
COLORADO

WATER SUPPLY CONDITIONS UPDATE

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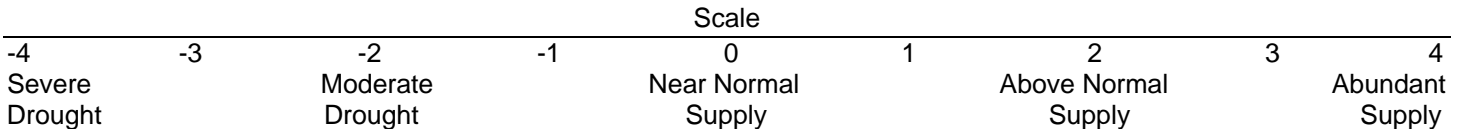
May 2008

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 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.

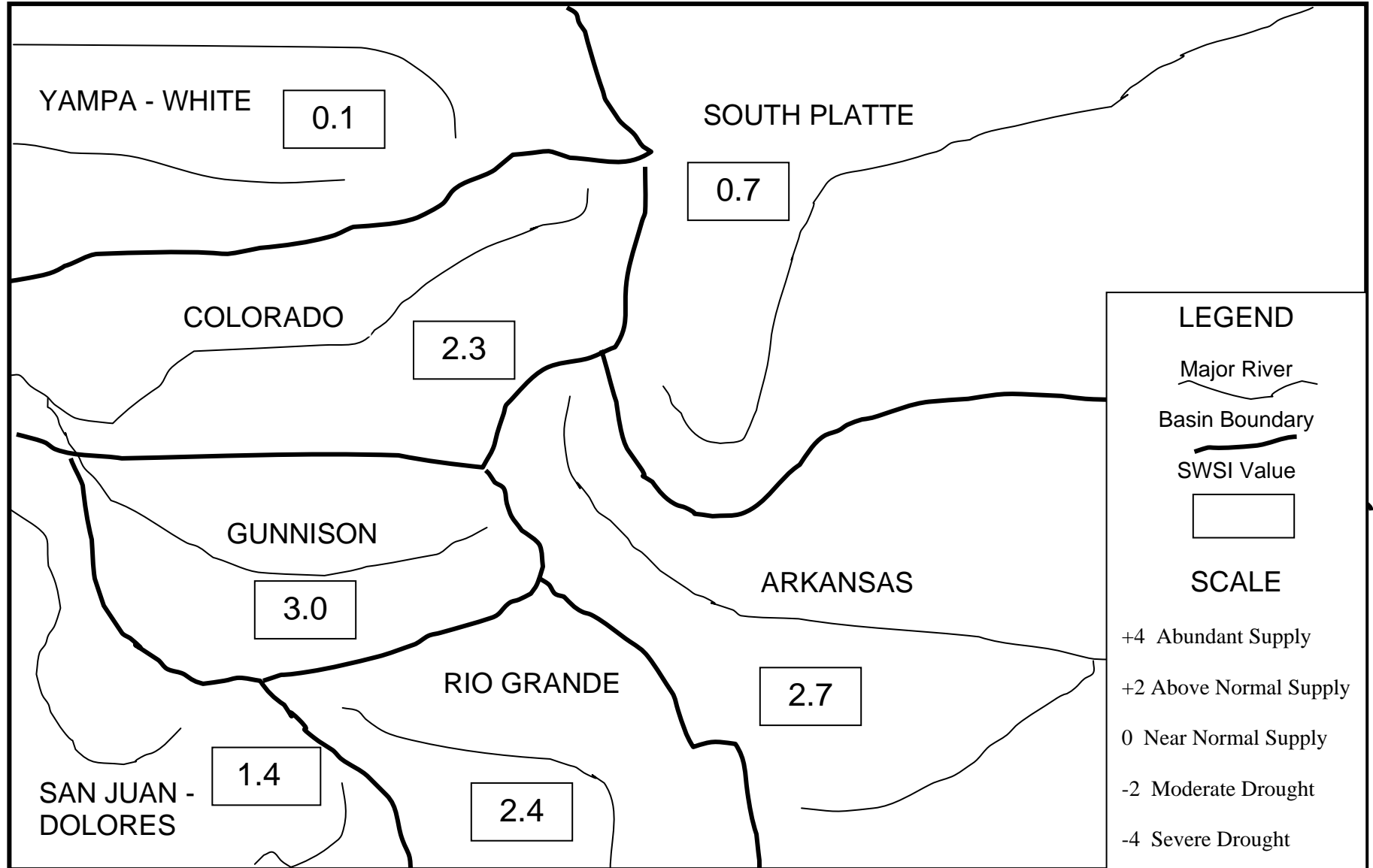
The statewide SWSI values for April range from a high value of +3.0 in the Gunnison Basin to a low value of +0.1 in the Yampa/White Basin. All of the basins experienced a decline from the previous month's values.

