
COLORADO

WATER SUPPLY CONDITIONS UPDATE

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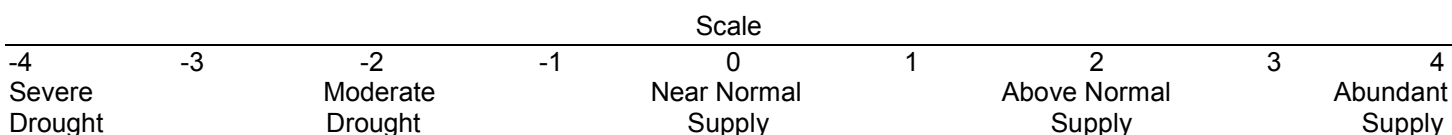
September 2008

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 stream flow, reservoir storage, and precipitation for the summer period (May through October). During the summer period, stream flow is the primary component in all basins except the South Platte basin where reservoir storage is given the most weight.

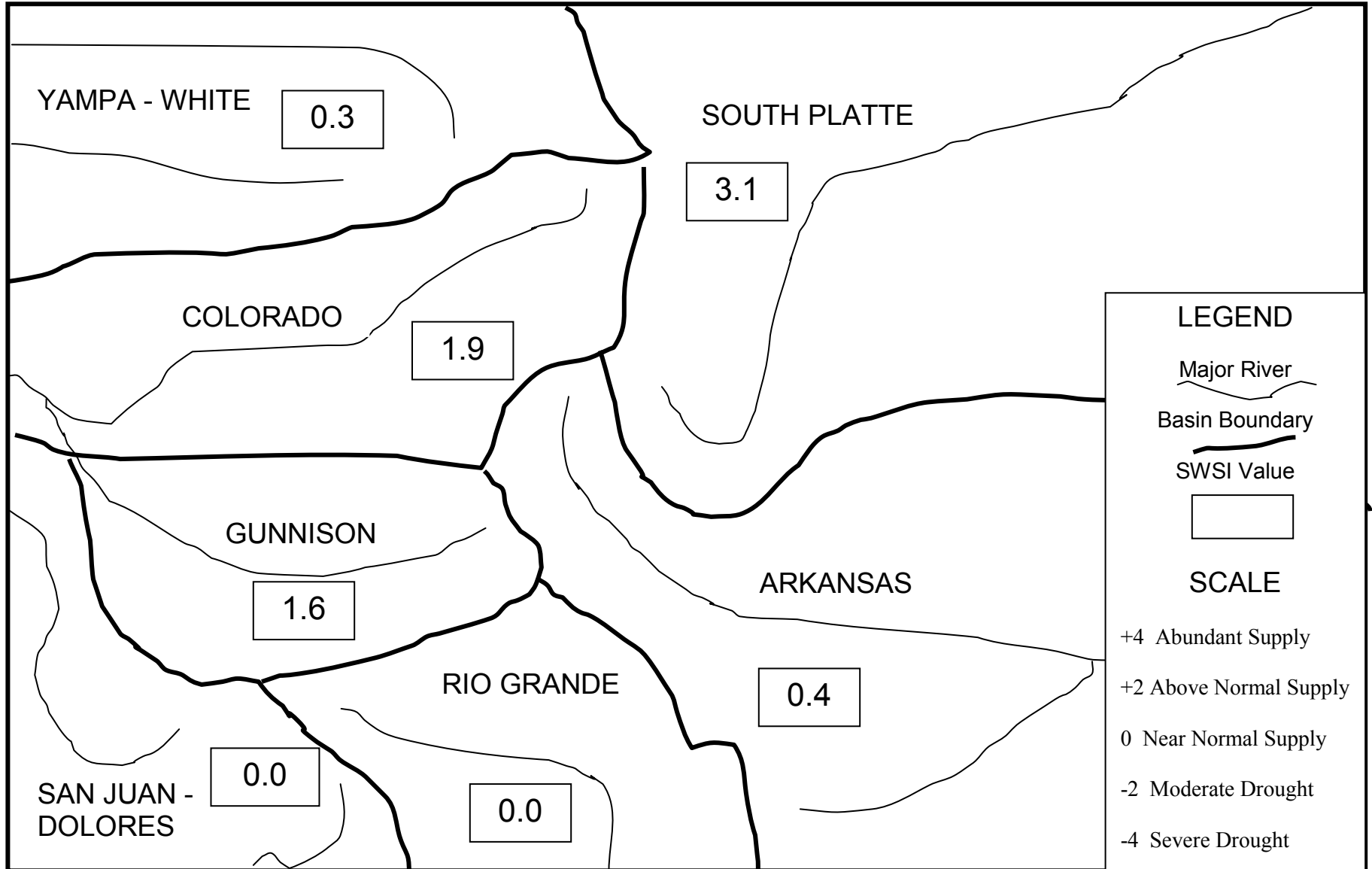
The statewide SWSI values for the month range from a high value of 3.1 in the South Platte Basin to a low value of 0.0 in the Rio Grande and San Juan/Dolores Basins. The South Platte Basin experienced a gain from the previous month's values. The remaining six basins (Arkansas, Rio Grande, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a loss from the previous month's values.

