COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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January 2010

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 of November through April (December 1 through May 1). 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 (January 1) range from a high value of 1.6 in the South Platte Basin to a low value of -2.1 in the Yampa/White Basin. Six of the basins (South Platte, Rio Grande, Gunnison, Colorado, Yampa/White, and San Juan/Dolores) experienced a gain from the previous month's values. One of the basins (Arkansas) experienced a slight loss from the previous month's value.

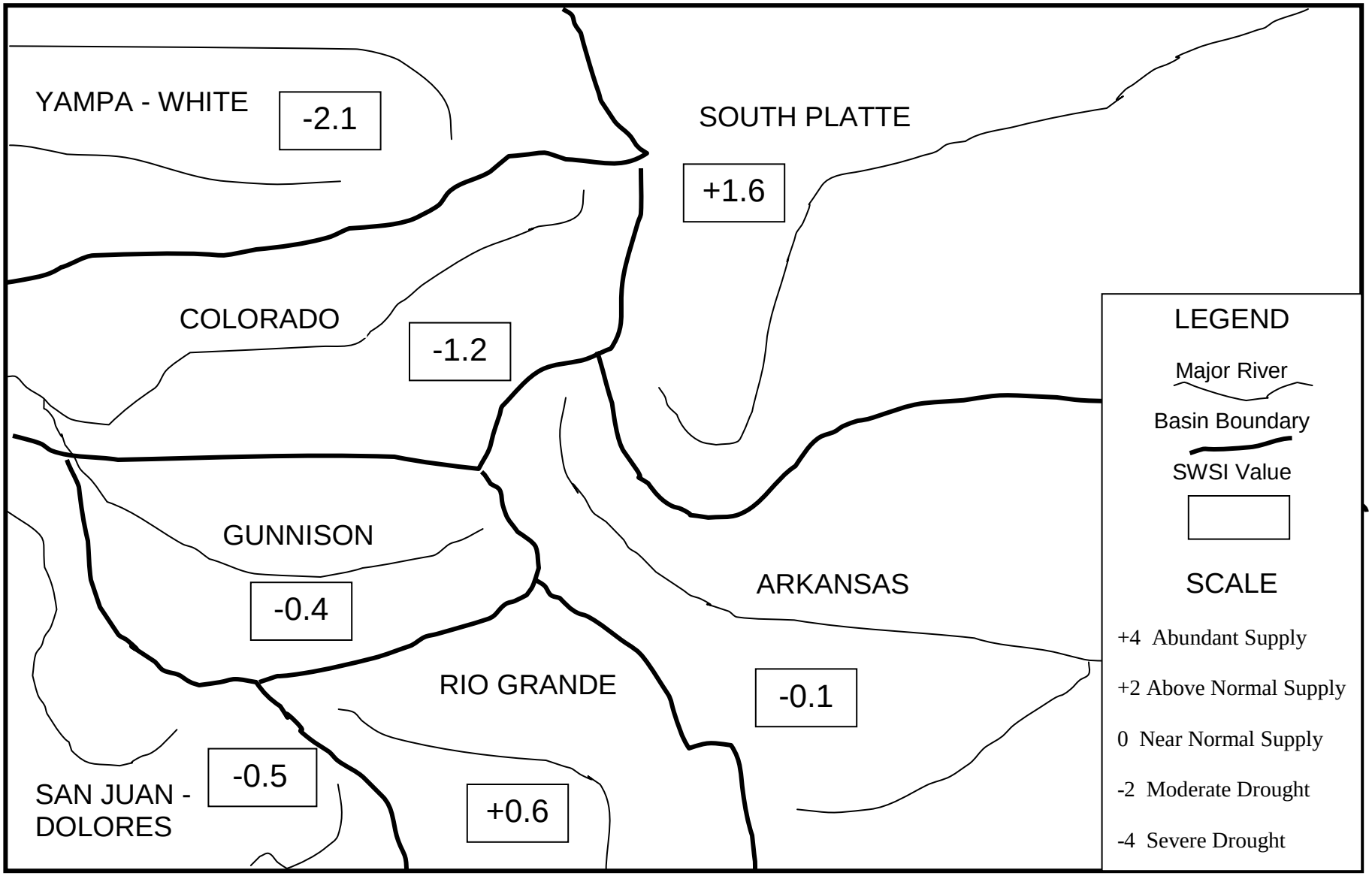
The following SWSI values were computed for each of the seven major basins for January 1, 2010, and reflect the conditions during the month of December.

Basin	January 1, 2010 SWSI Value	Change From Previous Month	Change From Previous Year
South Platte	+1.6	+0.3	+1.4
Arkansas	- 0.1	- 0.1	- 1.8
Rio Grande	+0.6	+2.4	- 2.0
Gunnison	- 0.4	+1.5	- 2.1
Colorado	- 1.2	+0.8	- 2.5
Yampa/White	- 2.1	+0.1	- 2.7
San Juan/Dolores	- 0.5	+2.1	- 2.7

