COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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August 2011

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 of May through October (June 1 through November 1). 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 July (August 1) range from a high value of +4.1 in the Yampa/White Basin to a low value of -0.4 in the Rio Grande Basin. Six of the basins (South Platte, Arkansas, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's value, while one basin (Rio Grande) experienced a loss from the previous month's value. Monsoon rains took over for snowmelt runoff this month to keep water supply outlooks positive for most of the basins.

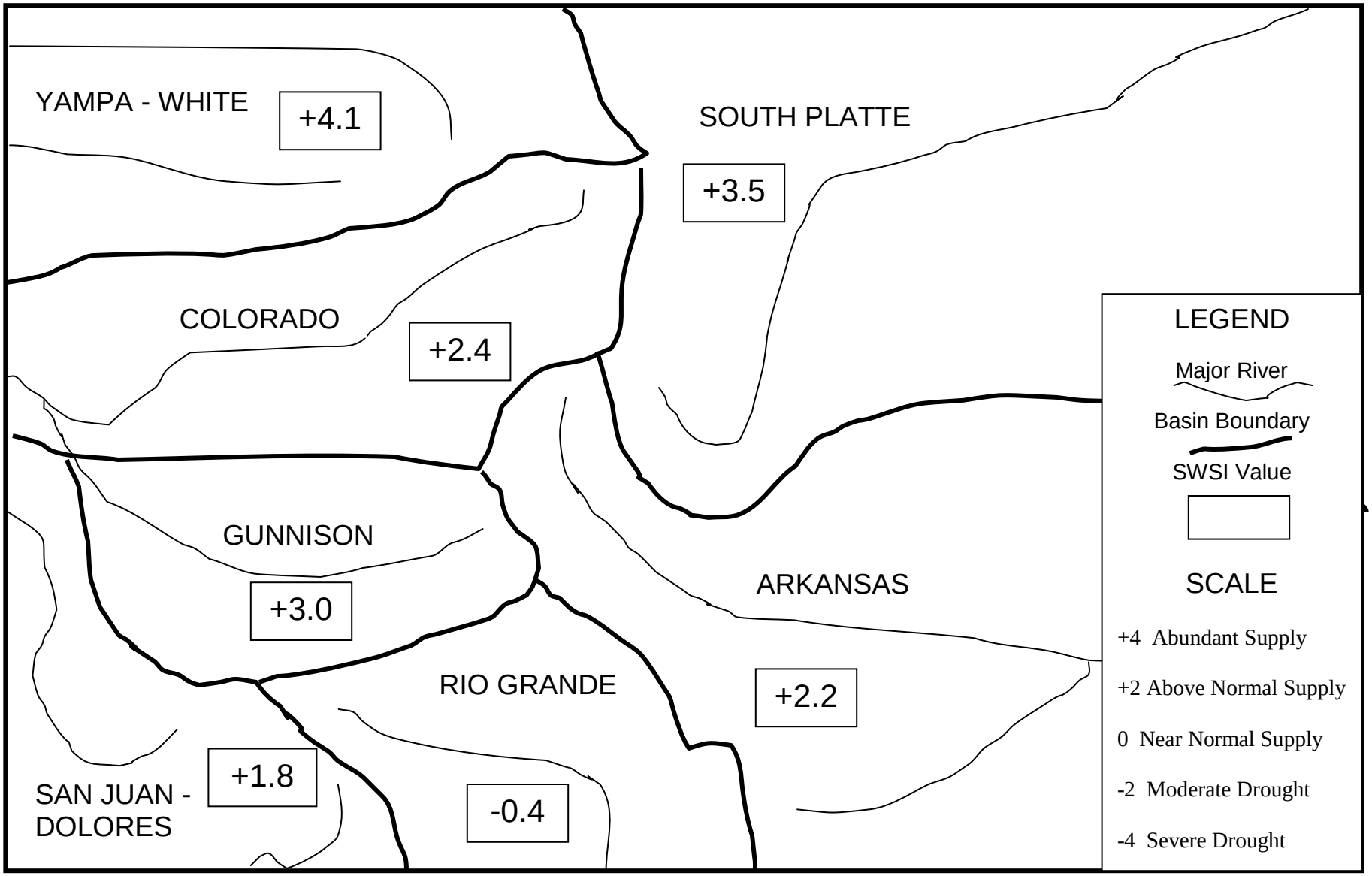
The following SWSI values were computed for each of the seven major basins for August 1, 2011, and reflect the conditions during the month of July.

Basin	August 1, 2011 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+3.5	+0.9	+0.9
Arkansas	+2.2	+1.0	+3.3
Rio Grande	- 0.4	- 0.8	+1.7
Gunnison	+3.0	+0.7	+4.1
Colorado	+2.4	+0.3	+4.1
Yampa/White	+4.1	+0.9	+4.7
San Juan/Dolores	+1.8	+0.3	+4.4