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

<u>Basin</u>	<u>September 1, 2008 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	+3.1	+2.3	+1.7
Arkansas	+0.4	-1.0	+0.5
Rio Grande	0.0	-1.0	+0.1
Gunnison	+1.6	-1.2	+1.9
Colorado	+1.9	-0.6	+2.9
Yampa/White	+0.3	-1.5	+3.2
San Juan/Dolores	0.0	-1.6	+0.3



SURFACE WATER SUPPLY INDEX FOR COLORADO

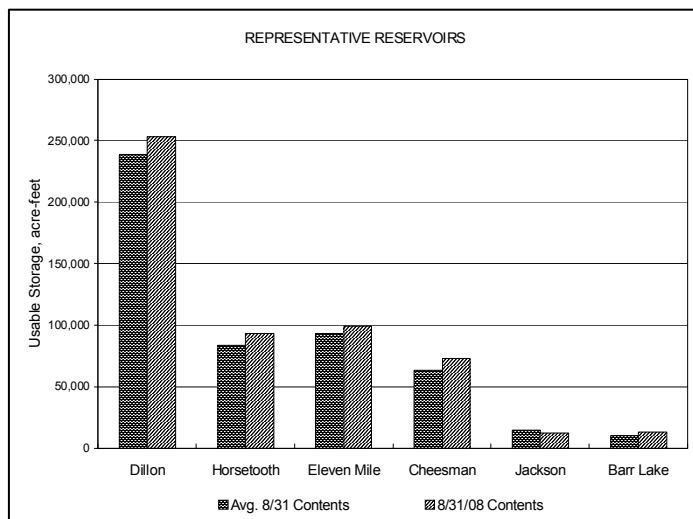
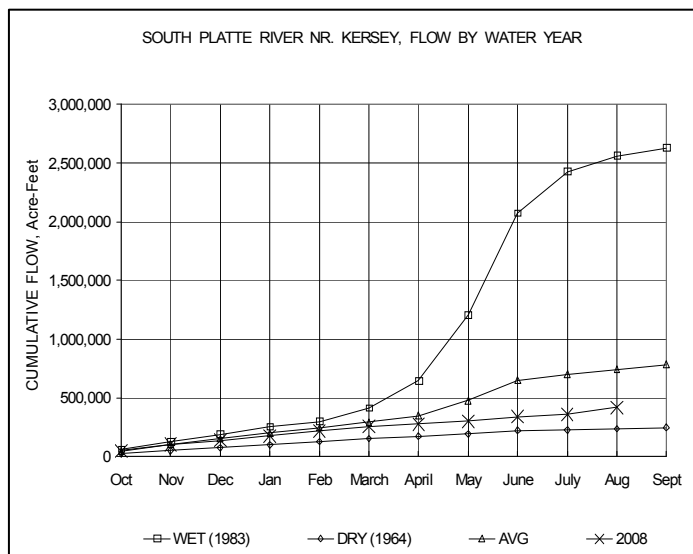
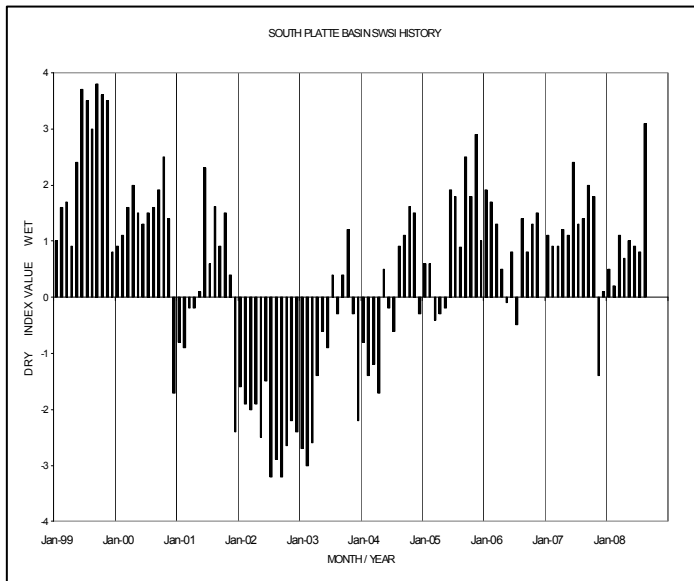


September 1, 2008

Basinwide Conditions Assessment

The SWSI value for the month was +3.1. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 108% of normal as of the end of August. Cumulative storage in the major plains reservoirs: Julesburg, North Sterling, and Prewitt, is at 34.8% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 96.3% of capacity. Flow at the gauging station South Platte River near Kersey was 976 cfs, as compared to the long-term average of 505 cfs. Flow at the Colorado/Nebraska state line averaged 73 cfs.

Fortunately, August was significantly wetter than the remainder of the irrigation year on the plains with several significant widespread storms in the basin. In fact for some of the plains areas, the rain in August was nearly half of the total precipitation for the year. The additional supply provided much needed water directly to crops, reduced the need for reservoir supplies and increased stream flow allowing for junior users to come into priority and begin taking water. It even allowed for periods of reservoir refills on the plains on the main stem of the South Platte. While storage conditions by the end of the month were not as good as 2007 at the end of August, there was at least enough storage water to assure an adequate supply for most surface water users this year. Without the wet conditions, some users had expressed concern that they would not have enough supply as their rights would have been out-of-priority and/or the irrigation reservoirs they depend on would have been empty prior to the end of the irrigation season. While not generally in danger of serious supply limitations this year, municipal suppliers also benefited from the rains as it reduced their demand on reservoir water which will have the affect of increasing available supply for future years.