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

<u>Basin</u>	<u>May 1, 2008 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	0.7	- 0.4	- 0.5
Arkansas	2.7	- 0.4	4.3
Rio Grande	2.4	- 0.7	2.6
Gunnison	3.0	- 0.6	4.5
Colorado	2.3	- 0.4	2.3
Yampa/White	0.1	- 0.1	2.9
San Juan/Dolores	1.4	- 1.6	2.4



SURFACE WATER SUPPLY INDEX FOR COLORADO



May 1, 2008

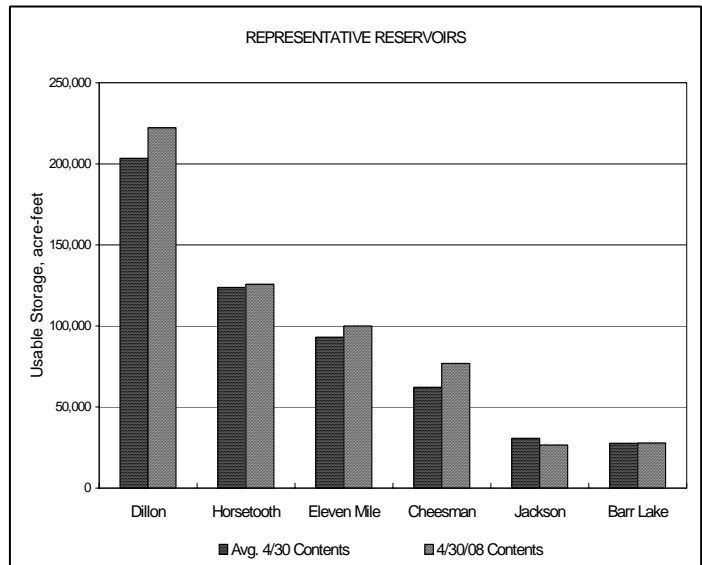
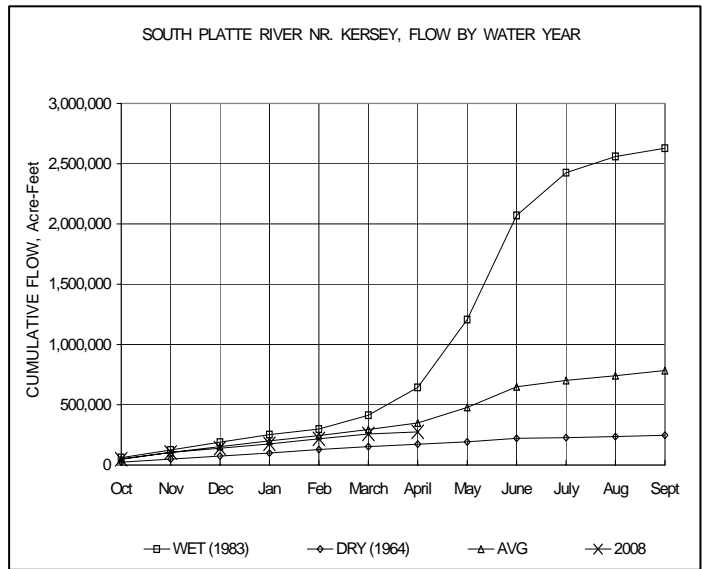
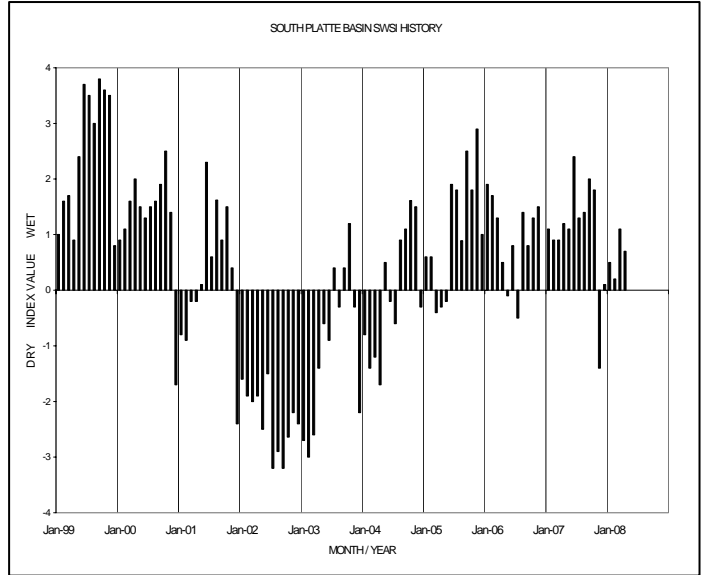
Basinwide Conditions Assessment

The SWSI value for the month was 0.7. Cumulative storage for the six reservoirs graphed on this page was 107% of normal as of the end of April. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 98% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 95% of capacity. The Natural Resources Conservation Service reports that May 1 snowpack is 103% of normal. Flow at the gaging station South Platte River near Kersey was 294 cfs, as compared to the long-term average of 843 cfs. Flow at the Colorado/Nebraska state line averaged 152 cfs.

Outlook

With reservoirs generally full on the South Platte, users began to recharge along the mainstem in April. Storage continued on most tributaries. Due to the relatively dry April conditions, the primary diversions changed to irrigation purposes along the mainstem by the end of the month. With no supply yet from runoff, the demand for irrigation exceeded the supply and there was a direct flow call for irrigation by the last ten days of the month. This is not unusual when spring conditions on the plains are relatively dry.

With average or above average snowpack throughout the basin, we are hopeful that runoff will meet a significant portion of demand this spring. Nevertheless, it is important that there is at least some significant precipitation in May and June to assure adequate supplies for this water year. If conditions remain dry on the plains and runoff is used mainly along the tributaries for their senior rights, mainstem users will need to use reservoir water to irrigate this spring which could strain supplies later in the summer.



Basinwide Conditions Assessment

The SWSI value for the month was 2.7. The Natural Resources Conservation Service reports that May 1 snowpack is 131% of normal. Flow at the gaging station Arkansas River near Portland was 750 cfs, as compared to the long-term average of 426 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 98% of normal as of the end of April.

