COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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May 2009

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 May 1, 2009 range from a high value of 1.4 in the South Platte Basin to a low value of -1.3 in the Yampa/White Basin. The South Platte and Colorado Basins improved from the previous month's values, while the Arkansas, Gunnison, Yampa-White, and San Juan/Dolores Basins decreased from the previous month's values.

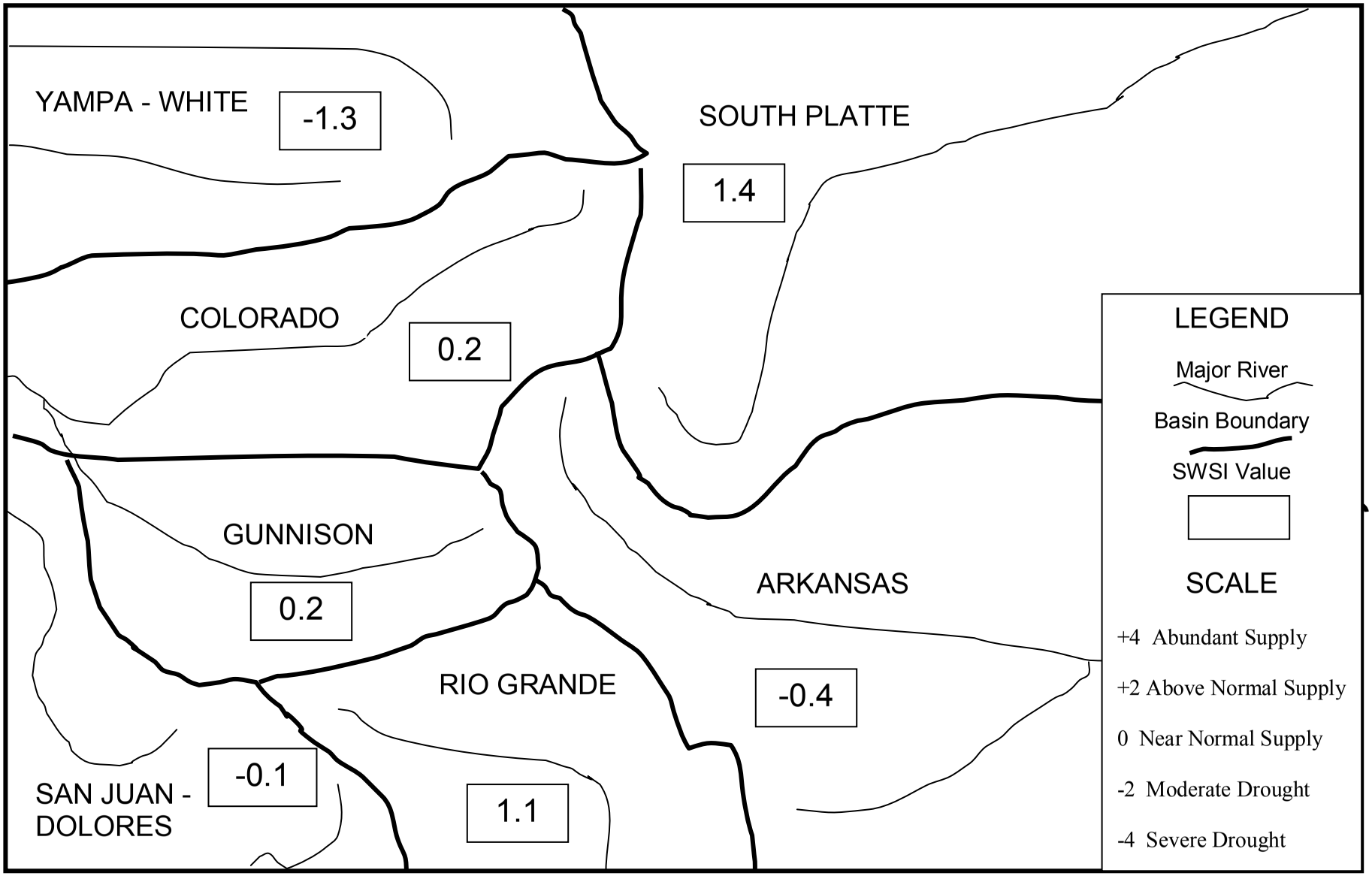
The following SWSI values were computed for each of the seven major basins for May 1, 2009, and reflect the conditions during the month of April.

Basin	May 1, 2009 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	1.4	1.2	0.7
Arkansas	- 0.4	- 0.8	- 3.1
Rio Grande	1.1	0.0	- 1.3
Gunnison	0.2	- 0.2	- 2.8
Colorado	0.2	0.3	- 2.1
Yampa/White	- 1.3	- 0.5	- 1.4
San Juan/Dolores	- 0.1	- 0.2	- 1.5