Basinwide Conditions Assessment

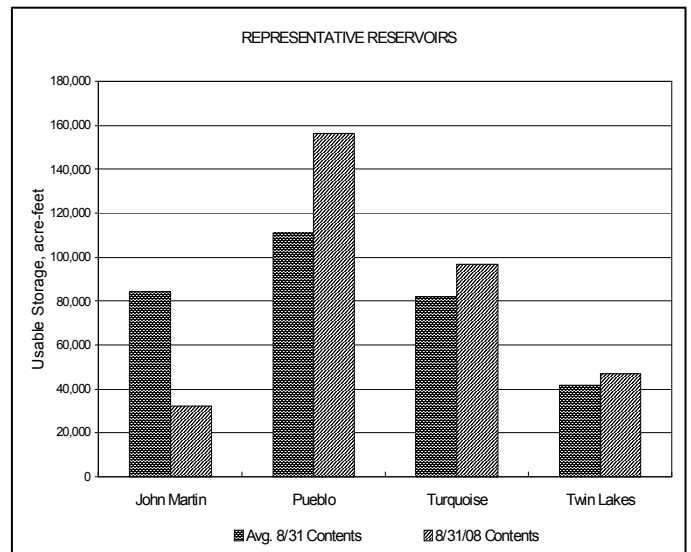
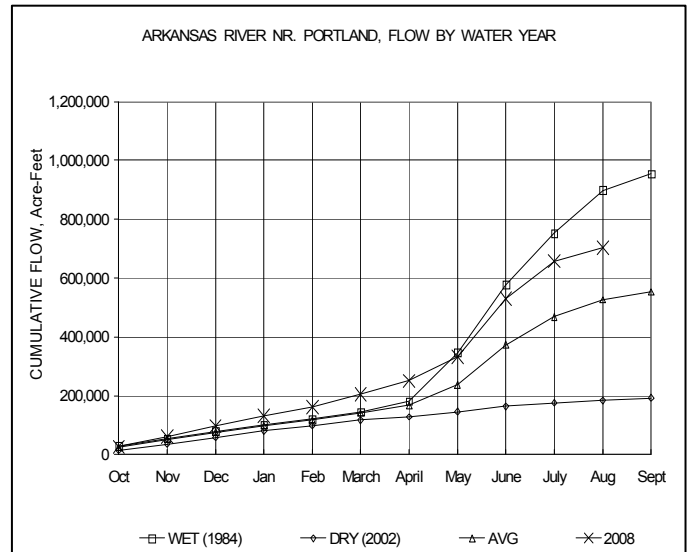
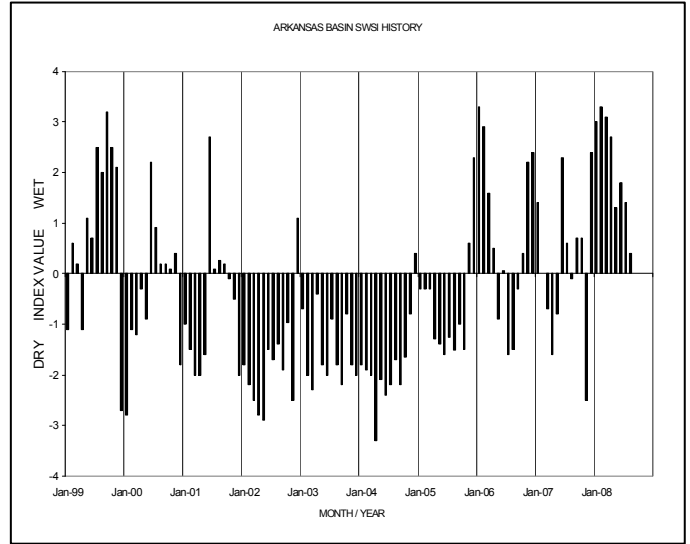
The SWSI value for the month was +0.4. Flow at the gaging station Arkansas River near Portland was 740 cfs, as compared to the long-term average of 452 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 104% of normal as of the end of August.

Outlook

The Arkansas River call began the month set at the Oxford Farmers Ditch #2 call (2/26/1887). Heavy rains occurred primarily along the Purgatoire River in mid-August. River flows were high enough to trigger a conservation storage event in John Martin Reservoir on August 16, 2008 and lasting through August 22, 2008. Additionally, Amity Canal stored water in John Martin Reservoir under their Great Plains storage right. Total storage in John Martin during the event totaled over 22,000 acre-feet. The John Martin Reservoir Permanent Fisheries Pool also accrued 129 acre-feet of storage. The river call at the end of August was set at the Fort Lyon #2 call (3/1/1887) as the stream flow receded following the large rains.

Administrative/Management Concerns

A number of ditches appear to have avoided shortages to finish corn crops due to the rainfall events that occurred. Rainfall on Fountain Creek helped to break a severely dry cycle that had contributed to record transit losses in July for deliveries of reusable return flows being tracked down Fountain Creek to the Arkansas River for exchange into Pueblo Reservoir.