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



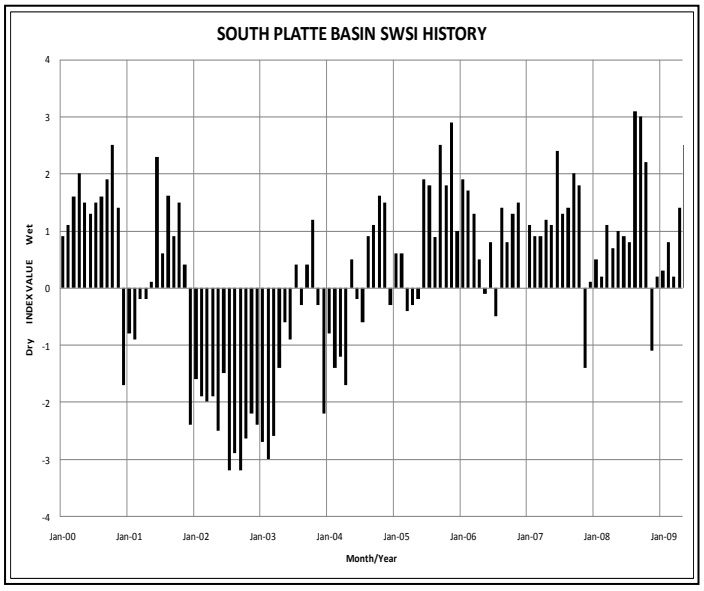
January 1, 2010

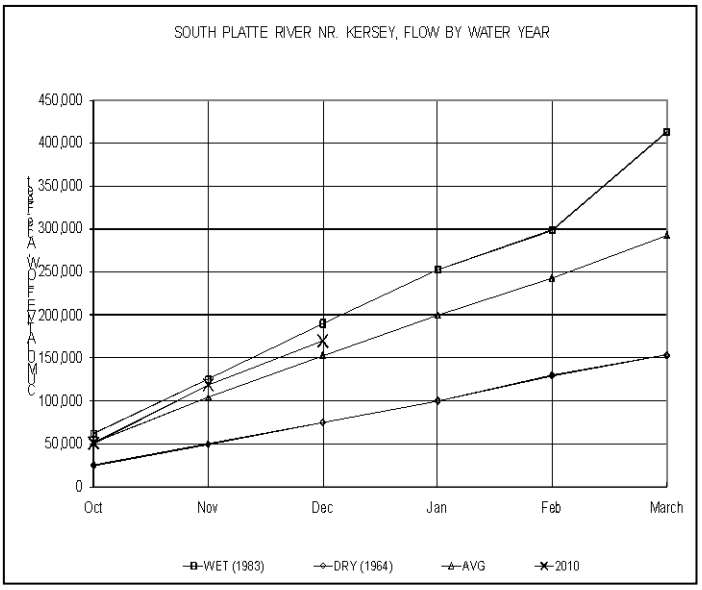
Basinwide Conditions Assessment

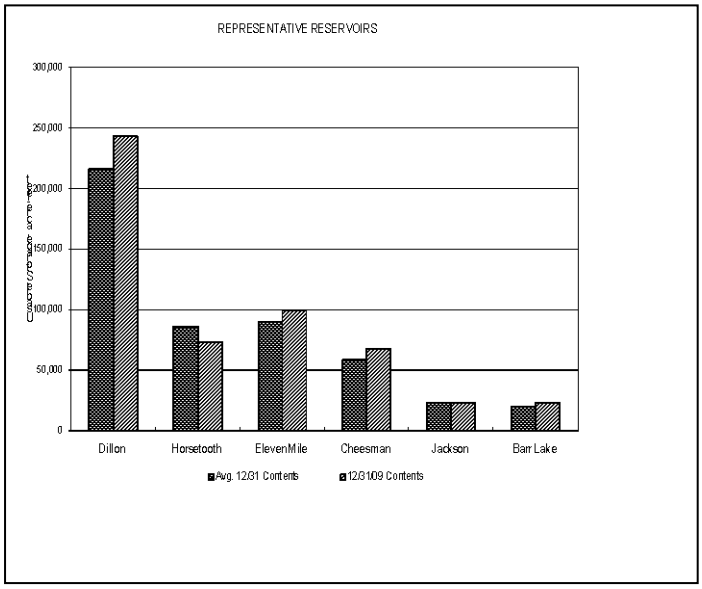
The SWSI value for the month was +1.6. The Natural Resources Conservation Service reports that January 1 snowpack is 92% of normal. Flow at the gaging station South Platte River near Kersey was 828 cfs, as compared to the long-term average of 682 cfs. Flow at the Colorado/Nebraska state line averaged 909 cfs.Cumulative storage for the six reservoirs graphed on this page was 107% of normal as of the end of December. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 67% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 91% of capacity.

Outlook

Flow conditions along the mainstem and tributaries continued above average during December. Flow exceeded demands for the entire month on the mainstem and most tributaries. Because of the cold conditions, there was little storage or recharge of water below Kersey in December. Because of the limited flow available on tributaries and the mainstem upstream and dam safety construction efforts, there was also very limited storage above Kersey. Nevertheless, the overall storage picture remains positive with the likelihood of all reservoirs filling by this spring providing a good start to meet next year's demands.







Basinwide Conditions Assessment

The SWSI value for the month was -0.1. The Natural Resources Conservation Service reports that January 1 snowpack is 90% of normal. Flow at the gaging station Arkansas River near Portland was 533 cfs, as compared to the long-term average of 402 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 109% of normal as of the end of December.

