
COLORADO

WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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March 2007

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.

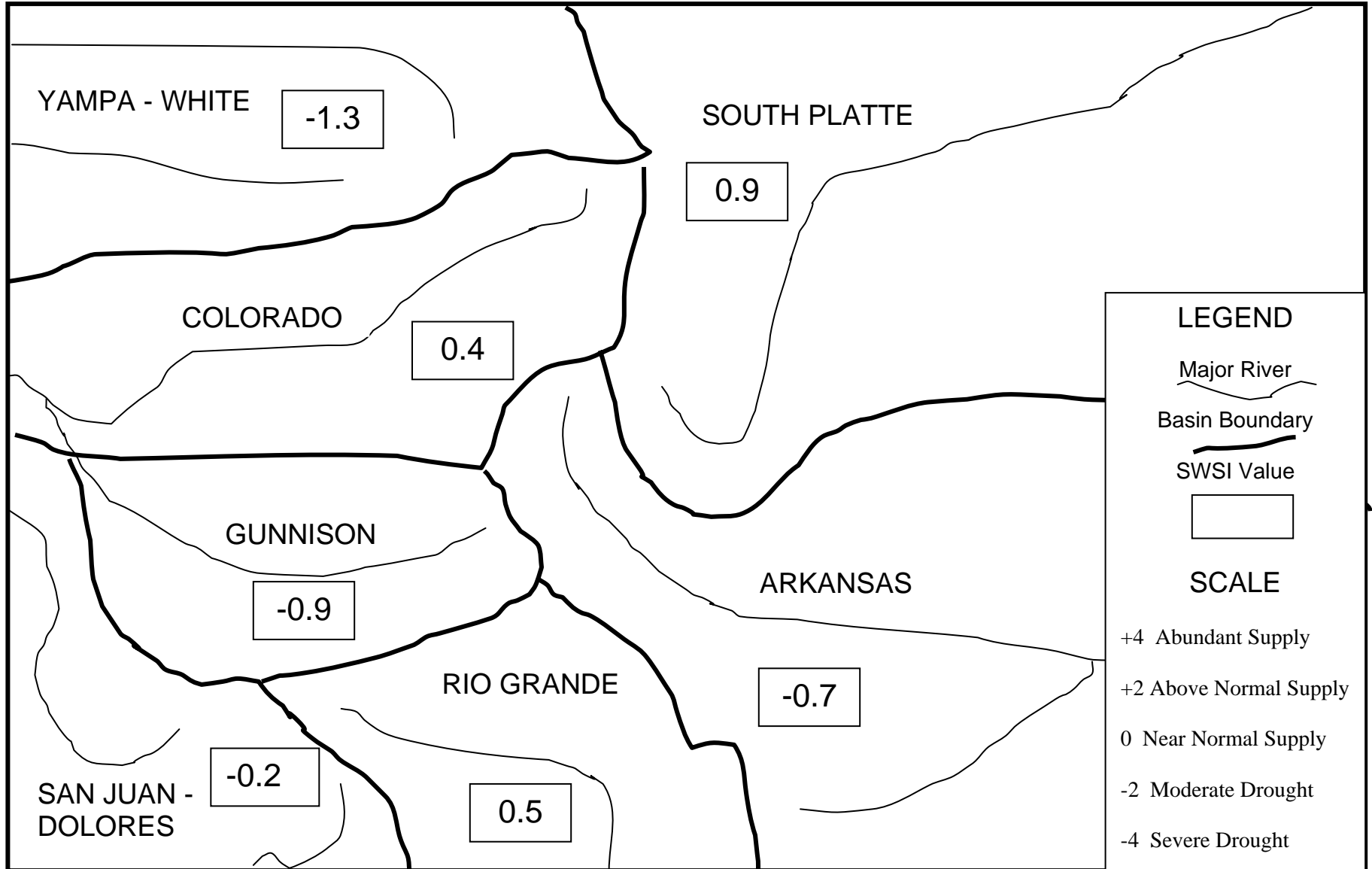
The statewide SWSI values for March range from a high value of 0.9 in the South Platte Basin to a low value of -1.3 in the Yampa/White Basin. Three of the basins (Gunnison, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's values. Three of the basins (Arkansas, Rio Grande, and Colorado) experienced a loss from the previous month's values. One of the basins (South Platte) remained unchanged from the previous month's values.

The following SWSI values were computed for each of the seven major basins for March 1, 2007, and reflect the conditions during the month of February.

<u>Basin</u>	<u>March 1, 2007 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	+0.9	0.0	- 0.4
Arkansas	- 0.7	- 0.7	- 2.3
Rio Grande	+0.5	- 0.3	+3.3
Gunnison	- 0.9	+0.2	- 1.0
Colorado	+0.4	- 0.2	- 1.7
Yampa/White	- 1.3	+0.6	- 2.2
San Juan/Dolores	- 0.2	+0.1	+2.1

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, 2007

Basinwide Conditions Assessment

The SWSI value for the month of February was 0.9. Cumulative storage for the six reservoirs graphed on this page was 112% of normal as of the end of February. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 60% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 91% of capacity. The Natural Resources Conservation Service reports that the March 1 snowpack is 113% of normal. Flow at the gaging station South Platte River near Kersey was 569 cfs, as compared to the long-term average of 673 cfs. Flow at the Colorado/Nebraska state line averaged 115 cfs.