Basinwide Conditions Assessment

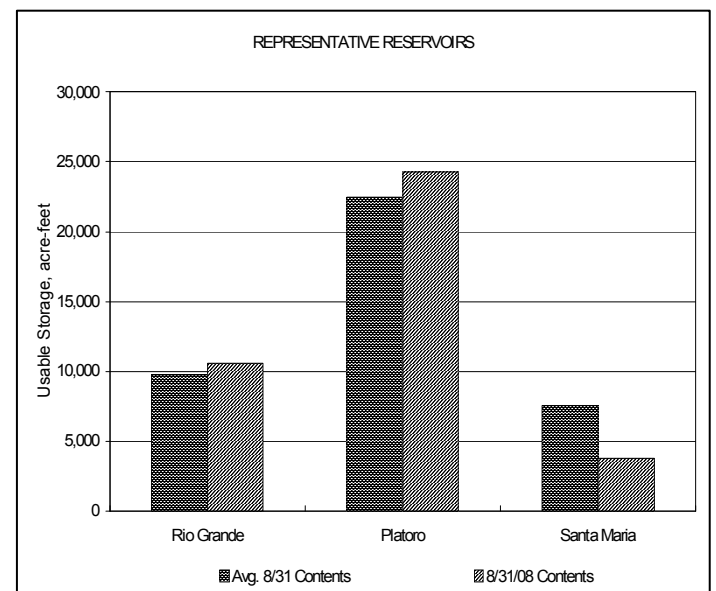
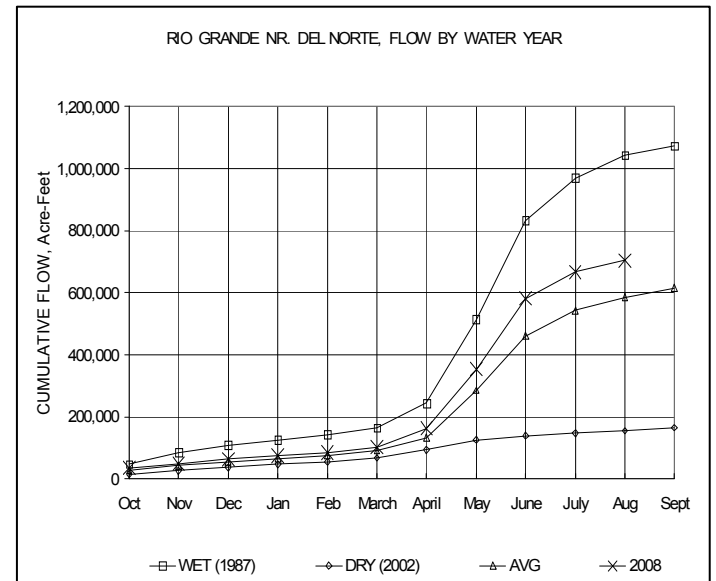
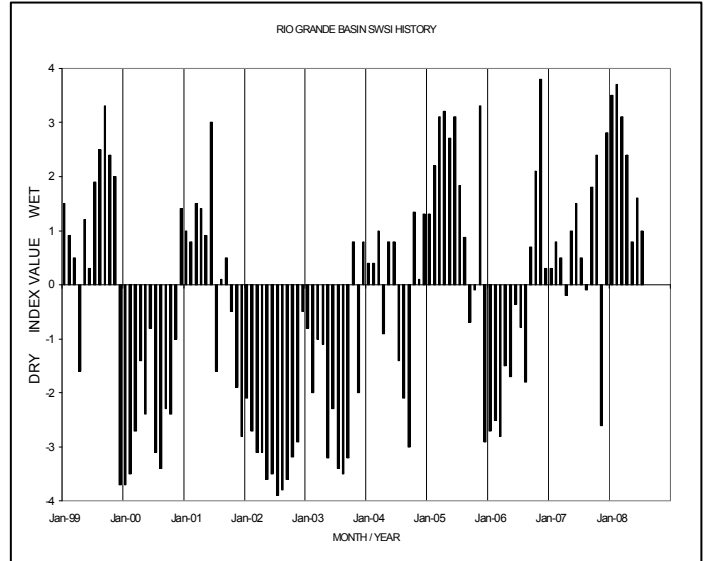
The SWSI value for the month was 0.0. Flow at the gauging station Rio Grande near Del Norte averaged 594 cfs (75% of normal). The Conejos River near Mogote had a mean flow of 264 cfs (130% of normal). Streamflow in the upper Rio Grande basin was generally below average during August with the exception of the central Sangre de Cristo Mountain creeks and the Alamosa River and La Jara Creek drainages, which were about normal. The Conejos River was above average due only to storage releases from Platoro Reservoir for irrigation demand. Most of the other streams in the upper Rio Grande basin have not received enough rainfall to alter the trend of below average conditions. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 97% of normal as of the end of August.

Administrative/Management Concerns

The decline of streamflow brought reduction of the curtailment on both the Rio Grande and Conejos systems. That is, less water was routed directly through to the stateline for Compact delivery obligations.

Public Use Impacts

Although the runoff season was better than normal, many irrigators felt the pinch of dry conditions and ditches going out of priority. Reservoir releases, if available, and well pumping helped meet the heavy demand for irrigation supplies during August. As September approaches, this demand eases as farmers prepare for harvest. Commodity prices seem to be good at this time.



