
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/default.htm

February 2000

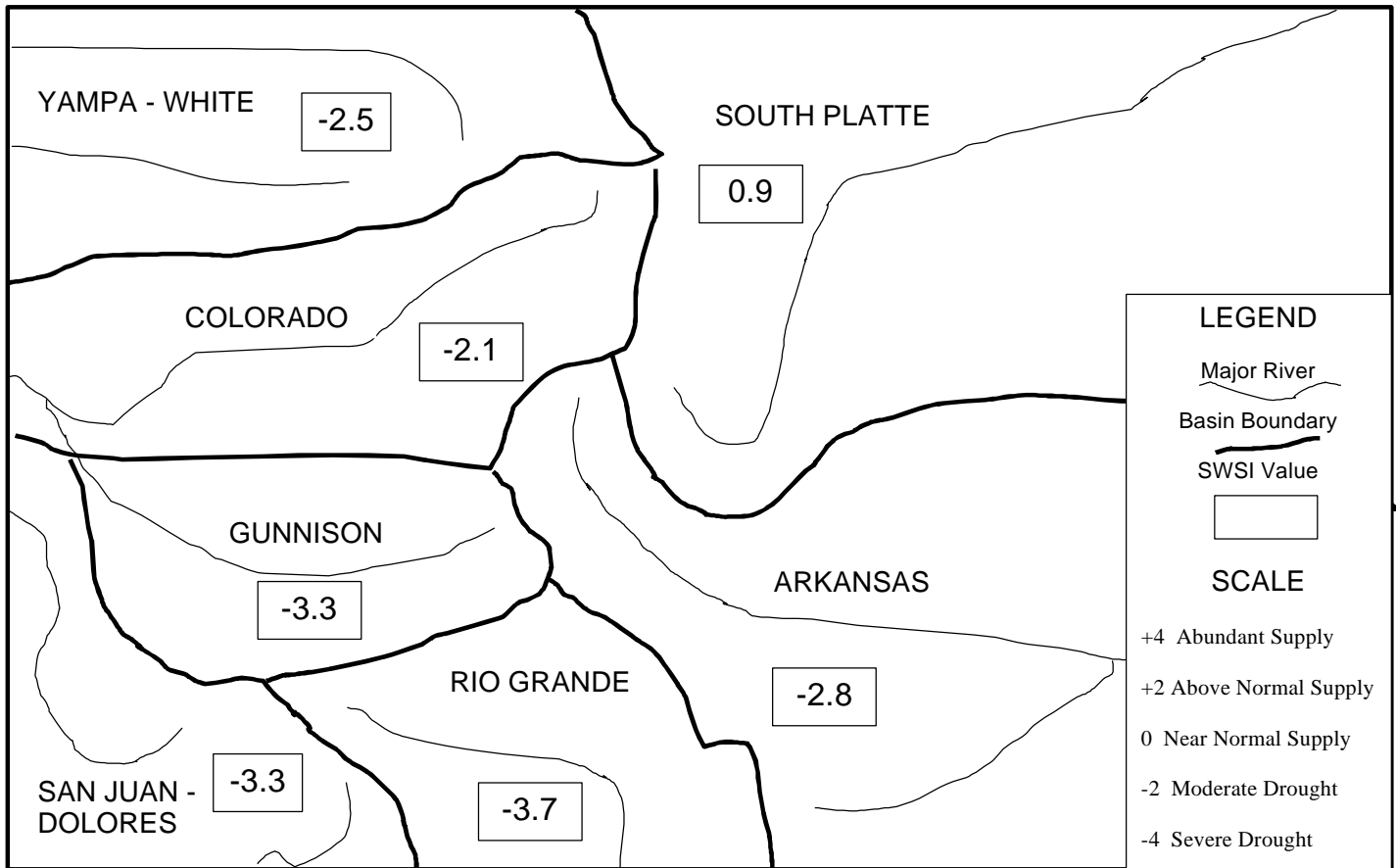
The statewide average snowpack increased from 45% of normal to 66% of normal during January. In several basins, the Arkansas, the Colorado, and the Yampa/White, the increased snowpack brought water supplies to near normal levels. The Rio Grande, Gunnison, and San Juan/Dolores basins continue to have the lowest SWSI values and the lowest snowpacks. In spite of low snowpacks, stream flow levels remain adequate statewide and reservoir storage is average to above average in most of the reservoirs across the state.

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 snowpack, reservoir storage, and precipitation for the winter period (November through April). During the winter period, snowpack 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 February 1, 2000, and reflect the conditions during the month of January.