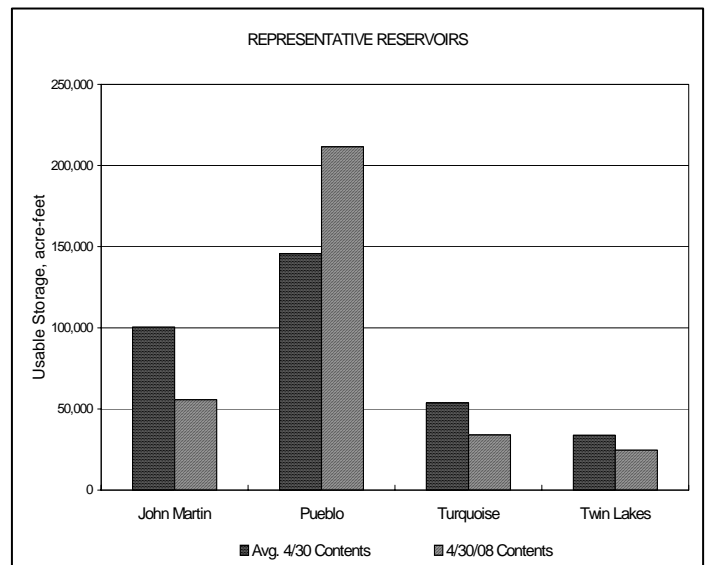
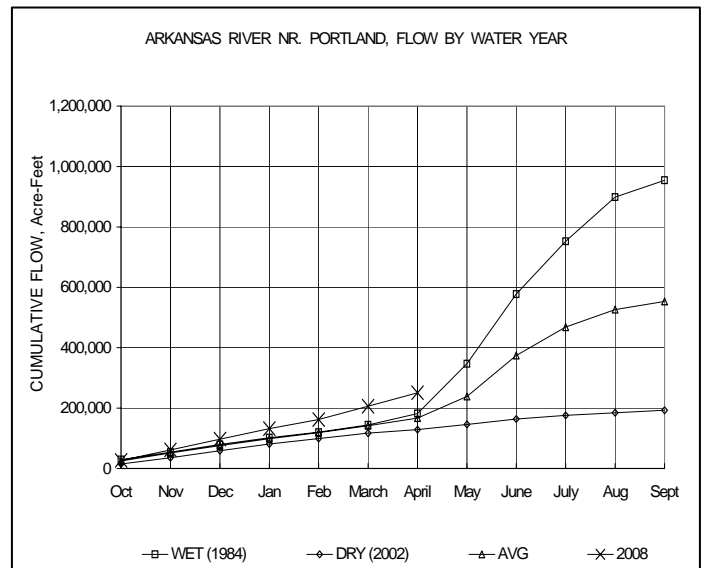
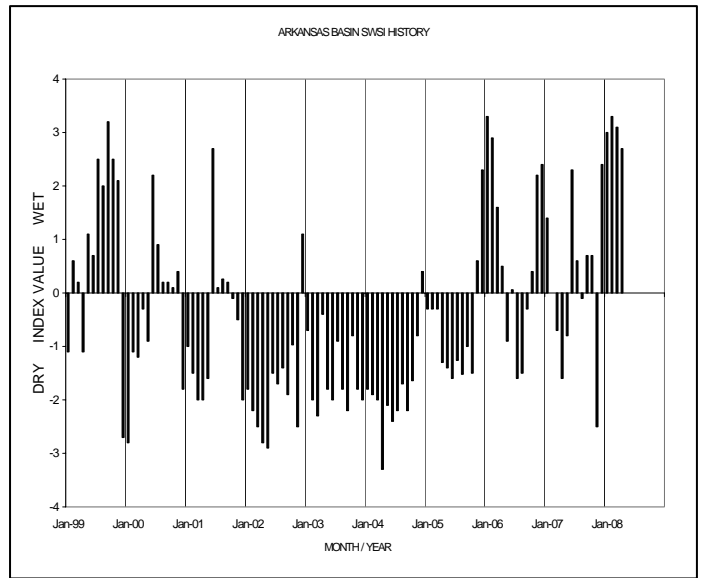
Outlook

The Lamar Canal called for water from John Martin Reservoir prior to April 1, 2008; consequently the distribution of conservation storage into accounts per the 1980 Operating Agreement for John Martin Reservoir began on the above date at 00:00 hours. Total storage from November 1, 2007 through April 30, 2007 distributed into accounts in John Martin Reservoir was approximately a net of 28,234 acre-feet. This storage volume was considerably smaller than last year when the conservation storage total was over 50,000 acre-feet and indicates the large difference in low elevation snowpack between the 2006-07 winter and the 2007-08 winter. The Arkansas River call started at Fort Lyon Canal's second water right (3/1/1887) and ended on Amity Canal's senior water right (2/21/1887).

Administrative/Management Concerns

A significant amount of planning has occurred to prepare for higher than average runoff in 2008. The falling snowpack numbers through April alleviated some concerns, but the snowpack remaining still indicates a good runoff. Multiple meetings with a large number of municipal entities and the Bureau of Reclamation and Army Corps of Engineers were conducted to review operations that make room in upper reservoirs (Twin Lakes and Turquoise) by moving water to Pueblo Reservoir. These operations pushed Pueblo Reservoir to near spill and caused a number of entities to make decisions regarding water at risk of spill. Winter carry-over water was called for by the ditches with water in Pueblo Reservoir for use prior to the end of April.

Preliminary compliance model results (H-I Model) produced by Colorado experts at the end of March indicated that the well associations in the Arkansas Basin were successful in providing adequate replacement water to the river and to the Offset Account in John Martin Reservoir to keep Colorado in compliance with the Arkansas River Compact for the ten-year accounting period from 1998-2007. Kansas experts have until May 15, 2008 to review the model results and provide any revisions.



