COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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December 2005

The water supply conditions for Colorado are generally good in the northern and eastern parts of the state, but poor in the southwest. The SWSI index values range from a high of +2.7 in the Colorado Basin to a low of -2.9 in the Rio Grande Basin. The values this month relate closely with the snowpack averages, as reported by the NRCS. The highest snowpack report (measured as the snow water equivalent percent of normal for the time of year) is highest in the Colorado Basin at 123% of normal and lowest in the Rio Grande and San Juan-Dolores Basins at 23% and 28% of normal respectively.

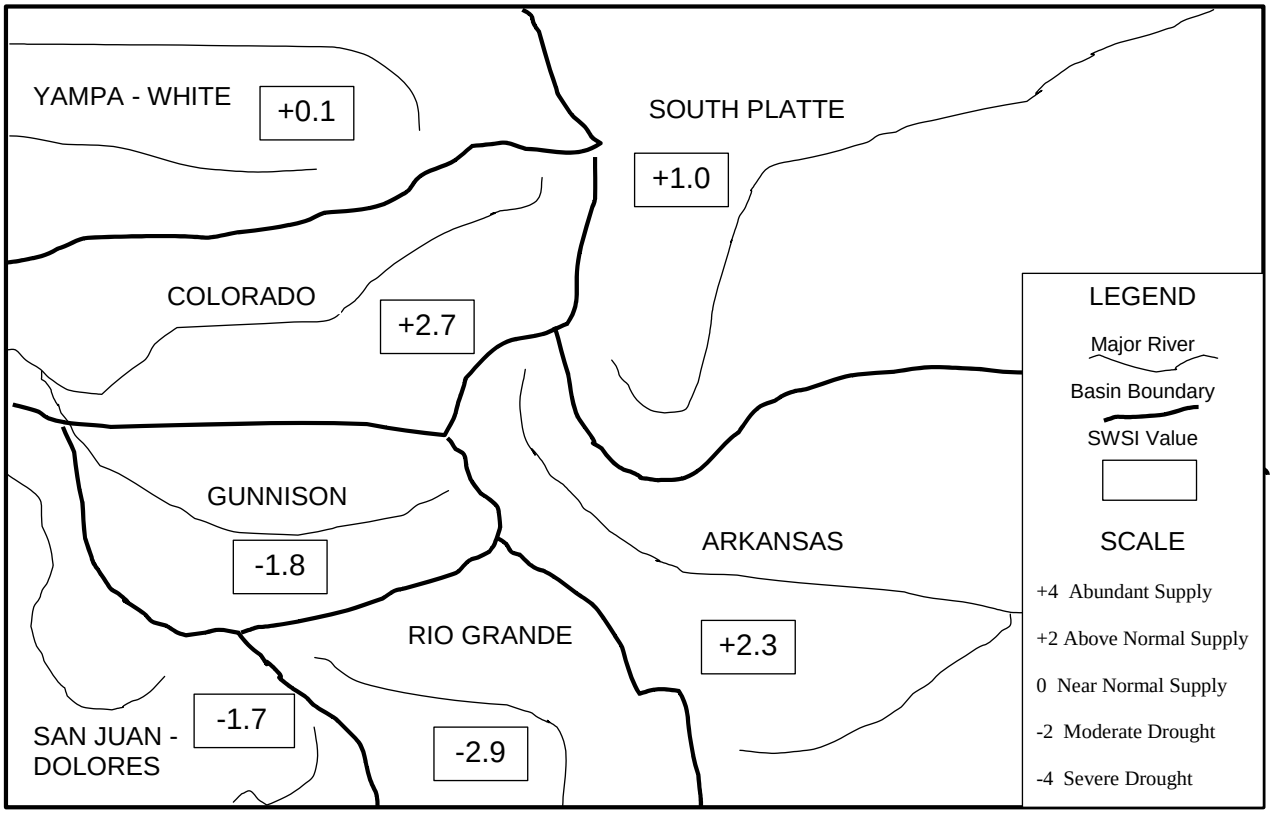
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on snowpack, reservoir storage, and precipitation for the winter 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 December 1, 2005, and reflect the conditions during the month of November.

Basin	November 1, 2005 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+1.0	-1.9	+1.3
Arkansas	+2.3	+1.7	+1.9
Rio Grande	-2.9	-6.2	-4.2
Gunnison	-1.8	-1.9	-4.2
Colorado	+2.7	+1.1	+2.2
Yampa/White	+0.1	-0.4	+0.3
San Juan/Dolores	-1.7	-5.3	-3.5

