COLORADO
WATER SUPPLY CONDITIONS UPDATE

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

The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service (NRCS) 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, 2005, and reflect the conditions during the month of January.

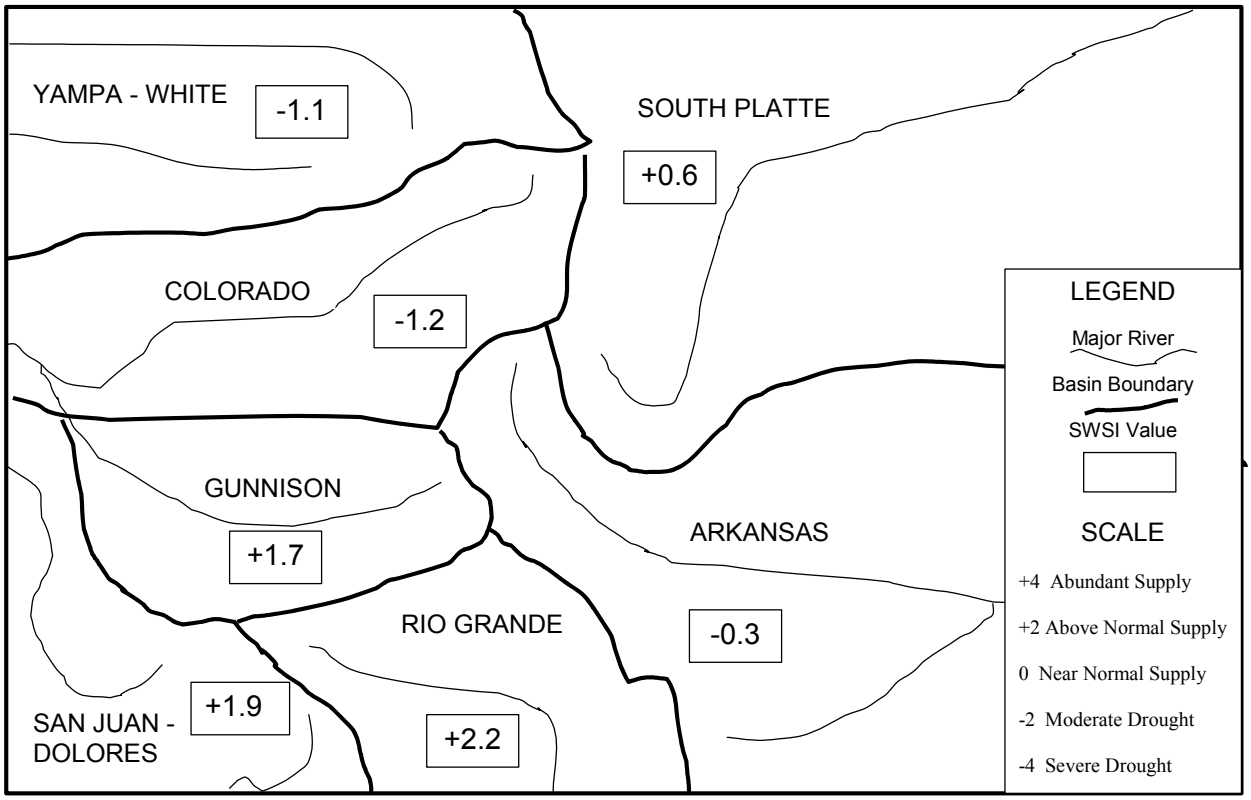
Winter storms in early January produced significant snowfall in the southern part of the state. However, the latter part of January was dry, and the snowpacks declined in all parts of Colorado during that dry period. Statewide, the snowpack level is still better than normal and stands at 114% of average. The Rio Grande and San Juan/Dolores Basins have impressive snowpack levels at 155% of average, and the Gunnison Basin is also very high at 143% of average. The low snowpack is in the Yampa/White Basin at 92% of average. According to the NRCS, Colorado typically receives 60% of its winter snowpack by February 1st. The calculated SWSI values range from a high of +1.9 in the San Juan/Dolores Basin to a low of –1.2 in the Colorado Basin.

Basin	Feb 1, 2005 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+0.6	0.0	+2.0
Arkansas	-0.3	0.0	+1.6
Rio Grande	+2.2	+0.9	+1.8
Gunnison	+1.7	0.0	+2.5
Colorado	-1.2	-1.4	+0.9
Yampa/White	-1.1	+0.1	+0.2
San Juan/Dolores	+1.9	+1.1	+1.7