Basinwide Conditions Assessment

The SWSI value for the month was 2.4. The Natural Resources Conservation Service reports that May 1 snowpack is 117% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 1008 cfs (153% of normal). The Conejos River near Mogote had a mean flow of 314 cfs (97% of normal). Streamflow in the upper Rio Grande basin was near or above average during the last three weeks of April as temperatures warmed and melted out the lower elevation snow. The higher elevations and the Valley floor received below average precipitation during April. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 100% of normal as of the end of April.

Outlook

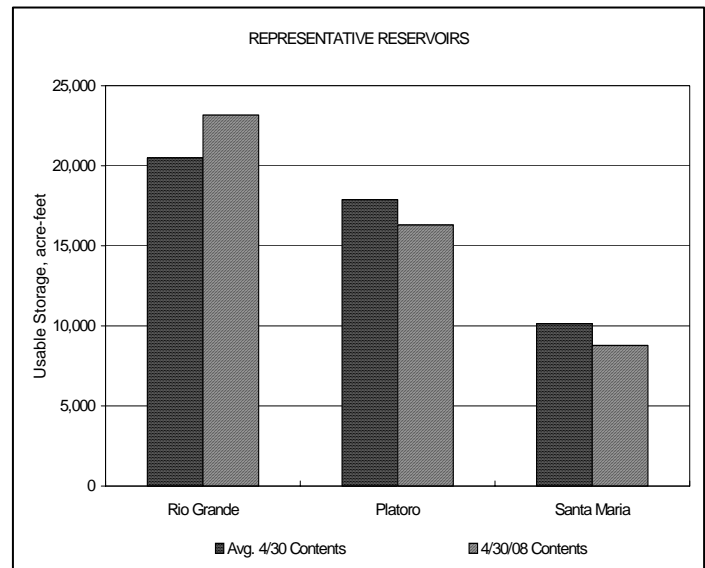
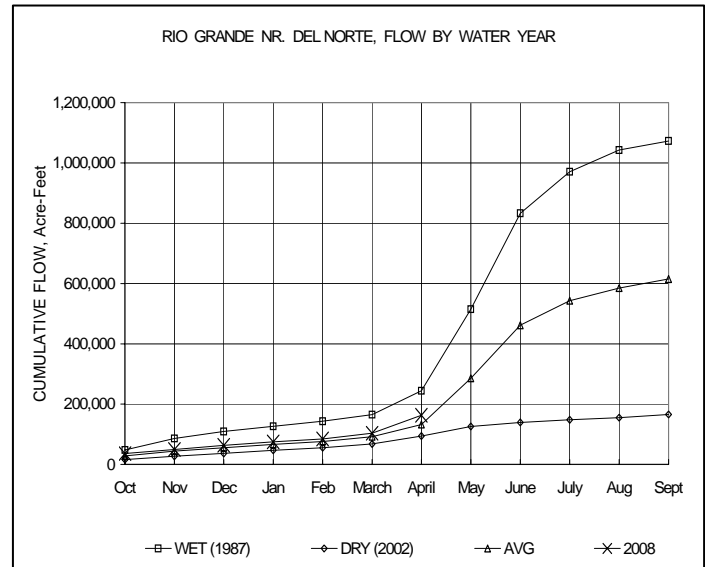
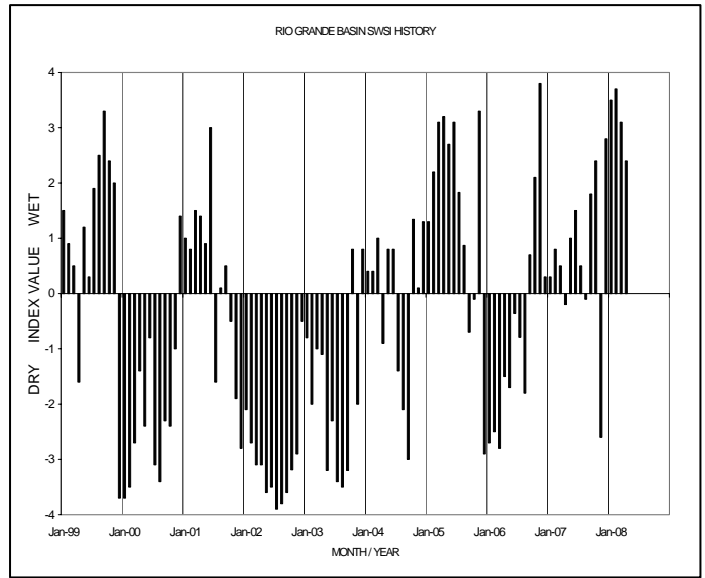
The lack of snowfall during March and April lowered Natural Resources Conservation Service forecasts to 128% of average on the Rio Grande near Del Norte and 138% for the Conejos near Mogote. These forecasts are a significant reduction from the March 1 and April 1 forecasts. Culebra Creek, in the southeast part of the San Luis Valley has the lowest forecast at 80% of normal. The Rio San Antonio, in the southwest portion of the Valley, has the highest forecasted runoff at 159% of normal.

Administrative/Management Concerns

Pursuant to the Ground Water Measurement rules approved in Case No. 05CW12, all flow meters must be verified by a certified tester no later than March 1, 2008. Compliance with this deadline has been satisfactory. However, many irrigation well meters remain uncertified, subjecting well owners to fines and legal action if the well is used. For more information regarding the metering rules, please contact the Division 3 office at (719) 589-6683.

