
COLORADO

WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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January 2008

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.

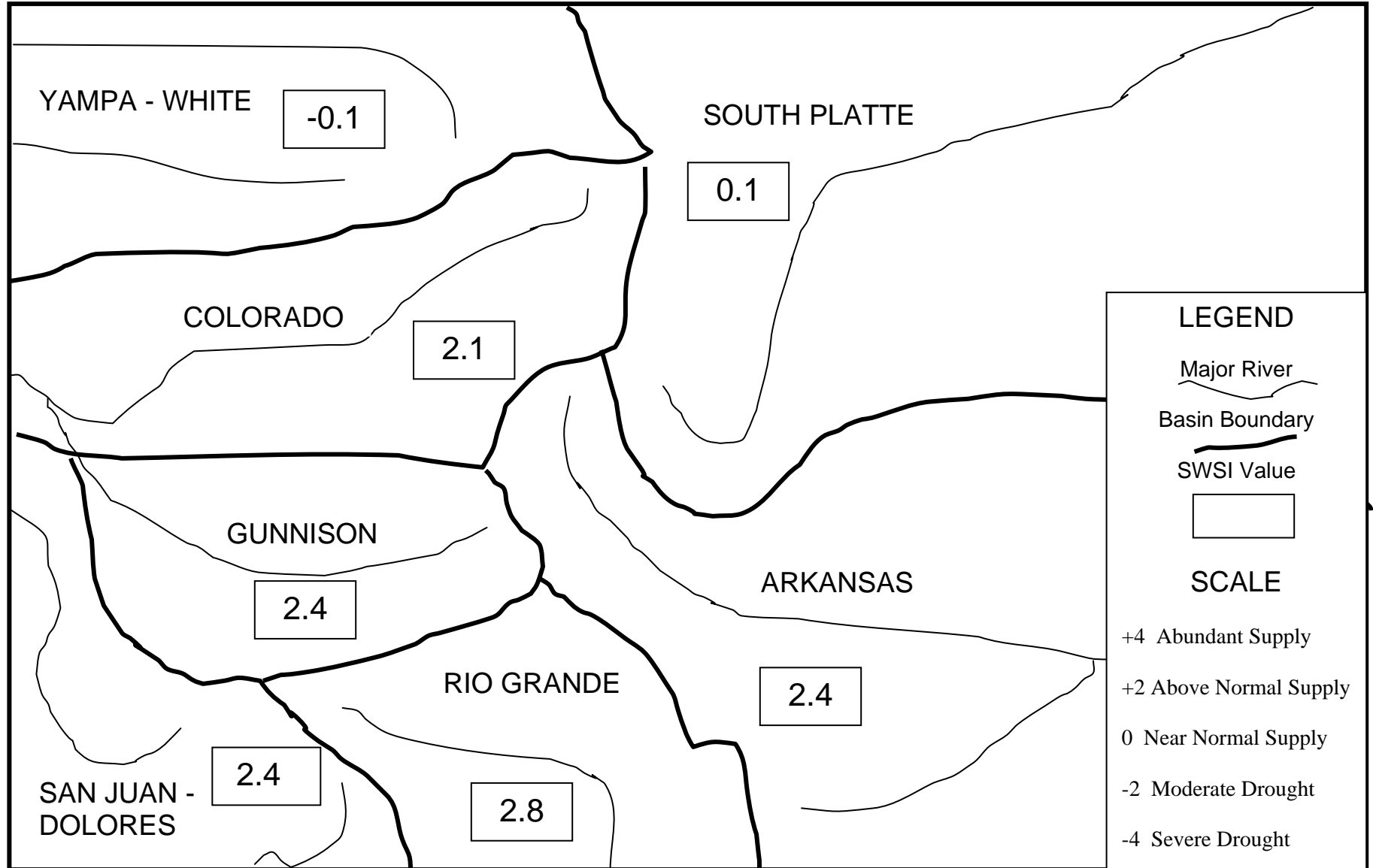
The statewide SWSI values for December range from a high value of 2.8 in the Rio Grande to a low value of -0.1 in the Yampa/White Basin. All of the basins experienced a gain from the previous month's values largely due to the amount of snow received by the State in the month of December.

The following SWSI values were computed for each of the seven major basins for January 1, 2008, and reflect the conditions during the month of December.

<u>Basin</u>	<u>January 1, 2008 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	+0.1	+1.5	+0.1
Arkansas	+2.4	+4.9	+0.0
Rio Grande	+2.8	+5.4	+2.5
Gunnison	+2.4	+5.0	+0.8
Colorado	+2.1	+3.8	- 0.5
Yampa/White	- 0.1	+3.2	- 3.0
San Juan/Dolores	+2.4	+4.5	+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



