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# COLORADO

## WATER SUPPLY CONDITIONS UPDATE

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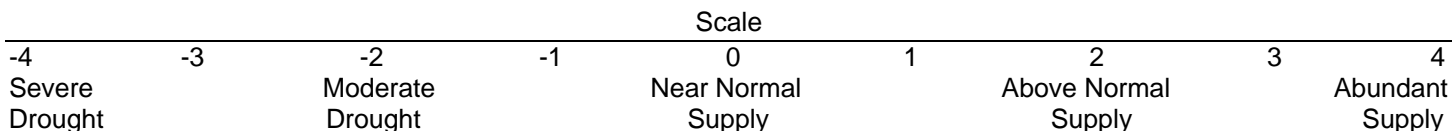
FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES  
 ROOM 818, 1313 SHERMAN ST., DENVER, CO 80203  
 303-866-3581; [www.water.state.co.us](http://www.water.state.co.us)

February 2006

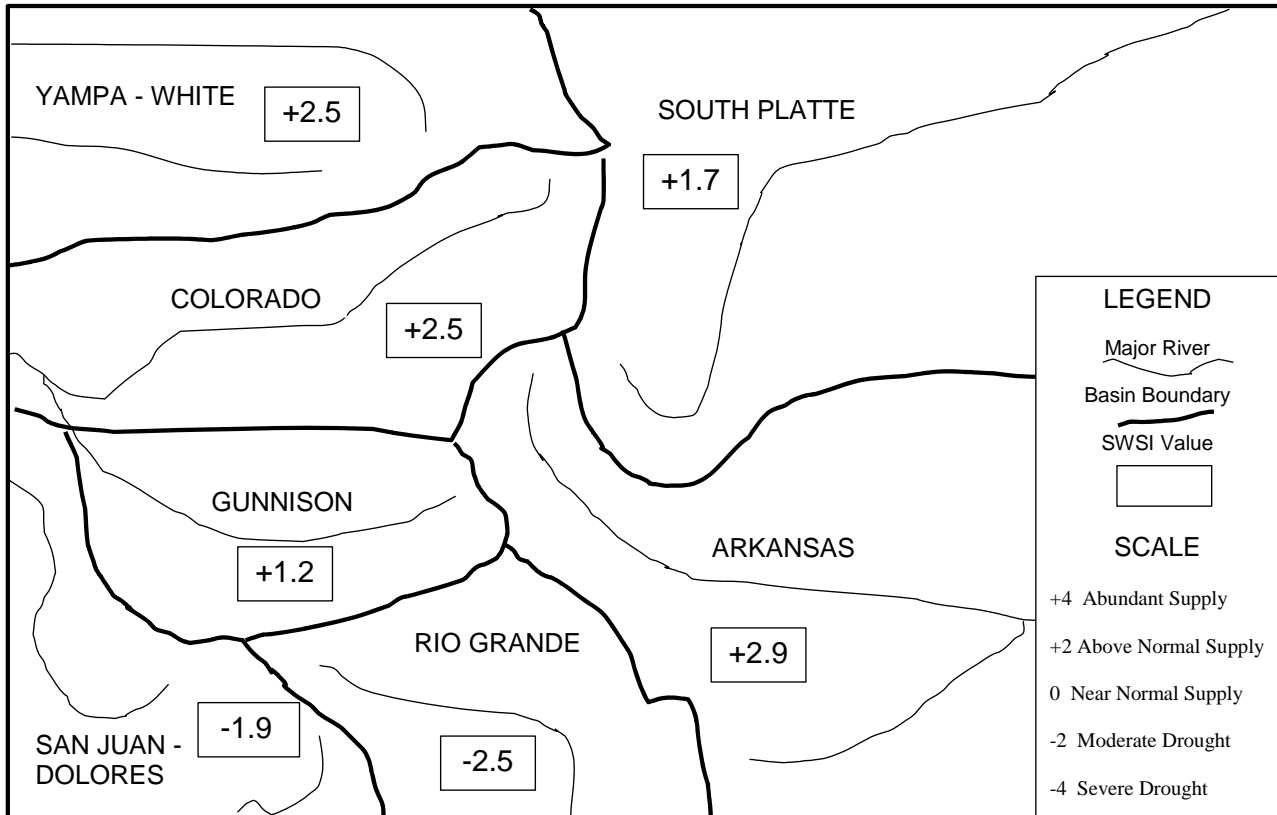
The water supply conditions in this report show an outlook that is good in the northern part of Colorado and the Arkansas Basin, but quite poor in the southwest. The SWSI values range from a high of +2.9 in the Arkansas Basin to a low of -2.5 in the Rio Grande Basin. The SWSI values generally reflect snowpack averages, which ranges from highs of 127% (Colorado Basin) and 124% (Yampa/White Basin) to lows of 43% (Rio Grande Basin) and 54% (San Juan/Dolores Basin).

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 January). 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, 2006, and reflect the conditions during the month of January.

