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
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April 2001

Little change in the statewide average snowpack occurred during March, which is at 87% of normal, compared to last month's 86%. However, the South Platte basin saw a 12% increase in snowpack during the month. Still, recharge and reservoir storage will be heavily relied upon to manage the South Platte basin water supplies. Only the Rio Grande basin SWSI value reflects an above-average water supply, as we enter the irrigation season. The San Juan/Dolores basin is seeing a near normal water supply. The Gunnison, Colorado, and the Yampa/White basins' outlook is largely dependent upon late spring and summer precipitation as they enter the water year with below normal supplies.

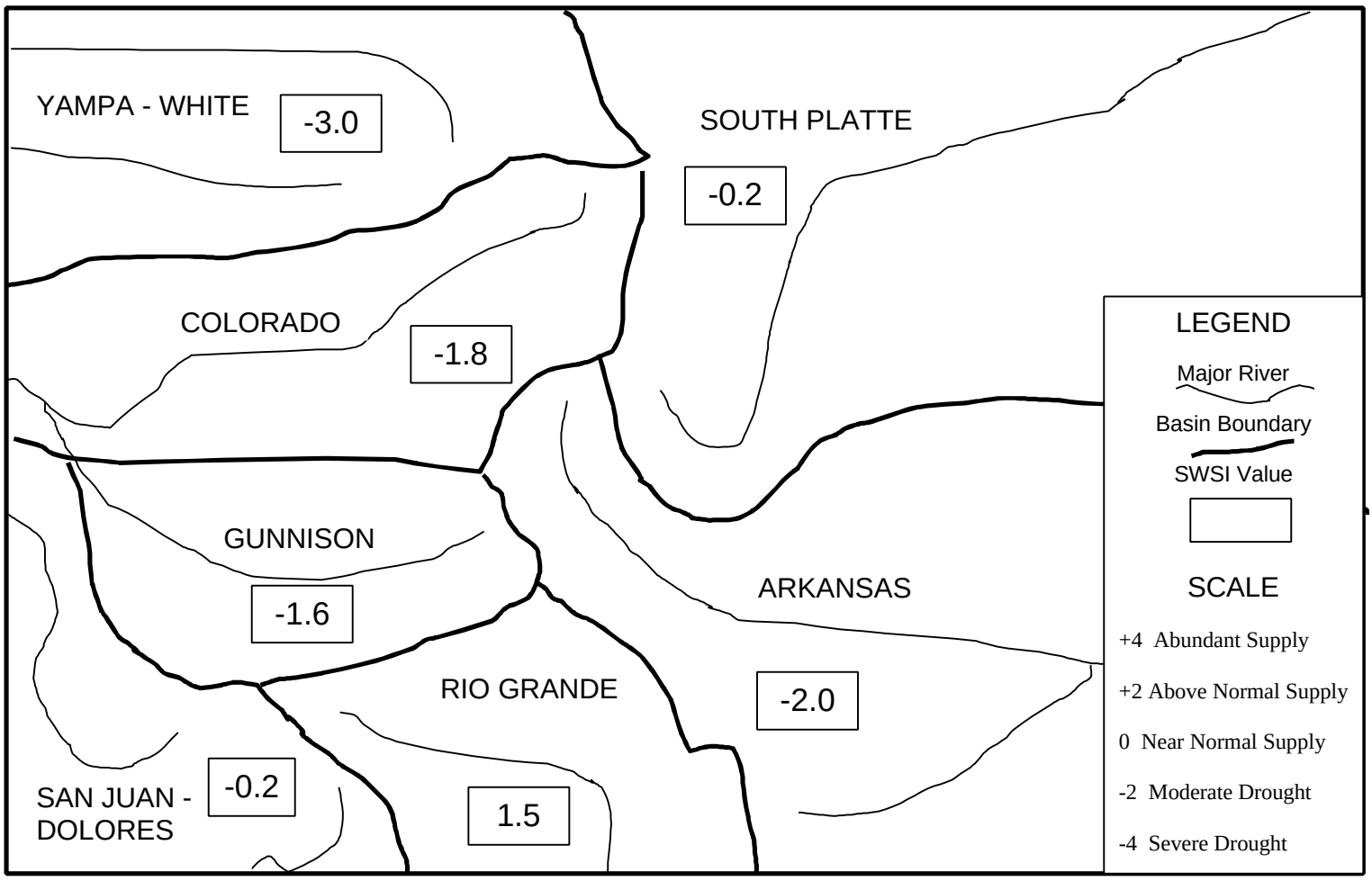
The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on snowpack, reservoir storage, and precipitation for the winter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

Basin	April 1, 2001 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	-0.2	+0.8	-2.2
Arkansas	-2.0	-0.4	-1.7
Rio Grande	1.5	+0.2	+2.9
Gunnison	-1.6	0	-1.3
Colorado	-1.8	+0.4	-1.5
Yampa/White	-3.0	-0.5	-2.4
San Juan/Dolores	-0.2	-1.9	+1.2