Scale

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

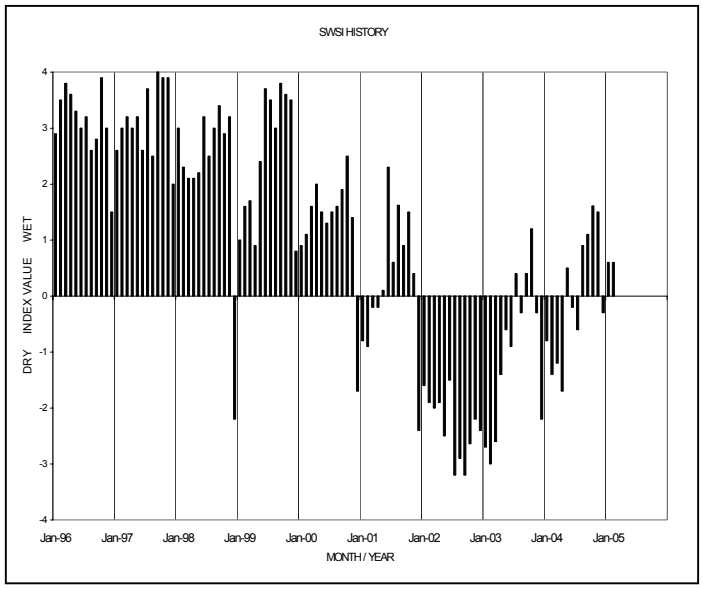
SURFACE WATER SUPPLY INDEX FOR COLORADO



February 1, 2005

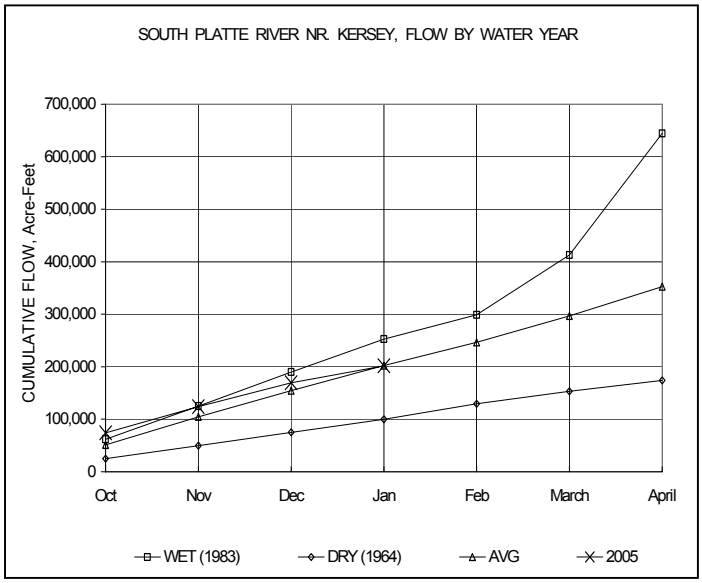
Basinwide Conditions Assessment

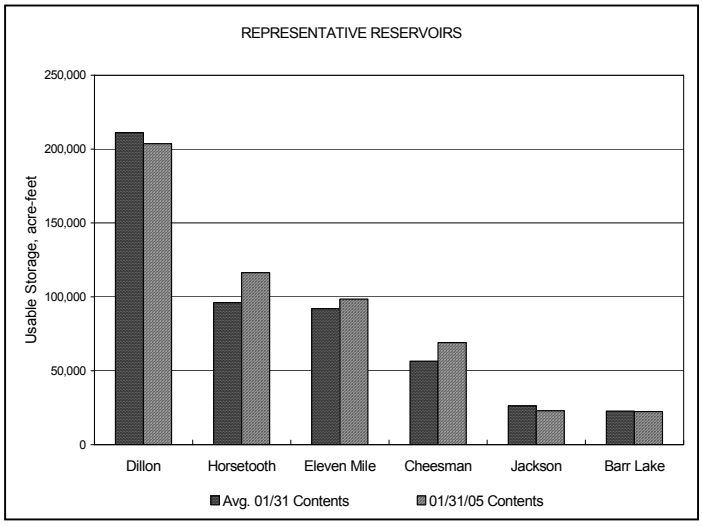
The SWSI value of +0.6 indicates that for January the basin water supplies were slightly above normal. Cumulative storage for the six reservoirs graphed on this page was 106% of normal as of the end of January. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 77% 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 February 1 snowpack is 84% of normal. Flow at the gaging station South Platte River near Kersey was 524 cfs, as compared to the long-term average of 658 cfs. Flow at the Colorado/Nebraska state line averaged 242 cfs.



Outlook

Reservoir storage continued in January for reservoirs along the mainstem and tributaries. Calls for storage continued throughout the basin except below the Prewitt inlet on the lower end of the Platte. Calls for storage also existed on tributaries in January, the normal situation for this time of year. Storage levels remain at a much better place as many reservoirs approach their winter maximum. We are hopeful that all major irrigation reservoirs on the mainstem and tributaries will fill this year. This is dependent on it not getting extremely cold the next month, limiting the ability to store, and also having at least some precipitation in February and March so that streamflows remain at current levels or higher.