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



May 1, 2009

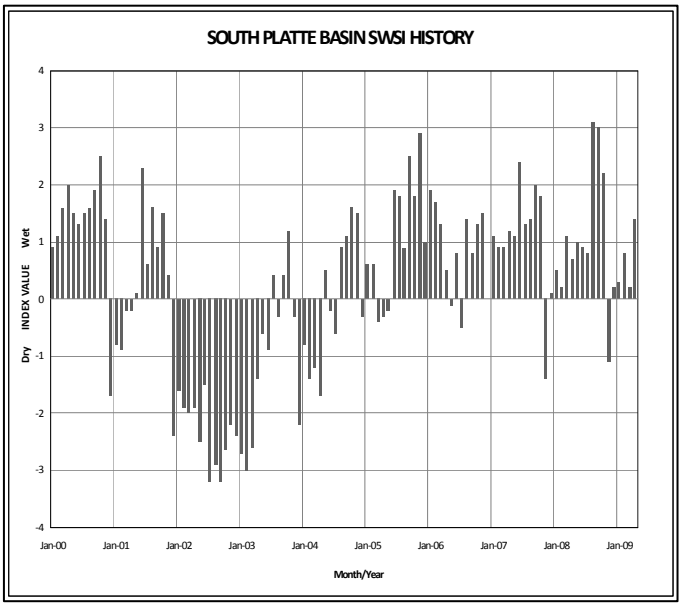
Basinwide Conditions Assessment

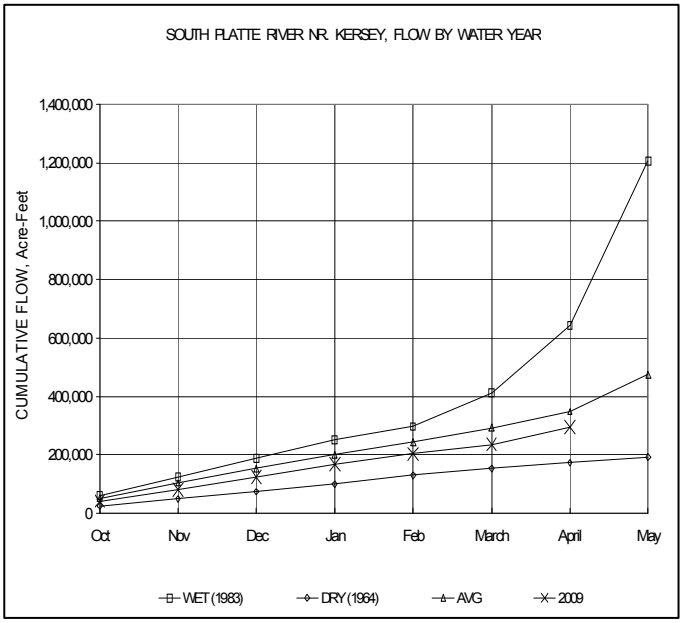
The SWSI value for the month was 1.4. Cumulative storage for the six reservoirs graphed on this page was 107% of normal as of the end of April. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 100% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 97% of capacity. The Natural Resources Conservation Service reports that May 1 snowpack is 104% of normal. Flow at the gaging station South Platte River near Kersey was 1,008 cfs, as compared to the long-term average of 850 cfs. Flow at the Colorado/Nebraska state line averaged 281 cfs.

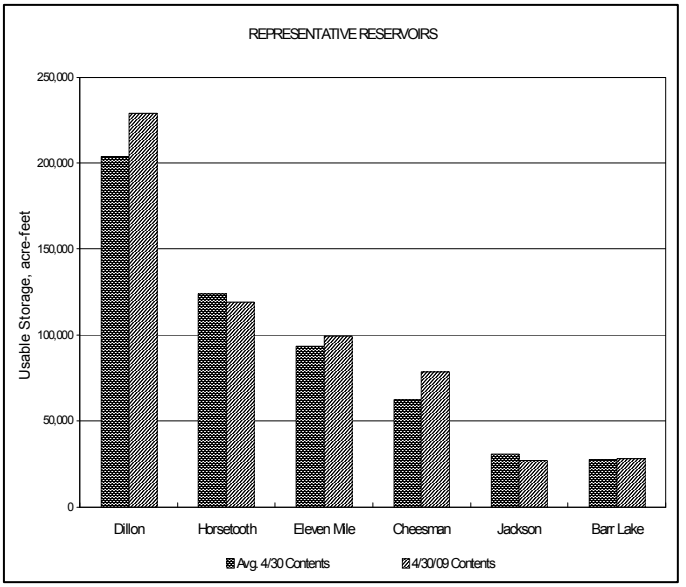
Outlook

April continued to be wet on the plains with snow/rain events in the latter half of the month. This caused the monthly streamflow to be above average throughout most of the basin. The precipitation should allow for an excellent winter wheat crop. It also puts the water supply for irrigators in excellent condition with above average snowpack and all major plains irrigation reservoirs along the South Platte filled. In addition, irrigators will not have to "water up" their crops this year because of the high soil moisture conditions. Likewise, all major municipal water suppliers along the Front Range are in an excellent water supply situation.

As a result of the wet conditions, the calls for the majority of the month downstream of Denver were for recharge purposes. Recharge water will be a key supply of augmentation to replace depletions from irrigation wells the remainder of this summer and in the future.







Basinwide Conditions Assessment

The SWSI value for the month was -0.4. The Natural Resources Conservation Service reports that May 1 snowpack is 95% of normal. Flow at the gaging station Arkansas River near Portland was 376 cfs, as compared to the long-term average of 434 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 105% of normal as of the end of April.

