
COLORADO

WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
 ROOM 818, 1313 SHERMAN ST., DENVER, CO 80203
 303-866-3581; www.water.state.co.us

JANUARY 2005

None of the SWSI values are drastically high or low, indicating conditions around the state at the beginning of the year were close to normal. January 1 snowpack was below normal in the northern mountains and above normal in the southern mountains, although neither fluctuation was extreme. Some of the index stream gaging stations shown on the following pages were above normal, some were below normal. Cumulative storage in the reservoirs shown in this report was 89% of average on January 1.

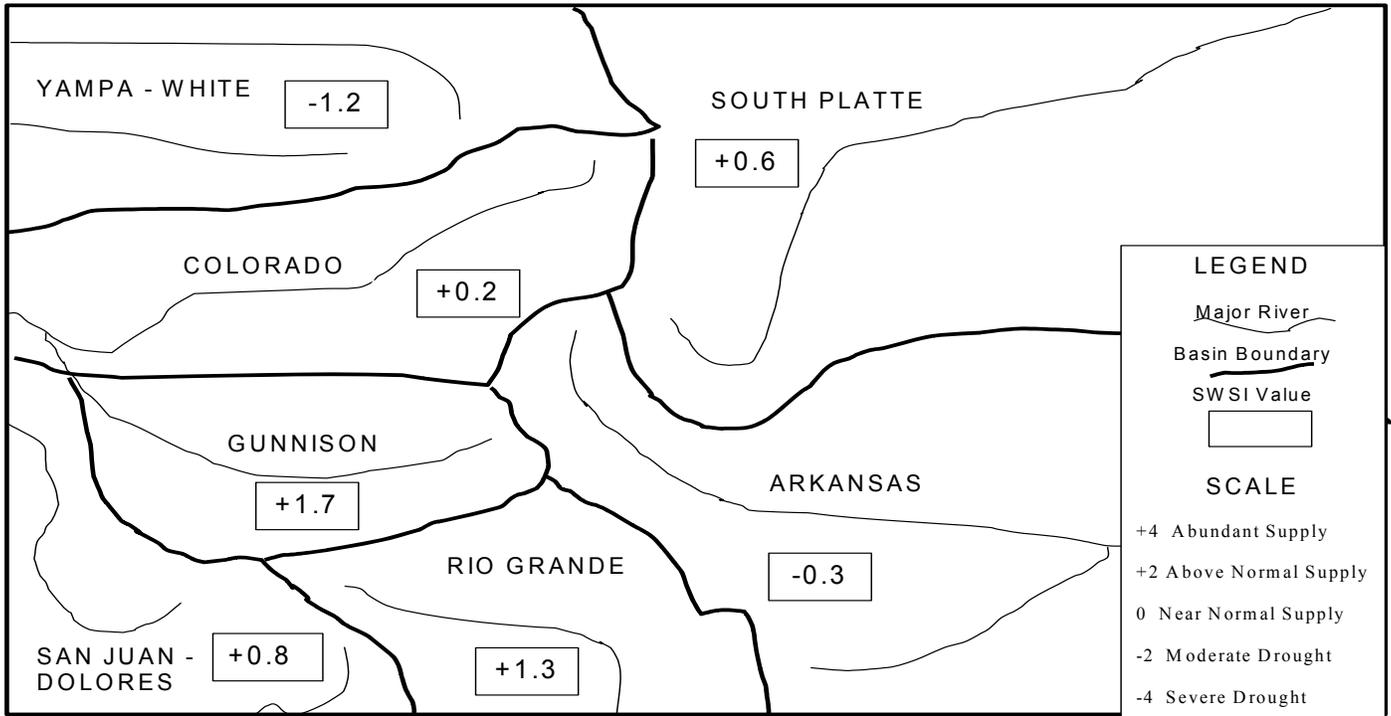
Post-January 1 storms provided a large boost to the snowpack across the state. While this brightens the possibilities for a good runoff next spring and summer, continued snowpack accumulation into April and spring temperature and wind conditions will have a significant impact on how beneficial the runoff will be.

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 following SWSI values were computed for each of the seven major basins for January 1, 2005, and reflect the conditions during the month of December.

<u>Basin</u>	<u>January 1, 2005 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	+0.6	+0.9	+1.4
Arkansas	-0.3	-0.7	+1.5
Rio Grande	+1.3	0.0	+0.9
Gunnison	+1.7	-0.7	+1.9
Colorado	+0.2	-0.3	+1.3
Yampa/White	-1.2	-1.0	-2.1
San Juan/Dolores	+0.8	-1.0	+0.2