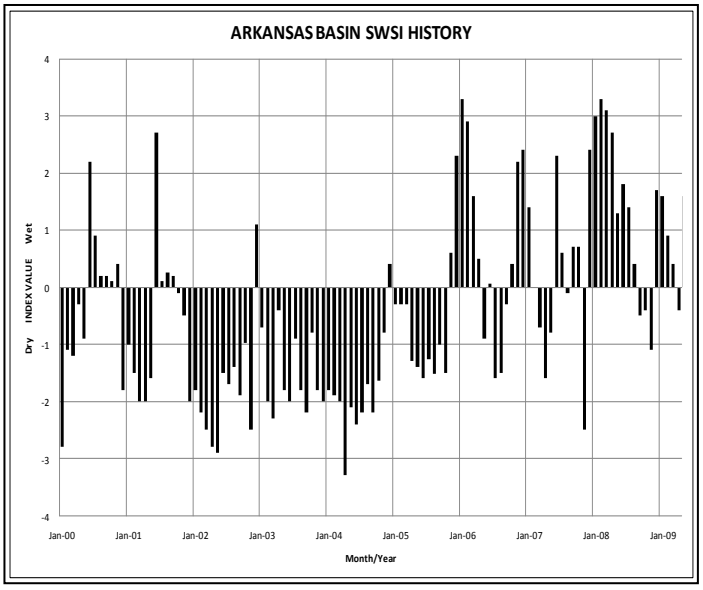
Outlook

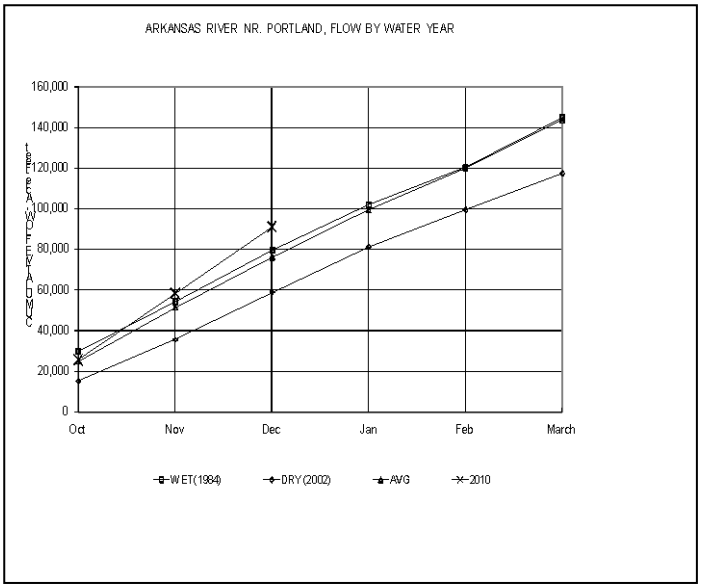
The Pueblo Winter Water system grand total was 61,927 acre-feet at the end of December representing a slight decrease from last year's storage to date, which was 62,766 acre-feet. The previous five-year average for this period is 59,193 acre-feet and the average since 1990 for this period has been 62,887 acre-feet.

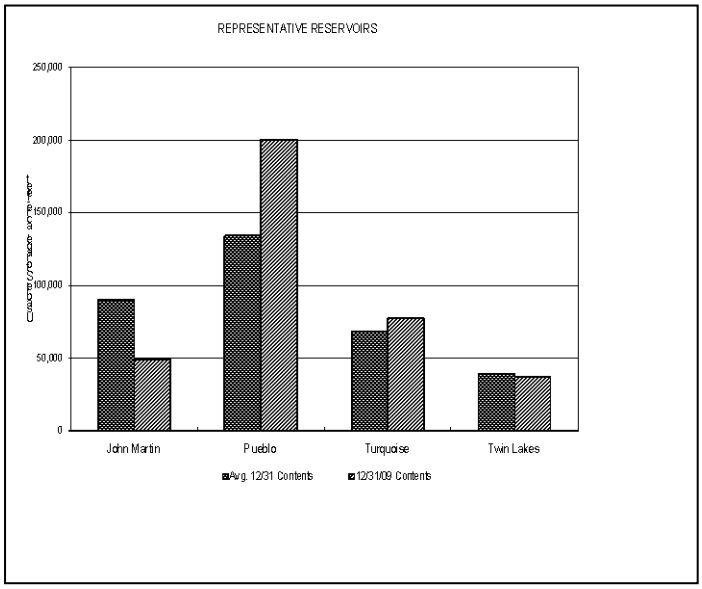
Conservation storage in John Martin Reservoir has been slightly below last year. Storage since November 1st has been 13,958 acre-feet while storage a year ago for the same time period was 14,330 acre-feet.

Administrative/Management Concerns

The Arkansas River Compact Administration meeting was held in Garden City, Kansas on December 7th and 8th.







Basinwide Conditions Assessment

The SWSI value for the month was +0.6. The Natural Resources Conservation Service (NRCS) reports that January 1 snowpack is 94% of normal. Flow at the gaging station Rio Grande near Del Norte averaged 153 cfs (79% of normal) during December. The Conejos River near Mogote had a mean flow of 39 cfs (76% of normal) during the month. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 126% of normal as of the end of December.

Alamosa received 0.10 inches of precipitation during December, 0.23 inches below normal. Alamosa's total precipitation of 7.24 inches during 2009 was 0.03 inches above the annual average. For the year, the average temperature was 1.4 degrees above normal.

Outlook

Stream flow in the basin should be below average for the next few months due to lack of late summer and autumn precipitation. Currently, the NRCS forecasts the 2010 runoff to be generally slightly below normal for key streams in the Upper Rio Grande Basin. At the midpoint of January, 2010, snowpack at index sites in the San Juan and Sangre de Cristo mountains was in the range of 74% to 108% of normal.

Administrative/Management Concerns

Pursuant to the provisions of the Rio Grande Compact, Colorado delivered approximately 290,000 acre-feet to New Mexico and Texas during 2009. A small delivery credit will be available for 2010. Closed Basin Project delivery to the Rio Grande totaled about 13,800 acre-feet.