Basinwide Conditions Assessment

The SWSI value for the month was +1.6. Flow at the gaging station Uncompahgre River near Ridgway was 131 cfs, as compared to the long-term average of 165 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 96% of normal as of the end of August.

Outlook

In terms of rainfall, August was not much better than July, with most areas of the basin receiving less than half the normal rainfall amounts. For example, Grand Junction received only 0.44 inches of rainfall in August compared to their average of 1.0 inches. Montrose received only 0.25 inches of their normally 1.25 inches of rainfall in August.

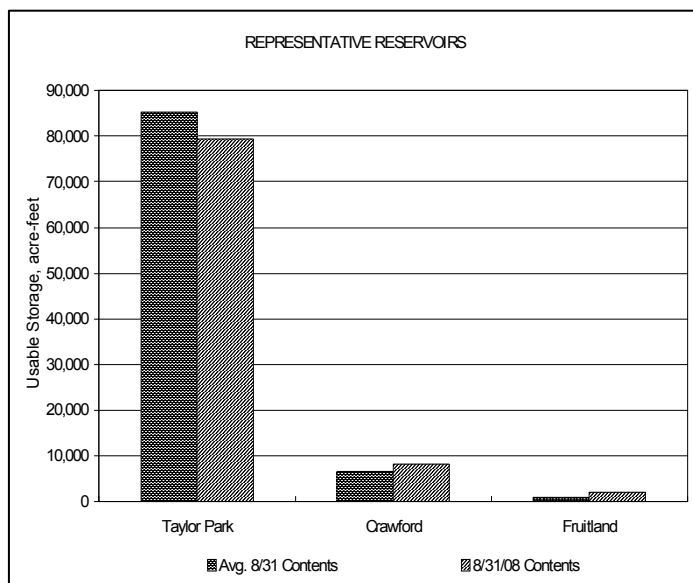
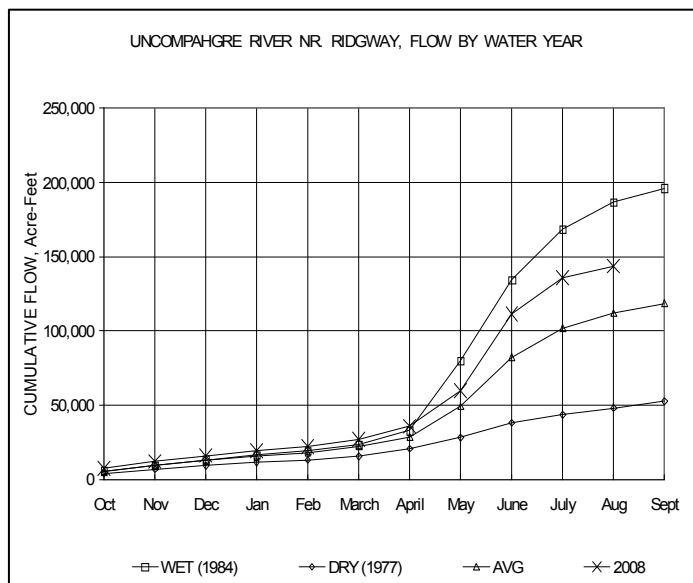
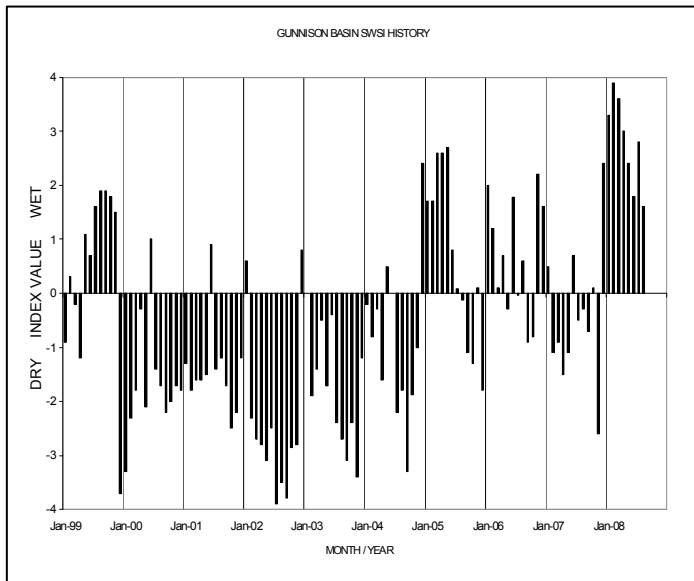
However, due to the above average snowpack this winter and the slow runoff, the major reservoirs in the basin have continued to hold fairly steady and it appears there will be ample storage going into the fall. We continue to look forward to the expected monsoonal moisture, which typically occurs by this time of the year, to help replenish reservoir levels and decrease the demand for irrigation water.

Administrative/Management Concerns

No river calls occurred on the Gunnison, Uncompahgre, or San Miguel Rivers yet this season. Most stream systems have continued to flow enough to keep the water rights whole but decreasing flows in the Uncompahgre and San Miguel River systems will result in call scenarios if monsoonal moisture does not arrive during September.

Public Use Impacts

For farmers and ranchers that have put up hay in the Gunnison Basin, this has been a great summer. Most had enough water to fully irrigate their crops, and the dry weather in August resulted in conditions to bail hay without it getting rained on. A very good growing season, despite the lack of rainfall.



