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

MARCH 2001

Snowfall during February slightly increased the percent of average snowpack across the state, producing a statewide March 1 value of 86% of normal. The Rio Grande basin currently has the highest snowpack in the state, at 103% of average. This is a reversal of the past few years when the Rio Grande basin, and the rest of the southwest corner of the state, had the lowest percents. Water use at this time of year is low, with reservoir filling being one of the primary river diversions.

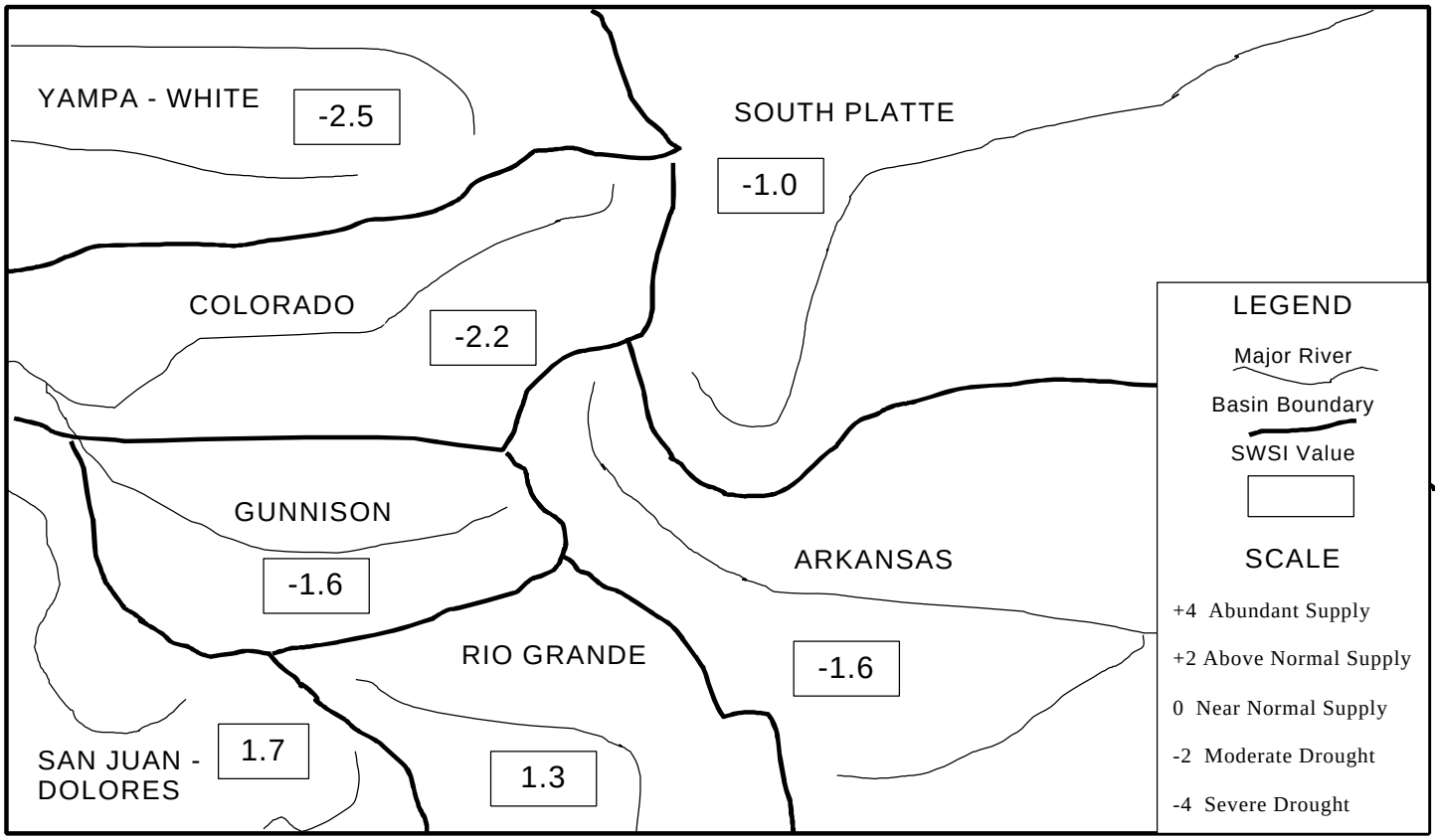
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on snowpack, reservoir storage, and precipitation for the winter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

Basin	March 1, 2001 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	-1.0	-0.1	-2.6
Arkansas	-1.6	-0.1	-0.4
Rio Grande	+1.3	+0.5	+4.0
Gunnison	-1.6	+0.2	+0.2
Colorado	-2.2	+0.1	+1.3
Yampa/White	-2.5	-0.5	+1.8
San Juan/Dolores	+1.7	+2.3	+4.2

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



MARCH 1, 2001

Basinwide Conditions Assessment

The SWSI value of –1.0 indicates that for February the basin water supplies were near to slightly below normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 86% of normal as of the end of February. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 83% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 76% of capacity. The Natural Resources Conservation Service reports that March 1 snowpack is 69% of normal. Flow at the gaging station South Platte River near Kersey was 868 cfs, as compared to the long-term average of 808 cfs. Flow at the Colorado/Nebraska state line averaged 514 cfs.

