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Department of  
Agriculture

**Natural  
Resources  
Conservation  
Service**

# Colorado Basin Outlook Report March 1, 2007



# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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## *How forecasts are made*

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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# COLORADO

## WATER SUPPLY OUTLOOK REPORT

### MARCH 1, 2007

#### Summary

For the first month this season, snowfall across western Colorado was above average during February. This has improved the water supply expectations in these basins somewhat, but below average runoff continues to be forecast across the entire western slope this year. Meanwhile, snowpack totals in eastern Colorado remain in excellent condition and expected water supplies are the best in years in these basins. With only four to six weeks remaining in the typical winter accumulation season, the next month's weather will determine the final result of water availability for most of the state's water users. With reservoir storage still quite variable across the state, not all water users can count on supplemental water from storage.

#### Snowpack

February was a very productive month for snowfall across northwestern Colorado. Snowpack totals in the Yampa and White River basins improved the most during the month, with an increase to 84 % of average on March 1, after dipping to only 68% of average on February 1. Elsewhere across western Colorado slight improvements in percentages were measured this month. While conditions improved across western Colorado they still remain consistently below average and range from 78% of average in the San Juan, Animas, Dolores, and San Miguel basins to 95% of average in the Colorado River basin. Although snowfall was below average across the eastern slope during February, snowpack totals remain above average. The South Platte basin continues to lead the state at 111% of average. Snowpack totals in the Arkansas basin decreased again during February, but remain at 102% of average. The Rio Grande basin experienced a fairly dry month and has now dipped below average this month, at 93% of average. Colorado's statewide snowpack increased just slightly during February and now stands at 92% of average. These readings are 105% of last year's totals on this date, with the first readings of the season exceeding those from 2006. For a near average runoff season to materialize across western Colorado March snowfall becomes critical.

#### Precipitation

Precipitation across Colorado during February was above average across the northern basins but below average across the southern basins. The above average monthly totals were measured in the Colorado, the Yampa and White, and the North and South Platte basins in February. Towards the southern border of the state precipitation percentages decrease, with the lowest monthly percentages recorded in the Rio Grande basin, at only 69% of average for February. Statewide, February's precipitation was 98% of average. Although just slightly below average, the February totals allowed the statewide precipitation for the 2007 water year (since October 1, 2006) to decrease for the fourth consecutive month and is now at 100% of average. Even with the wet month across the Yampa and White basins in February water year totals in these basins are the lowest in the state at 90% of average. Meanwhile, the South Platte basin continues to lead all of the other basins in the state with water year totals of 113% of average.

## Reservoir Storage

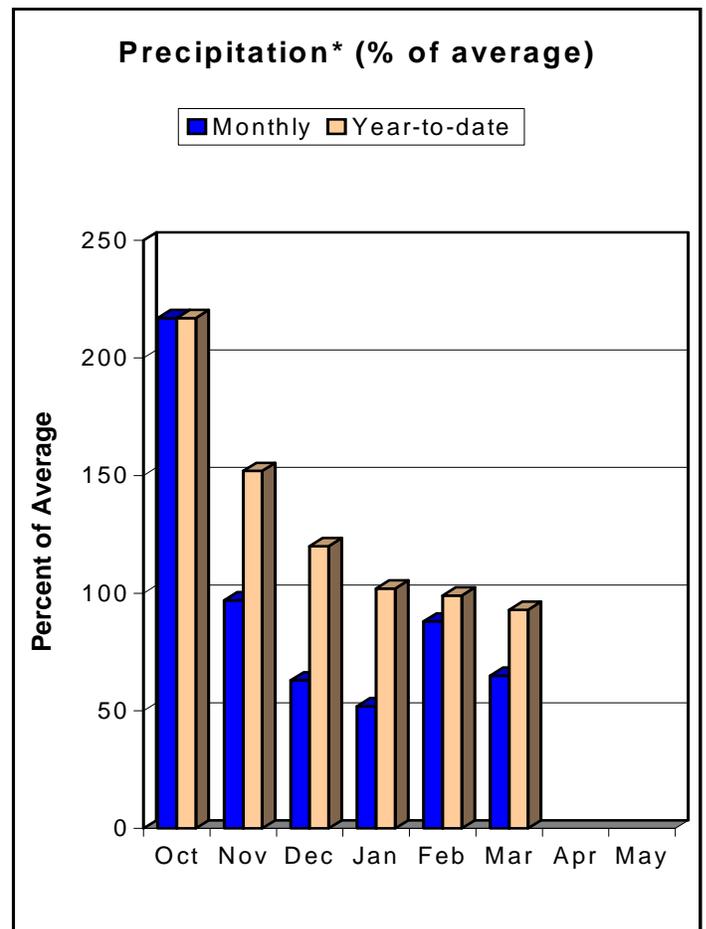
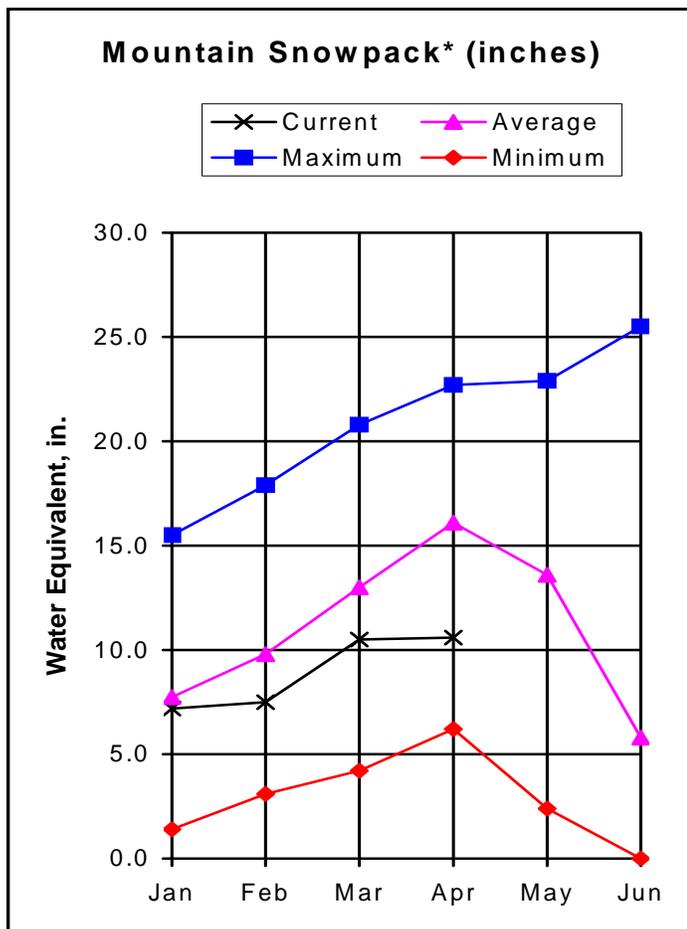
For the state in general, reservoir storage continues to improve from the deficits reached last summer. While conditions are improving, storage volumes remain below average in several basins. In terms of volume, the South Platte and Arkansas basins have the greatest deficits to recover from, with storage at 125,000 acre-feet, and 114,000 acre-feet below the average mark, respectively. On the positive side, the two basins which are storing the largest surplus volumes include the Gunnison and the San Juan, Animas, Dolores, and San Miguel, at 86,000 acre-feet, and 42,000 acre-feet, respectively. Statewide, reservoir storage is 96% of average, just 136,000 acre-feet below average. These storage volumes are at 99% of those in storage a year ago at this time. The only basins currently storing more than last year at this time include the Arkansas, the Yampa and White, and the San Juan, Animas, Dolores, and San Miguel. The South Platte basin shows the greatest decrease from last year's volumes, at only 90% of last year's volumes.