<u>Basin</u>	<u>February 1, 2000 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	1.1	+0.2	-0.5
Arkansas	-1.1	+1.7	-1.7
Rio Grande	-3.5	+0.2	-4.4
Gunnison	-2.3	+1.0	-2.6
Colorado	-1.1	+1.0	-1.3
Yampa/White	-0.6	+1.9	+1.1
San Juan/Dolores	-2.9	+0.4	-3.3

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



JANUARY 1, 2000

Basinwide Conditions Assessment

The SWSI value of 1.1 indicates that for January the basin water supplies were near normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 107% of normal as of the end of January. Storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, decreased overall by 440 acre-feet during January and are at 86% of capacity. Storage in the major upper basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero, decreased by 1,787 acre-feet overall during January and are at 89% of capacity. The Natural Resources Conservation Service reports that February 1 snowpack is 85% of normal. Flow at the gaging station South Platte River at Kersey was 1,080 cfs, as compared to the long-term average of 774 cfs.

Outlook

The snowpack in the mountains remains below average in the whole basin but significantly better than the remainder of the state. There is not too much concern yet that there will be dry conditions as final snowpack level will be affected by the snowfall the next two months, generally the period when the basin gets the most precipitation. Last year, conditions were similar and the wet early spring completely changed the water supply outlook.

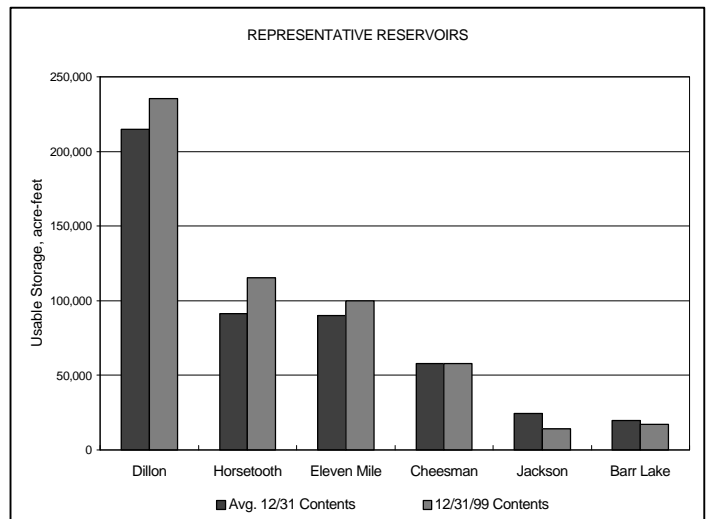
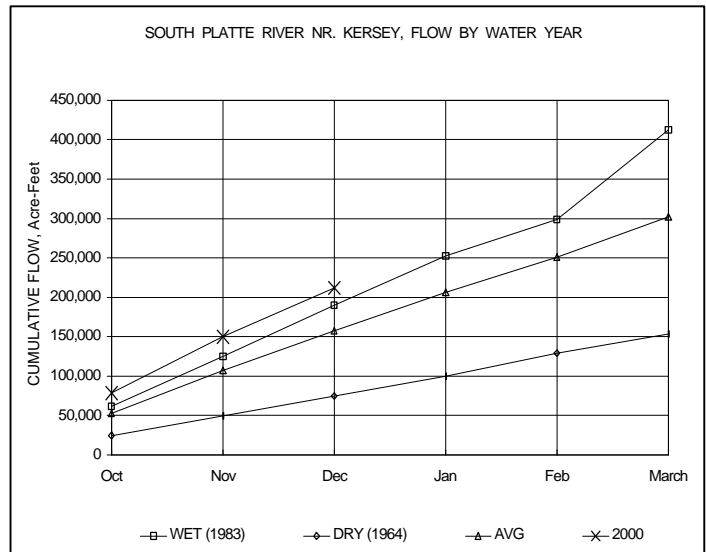
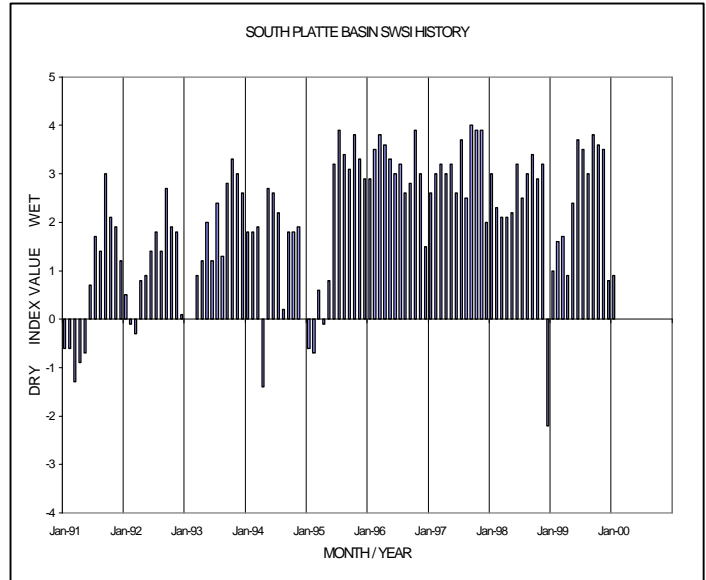
Administrative/Management Concerns

The generally dry conditions continued in January throughout the South Platte basin. Diversions in January were primarily for storage, recharge and for direct municipal use. Most major reservoirs diverted in January to maintain their winter fill as conditions allowed for diversions because of the warm temperatures. The only call on the South Platte in January was by Denver at their intake above Denver for direct flow uses. If storage is down on the mainstem, usually the call this time of year would be for storage.