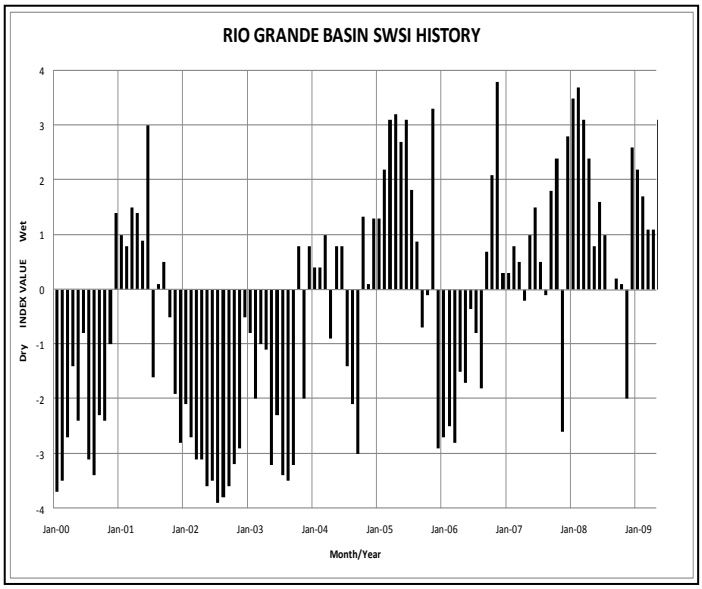
2009 saw far above average runoff during March, April and May in the upper Rio Grande basin as the snowpack melted out early. June was spotty as some drainages had snow left to melt, but most were on the sharp decline. Streamflow in the basin was generally 50% to 80% of normal from July through October. There was no normal monsoonal activity and the large rainstorm event that often hits the San Luis Valley in September or October never came. In the end, the Rio Grande near Del Norte had annual flows of approximately 95% of normal. The Conejos near Mogote annual volume was 105% of normal.

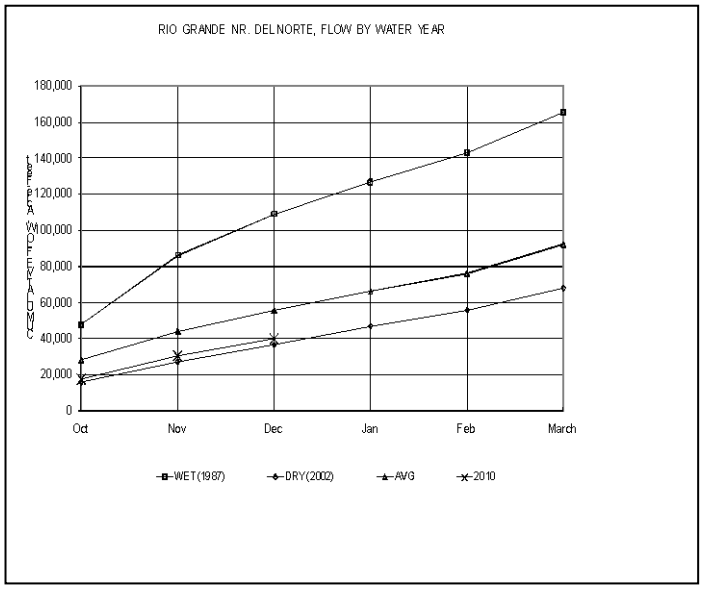
The State Engineer and his staff conducted monthly meetings of the Well Rules Advisory Committee during 2009. This appointed cross-section of water users and interests hope to formulate consensus rules and regulations for non-exempt well use in Division 3. These rules will likely be filed with the Water Court during the first half of 2010.

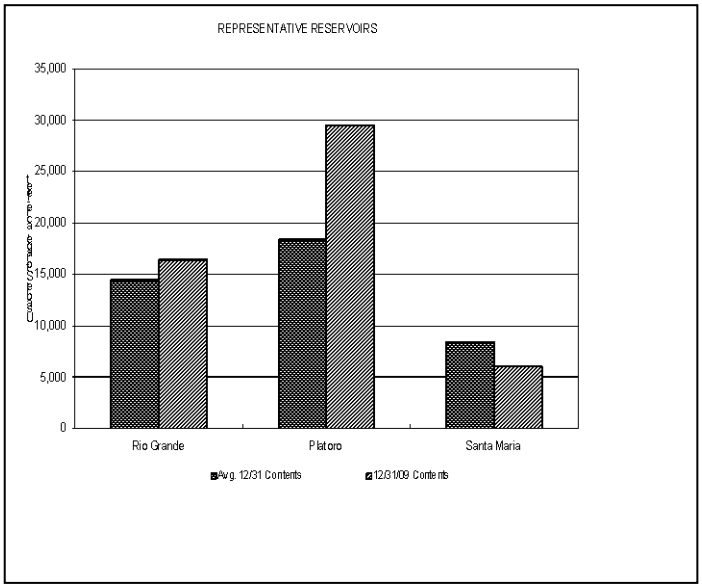
Work at Smith Reservoir continued into January as cold weather hampered efforts to install a new outlet structure and dam lining material. The plan is to complete the project as soon as possible and begin storing winter streamflow from Sangre De Cristo Creek in the reservoir.

Public Use Impacts

In summary, 2009 started out with plentiful snowpack from December, 2008 storms that were enhanced by January and February snowfall. But marginal snowfall during March and April set most of the upper Rio Grande Basin up for a near-normal runoff. Unusually warm weather conditions in March, April and May jump-started the early runoff. Crop yields were very good, but commodity prices were down from the previous year.