<u>Basin</u>	<u>February 1, 2006 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	+1.7	- 0.2	+1.1
Arkansas	+2.9	- 0.4	+3.2
Rio Grande	- 2.5	+0.2	- 4.7
Gunnison	+1.2	- 0.8	- 0.5
Colorado	+2.5	- 1.1	+3.7
Yampa/White	+2.5	- 1.0	+3.6
San Juan/Dolores	- 1.9	- 0.2	- 3.8



## SURFACE WATER SUPPLY INDEX FOR COLORADO



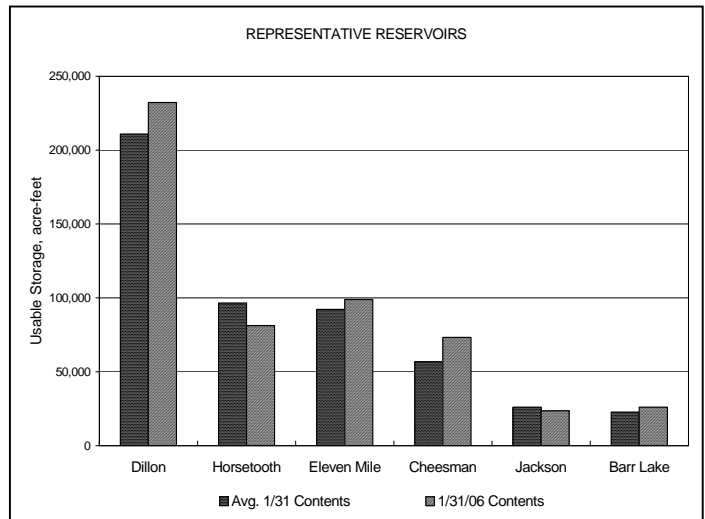
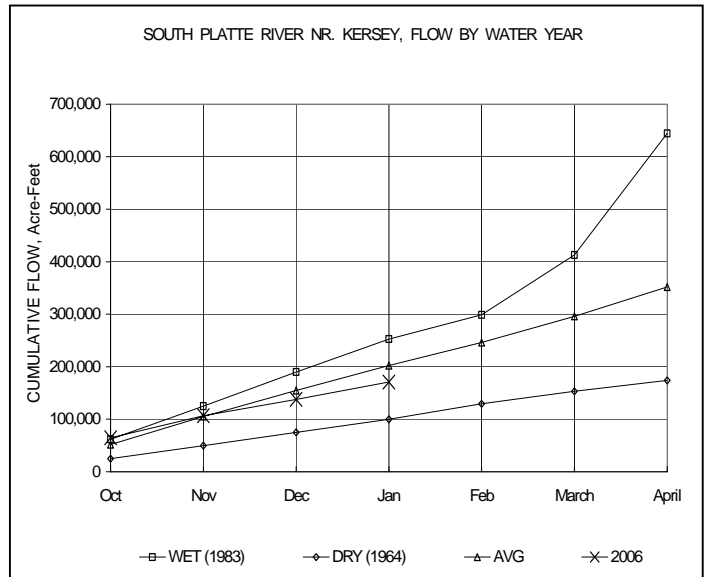
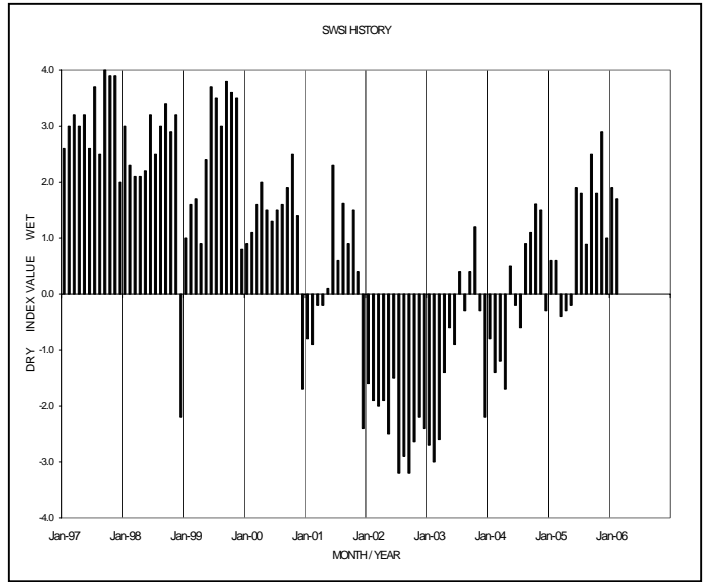
February 1, 2006

Basinwide Conditions Assessment

The SWSI value of 1.7 indicates that for January the basin water supplies were above normal. Cumulative storage for the six reservoirs graphed on this page was 106% of normal as of the end of January. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 79% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 88% of capacity. The Natural Resources Conservation Service reports that February 1 snowpack is 112% of normal. Flow at the gaging station South Platte River near Kersey was 537 cfs, as compared to the long-term average of 656 cfs. Flow at the Colorado/Nebraska state line averaged 98 cfs.

Outlook

Reservoir storage continued as the main diversion in December. The weather continued to be unseasonably warm and there were no restrictions in storage due to weather conditions. Many reservoirs on the mainstem have reached their winter fill and will not pick up again until late February or March. Unless there is a very early call this spring for direct flow uses because of the dry warm conditions, we would anticipate that all the reservoirs on the plains and generally on the mainstem should fill. Snowpack continues to be above average which gives us optimism for the upcoming season. While snowpack is very good, late season snow and rain in the spring are probably the most important factors in determining how good the water year will be.