Scale

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

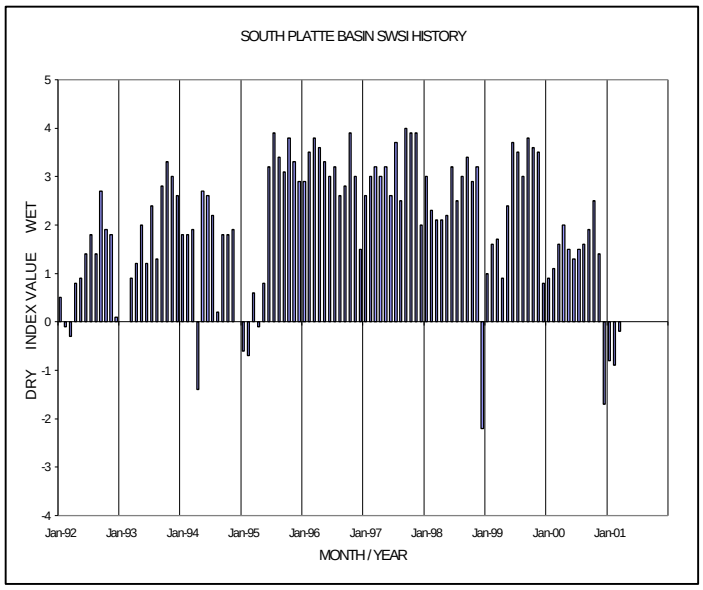
SURFACE WATER SUPPLY INDEX FOR COLORADO



APRIL 1, 2001

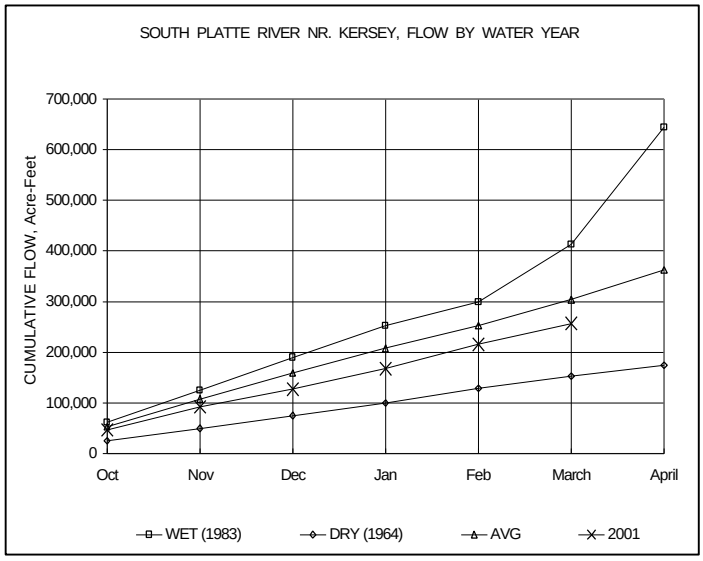
Basinwide Conditions Assessment

The SWSI value of –0.2 indicates that for March the basin water supplies were near normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 86% of normal as of the end of March. Storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, increased overall by 21,220 acre-feet during March and are at 99.8% of capacity. Storage in the major upper basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero, increased by 8,103 acre-feet overall during March and are at 80% of capacity. The Natural Resources Conservation Service reports that April 1 snowpack is 81% of normal, a significant climb from last month's 69% of normal. Flow at the gaging station South Platte River at Kersey was 667 cfs, as compared to the long-term average of 941 cfs.



Outlook

The mainstem reservoirs on the South Platte almost completed filling in March as was hoped. Most users are now diverting a maintenance head to maintain water levels. The reservoirs will be topped off once the owners are sure that wind conditions will not cause structural problems to the reservoir dams. The completion of reservoir storage along with the warmer weather conditions allowed recharge to increase dramatically during March. Recharge is very important to help assure an adequate supply this summer. Direct flow diversions for irrigation will begin to increase by the end of this month if conditions require irrigation - especially for farmers north of the Denver Metro area who grow vegetables. The increased demand may create a call situation on the South Platte and tributaries unless flow is adequate to meet this demand.

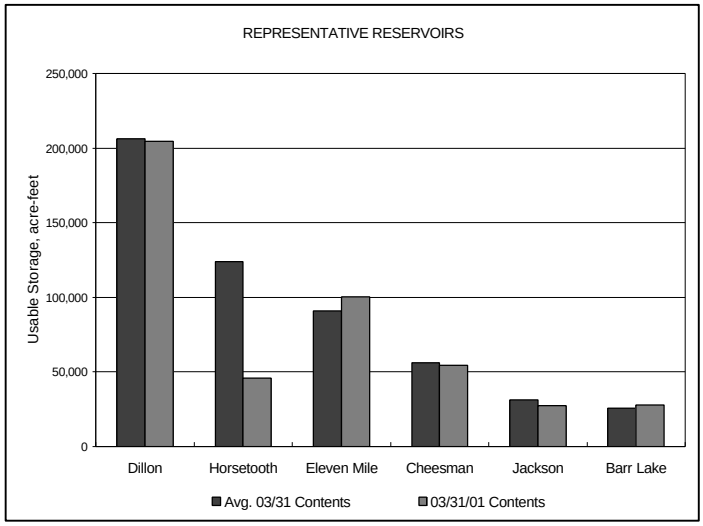


Administrative/Management Concerns

Division 1 is concerned that snowpack is still behind average. The next month is critical in determining the overall snowpack for the year. After the dry 2000 water year, Division 1 is also concerned that we have adequate spring precipitation on the plains to reduce demand and increase river flows allowing reservoirs to be kept full and recharge to be maximized.