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



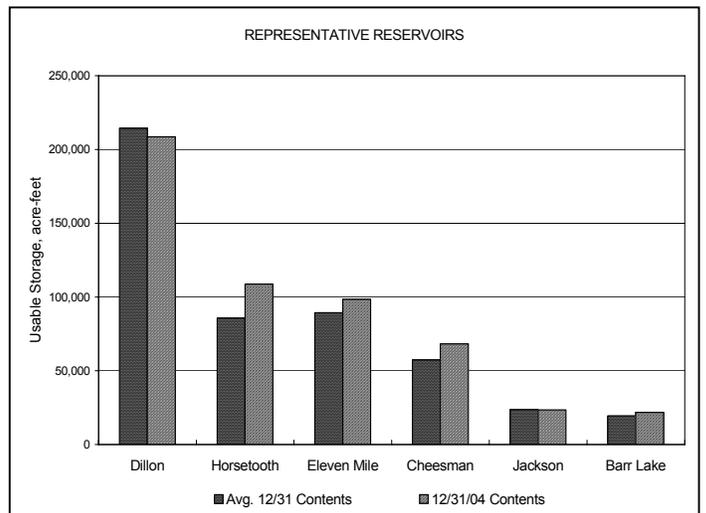
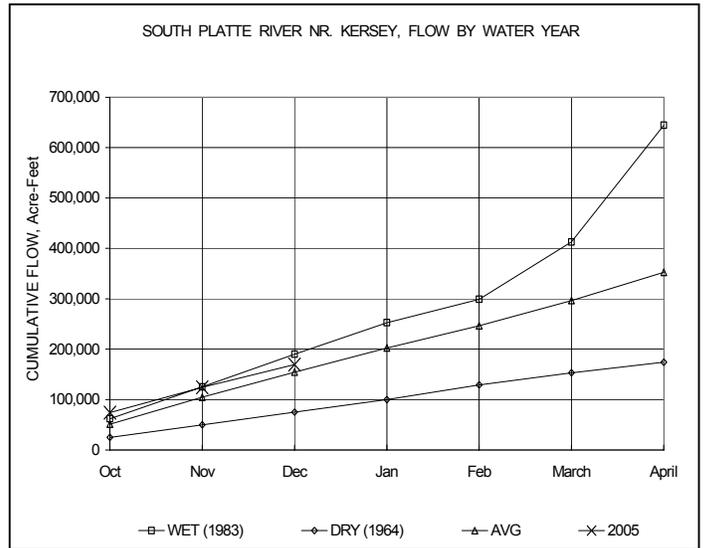
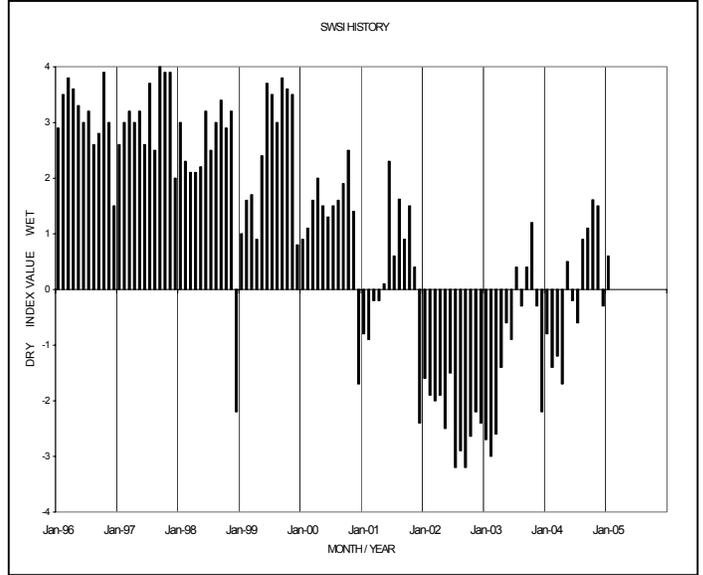
JANUARY 1, 2005

Basinwide Conditions Assessment

The SWSI value of +0.6 indicates that for December the basin water supplies were near normal. Reservoir storage, the major component in this basin in computing the SWSI value, was 108% of normal as of the end of December. Cumulative storage in the major plains reservoirs: Julesberg, North Sterling, and Prewitt, is at 61% of capacity. Cumulative storage in the major upper-basin reservoirs: Cheesman, Eleven Mile, Spinney, and Antero is at 74% of capacity. 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 738 cfs, as compared to the long-term average of 684 cfs. Flow at the Colorado/Nebraska state line averaged 84 cfs.

Outlook

Reservoir storage continued in December for reservoirs along the mainstem and tributaries. Calls for storage continued through out the basin except below the Prewitt inlet on the lower end of the Platte. Calls for storage also existed on tributaries in December, the normal situation for this time of year. Storage levels remain at a much better place than the last few years and administrators are fairly confident that the major in-basin reservoirs that generally fill will fill this spring.