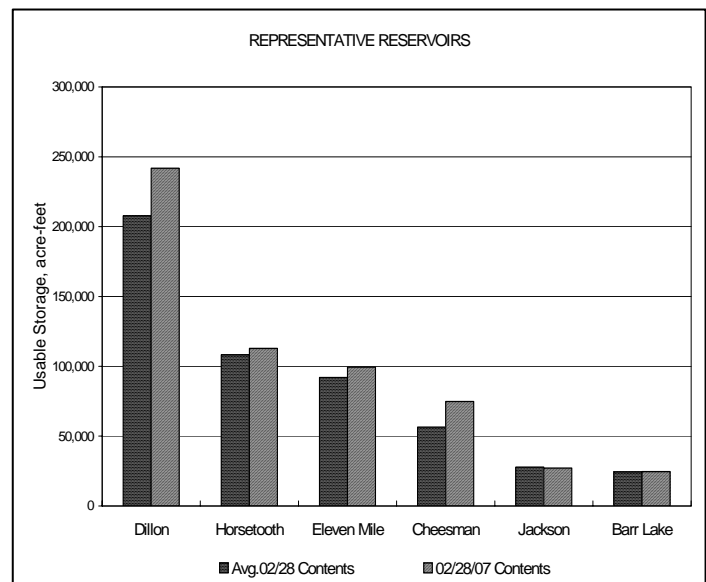
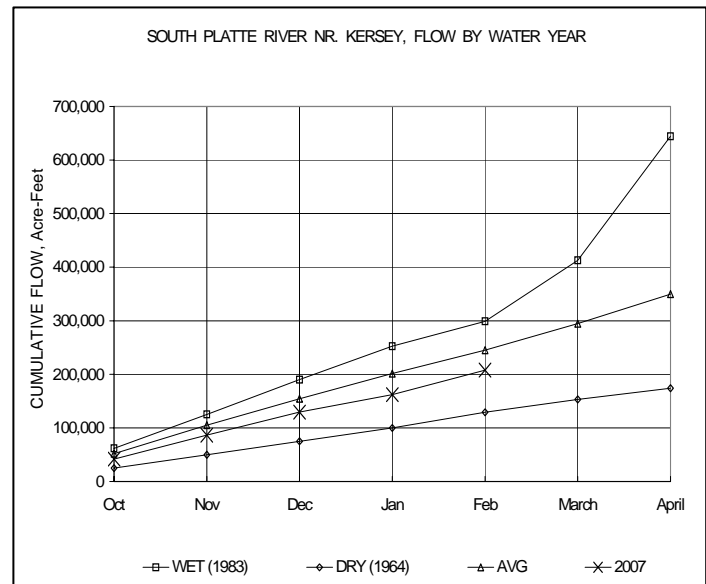
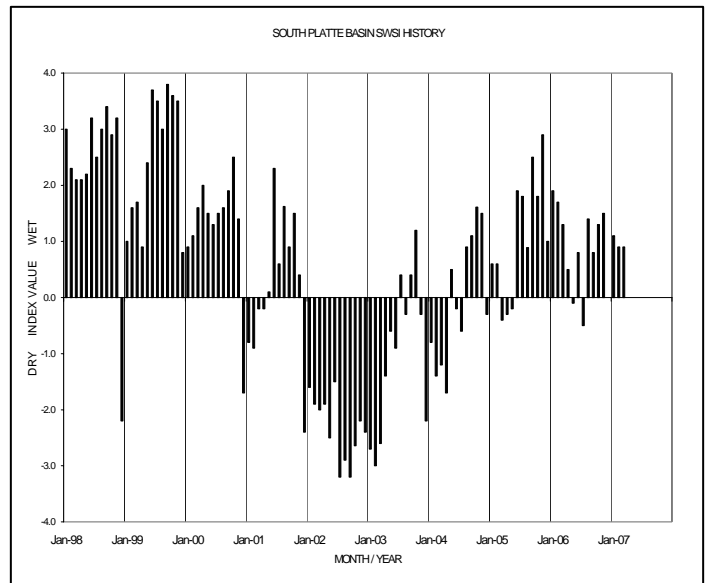
Outlook

The ability to store water improved in February as weather conditions warmed during the month. Nevertheless, some users still have not been able to take decreed amounts due to ice conditions. Flow the latter part of February significantly increased due to the melting of low elevation snow which also helped in meeting demand to fill reservoirs. While still lagging last year's storage rate, it now appears most if not all the major irrigation storage reservoirs will fill this season. Of some concern, North Sterling and Empire still need significant time to finish their fill and will require that the direct flow demand not be high during at least part of April in order to fill. We are cautiously optimistic with present soil moisture conditions. If reservoirs fill or the rate of flow exceeds the fill rate capacity of the mainstem plains reservoirs, it appears we may even be able to allow much needed recharge to occur during March along the mainstem.

Administrative/Management Concerns

In general, storage on tributaries continued to be approximately average for this time of the year except for the Poudre basin which still is lagging behind. A good snow melt runoff will be necessary in order to fill reservoirs in this basin. Storage above the Denver metropolitan area continued to be in excellent shape going into 2007 with most municipal reservoirs full or near full.

Snowpack continues slightly above average in the basin. This bodes well for at least an average runoff provided weather conditions are not extremely dry. As we relearned in 2004 and 2006, late winter/early spring season weather conditions are the most important factor in determining what the runoff will end up being.