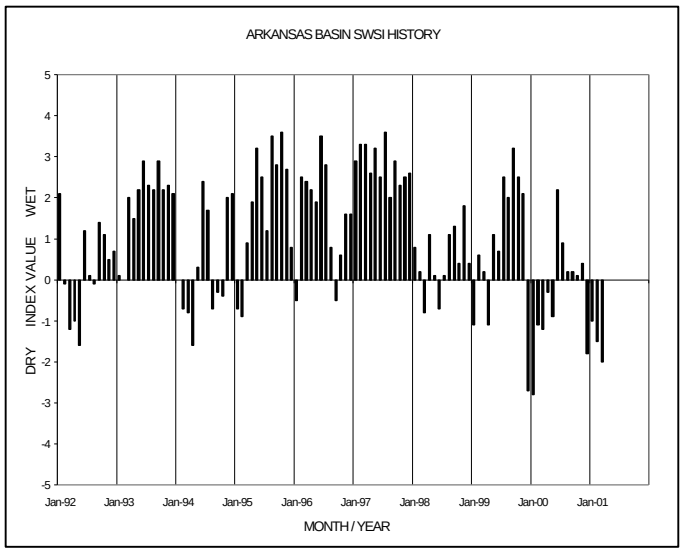
Public Use Impacts

None.



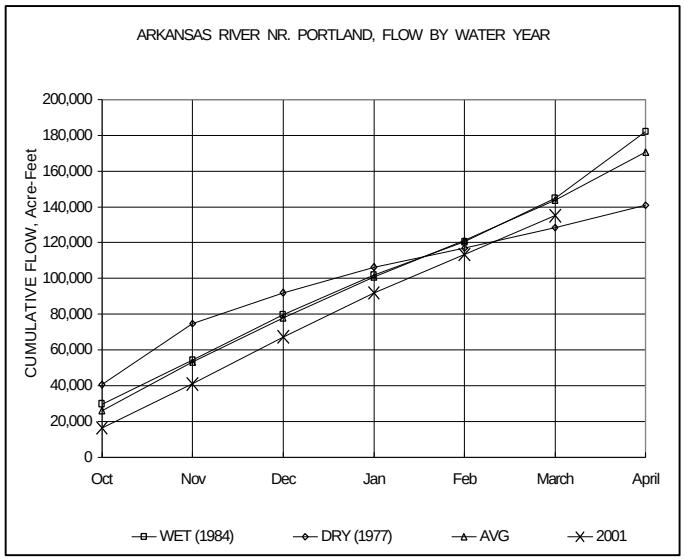
Basinwide Conditions Assessment

The SWSI value of –2.0 indicates that for March the basin water supplies were below normal. The Natural Resources Conservation Service reports that April 1 snowpack is 84% of normal. Flow at the gaging station Arkansas River near Portland was 352 cfs, as compared to the long-term average of 370 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 114% of normal as of the end of March.



Outlook

Total reservoir storage during the Pueblo Winter Water Program was 158,390 acre-feet, including 46,457 acre-feet in Pueblo Reservoir, 83,446 acre-feet in off-channel reservoirs, and 27,597 acre-feet in John Martin Reservoir (after distribution to accounts). Total Winter Compact Storage in John Martin Reservoir was 36,314 acre-feet for the period from November 1, 2000 through March 31, 2001. Distribution of Winter Compact Storage into accounts began at noon on April 2, 2001.



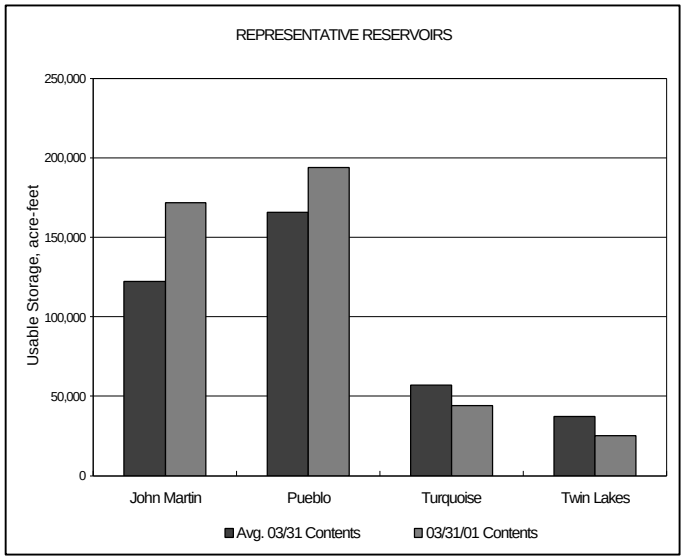
Administrative/Management Concerns

The Kansas versus Colorado litigation will be shaped by the impending ruling by the U.S. Supreme Court regarding the amount of money damages to which Kansas will be entitled and by the next phase of depositions and trial concerning Colorado's ongoing compliance with the Arkansas River Compact.

Public Use Impacts

The Southeastern Colorado Water Conservancy District allocated just over 23,000 acre-feet in Project water return flow sales for 2001, with most of the allocation going to entities with replacement plans for augmentation of stream depletions caused by well pumping.