Flow on the South Platte and tributaries to the South Platte continued above average because of the overall wet conditions during the past year. Reservoir levels are excellent for this time of year.

Public Use Impacts

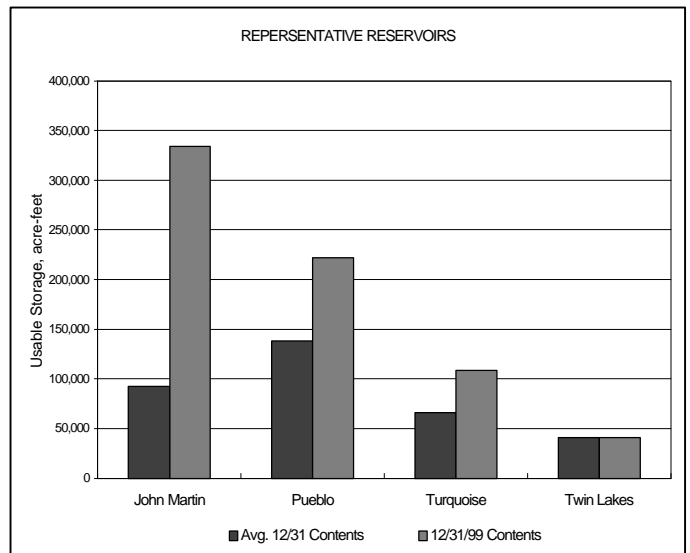
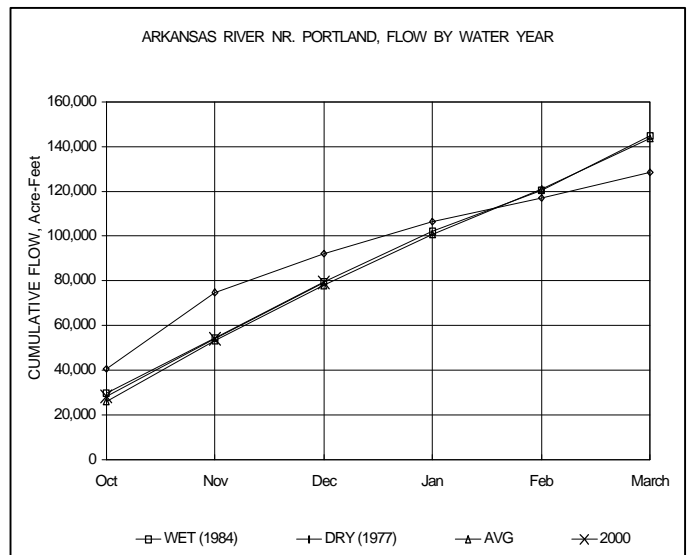
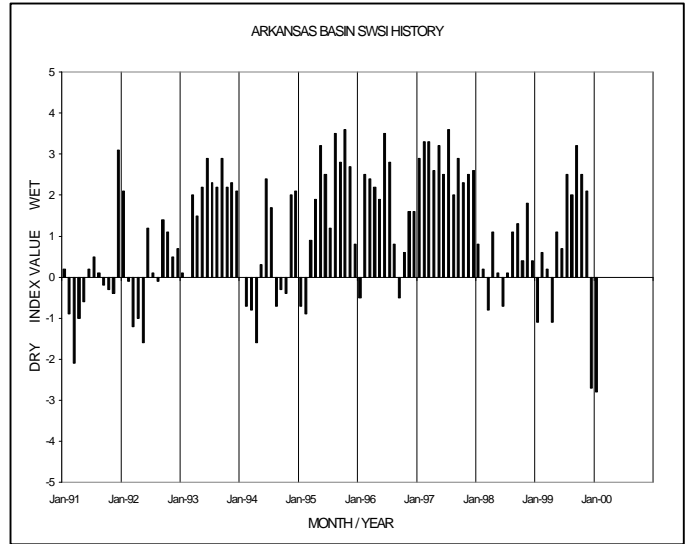
None.



Basinwide Conditions Assessment

The SWSI value of -1.1 indicates that for January the basin water supplies were slightly below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 62% of normal. Flow at the gaging station Arkansas River near Portland was 413 cfs, as compared to the long-term average of 354 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 203% of normal as of the end of January.

Current reservoir storage levels remain high.