Basinwide Conditions Assessment

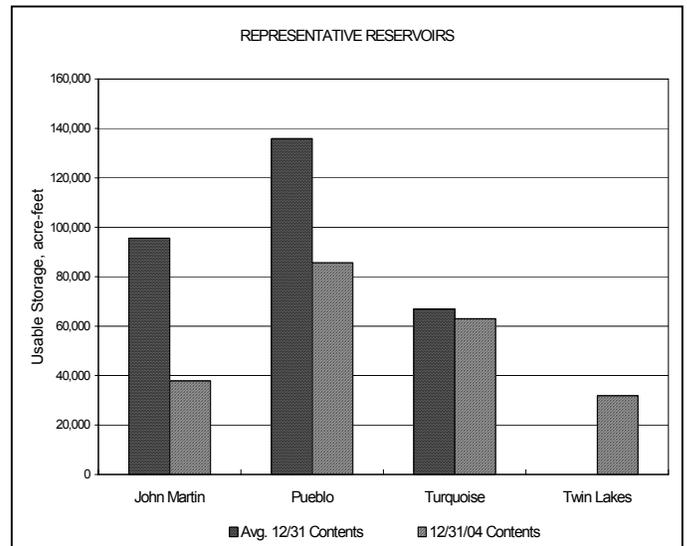
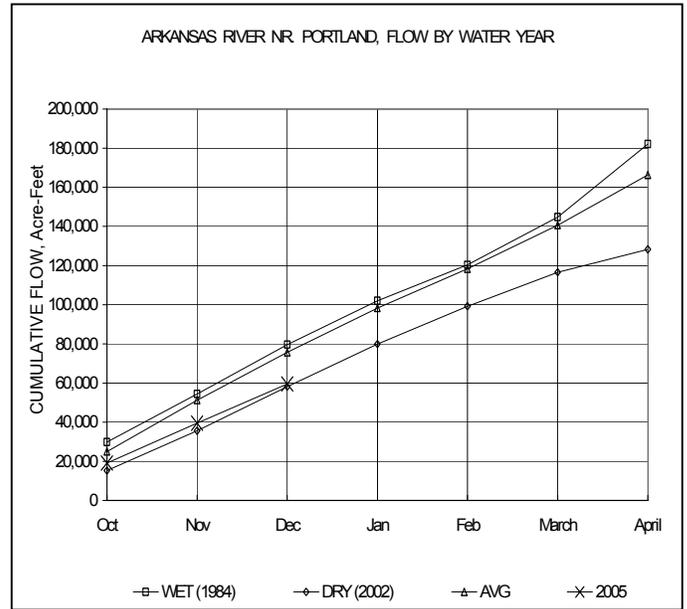
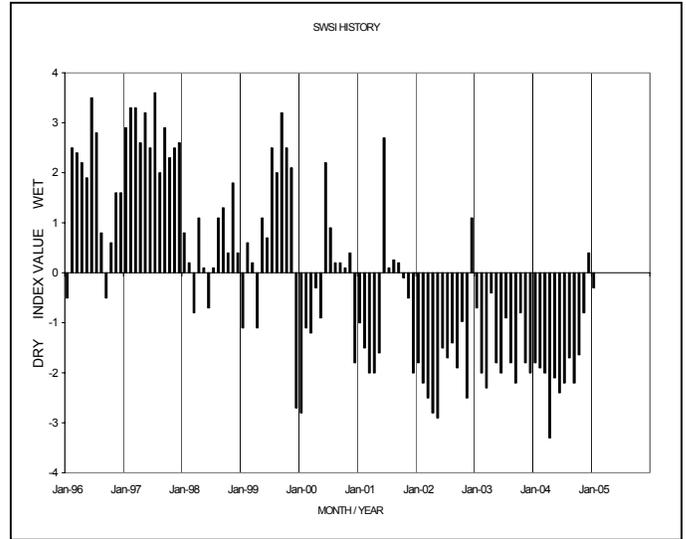
The SWSI value of -0.3 indicates that for December the basin water supplies were near normal. The Natural Resources Conservation Service reports that January 1 snowpack was 110% of normal. Flow at the gaging station Arkansas River near Portland was 326 cfs, as compared to the long-term average of 403 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 65% of normal as of the end of December.

Administrative/Management Concerns

The Winter Water system grand total was 45,903 acre-feet at the end of December, which represents a substantial improvement from last year's storage at this time of 32,640 acre-feet. The previous five-year average for this period is 53,488 acre-feet.

Conservation storage in John Martin Reservoir has also improved from last year. Storage since November 1st has been 8,801 acre-feet, compared to storage a year ago for the same period of 2,314 acre-feet. Inflow contributions from the Purgatoire River have been particularly strong in helping build the improved storage amount. Conservation storage is shared between Kansas and Colorado with 60% attributed to Colorado ditches below John Martin Reservoir and 40% designated for use by Kansas.

The U.S. Army Corps of Engineers is working to complete channel improvements between Pueblo Reservoir and the Fountain Creek confluence during the winter storage period with minimal impact to the Pueblo Winter Water Storage Program.



Basinwide Conditions Assessment

The SWSI value of +1.3 indicates that for December the basin water supplies were slightly above normal. The Natural Resources Conservation Service reports that January 1 snowpack is 115% of normal. Flow at the gaging station Rio Grande near Del Norte was 191 cfs, (92% of normal). The Conejos River near Mogote had a mean flow of 44 cfs (84% of normal). Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 66% of normal as of the end of December.