## Streamflow

Although snowpacks across western Colorado improved during February, runoff forecasts are consistently below average in these basins. Some of the lowest forecasts, as a percent of average, are issued for those basins along the far western border; such as the Yampa River near Maybell, at 77% of average, the White River near Meeker at 78% of average, and the Dolores River near Dolores at 74% of average. A few smaller streams even have slightly lower forecasts as a percentage. The best outlook along the western slope is in the Colorado River basin, where forecasted runoff is just slightly below average at most locations. After experiencing two back-to-back dry years across southern Colorado, many basins can expect some relief in this year's forecasts. Throughout most of the Rio Grande basin, this year's outlook remains significantly better than last year's. After a near record dry last year in the Sangre de Cristo Range, this year's outlook is excellent. For nearly all of the water users across eastern Colorado, this year's water supplies should be near to slightly above average. Of course, this is barring any extended dry conditions during the critical spring period.

# GUNNISON RIVER BASIN

## as of March 1, 2007



\*Based on selected stations

Snowpack conditions in the Gunnison River Basin are the lowest in the state at 81 percent of average, making it the eighth year in the last ten years with below average snowpacks on March 1. Projections based on historic SNOTEL data indicate only about a 10 percent chance that snowpacks will reach the average peak this year. Sub-basin snowpacks range from 69 percent of average in the Surface Creek Watershed to 91 percent of average in the Uncompahgre Watershed. Mountain precipitation during February was below normal at 88 percent of average. This makes the fourth straight month of below average monthly precipitation. On the bright side, this is almost twice the precipitation the basin accumulated during February of 2006, so things could be much worse. Unfortunately, the lower than average monthly precipitation contributed to a drop in the total precipitation figures for the water year, leaving the basin at 99 percent of average at the end of February. However, this is still 9 percent higher than the totals reported at this time last year. Although slightly below the levels reported last year, reservoir storage at the end of February is 10 percent higher than average. Not surprisingly, streamflow forecasts have dropped at most forecast points again this month. Runoff volumes during April-July are expected to be below average throughout the basin. Flows are forecast to range from 75 percent of average at Cochetopa Creek below Rock Creek near Parlin to 95 percent of average for Lake Fork at Gateview.

GUNNISON RIVER BASIN  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Taylor Park blw Taylor Park Res (2)	APR-JUL	63	74	83	81	92	106	103
Slate River nr Crested Butte	APR-JUL	51	62	70	79	78	92	89
East River at Almont	APR-JUL	105	128	145	76	163	192	192
Gunnison River near Gunnison (2)	APR-JUL	207	257	295	76	335	399	390
Tomichi Creek at Sargents	APR-JUL	13.6	20	25	78	31	40	32
Cochetopa Creek Blw Rock Ck Nr Parli	APR-JUL	5.5	9.5	13.0	75	17.3	25	17.3
Tomichi Creek at Gunnison	APR-JUL	34	50	64	79	80	108	81
Lake Fork at Gateview	APR-JUL	88	106	120	95	134	157	126
Blue Mesa Reservoir Inflow (2)	APR-JUL	397	498	575	80	660	800	720
Paonia Reservoir Inflow	MAR-JUN	51	69	83	83	99	126	100
	APR-JUL	49	68	83	81	100	130	102
North Fork Gunnison R Nr Somerset (2)	APR-JUL	165	210	245	80	283	347	305
Surface Creek at Cedaredge	APR-JUL	8.5	11.0	13.0	76	15.2	18.9	17.1
Ridgway Reservoir Inflow	APR-JUL	61	78	92	90	107	132	102
Uncompahgre River At Colona (2)	APR-JUL	68	97	120	86	147	193	139
Gunnison River Nr Grand Junction (2)	APR-JUL	560	970	1250	80	1530	1940	1560

GUNNISON RIVER BASIN Reservoir Storage (1000 AF) - End of February					GUNNISON RIVER BASIN Watershed Snowpack Analysis - March 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE MESA	830.0	497.7	569.4	446.5	UPPER GUNNISON BASIN	15	87	78
CRAWFORD	14.0	10.7	8.7	9.2	SURFACE CREEK BASIN	3	95	69
FRUITGROWERS	4.4	4.5	4.5	3.7	UNCOMPAHGRE BASIN	4	131	91
FRUITLAND	9.2	2.5	0.9	2.1	TOTAL GUNNISON RIVER BASIN	19	96	81
MORROW POINT	121.0	105.2	108.3	113.4				
PAONIA	15.4	1.5	2.2	4.9				
RIDGWAY	83.0	76.5	70.0	60.5				
TAYLOR PARK	106.0	77.6	71.3	65.5				

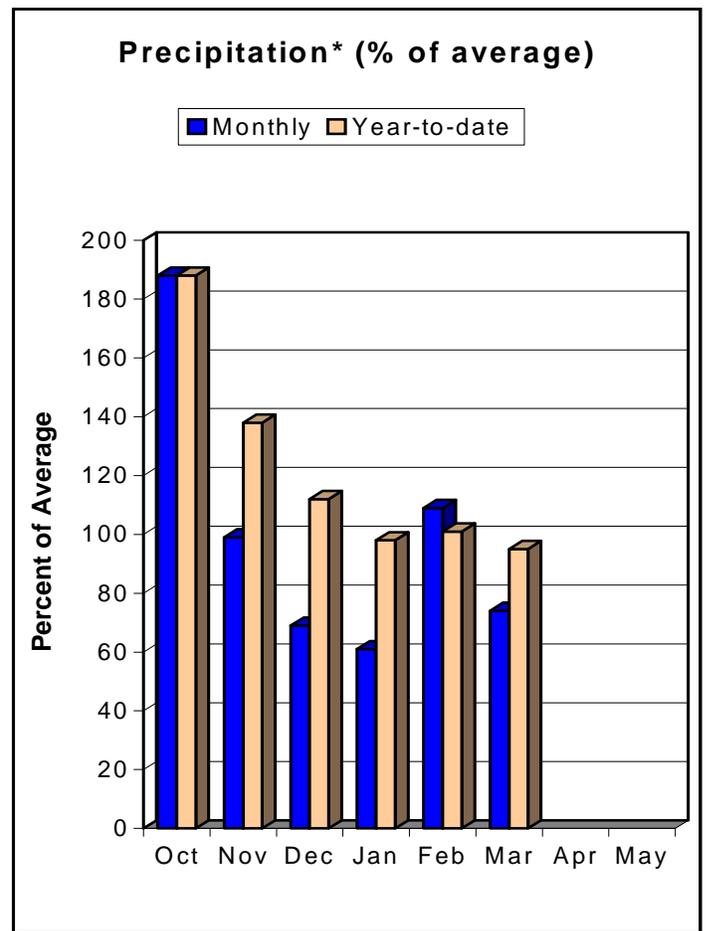
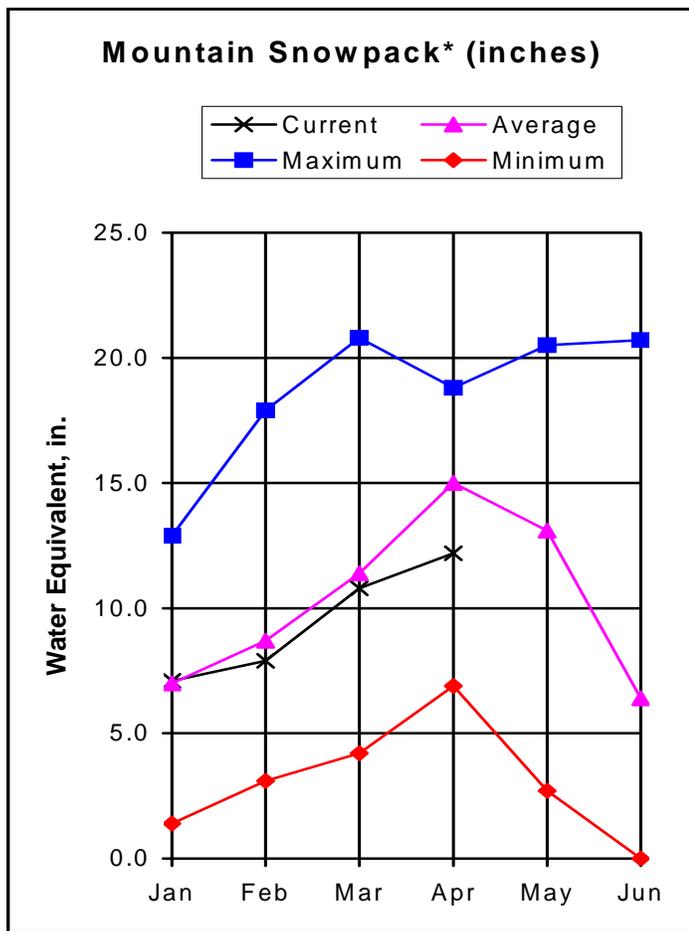
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