Scale

-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

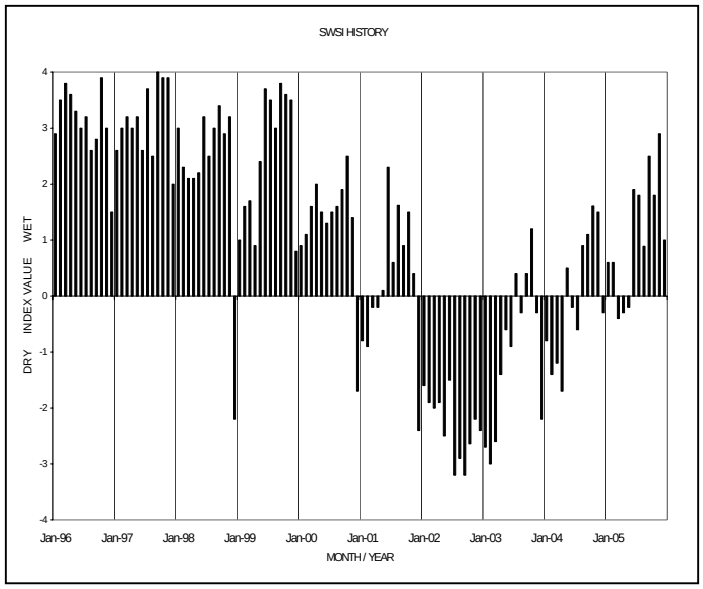
SURFACE WATER SUPPLY INDEX FOR COLORADO



December 1, 2005

Basinwide Conditions Assessment

The SWSI value of +1.0 indicates that for November the basin water supplies were slightly above normal. Cumulative storage for the six reservoirs graphed on this page was 53% of normal as of the end of November. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 54% 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 December 1 snowpack is 118% of normal. Flow at the gaging station South Platte River near Kersey was 709 cfs, as compared to the long-term average of 737 cfs. Flow at the Colorado/Nebraska state line averaged 71 cfs.

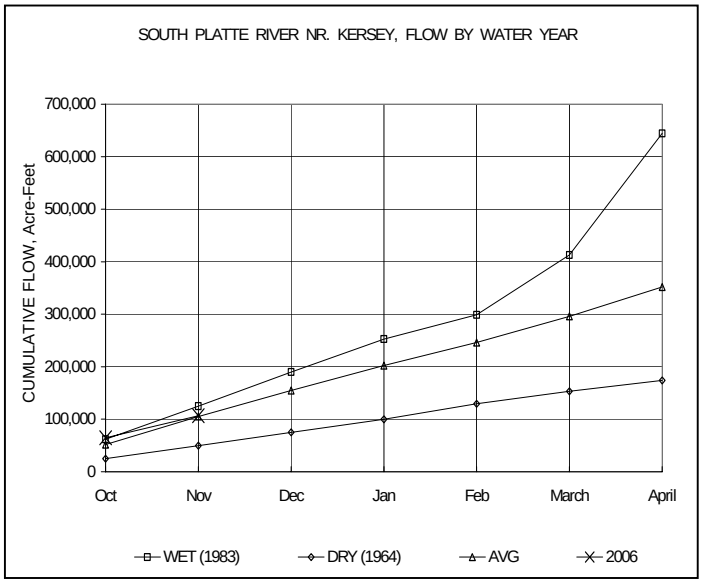


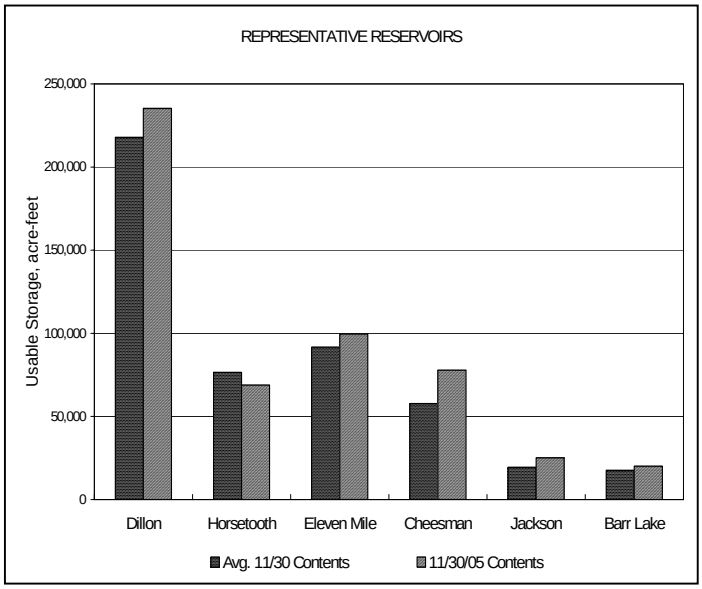
Outlook

With the start of the new water year and end of the irrigation season, water not needed for domestic purposes was stored during November. River flow was approximately average in the basin for this time of year. Overall storage conditions are slightly better than last year and are also what is normally expected this time of year.

Early snowpack was significantly above average in the South Platte basin at the end of the month. This much better than average early snowpack bodes wells for water supply next spring and summer throughout the basin.

As has occurred the last several years, there was a storage call throughout the basin except in District 64, below the Washington County line, for the whole month of November. We expect the calls for storage to be less senior this year than the last few years and are optimistic all the major reservoirs will fill this year even without an extremely wet spring. In addition to stream flow, storage in some places may be limited by weather conditions during the next three months of winter.