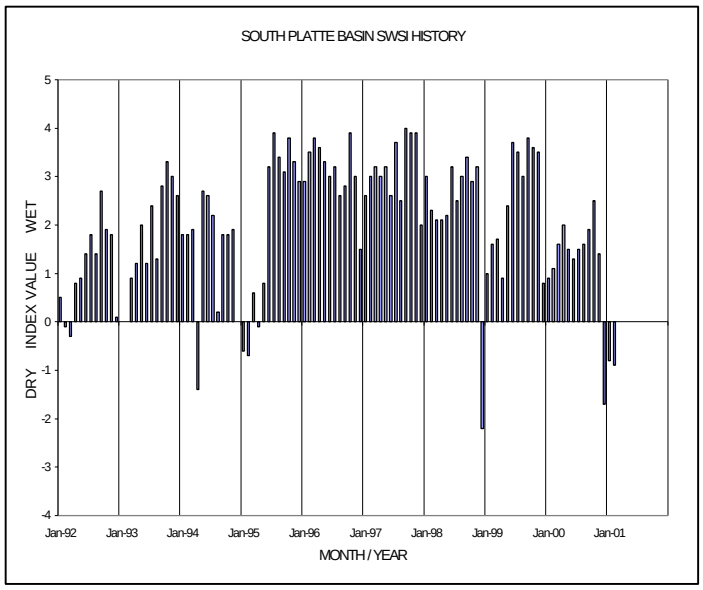
Outlook

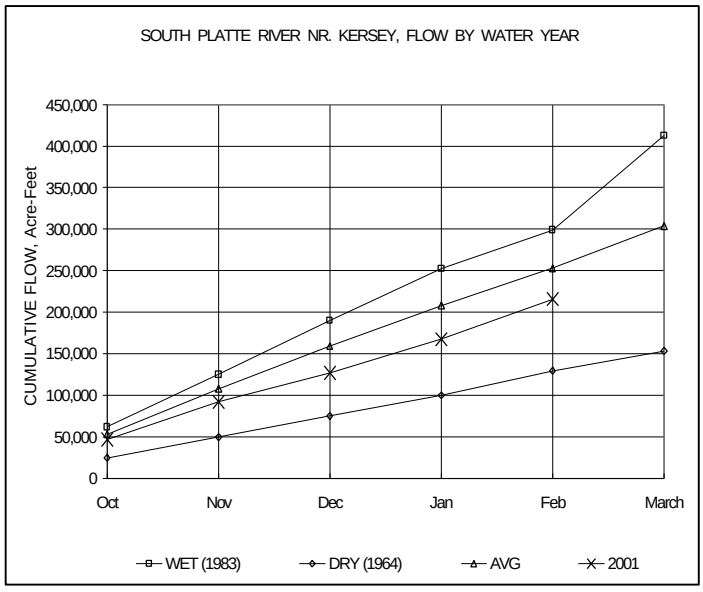
The main use of water continues to be for filling reservoirs. The primary mainstem reservoir left unfilled, North Sterling Reservoir, should fill approximately the third week of March. Reservoirs on tributaries also continue to fill. Administrators expect reservoir demand to increase as users completely fill reservoirs which have been maintained at less than full winter storage levels.

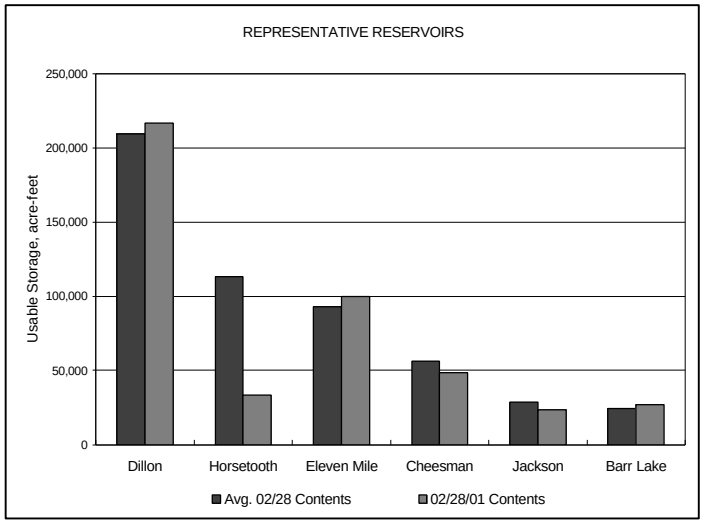
As conditions warmed up toward the end of February, allowing ditches to be used without fear of icing up, the additional use of recharge began. Administrators expect users on several more ditches to begin recharging during March, prior to demand for direct flow irrigation.

Administrative/Management Concerns

Basin administrators are concerned that snowpack is still behind average. The next couple of months are critical in determining the overall snowpack for the year. After the dry 2000 water year, there is concern for adequate spring precipitation on the plains to reduce direct flow demand, increase river flows, allow reservoirs to be kept full, and allow recharge to be maximized.