Alamosa received 0.26 inches of precipitation during December, including a very rare rainstorm on December 29th. That storm dropped a blanket of snow on the San Juan Mountains, but did not turn to snow in the Valley where temperatures stayed above freezing. Alamosa's annual precipitation of 6.03 inches during calendar year 2004 was 1.2 inches below the annual average. Precipitation in other areas of the basin was also poor. For example, precipitation near Crestone was over four inches below normal. For the seventh consecutive year, the average annual temperature in the San Luis Valley was above normal.

Outlook

2004 saw an unusually high runoff in May. But, stream flow levels dropped quickly during June and bottomed out in August. Welcome rainfall in the mountains and the valleys during September and October increased stream flow to near-normal levels. Stream flow in the basin should be near average for the next few months.

Enthusiasm about the great start to the 2005 snowpack waned during late December when the basin wide content dropped below average. But heavy snowfall in the mountains during the last few days of December and early January dramatically increased snowpack to over 150% of average.

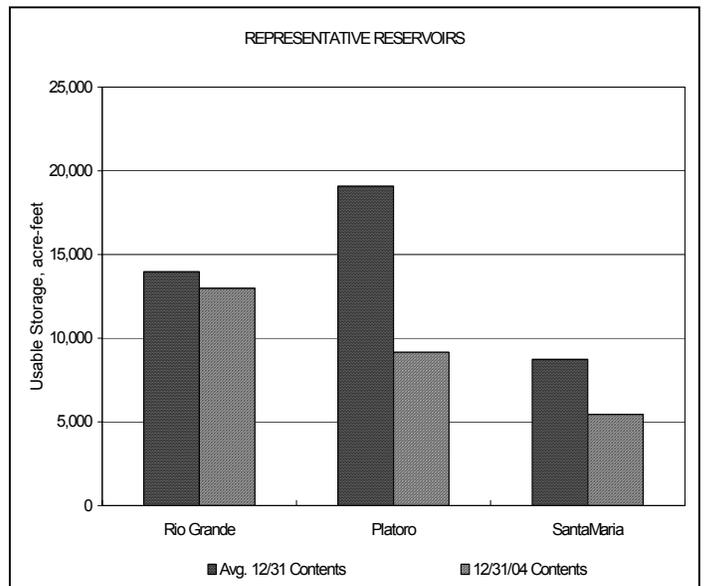
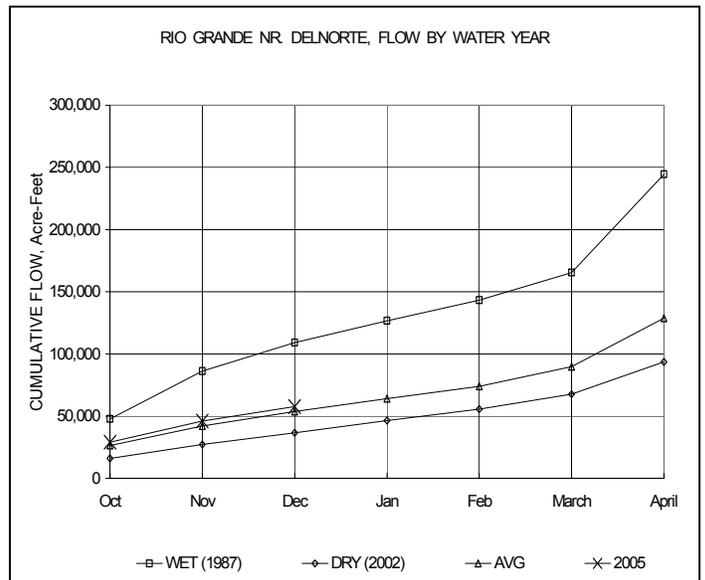
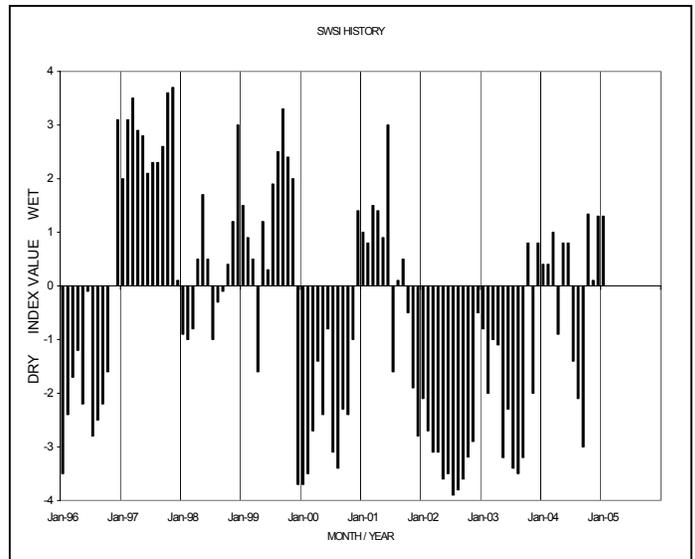
The Natural Resources Conservation Service is forecasting 2005 runoff levels to be 85 to 120 percent of normal for key streams in the San Luis Valley, due in part to this recent snowfall.