Basinwide Conditions Assessment

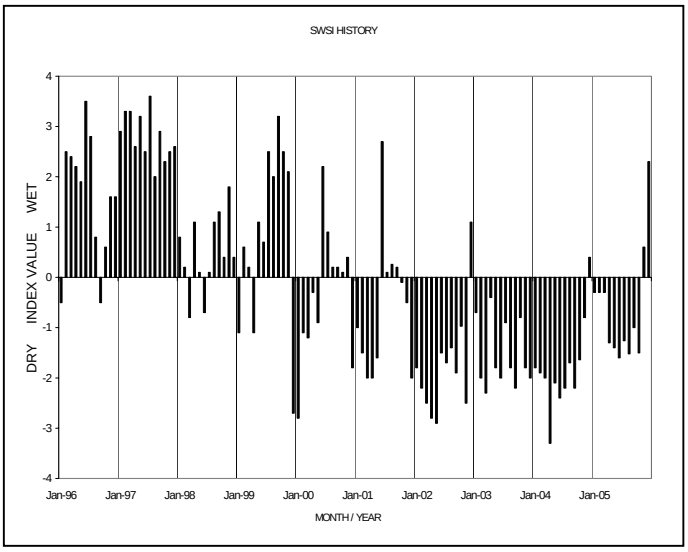
The SWSI value of +2.3 indicates that for November the basin water supplies were above normal. The Natural Resources Conservation Service reports that December 1 snowpack is 83% of normal. Flow at the gaging station Arkansas River near Portland was 466 cfs, as compared to the long-term average of 439 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 69% of normal as of the end of November.

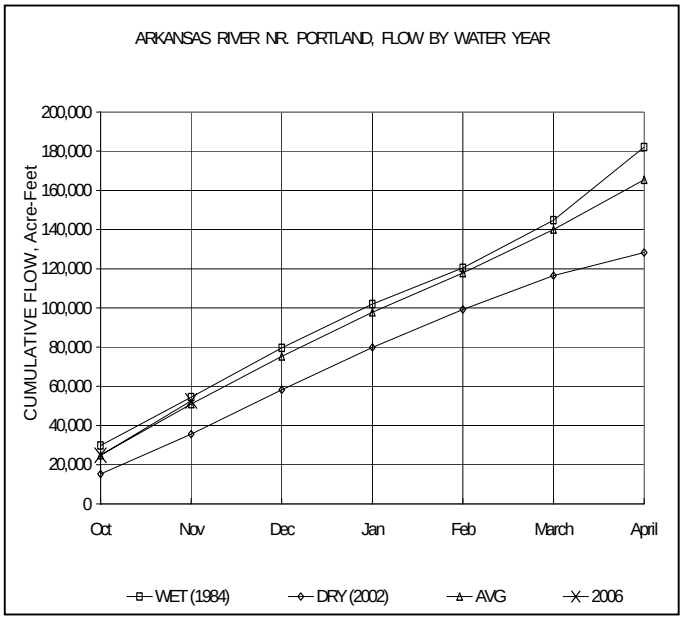
Outlook

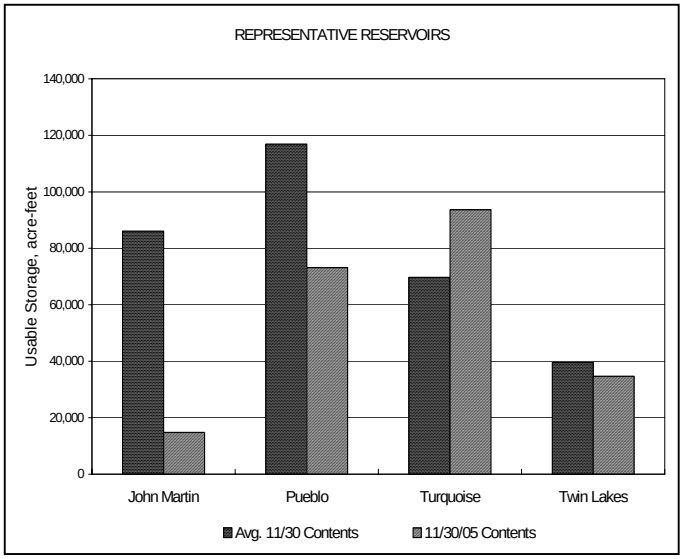
Winter Compact storage began in John Martin Reservoir on November 1, 2005. The Pueblo Winter Water Program began operation on November 15, 2005 with storage taking place initially in Pueblo and John Martin Reservoirs and under the Fort Lyon Canal system in Adobe Creek Reservoir.

Administrative/Management Concerns

Tri-State Generation and Transmission Association announced plans to begin acquiring water rights to supply a 600-megawatt power plant they intend to build in the lower Arkansas valley approximately ten years from now. The power plant demand is expected to be for approximately 20,000 acre-feet of consumable water.