Public Use Impacts

The abundant snowfall in December, January, and February was replaced by very dry and windy conditions during March and April. Thus, the initial concern for localized flooding during the 2008 runoff season has lessened. If weather patterns sustain warm temperatures for more than a week, the snowmelt could result in bank-full conditions. But so far, bouts of cooler temperatures have slowed the melt and kept local streams at manageable levels. Currently, reservoir storage in the basin is near normal.



Basinwide Conditions Assessment

The SWSI value for the month was 3.0. The Natural Resources Conservation Service reports that May 1 snowpack is 136% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 146 cfs, as compared to the long-term average of 111 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 110% of normal as of the end of April.

April was cooler than normal and the Gunnison Basin received higher than average precipitation for the month of April. As a result, snowpack conditions remained high during April.

Outlook

Due to the higher than average unregulated inflow forecast for Gunnison Basin reservoirs, Crawford, Fruitgrowers, Paonia, Silver Jack, Taylor Park and Ridgway Reservoirs are expected to fill this year and are being drawn down to receive the anticipated runoff. All of the reservoirs on Grand Mesa are expected to fill as well.

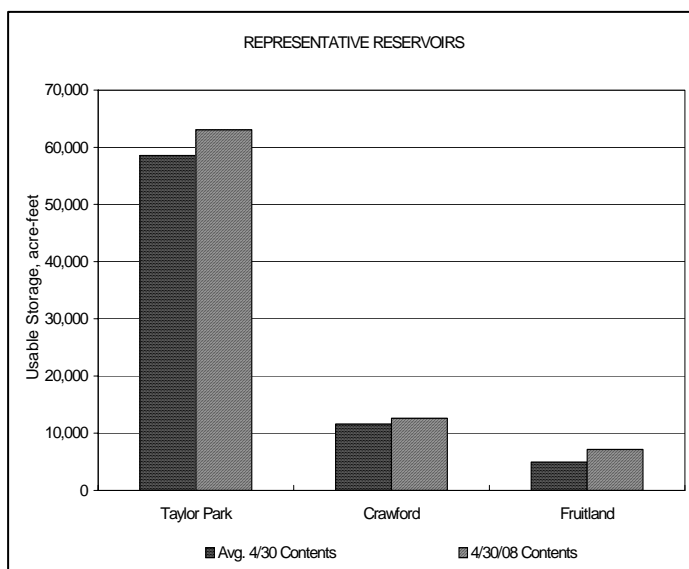
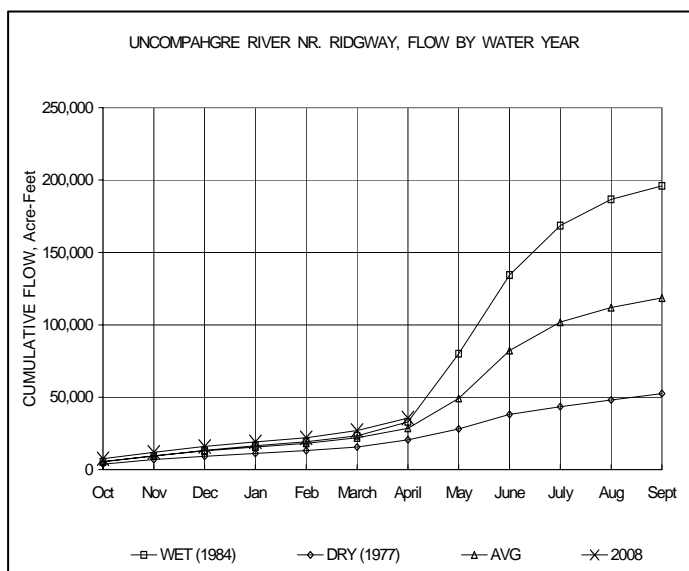
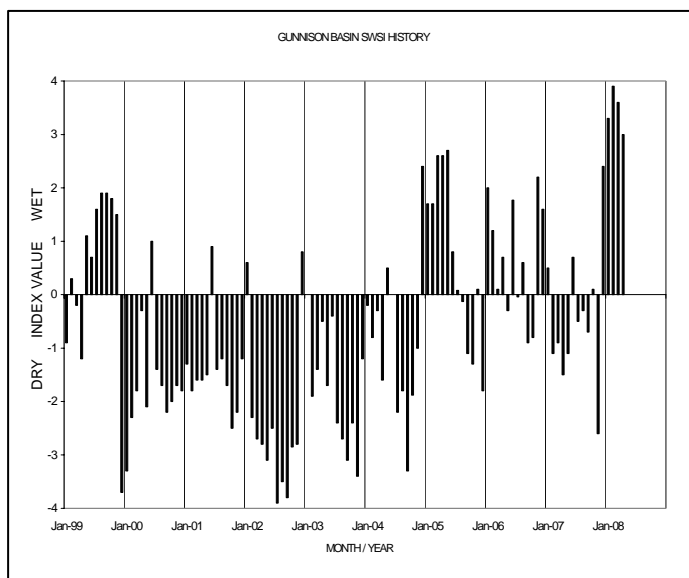
The spring runoff season is late in getting started this year. Given the snowpack levels to date, the trend of warm dry spells followed by cool moist spells, which the Gunnison Basin experienced in the last half of April, is expected to help reduce the potential for basin-wide flooding problems. The spring runoff conditions will be monitored closely as the weather warms in May.

Administrative/Management Concerns

Cool weather and precipitation kept the irrigation demand low for the month of April. Basinwide, pasture grass and alfalfa fields only just started growing by the end of April. Water systems that typically run short are expected to enjoy lengthier free river conditions this water year, keeping administration issues to a minimum. The Grand Mesa reservoir system is not expected to draw off storage until later in July.