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



August 1, 2011

Basinwide Conditions Assessment

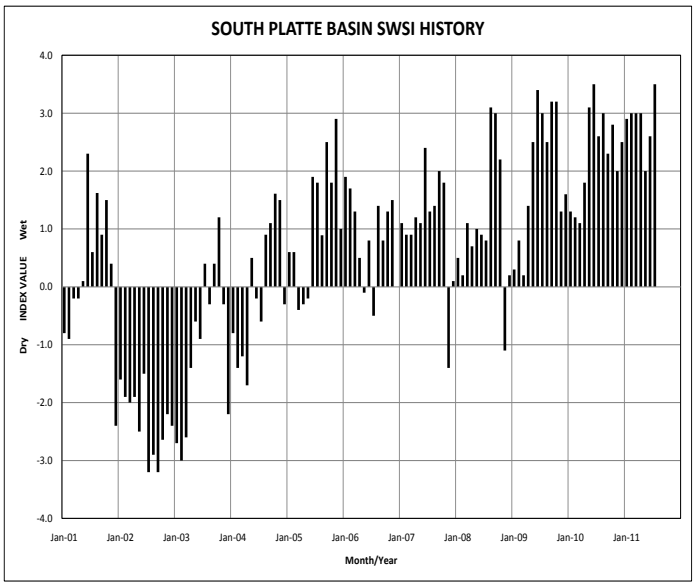
The SWSI value for the month was +3.5. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in this basin in computing the SWSI value, was 113% of normal as of the end of July. Cumulative storage in the major plains reservoirs (Julesburg, North Sterling, and Prewitt) is at 84% of capacity. Cumulative storage in the major upper-basin reservoirs (Cheesman, Eleven Mile, Spinney, and Antero) is at 98% of capacity. Flow at the gaging station South Platte River near Kersey was 3,235 cfs, as compared to the long-term average of 662 cfs (109 years of record). Flow at the Colorado/Nebraska state line averaged 2,410 cfs, as compared to the long-term average of 296 cfs (108 years of record).

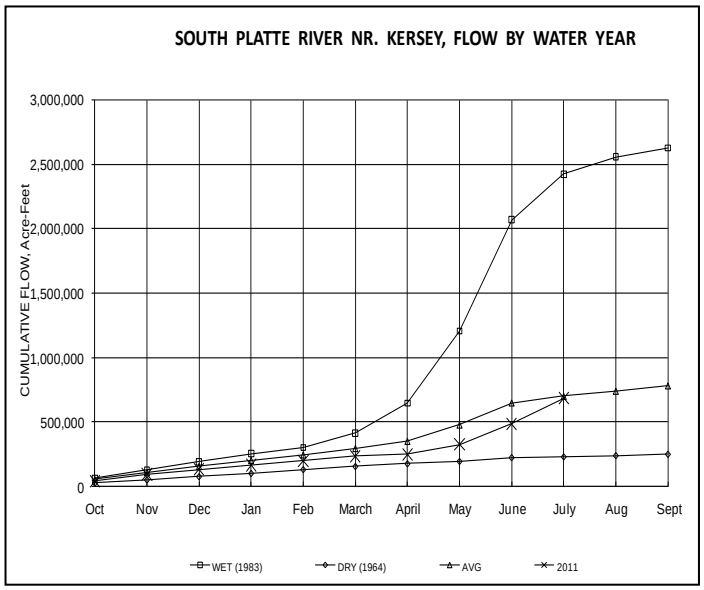
Outlook

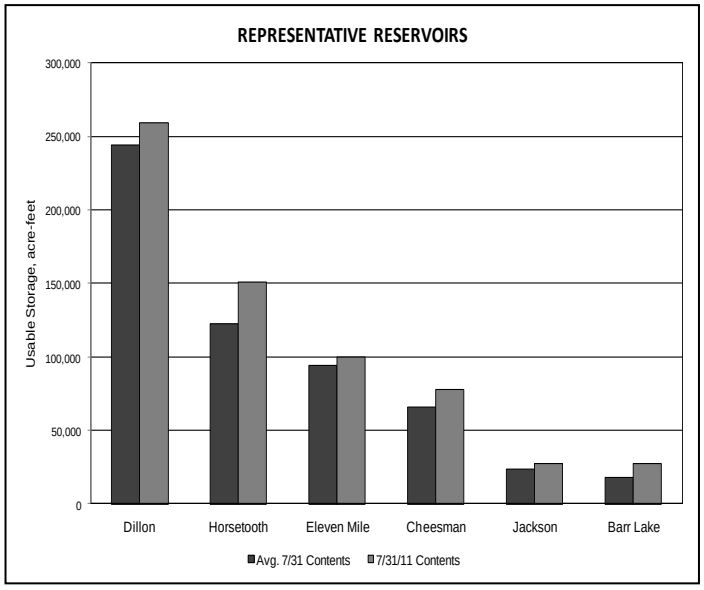
July turned out to be a fantastic water supply month for the South Platte basin. The entire mainstem was under free river conditions from July 8 to July 24 and the mainstem below the Town of Platteville was under free river the entire month. Even the calls that did exist above Platteville were much more junior than normal for July. The situation on the tributaries was not quite as good as the mainstem, but they also experienced much more free river and much more junior calls than normal for July. All of this was due to a combination of the large snowpack that melted out at a wonderfully steady rate and significant rain on the plains in June and early July.

The July mean daily flows at both the Kersey and Julesburg gages as well reservoir storage reflect the well above average water supply conditions. The end of July reservoir storage also bodes well for next year's water supply.

The South Platte basin outlook for August and September appears to be good. Both precipitation and temperature are forecast to be near normal. There also appears to be a good chance that extreme northeastern Colorado will receive above average precipitation, further reducing the chances of a call for water from the lower end of the South Platte basin.