# UPPER COLORADO RIVER BASIN as of March 1, 2007



\*Based on selected stations

The Colorado River Basin saw a slight improvement in its snowpacks during February, increasing from 91 percent of average on February 1 to 95 percent of average on March 1. Unfortunately, this makes the ninth below average March 1 figure of the last ten years for the basin (last year being the exception at 115 percent of average). Snowpacks in the sub-basins ranged from 69 percent of average in the Plateau Creek Watershed to 106 percent of average in the Blue River Drainage. The only sub-basin to show a drop from February 1 was the Williams Fork Watershed which went down from 102 percent of average to 100 percent of average on March 1. After three months of below average monthly precipitation in the high country, the basin finally returned to above average conditions with February producing 10 percent over the average monthly precipitation. This helped to bring the water year totals back to just above normal at 101 percent of average, but still only 82 percent of the precipitation totals reported last year at this time. Reservoir storage at the end of February, while slightly lower than the amount stored a year ago, is 103 percent of average. Although a few points saw increases from 2 to 5 percent, streamflow forecasts over most of the basin remain relatively unchanged, still calling for near to below average runoff. Runoff percentages range from 70 percent of average for Muddy Creek below Wolford Mountain Reservoir to 99 percent of average for the Inflow to Dillon Reservoir.

UPPER COLORADO RIVER BASIN  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)		
Lake Granby Inflow (2)	APR-JUL	167	195	215	96	236	269	225				
Willow Creek Reservoir Inflow	APR-JUL	36	44	50	98	57	68	51				
Williams Fork Reservoir Inflow (2)	APR-JUL	66	78	87	92	97	112	95				
Dillon Reservoir Inflow (2)	APR-JUL	126	148	165	99	183	212	167				
Green Mountain Reservoir Inflow (2)	APR-JUL	210	247	275	98	305	352	280				
Muddy Creek blw Wolford Mtn Resv (2)	APR-JUL	26	35	42	70	50	64	60				
Eagle River below Gypsum (2)	APR-JUL	226	274	310	93	348	407	335				
Colorado River Near Dotsero (2)	APR-JUL	1006	1205	1350	94	1503	1744	1440				
Ruedi Reservoir Inflow (2)	APR-JUL	93	111	125	89	139	162	141				
Roaring Fork At Glenwood Springs (2)	APR-JUL	447	547	620	87	698	821	710				
Colorado River Near Cameo (2)	APR-JUL	1390	1870	2200	91	2530	3010	2420				

UPPER COLORADO RIVER BASIN Reservoir Storage (1000 AF) - End of February					UPPER COLORADO RIVER BASIN Watershed Snowpack Analysis - March 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DILLON	250.7	238.5	225.9	216.8	BLUE RIVER BASIN	9	75	106
LAKE GRANBY	465.6	238.8	277.0	281.1	UPPER COLORADO RIVER BASIN	37	81	99
GREEN MOUNTAIN	146.8	73.0	69.1	70.0	MUDDY CREEK BASIN	4	66	81
HOMESTAKE	43.0	41.0	30.5	26.6	PLATEAU CREEK BASIN	3	95	69
RUEDI	102.0	72.0	70.7	68.0	ROARING FORK BASIN	8	87	91
VEGA	32.9	17.6	20.1	12.2	WILLIAMS FORK BASIN	4	76	99
WILLIAMS FORK	97.0	70.9	72.8	57.3	WILLOW CREEK BASIN	4	88	101
WILLOW CREEK	9.1	7.1	7.1	6.7	TOTAL COLORADO RIVER BASIN	48	83	95

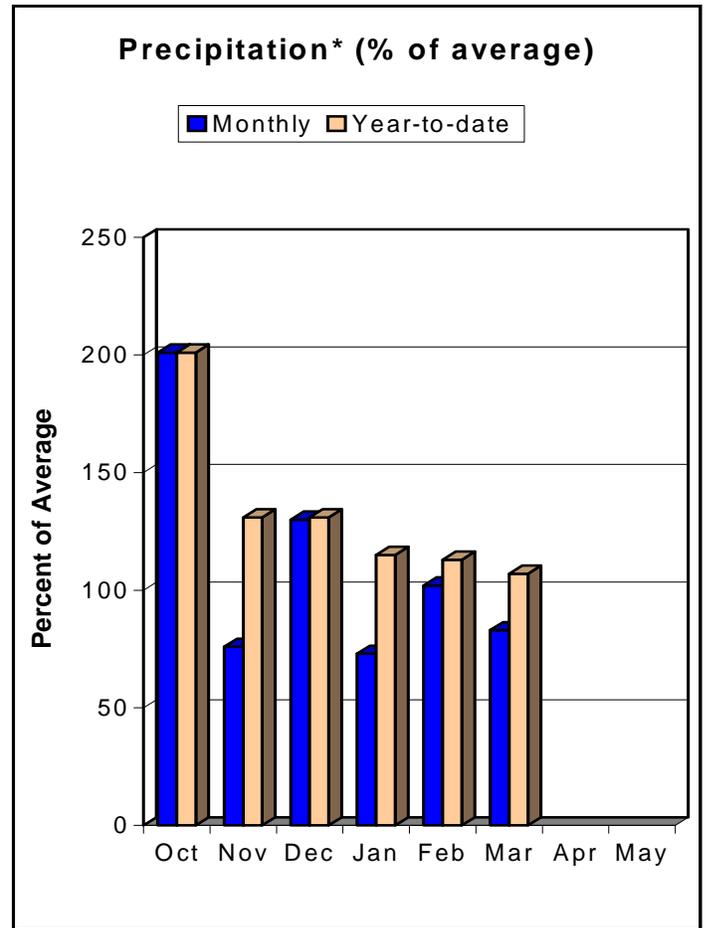
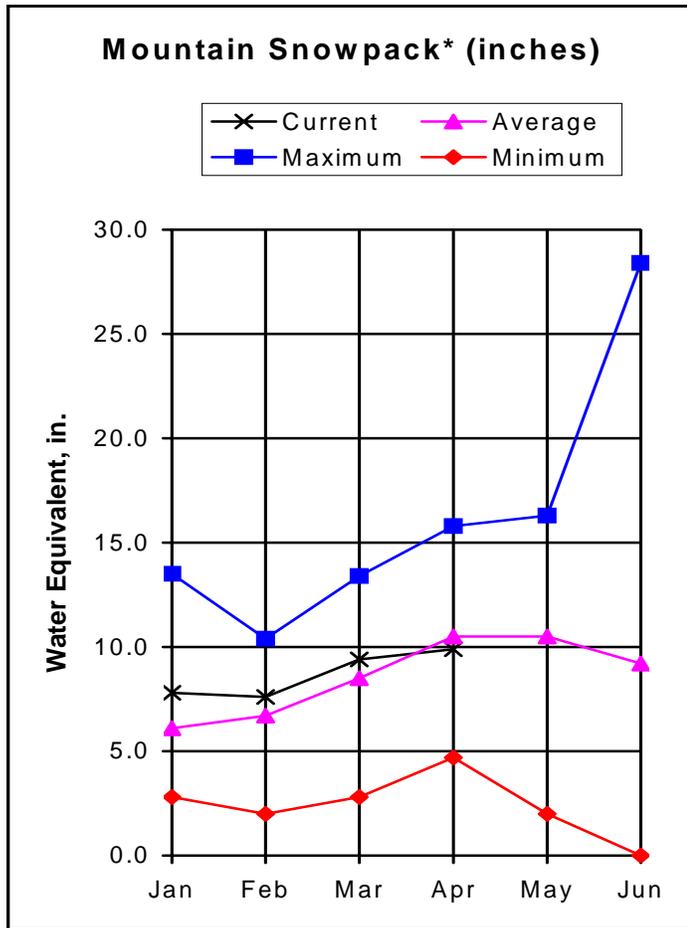
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# SOUTH PLATTE RIVER BASIN