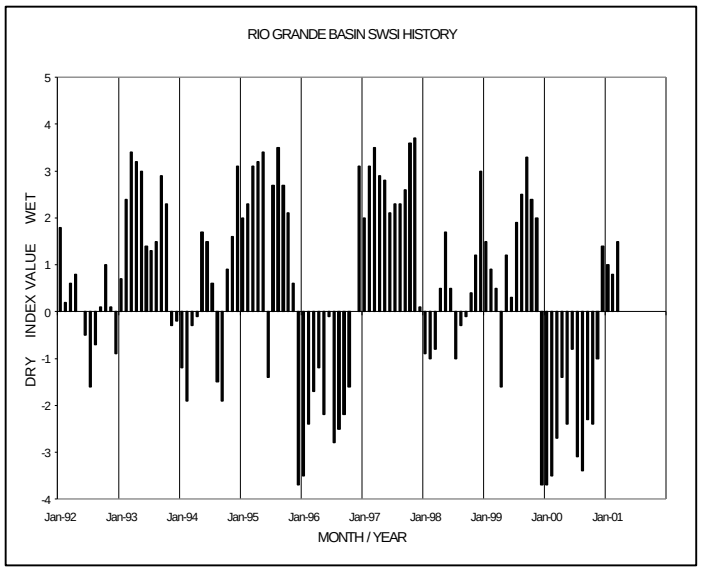
House Bill 1354, concerning the establishment of a water banking system in the Arkansas River Basin, was introduced on February 27, 2001 in the Legislature and was assigned to the Agriculture, Livestock, & Natural Resources Committee. The bill was passed by the Agriculture, Livestock, & Natural Resources Committee on March 14, 2001 and moved on to the House Appropriations Committee. This bill, if passed, would direct the State Engineer to promulgate rules by July 1, 2002 to establish and administer a water banking pilot program intended to simplify and improve the approval of water leases, loans, and exchanges of stored water within the Arkansas River Basin.



Basinwide Conditions Assessment

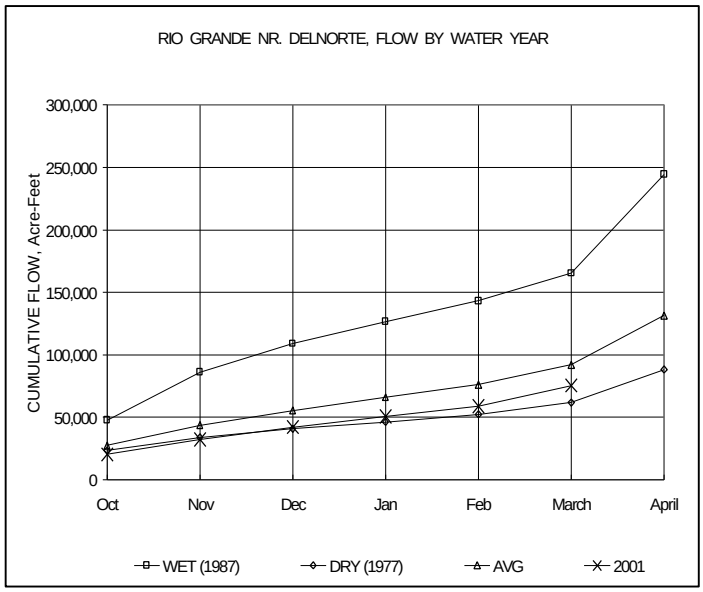
The SWSI value of 1.5 indicates that for March the basin water supplies were above normal. The Natural Resources Conservation Service reports that April 1 snowpack is 102% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 272 cfs (100% of normal). The Conejos River near Mogote had a mean flow of 70 cfs (88% of normal). Flow to the state line was 105% of normal. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 91% of normal as of the end of March.

March was the third consecutive month of above-average precipitation in the San Luis Valley as 1.02 inches fell during the month, nearly twice as much as the historic average. Temperatures ranged from -3 degrees to 66 degrees in Alamosa where the average monthly temperature was 34.2 degrees, 1.9 degrees above normal.



Outlook

NRCS forecasts are now predicting runoff to be 119% of average for the Rio Grande near Del Norte and 93% of average for the Conejos near Mogote. Streamflows in the Saguache Creek basin and the northern Sangre de Cristo Mountains are also forecasted above average.



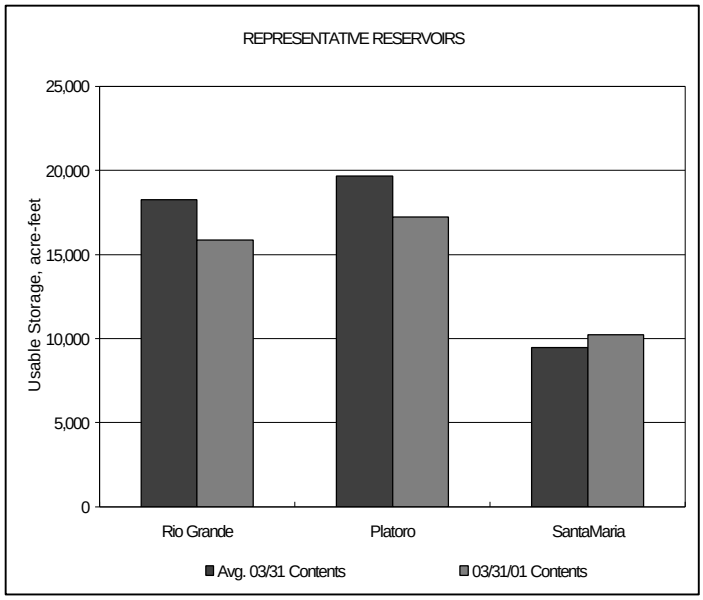
Administrative/Management Concerns

Rio Grande Compact accounting for the 2000 calendar year was approved at the Compact meeting held in Alamosa in late March. Colorado over-delivered 11,400 acre-feet to the state line last year. Approximately 25,000 acre-feet of available credit in Elephant Butte Reservoir will be used to assist Colorado in meeting its delivery obligation this year.