Basinwide Conditions Assessment

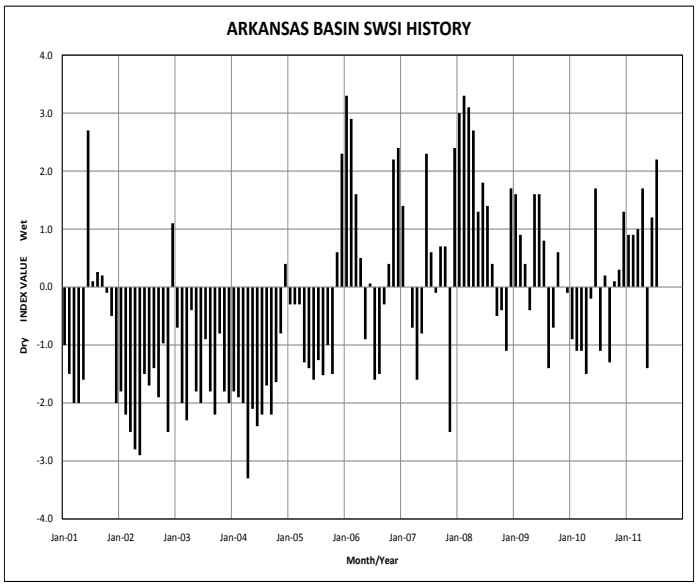
The SWSI value for the month was +2.2. Flow at the gaging station Arkansas River near Portland was 2,558 cfs, as compared to the long-term average of 1,525 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 105% of normal as of the end of July.

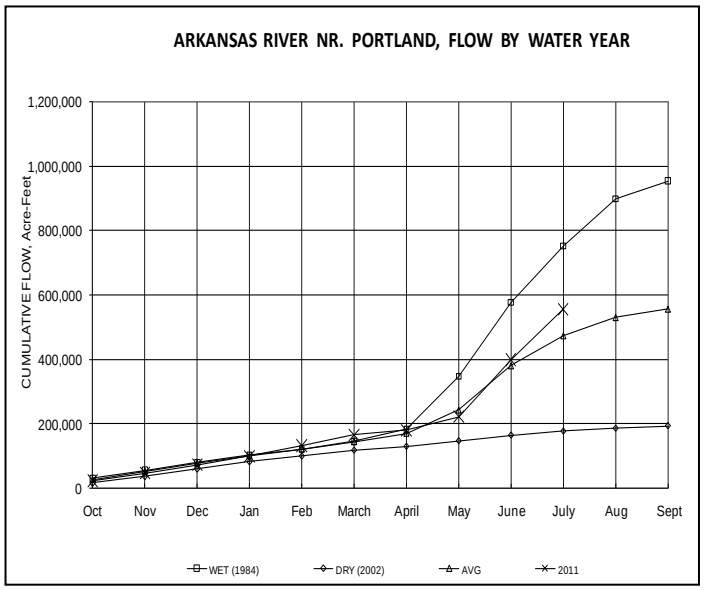
Outlook

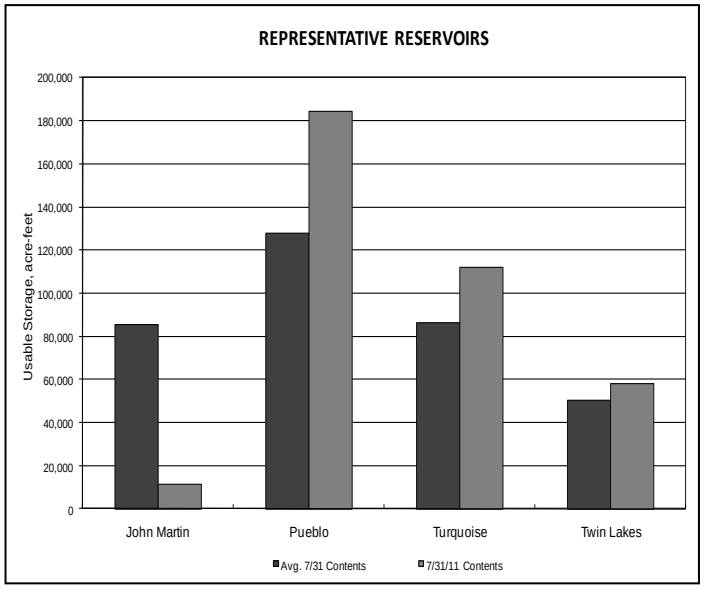
Runoff stayed very strong in July. A secondary peak flow through the Arkansas River at Portland gage was nearly 3,800 cfs in early July, matching the prior peak flow in June. The Arkansas River call was at the Lamar Canal 6/16/1890 right to begin the month and hovered around that call (alternating with Colorado Canal's 6/9/1890 right and Amity Canal's Great Plains right of 8/1/1896. The month ended with the call on the Fort Lyon Canal's 3/1/1887 water right.

Administrative/Management Concerns

Kansas began a release of water from John Martin Reservoir on June 30, 2011 and ran until their accounts were virtually empty on July 24, 2011. This included the Kansas portion of conservation storage water and water stored in John Martin Reservoir in the Offset Account used to replace post-Compact well depletions. The storage in John Martin Reservoir dropped from approximately 35,550 acre-feet at the start of the release to approximately 13,850 acre-feet at the end of the release and the reservoir dropped approximately nine vertical feet over that time span. The small amount of water remaining in John Martin Reservoir has caused some issues with recreation use of this reservoir. John Martin Reservoir is capable of storing nearly 346,500 acre-feet without invading the flood pool of the reservoir.