Basinwide Conditions Assessment

The SWSI value for the month was -0.4. The Natural Resources Conservation Service reports that January 1 snowpack is 94% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 43.6 cfs, as compared to the long-term average of 53.6 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 103% of normal as of the end of December.

Outlook

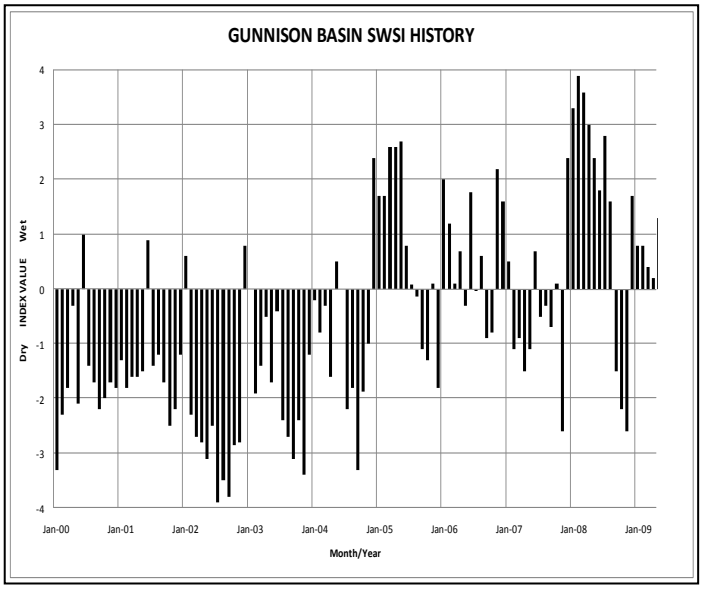
December began with poor snowpack conditions throughout the Gunnison River and San Miguel River basins with NRCS SNOTEL sites reporting snow water equivalent measurements only averaging 60% of normal on December 1st. Fortunately, storm events produced enough snow to increase the snowpack levels to 90% of average by the end of December.

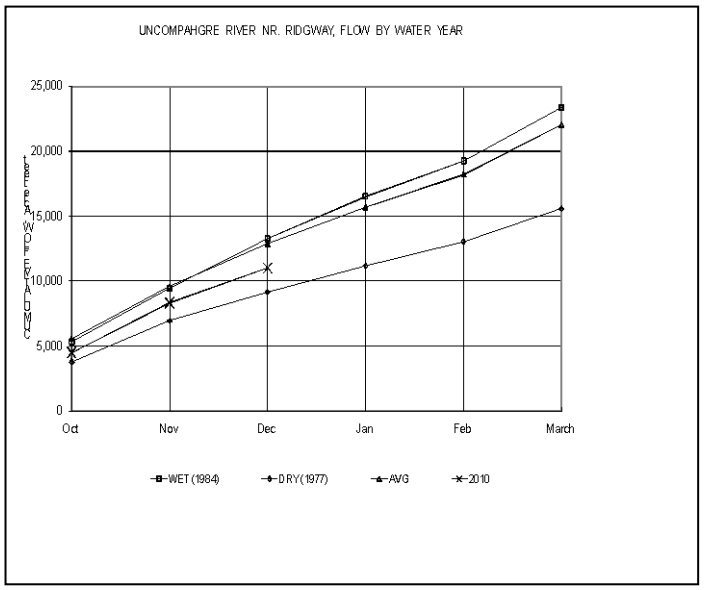
Administrative/Management Concerns

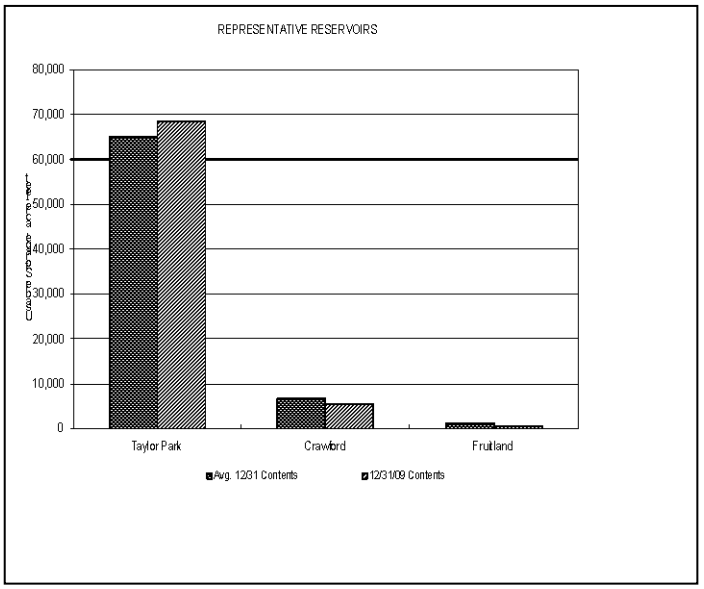
Releases out of the Aspinall Unit are steady at about 825 cfs, which is about 200 cfs above normal for this time of year. The water surface elevation of the State's largest reservoir, Blue Mesa Reservoir, was lowered to the target level of 7,490 feet by the end of the month. This is necessary to prevent upstream flooding due to river channel clogging by winter ice; especially important since this was one of the coldest Decembers on record. The release flow rates will likely be adjusted again near the end of January, after the preliminary runoff forecast comes in, and in response to peak power generation demands.

Public Use Impacts

Everyone is anxiously awaiting this winter's snowstorms that provide our water supply for the next irrigation season and a boost to the economy through skiing and tourism. It is really too early to make any snowpack assessments, but the good news is that early December storms have finally helped to bring snow to the high country and soil moisture to the valleys. We hope the trend continues.