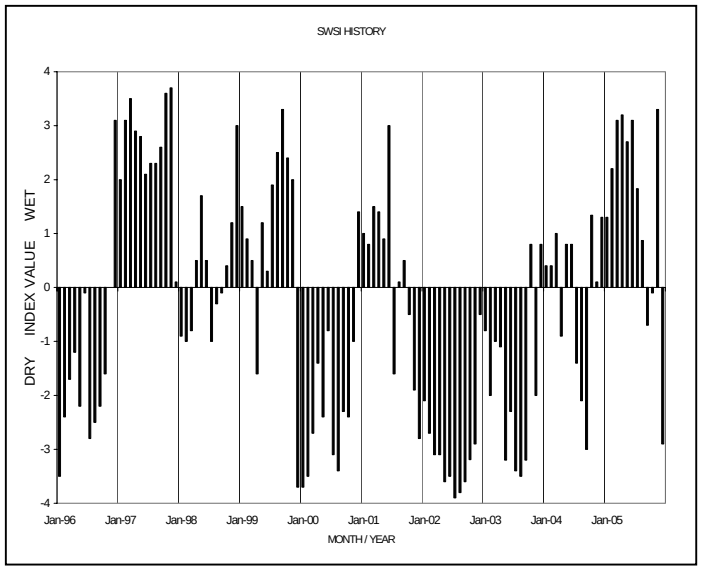




Basinwide Conditions Assessment

The SWSI value of –2.9 indicates that for November the basin water supplies were below normal. The Natural Resources Conservation Service reports that December 1 snowpack is 23% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 270 cfs (94% of normal). The Conejos River near Mogote had a mean flow of 155 cfs (160% of normal). The high flows on the Conejos were the result of a release of nearly 4000 acre-feet from Platoro Reservoir for Rio Grande Compact delivery requirements. In general, stream flow in the basin was near normal due to mild temperatures during November and a melt of the early snowfall. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 81% of normal as of the end of November.

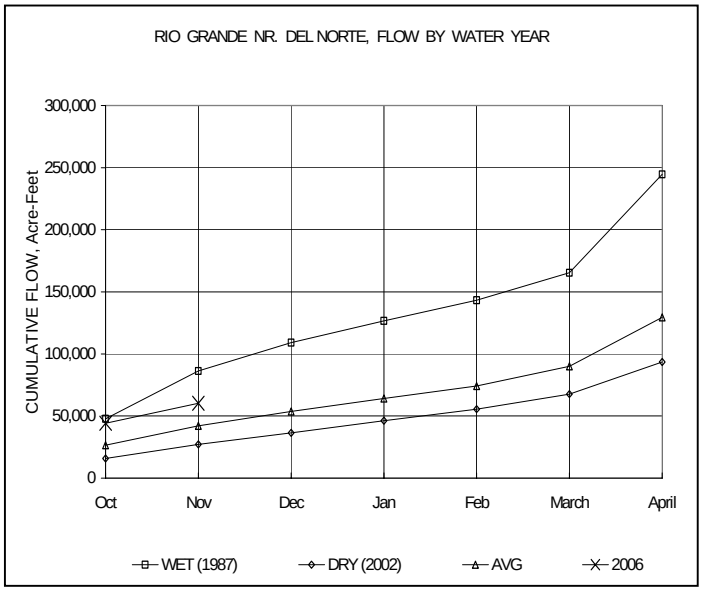
Warmer than normal temperatures have been the rule in 2005 and November was no exception. The average temperature in Alamosa was four degrees above normal for the month.



Outlook

The current snowpack is extremely poor! Comparison with the past several years shows that the current level is worse even than that on the same date in the fall of 2001, which led to the drought of 2002. The southern end of the state has not received much benefit from the snowstorms that have blanketed the northern portion of the state.

The forecasted runoff is also dismal. Without above normal snowfall from now until spring, the likelihood of repeating a 2002-type year is ominous

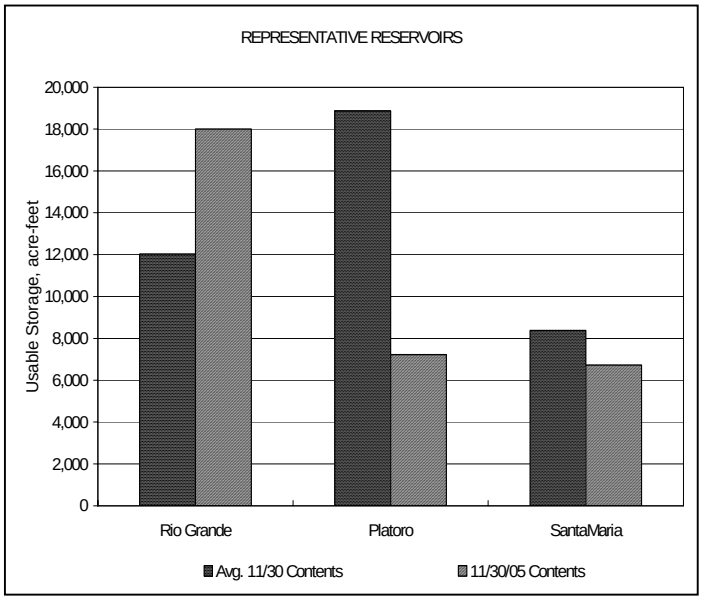


Administrative/Management Concerns

Water users on the Conejos River and its tributaries ceased diverting water for irrigation at the beginning of November for Compact delivery requirements. Diversions from the Rio Grande and its tributaries stopped on November 7th. The delivery requirements for the Conejos and the Rio Grande should be met or exceeded this year.