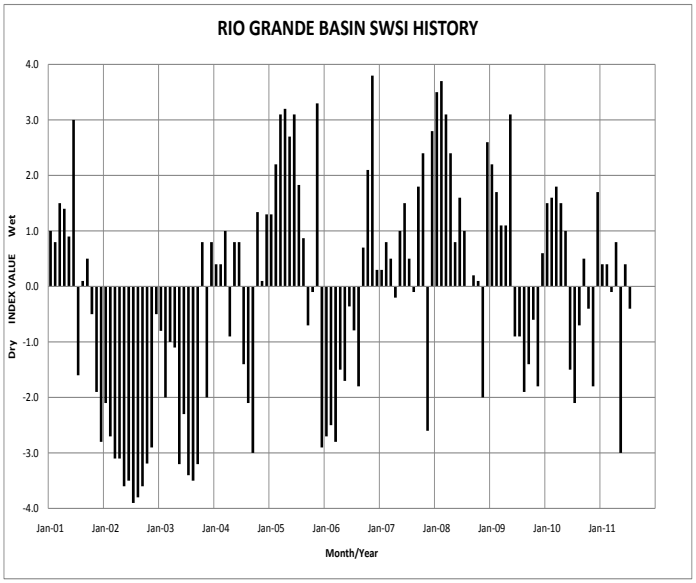


Basinwide Conditions Assessment

The SWSI value for the month was -0.4. Flow at the gaging station Rio Grande near Del Norte averaged 956 cfs (71% of normal). The Conejos River near Mogote had a mean flow of 478 cfs (101% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 86% of normal as of the end of July.

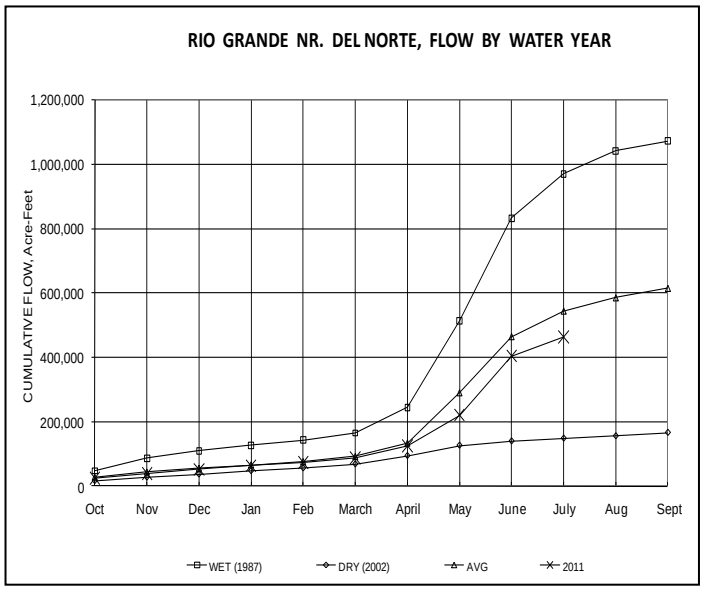
Precipitation of 0.14 inches during July in Alamosa was well off the average mark of 0.94 inches. The valley floor and some mountainous areas are still very dry after some rain this month, but the overall rainfall in the area is nearly three inches below normal already this year.

Temperatures in Alamosa soared to 90 degrees or above eight days during July and tie record daily highs five times. No big deal for folks on the eastern plains. But here, temperatures on the valley floor usually equal or exceed 90 degrees only two days a year. The average monthly temperature in Alamosa was 68.4 degrees during July. That's the warmest month on record in Alamosa!



Outlook

The hot, dry conditions are expected to continue. Without a significant change in the current weather patterns, the upper Rio Grande Basin will continue to experience drought conditions. With the high runoff months behind us, only significant rainfall will increase streamflow.



Administrative/Management Concerns

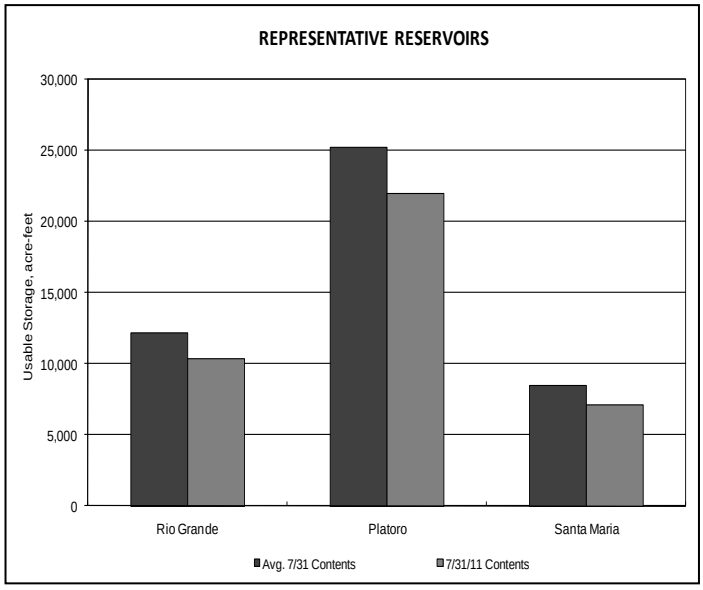
Junior surface water right owners in Division 3 should expect senior calls to keep them out of priority for the rest of the irrigation season.

The only drainages that have had near normal streamflow since mid-June are the Conejos River and Kerber Creek. All other streams are well below normal. Hardest hit this year are LaGarita Creek with only 10 to 20% of normal runoff, Saguache Creek, all Sangre de Cristo Range creeks, the Alamosa River and La Jara Creek.

Reservoir storage in the basin has been severely depleted.