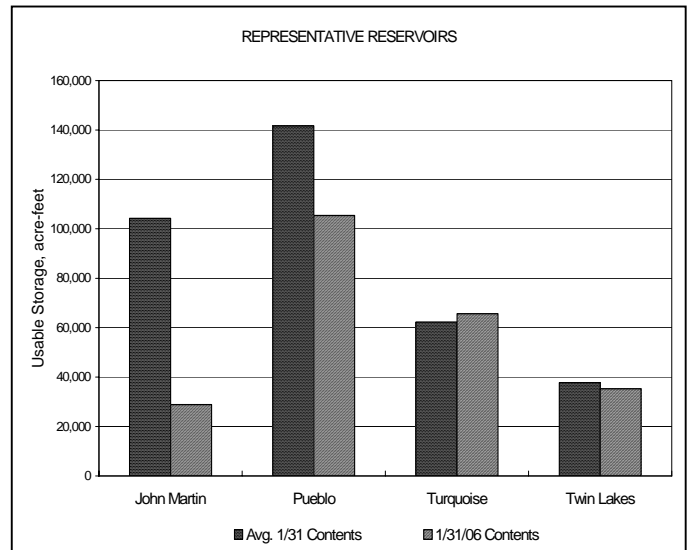
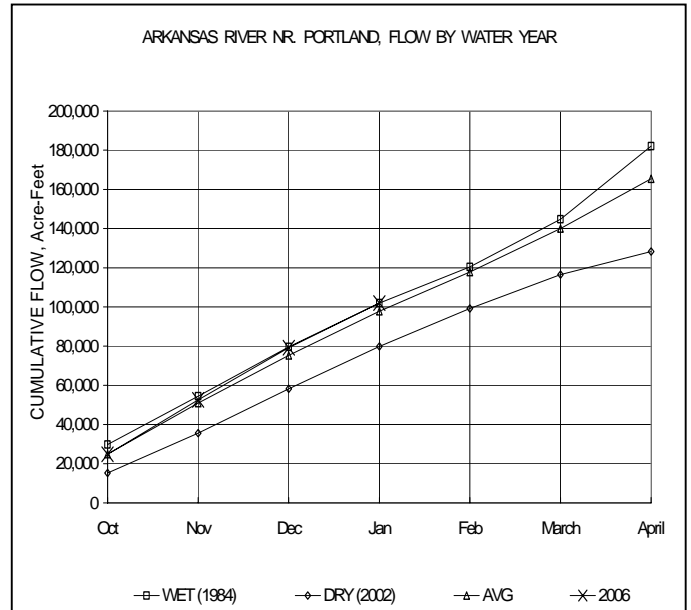
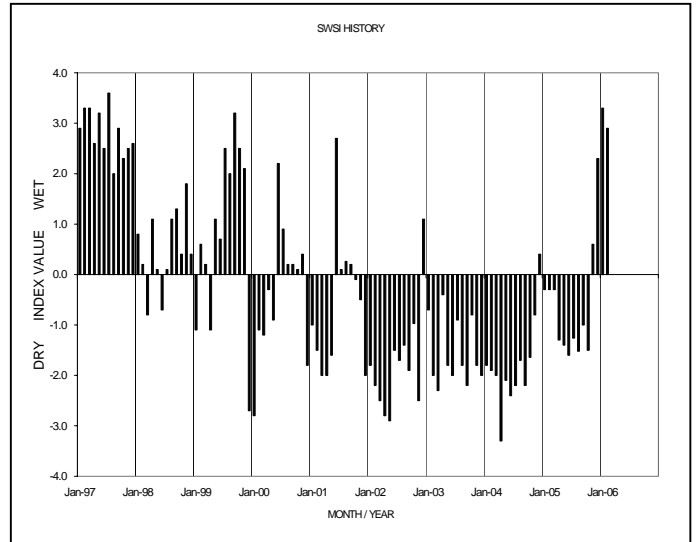
Basinwide Conditions Assessment

The SWSI value of 2.9 indicates that for January the basin water supplies were above normal. The Natural Resources Conservation Service reports that February 1 snowpack is 100% of normal. Flow at the gaging station Arkansas River near Portland was 370 cfs, as compared to the long-term average of 368 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 68% of normal as of the end of January.

Administrative/Management Concerns

Reservoir storage in the Pueblo Winter Water Program totaled 76,893 acre-feet as of the end of January. This storage amount is approximately the same as last year's storage to date and represents 102% of the past five-year average. Conservation storage in John Martin Reservoir has accumulated 10,766 acre-feet versus 13,396 acre-feet as of the end of January last year.

Flow rates through the City of Pueblo were held slightly lower than the start of the Pueblo Winter Water Program last winter so that low flows might be avoided later in the storage season that might impact the reach below Pueblo Reservoir in terms of the Inter-governmental agreement in place for this reach.