Basinwide Conditions Assessment

The SWSI value for the month was -1.2. The Natural Resources Conservation Service reports that January 1 snowpack is 80% of normal. Flow at the gaging station Colorado River near Dotsero was 798 cfs, as compared to the long-term average of 1048 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 105% of normal as of the end of December.

Outlook

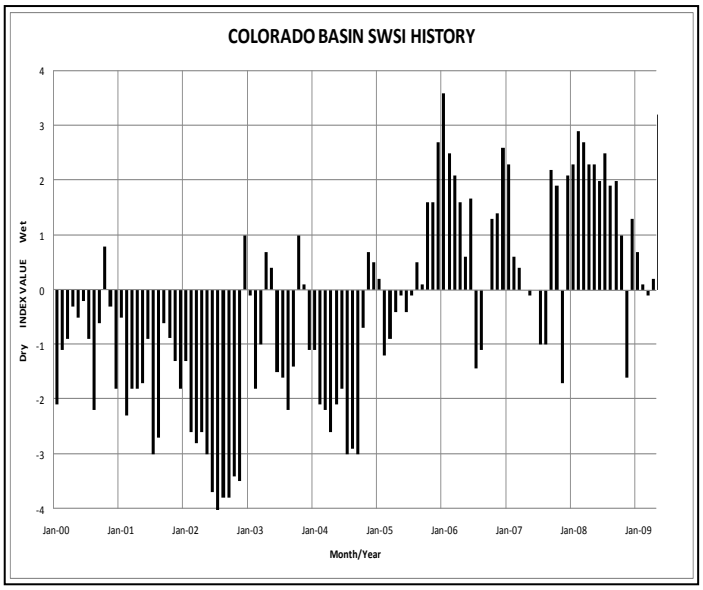
Colorado River flows, which experienced ice-affected stage variations throughout December, will likely remain below average in January. Green Mountain Reservoir releases, which have remained low with no Shoshone Power plant call, will increase slightly in mid-January as Shoshone brings one turbine back on line. Ruedi Reservoir releases will remain low through January. Crystal and Roaring Fork River flows should remain below average through January as well. Snowpack in the Upper Colorado Basin was significantly below average at 79% snow water equivalent, the lowest since January 2002 when the snow water equivalent was 72% of average.

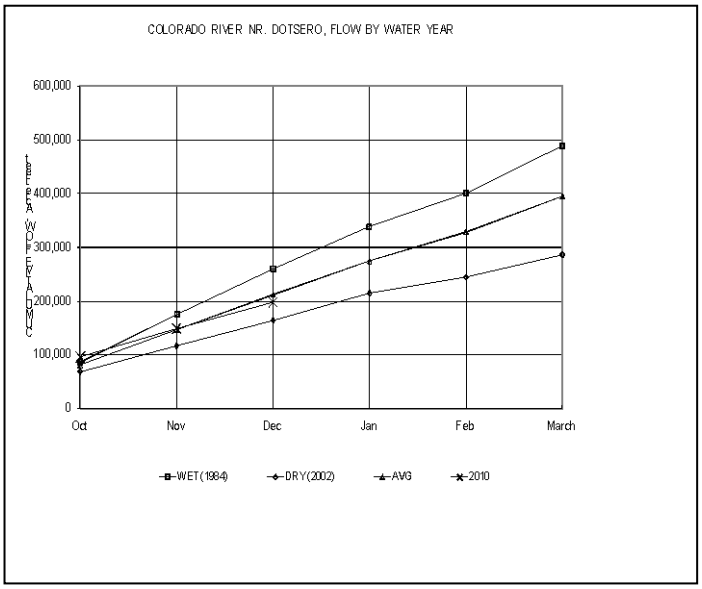
Administrative/Management Concerns

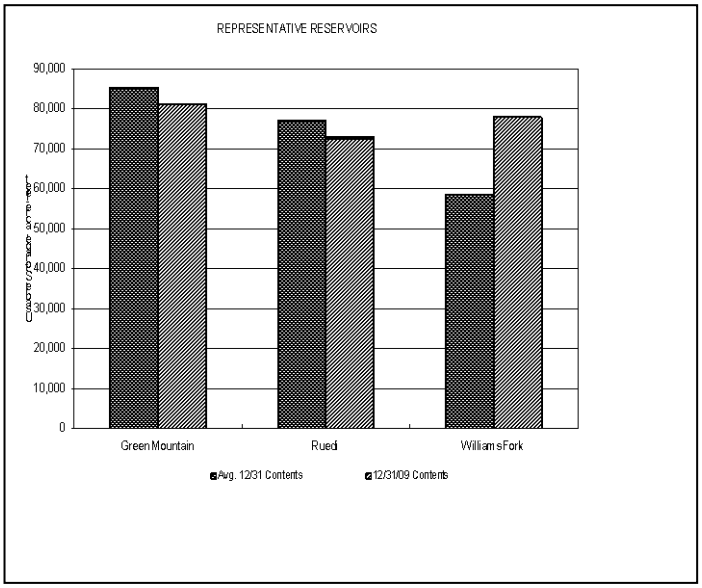
Green Mountain Reservoir releases will average around 150 cfs, and Ruedi Reservoir releases will remain well below average at 70 cfs throughout the month of January.

