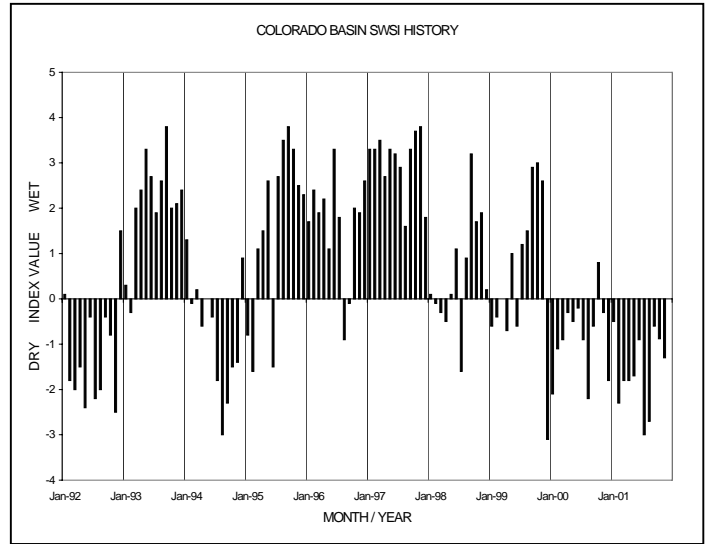
October moisture was well below average and early season snowpack reflects this lack of moisture. Weather forecasts through mid-October are not optimistic for increased moisture.

Administrative/Management Concerns

The Cameo call on the lower Colorado River, which controls lower basin water rights, was removed October 16 and will be off for the season. The senior Shoshone Power Plant call, which controls the upper basin water rights, should remain on the entire winter except for scheduled maintenance periods at the plant.

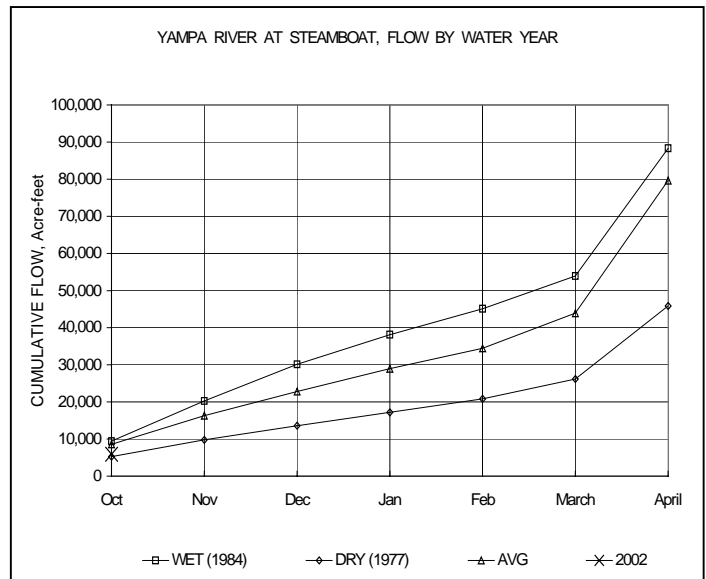
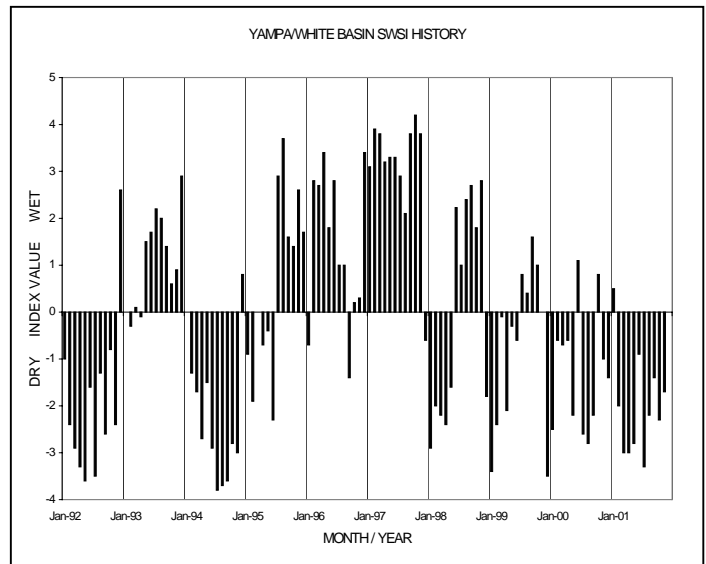
Public Use Impacts

Warm and dry weather in October has provided ski areas with little snow to begin the season and there is concern in the industry as the traditional Thanksgiving kickoff approaches. Several ski areas have already opened, but are primarily operating on only one or two runs of man-made snow. Warm nights have kept ski area snowmaking well below capacity.



Basinwide Conditions Assessment

The SWSI value of -1.7 indicates that for October the basin water supplies were slightly below normal. Flow at the gaging station Yampa River at Steamboat was 96 cfs, as compared to the long-term average of 141 cfs.