Basinwide Conditions Assessment

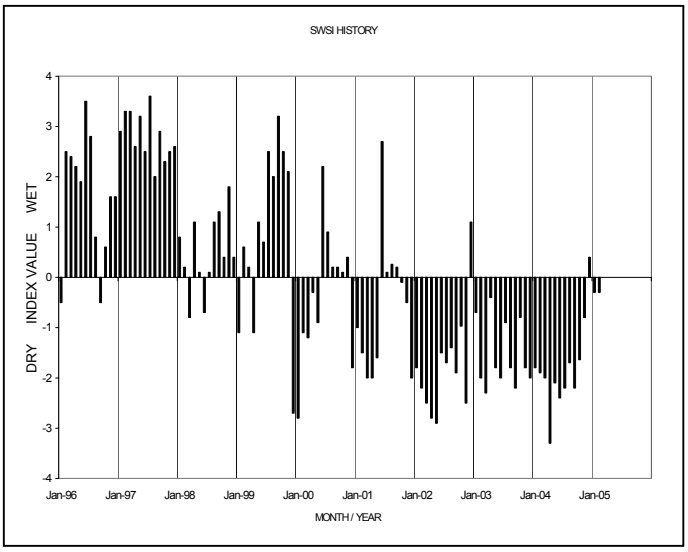
The SWSI value of –0.3 indicates that for January the basin water supplies were about normal. The Natural Resources Conservation Service reports that February 1 snowpack is 113% of normal. Flow at the gaging station Arkansas River near Portland was 313 cfs, as compared to the long-term average of 369 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 67% of normal as of the end of January.

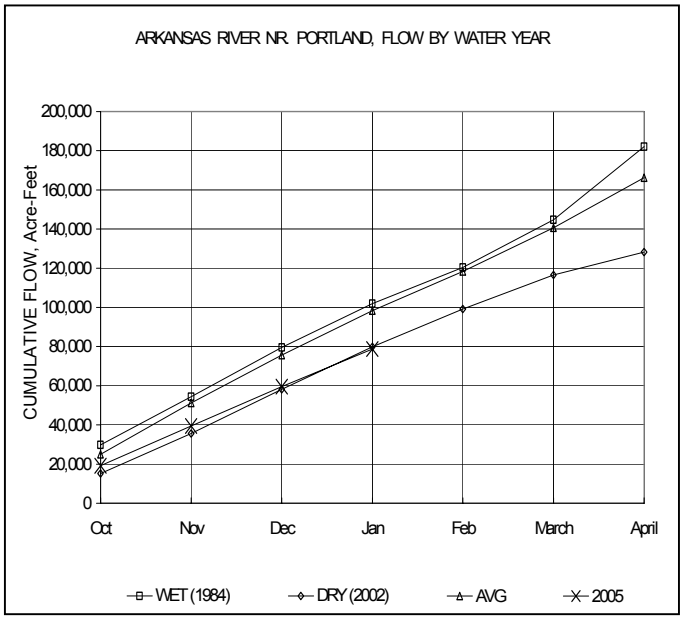
Administrative/Management Concerns

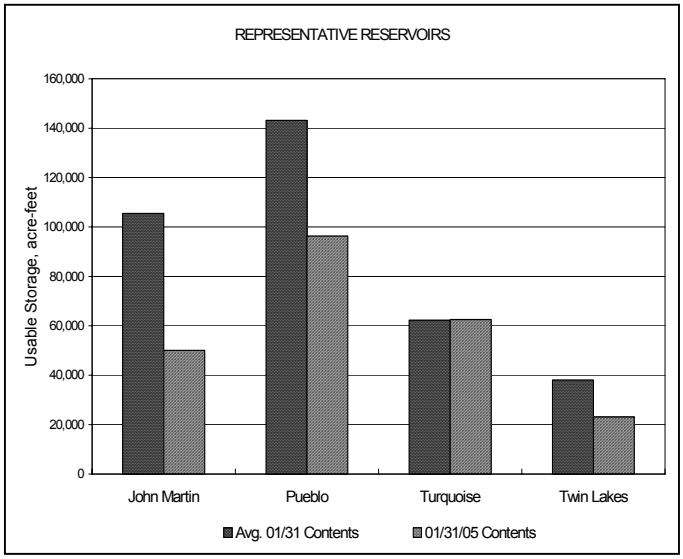
Reservoir storage in the Pueblo Winter Water Program totaled only about 76,555 acre-feet as of the end of January. This storage amount is significantly higher than last year's storage to date and represents 90% of the past five-year average. Conservation storage in John Martin Reservoir has accumulated at a much better rate totaling just under 14,000 acre-feet versus only about 3,960 acre-feet as of the end of January last year.

The demand for storage of Winter Water in Pueblo Reservoir caused releases to be cut to flow rates lower than the targets agreed to under an Inter-Governmental Agreement signed by City of Pueblo, Aurora, Colorado Springs and Southeastern Colorado Water Conservancy District. The lower flow rates caused curtailment of Colorado Springs' exchange from Fountain Creek at the end of January.

Aurora and Colorado Springs have combined efforts to lease a similar portion of the Highline Canal (approximately 37% of the canal or just over 8,200 acres of irrigated lands to be dried up) as Aurora leased last year to attempt to rebuild critical storage volumes for municipal use. The lease was well received by farmers under the Highline Canal still attempting to recover from the drought devastation of 2002 and 2003.