## as of March 1, 2007



\*Based on selected stations

The South Platte River Basin, along with all sub-basins therein, shows above average snowpack again this month. Dropping slightly from 114% of average last month, the basin as a whole is at 111% of its average snowpack for March 1. The northern sub-basins lead the way with 132% of average on Boulder Creek, 116% of average on Clear Creek, and 112% of average on the Cache la Poudre. With the exception of last year, the South Platte has not seen above average snowpack on March 1 since 1997. Some smaller storms favoring the Front Range helped keep precipitation for the month of February above average at 104% of average. The year to date precipitation, however, dropped slightly from 115% of average last month to 113% of average this month. Reservoir storage on the South Platte is at 86% of average, up from 82% of average last month, and 92% of the storage at this time last year. April through September streamflow volumes on Boulder Creek should reach 128% of average near Orodell, while the South Platte at South Platte should run about 98% of average. Boaters on the Poudre should be content with 100% of their average streamflow at the canyon mouth.

SOUTH PLATTE RIVER BASIN  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)		
Antero Reservoir inflow	APR-JUL	11.3	14.1	16.3	97	18.6	22	16.8				
	APR-SEP	14.8	18.1	21	102	23	27	21				
Spinney Mountain Reservoir inflow	APR-JUL	46	54	60	107	66	76	56				
	APR-SEP	58	68	74	107	81	92	69				
Elevenmile Canyon Reservoir inflow	APR-JUL	49	57	63	109	69	78	58				
	APR-SEP	60	71	77	107	84	95	72				
Cheesman Lake inflow	APR-JUL	63	94	120	104	148	194	115				
	APR-SEP	82	119	150	106	183	240	142				
South Platte River at South Platte	APR-JUL	170	191	205	100	220	245	205				
	APR-SEP	210	235	250	98	270	295	255				
Bear Creek abv Evergreen	APR-JUL	8.5	15.1	19.4	100	24	30	19.4				
	APR-SEP	12.5	20	25	100	30	38	25				
Bear Creek at Morrison	APR-JUL	13.8	20	25	100	31	40	25				
	APR-SEP	18.6	25	31	100	37	47	31				
Clear Creek at Golden	APR-JUL	75	96	112	102	130	157	110				
	APR-SEP	90	117	136	102	157	192	134				
St. Vrain Creek at Lyons	APR-JUL	65	86	102	111	120	147	92				
	APR-SEP	78	102	119	111	138	169	107				
Boulder Creek nr Orodell	APR-JUL	41	52	59	128	67	80	46				
	APR-SEP	48	59	68	128	77	92	53				
South Boulder nr Eldorado Spgs	APR-JUL	29	38	45	109	53	65	41				
	APR-SEP	32	42	50	109	58	71	46				
Big Thompson River at mouth nr Drake	APR-JUL	66	86	102	104	119	146	98				
	APR-SEP	81	104	121	103	139	170	117				
CACHE LAPOUDRE at Canyon Mouth	APR-JUL	149	205	245	100	290	365	245				
	APR-SEP	171	230	275	100	325	405	275				

SOUTH PLATTE RIVER BASIN  
Reservoir Storage (1000 AF) - End of February

SOUTH PLATTE RIVER BASIN  
Watershed Snowpack Analysis - March 1, 2007

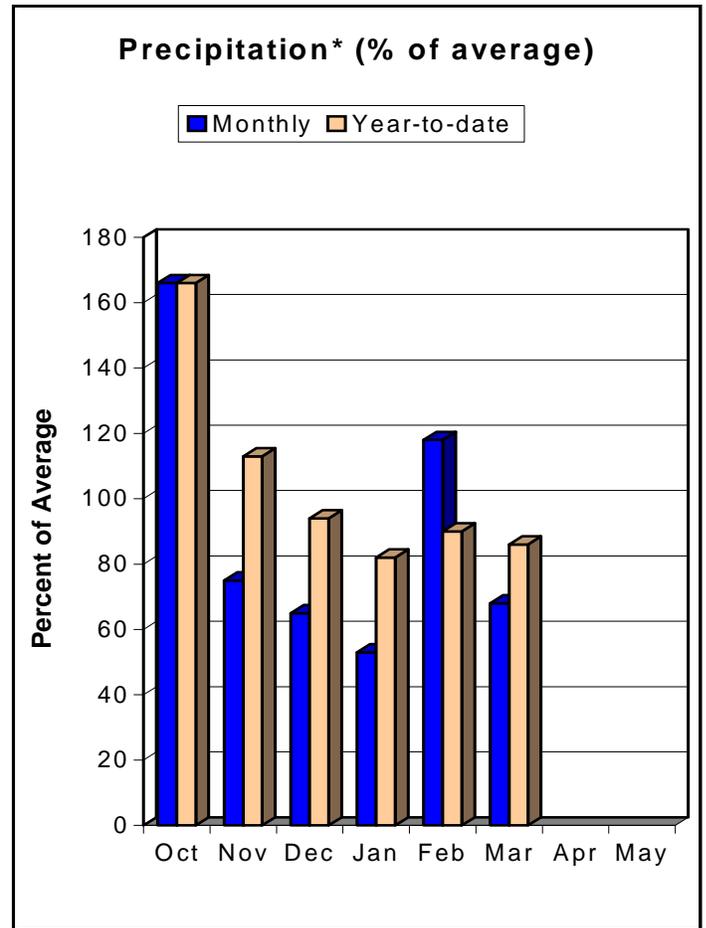
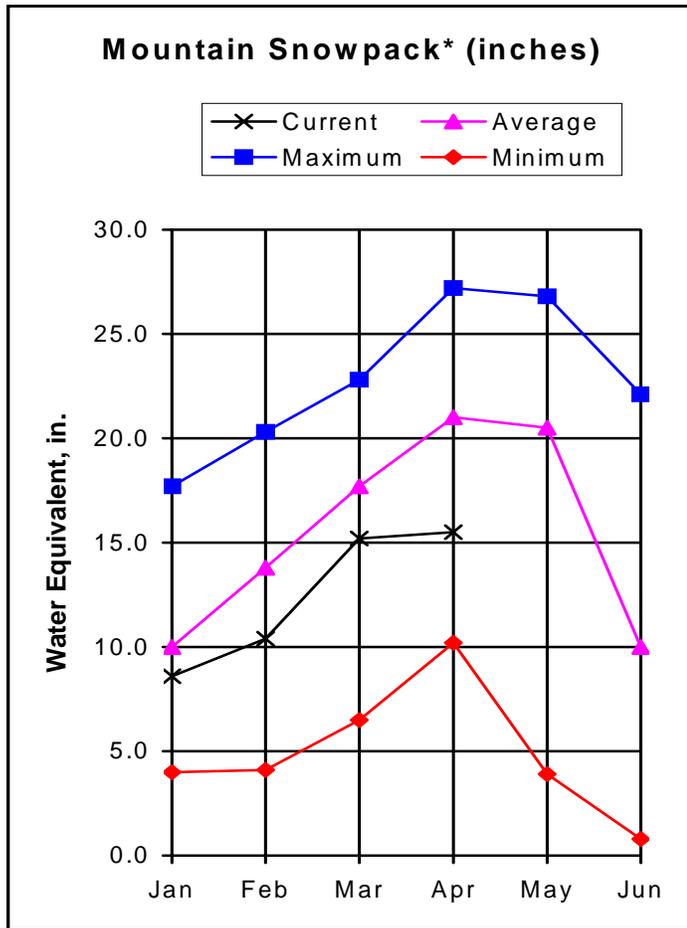
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ANTERO	19.9	17.2	6.8	16.3	BIG THOMPSON BASIN	7	112	105
BARR LAKE	32.0	24.6	28.9	26.0	BOULDER CREEK BASIN	5	123	132
BLACK HOLLOW	6.5	2.3	1.5	3.9	CACHE LA POUFRE BASIN	8	107	112
BOYD LAKE	44.0	12.9	30.4	32.4	CLEAR CREEK BASIN	4	87	116
BUTTON ROCK/RALPH PRICE	16.2	14.7	13.9	12.4	SAINT VRAIN BASIN	4	115	106
CACHE LA POUFRE	10.1	5.2	6.3	7.8	UPPER SOUTH PLATTE BASIN	15	114	105
CARTER	108.9	43.1	56.7	93.4	TOTAL SOUTH PLATTE BASIN	43	109	111
CHAMBERS LAKE	8.8	1.5	4.0	3.1				
CHEESMAN	79.0	74.8	70.7	59.0				
COBB LAKE	22.3	3.4	9.0	13.9				
ELEVEN MILE	98.0	99.5	99.3	95.8				
EMPIRE	36.5	19.0	29.0	25.6				
FOSSIL CREEK	11.1	9.7	8.8	7.4				
GROSS	42.0	24.2	21.8	25.3				
HALLIGAN	6.0	4.3	4.8	4.8				
HORSECREEK	14.7	12.5	13.3	12.5				
HORSETOOTH	149.7	105.3	96.7	109.2				
JACKSON	26.1	26.1	22.1	27.3				
JULESBURG	20.5	15.9	16.6	18.9				
LAKE LOVELAND	14.0	11.3	11.4	8.8				
LONE TREE	9.0	7.1	7.3	6.7				
MARIANO	6.0	3.9	4.1	4.3				
MARSHALL	10.0	4.9	5.3	5.4				
MARSTON	13.0	7.7	1.7	12.9				
MILTON	24.0	19.4	18.9	17.1				
POINT OF ROCKS	70.6	37.6	60.8	65.4				
PREWITT	28.2	12.7	23.3	21.0				
RIVERSIDE	55.8	46.8	49.8	48.9				
SPINNEY MOUNTAIN	49.0	31.3	34.7	32.2				
STANDLEY	42.0	40.0	35.4	33.6				
TERRY LAKE	8.0	6.1	5.4	5.3				
UNION	13.0	7.7	9.7	11.0				
WINDSOR	19.0	1.4	7.0	11.5				