Basinwide Conditions Assessment

The SWSI value of –1.6 indicates that for February the basin water supplies were slightly below normal. The Natural Resources Conservation Service reports that March 1 snowpack is 79% of normal. Flow at the gaging station Arkansas River near Portland was 386 cfs, as compared to the long-term average of 361 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 113% of normal as of the end of February.

Outlook

Reservoir storage levels remain adequate in the basin to accommodate normal to above normal runoff.

Administrative/Management Concerns

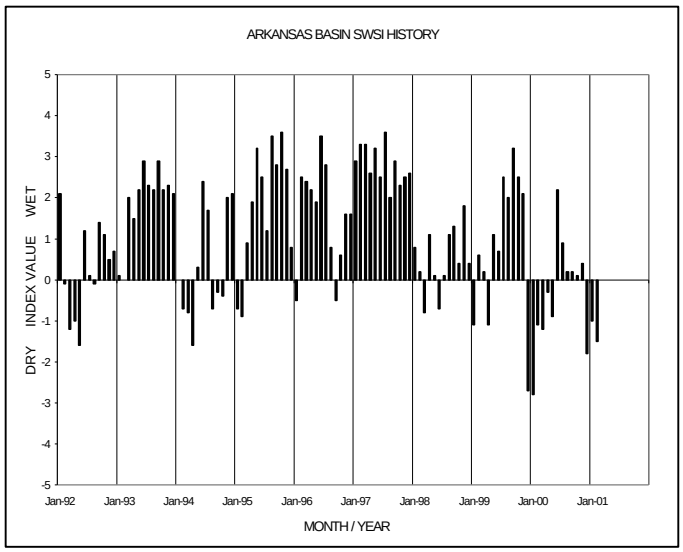
The Winter Water Storage Program ends on March 14. Through February, Pueblo and John Martin Reservoirs stored approximately 40,500 acre-feet and 25,200 acre-feet respectively, while canal diversions accounted for 73,524 acre-feet. The winter water system grand total of 142,043 acre-feet is approximately 18,000 acre-feet less than last year, and 5,300 acre-feet less than the moving 5 year average.

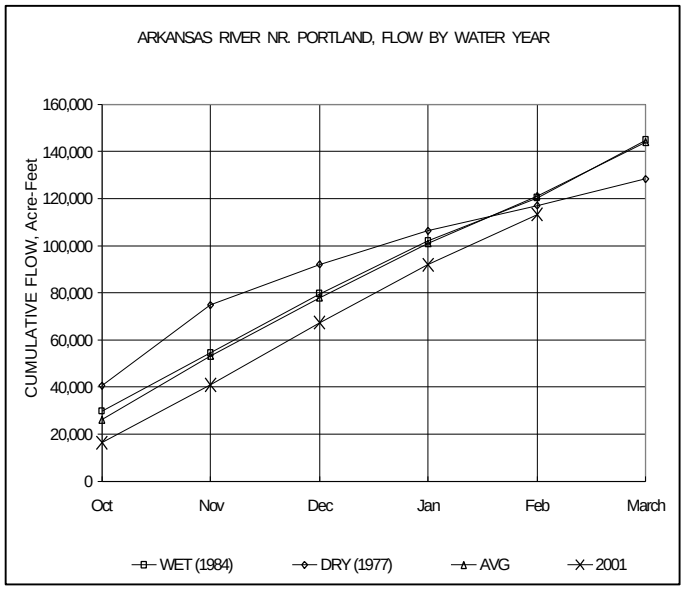
Sixteen Arkansas River Replacement Plans were submitted in late February and early March for augmentation of over 1,950 wells throughout the basin. These plans will be reviewed during March and approved for the period April 1, 2001 to March 31, 2002. Overall estimated pumping increased by about 8% from last plan year, and overall estimated stream depletions increased 10% from last plan year. These plans are designed to augment estimated stream depletions of over 65,000 acre-feet caused by estimated pumping of almost 200,000 acre-feet during the plan year, and lagged stream depletions from prior years' pumping.

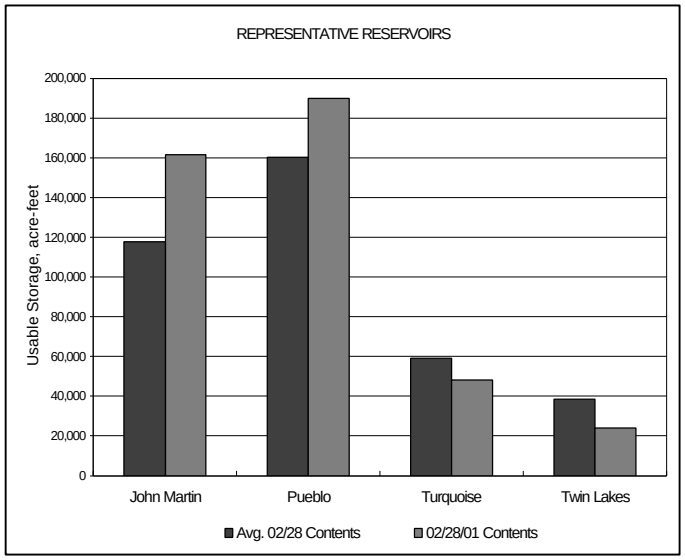
Division 2 diversion records for irrigation year 2000 are complete and are being compiled, reproduced, and bound.