There will be a slight curtailment of water rights on the Rio Grande and Conejos this irrigation season if forecasts are realized.

Public Use Impacts

Spring snowstorms are prolonging winter activities. However, several tractors have been seen plowing in the fields. Many ditch companies have begun cleaning operations in preparation for the diversion season.



Basinwide Conditions Assessment

The SWSI value of –1.6 indicates that for March the basin water supplies were below normal. The Natural Resources Conservation Service reports that April 1 snowpack is 85% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 49.1 cfs, as compared to the long-term average of 61 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 96% of normal as of the end of March.

Outlook

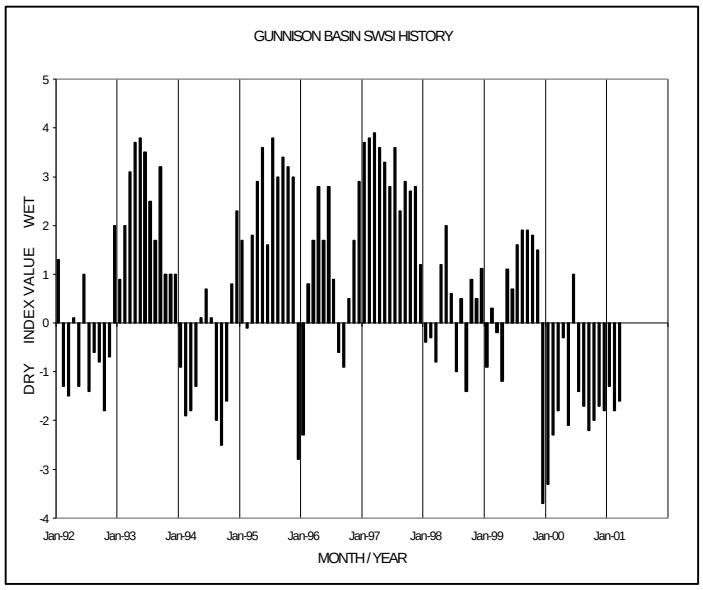
As mentioned below, with the low carryover the outlook is dismal. In addition to surface water supply concerns among water users, the low water supply and constant introduction of new impacts are causing many wells to dry up. In the last month every area of this water division has suffered from wells going dry, resulting in a need for emergency replacements of these wells. This trend began in Water District 59 last year and appears to be growing and expanding to other areas of the division at this time.