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of March 1, 2007



\*Based on selected stations

Storm patterns during February heavily favored the northwestern portion of Colorado and the Yampa, White, North Platte and Little Snake River basins reaped the benefit, reporting the largest increases in snowpack percentages statewide over last month. March 1 snowpack measurements show the Yampa and White River basins at 84 percent of average, up from 68 percent of average; the North Platte River Basin improved from 77 percent of average in February to 87 percent of average this month; and the Little Snake jumped from 68 percent of average in February to 82 percent of average on March 1. Oddly enough, the Laramie River Basin, which continues to report the best snowpacks in the area this year, dropped from 104 percent of average last month to 101 percent of average. Despite the favorable turnaround from a month ago, the below average conditions became the eighth year the combined basins have seen in the last ten years. Mountain precipitation during February was 118 percent of average. The monthly totals helped to improve the water year total precipitation to 90 percent of average. Overall, reservoir storage for the basin at the end of February was 104 percent of average and 101 percent of the storage available a year ago. With the exception of Laramie River near Woods which is forecast at 103 percent of average, the remainder of the basin is expected to produce below to well below average April-July volumes. At the bottom end of the spectrum is the Little Snake River near Lily which is forecast at 69 percent of average.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
NORTH PLATTE RIVER nr Northgate	APR-JUL	108	172	215	88	260	325	245
	APR-SEP	119	192	240	89	290	360	270
LARAMIE RIVER nr Woods	APR-JUL	77	107	127	103	148	177	123
	APR-SEP	85	117	140	104	162	194	135
Yampa R ab Stagecoach Reservoir (2)	APR-JUL	12.4	17.7	22	76	27	36	29
Yampa River at Steamboat Springs (2)	APR-JUL	155	192	220	79	250	296	280
Elk River nr Milner	APR-JUL	203	247	280	86	315	369	325
Elkhead Creek nr Elkhead	APR-JUL	18.5	26	31	80	37	47	39
Elkhead Creek blw Maynard Gulch (2)	APR-JUL	22	39	51	86	63	80	59
Fortification Ck nr Fortification	MAR-JUN	1.86	3.72	5.50	73	7.78	12.17	7.50
Yampa River Near Maybell (2)	APR-JUL	516	655	760	77	872	1052	990
Little Snake River nr Slater	APR-JUL	75	96	112	70	129	157	159
Little Snake River nr Dixon	APR-JUL	138	193	235	71	281	357	330
Little Snake River nr Lily	APR-JUL	139	201	250	69	304	393	365
White River nr Meeker	APR-JUL	153	194	225	78	258	310	290

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS  
Reservoir Storage (1000 AF) - End of February

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS  
Watershed Snowpack Analysis - March 1, 2007

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
STAGECOACH	33.3	28.7	24.0	24.0	LARAMIE RIVER BASIN	3	101	101
YAMCOLO	8.7	3.1	7.5	6.5	NORTH PLATTE RIVER BASIN	12	77	87
					TOTAL NORTH PLATTE BASIN	14	81	89
					ELK RIVER BASIN	2	83	91
					YAMPA RIVER BASIN	12	71	85
					WHITE RIVER BASIN	6	77	83
					TOTAL YAMPA AND WHITE RIV	17	73	84
					LITTLE SNAKE RIVER BASIN	8	71	82
TOTAL YAMPA, WHITE AND NO	36	77	86					