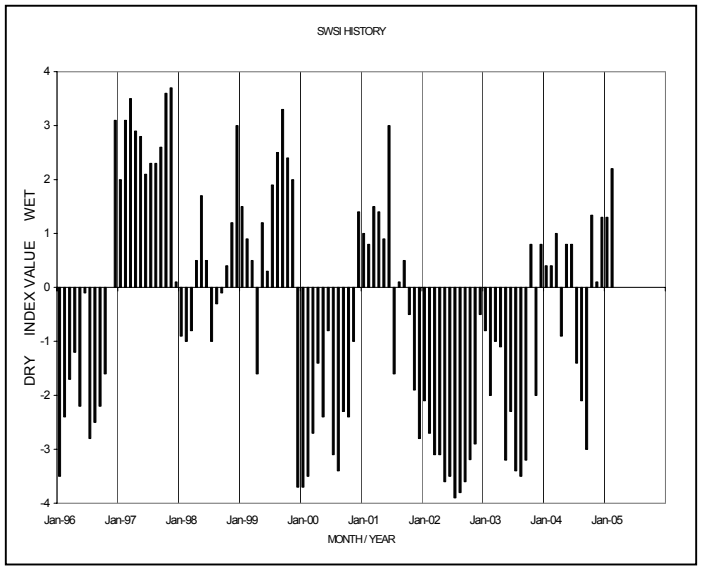




Basinwide Conditions Assessment

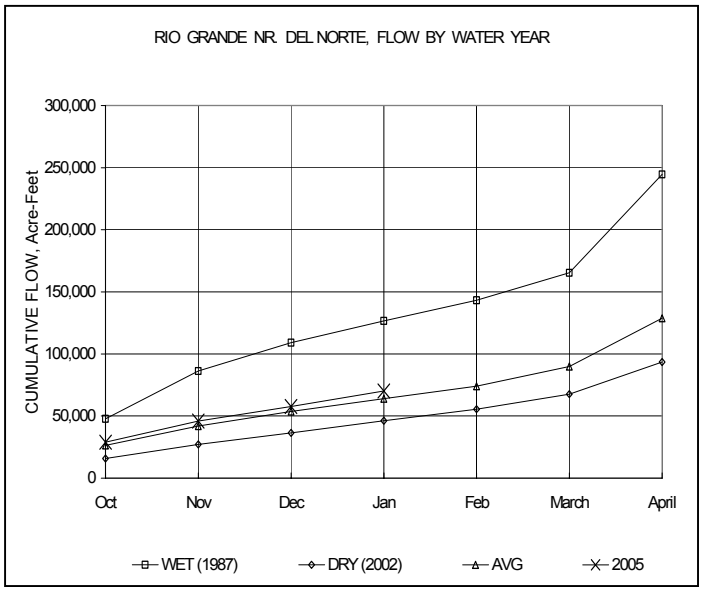
The SWSI value of +2.2 indicates that for January the basin water supplies were above normal. Flow at the gaging station Rio Grande near Del Norte averaged 204 cfs (107% of normal). The Conejos River near Mogote had a mean flow of 52 cfs (108% of normal). Precipitation in Alamosa was 1.09 inches, 0.84 inches above normal. This was the snowiest January on record in Alamosa. Precipitation in the high country during January was over twice the monthly average. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 72% of normal as of the end of January.

The southern areas of Colorado received abundant snowfall during January. March-like snowstorms blanketed the upper Rio Grande basin the first two weeks of the month and another storm hit the region during the last week. Snowpack accumulation stood at 155% of normal at the end of the month, the second best February 1 snowpack since 1968.



Outlook

The Natural Resources Conservation Service stream flow forecasts are now predicting runoff in area streams to be in the range of 115% to 148% of average during the 2005 irrigation season.

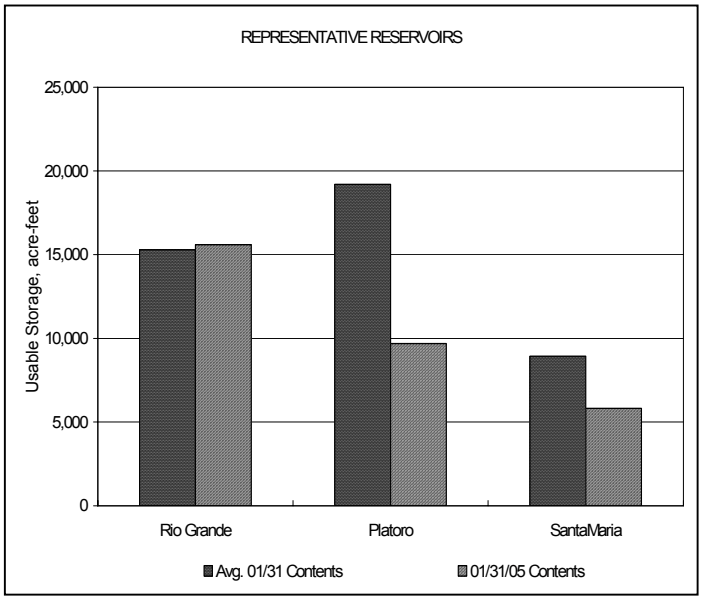


Administrative/Management Concerns

Much effort was spent during January finalizing streamflow and diversion records. The annual meetings of local districts and ditch boards are held this time of year to reflect on the 2004 season and plan for the upcoming irrigation season. Given even average snowfall from now through April, there is a very good chance of a high runoff this year. For the first time in several years, local officials are concerned about the possibility of flooding.