Public Use Impacts

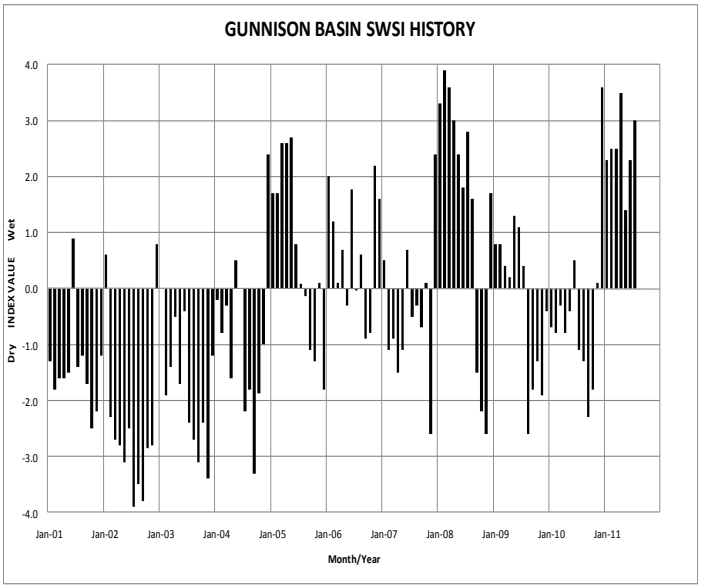
Water users and recreators should expect below average stream flows and reservoir levels through the end of the summer. Some financial assistance was made available during July to local ranchers and farmers when the counties of the San Luis Valley were granted disaster relief from the drought conditions.



Basinwide Conditions Assessment

The SWSI value for the month was +3.0. Flow at the gaging station Uncompahgre River near Ridgeway was 569 cfs, as compared to the long-term average of 316 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 106% of normal as of the end of July.

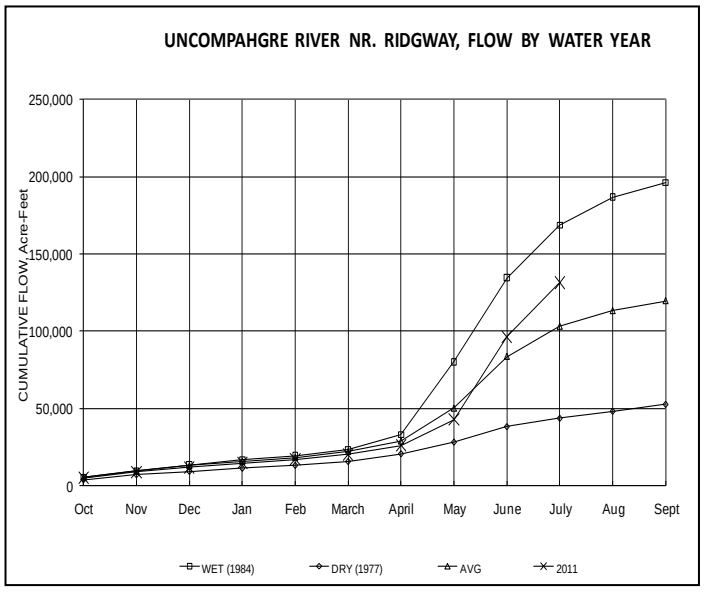
Strong southwestern flow predominated in July, producing monsoon rains and extended high runoff in Gunnison basin streams. In fact, precipitation during July was 110 to 129 percent of normal in the upper basin and 130 to 150 percent in the lower basin near Grand Junction and Gateway. Even the San Miguel basin experienced precipitation above 130 percent of average during July. These rains occurred beginning in early July almost immediately following the peak of the snowmelt runoff. This timing has allowed most irrigators to rely on direct flow rather than reservoir storage for a much longer period of time than normal. Most Gunnison basin water users hope that this good fortune continues and wish every year could work out like 2011 has so far.



Outlook

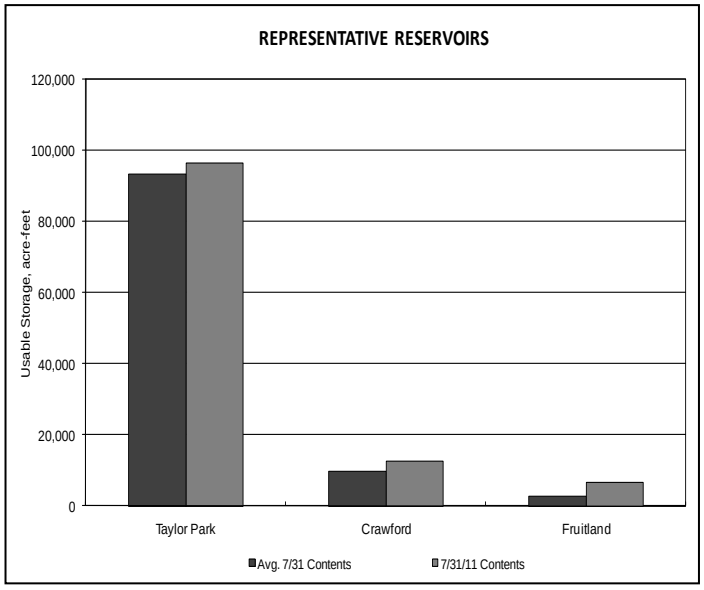
Almost all basin reservoirs filled or spilled this year with the largest reservoir, Blue Mesa, coming within 0.15 feet of spilling. This coupled with the reduced reliance on storage thus far during the irrigation season means that we should begin the 2012 water year in good shape with above average amounts of reservoir storage.

The National Climate Center currently forecasts average to slightly above average temperatures and average precipitation from mid-July through mid-October.