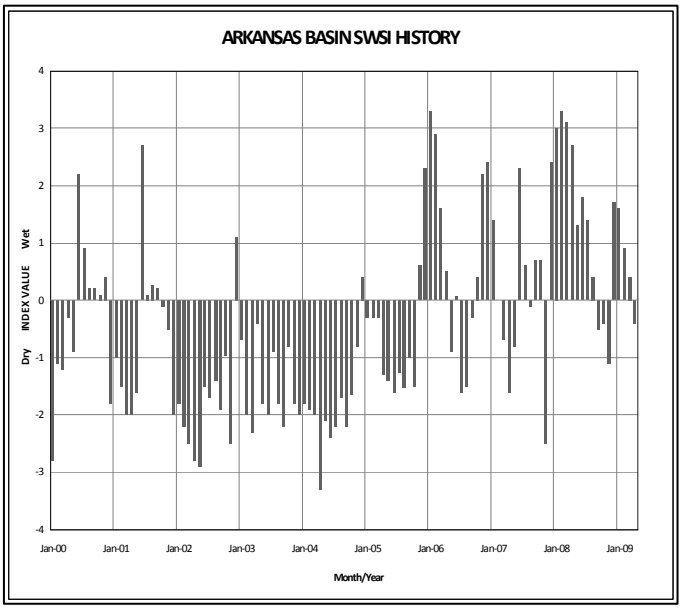
Outlook

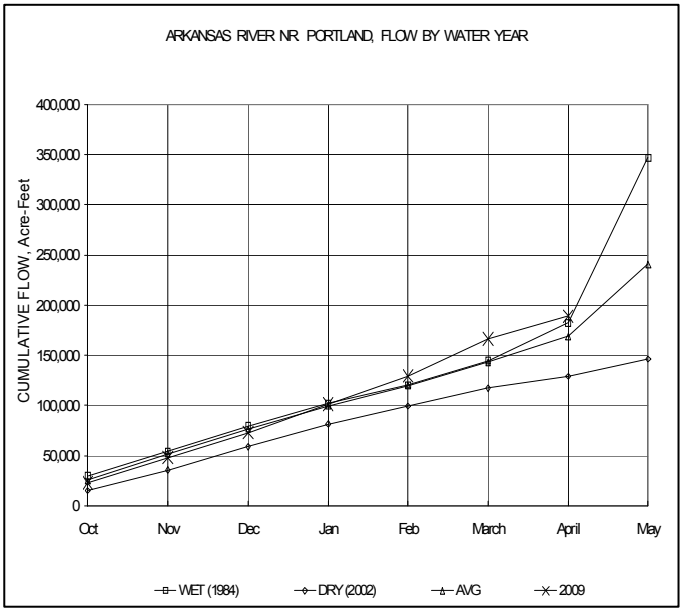
No ditches in Water District 67 called for water prior to April 7, 2009; consequently the distribution of conservation storage into accounts per the 1980 Operating Agreement for John Martin Reservoir began on April 7, 2009 at 08:00 hours. Total storage from November 1, 2008 through April 30, 2009 distributed into accounts in John Martin Reservoir was approximately a net of 32,757 acre-feet. This storage volume was considerably larger than last year when the conservation storage total was below 30,000 acre-feet.

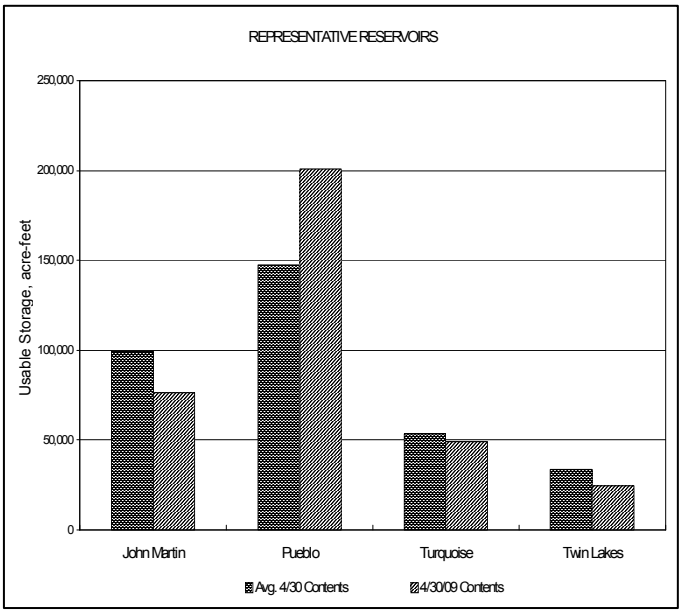
The Arkansas River call started at Holbrook Canal's water right (9/25/1889) and ended on Amity Canal's senior water right (2/21/1887).

Administrative/Management Concerns

The snowpack improved significantly through April, but began to fall off quickly towards the end of the month as drier conditions set in.







Basinwide Conditions Assessment

The SWSI value for the month was 1.1. The Natural Resources Conservation Service reports that May 1 snowpack is 92% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 954 cfs (144% of normal). The Conejos River near Mogote had a mean flow of 293 cfs (91% of normal). Flow to the state line was 101% of normal. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 94% of normal as of the end of April.

Alamosa received above average precipitation of 1.12 inches during April and temperatures ranged from 7 degrees to 74 degrees. Most of the remaining snowpack in the basin at the end of April was found at elevations above 10,000 feet. Little or no snow remained at the lower elevations.

Outlook

There was some early melting during March, but snowstorms and cold temperatures reduced the runoff intensity until the 3rd week of April. That's when warm weather and melt of the April snowfall really kicked into high gear.