Basinwide Conditions Assessment

The SWSI value of -2.5 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 43% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 171 cfs (90% of normal). The Conejos River near Mogote had a mean flow of 44 cfs (92% of normal). Alamosa received only 0.17 inch of precipitation during January and the average daily temperature was nearly 7 degrees above normal extending the streak of above normal temperatures to 7 months. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 87% of normal as of the end of January.

Outlook

The outlook for the upper Rio Grande basin is poor. With the lowest basin snowpack in the state, local water administrators are warning users of continued drought. Updated forecasts are predicting area stream flow in 2006 to be in the range of 40 to 73% of normal.

Administrative/Management Concerns

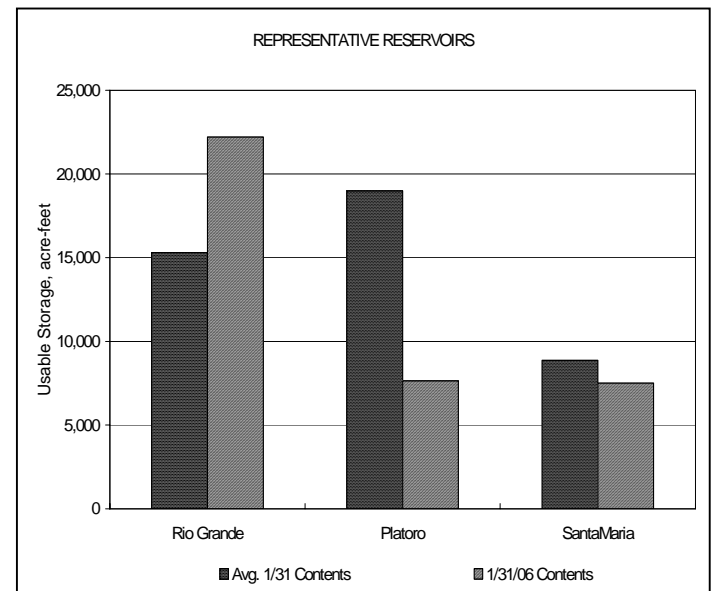
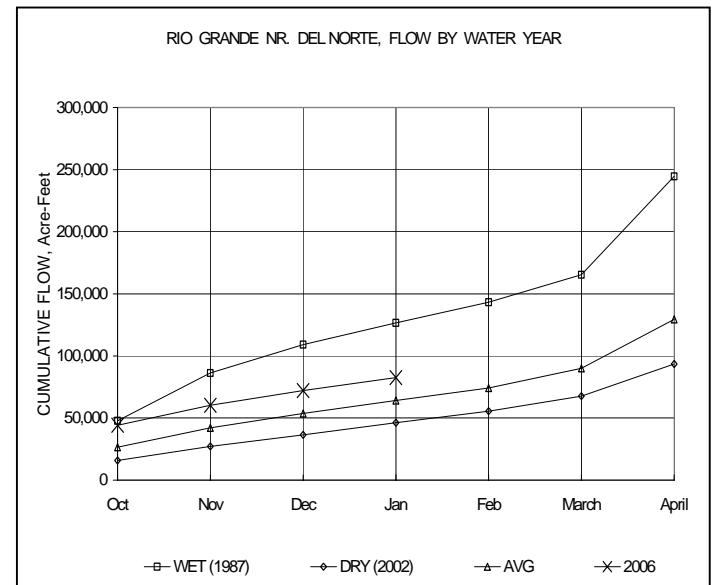
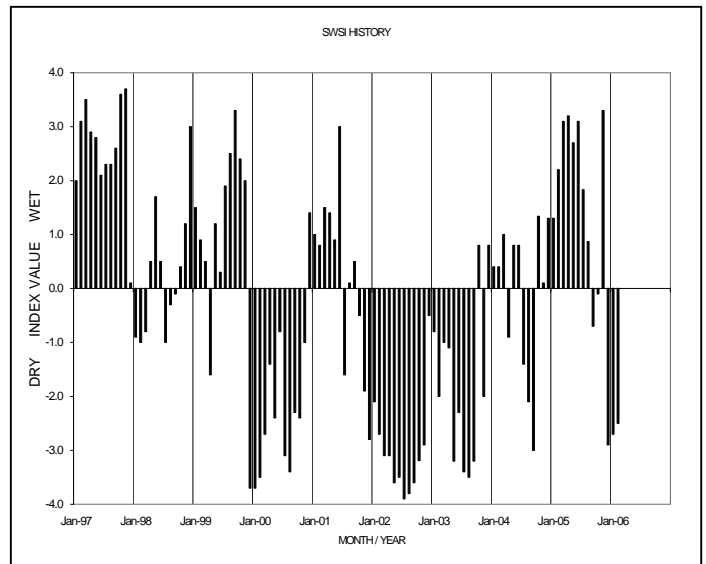
The trial for Case No. 04-CW-24 "Rules Governing New Withdrawals of Ground Water in Water Division 3 Affecting the Rate or Direction of Movement of Water in the Confined Aquifer System" began on January 30, 2006. The trial is scheduled for six weeks and is the most significant matter to be heard before the Water Judge since the 84-CW-46 American Water Development Inc. trial.