Public Use Impacts

The snowfall closed Wolf Creek Pass for a few days during early January. High snowbanks along the roads in mountainous areas "look more like they did in the old days". Other than transportation difficulties, area water users and winter sports enthusiasts are enjoying the wintery conditions.



Basinwide Conditions Assessment

The SWSI value of +1.7 indicates that for January the basin water supplies were above normal. The Natural Resources Conservation Service reports that February 1 snowpack is 143% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 68.7 cfs, as compared to the long-term average of 44.5 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 99% of normal as of the end of January.

Outlook

Recent storms have been hitting the southwestern part of the state, and the Gunnison Basin is certainly enjoying an overall snowpack percentage of 143%. Some are speculating that if we don't get any more snow at all, we would still have an average snowpack. That viewpoint is unacceptable; WE STILL NEED MORE SNOW.

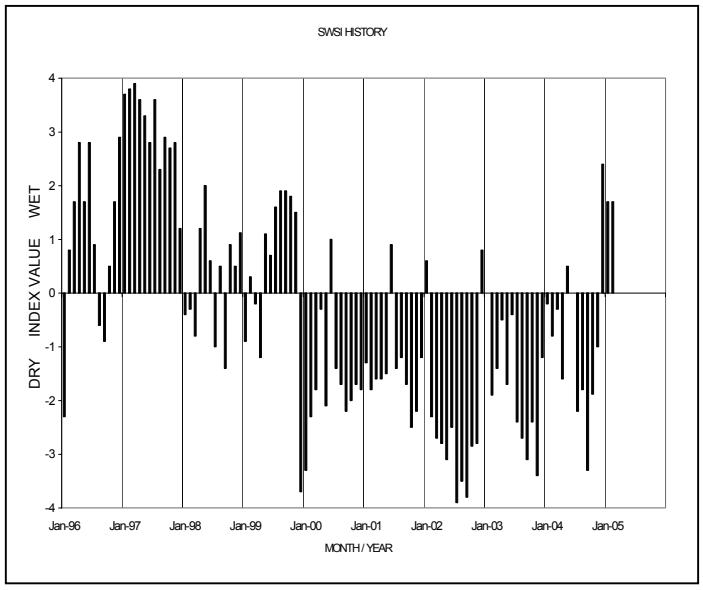
Administrative/Management Concerns

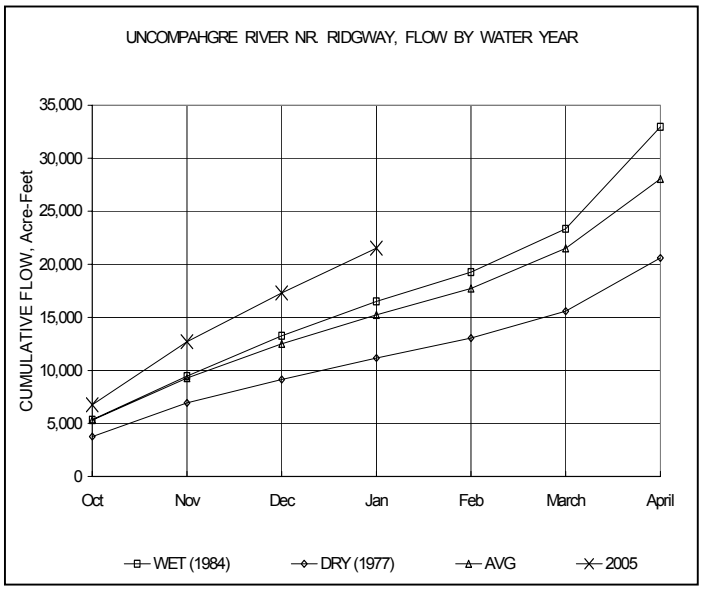
The Grand Mesa area appears to have about the best snowpack in the entire State. The three courses are averaging 185% of normal. This should allow all of the 100+ reservoirs to fill this year, something that hasn't happened in the last 5 years. Additionally, storms last September removed stream calls and allowed the reservoirs to store some of the rainfall. They were able to carry over some storage going into the winter season.

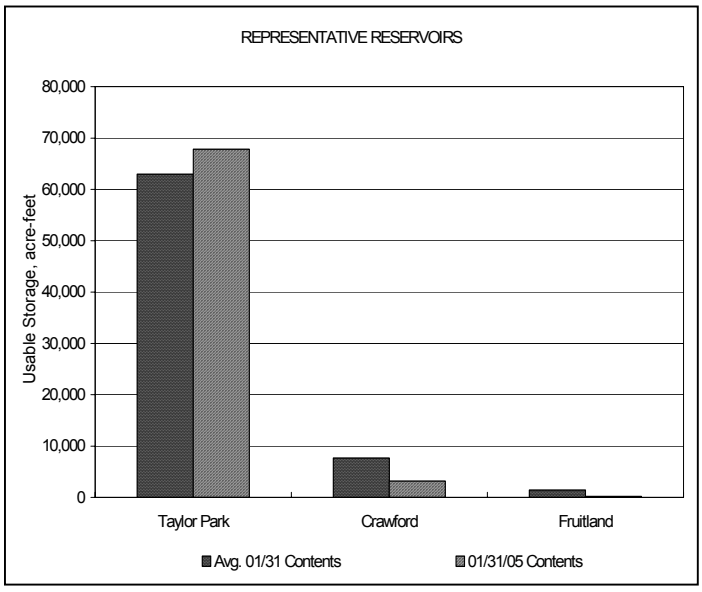
At the last Aspinall Unit operations meeting, the USBR forecasted that they could fill Blue Mesa Reservoir this year. Blue Mesa Reservoir is at a significantly higher level than last year. The USBR also increased the releases out of the Aspinall from 350 cfs to 600 cfs, forecasting they would have enough 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 ecstatic to see the snowpack levels above normal. Many are thinking this is the end of the drought, but the prudent ones know it's too early to tell. An average or above average snowpack will also allow the underground aquifers to be recharged so that springs that dried up in the drought will start to flow again.