Administrative/Management Concerns

During July a lower than average number of calls were placed due to the extended runoff and ample monsoon rainfall. In fact, on August 1st the Surface Creek drainage remains primarily on direct runoff and reservoir releases have not been required to satisfy demand. This is a month beyond when reservoir releases typically begin in that area. With many agricultural users in the process of harvesting by the middle of August even excessively dry weather in August and September should not cause an increase in demand that would require greater than average administration in the Gunnison basin.



Public Use Impacts

In order to prevent a spill at Blue Mesa Reservoir, shortly after ramping down from the required one-day peak on July 5th, the USBR increased flows from Crystal Dam again from July 7th to August 4th. This operation produced a second peak in the Gunnison Gorge of 3,410 cfs on July 16th. As of August 4th flows in the Gorge continue at 1,090 cfs, which is above the 720 cfs average.

Basinwide Conditions Assessment

The SWSI value for the month was +3.4. Flow at the gaging station Colorado River near Dotsero was 10,760 cfs, as compared to the long-term average of 2,932 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 106% of normal as of the end of July.

Outlook

Basin wide river flows will slowly drop from significantly above average to average flows by the end of August as run-off diminishes. Roaring Fork and Colorado River flows at Glenwood Springs will drop from nearly three times their average flows to at or below average by the end of August.

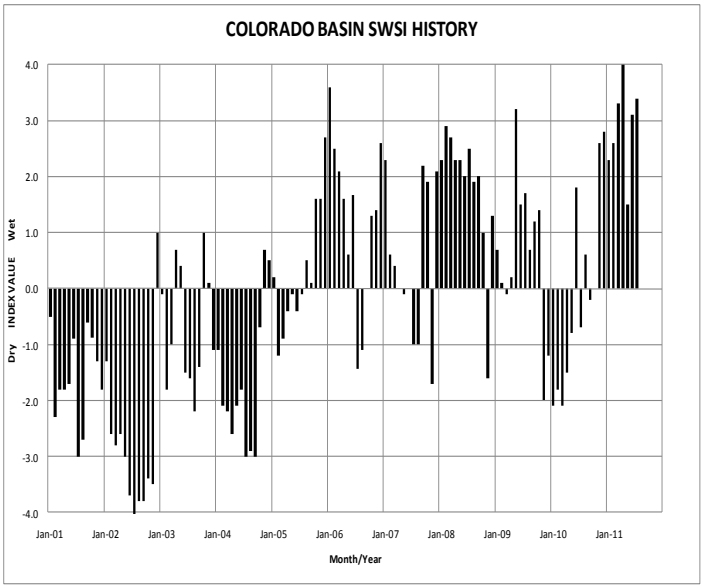
Administrative/Management Concerns

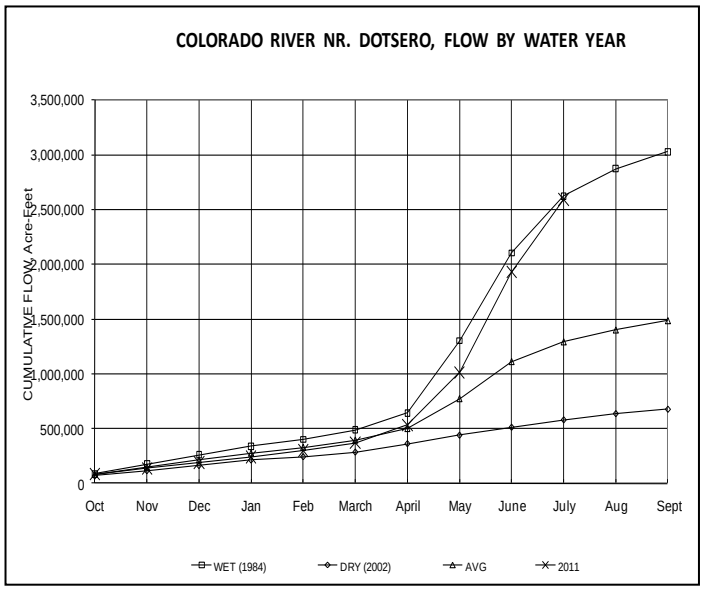
Willow Creek Reservoir releases have dropped significantly, but remain nearly 6 times their average flow. Green Mountain Reservoir releases have incrementally reduced from 3,300 to 500 cfs with receding Blue River basin runoff beginning in mid July. Ruedi Reservoir releases have decreased to 135 cfs as Fryingpan drainage. There is no call from grand valley irrigators.

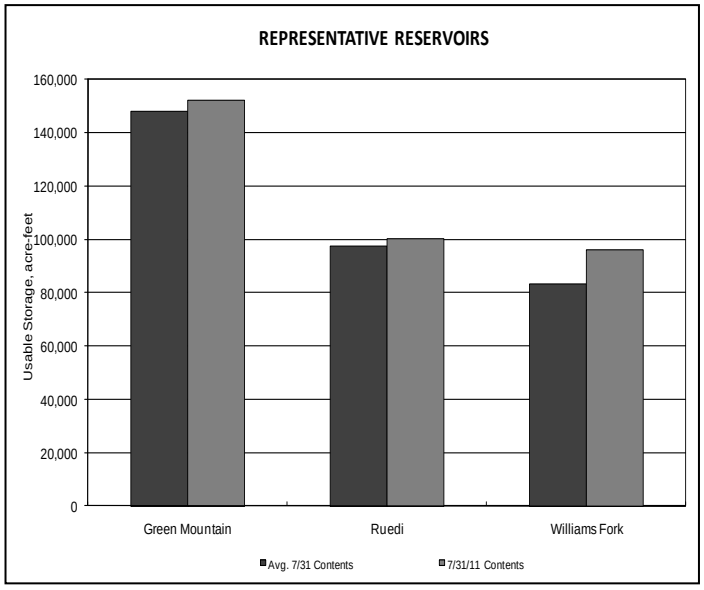
Public Use Impacts

Prolonged, significantly above average flows limited recreation activity on most upper Colorado River basin major tributaries in June and July. Fishing and rafting/kayaking activity on the Colorado and Roaring Fork Rivers has increased significantly in early August as flows have dropped; although still typically double their seasonal average.