Basinwide Conditions Assessment

The SWSI value for the month was +1.9. Flow at the gauging station Colorado River near Dotsero was 1709 cfs, as compared to the long-term average of 1771 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 112% of normal as of the end of August.

Outlook

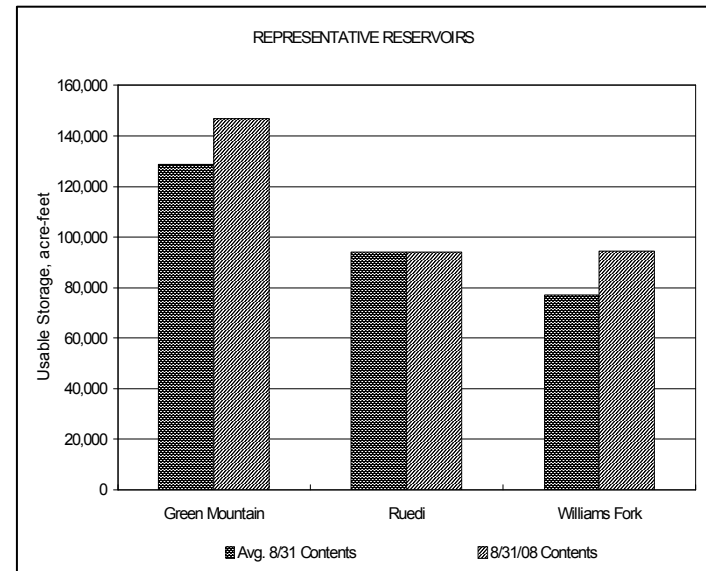
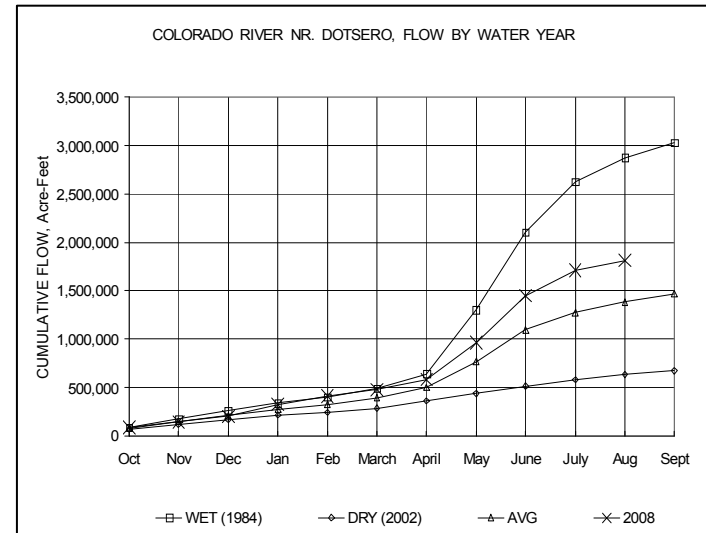
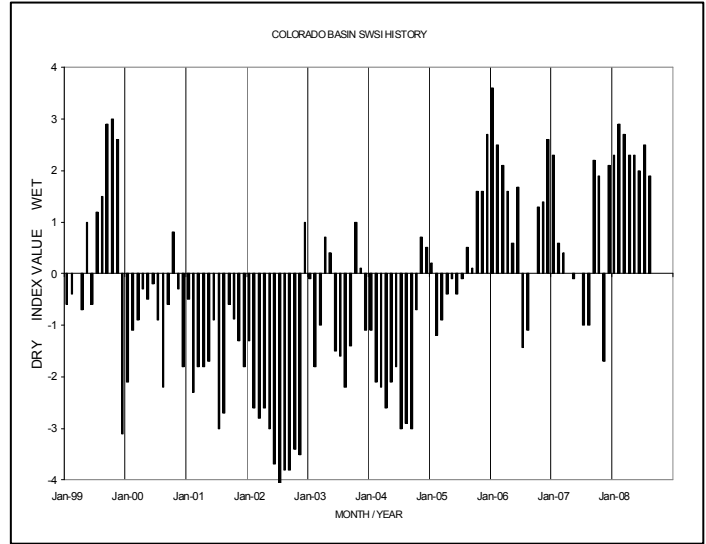
Upper Fryingpan River flow fell sharply in late August well below average and in violation of minimum stream flow requirements. However, continued above-average flows in the upper Roaring Fork and Crystal River have maintained the lower Roaring Fork River at above average flows, contributing to continued above average flows on the Colorado River. Blue and Eagle River flows have fallen to at or below average throughout August.

Administrative/Management Concerns

Dillon Reservoir spilling from moderate precipitation in the upper Blue River Basin and discontinued Roberts Tunnel diversions resulted in increased Green Mountain Reservoir releases in late August. Additionally, a declared Historic Users Pool surplus has led to further releases contributing to above average Colorado River flows. Green Mountain reservoir's 1935 power right imposed a call on the Blue River on August 18th. The Colorado River continues to have no calls from Grand Valley Irrigators.