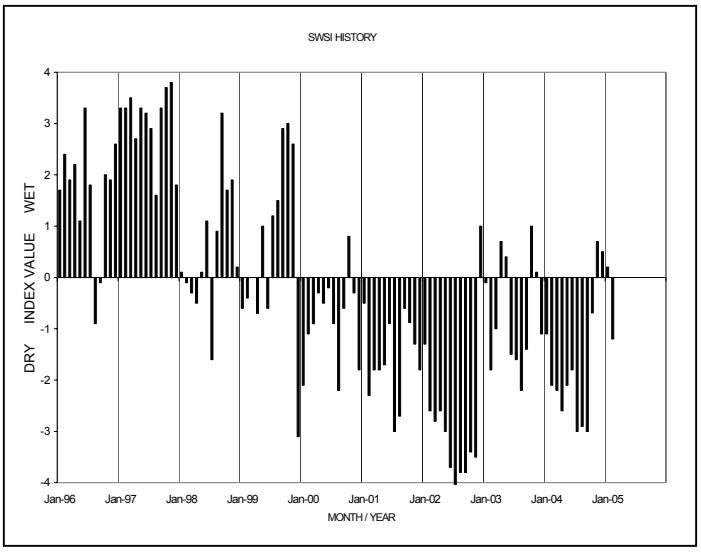
Basinwide Conditions Assessment

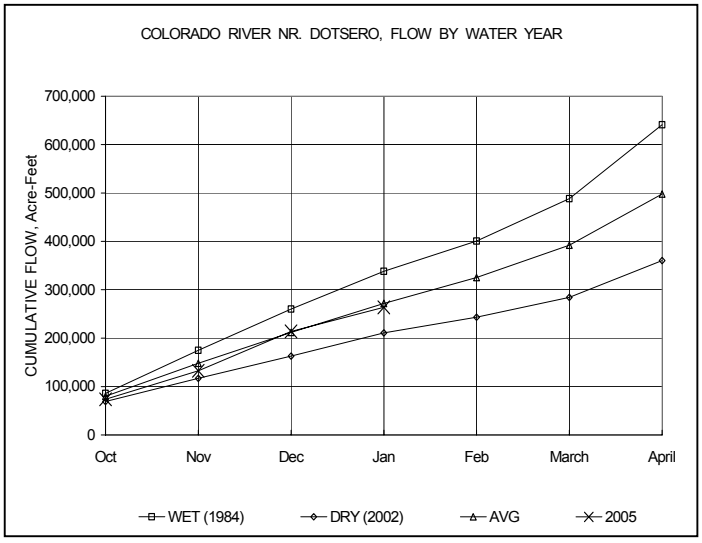
The SWSI value of –1.2 indicates that for January the basin water supplies were below normal. The Natural Resources Conservation Service reports that February 1 snowpack is 103% of normal. Flow at the gaging station Colorado River near Dotsero was 807 cfs, as compared to the long-term average of 978 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 94% of normal as of the end of January.

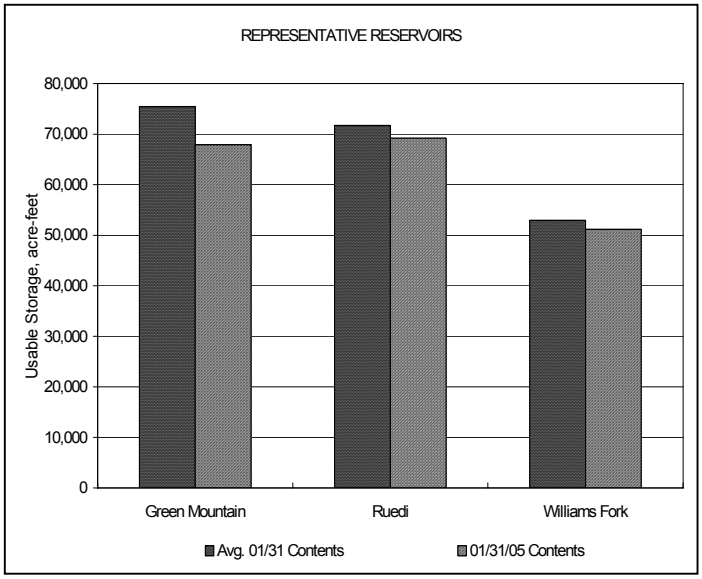
Outlook

Snowpack for the entire Colorado River basin is near normal and this represents the best February 1 snowpack conditions in the basin since 1997, according to the "Colorado Basin Outlook Report Feb. 1, 2005" (NRCS). Significant variations occur throughout the basin. The Plateau Creek basin is doing very well at 178% of average, while the Blue River basin and the Williams Fork River basin are at only 81% of average.