Administrative/Management Concerns

The Rio Grande and its tributaries generated about 516,000 acre-feet through the gage near Del Norte during calendar year 2004. The long-term annual average is 655,000 acre-feet.

The Conejos River and its tributaries also experienced good runoff in May 2004. Indexed flow on the Conejos River near Mogote totaled 197,000 in calendar year 2004, compared to an annual average of 241,000 acre-feet.

Closed Basin Project delivery to the Rio Grande totaled about 10,900 acre-feet in calendar year 2004. All Project canal deliveries met water quality standards.



Basinwide Conditions Assessment

The SWSI value of +1.7 indicates that for December the basin water supplies were slightly above normal. The Natural Resources Conservation Service reports that January 1 snowpack was 116% of normal. Flow at the gaging station Uncompahgre River near Ridgway was 75 cfs, as compared to the long-term average of 53 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 97% of normal as of the end of December.

Outlook

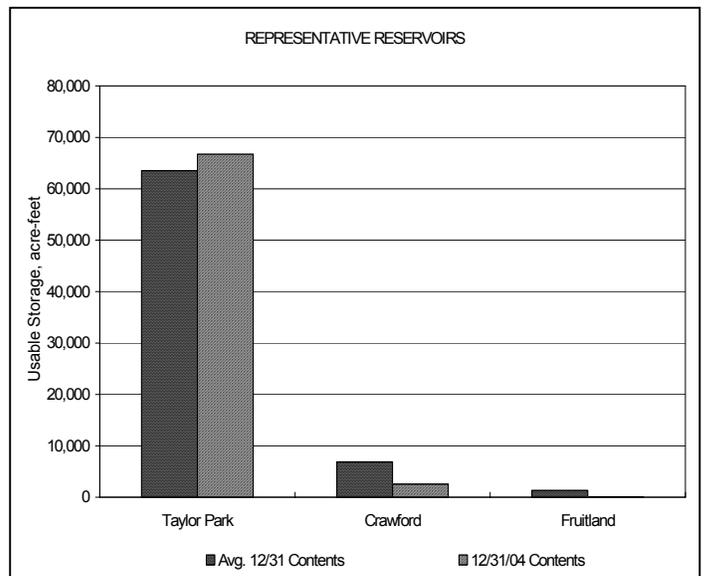
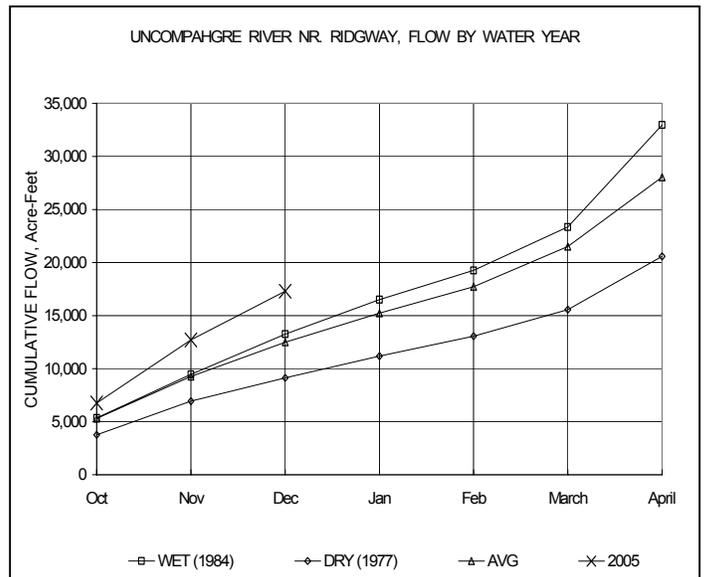
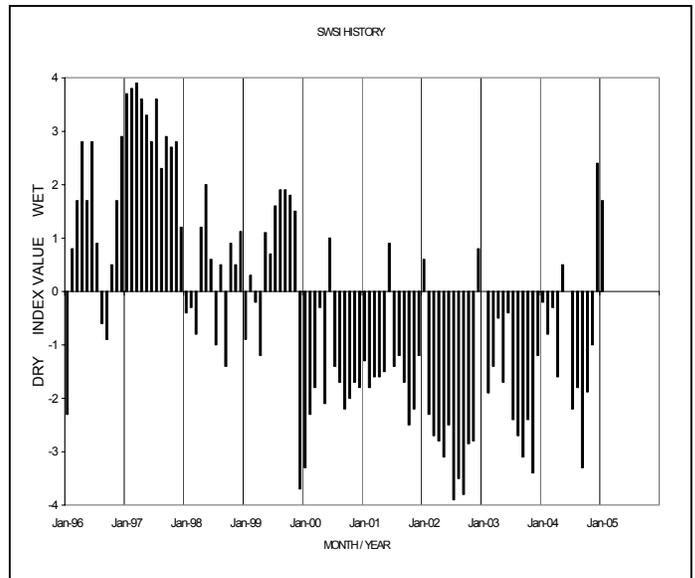
The soil moisture conditions are excellent in the low to mid-level elevations due to the late fall and December storms. A large storm in late December dumped a lot of moisture in the basin, in the form of rain in some areas. An inch of rain fell in Norwood, which is at the elevation of 7000 feet. This was highly unusual for December and melted most of the snow that was on the ground. The locals are hoping for some new snow to cover the ground and preserve the soil moisture.