Inflow to Lake Powell for the month of July was 4.35 maf (280 percent of average). This exceeded the projected July inflow by 0.85 maf and represented the second wettest July on record. The reservoir elevation reached its peak of 3,661 feet (76.5% of capacity) on July 30th, despite constant release rates of approximately 24,800 cfs. This compares with a water year 2001 peak elevation of 3,639 feet (65.2% of capacity).





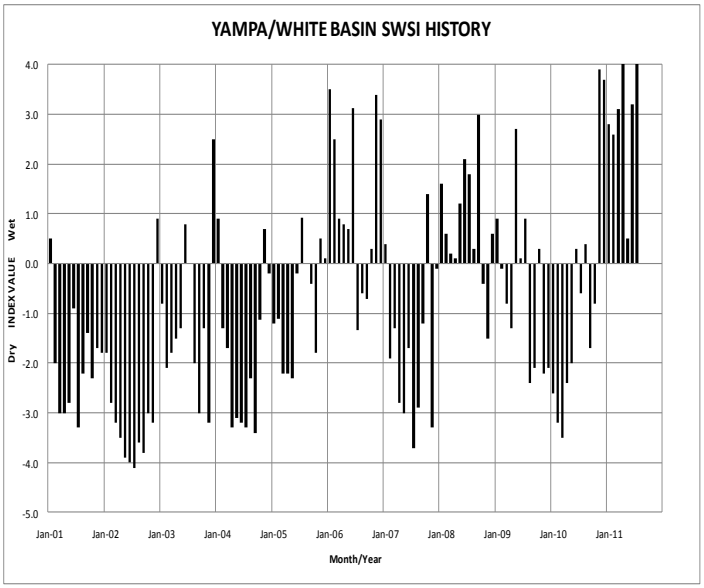


Basinwide Conditions Assessment

The SWSI value for the month was +4.1. Flow at the gaging station Yampa River at Steamboat was 1,869 cfs, as compared to the long-term average of 373 cfs.

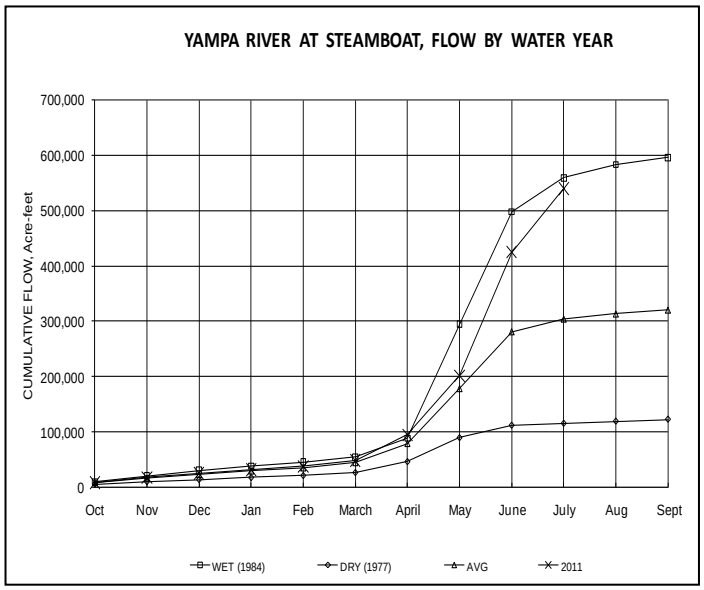
July precipitation was well above average in the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by NRCS, was reported at 157% of average for the Yampa, White, and North Platte River basins. Total precipitation for the water year as a percent of average to date in the combined basins at the end of July is 139%.

Bridge flow measurements were conducted at all of the Division 6 stream gages during July as flows continued to be well above average.



Outlook

As of July 31st Fish Creek Reservoir was storing 4,132 AF, 99.2% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Yamcolo Reservoir was storing 9,505 AF at the end of July 2011. On July 31st Elkhead Creek Reservoir was storing 24,778 AF, 100% of capacity. On August 5th, 2011, Stagecoach Reservoir was 2 feet below the spillway.



Public Use Impacts

Fishing at Stagecoach Reservoir has slowed a bit. Fishing may be better in deeper water as the lake has turned over. Tailwater fishing at Stagecoach has improved due to lower flows. Fishing at Steamboat Lake has been slower but steady lately. Aquatic nuisance species (ANS) inspections are mandatory on all vessels at both Steamboat and Pearl Lake. The tubing ban on the Yampa River was lifted on July 28th as flows through town dropped below 800 cfs.

Basinwide Conditions Assessment

The SWSI value for the month was +1.8. Flow at the Animas River at Durango averaged 1,355 cfs, as compared to the long-term average of 1,085 cfs (116% of average). The flow at the Dolores River at Dolores averaged 366 cfs (93% of average). The La Plata River at Hesperus averaged 21.9 cfs (60% of average). Storage in McPhee, Vallecito, and Lemon reservoirs totaled 113% of normal as of the end of July.