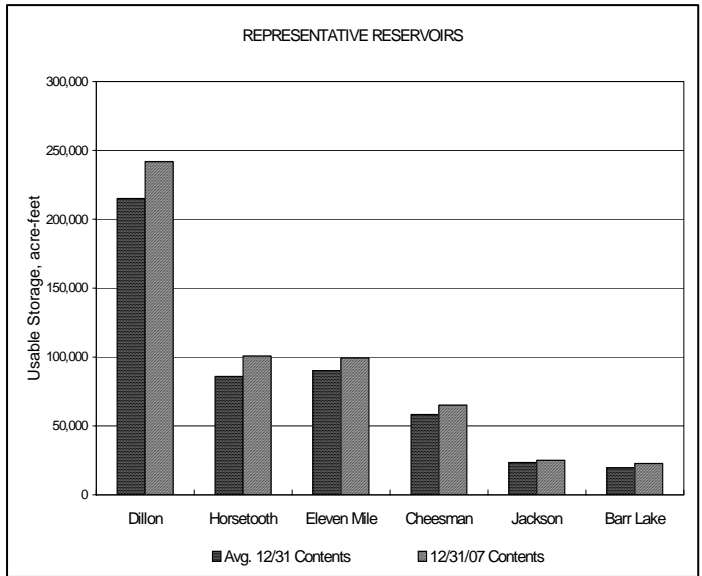
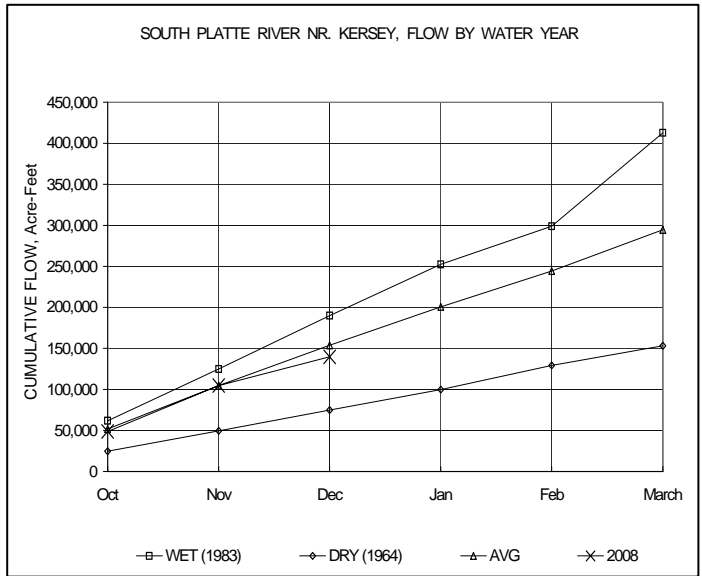
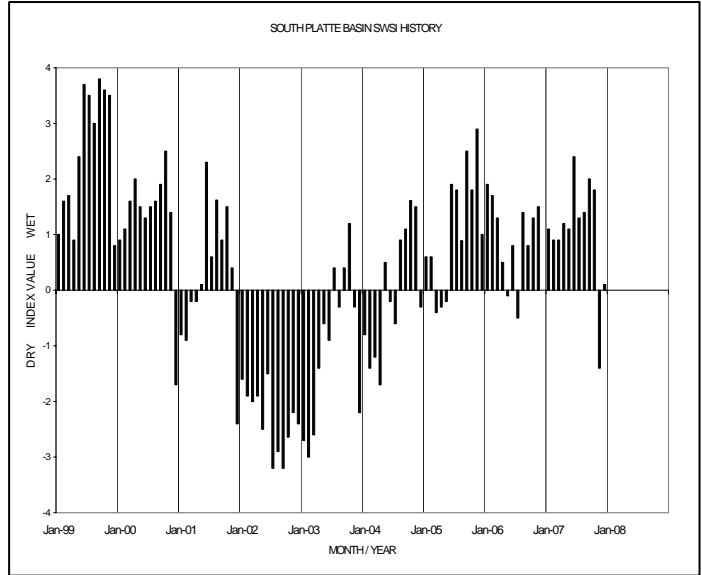
January 1, 2008

Basinwide Conditions Assessment

The SWSI value for the month was 0.1. Cumulative storage for the six reservoirs graphed on this page was 113% of normal as of the end of December. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 71% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 90% of capacity. The Natural Resources Conservation Service reports that January 1 snowpack is 94% of normal. Flow at the gaging station South Platte River near Kersey was 571 cfs, as compared to the long-term average of 683 cfs. Flow at the Colorado/Nebraska state line averaged 155 cfs.

Outlook

The main diversions in the South Platte basin continued for storage and to a lesser extent municipal use. During the first half of the month, the call on most of the river was for storage as there was not enough supply to meet all the flow rate storage demands. With colder conditions the latter half of the month, storage was restricted due to icing conditions. At that point, the call on the South Platte River was removed as users could no longer take all on the supply. This allowed for limited recharge to occur. However, even this usage was restricted due to the cold conditions. Nevertheless, irrigation and municipal storage conditions continue to be improved over last year at this time. The present flow and storage conditions give hope that all major irrigation reservoirs on the plains will fill this spring. This will provide a good start to the 2008 irrigation season. Municipal suppliers are also optimistic that there will not be shortages this coming summer as storage conditions are in good shape. As always is the case, supply conditions for next year will be dramatically dependent on late winter and early spring mountain snow fall and spring rainfall conditions on the plains.



Basinwide Conditions Assessment

The SWSI value for the month was 2.4. The Natural Resources Conservation Service reports that January 1 snowpack is 141% of normal. Flow at the gaging station Arkansas River near Portland was 569 cfs, as compared to the long-term average of 399 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 99% of normal as of the end of December.