Basinwide Conditions Assessment

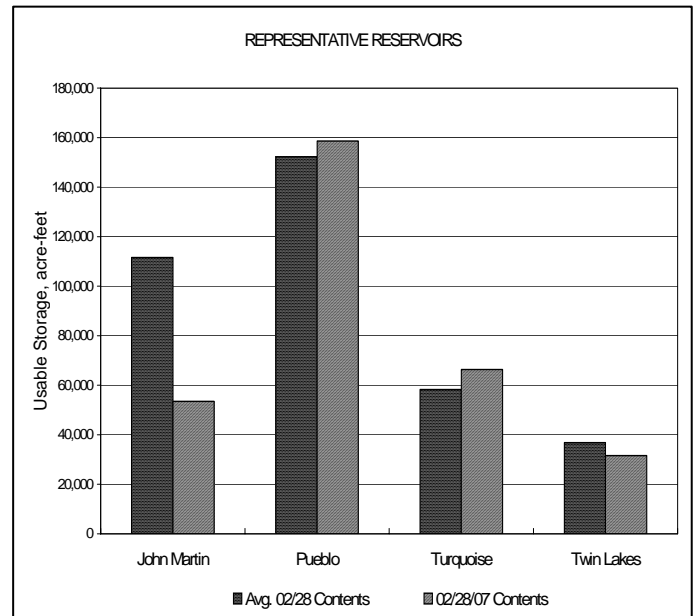
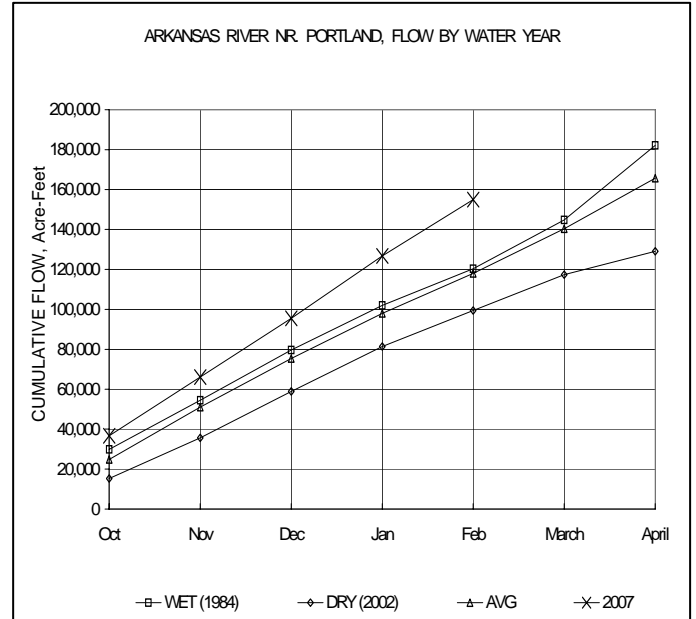
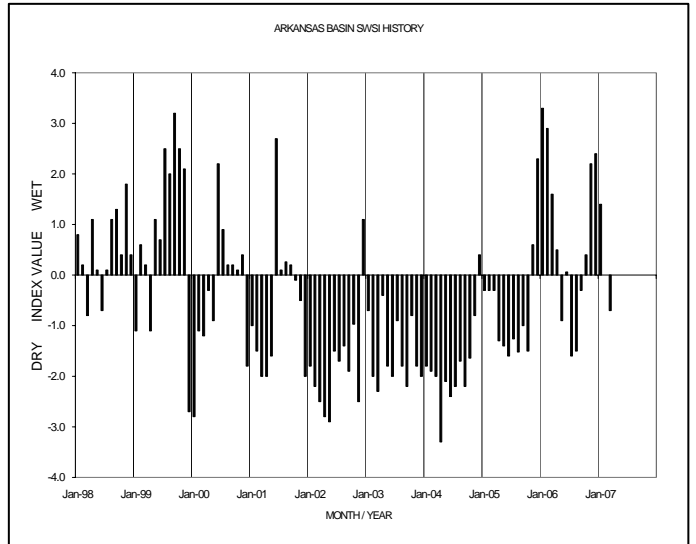
The SWSI value for the month of February was -0.7. The Natural Resources Conservation Service reports that the March 1 snowpack is 114% of normal. Flow at the gaging station Arkansas River near Portland was 507 cfs, as compared to the long-term average of 358 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 86% of normal as of the end of February.

Outlook

Reservoir storage in the Pueblo Winter Water Program totaled 133,984 acre-feet as of the end of February. This storage amount is 134% of last year's storage to date and represents 145% of the past five-year average. Conservation storage in John Martin Reservoir has accumulated 30,605 acre-feet versus 13,171 acre-feet as of the end of February last year.

Administrative/Management Concerns

Flows through the City of Pueblo became an issue for the recreation fisheries area that DOW has been building on the Arkansas River through the city when flows under the Winter Water storage program required cuts below 50 cfs. This year DOW and Pueblo Board of Water Works were able to work a deal to maintain flows up to 50 cfs by arranging for a Permanent Pool delivery to John Martin Reservoir that accomplished a dual purpose for recreational benefit.