Basinwide Conditions Assessment

The SWSI value of -3.5 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 29% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 187 cfs (99% of normal). The Conejos River near Mogote had a mean flow of 38 cfs (79% of normal). Precipitation in Alamosa was near the historic average for January, but the average monthly temperature was 24.2 degrees, 9.5 degrees above normal. The mercury rose to a 30-year high of 60 degrees on the 16th.

The first significant snowstorm to drop snow on the valley floor this winter season finally arrived on January 27. This was a welcome relief to the dusty conditions that prevailed.

Outlook

With the lowest basin snowpack in the state, local water administrators are warning users of a possible drought. Forecasts are predicting area stream flow in 2000 to be in the range of 30 to 70% of normal with the exception of streams originating from the Sangre de Cristo Mountains. These creeks are forecast at 90%.

Administrative/Management Concerns

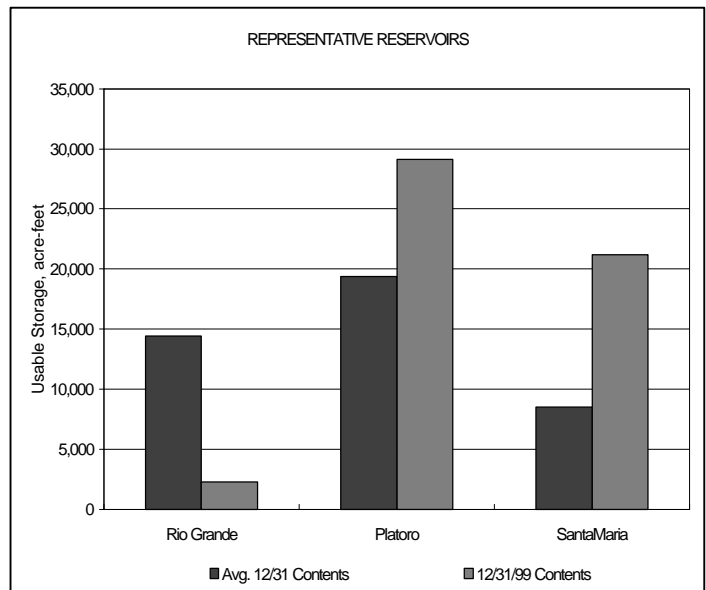
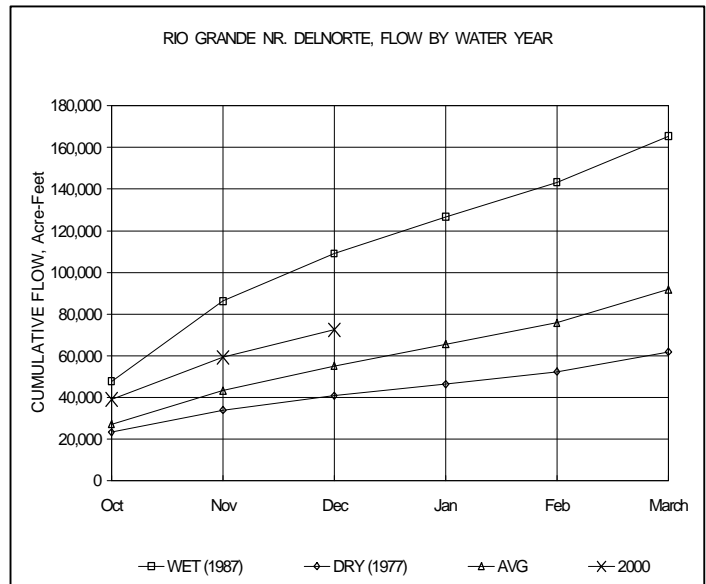
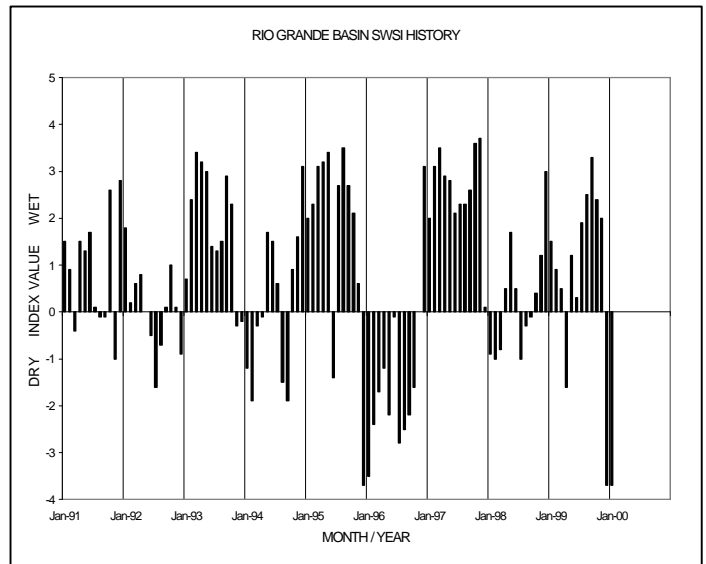
End of the year analysis of stream flow in the upper Rio Grande Basin found the Rio Grande near Del Norte carried 140% of the normal annual volume during 1999, and the Conejos near Mogote carried 93% of normal.