Outlook

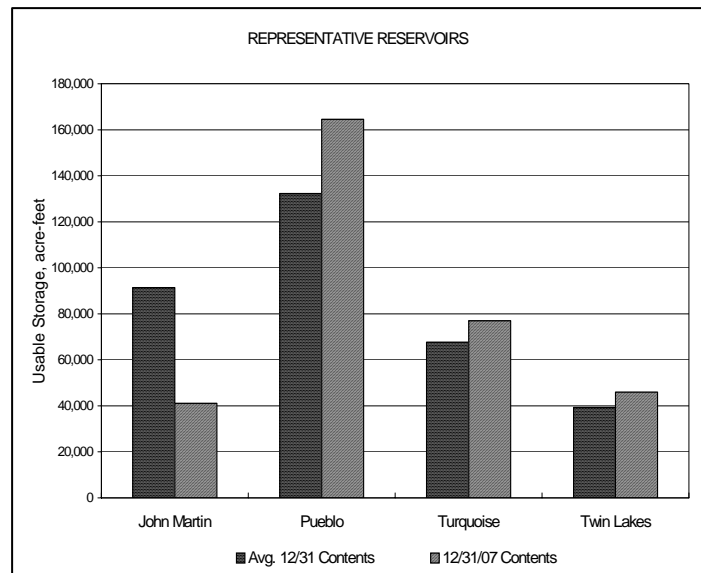
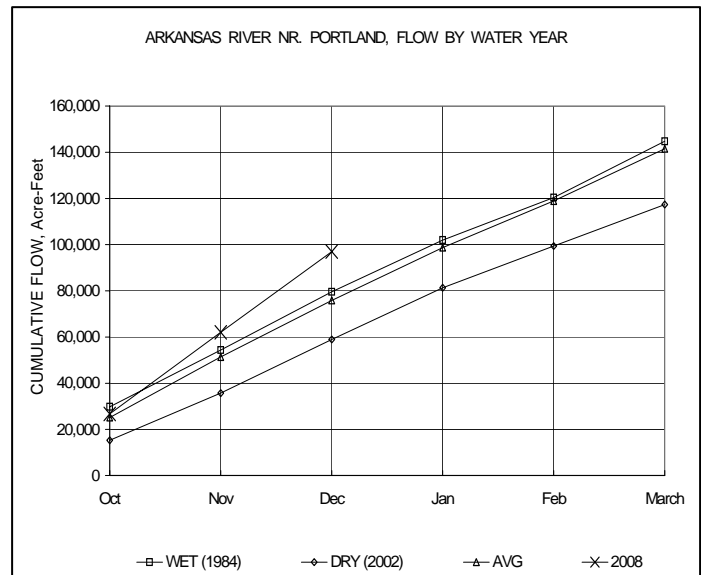
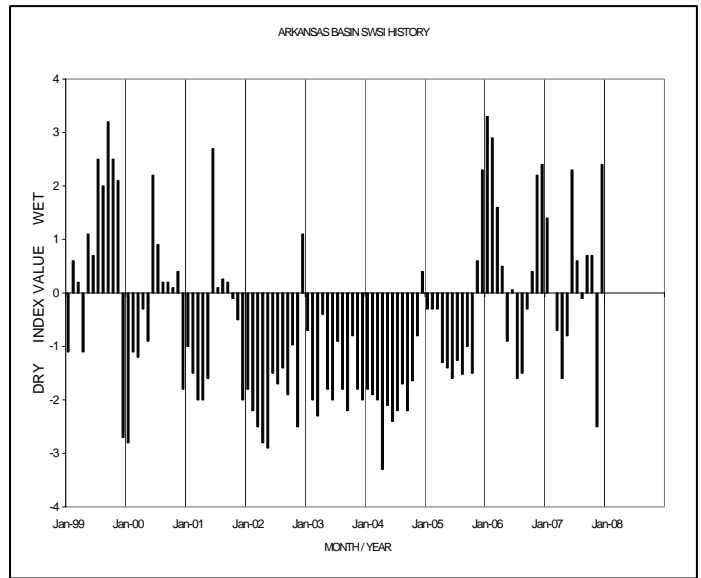
The Pueblo Winter Water system grand total was 61,668 acre-feet at the end of December representing an increase from last year's storage to date, which was 59,121 acre-feet. The previous five-year average for this period is 43,164 acre-feet and the average since 1990 for this period has been 62,415 acre-feet.

Conservation storage in John Martin Reservoir has been somewhat less than last year. Storage since November 1st has been 9,253 acre-feet while storage a year ago for the same time period was 16,022 acre-feet.

Administrative/Management Concerns

The Arkansas River Compact Administration meeting was held in Lamar on December 10th and 11th. A few additional reservoir accounting issues for John Martin Reservoir were resolved due to the efforts of a Special Engineering Committee originally appointed by ARCA in 2005 and which continued efforts to try to resolve the remaining disputed issues on reservoir accounting during 2007 prior to the retirements of the Colorado State Engineer and the Kansas Chief Engineer.

The Lower Arkansas Valley Water Conservancy District released the Final Report on their "Super Ditch" concept. The report was prepared by HDR Engineering and included a study of a Rotational Land Following-Water Leasing Program as an alternative to "buy and dry" purchases of agricultural land by municipalities.



Basinwide Conditions Assessment

The SWSI value for the month was 2.8. The Natural Resources Conservation Service reports that January 1 snowpack is 137% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 224 cfs (115% of normal) during December. The Conejos River near Mogote had a mean flow of 54 cfs (103% of normal). Hydrologically speaking, 2007 was a very unusual year. Late snowstorms and unexpected monsoonal patterns bolstered the runoff from a poor snowpack. The Conejos system produced about 90% compared to long term averages and the Rio Grande about 110%. But creeks at the northern end of the San Luis Valley, such as Carnero, Saguache, and Kerber had an outstanding year. For the majority of the Division 3 streams, runoff was moderate and lengthy, without any flooding; a real benefit to area farmers and ranchers. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 104% of normal as of the end of December.