Basinwide Conditions Assessment

The SWSI value for the month of February was 0.5. The Natural Resources Conservation Service reports that the March 1 snowpack is 93% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 192 cfs (96% of normal). The Conejos River near Mogote had a mean flow of 48 cfs (93% of normal). Flow to the state line was 113% of normal due to significant return flows throughout the system. After the very cold January that the Rio Grande Basin experienced, February was near average in terms of temperature. Alamosa had a mean temperature in February of 22.7 degrees, 0.2 degrees warmer than average. Alamosa only received 0.07 inches of precipitation during the month, 0.14 inches below normal. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 92% of normal as of the end of February.

Outlook

Snowpack conditions dropped during the month of February due to the lack of snowfall. Recent NRCS stream flow forecasts are calling for average to slightly above average conditions for Sangre de Cristo Mountain streams, and average to slightly below average conditions for the remainder of the basin this year. Expected runoff in the Rio Grande near Del Norte is 92 percent of normal and 93 percent of average for the Conejos near Mogote. Carryover storage in the basin reservoirs is somewhat less than average.

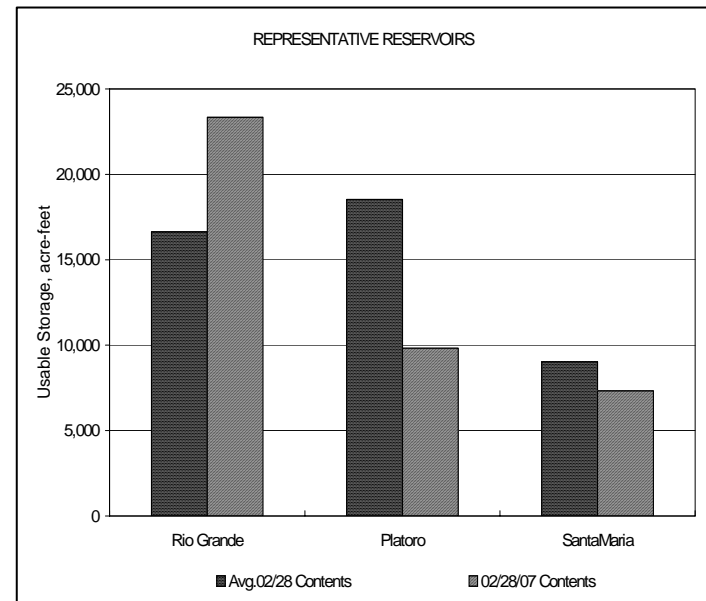
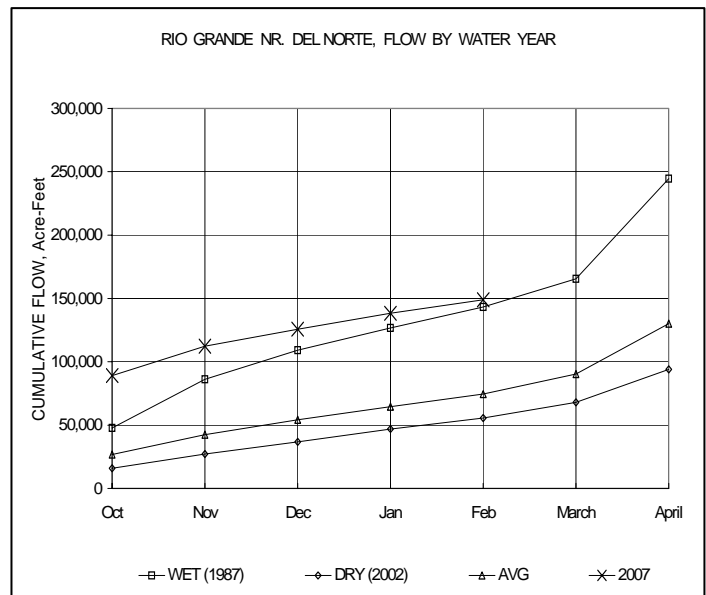
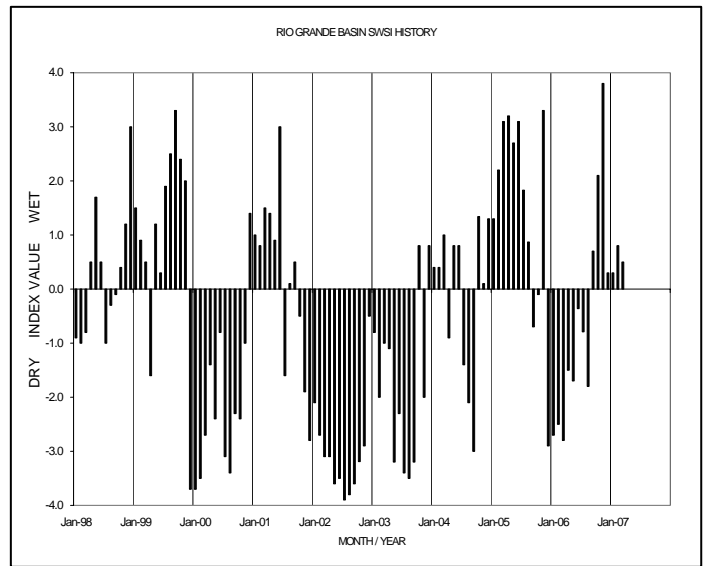
Administrative/Management Concerns

The annual meeting of the Rio Grande Compact Commission will be held at the Inn of the Rio Grande in Alamosa on March 22, 2007 at 9 a.m. The public is invited to attend. The Inn is located on US Highway 160 just east of State Highway 17.