Public Use Impacts

The U.S. Fish & Wildlife Service, U.S. Forest Service, Ruedi Water and Power Authority, and Basalt Town Government met to discuss the water release by the U.S. Fish and Wildlife Service from Ruedi Reservoir last fall to assist endangered fish in the 15-Mile Reach of the Colorado River near Grand Junction. The resulting higher flows (300-500 cfs) negatively affected trout fishing on the lower Fryingpan River. With roughly 10,000 acre feet of Ruedi Reservoir water still available for sale, there is growing concern over the impact of contract water release on the fishing along the lower Fryingpan River. A ditch or pipeline along the 12 mile stretch from Ruedi Reservoir to the Fryingpan's confluence with the Roaring Fork River was suggested as a way to deliver contract water and keeping the lower Fryingpan flows below 300 cfs. A ditch or pipeline was part of the original design of the Fryingpan-Arkansas diversion system, however was never constructed.







Basinwide Conditions Assessment

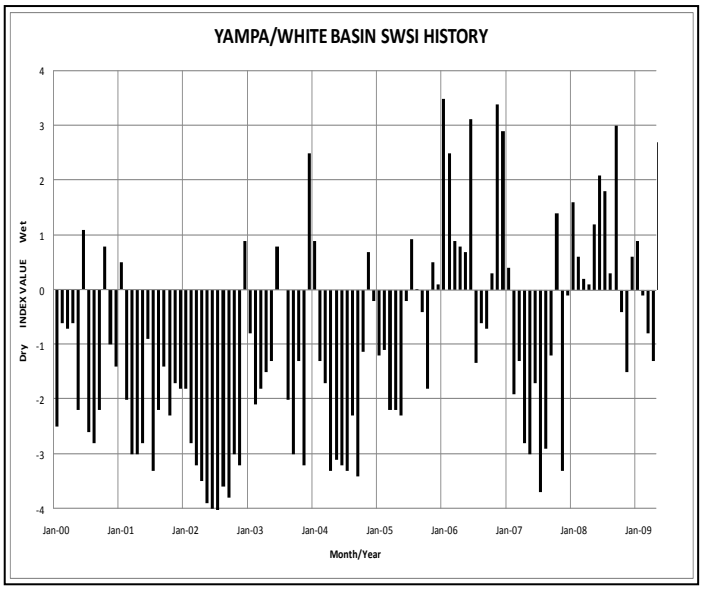
The SWSI value for the month was -2.1. Flow at the gaging station Yampa River at Steamboat was 117 cfs, as compared to the long-term average of 101 cfs.

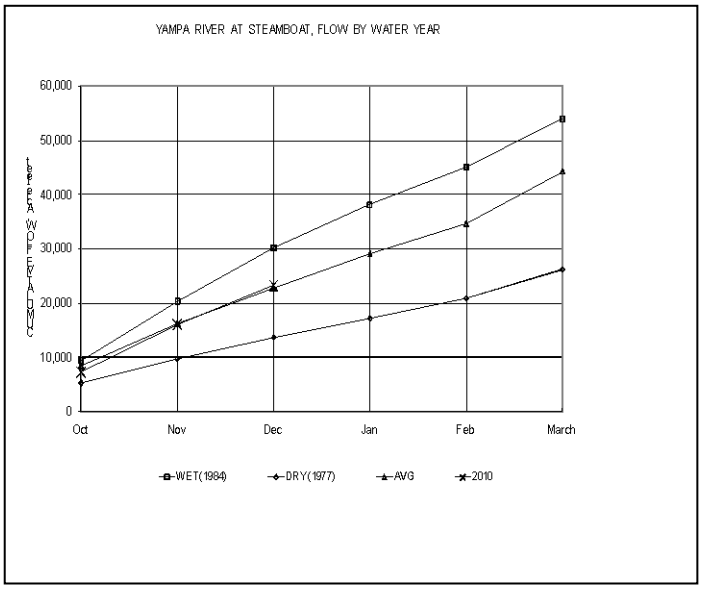
The dry trend continued in December and precipitation remained below average in the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by the NRCS, was reported at approximately 91% of average for the Yampa/White River basin and 86% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was reported at approximately 90% of average for the month of December and 89% of average for the water year to-date.

The snow water equivalent (SWE) as of December 31, 2009 was 81% of average for the North Platte River basin, 73% of average for the Yampa River basin, and 83% of average for the White River basin.

NRCS predicts primarily below average spring and summer streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the April through July period are 74% of average for the North Platte River at Northgate, 80% of average for the Yampa River near Maybell, 86% of average for the Little Snake River near Lily, and 83% of average for the White River near Meeker.

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





Outlook

Fish Creek Reservoir storage level continued to decline in December and was reported at approximately 60% of capacity at the end of the month. Elkhead Creek Reservoir level rose slightly during the month and the reservoir was at approximately 75% of its enlarged capacity. Yamcolo Reservoir storage level also increased and the reservoir was at approximately 73% of 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 recreational purposes, as well as fish recovery releases.

Administrative/Management Concerns

The third 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.

Public Use Impacts

Many area reservoirs are frozen with good ice-fishing reported. The snowpack at the ski area has increased over the past several weeks, and powder conditions are reported.

Basinwide Conditions Assessment

The SWSI value for the month was -0.5. The Natural Resources Conservation Service reports that January 1 snowpack is 95% of normal. Flows at the Animas River at Durango averaged 145 cfs (65% of average). The flow at the Dolores River at Dolores was estimated to average 34 cfs (58% of average). The La Plata River at Hesperus averaged 4.7 cfs (57% of average). Precipitation in Durango was 2.87 inches for December, 172% of the 30-year average of 1.67 inches. Precipitation to date in Durango, for the water year, is 5.03 inches, compared to the average of 5.08 inches. The flow on the Animas River for December (8,900 acre-feet) was the third lowest total for the month out of 99 years of record. The average high and low temperatures for the month of December in Durango were 34° and 2.5°. In comparison, the 30-year average high and low for the month is 42° and 15°. The average temperatures for the month were well below their respective 30-year averages. The average high temperature was the 7th coldest and the average low was the coldest on record out of 107 years of data.