Public Use Impacts

As a reminder to water users who rely on data from the DWR satellite monitoring system for accessing Arkansas mainstem flows in Districts 14, 17, and 67, the location of the stream gage for the Arkansas River at Nepesta was moved during 2000, downstream to the bridge crossing for Nepesta Road. The main effect of this change is that the gage now records river flows downstream rather than upstream of the Oxford Farmers Ditch headgate. Diversion data of the Oxford Farmers Ditch is also available on the satellite monitoring system.



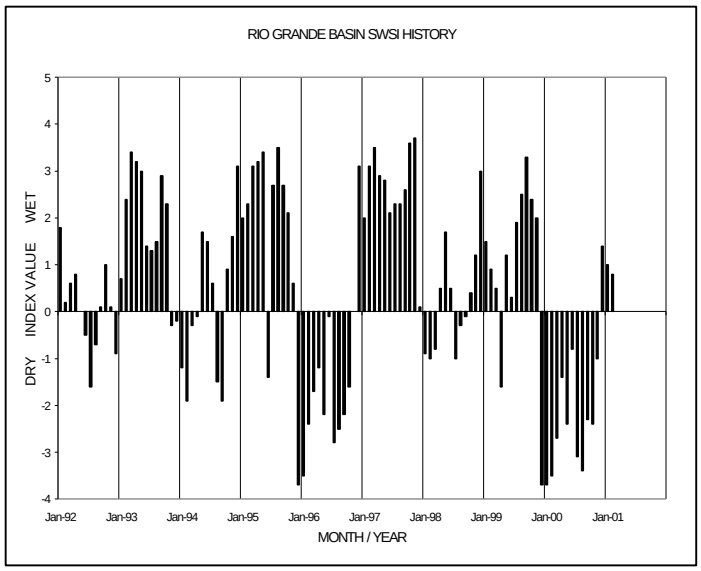




Basinwide Conditions Assessment

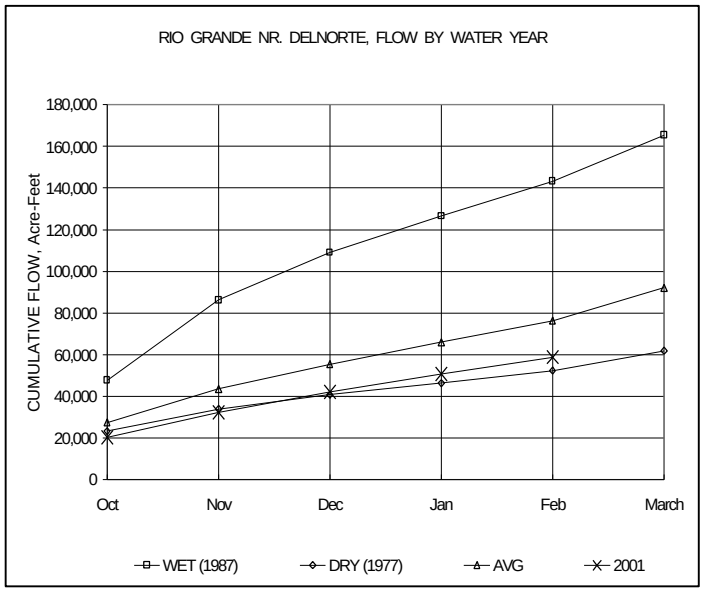
The SWSI value of 1.3 indicates that for February the basin water supplies were slightly above normal. The Natural Resources Conservation Service reports that March 1 snowpack is 103% of normal. Flow at the gaging station Rio Grande near Del Norte was 146 cfs, as compared to the long-term average of 183 cfs. The Conejos River near Mogote had a mean flow of 42 cfs (80% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 94% of normal as of the end of March.

Despite the –21^{o} freeze on the 1st, the San Luis Valley was warmer and wetter than normal during February. Alamosa received 0.56 inches of precipitation during the month, 0.27 inches above normal. This precipitation was gladly received as a benefit to winter wheat crops and soil moisture conditions.