The Division Engineer has received word that the call for irrigation water may come later this year than last. Rio Grande Compact delivery requirements and significant snowfall on the valley floor has cooled the desire of many farmers and ranchers to open their headgates early this year. Diversions from the Rio Grande and Conejos are expected to begin sometime during the first half of April.

Public Use Impacts

Snow cover on the valley floor is starting to melt, causing muddy conditions throughout the valley.



Basinwide Conditions Assessment

The SWSI value for the month of February was -0.9. The Natural Resources Conservation Service reports that the March 1 snowpack is 85% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 50.4 cfs, as compared to the long-term average of 45.3 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 124% of normal as of the end of February.

Current streamflow and reservoir storage levels are slightly above average. This situation might offset some of the grief found in the March 1, 2007 streamflow forecasts issued by the Natural Resources Conservation Service (NRCS) for runoff in the Gunnison River basin. Lack of snowfall during February resulted in the reduction of forecasted runoff for the period of April 1 through July 31. At this time, no sub-basins of the Gunnison are forecasted to experience an average runoff this year. The highest is the Lake Fork of the Gunnison at 95% and the lowest is the Cochetopa Creek basin at 75% of normal. Of special note is that the major rivers, the East, the Taylor, the San Miguel and the North Fork of the Gunnison are all situated around 80% of normal runoff. A situation not nearly as poor as the 2002 and 2003 runoffs, but certainly a disappointing drop from snowpack conditions at the first of the year.

Outlook

Expected continued high pressure systems over the region won't help snowpack accumulation in the early part of March. The NRCS forecasts that, based on historic SNOTEL data, only a 10% chance exists that snowpack in the Gunnison basin will reach the average peak this spring. Simply stated, it is unlikely that the basin will see average runoff this spring.

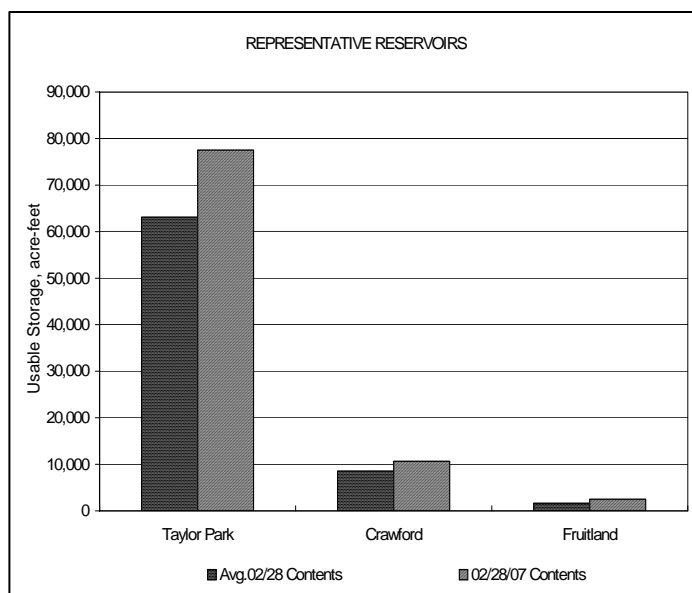
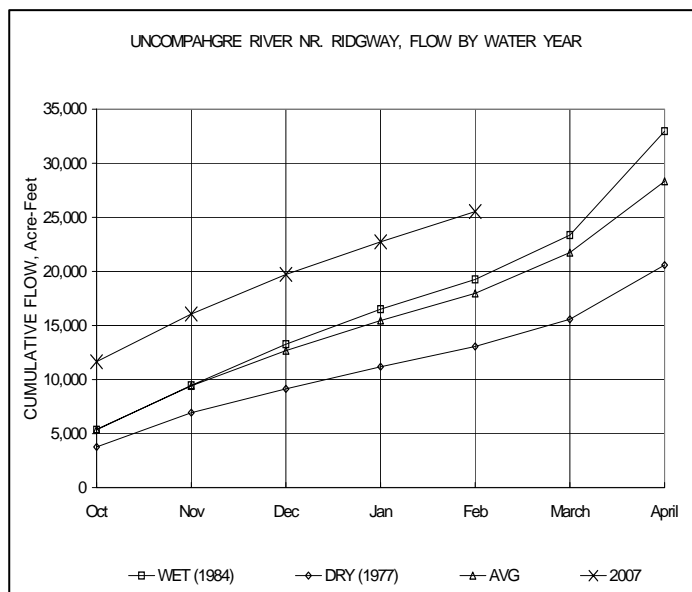
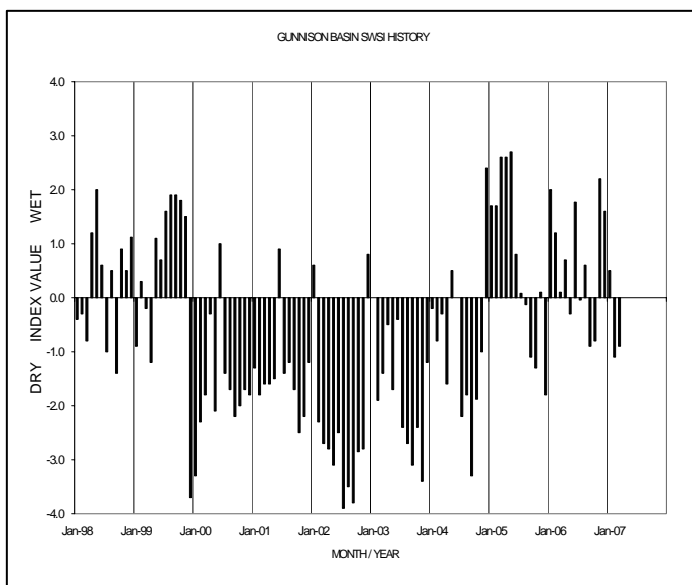
Administrative/Management Concerns