Alamosa received 1.21 inches of precipitation during December, 0.88 inches above normal. Temperatures ranged from -33 degrees to 53 degrees in Alamosa where the average monthly temperature was only 12 degrees, about 5 degrees below normal. Several weather-related records were broken during December including over one-third of an inch of rain on December 1 and bitter temperatures late in the month. For the year, Alamosa had above average precipitation of 9.74 inches (+2.49 inches) and warmer than average temperatures.

Outlook

Stream flow in the basin should remain slightly above average for the next few months. Very cold temperatures in the San Luis Valley will continue as long as the snow and ice cover on the valley floor remains.

Administrative/Management Concerns

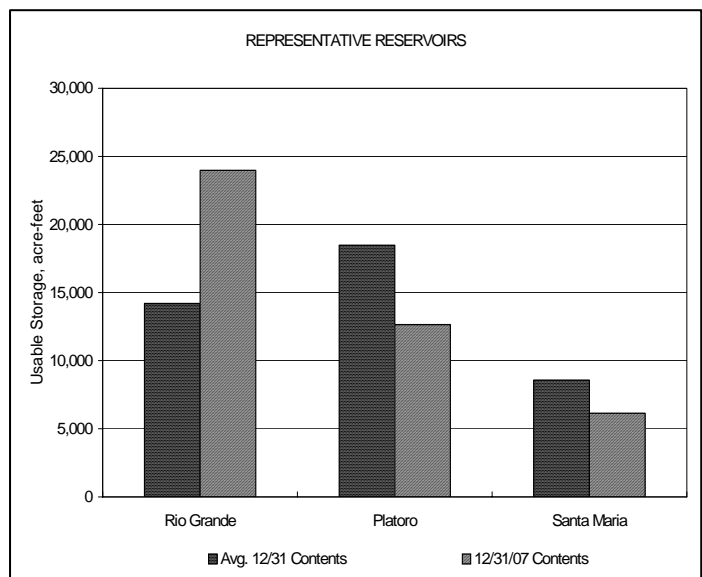
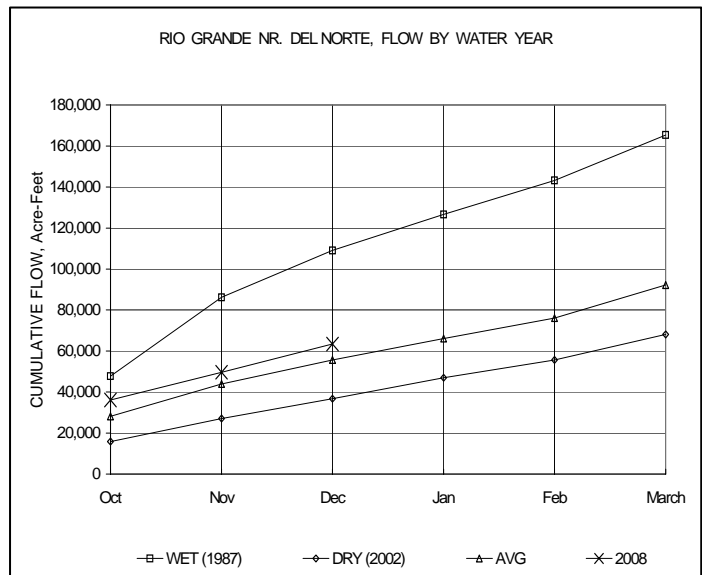
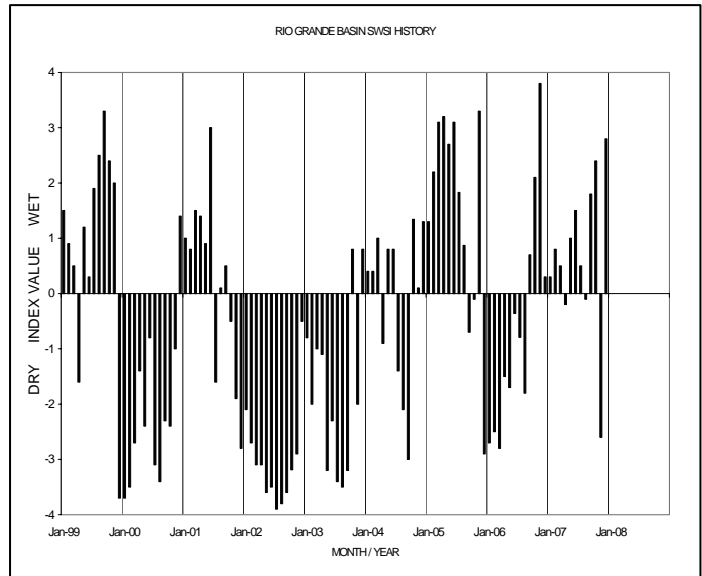
Colorado will exceed the delivery obligation to New Mexico and Texas on the Rio Grande Compact for 2007 by about 8000 acre-feet. Approximately 710,000 acre-feet was indexed at the Rio Grande near Del Norte gaging station during 2007. Stream flow in an average year totals 630,000 acre-feet at that site. Indexed flow on the Conejos River near Mogote totaled 204,000 acre-feet compared to an average of 220,000 acre-feet. The Los Pinos and San Antonio Rivers added another 72,000 acre-feet to the index.