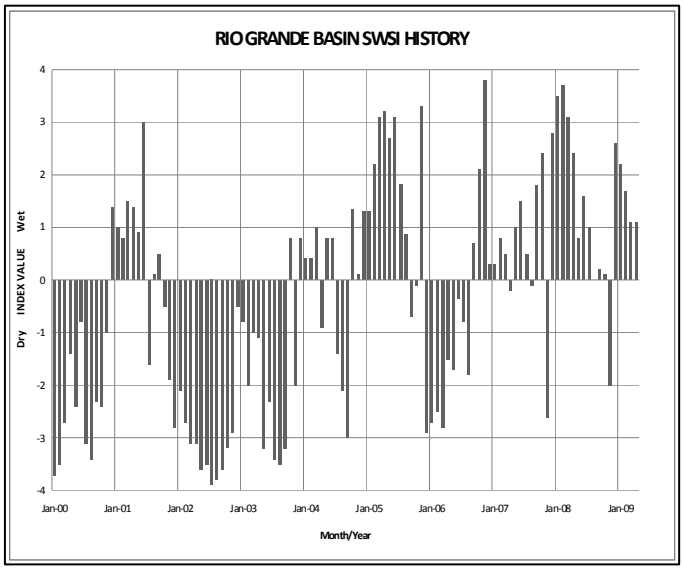
NRCS forecasts are predicting runoff to be 91% of average on the Rio Grande near Del Norte and 103% for the Conejos near Mogote. Despite the abundant snowfall during April, these forecasts were not changed from last month's forecast. The best runoff in the basin is predicted for the Conejos, Los Pinos, and San Antonio Rivers located in the southwestern part of the San Luis Valley. The lowest runoff, compared to average, is expected on Saguache Creek (82%).

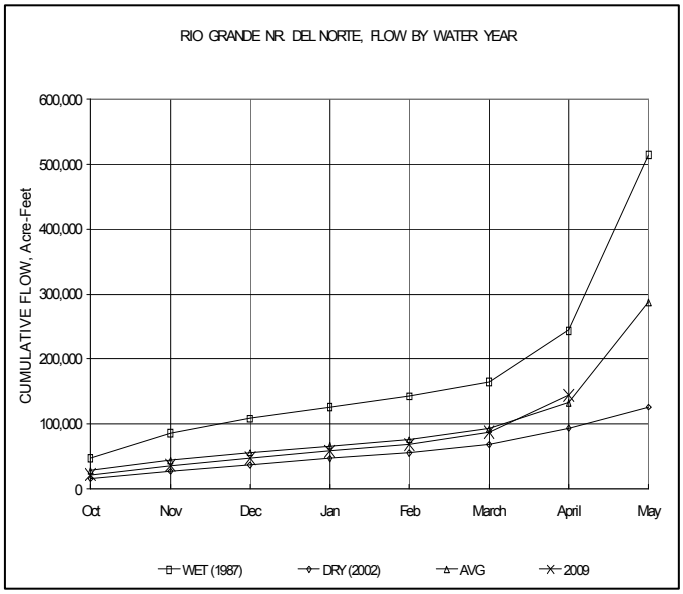
Administrative/Management Concerns

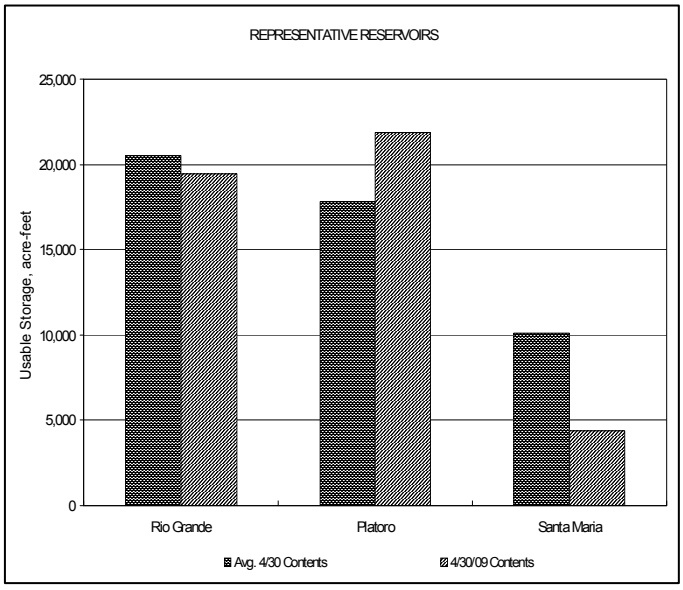
Diversions from the creeks usually begin during early April in the San Luis Valley. But the colder temperatures and snowfall held many irrigators off until late in the month. Then May roared in like a lion as local streams swelled with high runoff due to the warm temperatures and melting of the 'dirty snow'. The kind of streamflow that is normally expected during the 3rd or 4th weeks of May was seen during the first week of May. Many irrigators just weren't ready for the water and reservoirs were put into storage to control the gush. The 'dirty snow' was the result of wind-borne dust from Arizona and Utah dropping on the snowfields of the San Juan Mountains. This is certainly a concern as it appears to have forced an early and intense runoff.

Public Use Impacts

Weather conditions during April prevented many farmers from working in the fields as early as they would like. There is slight localized flooding in the San Luis Valley due to the high and early runoff conditions.