The lack of snowfall during February has resulted in administrative changes. The release from Crystal Reservoir was reduced from 800 to 700 cfs on March 8. The release from Ridgway Reservoir was reduced from 100 cfs to 75 cfs on March 2. These reductions are in anticipation of below normal runoff this spring

It does not appear like there will be a call on the Gunnison system from the Redlands Canal this spring as streamflow should remain just above normal for March and April. The benefit of last year's rainfall is still felt. A call could threaten the ability of numerous reservoirs to store in the critical runoff period.

Public Use Impacts

Lack of snowfall during February was somewhat detrimental to winter sports activities. A warm March could lead to early diversions and calls for irrigation water as users anticipate a lower than normal water supply.



Basinwide Conditions Assessment

The SWSI value for the month of February was 0.4. The Natural Resources Conservation Service reports that the March 1 snowpack is 96% of normal. Flow at the gaging station Colorado River near Dotsero was 1559 cfs, as compared to the long-term average of 945 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 121% of normal as of the end of February.

Outlook

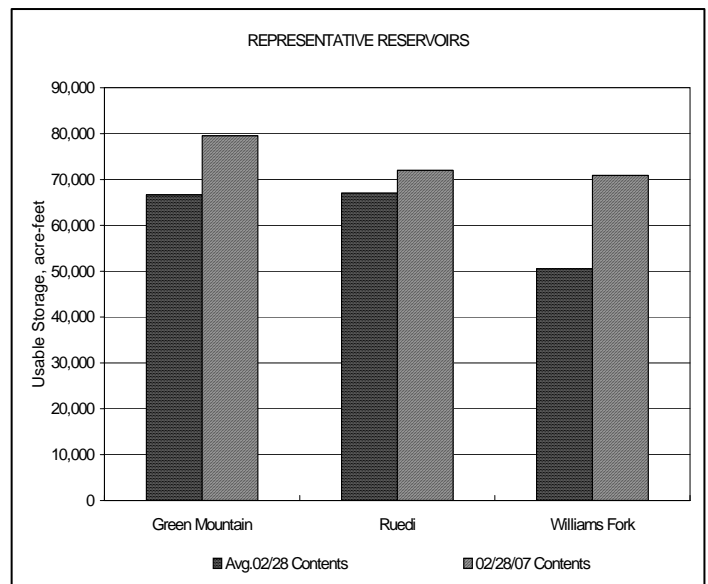
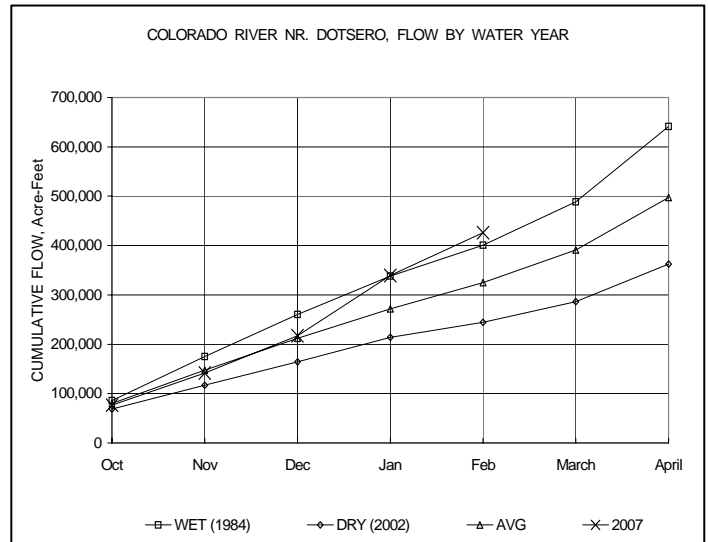
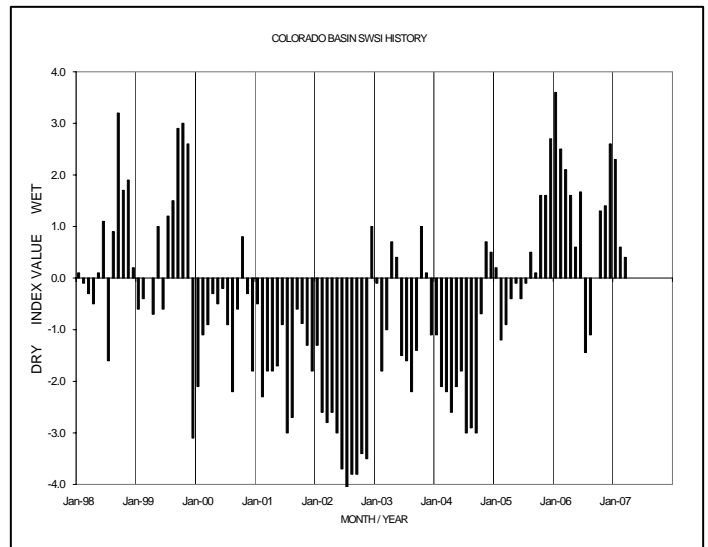
The Upper Colorado River Basin continues to be above 90% of Snow Water Equivalent since January, according to SNOTEL course data. Flows at the Dotsero and Cameos gages for the short-term forecast are average.