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

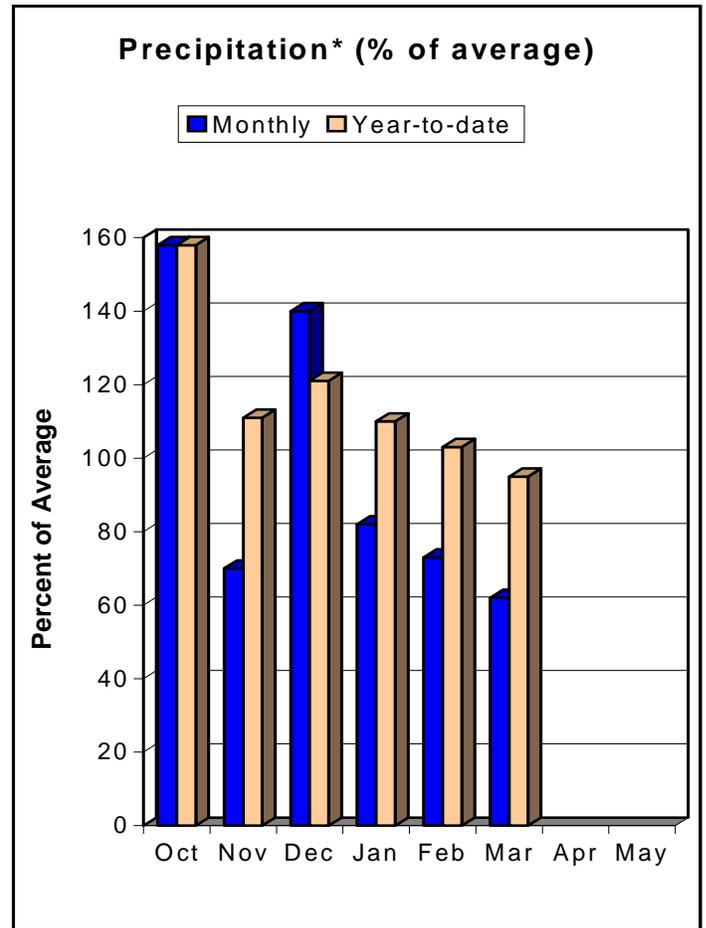
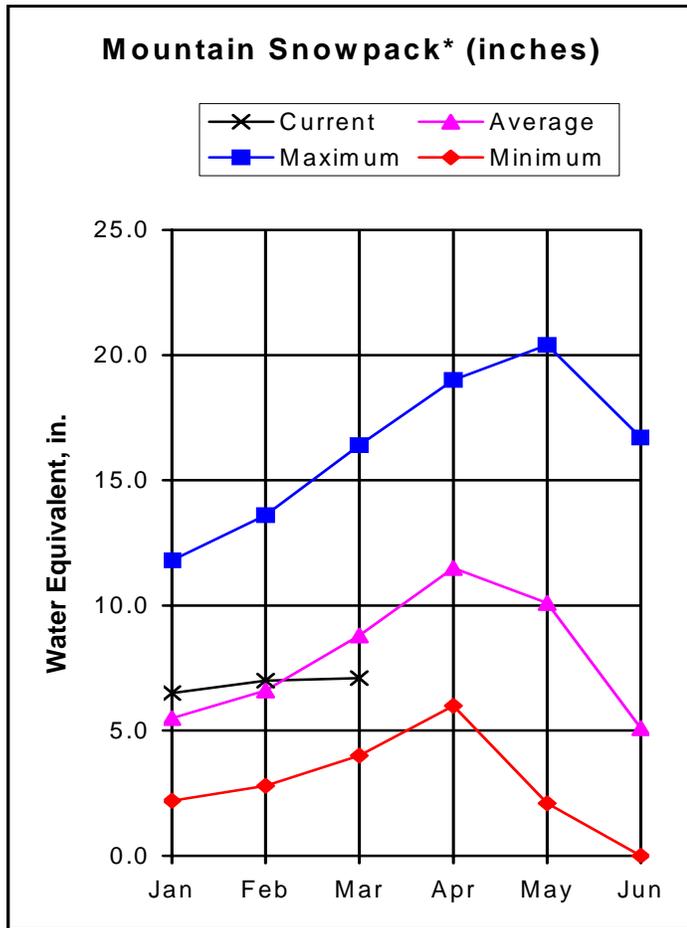
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

# ARKANSAS RIVER BASIN

## as of March 1, 2007



\*Based on selected stations

Snowpack in the Arkansas River Basin remains just barely above average this month. At 102% of average, down from 106% of average last month, sub-basins draining the Sangre de Cristos continue to carry most of the snow in the basin. The Purgatoire sub-basin is at 146% of average and the Cucharas and Huerfano sub-basins are at 126% of average. Farther north and west, it is a different story. The Upper Arkansas is more in line with adjacent sub-basins of the Colorado, such as the Roaring Fork, and is showing 92% of its average snowpack this month. The drop in snowpack this month should be attributed to below average February precipitation. February only saw 73% of its average precipitation, dropping the year to date precipitation to 103% of average since October 1, down from 110% of average at this time last month. Reservoir storage on the Arkansas is at 80% of average, up from 76% of average last month, and 124% of the storage at this time last year. Streamflow forecasts for the April-September period dropped 4 to 25 percentage points from those issued last month. However, the outlook remains positive with most streams in the basin expected to produce near to above average flows. Reflective of the snowpack, predicted runoff is higher for the points in the southern portion of the basin and drops off as you move north. April-September volumes are forecast to range between 93% of average for Chalk Creek at Nathrop to 131% of average for the Cucharas River at Boyd Ranch near La Veta.

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ARKANSAS RIVER BASIN  
Streamflow Forecasts - March 1, 2007

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Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Chalk Ck At Nathrop	APR-JUL	11.0	16.0	20	87	24	32	23
	APR-SEP	14.2	20	25	93	30	39	27
Arkansas River At Salida (2)	APR-JUL	174	212	240	94	270	317	255
	APR-SEP	223	273	310	100	349	411	310
Grape Creek Near Westcliffe	APR-JUL	5.7	12.9	19.5	121	27	42	16.1
	APR-SEP	9.7	18.0	25	128	33	47	19.6
Pueblo Reservoir Inflow (2)	APR-JUL	218	298	360	94	428	538	385
	APR-SEP	300	399	475	98	557	690	485
Huerfano River Near Redwing	APR-JUL	8.1	11.5	14.1	115	17.0	22	12.3
	APR-SEP	11.2	15.3	18.5	119	22	28	15.5
Cucharas River At Boyd Ranch Nr La V	APR-JUL	6.8	10.9	14.2	126	18.0	24	11.3
	APR-SEP	8.9	13.4	17.0	131	21	28	13.0
Trinidad Lake Inflow	MAR-JUL	14.9	27	38	112	50	72	34
	APR-SEP	20	36	49	111	64	90	44

ARKANSAS RIVER BASIN Reservoir Storage (1000 AF) - End of February					ARKANSAS RIVER BASIN Watershed Snowpack Analysis - March 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ADOBE	62.0	33.9	23.4	36.0	UPPER ARKANSAS BASIN	10	82	92
CLEAR CREEK	11.4	8.6	9.0	6.8	CUCHARAS & HUERFANO RIVER	4	369	126
CUCHARAS RESERVOIR	40.0	2.2	1.7	4.7	PURGATOIRE RIVER BASIN	2	1427	147
GREAT PLAINS	150.0	0.0	0.0	38.9	TOTAL ARKANSAS RIVER BASIN	15	116	102
HOLBROOK	7.0	2.2	0.0	4.8				
HORSE CREEK	27.0	0.0	0.0	12.7				
JOHN MARTIN	616.0	53.5	33.0	132.2				
LAKE HENRY	8.0	7.1	5.4	5.6				
MEREDITH	42.0	19.4	12.1	18.1				
PUEBLO	354.0	186.6	148.1	168.7				
TRINIDAD	167.0	26.7	19.9	26.2				
TURQUOISE	127.0	72.5	64.9	77.3				
TWIN LAKES	86.0	49.5	56.2	44.0				