The NRCS forecasts that April-July streamflows will vary from 75% of average on Muddy Creek below Wolford Mtn. Reservoir to 118% of average for Willow Creek Reservoir inflow. The Colorado River near Cameo streamflow is forecasted at 93% of average.



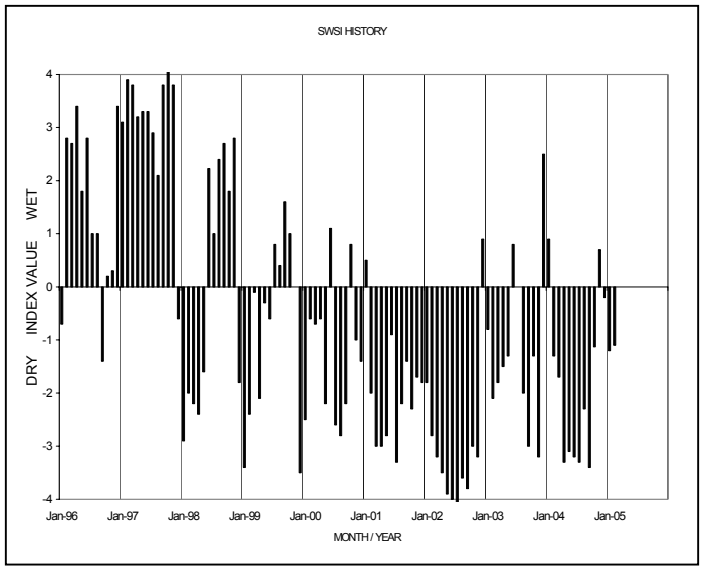




Basinwide Conditions Assessment

The SWSI value of –1.1 indicates that for January the basin water supplies were below normal. Flow at the gaging station Yampa River at Steamboat was 119 cfs, as compared to the long-term average of 98.6 cfs.

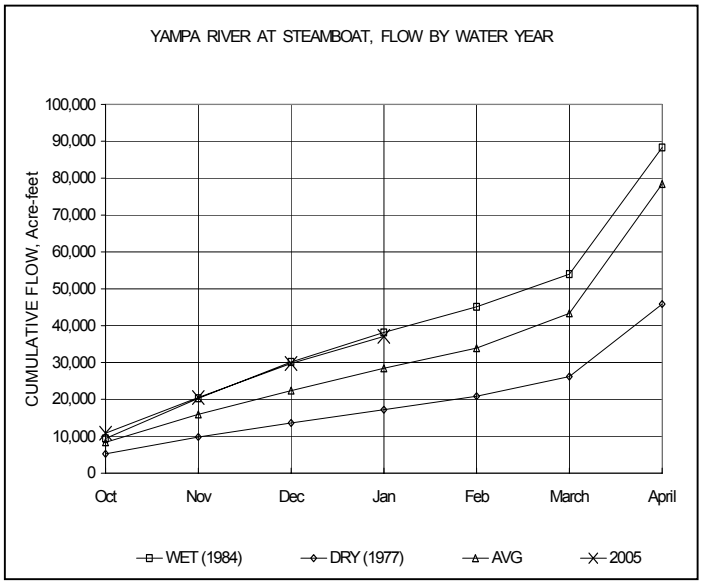
Precipitation for January was 100% of average across the basin but was accompanied by above average temperatures. Most of the precipitation occurred during the first half of the month. Year–to-date precipitation for the water year is slightly below average at 94% of average. The snowpack for the basin started out at about 92 % of average, rose to near average by mid-month, and decreased to about 92% of average by the end of January.



Outlook

The February 1 runoff forecast released by the Natural Resources Conservation Service, differs only slightly from the January forecast, with the most probable condition forecasted as 82% of average for the North Platte River near Northgate; 82% of average for the Yampa River near Maybell; 92 % of average for the Little Snake River near Dixon; and 86% of average for the White River near Meeker

The warm temperatures in January melted much of the low-level snowpack throughout the basin. While the overall snowpack numbers in the basin have remained stable, there are several individual SNOTEL sites that have shown marked declines in their readings. Based on the most recent forecast, below average runoff can be expected absent a significant increase in precipitation



Basinwide Conditions Assessment

The SWSI value of +1.9 indicates that for January the basin water supplies were above normal. The Natural Resources Conservation Service reports that February 1 snowpack is 155% of normal. Flow at the gaging station Animas River near Durango was 318 cfs, as compared to the long-term average of 208 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 88% of normal as of the end of January.

A good January was realized after several storm fronts moved through the area. The best accumulations were at middle elevations near Vallecito Reservoir and Lemon Reservoir, Columbus Basin in the La Plata Mountains and the Coal Bank/Molas Pass areas. Some key stations were not reporting for those totals, but it appeared that basin-wide, enough snow water content was achieved to yield an average season of flow if it is maintained.