Administrative/Management Concerns

The Gunnison River basin continues to be concerned about the decreasing levels in Lake Powell and Lake Mead caused from the multi-year drought. Lake Powell storage is about 38 percent of capacity, the lowest level since 1970. The Colorado River Compact of 1922 divided the Colorado River into upper and lower basins and apportioned water between the two basins. The Compact required that the upper basins (of which Colorado is one) deliver an average of 7.5 million acre-feet over a ten-year period. Because of the drought, the deliveries have been well below that amount since the year 2000. It is still unsure how it could be administered, but the legal and political climates are heating up. The Secretary of the Interior has the final say in this matter.

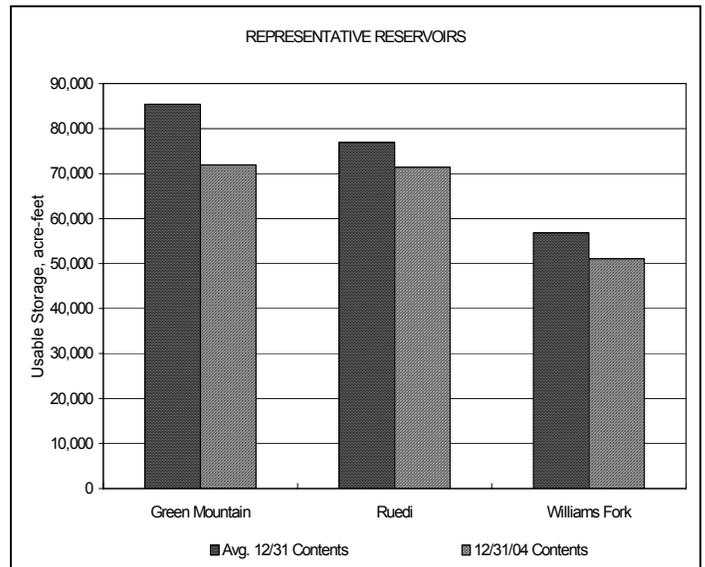
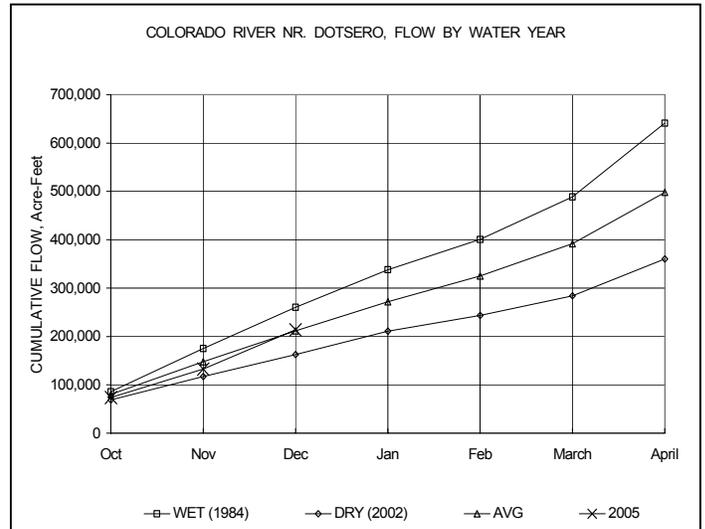
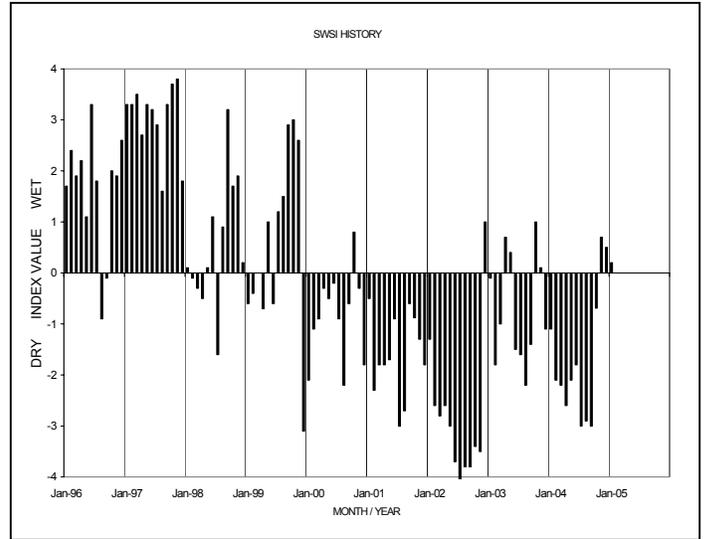
Public Use Impacts

The farmers are excited to see the good soil moisture conditions, and it will help their planting this spring. Other water users are also excited to see an above-average snow pack, realizing it's still too early to forecast the spring runoff. Of course, those that enjoy recreating on the snow are having a good winter season.