The total Closed Basin Project production during 1999 was 25,600 acre-feet, of which 20,400 acre-feet were creditable delivery to the state line. This creditable delivery helps the two river systems meet Colorado's delivery obligation to New Mexico and Texas.

Colorado exceeded its delivery obligation to New Mexico and Texas in 1999 by 7,500 acre-feet and will carry about 18,000 acre-feet of accumulated delivery credit over for 2000.

Public Use Impacts

Outdoor activities dependent on snow depth are suffering from the below average conditions.



Basinwide Conditions Assessment

The SWSI value of -2.3 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that December 1 snowpack is 61% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 46.7 cfs, as compared to the long-term average of 43.6 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 111% of normal as of the end of January.

Releases from Blue Mesa Reservoir to the Gunnison River were reduced in order to increase reservoir storage.

Outlook

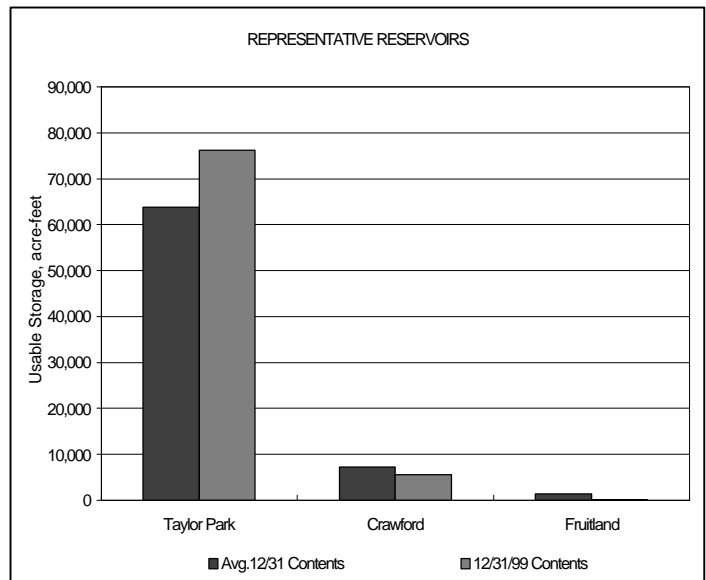
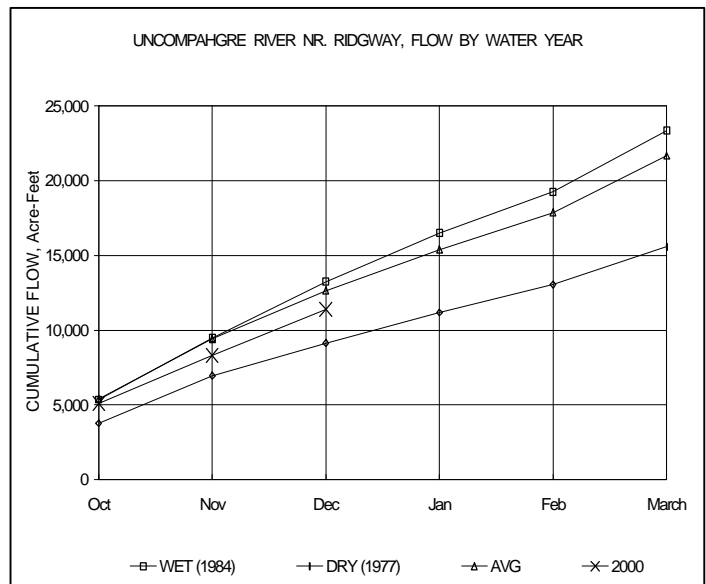
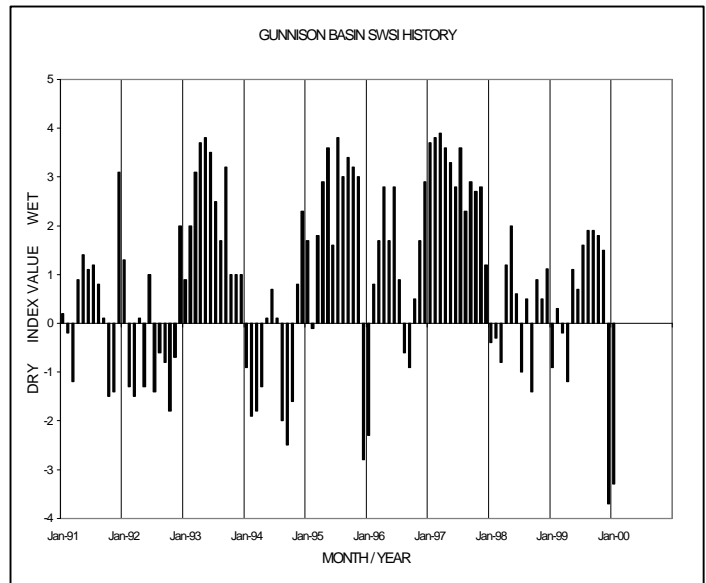
The increase in snowpack is encouraging to water administrators and users.