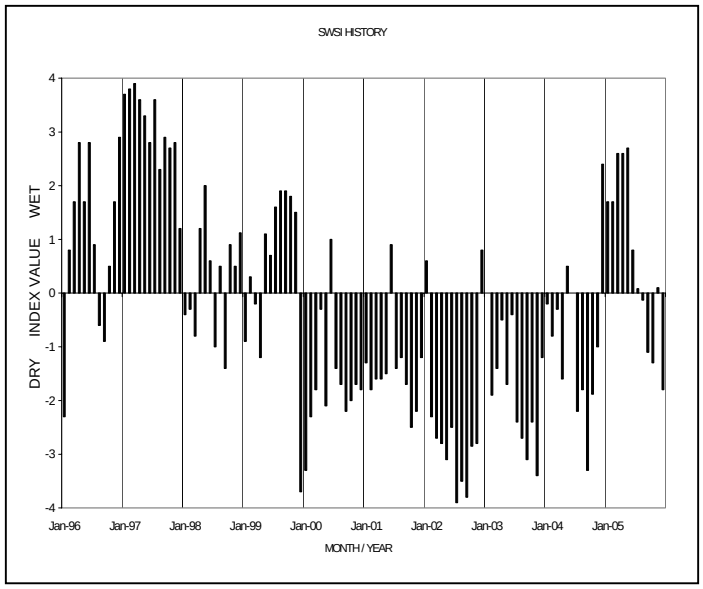
Public Use Impacts

The first part of November was very mild, with clear skies, warm temperatures and low wind. As pleasant as that was for area residents, the resultant lack of snowpack in the higher elevations doesn't bode well for winter sports enthusiasts.



Basinwide Conditions Assessment

The SWSI value of –1.8 indicates that for November the basin water supplies were below normal. The Natural Resources Conservation Service reports that December 1 snowpack is 73% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 78 cfs, as compared to the long-term average of 67 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 109% of normal as of the end of November.



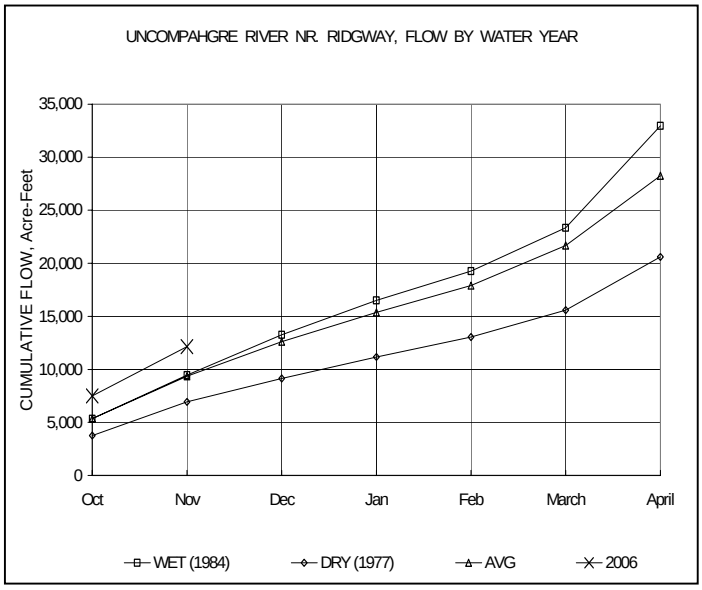
Outlook

The month of November was not a good precipitation month for the Gunnison Basin. The snowpack numbers currently average 92% while the precipitation is at 105% of average. It is still too early to get a good indication from the snowpack numbers. Normally, forecasters use the first of January readings as the first indication of the upcoming spring runoff amounts.

Administrative/Management Concerns

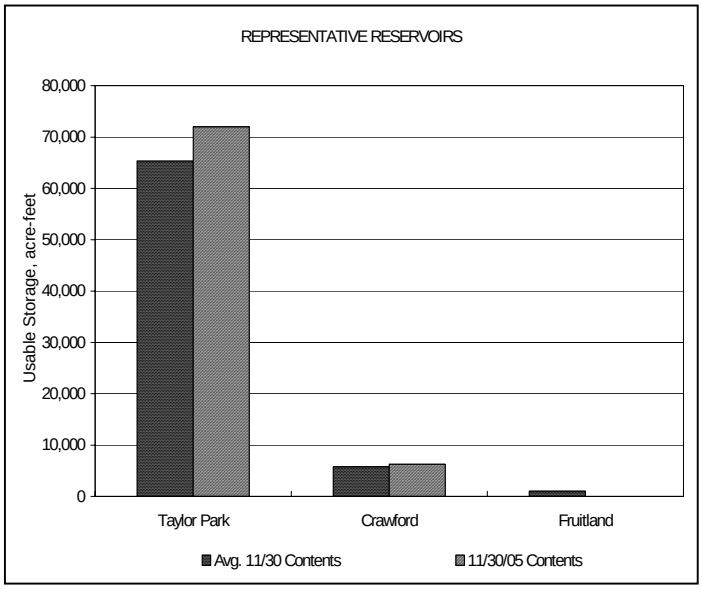
This is reservoir storage season, and most reservoirs are shut down to minimum flows in hopes they can capture winter flows and boost storage before spring runoff. After the good runoff year, the reservoirs on the Grand Mesa are in very good shape going into the winter with twice the normal amount of carryover storage. The rest of the basin reservoirs are in good shape as well.