Outlook

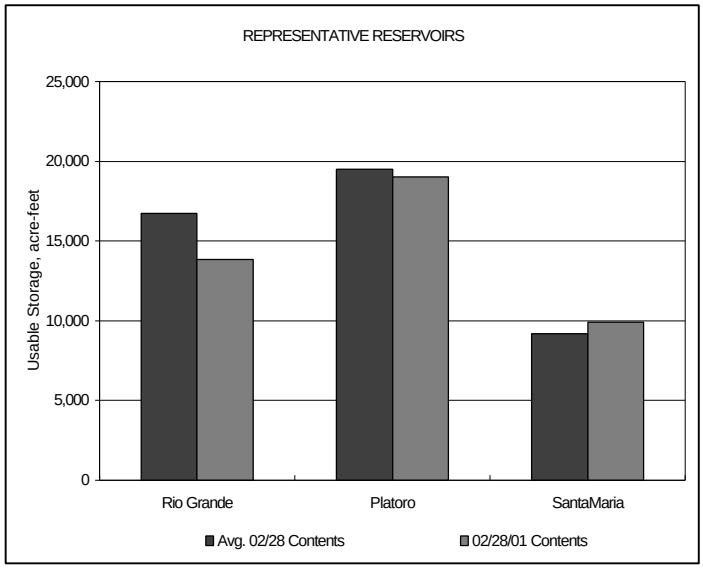
Snowpack conditions improved a bit during February. Recent NRCS stream flow forecasts are calling for average to slightly above average conditions in the entire upper Rio Grande basin this year. Expected runoff in the Rio Grande near Del Norte is 114% of normal, and 100% of average for the Conejos River near Mogote. Carryover storage in the basin reservoirs may be low due to last year's drought, but a good runoff could reverse that condition.



Administrative/Management Concerns

The annual meeting of the Rio Grande Compact Commission will be held on the Adams State College campus on March 22, 2001 at 9 a.m. The public is invited to attend.

The Division Engineer has received word that the call for irrigation water may come much later this year than last year. Significant snow accumulation on the valley floor has cooled the desire of many farmers and ranchers to crank open their headgates. Diversions from the Rio Grande and Conejos River are expected to begin around the first of April.



Public Use Impacts

Winter sports enthusiasts reliant on snow cover enjoyed the bounty of a very snowy month.

Basinwide Conditions Assessment

The SWSI value of –1.6 indicates that for February the basin water supplies were slightly below normal. The Natural Resources Conservation Service reports that March 1 snowpack is 84% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 44 cfs, as compared to the long-term average of 45 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 90% of normal as of the end of February.

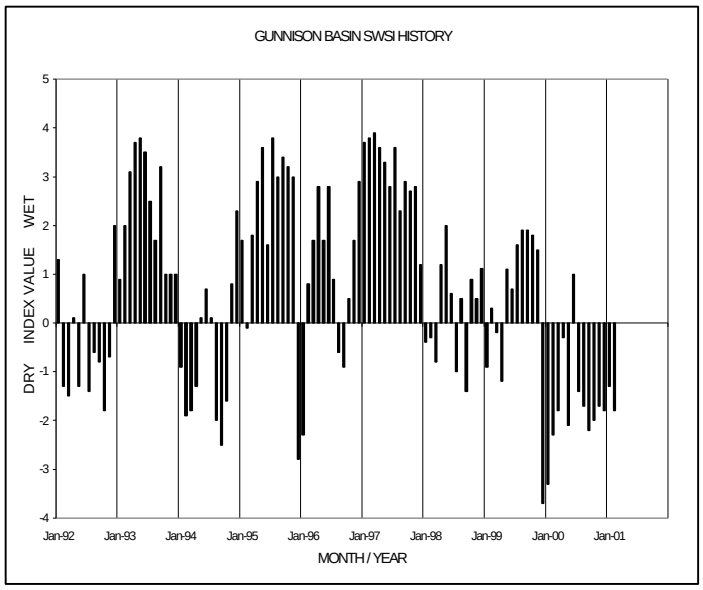
Administrative/Management Concerns

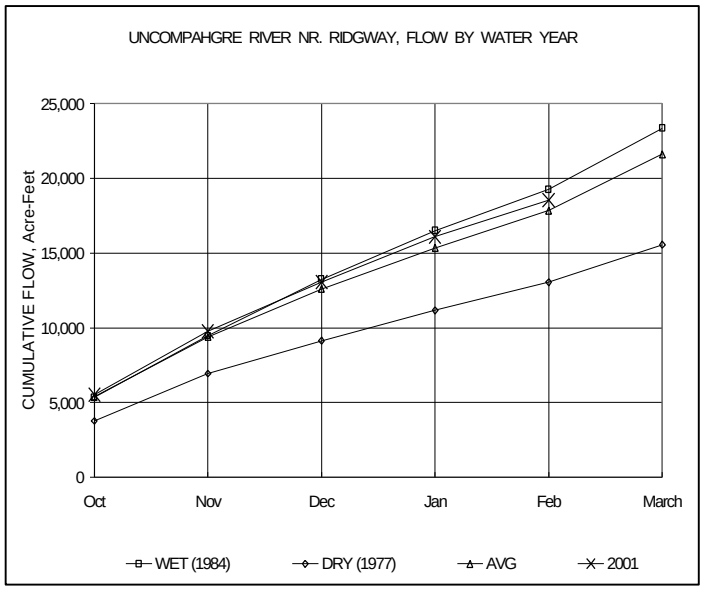
Low flows in the Gunnison River could trigger a call from the Redlands Canal, necessitating a release from Blue Mesa Reservoir.