Public Use Impacts

A flushing of the lower Fryingpan River near the confluence with the Roaring Fork River considered by the Division of Wildlife following last years mud flow was deferred pending runoff this past Spring. Flushing of the channel was accomplished by mid-June flows which exceeded 600 cfs as part of the fish recovery program near Grand Junction. The Colorado Water Conservation District is considering implementation of a Western Slope "water bank" created through purchase or lease of pre-1922 water rights for municipality use in the event the full allotment of 1922 interstate compact water with California, Arizona, and Nevada was demanded. This however could create competition with Front Range utilities such as Denver Water and the Northern Water Conservancy District who are equally interested in Western Slope water rights.



Basinwide Conditions Assessment

The SWSI value for the month was +0.3. Flow at the gaging station Yampa River at Steamboat was 163 cfs, as compared to the long-term average of 149 cfs.

August precipitation was slightly below 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 92% of average for the Yampa/White River basins and 98% of average for the North Platte River basin. Year-to-date precipitation remains above average, however, and is reported at 103% of average for the combined Yampa, White, and North Platte River basins. Warm weather continued throughout August, with sporadic, isolated afternoon thunderstorms throughout the area. Most streamflows remained at average to slightly above average conditions for the month.

Outlook

Yamcolo Reservoir, Elkhead Reservoir, and Fish Creek Reservoir were reported at approximately 62%, 91%, and 93% of capacity, respectively, at the end of August. Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Reservoir for municipal, industrial, and recreation purposes, as well as fish recovery releases.

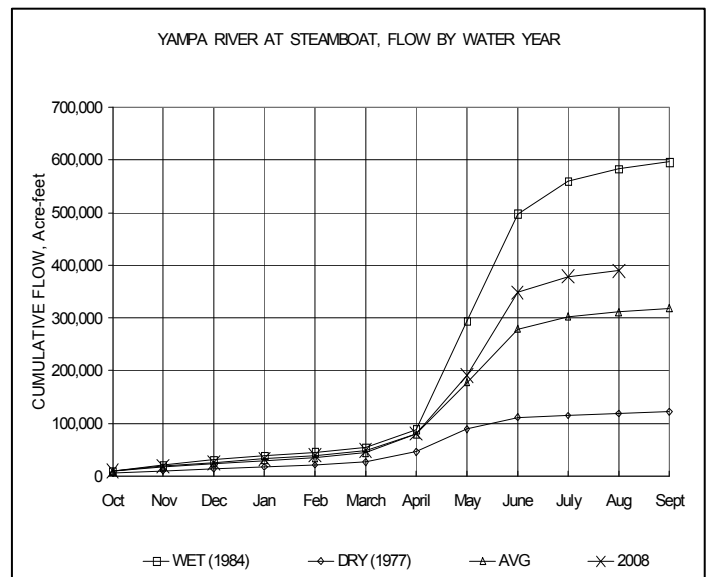
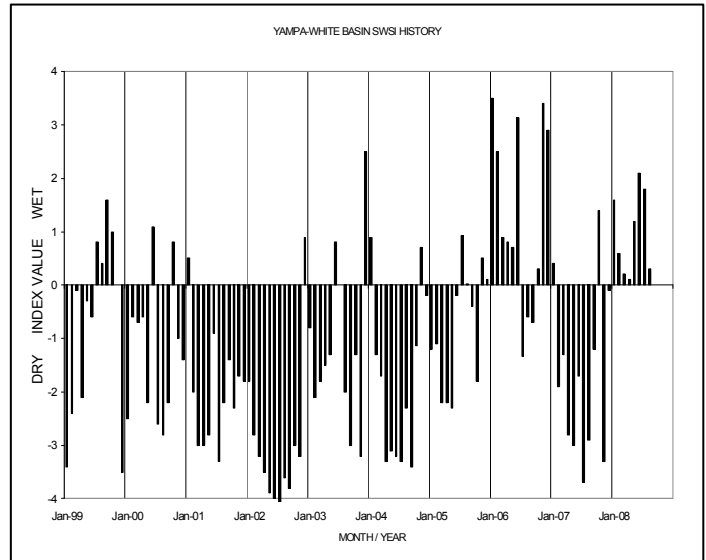
Administrative/Management Concerns

Calls were placed on the following streams, which remained under administration at the end of the month: Bear River (June 6), Talamantes Creek (June 13), West Fish Creek (June 20), and Little Bear Creek (July 7). Middle Hunt Creek and South Hunt Creek were released from call on August 7 and August 19, respectively.

The Colorado River District, on behalf of the Fish Recovery Program, requested that releases be made from Elkhead Reservoir starting on August 22. Releases are being made to augment flows and enhance habitat for the endangered fish species in the critical habitat reach of the Yampa River (from Craig to the confluence with the Green River at Echo Park). Target flows of 300 to 400 cfs at the Maybell gauge were set through mid-September this year to facilitate a special small mouth bass research project being conducted by Colorado State University on this stretch of the river. It is anticipated that target flows will return to their normal levels after completion of the study. District 44 water commissioners are responsible for protecting the water released from Elkhead Reservoir through the Yampa River critical habitat reach.