At the Aspinall Unit, December through March are important power production months for the three facilities. The winter releases appear to have been set at 500 cfs. This amount will gradually drawn Blue Mesa Reservoir throughout the winter. The releases are likely to be adjusted again in January after the preliminary forecast comes in, as they try to run as much as possible to produce power.



Public Use Impacts

Hopefully, the recent snowfall has covered the ground and protected the excellent soil moisture that was obtained in September and October. Although the middle part of the State has not been getting as much snow as the northern part, there is plenty of opportunity left this winter. Of course, winter recreationalists and irrigators are hoping for more snow.



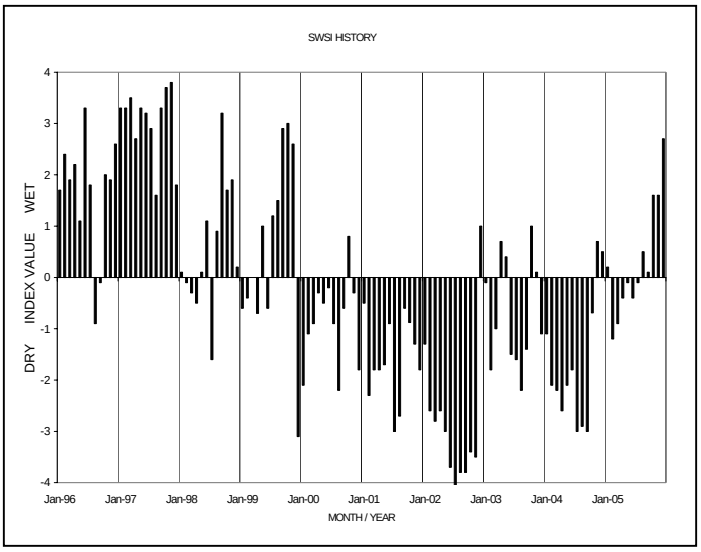
Basinwide Conditions Assessment

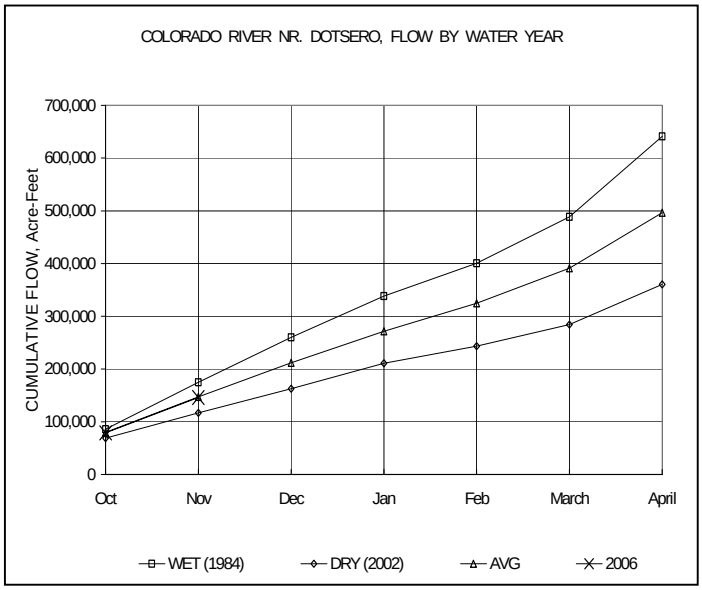
The SWSI value of 2.7 indicates that for November the basin water supplies were above normal. The Natural Resources Conservation Service reports that December 1 snowpack is 123% of normal. Flow at the gaging station Colorado River near Dotsero was 1,131 cfs, as compared to the long-term average of 1,134 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 110% of normal as of the end of November.