The required delivery for Colorado on that indexed flow was approximately 304,000 acre-feet. A preliminary estimate of the amount delivered to the state line is 289,000 acre-feet. Paper credit and other standard adjustments will more than make up the difference.

Closed Basin Project delivery to the Rio Grande totaled 15,000 acre-feet for 2007. All Project canal deliveries met water quality standards.

Public Use Impacts

Going into December, snowpack in the upper Rio Grande basin was abysmal – even prompting comparisons to 2001/2002. But three superb snowstorms since then have the basin sitting pretty at over 150% of normal; a remarkable turnaround.



Basinwide Conditions Assessment

The SWSI value for the month was 2.4. The Natural Resources Conservation Service reports that January 1 snowpack is 117% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 65.0 cfs, as compared to the long-term average of 53.3 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 118% of normal as of the end of December.

Outlook

October and November were dry months in the Gunnison Basin with temperatures well above normal. Grand Junction set an all time record for December precipitation, receiving 2.04 inches for the month, breaking the 1951 record of 1.89 inches. It will be a December to remember and hopefully this generous trend will persist and place the basin in great shape for the 2008 irrigation season.

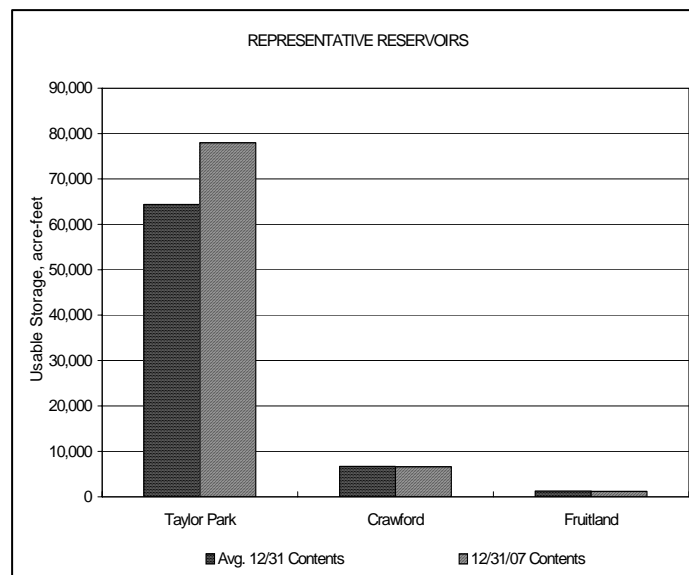
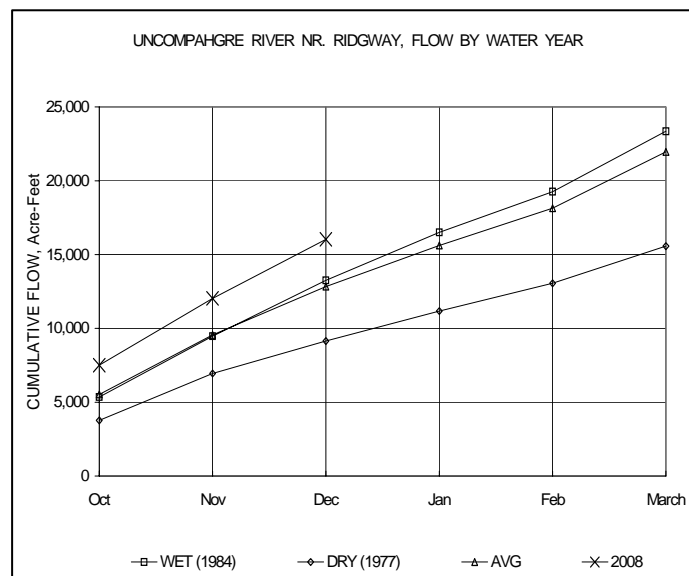
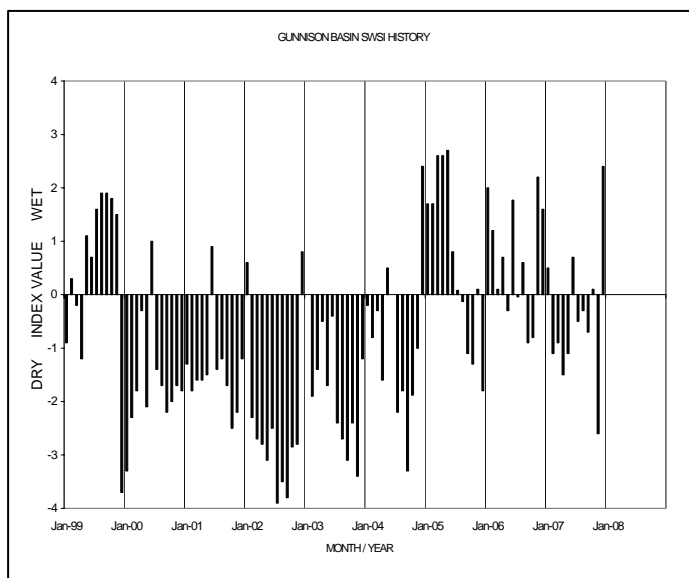
Administrative/Management Concerns

The mediation process for quantifying flows in the Black Canyon National Park is making favorable progress at developing a flow run scenario acceptable to all parties. The scheduled meetings in January will complete the mediation process for resolution of this issue. If resolution is reached within this period, lengthy legal proceedings will be avoided.

By the end of December, releases out of the Aspinall Unit brought Blue Mesa Reservoir elevation down to the target level of 7,490 feet, which is necessary to prevent upstream flooding due to river channel clogging by winter ice.