Administrative/Management Concerns

The Division is observing an increase in the number of people with small decreed springs seeking exempt well permits for these diversions for domestic use. Reportedly, some water companies have been pressuring property owners to obtain water taps from the company. Also, the threat exists that these springs, as surface water diversions, would need to be administered in the water rights priority system. The spring owners are finding it advantageous to modify the construction of their structures to comply with well construction variance requirements for springs, and obtain well permits for the structures.

Public Use Impacts

Fly-fishing was great on the Taylor River during the warm spell in January.



Basinwide Conditions Assessment

The SWSI value of -1.1 indicates that for January the basin water supplies were slightly below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 79% of normal. Flow at the gaging station Colorado River near Dotsero was 1,591 cfs, as compared to the long-term average of 968 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 113% of normal as of the end of January.

Outlook

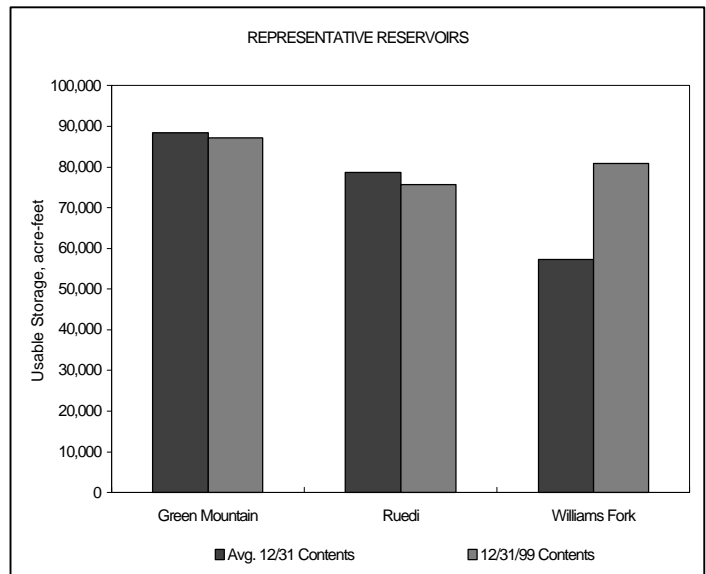
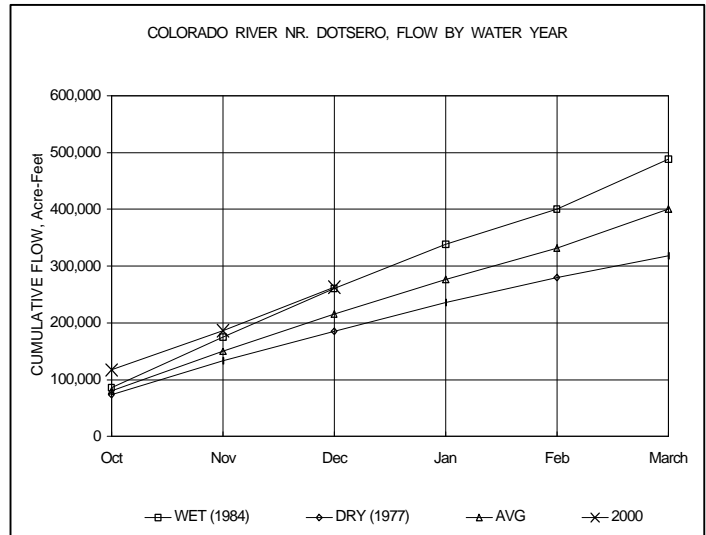
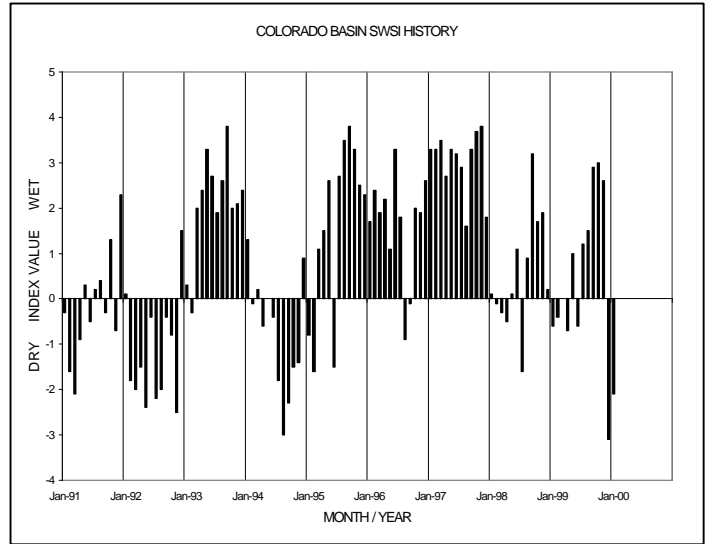
Winter temperatures are forecasted to be 5-10% above average, while winter precipitation is projected to be up to 10% below normal.