The aquifers of the San Luis Valley continue to be in great peril despite an above normal runoff in 2005. No gain in storage was found in a study area of the unconfined aquifer of the Closed Basin during 2005 despite an annual runoff of 120%. The overall ground water storage in that aquifer is nearly one million acre-feet below the reference storage level in 1976. This aquifer provides a large portion of the water supply for irrigation of over 200,000 acres north of the Rio Grande. The aquifer is normally recharged by ditch diversions from the Rio Grande. Below average runoff has resulted in a decrease in this aquifer storage of over 600,000 acre-feet since January of 2000.

Much of the artesian head on the confined aquifer has also been lost. This affects homeowners and ranchers alike as they struggle to find an alternate water supply.

Public Use Impacts

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



Basinwide Conditions Assessment

The SWSI value of +1.2 indicates that for January the basin water supplies were above normal. The Natural Resources Conservation Service reports that February 1 snowpack is 97% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 51 cfs, as compared to the long-term average of 45 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 112% of normal as of the end of January.

Outlook

The snowpack figures for the Upper Gunnison basin still appear to be about normal, with the forecasted inflow to Blue Mesa Reservoir at 112% of normal.

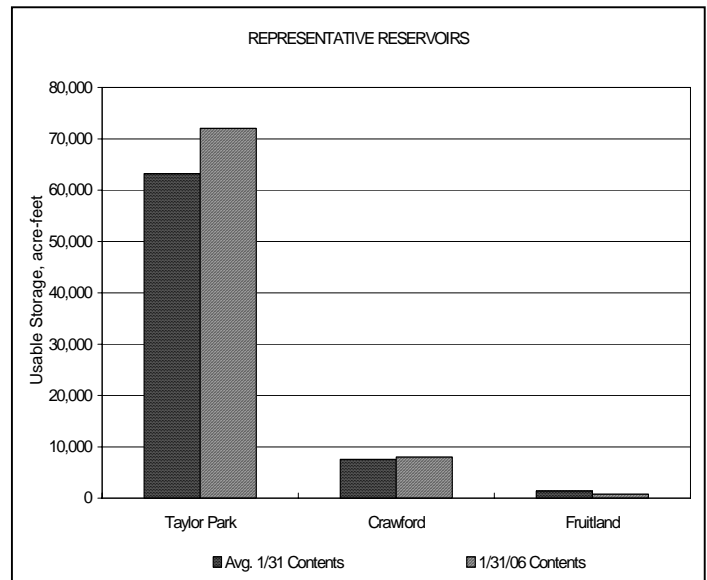
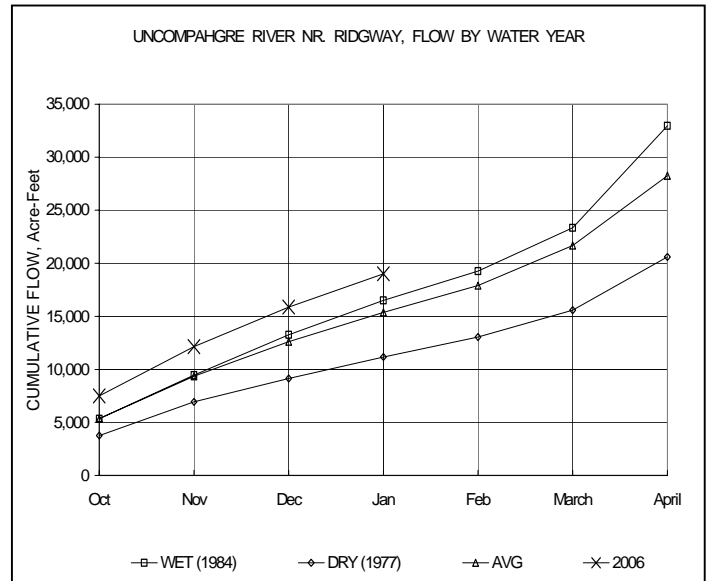
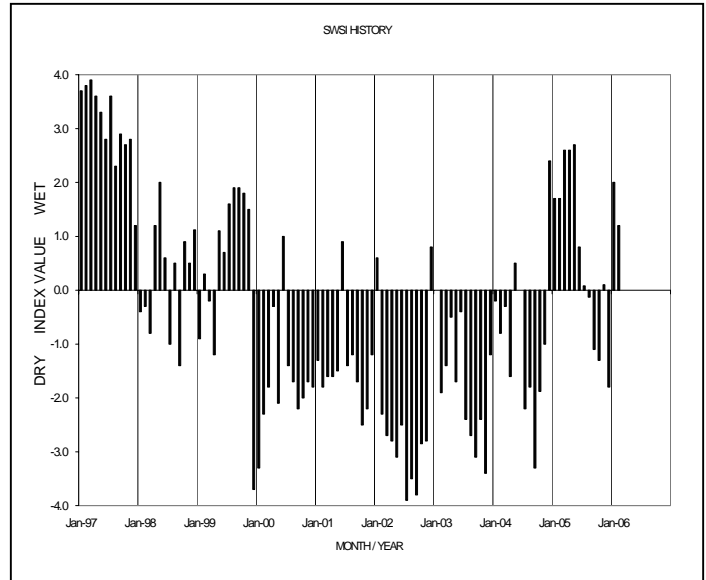
Administrative/Management Concerns

The snowpack varies throughout the basin, being the best in the upper Gunnison, around 90% on the Grand Mesa and Uncompahgre, but less than that in the San Miguel. The Lake City area is probably the worst.