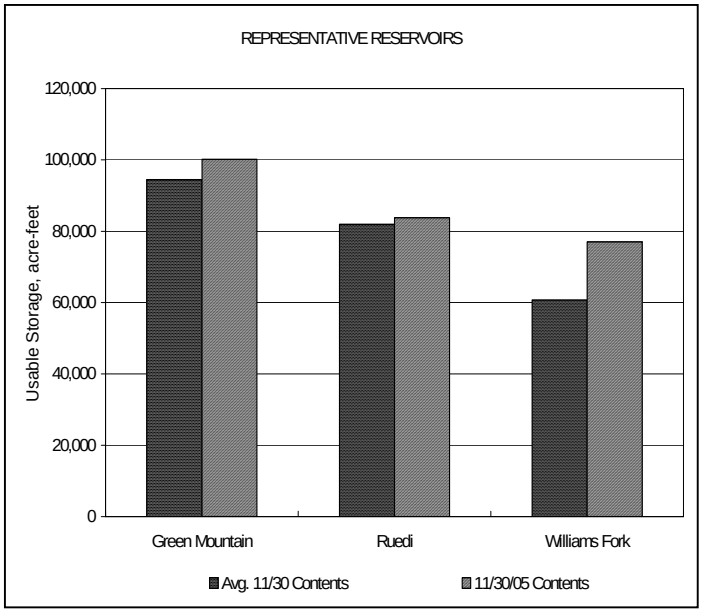
Early December snowpack is above average for most of the Colorado River basin. Well above average snowpack can be found in the following basins: Upper Colorado (i.e., Grand County), Blue River, and Fryingpan River. One area with moderately below average snowpack is the Grand Mesa/West Elks area.

Public Use Impacts

Ski areas are in good shape for the upcoming holiday season.



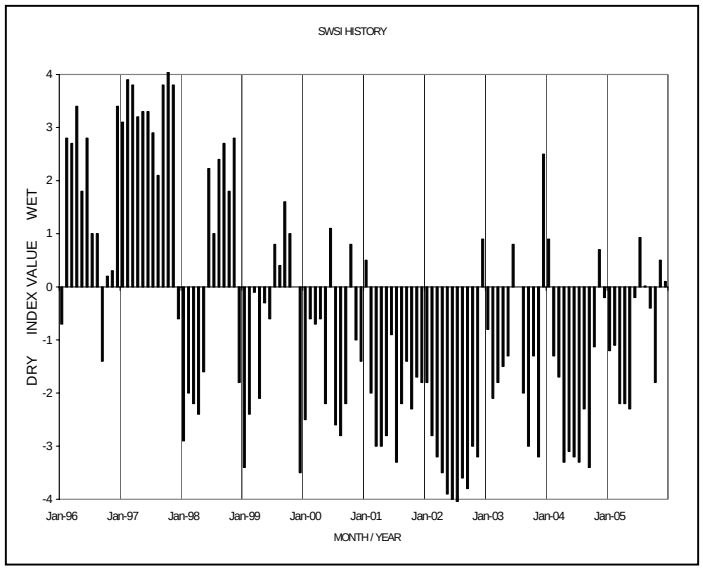


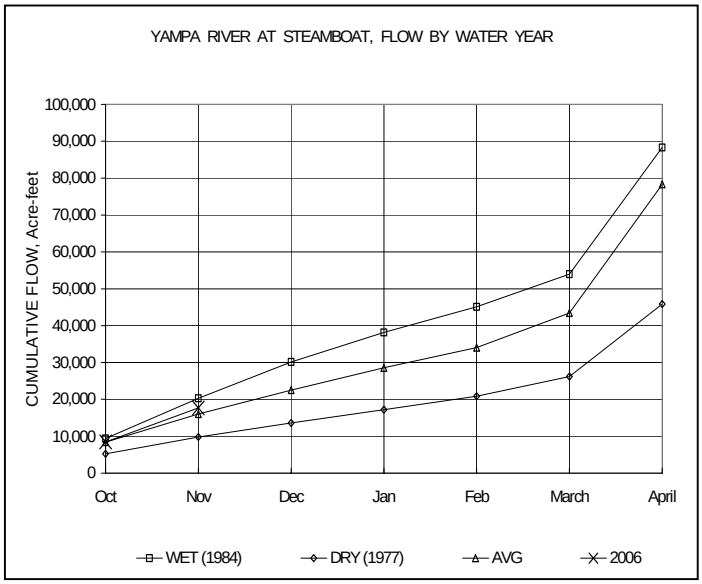


Basinwide Conditions Assessment

The SWSI value of +0.1 indicates that for November the basin water supplies were normal. Flow at the gaging station Yampa River at Steamboat was 155 cfs, as compared to the long-term average of 129 cfs.

November precipitation was above average for the basin. After starting out the month with a few precipitation events, the month ended with a series of significant storms moving through the area. Precipitation for the month averaged 138% of normal for the basins as measured at the SNOTEL sites operated by the NRCS. Of the 25 sites located throughout the basins, only one recorded precipitation below normal amounts, that being 94% of average. The highest total was 180% of average recorded at the Trapper Lake snotel. At the end of the month, snow pack totals were 107% of average for the Laramie and North Platte Basins and 103% of average for the Yampa and White River Basins. The ski area in Steamboat Springs reported that snowfall this November was the highest on record for the mid-mountain measurement site.





Basinwide Conditions Assessment

The SWSI value of –1.7 indicates that for November the basin water supplies were below normal. The Natural Resources Conservation Service reports that December 1 snowpack is 28% of normal. Flow at the gaging station Animas River near Durango was 323 cfs, as compared to the long-term average of 285 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 118% of normal as of the end of November.