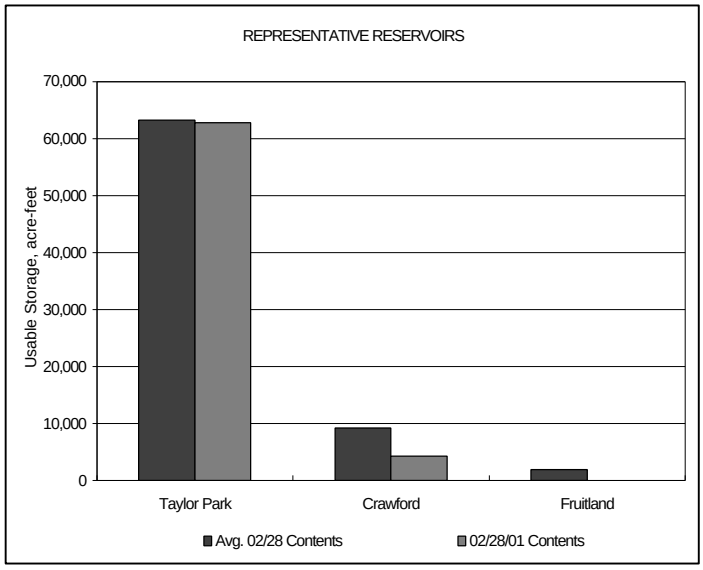
Public Use Impacts

While the recent snowfall is very promising to most, it did not come in time for the opening of certain ski areas in Crested Butte, according to the US Forest Service. Finding that the recent snow is now sufficient for the opening of this new area, the application request to the Forest Service was submitted. However, it may be to late to be granted for this year. Contributing to the delay is final approval of the area's boundaries.

The upper end of Blue Mesa Reservoir began to see the ice breaking. Ice fishing is still happening in the upper end.







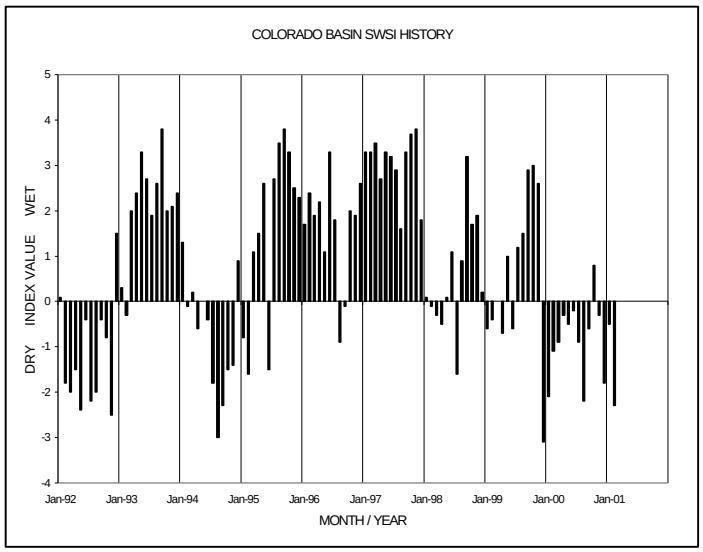
Basinwide Conditions Assessment

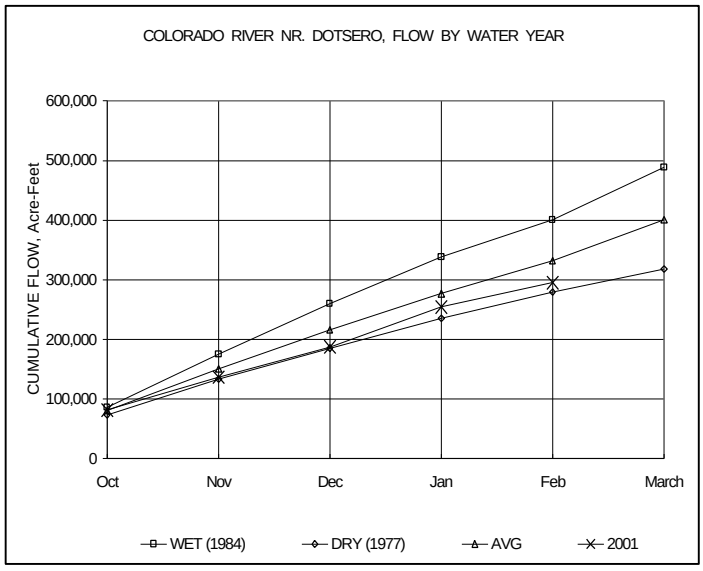
The SWSI value of –2.2 indicates that for February the basin water supplies were below normal. The Natural Resources Conservation Service reports that March 1 snowpack is 85% of normal. Flow at the gaging station Colorado River near Dotsero was 736 cfs, as compared to the long-term average of 985 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 92% of normal as of the end of February. February precipitation was about 90% of average for the basin, but there were large variations from location to location within the basin.