Basinwide Conditions Assessment

The SWSI value for the month was 0.2. Flow at the gaging station Uncompahgre River near Ridgway was 160 cfs, as compared to the long-term average of 112 cfs. The month of April resulted in good precipitation throughout the Gunnison River Basin and good snowpack accumulation in high altitude areas. Basin wide, the snow water equivalent was at 100% on April 1st and peaked at 112% of average (with a total annual precipitation of 109%) on April 19th. Unseasonably warm temperatures and late April rain, combined with extreme dust-on-snow events really got the runoff started early. By April 30th, the snow water equivalent in the basin decreased to 85%. Reservoir storage is 130% of average and 131% of the stored water available at this time last year.

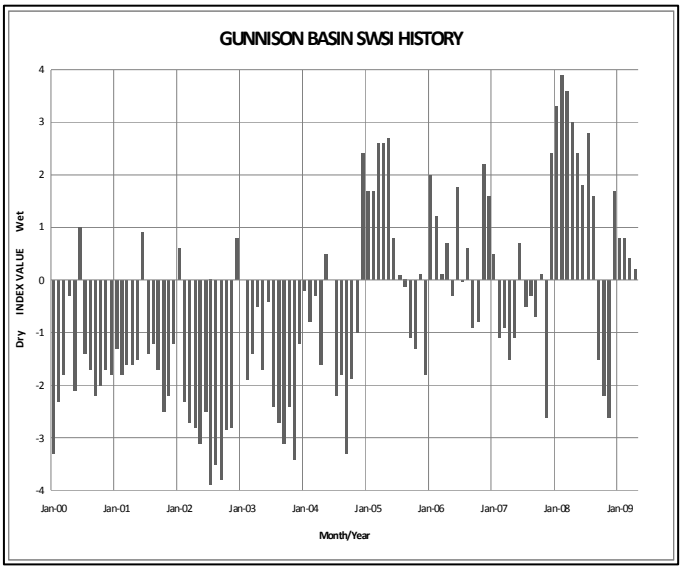
Outlook

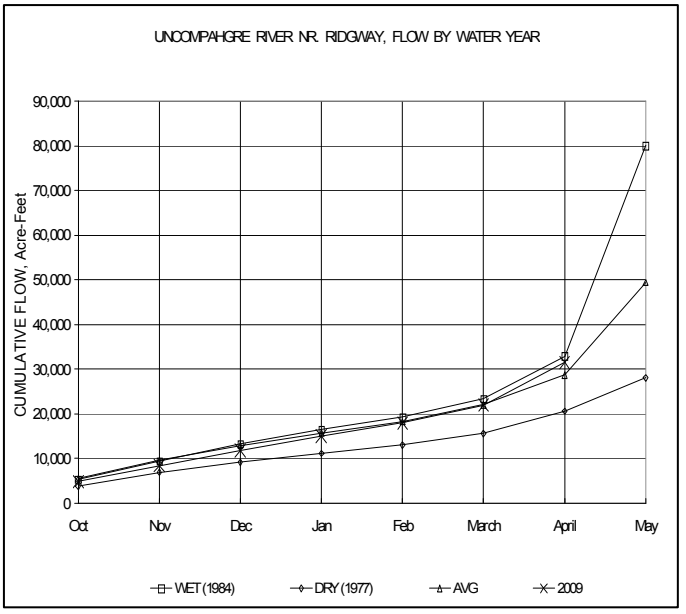
Based on the Natural Resources Conservation Service, forecasts remain mostly unchanged from those issued last month. However, with the increased melt during the last half of April, water users should expect near average to below average flows from now through July. May-July runoff should range from 69% of average for Tomichi Creek at Gunnison to 99% of average for the Slate River near Crested Butte, East River at Almont and Gunnison River near Gunnison.

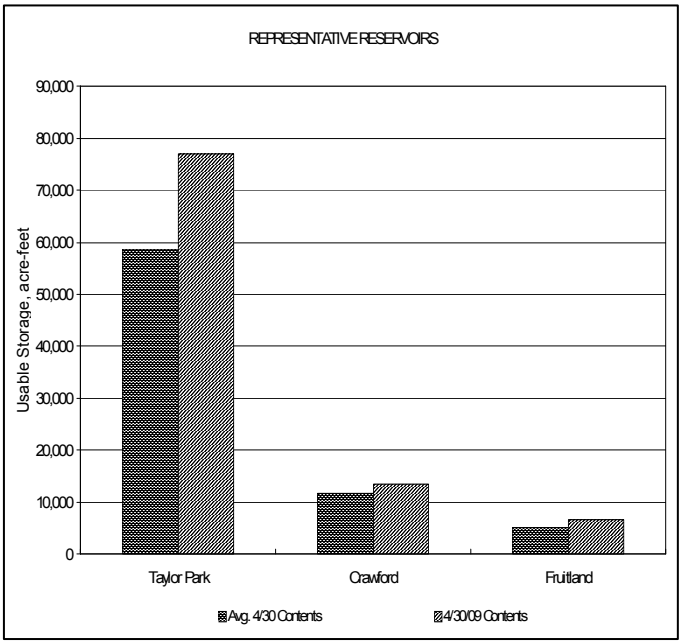
Gunnison Basin reservoirs will fill this season with another spill at Crystal Dam predicted for the second year in a row, to occur mid-May as the peak flow in the Gunnison Gorge is increased to 6,000 cfs. The peak runoff will be much earlier than last year with most areas peaking around mid-May. Given the numerous dust-on-snow events this winter and spring (some severe), and the extended warm temperatures, the runoff will also be much faster and shorter in duration compared to last year's runoff when warm/cool cycles extended the runoff period into July.