At the last Aspinall Unit operations meeting, the USBR forecasted that they could fill Blue Mesa Reservoir this year. Blue Mesa Reservoir is at a significantly higher level than last year. The USBR also increased the releases out of the Aspinall from 500 cfs to 700 cfs, forecasting they would have enough inflow to sustain the higher releases. The months of December, January, and February are critical to power generation at the Unit, so it was imperative to make the decision in early January.

Public Use Impacts

The water using public is glad to see the snowpack levels above or near normal, but the southern part of the basin could use more snow. Hopefully, a decent snowpack will continue to allow the underground aquifers to be recharged so that springs that dried up in the drought will start to flow again.



Basinwide Conditions Assessment

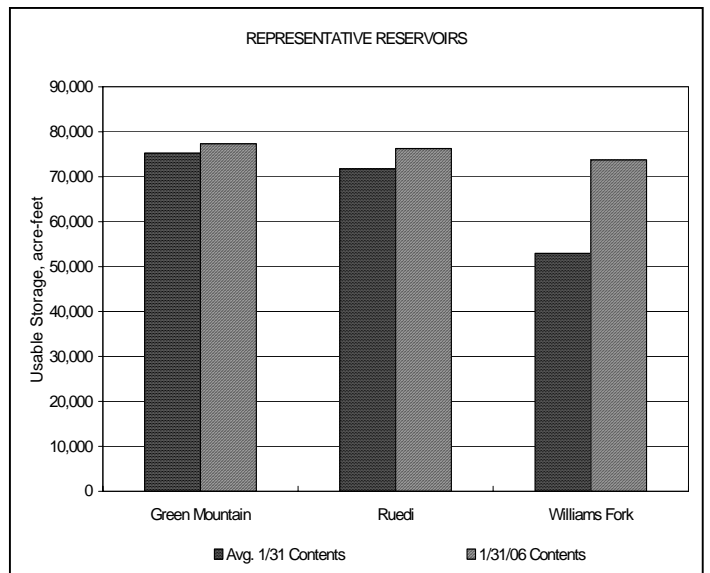
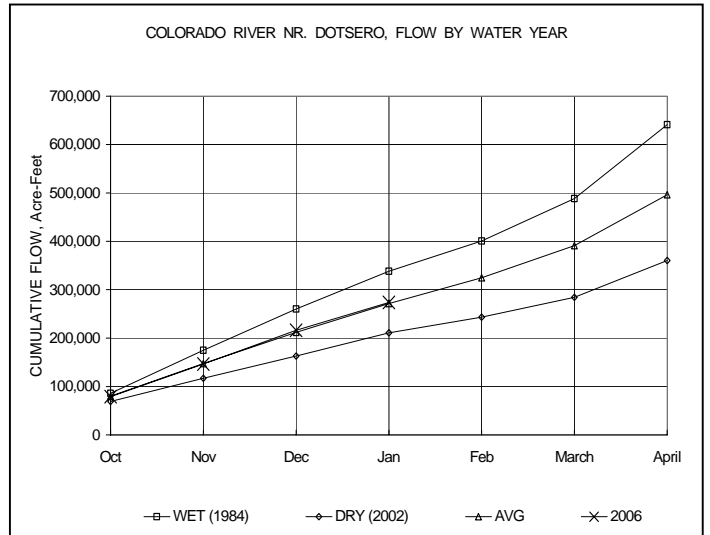
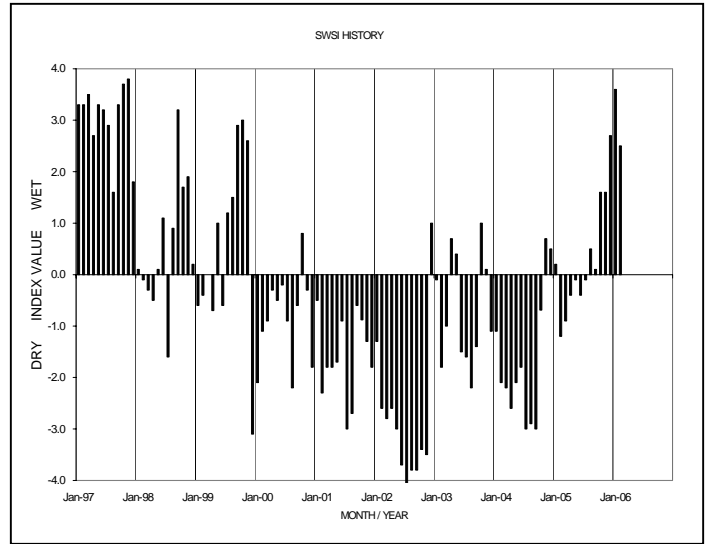
The SWSI value of 2.5 indicates that for January the basin water supplies were above normal. The Natural Resources Conservation Service reports that February 1 snowpack is 127% of normal. Flow at the gaging station Colorado River near Dotsero was 934 cfs, as compared to the long-term average of 974 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 114% of normal as of the end of January.