Public Use Impacts

The high flows being released from the Aspinall Unit will adversely affect springtime rituals such as the Gunnison River Gorge annual salmon fly hatch in June, as fly fisherman prefer the typically much lower flows for their float trip fly fishing experience. However, white water rafting enthusiasts should experience a year to remember.



Basinwide Conditions Assessment

The SWSI value for the month was 2.3. The Natural Resources Conservation Service reports that May 1 snowpack is 120% of normal. Flow at the gaging station Colorado River near Dotsero was 1784 cfs, as compared to the long-term average of 1779 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 125% of normal as of the end of April.

Outlook

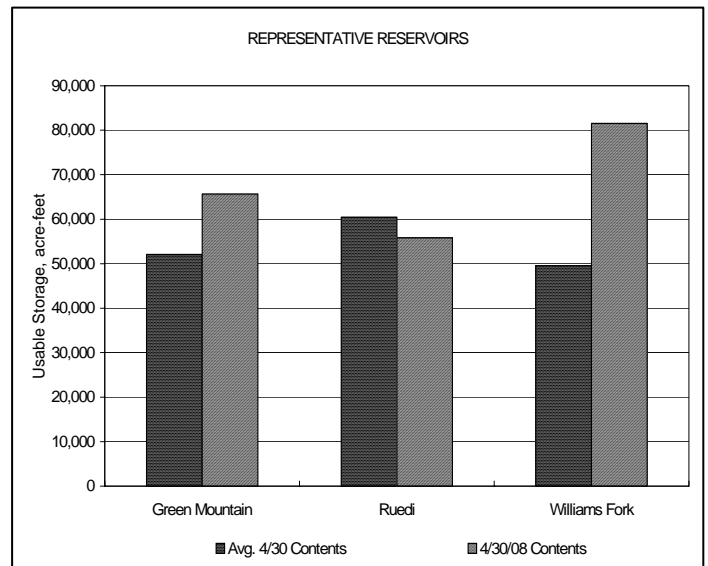
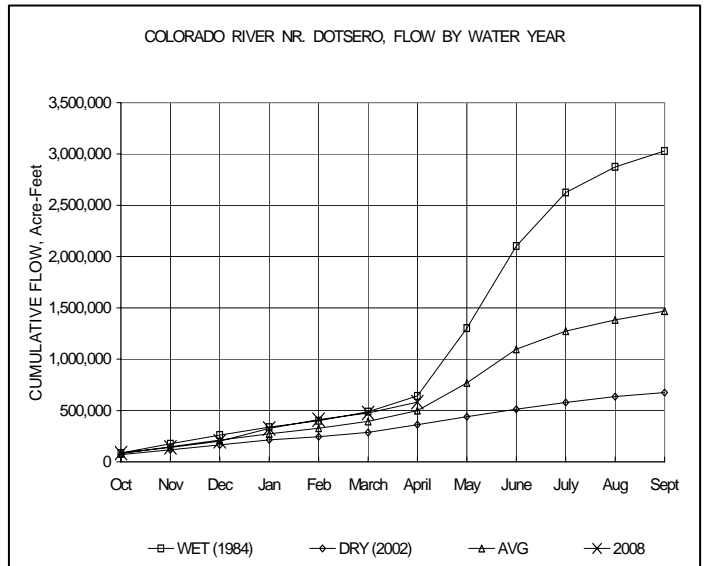
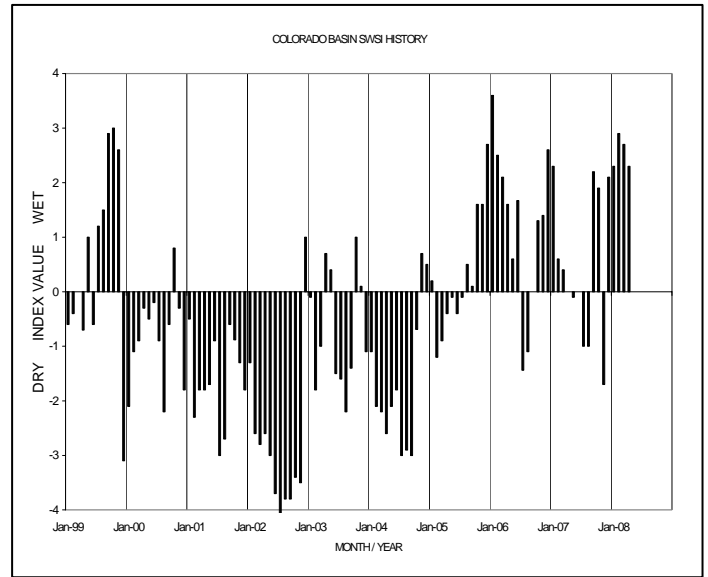
Reservoir operators continue to open storage space for anticipated heavy run-off. Green Mountain Reservoir release was increased by 110 cfs to 600 cfs on April 28th, due to rapid level increases from above-average run-off. Ruedi Reservoir release was also increased by 90 cfs to 325 cfs on April 22. Cooler spring temperatures in the region have slowed the run-off rate, and that runoff will therefore be seen later in the season.

Administrative/Management Concerns

The Shoshone hydroelectric power plant resumed operation on April 30th, following the penstock rupture on June 20th of last year. The reopening of the 14 megawatt plant will restore benefits to fish, rafters, and other water users along the river.