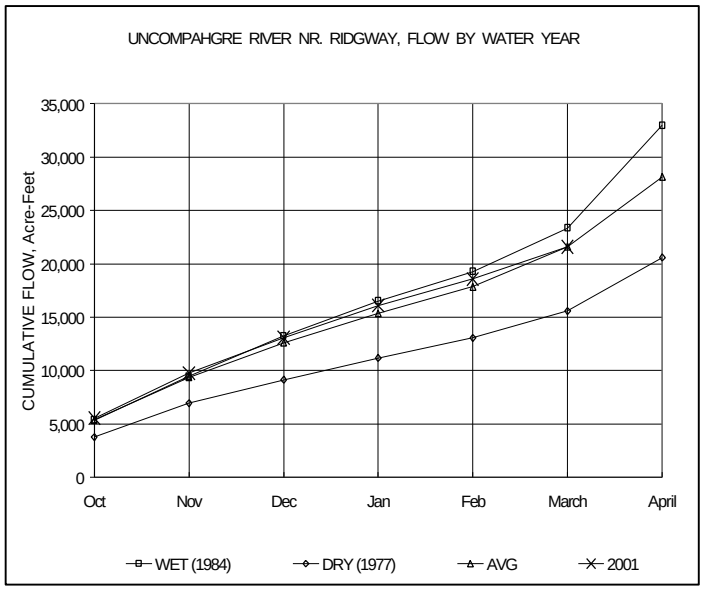
Administrative/Management Concerns

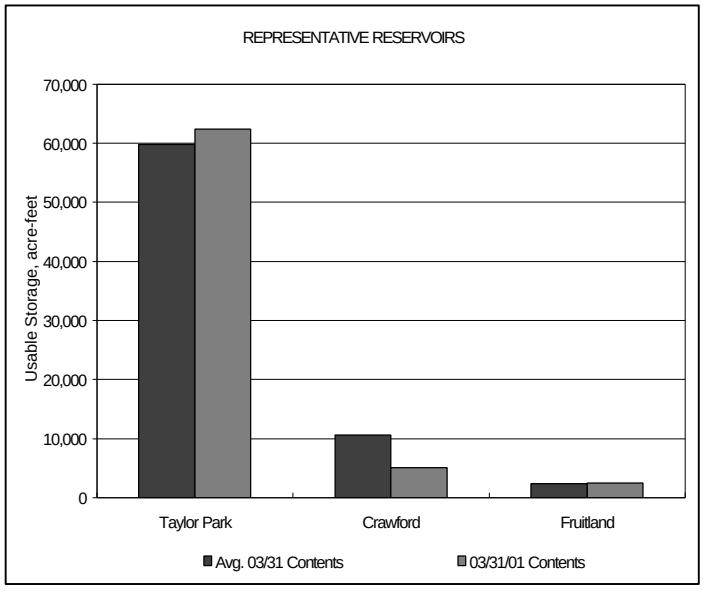
Administrators continue to see signs of yet another touchy year. The Grand Mesa Reservoirs are looking at an overall carryover of 22% of storage. Normally they have and/or require a 40% carryover to look OK for the season. This of course will put a demand on the entire North Fork area as far as water administration is concerned.

Public Use Impacts

The anticipated dry water year could put a strain on area recreation, as well as adversely impact this strongly agricultural area.







Basinwide Conditions Assessment

The SWSI value of –1.8 indicates that for March the basin water supplies were below normal. The Natural Resources Conservation Service reports that April 1 snowpack is 86% of normal. Flow at the gaging station Colorado River near Dotsero was 796 cfs, as compared to the long-term average of 1,120 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 101% of normal as of the end of March.

Outlook

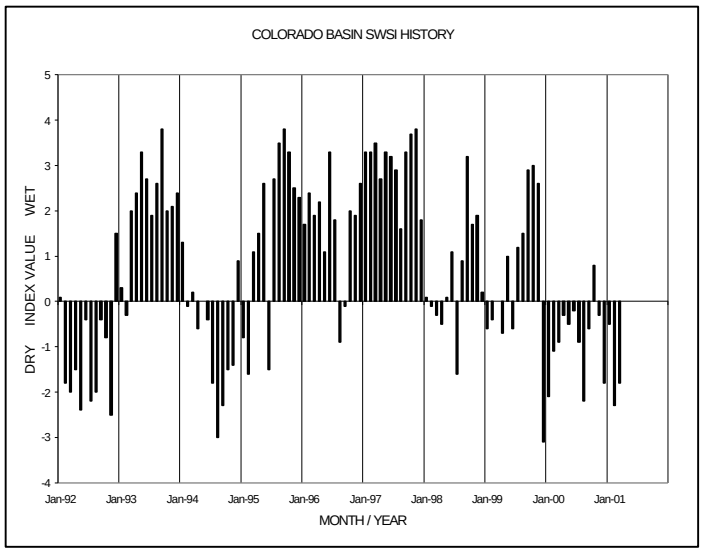
Snowpack conditions remained at about 86% of average through March, with the best snowpack in the Blue River basin and the worst in parts of the Roaring Fork, Elk Creek, and Plateau Creek basins. This season's snowpack trends are very similar to last year's.

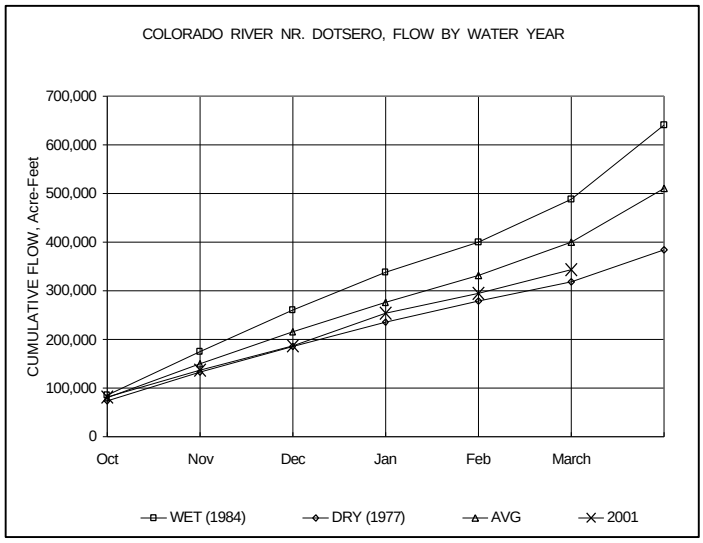
Administrative/Management Concerns

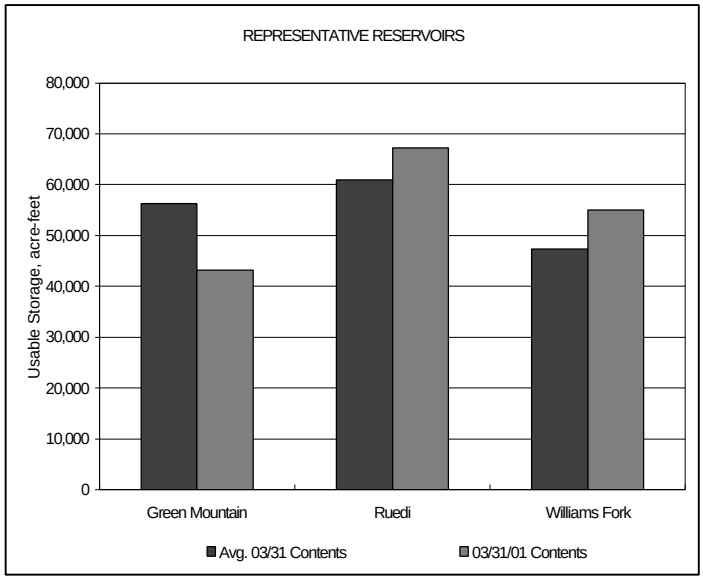
The senior Shoshone power call remained on throughout March and should continue until mainstem runoff in May or June. Both major canals in the Grand Valley began irrigation diversions in early April.