Outlook

January precipitation was near average for the entire Colorado River basin, with the best snowfall occurring in the upper tributaries, continuing the area trend for the winter. As a result, snowpack for the entire basin is about 125 percent of average in early January with the best snowpack in the upper basin.

The Colorado Basin River Forecast Center (NWS) February 1 volume forecasts show above average volume runoff (January - July) for all tributaries of the Colorado River except Plateau Creek, with a forecast unchanged from last month of 87 percent of average. The Blue and Eagle Rivers remain highest, with forecasts of over 130 percent of average. The forecast at the Dotsero station, which measures flow available to the Shoshone Power Plant, is 129 percent of average.

The mainstem administrative senior call from Shoshone Power Plant remains at only 700 cfs in February, with the river easily satisfying this amount. In fact, some reservoirs, such as Dillon, Green Mountain, and Ruedi, have increased their outflows in anticipation of above average spring runoff.



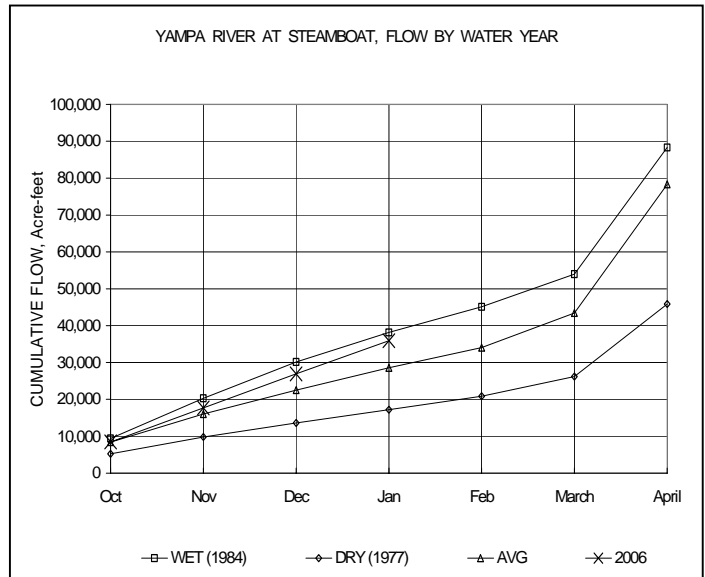
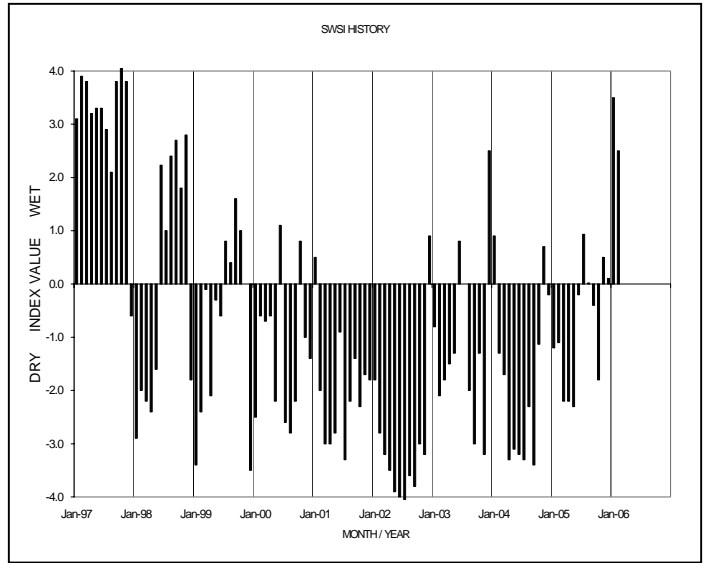
Basinwide Conditions Assessment

The SWSI value of 2.5 indicates that for January the basin water supplies were above normal. Flow at the gaging station Yampa River at Steamboat was 146 cfs, as compared to the long-term average of 99 cfs.

January precipitation continued the trend of above average for the basin. Precipitation for the month averaged 110% of normal as measured at the SNOTEL sites operated by the NRCS. Total precipitation for the current water year is 131% of average. The overall snowpack for the Division was 124% of average. This is the first time since 1997 that the combined snowpack is above average at this point in the year. For the individual basins the snowpack at the end of the month were: 126% of average for the North Platte River Basin, 133% of average for the Yampa River Basin, and 120% of average for the White River Basin. In late January the ski area in Steamboat Springs reported that total snowfall at the summit of the mountain surpassed 300 inches for the year. The February 1 runoff forecast from the NRCS for the January through July period are 133% of average for the North Platte River at Northgate, 136% of average for the Yampa River near Februarybell, 127% of average for the Little Snake River near Dixon, and 121% of average for the White River near Meeker. These forecasts are little changed from the previous month.

Public Use Impacts

There is abundant snow in the mountains for all outdoor activities. Elkhead Reservoir remains closed to all recreational activities.