Soil moisture content was up and lower elevation runoff increased in the streams. About 35,000 acre feet was stored in Navajo Reservoir during the post-Christmas period, inflows coming from the San Juan, Piedra and Pine Rivers. Reservoir storage increased to 94% of normal at Lemon and 80% of normal at McPhee. Red Mesa Ward Reservoir filled early in February.

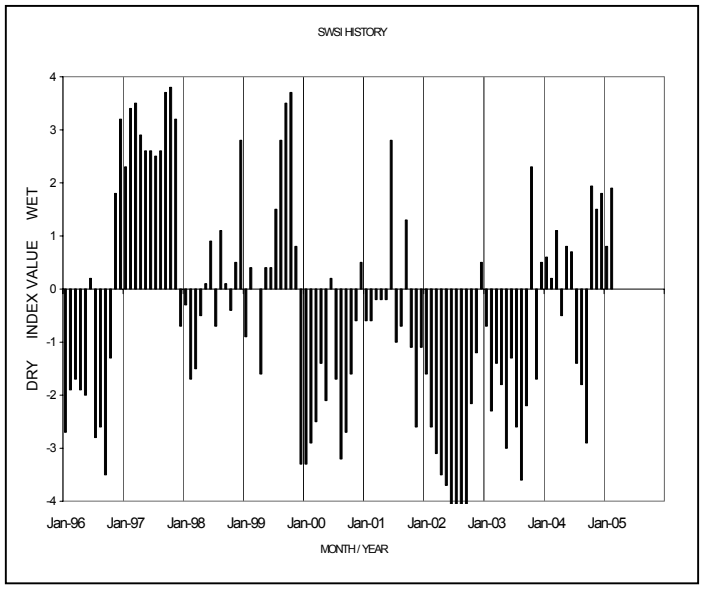
Vallecito Reservoir carried the maximum allowed for this time of year. It appears likely that significant releases will need to be made to keep the reservoir from spilling this year.

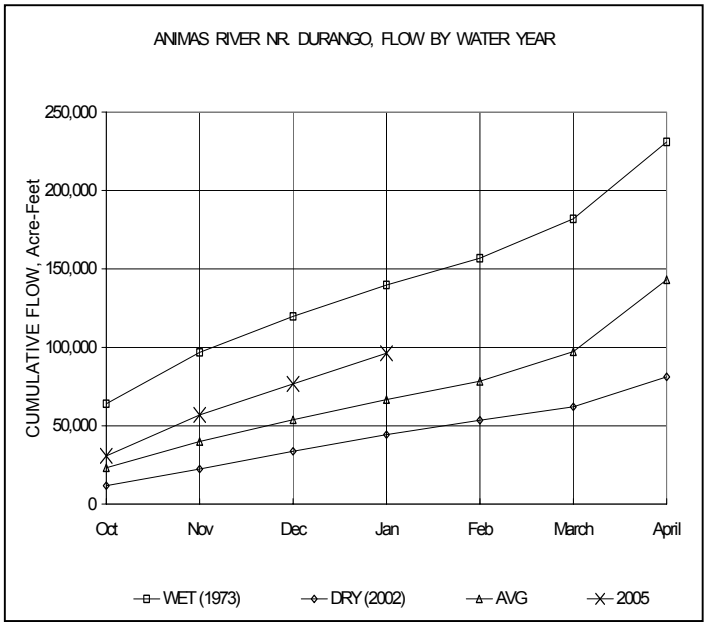
The 5.73 inches of precipitation received in Durango during the month of January was the highest precipitation recorded for January since the flood year of 1993.

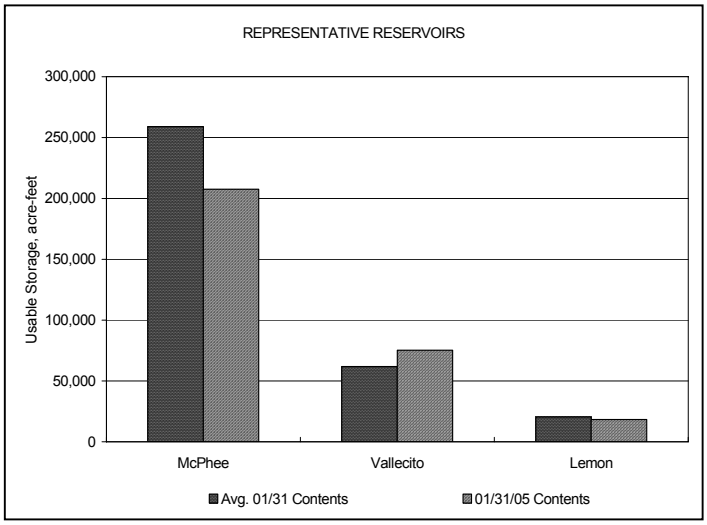
Temperatures during the month were very warm--being 5 degrees F above normal highs and 9 degrees above normal lows. The lower elevation snow compacted and melted in many areas, leaving the ground saturated. Snow in the snowcourses was measured at 30% density.

Outlook

Two more months of winter remain, and it is possible that a very significant water accumulation will be developed. An extended period of no precipitation could reverse that assessment. However, currently, the outlook is positive for adequate water supplies for users in the upcoming season.







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