Public Use Impacts

Hopes are high now that December storms have salvaged what looked to be a dismal snowfall season, erasing visions of severe drought for 2008. Telluride, Crested Butte, and Powderhorn ski resorts are receiving a lot of attention in the news with winter sport enthusiasts taking advantage of ample snowfalls in recent weeks. With temperatures colder than normal over the last month, conditions are also perfect for the very popular annual ice festival in Ouray, January 9th through the 13th.



Basinwide Conditions Assessment

The SWSI value for the month was 2.1. The Natural Resources Conservation Service reports that January 1 snowpack is 105% of normal. Flow at the gaging station Colorado River near Dotsero was 951 cfs, as compared to the long-term average of 1052 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 115% of normal as of the end of December.

Outlook

Upper Colorado River Basin precipitation levels increased during the month of December with heavy snowfall during the first and third weeks of the month. No changes in basin reservoir releases have occurred. Reservoir volumes remain at or above average for this time of year.

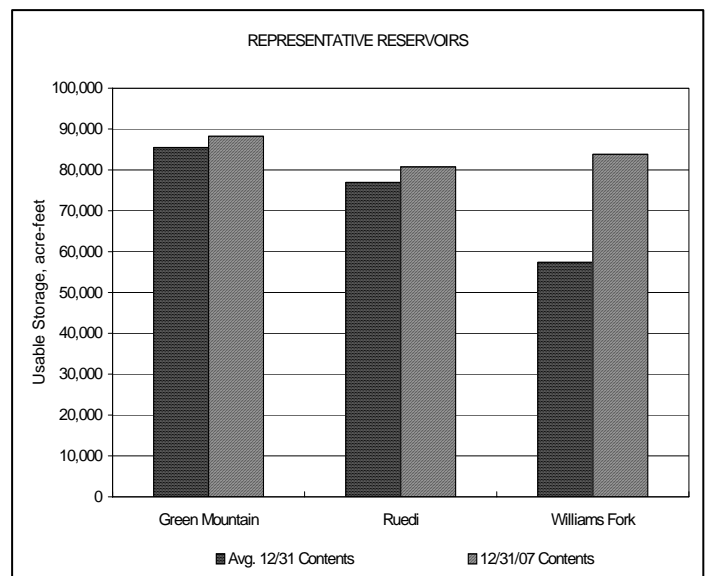
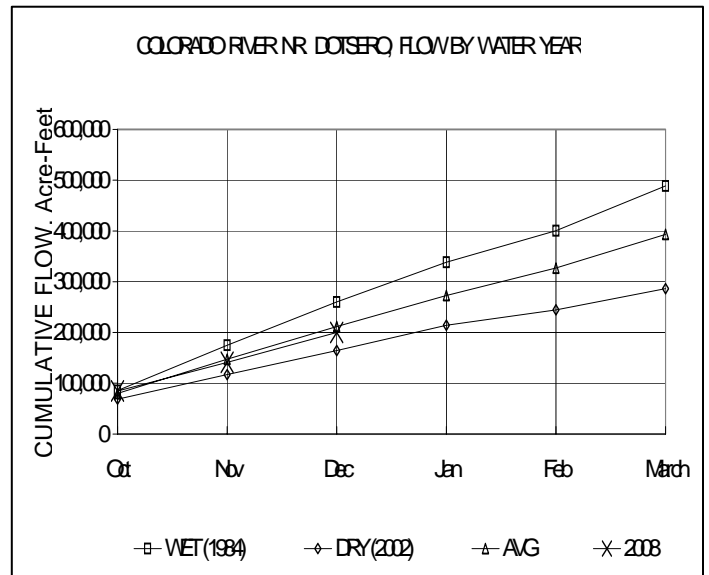
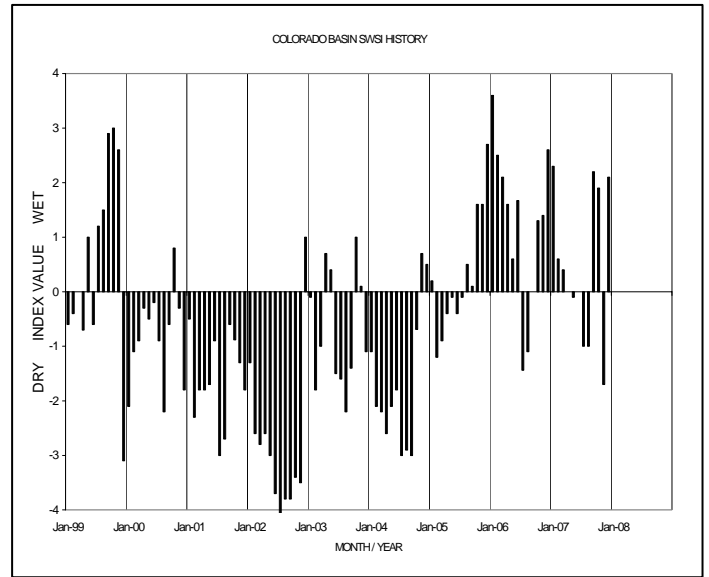
Administrative/Management Concerns

A Colorado River water pact agreement signed by Interior Secretary Dirk Kempthorne and state officials representing California, Arizona, Nevada, Wyoming, Utah, Colorado, and New Mexico established cooperation rules during the continuing regional drought, now in its ninth year. The drought plan allows the lower-basin states of California, Arizona, and Nevada to use Lake Mead to store water they conserve or don't need for later use. This could result in storage of nearly 1.5 million acre-feet of conserved water in Lake Mead.