Administrative/Management Concerns

The Denver Water Board and the Northern Colorado Water Conservancy District filed for a 16,000 acre-feet reservoir on Sulphur Gulch, tributary to the Colorado River in DeBeque Canyon. Proposed uses include fish recovery for the 15-mile reach of the Colorado River between Palisade and Grand Junction, hydropower, piscatorial, and wildlife. The applicants filed the case, 99CW279, in the Division 5 Water Court in December 1999.

Public Use Impacts

None.



Basinwide Conditions Assessment

The SWSI value of -0.6 indicates that for January the basin water supplies were near normal. The Natural Resources Conservation Service reports that December 1 snowpack is 87% of normal. Flow at the gaging station Yampa River at Steamboat was 116 cfs, as compared to the long-term average of 92.6 cfs.

January brought above-average moisture to the entire basin. Precipitation for the basin was 144% of average. The snowpack increased from 64% at the end of December to 84% at the end of January. While the basin-wide numbers have increased significantly, much of the lower elevations have no snow cover and soil moisture content is very low. Run-off forecasts, based on end-of-month snow measurements, show a wide range of predictions based on location. These numbers range from about 71% to 85% of average. Hopefully these will increase as the winter progresses.

Outlook

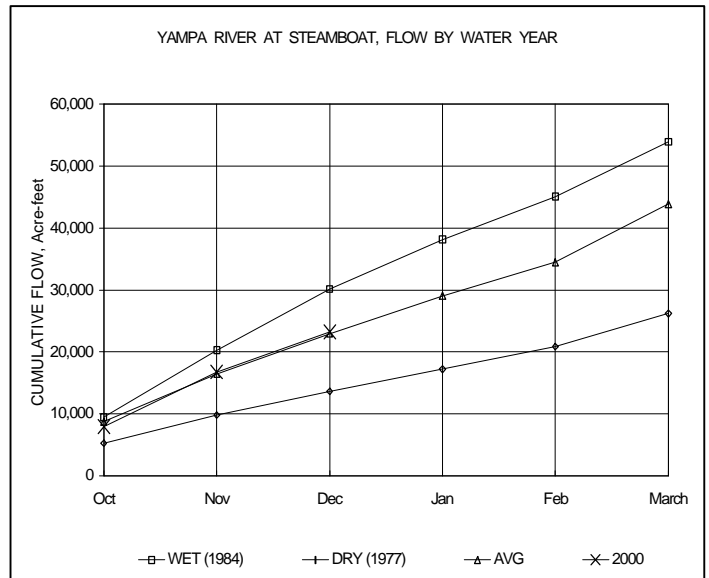
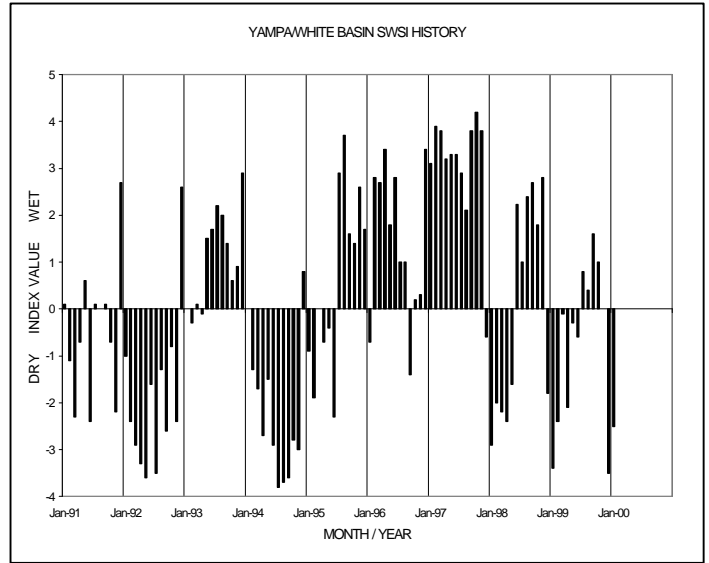
February has started out warm and dry. Hopefully the weather pattern that developed in January will return and bring additional moisture to the basin.

Administrative/Management Concerns

None.

Public Use Impacts

Snowpack throughout the basin has increased. While winter activities continue at the higher elevations, most low elevation areas have little or no snow.



Basinwide Conditions Assessment

The SWSI value of -2.9 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 41% of normal. Flow at the gaging station Animas River near Durango was 183 cfs, as compared to the long-term average of 210 cfs. River flows were slightly below normal and running steady at base rates. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 120% of normal as of the end of January.