Administrative/Management Concerns

Irrigation water use picked up in April as water was turned into the Gunnison Tunnel in mid-March. Warm temperatures later in April and winter wheat plantings in the Uncompahgre Valley increased the irrigation demand significantly earlier this year compared to 2008. A Gunnison Tunnel call is highly unlikely this season, based on the full reservoir storage in Taylor Park and Blue Mesa reservoirs. Irrigation demand from the Grand Mesa reservoir system will begin earlier this year as well.







Basinwide Conditions Assessment

The SWSI value for the month was 0.2. The Natural Resources Conservation Service reports that May 1 snowpack is 97% of normal. Flow at the gaging station Colorado River near Dotsero was 1,840 cfs, as compared to the long-term average of 1,779 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 138% of normal as of the end of April.

Outlook

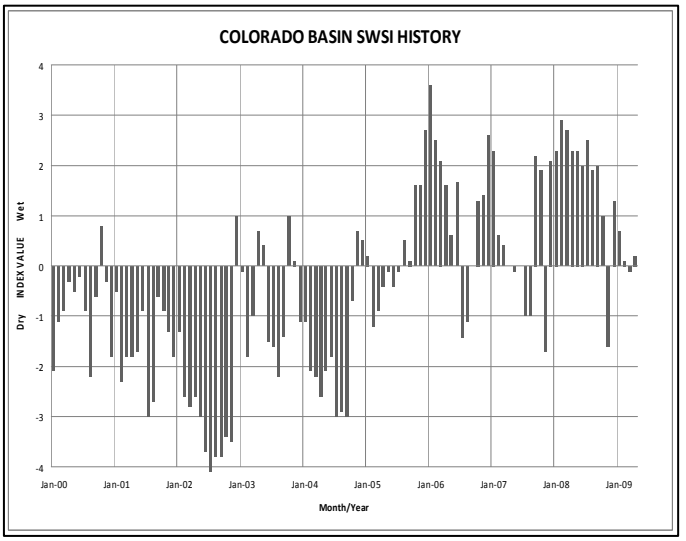
Heavy precipitation in early April followed by moderate spring storms resulted in Upper Colorado River basin precipitation at 107% of average as of May 1st (considerably lower than the level of 119% observed May 1, 2008). Colorado River flows varied from considerably below average in early April to considerably above average late in the month. Roaring Fork and Blue River flows were average until the last week of April when flows climbed to 25 to 50% above average. Ruedi Reservoir releases were increased by 50 cfs twice during April on the 10th and 25th boosting flows to 20% above average.

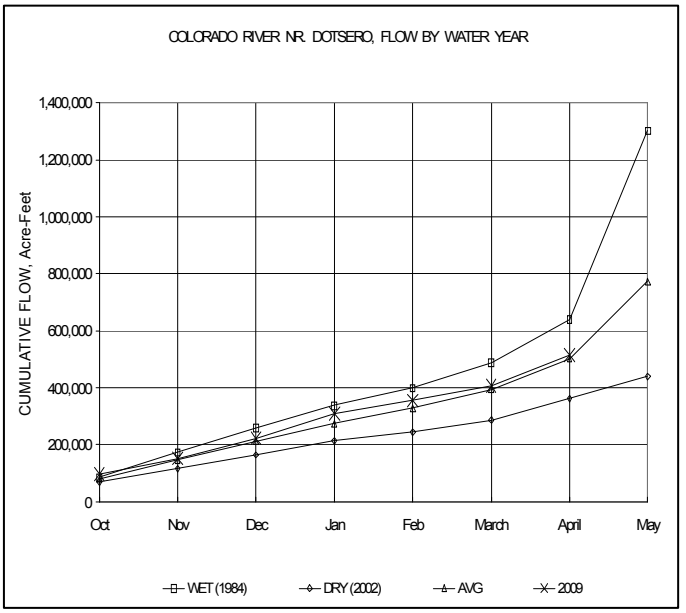
Administrative/Management Concerns

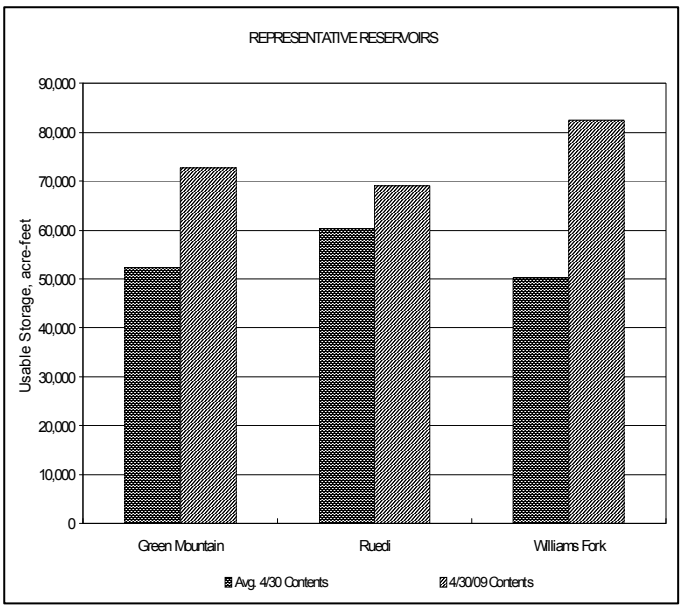
Seasonal administrative gages, including those monitoring trans-basin import water have been activated. The Green Mountain senior fill right is in effect, and there is no irrigation call from Grand Valley water users.