Basinwide Conditions Assessment

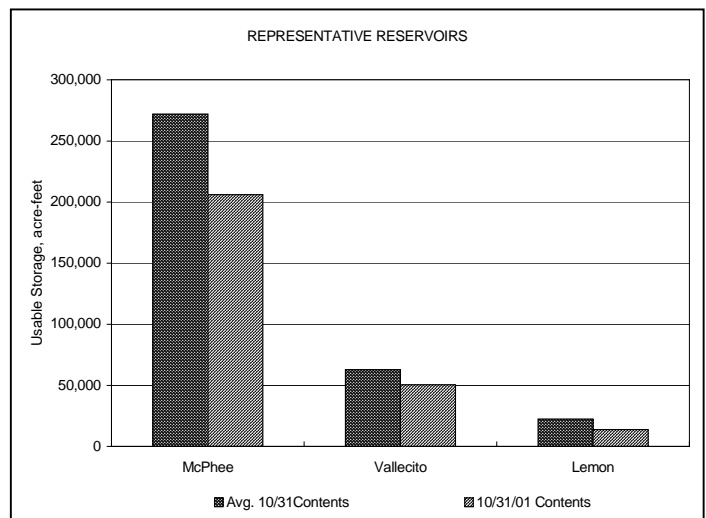
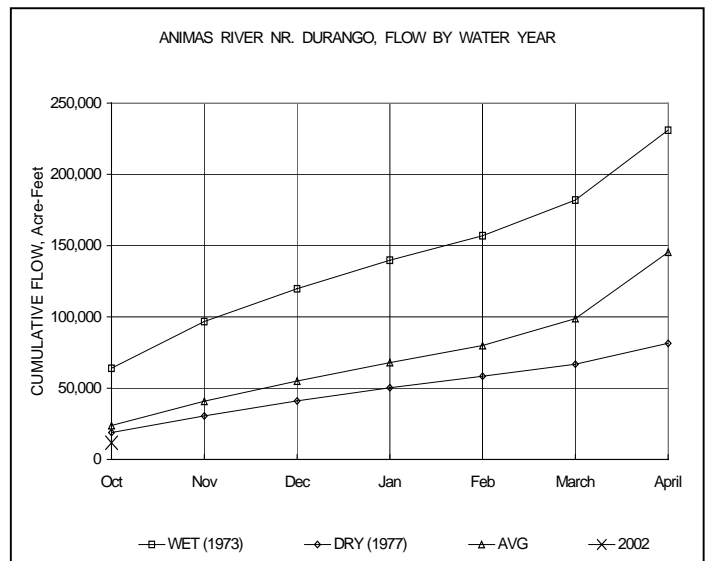
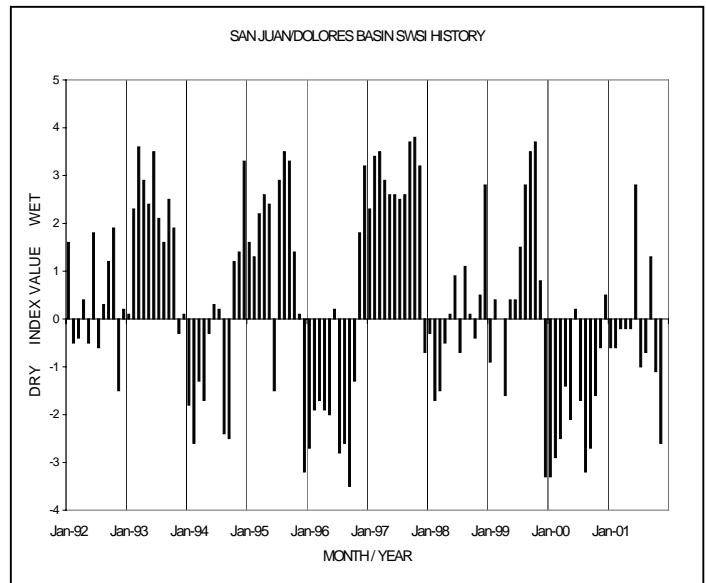
The SWSI value of -2.6 indicates that for October the basin water supplies were below normal. Flow at the gaging station Animas River near Durango was 191 cfs, as compared to the 100-year average of 413 cfs (46% of average). Storage in McPhee, Vallecito, and Lemon reservoirs totaled 76% of normal as of the end of October.

October continued the drier than normal trend of the past few months. Durango's October precipitation total of 0.99 inches was 44% of average. Precipitation across the area was not wide spread. Snow appeared on a few of the high mountains but quickly melted as the skies cleared.

The average high for Durango was 1.4° above normal, and the average low 4.9° above normal. The first freeze of the year occurred on October 10th. Below freezing temperatures occurred on only seven days.

River flows remained well below normal. The La Plata River at Hesperus averaged only 6.4 cfs, as compared to the long-term average of 15.4 cfs (42% of average).

Most reservoirs remain below normal, although Vallecito Reservoir, with 50,577 acre-feet in storage, was as 100% of average.



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