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

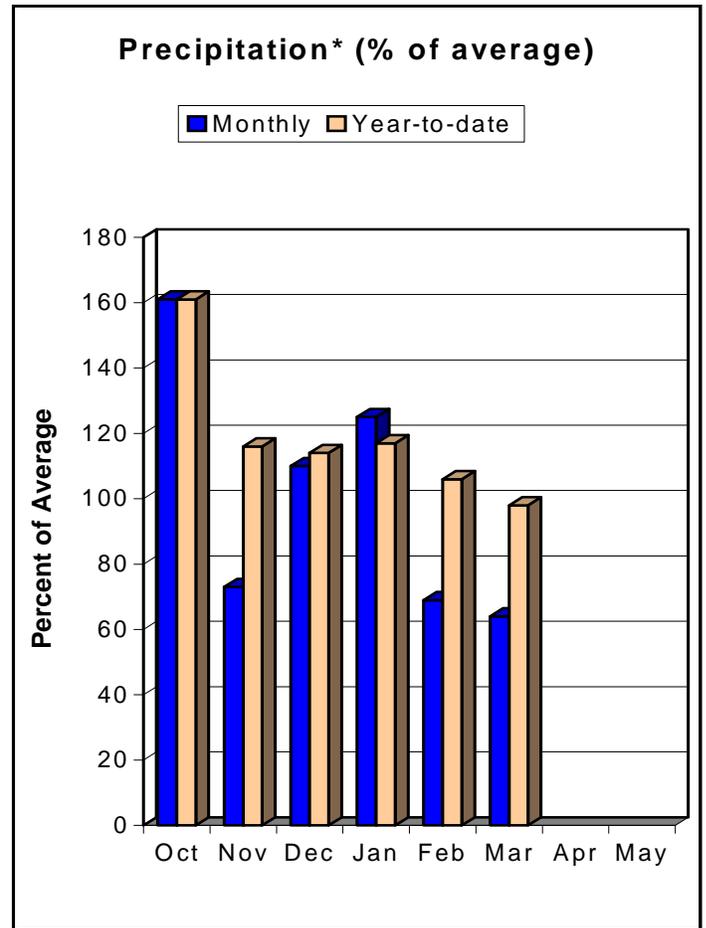
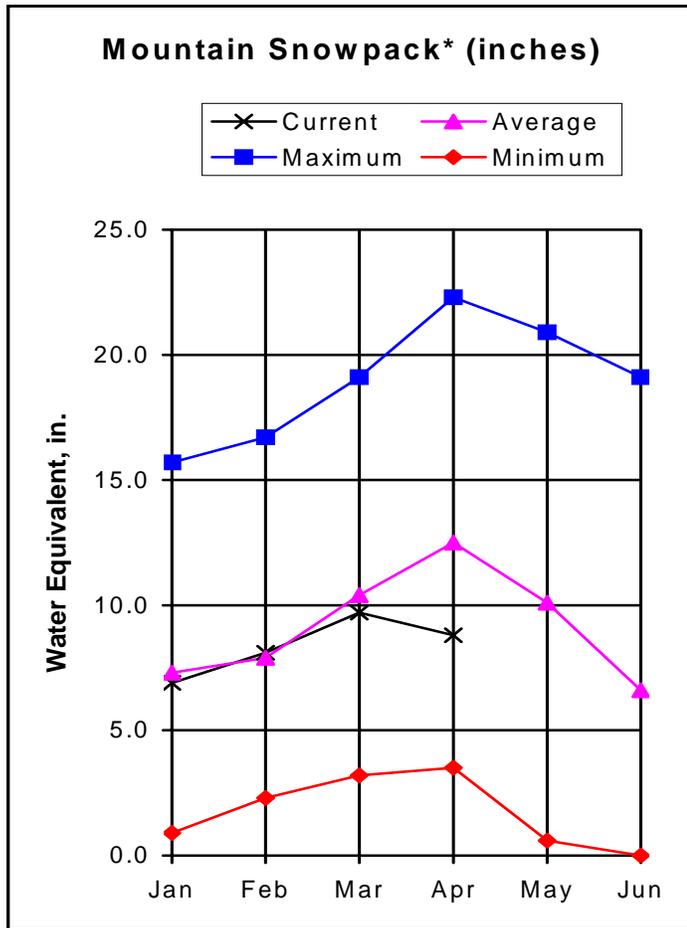
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

# UPPER RIO GRANDE RIVER BASIN

## as of March 1, 2007



\*Based on selected stations

At 93% of average this month and down from 102% of average last month, snowpack in the Rio Grande River Basin would be less than 90% if it were not for above average snowpack in the Sangre de Cristos. As snowpack in the Culebra and Trinchera sub-basins remains above average, the Conejos and Rio San Antonio are only at 88% of their average snowpack, down from 96% of average last month. Overall, 93% of average is not much to complain about, as the March 1 snow level last year was a mere 40% of average. The Rio Grande saw only 69% of its average February precipitation this year, dropping the year to date precipitation to 106% of average, down from 117% of average at this time last month. Reservoir storage in the Rio Grande Basin is at 70% of average, up from 66% of average last month. Storage is at 98% of storage this time last year. April through September streamflow volumes look to be about 116% of average on Trinchera Creek above Turner Ranch, but only about 79% of average on the San Antonio River at Ortiz.

UPPER RIO GRANDE BASIN  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)		
Rio Grande At Thirty Mile Bridge (2)	APR-SEP	86	107	123	90	140	166	136				
Rio Grande Reservoir Inflow	APR-JUL	79	95	108	92	122	144	118				
Rio Grande At Wagon Wheel Gap (2)	APR-SEP	213	271	315	91	362	437	345				
South Fork Rio Grande at South Fork	APR-SEP	86	106	122	92	139	167	132				
Rio Grande nr Del Norte (2)	APR-SEP	336	423	490	92	564	686	531				
Saguache Creek nr Saguache (2)	APR-SEP	17.4	25	30	91	36	46	33				
Alamosa Creek Abv Terrace Reservoir	APR-SEP	44	56	65	93	75	92	70				
La Jara Creek nr Capulin	MAR-JUL	4.38	6.36	8.00	92	9.90	13.21	8.70				
Trinchera Creek abv Turners Ranch	APR-SEP	7.9	11.5	13.9	116	16.3	19.9	12.0				
Sangre de Cristo Creek	APR-SEP	3.00	7.20	10.00	114	12.80	17.00	8.80				
Ute Ck nr Fort Garland	APR-SEP	6.0	9.0	11.5	94	14.5	19.7	12.2				
Platoro Reservoir Inflow	APR-JUL	40	49	55	86	62	73	64				
	APR-SEP	45	54	61	86	69	81	71				
Conejos River Near Mogote (2)	APR-SEP	128	160	185	93	212	257	200				
San Antonio River at Ortiz	APR-SEP	6.9	10.2	13.0	79	16.3	22	16.4				
Los Pinos River nr Ortiz	APR-SEP	42	55	66	89	78	98	74				
Culebra Creek at San Luis (2)	APR-SEP	12.6	19.8	26	113	33	47	23				
Costilla Reservoir Inflow	MAR-JUL	7.1	10.4	13.0	123	16.1	21	10.6				
Costilla Creek Near Costilla (2)	MAR-JUL	17.7	26	33	127	41	55	26				