Public Use Impacts

Late season frosts are always a threat to fruit growers in the Grand Valley during April. Sprinkler systems are often used to protect the crops by covering the blossoms with an insulating layer of ice.



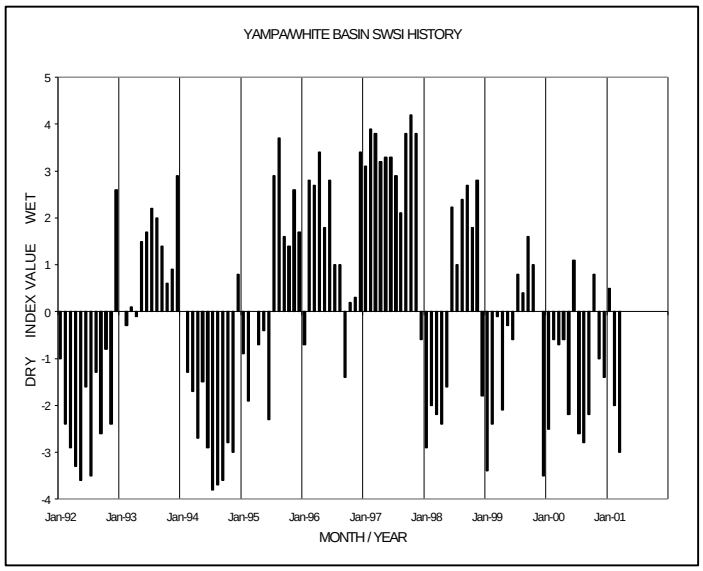




Basinwide Conditions Assessment

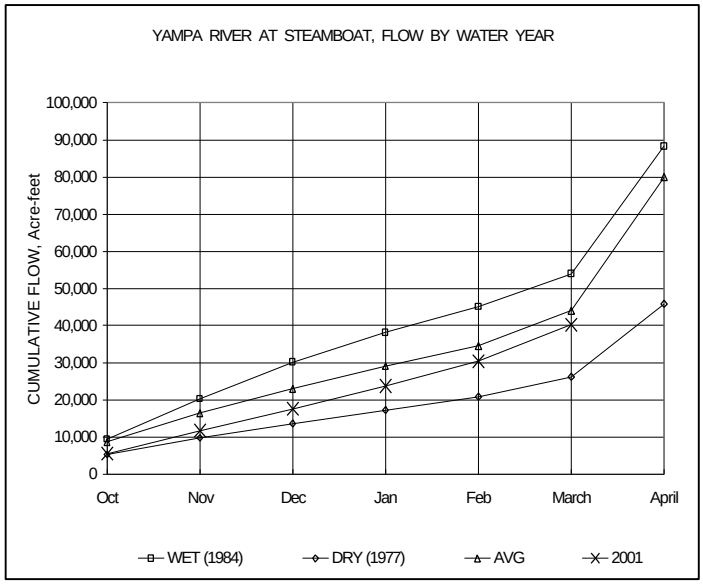
The SWSI value of –3.0 indicates that for March the basin water supplies were below normal. The Natural Resources Conservation Service reports that April 1 snowpack is 82% of normal. Flow at the gaging station Yampa River at Steamboat was 161 cfs, as compared to the long-term average of 154 cfs.

March was a month of below-normal precipitation at the higher elevations. Total precipitation over the basin was about 90% of the long-term average. While precipitation was down, the water content of the snowpack remained about the same as the previous month with the North Platte at 78% of average and the Yampa and White River basins at 82% of average.



Outlook

The April 1st forecast for the most probable spring runoff based on current conditions reports 54% of average for the North Platte River near Northgate, 70% of average for the White River near Meeker, 62% for the Little Snake River near Lily, and 74 % of average for the Yampa River near Maybell. These predictions are all lower than those contained in the March 1st forecast. The biggest decline was on the North Platte where the forecast dropped 16% in the last month. These forecasts are provided by the Natural Resources Conservation Service of the United States Department of Agriculture.



Administrative/Management Concerns

The continuing decline in the runoff forecast indicates a possible continuation of the drought that was experienced last year. Much of the low and mid-elevation snow has already melted. If additional precipitation is not forthcoming the spring runoff may be shorter in duration then normal. The Illinois River, a tributary to the North Platte is currently under administration to fill reservoirs. A dry spring would result in many streams systems going under administration much earlier then normal.