Water availability could threaten oil shale development. The Programmatic Environmental Impact Statement drafted by the BLM, identifies estimated water requirements of 2.5 – 4 barrels of water to produce each barrel of shale oil.

Public Use Impacts

Construction of a whitewater park on the Colorado River in West Glenwood Springs is underway with a diversion structure in place to isolate half of the channel for wave feature construction. Diversion structure placement was aided by lack of ice formation resulting from the area's geothermal activity.



Basinwide Conditions Assessment

The SWSI value for the month was -0.1. Flow at the gaging station Yampa River at Steamboat was 112 cfs, as compared to the long-term average of 107 cfs.

Following a very dry November, precipitation increased dramatically in December and above average precipitation was reported for the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 136% of average for the Yampa/White River basin and 131% of average for the North Platte River basin.

The snow water equivalent (SWE) as of January 1 for the Yampa and White River basins was 90% of average and for the Laramie and North Platte River basins was 91% of average. For the individual basins in Division 6, the snowpack at the end of the month was 91% of average for the North Platte River basin, 92% of average for the Yampa River basin, and 83% of average for the White River basin.

As a result of the increased precipitation, NRCS predicts near normal streamflows in much of the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the April through July period are 88% of average for the North Platte River at Northgate, 95% of average for the Yampa River near Maybell, 99% of average for the Little Snake River near Lily, and 91% of average for the White River near Meeker.

Due to the cold night temperatures, many of the Division 6 stream gages are either closed for the winter season or currently ice-affected.

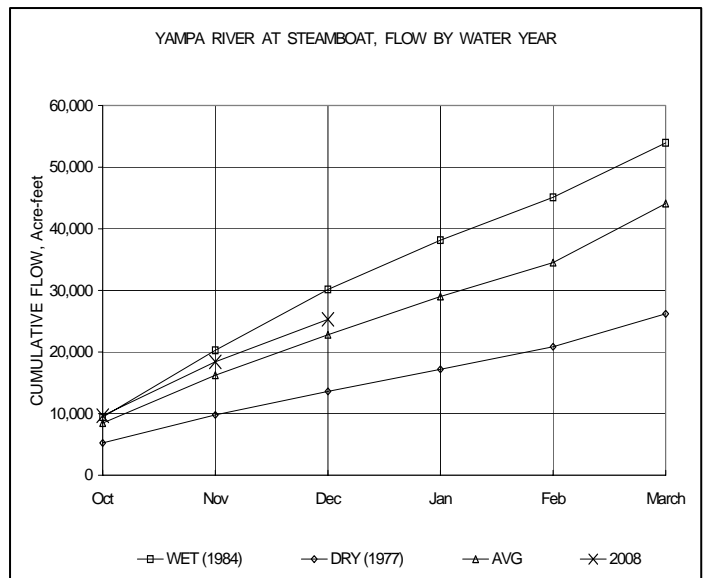
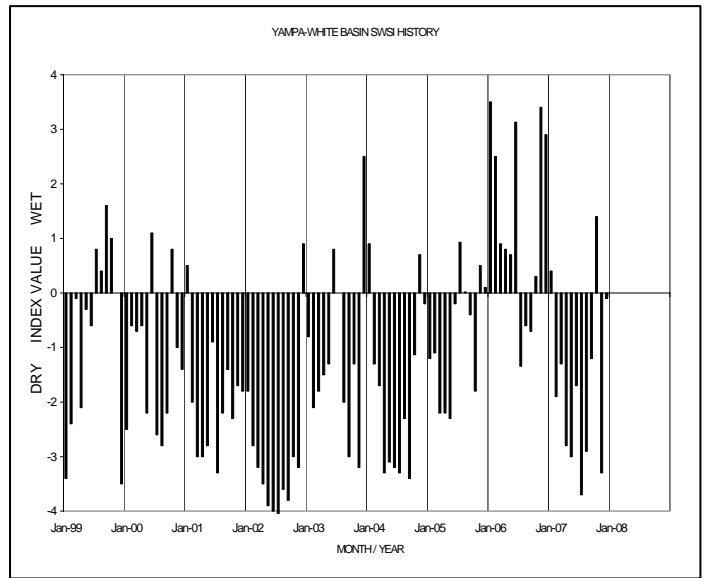
Outlook

The January temperature forecast for the area, based on NOAA data, is for above normal temperature for the month. The precipitation forecast is for an equal chance of above normal, normal, or below normal precipitation.

Fish Creek Reservoir storage level remained about the same as last month and was reported at approximately 78% of capacity at the end of the December. Yamcolo Reservoir storage level increased in December and the reservoir was at approximately 60% of capacity at the end of the month. Elkhead Creek Reservoir level also increased slightly during the month and the reservoir was at approximately 67% of its enlarged capacity at the end of December. Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Creek Reservoir for municipal, industrial, and recreation purposes, as well as fish recovery releases.

Administrative/Management Concerns

Many area reservoirs are frozen with good ice-fishing reported.