January 2000 brought a welcome break in the dry spell of the past three months. Precipitation again rose to near normal across the San Juan Basin. Two significant storm systems came through the area, one on the first and second of January, and one event from January 24-27. These served to bring the snowpack totals from about 17% of normal to 41% of normal by the end of the month.

Temperatures were very warm in January. The lows experienced were as low as -5°F on January 4 in Durango. But the average temperature was over 7.5°F above normal. The high temperatures were 4°F above normal.

Outlook

Reservoirs continued with extra carryover. The extra storage water currently appears to be critical for stream supplies next year.

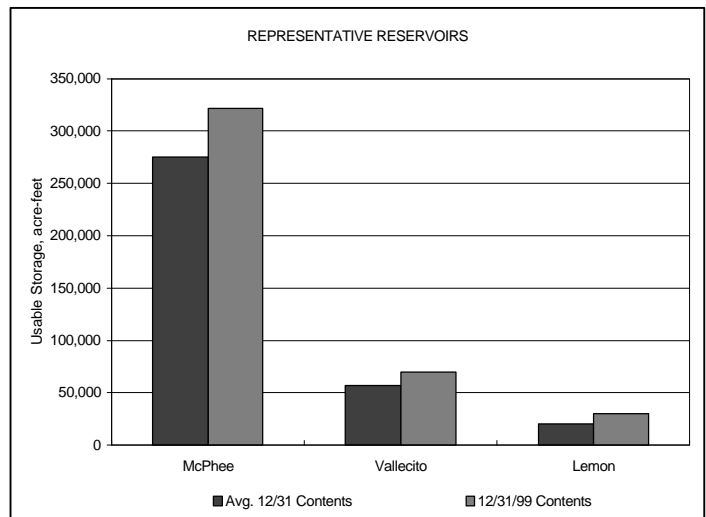
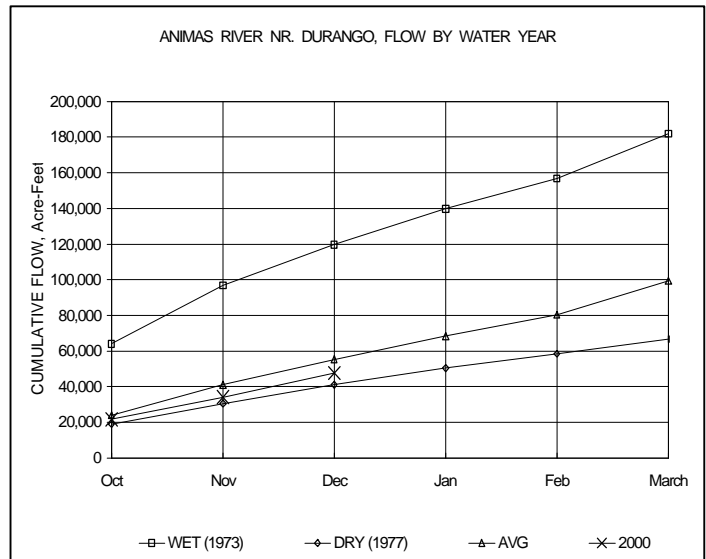
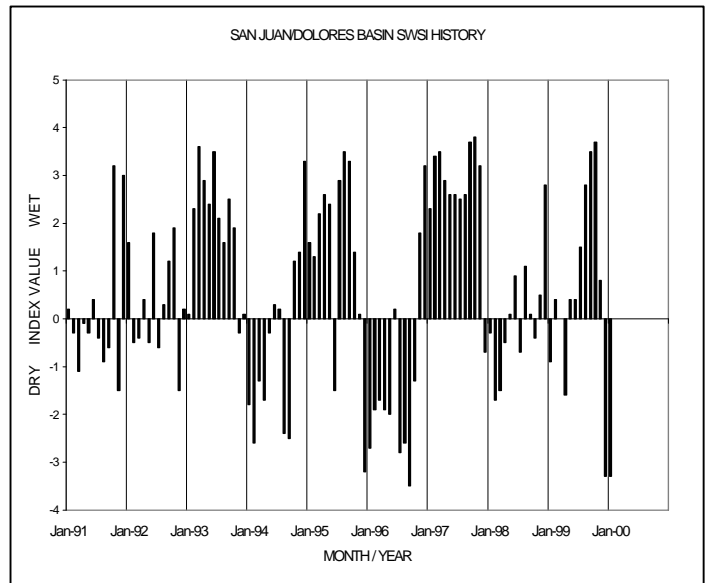
For the year-to-date totals, only 28% of normal precipitation has occurred in the area. Much more precipitation is needed in order to develop a significant runoff scenario.

Administrative/Management Concerns

None.

Public Use Impacts

Winter recreation was salvaged by the additional storms in the mountains.



OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES
1313 SHERMAN STREET ROOM 818
DENVER CO 80203