Precipitation in Durango was 3.17 inches for the month, 159% of the 30-year average of 1.99 inches. Precipitation to date in Durango, for the water year, is 13.58 inches, 89% of the 30-year average of 15.21 inches. The average high and low temperatures for the month of July in Durango were 86° and 57°. In comparison, the 30-year average high and low for the month is 86° and 53°.

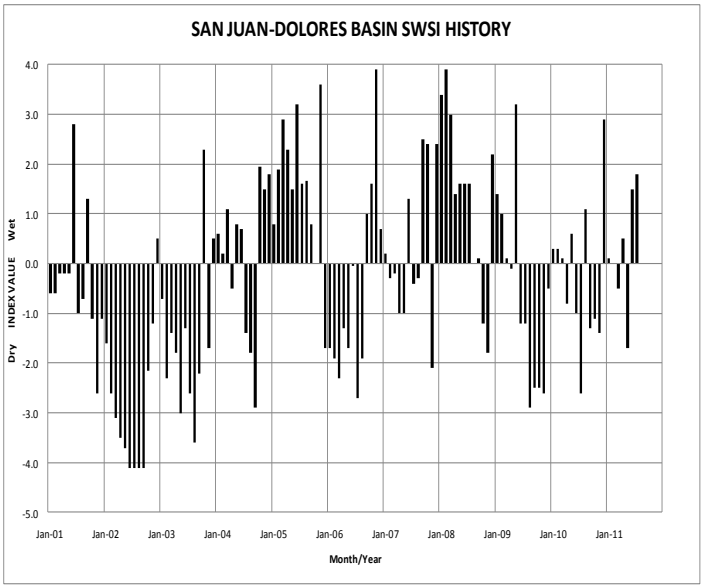
At the end of the month Vallecito Reservoir contained 109,130 acre-feet compared to its average content of 88,161 acre-feet (124% of average). McPhee Reservoir was up to 349,912 acre-feet compared to its average content of 301,193 (116% of average), while Lemon Reservoir was up to 25,420 acre-feet as compared to its average content of 27,416 acre-feet (93% of average).

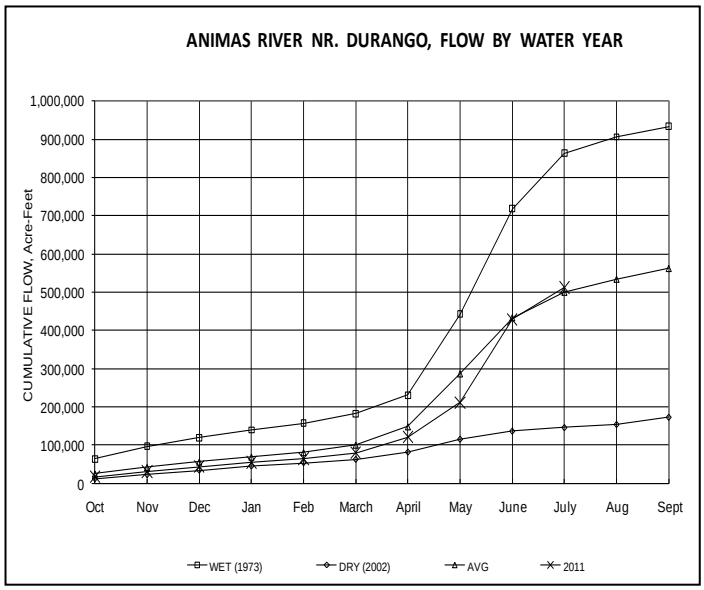
Outlook

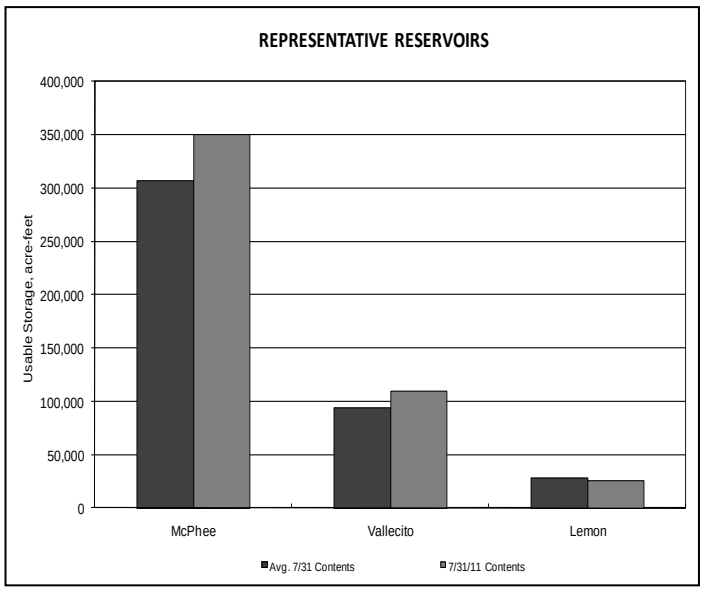
Precipitation (3.17-inches) was above average for July in Durango. There are 15 years out of 117 years of record where there was more precipitation than this year. The monsoon rains have been isolated with most of the precipitation occurring in the mountains north and east of Durango. Most reservoirs (Vallecito, McPhee, Narraguinnep, Groundhog, and Jackson) were full at the end of June with the exception of Lemon Reservoir.

Administrative/Management Concerns

Normal temperatures and an abundance of high elevation snow kept base flow in the rivers near average within the basin. Most rivers within the basin peaked on June 7. Nighthorse Reservoir filled for the first time on June 30. The LaPlata River compact call started on April 7, 2011 and will remain on call for the rest of the season.







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