Basinwide Conditions Assessment

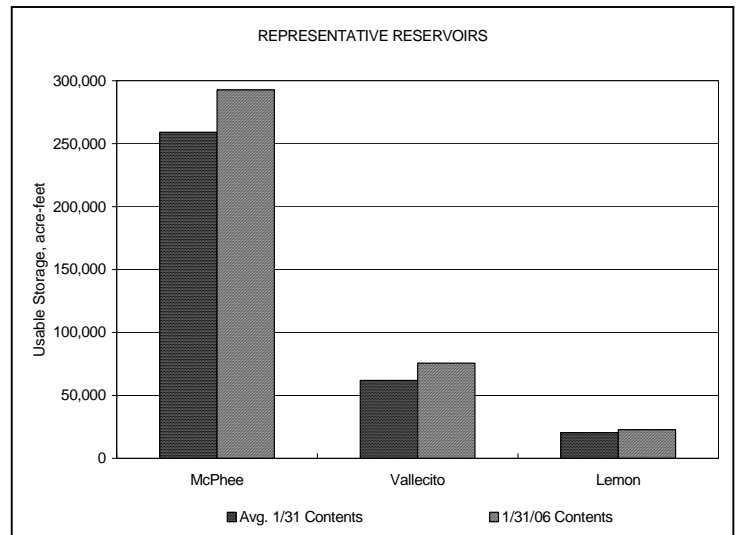
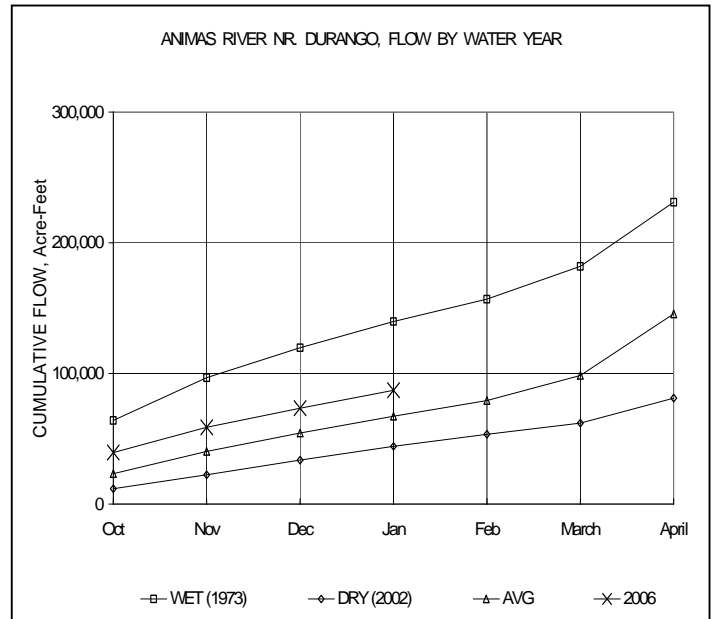
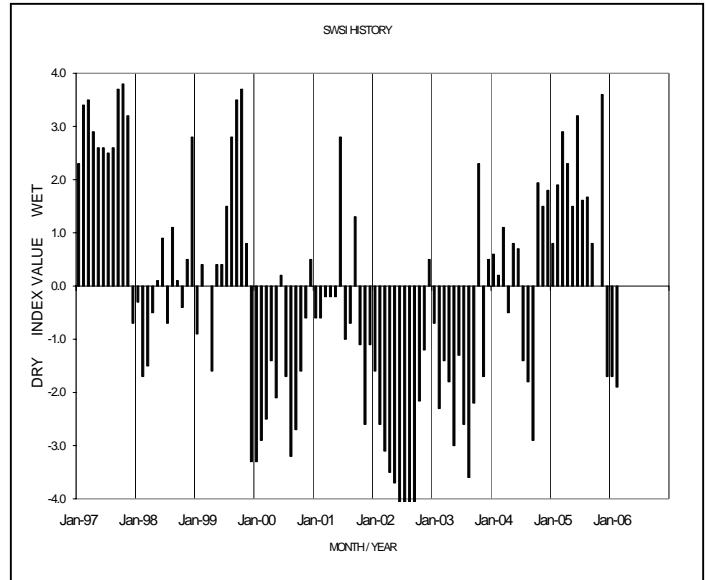
The SWSI value of -1.9 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 54% of normal. Flow at the gaging station Animas River near Durango was 223 cfs, as compared to the long-term average of 211 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 115% of normal as of the end of January.

January weather continued the drier than normal pattern of the previous two months. In Durango, only 1.14 inches of precipitation were recorded, 56% of average. So far this Water Year Durango is at 70% of normal precipitation. The snow course above Vallecito Reservoir rose dramatically from last months 17% of normal to 44% of normal.

Stream flows remained near normal to slightly below normal for the month due to the warm temperatures melting of the meager snowpack. The Animas River peaked at 228 cfs on February 1st and averaged 223 cfs for the month, which is 110% of normal. .

Reservoirs continued to be the bright spot in the water supply outlook. The three major reservoirs still maintained above average storage at the end of the month.

The temperatures remained well above normal. Overall Durango was 6.6° above its 30-year average high and 4.1° above its 30-year average low.



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