Public Use Impacts

The forecast 45-50 foot elevation rise in Lake Powell continues to look accurate based on current snow pack levels in the Gunnison, Green, San Juan, Yampa, White, and upper Colorado rivers. The significant rise will soon allow boaters to use the Castle Rock Cut marina, creating shorter access to upper lake destinations like Rainbow Bridge National Monument. The forecast elevation rise will also increase the depth to 85 feet above its low elevation of 3,555 feet in spring 2005, boosting electricity production by an estimated 12 percent this year.



Basinwide Conditions Assessment

The SWSI value for the month was 0.1. Flow at the gaging station Yampa River at Steamboat was 527 cfs, as compared to the long-term average of 589 cfs. The snow water equivalent (SWE) as of May 1 for the basins was 112% of average.

April precipitation was above average 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 101% of average for the Yampa and White River basins and 111% of average for the North Platte River basin. Year-to-date precipitation is reported at 108% of average for the combined Yampa, White, and North Platte River basins.

Snowpack is near average to above average for the area. NRCS continues to predict near average to well above-average runoff in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the May through July period are 115% of average for the North Platte River near Northgate, 119% of average for the Yampa River near Maybell, 142% of average for the Little Snake River near Lily, and 98% of average for the White River near Meeker.

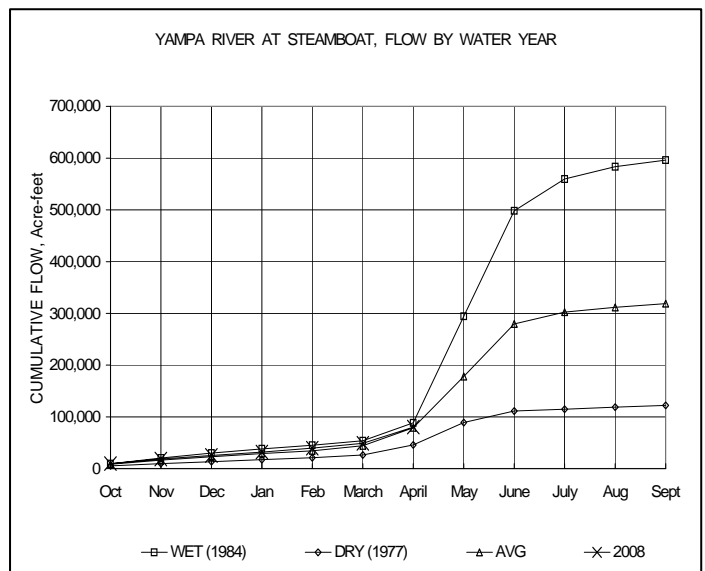
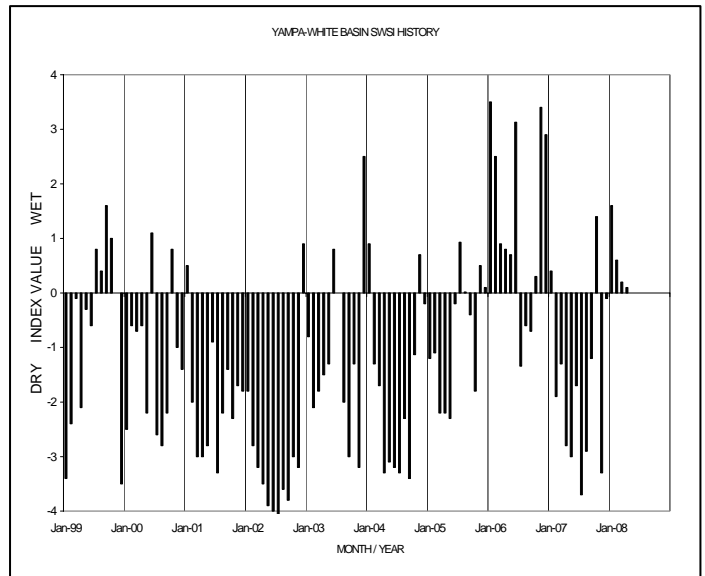
Most of the Division 6 stream gages re-opened in April as the night temperatures increased and ice conditions diminished. The gage stations at Steamboat Lake and Pearl Lake, however, remained closed due to frozen lake conditions. It is anticipated that these stations will open for the season in May.

Outlook

Yamcolo Reservoir and Elkhead Creek Reservoir storage levels continued to rise throughout the month, while Fish Creek Reservoir level remained fairly constant. Yamcolo Reservoir was reported at approximately 84% of capacity at the end of April, while Elkhead Creek Reservoir was at capacity and spilling. Fish Creek Reservoir level was reported at approximately 68% of capacity on April 30. 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 remained frozen throughout April, but were beginning to thaw. Elkhead Creek Reservoir opened for the season



Basinwide Conditions Assessment

The SWSI value for the month was 1.4. The Natural Resources Conservation Service reports that May 1 snowpack is 103% of normal. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 102% of normal as of the end of April.

Flows at the Animas River at Durango averaged 1,120 cfs (133% of normal) with a maximum average daily peak flow of 1,910 cfs on April 30th. The Dolores River at Dolores averaged 1,076 cfs (145% of normal) with a maximum average daily peak flow of 1,940 cfs on April 24th. The La Plata River at Hesperus averaged 94.3cfs (116% of normal) with a maximum average daily peak flow of 168 cfs on April 30th. Precipitation in Durango was 0.28 inches for April which is below the 30-year average of 1.51 inches. Precipitation to date in Durango, for the water year, is 13.61 inches which is above the average of 11.36 inches. Temperatures were near normal for the month. Durango was 1.1° above its 30-year average high and 1.7° below the 30-year average low.