Basinwide Conditions Assessment

The SWSI value of +0.2 indicates that for December the basin water supplies were near normal. The Natural Resources Conservation Service reports that January 1 snowpack is 96% of normal. Flow at the gaging station Colorado River near Dotsero was 1,324 cfs, as compared to the long-term average of 1,040 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 89% of normal as of the end of December.



Basinwide Conditions Assessment

The SWSI value of -1.2 indicates that for December the basin water supplies were slightly below normal. The Natural Resources Conservation Service reports that January 1 snowpack is 92% of normal. Flow at the gaging station Yampa River at Steamboat was estimated at 150 cfs, as compared to the long-term average of 105 cfs.

December brought well below average precipitation to the basins. While November precipitation was about 80% of average, December's dropped to 69% of average. Precipitation was down, and temperatures were above average, resulting in declining snowpacks. By the end of the month the basin-wide snowpack for the White, Yampa, Little Snake and North Platte River Basins were 92%, 87%, 100%, and 92%, respectively.

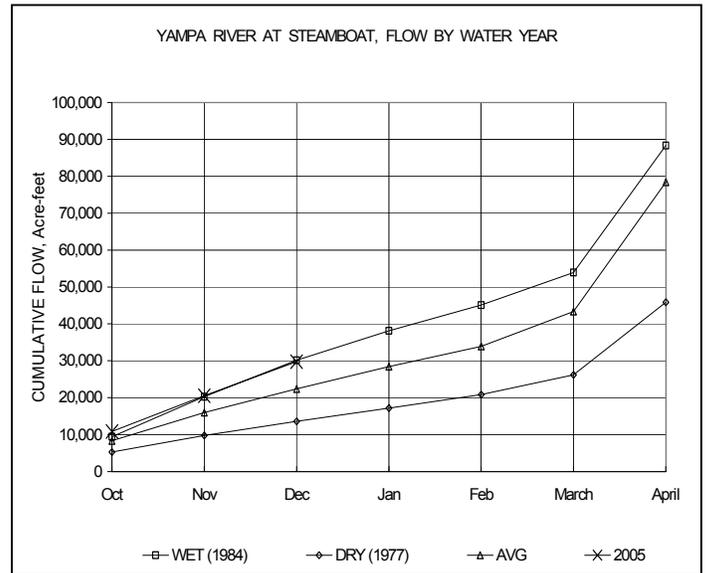
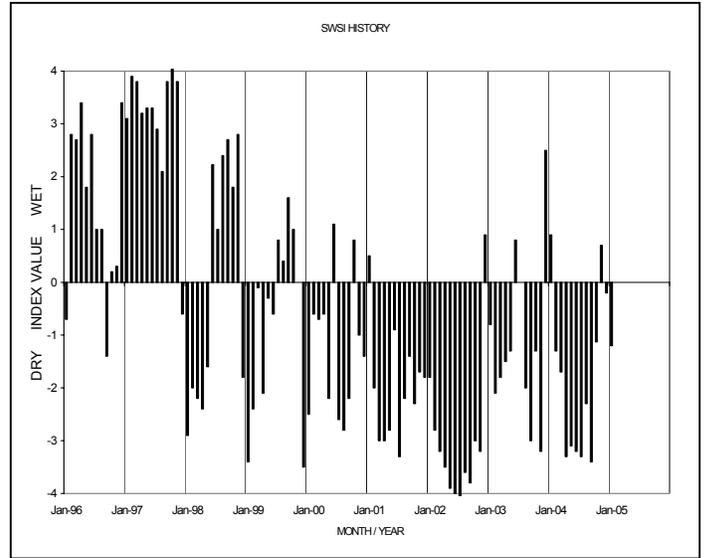
The first runoff forecast for the year released by the Natural Resources Conservation Service, predict below normal runoff for all of the basins. The forecasts, based on end of December measurements, list the most probable condition as 76% of average for the North Platte River near Northgate; 83% of average for the Yampa River near Maybell; 92% of average for the Little Snake River near Dixon; and 83% of average for the White River near Meeker.

Outlook

The first runoff forecasts of the season are not encouraging. The end of December snowpack for this year is only 85% of the snowpack from last year at the same time.

Public Use Impacts

Winter activities are in full swing throughout the basin.



Basinwide Conditions Assessment

The SWSI value of +0.8 indicates that for December the basin water supplies were near normal. The Natural Resources Conservation Service reports that January 1 snowpack is 109% of normal. Flow at the gaging station Animas River near Durango was 321 cfs, as compared to the long-term average of 228 cfs. Storage in McPhee, Vallecito, and Lemon reservoirs totaled 88% of normal as of the end of December.