Public Use Impacts

Area reservoirs remain open for the season, with good fishing reported



Basinwide Conditions Assessment

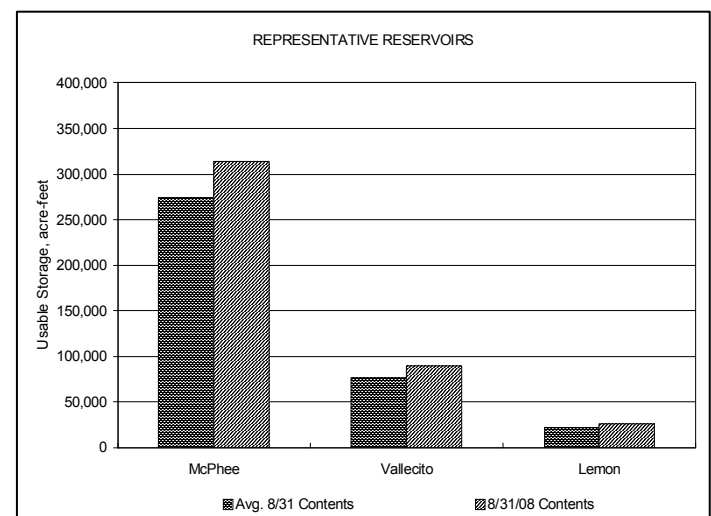
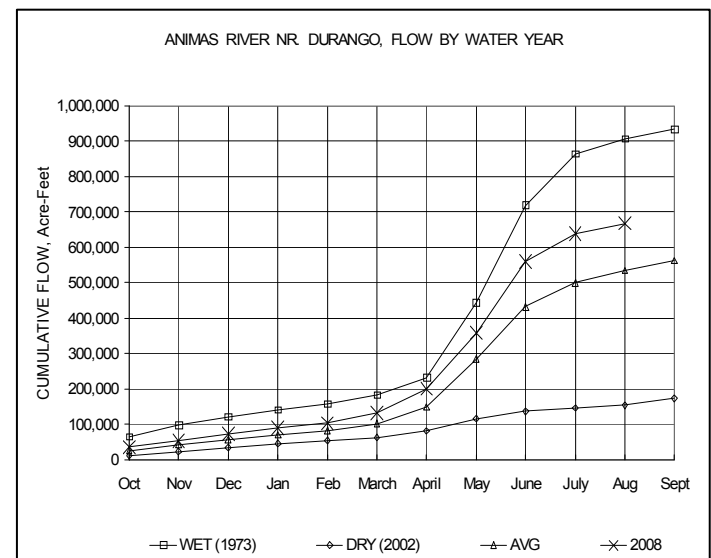
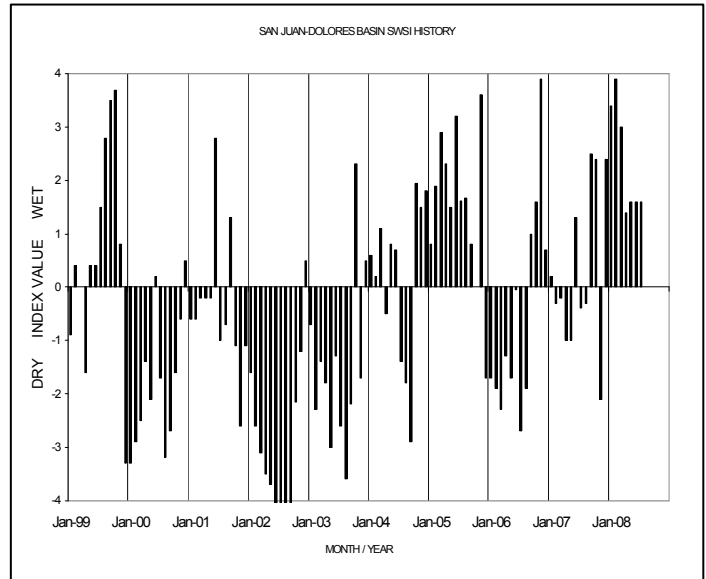
The SWSI value for the month was 0.0. Flows at the Animas River at Durango averaged 470 cfs (81% of normal) with a maximum average daily peak flow of 749 cfs on August 9th. The Dolores River at Dolores averaged 189 cfs (76% of normal) with a maximum average daily peak flow of 410 cfs on August 9th. The La Plata River at Hesperus averaged 15.4 cfs (66% of normal) with a maximum average daily peak flow of 20.8 cfs on August 1st. Precipitation in Durango was 3.18 inches for August which is above the 30-year average of 2.63 inches. Precipitation to date in Durango, for the water year, is 20.78 inches which is above the average of 17.57 inches. Temperatures were slightly above normal for the month. Durango was 1.3° above its 30-year average high and 1.5° above the 30-year average low. At the end of the month Vallecito Reservoir contained 89,930 acre-feet compared to its normal contents of 69,728 acre-feet (129% of normal). McPhee Reservoir was up to 313,899 acre-feet compared to its normal contents of 275,471 acre-feet (114% of normal), while Lemon Reservoir was up to 25,550 acre-feet as compared to its normal content of 22,389 acre-feet (114% of normal).

Outlook

By the end of the month all the major rivers within the basin were flowing well below average. River flows and precipitation in Durango only hedged slightly above average due to a rain event that occurred on August 30th.

Administrative/Management Concerns

Rain within the La Plata River basin was sparse at best. The compact period on the La Plata between Colorado and New Mexico began on February 15th. New Mexico placed a call starting on April 30th for half the flow at the upper index gage up to 80cfs. There was a total of 11 days in August where all Colorado ditches on the La Plata were shut off in order for Colorado to meet its compact obligations.



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