Public Use Impacts

River enthusiasts began boating and kayaking activities on the Colorado and Roaring Fork Rivers with increasing flows in late April. Glenwood Springs is preparing for the 2009 U.S. Freestyle Kayak Team Trials being held at the Glenwood Whitewater Park the weekend of May 30-31.





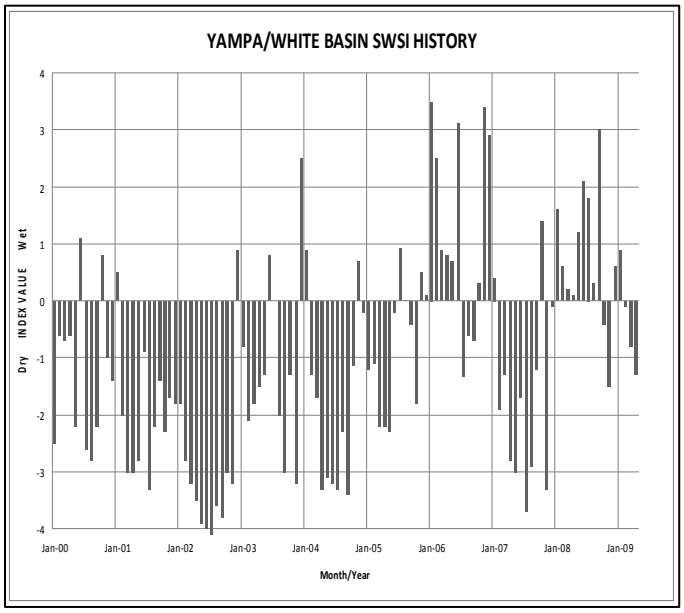


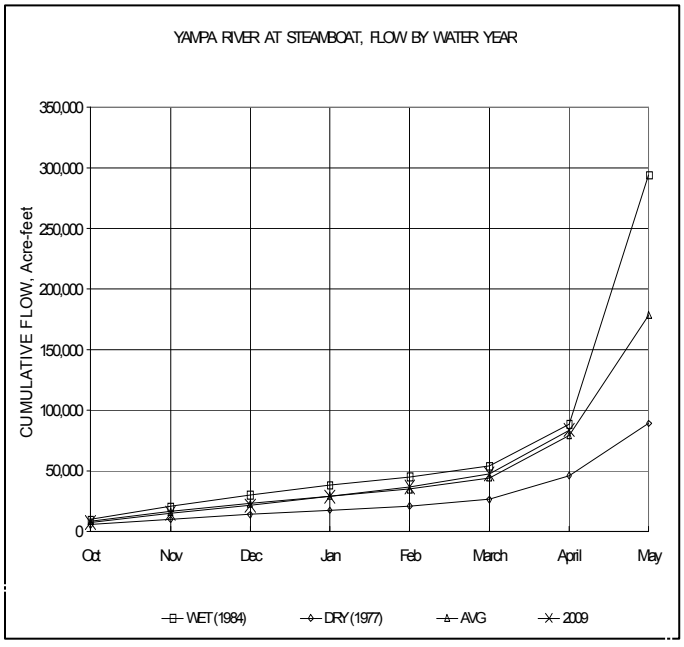
Basinwide Conditions Assessment

The SWSI value for the month was -1.3. Flow at the gaging station Yampa River at Steamboat Springs was 606 cfs, as compared to the long-term average of 588 cfs. 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 107% of average for the Yampa/White River basin and 112% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 111% of average for the month of April and 104% of average for the water year to-date.

The snow water equivalent (SWE) as of April 30, 2009 for the Yampa and White River basins was 94% of average and for the Laramie and North Platte River basins was 95% of average. For the individual Division 6 basins, the snowpack at the end of the month was 94% of average for the North Platte River basin, 96% of average for the Yampa River basin, and 87% of average for the White River basin.

NRCS predicts near average to above average spring and summer streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the May through July period are 88% of average for the North Platte River at Northgate, 100% of average for the Yampa River near Maybell, 131% of average for the Little Snake River near Lily, and 98% of average for the White River near Meeker.





Outlook

Fish Creek Reservoir storage level increased slightly in April and was reported at approximately 60% of capacity at the end of the month. Elkhead Creek Reservoir and Yamcolo Reservoir both continued to rise throughout the month and were reported at capacity and spilling the week of April 20. 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 fish recovery releases.

Administrative/Management Concerns

The second year of the fish recovery release from Elkhead Creek Reservoir was completed successfully and data collected during the release are being compiled and reviewed by participating agencies. A meeting with local landowners to discuss the recovery program and operation of Elkhead Creek Reservoir was held in Craig on April 15. The Colorado River Water Conservation District, Division of Water Resources, and U.S. Fish and Wildlife Service presented information to, and responded to questions from, interested parties.

Public Use Impacts

High mountain reservoirs are beginning to thaw and State Parks in the area are preparing to open for the season.

Basinwide Conditions Assessment

The SWSI value for the month was -0.1. The Natural Resources Conservation Service reports that May 1 snowpack is 65% of normal. Flows at the Animas River at Durango averaged 814 cfs (96% of average). The Dolores River at Dolores was estimated to have averaged 820 cfs (110% of average). The La Plata River at Hesperus averaged 56.9 cfs (70% of average). Precipitation in Durango was 0.88 inches for April which is below the 30-year average of 1.48 inches.