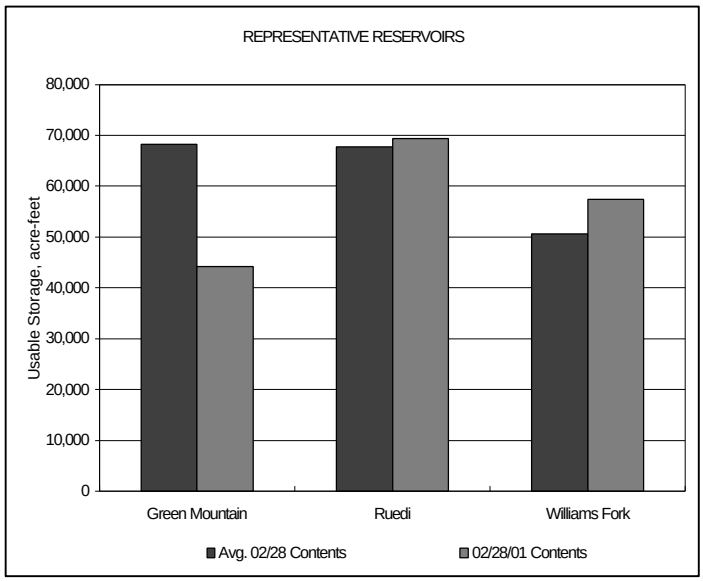
Administrative/Management Concerns

The Shoshone power plant is expected to have both turbines back on line by mid-March. The plant's senior call will continue, but at its full 1,250 cfs rate rather than the approximately 700 cfs rate the plant used when operating under only one turbine during winter maintenance.

The Grand Valley Water Management Study reached a milestone this past summer by completing the design and specifications for seven check structures for the Government Highline Canal and the Palisade pipeline, an administrative spill point. The anticipated completion for the check structures is the end of March. The USBR is concurrently working on a draft contract with Grand Valley municipalities to protect the saved water. The yearly projected savings are estimated at 28,500 acre-feet and they anticipate to save roughly half that amount in 2001.



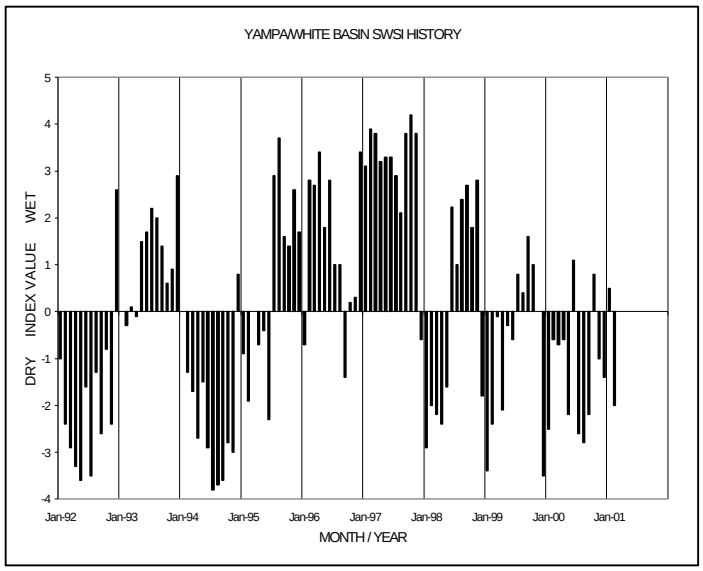




Basinwide Conditions Assessment

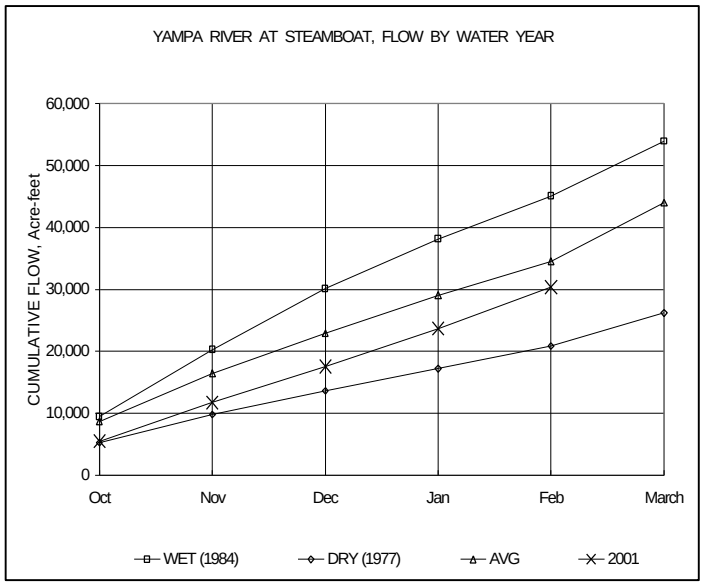
The SWSI value of –2.5 indicates that for February the basin water supplies were below normal. The Natural Resources Conservation Service reports that March 1 snowpack is 82% of normal. Flow at the gaging station Yampa River at Steamboat was 120 cfs, as compared to the long-term average of 98 cfs.

February brought near normal temperatures to the basin. Precipitation was bout 7% above average at the higher elevations. As a result, the average snowpack increased slightly from the previous month. Snowpack numbers as of the end of February varied from 80% of average on the Little Snake drainage to 84% of average on the North Platte drainage.



Outlook

Natural Resources Conservation Service March 1st forecasts for the most probable spring runoff, based on current conditions, are 70% of average for the North Platte River near Northgate, 79% of average for the White River near Meeker, and 78% of average for the Yampa River near Maybell. These predictions are the same as the February 1st forecast.