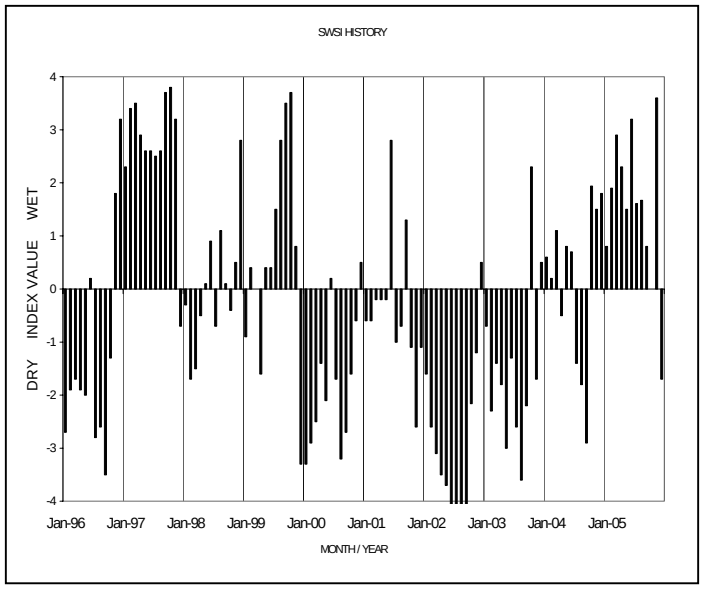
November weather did not continue the wetter than normal pattern of the previous two months. In Durango, only 0.30 inches of precipitation were recorded, 15% of average. Local ski areas had to delay opening due to a lack of snow.

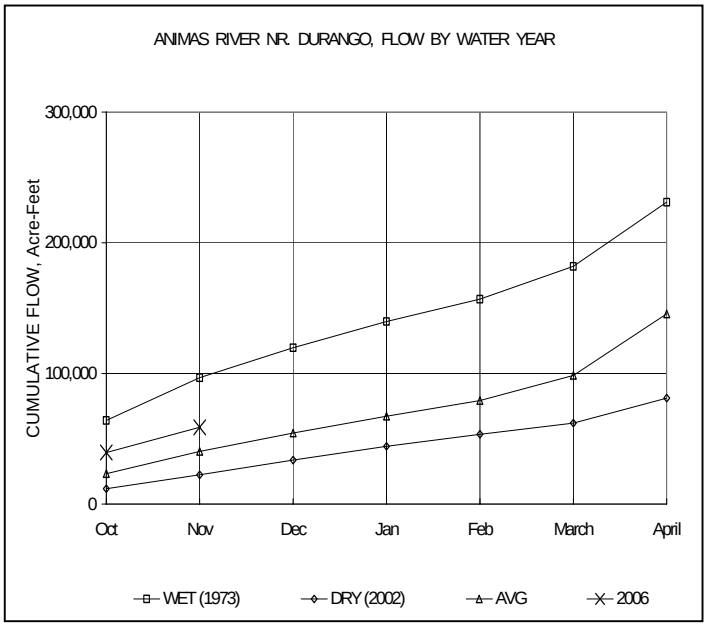
Stream flows remained near average for the month due to the previous months above normal precipitation. The Animas River peaked at 415 cfs on November 1st and averaged 323 cfs for the month, which is 112% of normal. The Dolores River peaked at 99 cfs on November 3rd and averaged 73 cfs, which is 73% of normal.

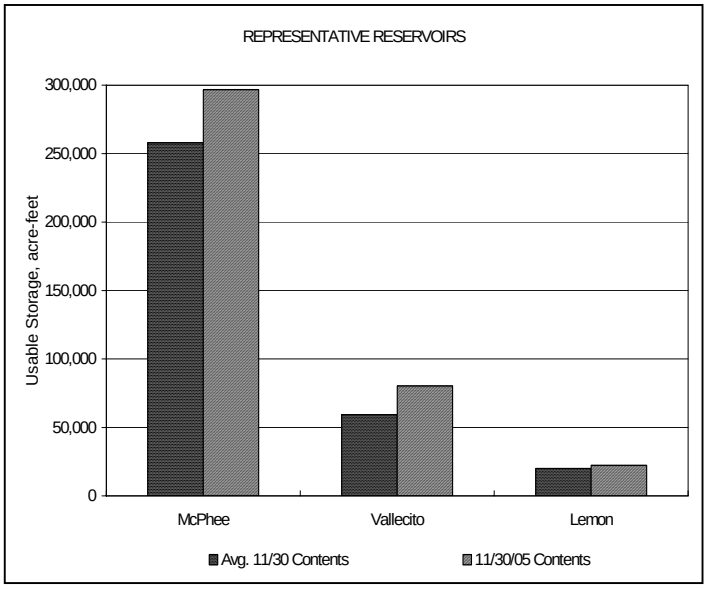
Reservoirs continued to be the bright spot in the water supply outlook. The three major reservoirs still maintained above average storage at the end of the month.

The temperatures remained above normal. Overall Durango was 3.1° above its 30-year average high and 2.5° above its 30-year average low.

The current weather pattern has the storm track to the north of Division 7 but as always is the case we are optimistic that we will get our fair share of snow in the coming winter months.







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