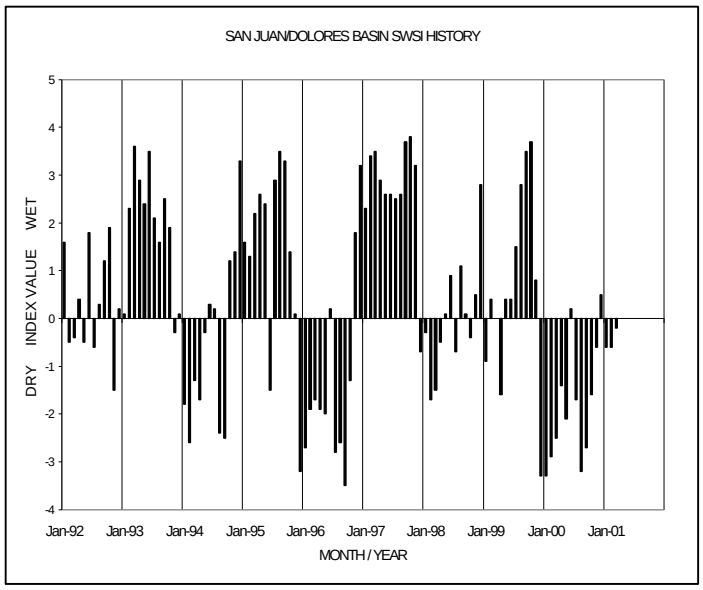
Public Use Impacts

None at this time.

Basinwide Conditions Assessment

The SWSI value of –0.2 indicates that for March the basin water supplies were near normal. The Natural Resources Conservation Service reports that April 1 snowpack is 90% of normal. Rivers were running at levels below average during March except the Animas which ran 104% of average. Flow at the gaging station Animas River near Durango was 311 cfs, as compared to the long-term average of 308 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 89% of normal as of the end of March.

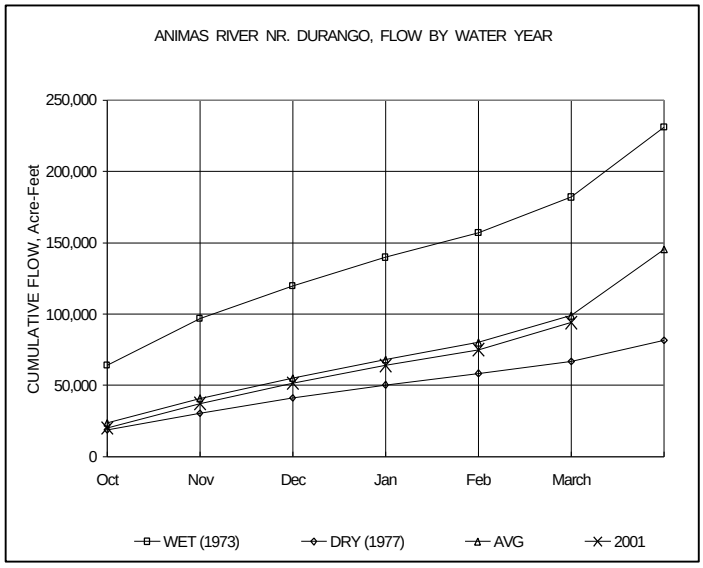
Temperatures were near the usual average of 51.9°F for the average high, but were almost 5°F higher than the 22.5°F average low. The lowest temperature of the month was 10°F in Durango. Local precipitation was well above normal (136%) and was about the same percentage for the water year since October 1, 2000.



Outlook

The winter accumulation of water in the mountains has come much closer to matching average for the entire season than past years have shown. After storms in the area dropped more than the monthly average, the snow water accumulation briefly exceeded 110% on March 10. Then the weather slowed down and as the average snowpack would have maximized around April 4, the snowpack fell to about 91% of normal. Snow courses on the La Plata and North San Juan Mountains were reporting the highest water content, where the Dolores/San Miguel areas were generally down to 75-80%.

Reservoirs remained frozen and below normal. Lower reservoirs filled early. Red Mesa achieved a fill and the Pine Ridge Ditch was opening up early in April with enough localized snow melt to fill Amber and overflows went to storage in Lake Durango. Most of the reservoirs except for McPhee were expected to fill during the runoff.

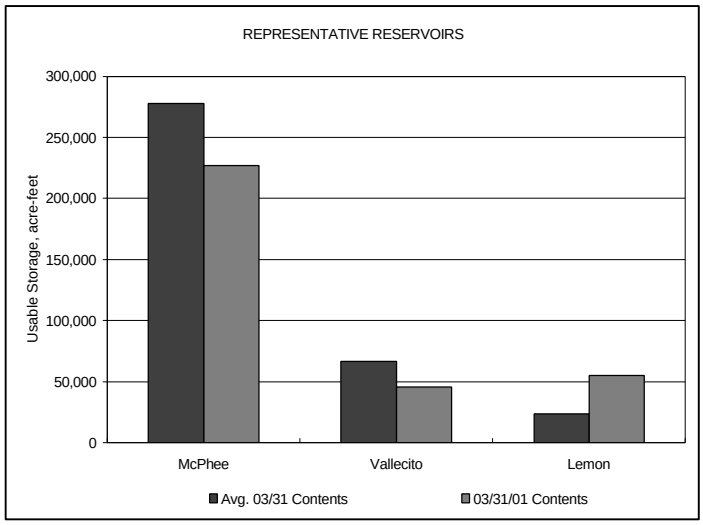


Administrative/Management Concerns

None.

Public Use Impacts

Though the lower-level snow melted extensively, the ground remained wet and supply prospects remained good for at least adequate but not excessive runoff early in the season. This will give both agricultural users and recreational users early water for beneficial use.



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