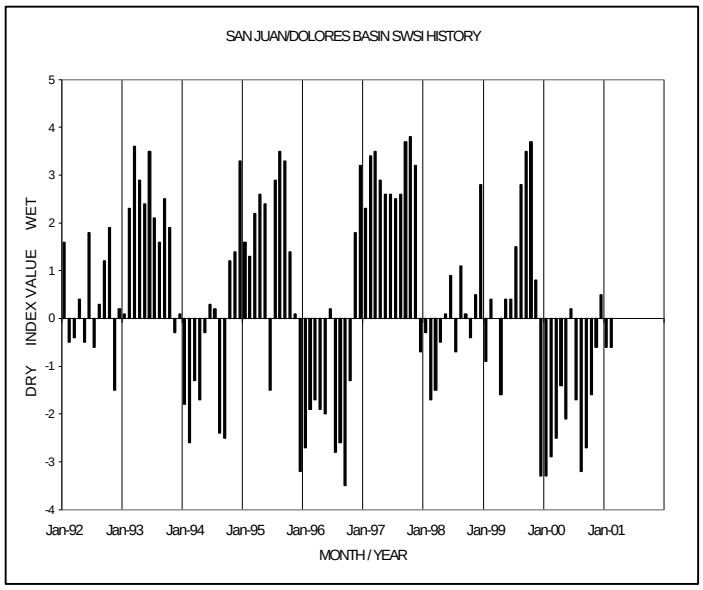
Basinwide Conditions Assessment

The SWSI value of 1.7 indicates that for February the basin water supplies were slightly above normal. The Natural Resources Conservation Service reports that March 1 snowpack is 96% of normal. Flow at the gaging station Animas River near Durango was 197 cfs, as compared to the long-term average of 212 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 76% of normal as of the end of February.

Stream flows, precipitation, and temperatures were typical of February.

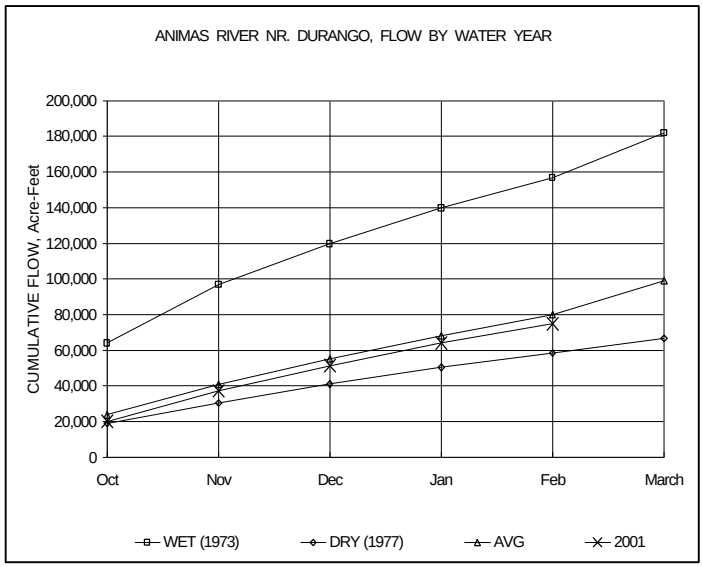
Storms came through the area on February 8th, 12th, and every day after the 22nd, all boosting the snowpack. The last series of storms brought the snowpack in the San Juan Mountains in Hinsdale and Mineral Counties up to the levels the La Plata Mountains had all winter.

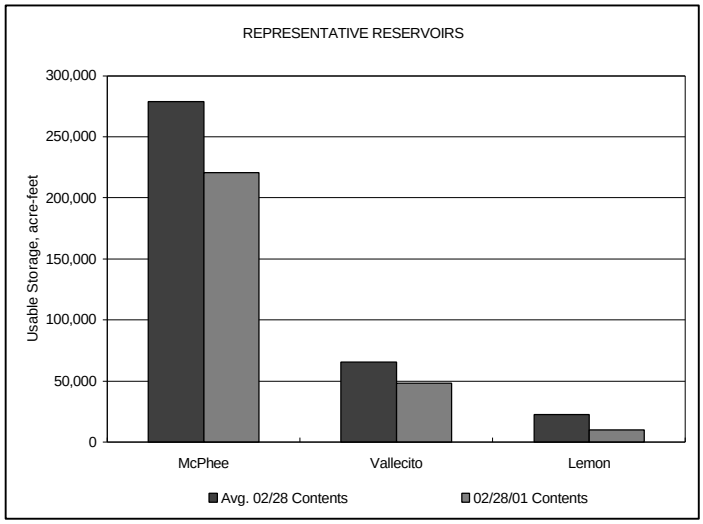
There remains good snow accumulation in the lower elevations. Some melt occurred during days that reached 50°, the effect being to saturate the soils.



Outlook

The water supply looks very promising, and most reservoirs will probably receive enough water to fill. Lemon Reservoir has not increased much, being about 25% of capacity. McPhee Reservoir will need a normal runoff from the Dolores River to have a probable chance to fill.





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