Southwestern Colorado experienced improved water conditions for December 2004. The early part of the month was very dry and warm. Temperatures in Durango averaged 5 degrees above the normal low. A cold spell occurred just before Christmas, dropping the temperature to near zero. After Christmas, weather patterns changed a bit. A storm on December 29th brought rain to the lower elevations and contributed significantly to the mountain snow pack. The total precipitation for Durango was 1.87 inches, which was 130% of normal. The mountain snow accumulation rose to 109% by the end of the month, which was similar to the previous year. The soil moisture content was good to excellent by the end of the month.

The Animas ran 321 cfs average flow compared to the normal 222 cfs. The Dolores River was less than normal. The La Plata River was at a base flow slightly above normal, giving the upper ditches and Red Mesa Ward Reservoir an opportunity to use water.

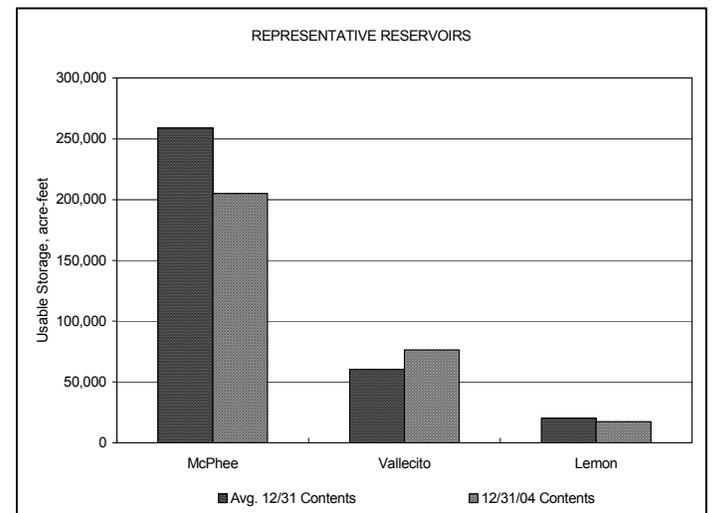
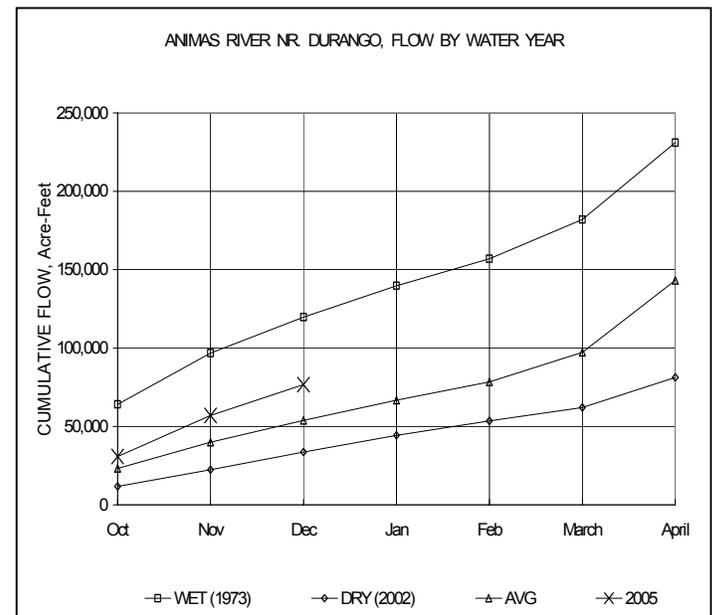
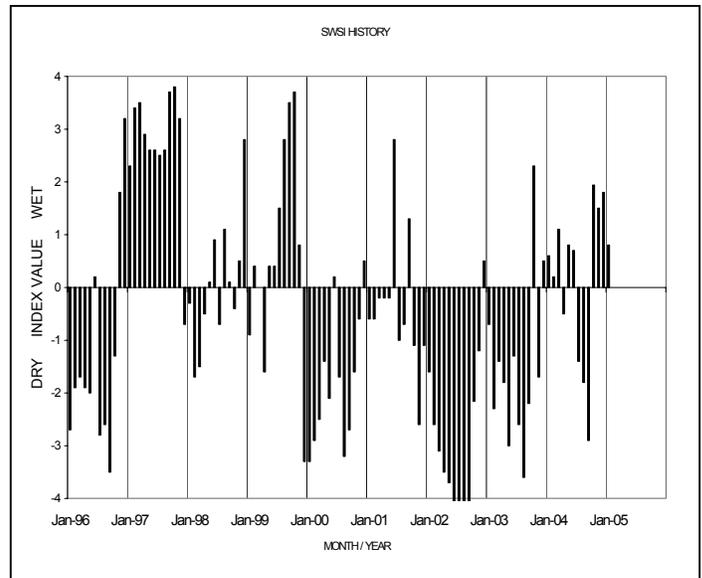
Reservoir Storage remained the same with Lemon Reservoir and McPhee Reservoir containing below average carryover. Vallecito contained 159% of normal storage with 76,000 acre-feet.

Outlook

The Pine River drainage is likely to provide water needed to fill Vallecito Reservoir next spring.

Public Use Impacts

Snow and winter recreation activities were proceeding well and residents were optimistic that the area would experience some recovery from the drought this year.



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