Administrative/Management Concerns

Division 5 is addressing well issues in Summit County. A preliminary review indicates there may be approximately 20 subdivisions with approximately 1,000 wells that have the chance to be out of compliance. Field research is underway to help determine the details.

Public Use Impacts

From the Colorado Avalanche Information Center, the avalanche danger in the Aspen area is considerable above tree line and moderate below tree line. On the Grand Mesa, Vail and Summit County, the danger is moderate at all elevations.



Basinwide Conditions Assessment

The SWSI value for the month of February was -1.3. Flow at the gaging station Yampa River at Steamboat was 117 cfs, as compared to the long-term average of 99 cfs.

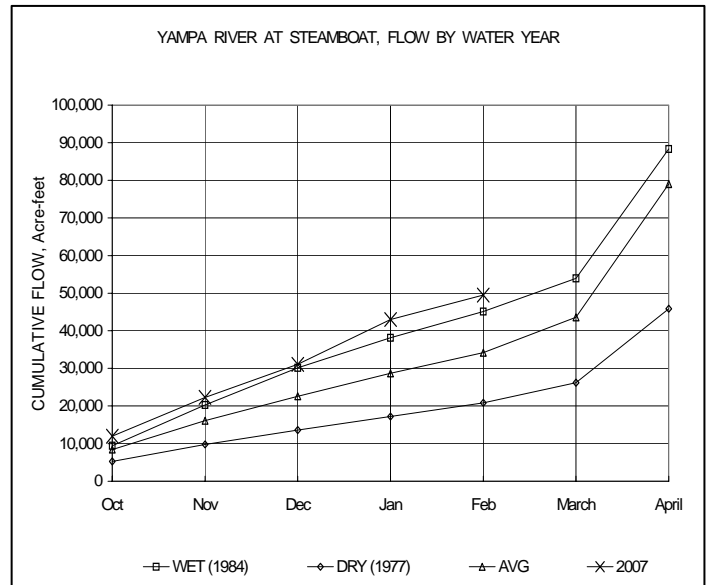
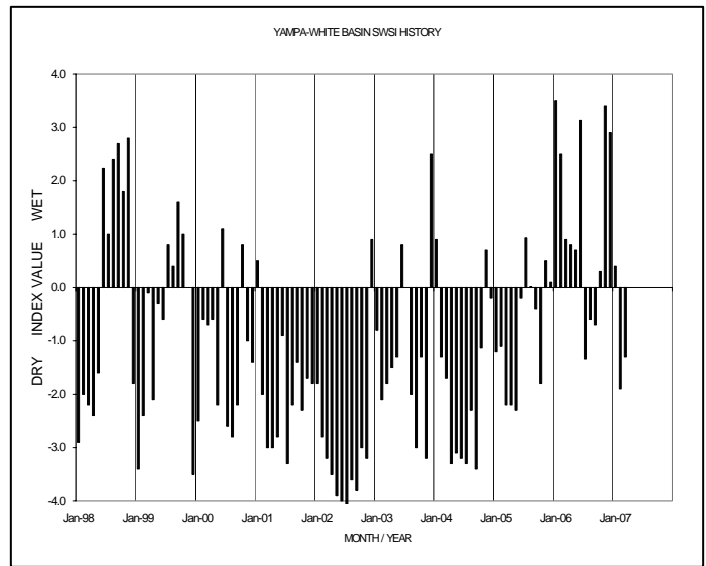
Unlike the previous months, February precipitation was above average for the basin. Precipitation for the month as measured at the SNOTEL sites operated by the NRCS averaged 118% of normal for the Yampa, White, and North Platte River basins combined. For the Yampa and White River Basins the precipitation totaled 121% of average and the North Platte River basin totaled 120% of average. The snow water equivalent as of February 28, 2007 for the Yampa and White River Basins was 83% of average and for the Laramie and North Platte River Basins it was 87% of average. The individual basin snowpacks at the end of the month were as follows: 86% of average for the North Platte River Basin, 84 % of average for the Yampa River Basin and 79% of average for the White River Basin. The latest runoff forecasts from the NRCS for the April through July period are 86% of average for the North Platte River at Northgate, 70% of average for the Yampa River near Maybell, 60% of average for the Little Snake River near Lily and 76% of average for the White River near Meeker.

Outlook

Fish Creek Reservoir storage dropped throughout the month of February ending the month at approximately 83% of capacity. Yamcolo Reservoir storage level at the end of February was approximately 94% of capacity. Officials are taking the opportunity at Elkhead Creek Reservoir to store as much inflow as possible releasing just a minimal amount. Elkhead Creek Reservoir was storing approximately 3,500 acre-feet at the end of February and the enlarged capacity of the reservoir is approximately 24,500 acre-feet. Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Creek Reservoir for municipal, industrial, recreation, and in the future, fish recovery releases.

Public Use Impacts

Area reservoirs are frozen, with good ice fishing reported. Elkhead Reservoir remains closed to all recreational activities.



Basinwide Conditions Assessment

The SWSI value for the month of February was -0.2. The Natural Resources Conservation Service reports that the March 1 snowpack is 78% of normal.