Basinwide Conditions Assessment

The SWSI value for the month was 2.4. The Natural Resources Conservation Service reports that January 1 snowpack is 129% of normal. Estimated flows at the Animas River at Durango averaged 315 cfs (142% of normal) with an average daily peak flow of 413 cfs on December 8th. The flows for Dolores River at Dolores were estimated to average 86 cfs. The La Plata River at Hesperus averaged 12 cfs (150% of normal) with an average daily peak flow of 16 cfs on December 1st. Durango recorded 4.84 inches precipitation for the month which is well above the 30-year average of 1.48 inches (326.1% of normal). Precipitation in for the month was the 3rd highest amount within the last 112 years of record. Precipitation to date in Durango, for the water year, is 6.10 inches which is 120.7% of the historic average. Temperatures in December were below normal for the month. Durango was 5° below its 30-year average high and right at average for the 30-year average low.

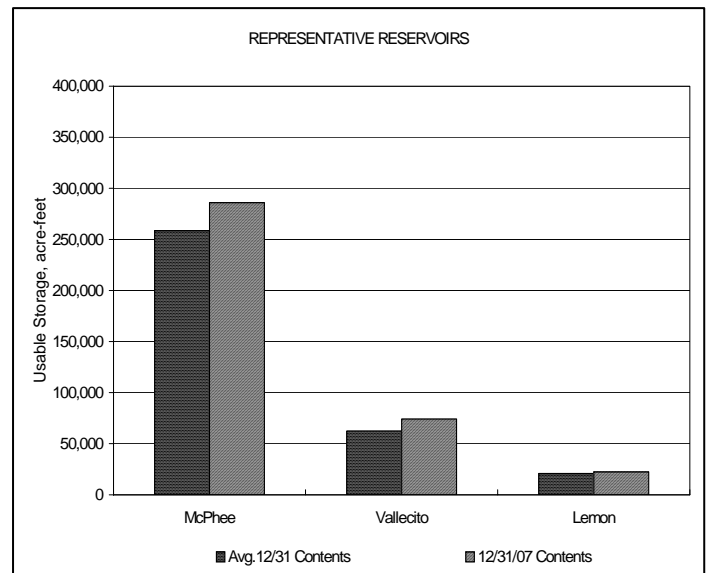
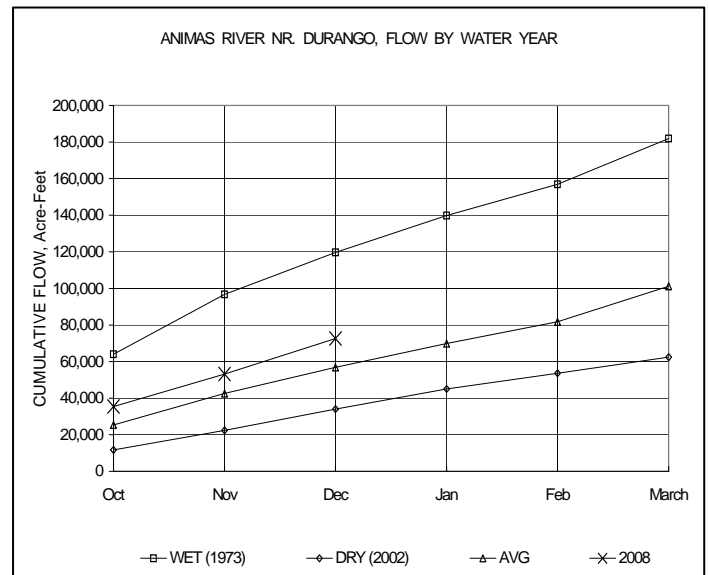
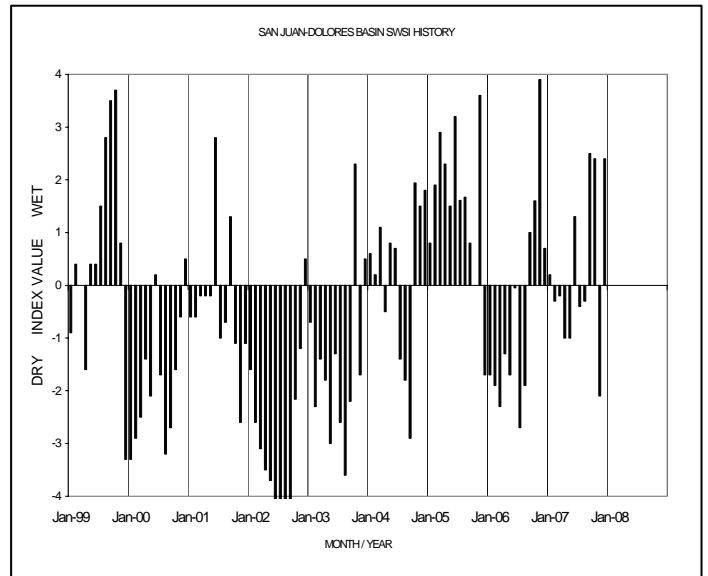
At the end of the month Vallecito Reservoir contained 74,130 acre-feet compared to its normal contents of 52,515 acre-feet (141% of normal). McPhee Reservoir has 286,024 acre-feet compared to its normal contents of 255,184 acre-feet (112% of normal). Lemon Reservoir has 22,460 acre-feet as compared to its normal content of 19,603 acre-feet (115% of normal).

Outlook

Two major storm systems in the first half of December brought much needed moisture to Southwest Colorado. Many of the lower regions received rain while the mountains received several feet of snow. The snow-water-equivalent on November 28th was 23% and on December 3rd it was 94.

Administrative/Management Concerns

Division 7 is without a Division Engineer although the Assistant Division Engineer (Scott Brinton) as well as the rest of the division staff has stepped up and kept operations running smooth.



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