At the end of the month Vallecito Reservoir contained 42,460 acre-feet compared to its normal contents of 63,579 acre-feet (67% of normal). Vallecito Reservoir began releasing water in early February to prepare for the expected above average inflows. McPhee Reservoir was up to 344,641 acre-feet compared to its normal contents of 293,696 acre-feet (117% of normal), while Lemon Reservoir was up to 21,660 acre-feet as compared to its normal content of 22,612 acre-feet (96% of normal).

Outlook

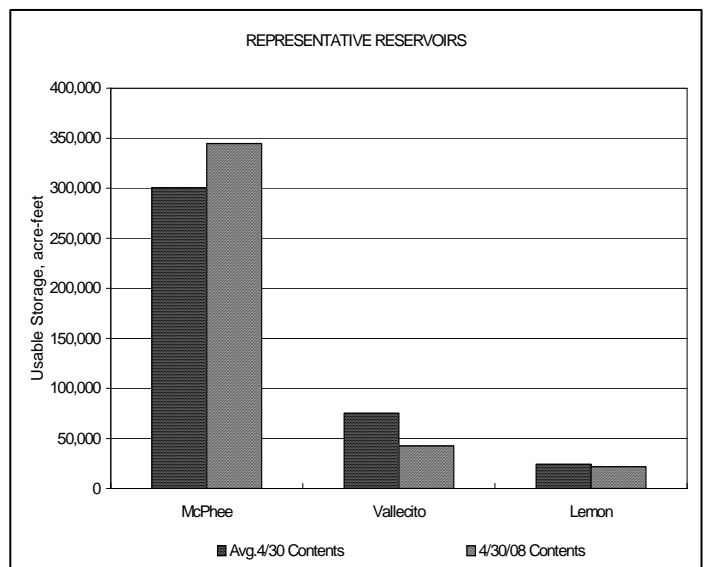
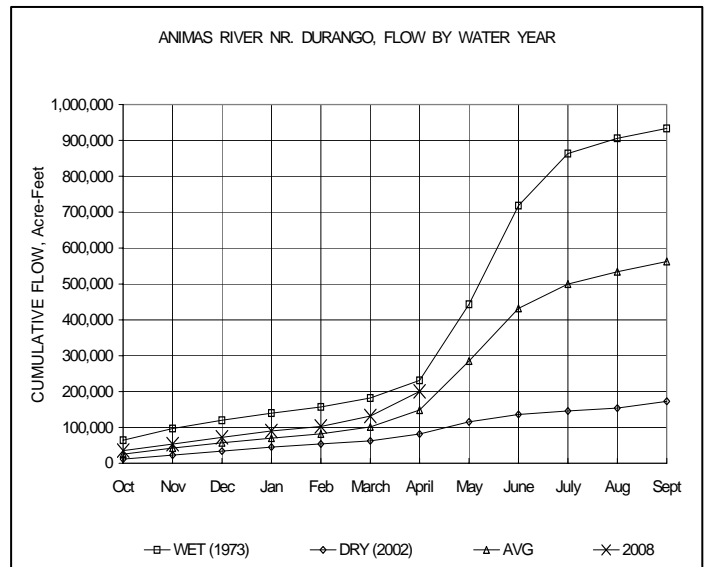
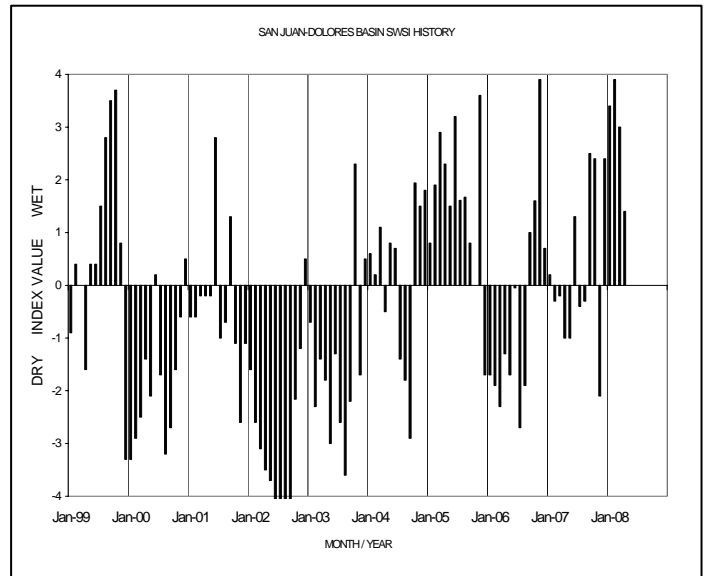
Very little precipitation, normal temperatures and a lot of wind was the major theme of April 2008. With only 0.28 inches of precipitation in April it ranked as one of the lowest monthly totals on record for the last 112 years (102 of 112). High winds have taken their toll on the above average snow pack accumulated during December, January and February. Above average to average flows are still expected throughout the basin this spring and summer but the near normal temperatures have kept the cold storage in the mountains.

Administrative/Management Concerns

The compact period on the La Plata between Colorado and New Mexico began on February 15th. The compact remained off call for most of the month. New Mexico placed a call starting on April 30th for half the flow at the upper index gage up to 80cfs. The compact requires that half the flow at the upper index gages (Hesperus and above) must be delivered across the Stateline the following day. The low level snow melting in the La Plata River basin has kept the flow at the Stateline well above the flows at Hesperus for most of the month.

Public Use Impacts

Vallecito and Navajo reservoirs began ratcheting back releases as the recent decrease in snow pack has decreased the expected above average spring runoff.



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