Precipitation to date in Durango, for the water year, is 10.58 inches which is below the average of 11.38 inches. Temperatures were near normal for the month. Durango was 1.3° below its 30-year average high and 0.2° below the 30-year average low.

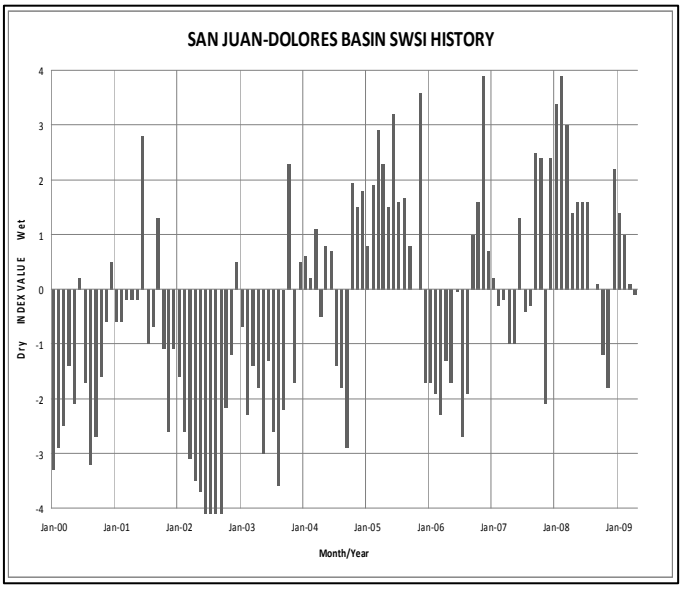
At the end of the month Vallecito Reservoir contained 92,484 acre-feet compared to its normal contents of 63,693 acre-feet (145% of normal). McPhee Reservoir was up to 330,044 acre-feet compared to its normal contents of 297,0540 acre-feet (111% of normal), while Lemon Reservoir was up to 24,039 acre-feet as compared to its normal content of 22,622 acre-feet (106% of normal).

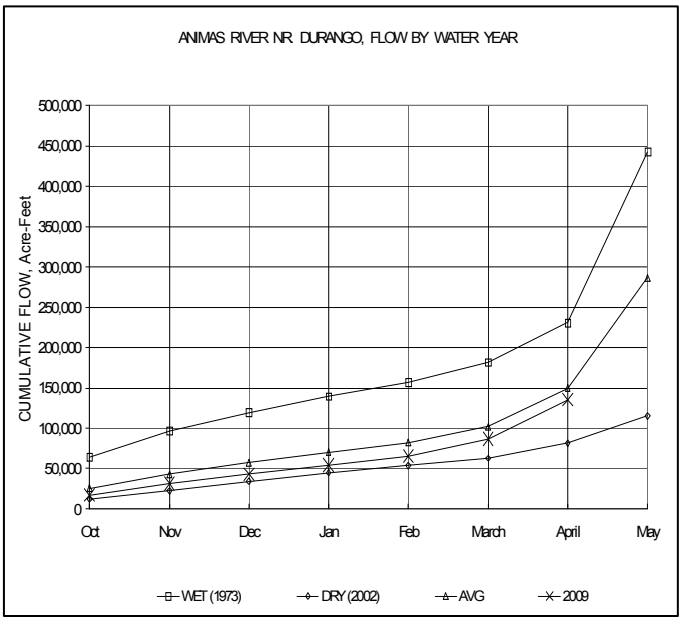
Outlook

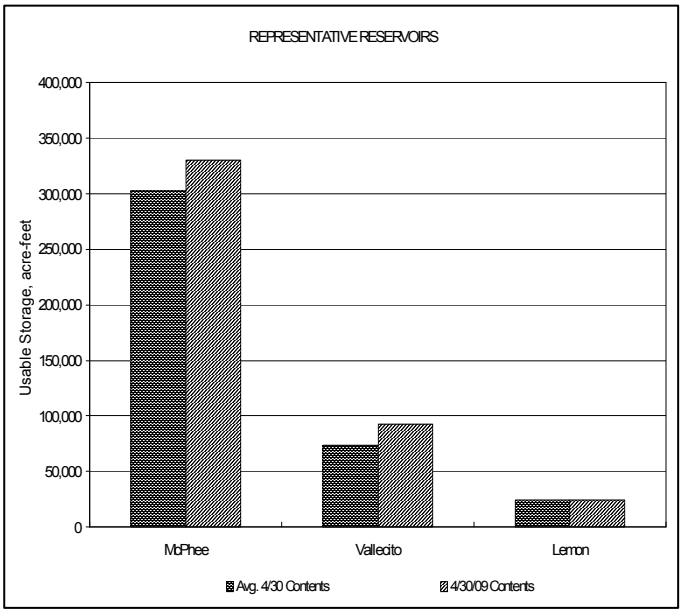
Dry and windy continues into April. It seems there was more dust pilling up than snow. With all the dust, the snow is expected to melt at a faster rate than normal. This will mean higher peaks and shorter duration for the spring runoff.

Administrative/Management Concerns

The USBR started the pumping water into Ridges Basin Reservoir. The reservoir is expected to take up to two years to fill depending on available water supplies and pumping plant capacity. New Mexico placed a call on the LaPlata River starting on April 13th for one half the flow at the upper index gage up to 60 cfs.







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