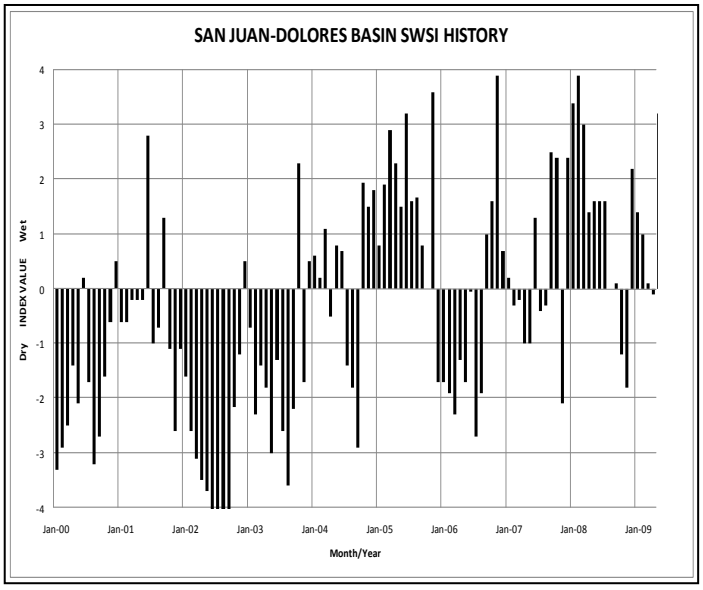
At the end of the month Vallecito Reservoir contained 46,010 acre-feet compared to its average content of 53,004 acre-feet (87% of average). McPhee Reservoir was up to 253,355 acre-feet compared to its average content of 257,216 acre-feet (98% of average), while Lemon Reservoir was up to 9,630 acre-feet as compared to its average content of 19,425 acre-feet (50% of average).

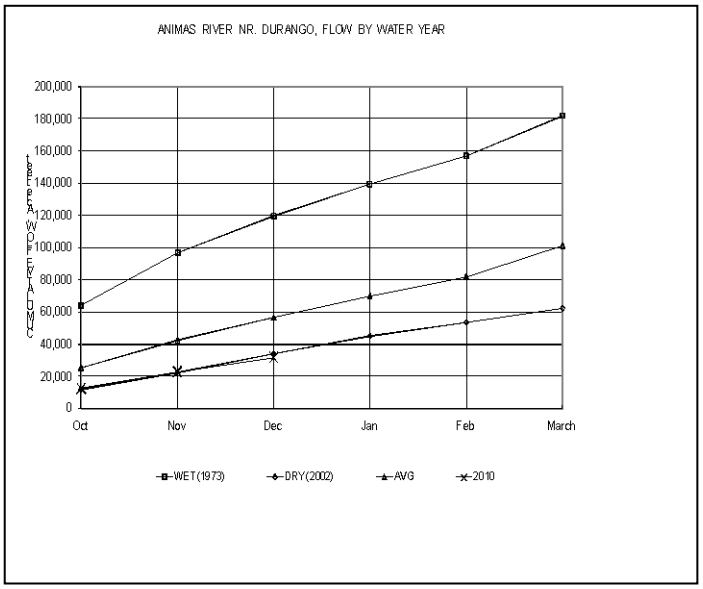
Outlook

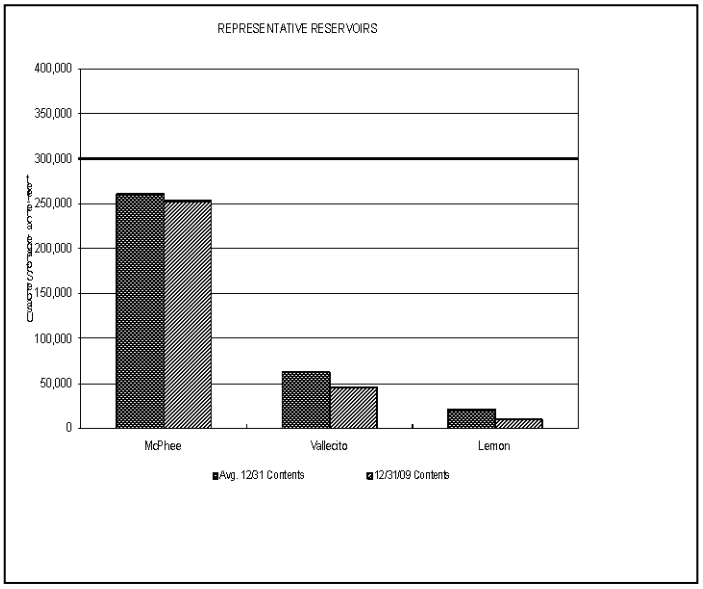
December started dry but by the second week above average precipitation brought much needed moisture to the basin. With stream flows below average the prospect of filling the reservoirs will not be very likely unless we can maintain an above average snowpack for the winter.

Administrative/Management Concerns

The flows in most, if not all the rivers within the basin remain very low. Most of the La Plata River just below the Hesperus gage to the confluence of Long Hollow remained dry. No pumping into Ridges Basin Reservoir occurred in December.







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