Flows at the Animas River at Durango averaged 266 cfs (129% of normal) with a maximum average daily peak flow of 288 cfs on Feb. 11th. The Dolores River at Dolores was estimated to average 76 cfs (135% of normal). The La Plata River at Hesperus averaged 7.7 cfs (104% of normal) with a maximum average daily peak flow of 8.8 cfs on Feb. 28th.

Precipitation in Durango was 0.94 inches for February which is below the 30-year average of 1.69 inches. Precipitation to date in Durango, for the water year, is 8.02 inches which is below the average of 8.27 inches. Temperatures were above normal. Durango was 1.8° above its 30-year average high and 2.3° above its 30-year average low.

At the end of the month Vallecito Reservoir contained 76,620 acre-feet compared to its normal contents of 53,693 acre-feet (143% of normal). McPhee Reservoir was up to 278,084 acre-feet compared to its normal contents of 256,579 acre-feet (108% of normal), while Lemon Reservoir was up to 33,780 acre-feet as compared to its normal content of 19,525 acre-feet (173% of normal). The storage in Lemon Reservoir is the highest amount stored for an end of February period based on 44 years of record.

Outlook

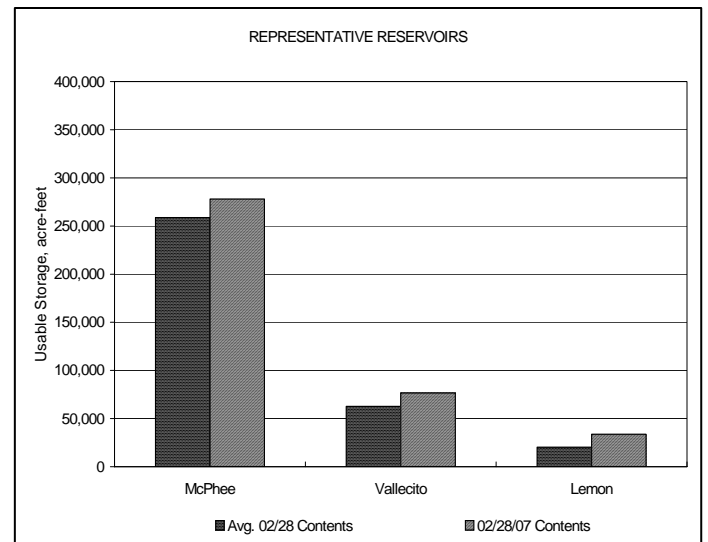
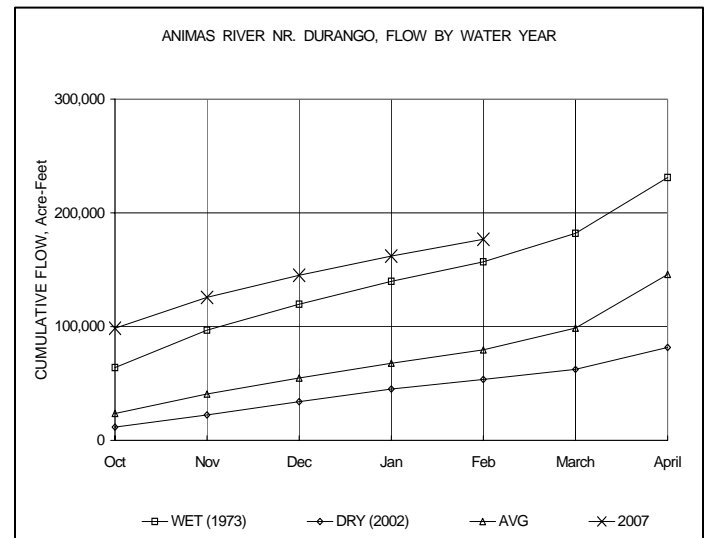
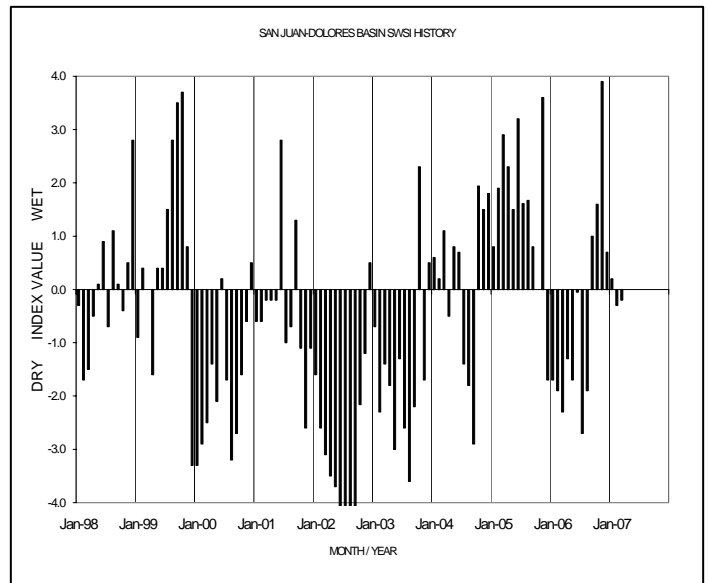
Current snowpack for the basin remains below average. Reservoir storage remains the bright spot in the basin with above average storage. The current storm track is south of the division but we are hopeful the storm track will move to the north slightly as we enter March.

Administrative/Management Concerns

The compact period on the La Plata between Colorado and New Mexico began on February 15th, but remained off compact call for the month.

Public Use Impacts

DWR staff did not observe kayaking on the Animas River in the month of February.



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