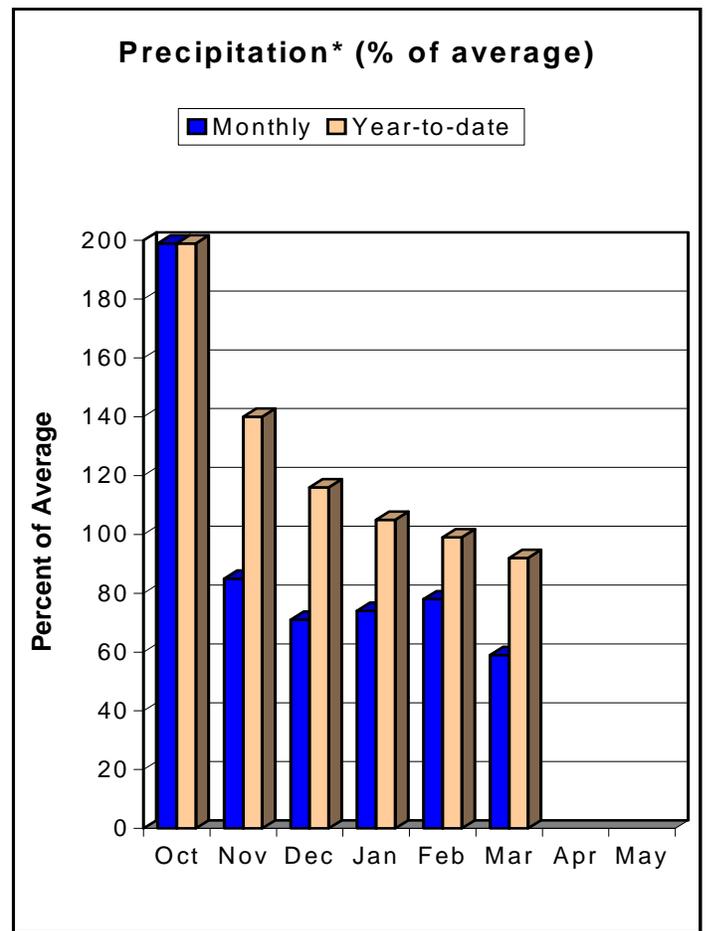
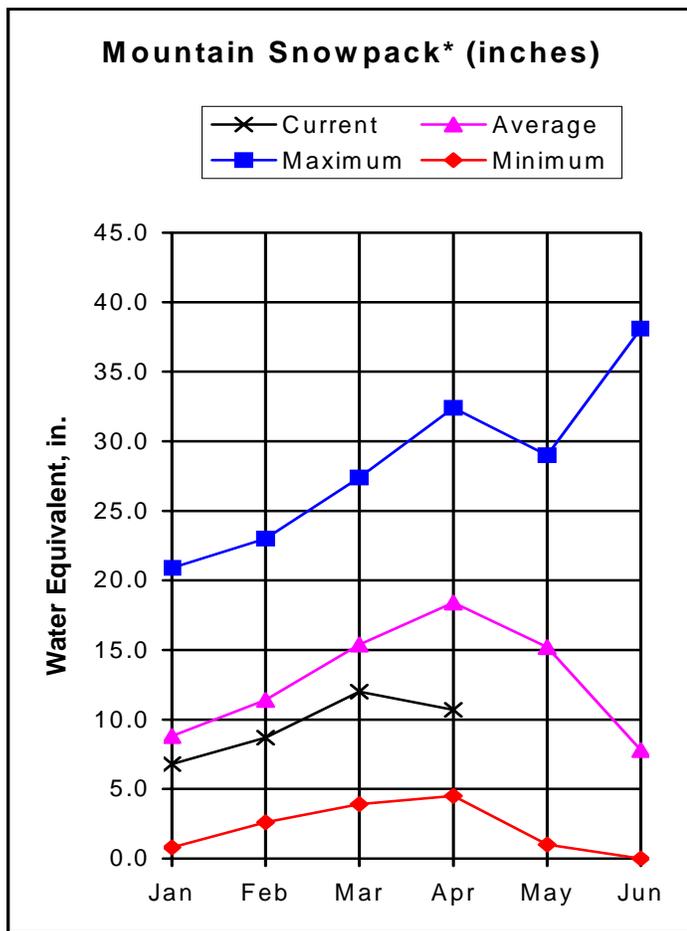
UPPER RIO GRANDE BASIN Reservoir Storage (1000 AF) - End of February					UPPER RIO GRANDE BASIN Watershed Snowpack Analysis - March 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	27.0	4.4	2.0	5.3	ALAMOSA CREEK BASIN	2	231	97
PLATORO	57.0	6.8	4.7	24.3	CONEJOS & RIO SAN ANTONIO	4	199	88
RIO GRANDE	51.0	23.3	23.4	17.6	CULEBRA & TRINCHERA CREEK	5	303	103
SANCHEZ	103.0	13.9	21.0	24.1	UPPER RIO GRANDE BASIN	12	220	90
SANTA MARIA	45.0	7.3	7.7	10.6	TOTAL UPPER RIO GRANDE BA	23	231	93
TERRACE	18.0	6.7	5.0	6.7				

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of March 1, 2007



\*Based on selected stations

While the San Miguel, Dolores and Animas River basins reported improvements in snowpack conditions over the last month and the San Juan River Basin measured a slight decline, overall, snowpacks remain below average throughout the combined basins, although they are greatly improved over a year ago (171 percent of last year). This marks the eighth year of below average conditions on March 1 out of the past ten years. Projections using historic SNOTEL data indicate a less than 10 percent chance of reaching the average peak snowpack. The lowest snowpack figures came from the Animas River Basin at 73 percent of average. Leading the pack was the San Miguel River Basin at 90 percent of average, up from 78 percent of average last month. Mountain precipitation during February was below normal at 78 percent of average, making it the fourth consecutive month of below normal precipitation. Total precipitation for the water year dropped below normal (99 percent of average) for the first time this year. Reservoir storage at the end of February was 111 percent of average. This is just slightly more than the stored water available at this time last year. Most streamflow forecasts saw a decline (3 to 12 percentage points) from the forecasts issued last month. Below average streamflows are still expected throughout the basins. April-July predictions call for volumes to range from 68 percent of average for the Mancos River near Mancos and the La Plata River at Hesperus to 91 percent of average for the Rio Blanco at Blanco Diversion.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS  
Streamflow Forecasts - March 1, 2007

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Dolores River at Dolores	APR-JUL	121	162	195	74	232	295	265
McPhee Reservoir Inflow	APR-JUL	147	196	235	73	279	353	320
San Miguel River nr Placerville	APR-JUL	69	91	109	83	129	163	132
Gurley Reservoir Inlet	APR-JUL	7.7	11.5	14.0	85	16.5	20	16.5
	APRIL			1.50	90			1.66
	MAY			7.70	87			8.83
	JUNE			3.90	84			4.67
	JULY			0.90	68			1.32
Cone Reservoir Inlet	APR-JUL	0.79	2.10	3.00	85	3.90	5.20	3.53
	APRIL			0.42	91			0.46
	MAY			1.50	92			1.64
	JUNE			0.80	77			1.04
	JULY			0.28	74			0.38
Lilylands Reservoir Inlet	APR-JUL	1.22	1.86	2.30	80	2.70	3.40	2.86
	APRIL			0.35	88			0.40
	MAY			1.14	86			1.32
	JUNE			0.66	76			0.87
	JULY			0.15	56			0.27
Rio Blanco At Blanco Diversion (2)	APR-JUL	33	41	48	91	55	67	53
Navajo River At Oso Diversion (2)	APR-JUL	39	50	58	84	68	83	69
San Juan River Near Carracas (2)	APR-JUL	211	280	335	83	396	500	405
Piedra River near Arboles	APR-JUL	111	152	185	80	222	286	230
Vallecito Reservoir Inflow	APR-JUL	129	158	180	88	204	242	205
Navajo Reservoir Inflow (2)	APR-JUL	413	548	655	83	775	977	785
Animas River at Durango	APR-JUL	257	326	380	86	439	537	440
Lemon Reservoir Inflow	APR-JUL	33	40	45	78	51	60	58
La Plata River at Hesperus	APR-JUL	10.5	14.1	17.0	68	20	26	25
Mancos River nr Mancos	APR-JUL	4.0	18.0	27	68	36	50	40
	APRIL			4.50	78			5.80
	MAY			11.8	74			15.9
	JUNE			8.0	58			13.7
	JULY			2.70	59			4.60

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS  
Reservoir Storage (1000 AF) - End of February

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS  
Watershed Snowpack Analysis - March 1, 2007

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GROUNDHOG	22.0	16.2	14.8	12.0	ANIMAS RIVER BASIN	9	149	73
JACKSON GULCH	10.0	6.1	4.7	4.6	DOLORES RIVER BASIN	7	161	75
LEMON	40.0	33.8	23.0	20.4	SAN MIGUEL RIVER BASIN	5	156	90
MCPHEE	381.0	278.0	291.4	276.3	SAN JUAN RIVER BASIN	4	242	81
NARRAGUINNEP	19.0	19.0	14.1	13.5	TOTAL SAN MIGUEL, DOLORES	24	171	78
VALLECITO	126.0	76.6	76.1	60.8	AN JUAN RIVER BASINS			

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.



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In addition to the basin outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through May. The information may be obtained from the National Resources Conservation Service web page at <http://www.wcc.nrcs.usda.gov/wsf/westwide.html>.

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