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**Natural
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Service**

Colorado Basin Outlook Report March 1, 2004



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, 2004

Summary

Colorado's snowpack, as a percent of average, remains almost unchanged from last month. The weather trend for this year seems to be bringing most of the moisture across the southern portion of the state, while the northern mountains are missing the big storms. As a result of this pattern, this year's snowpack is a reversal of last year's, with the best outlook for runoff across the southern basins. This will help improve the drought stressed reservoir storage in the southern basins, but will return heavy demands on those in the northern basins. Reservoir storage is currently below average nearly statewide, and the current outlook for runoff doesn't appear to bring much improvement as we enter the spring and summer months.

Snowpack

Only minor changes in percent of average snowpack were recorded across the state during February. The statewide snowpack inched up to 90% of average on March 1, just slightly higher than the 88% of average measured on February 1. Changes of less than 5% were measured across most of the state, with no change in the North Platte Basin. The only exception was the Arkansas Basin, which increased from 76% of average on February 1, to 90% of average on March 1. This basin was able to take advantage of the southern storm track which brought above average snowfall during February. Those basins now reporting above average totals include the Gunnison at 103% of average, the San Juan, Animas, Dolores, and San Miguel at 105% of average, and the Rio Grande at 108% of average. The South Platte Basin continues to track at the lowest percentage in the state. The March 1 readings of 69% of average are just a slight improvement from the 65% of average measured last month. With only one month remaining in the snowpack accumulation season, it's unlikely that March will bring enough snowfall for the basins across northern Colorado to reach average by April 1. While last year's snowfall accomplished that feat in the South Platte Basin, there have only been two years (2003 and 1983) out of the last 43 years, when March snowfall was heavy enough to eliminate such a deficit. This leaves that basin's chance of recovery at only 5%. A similar probability for statewide recovery stands at less than 25%.

Precipitation

Precipitation during February varied from above average across southern Colorado, to below average across the northern basins. The highest percent of average totals were measured in the San Juan, Animas, Dolores, and San Miguel basins, reporting 124% of average for the month. The Rio Grande Basin closely followed at 121% of average for February. Conditions dried out toward the north with the Yampa and White basins reporting the lowest percent of average totals in the state at only 77% of average. The beleaguered South Platte Basin only managed to record 83% of average. Water year totals remain below average across most of the state. The only exceptions are in southwestern Colorado, where the Rio Grande Basin is reporting 103% of average, and the combined San Juan, Animas, Dolores, and San Miguel basins at 100% of average. The South Platte Basin is reporting the lowest percent of average totals for the water year at only 73% of average.

Reservoir Storage

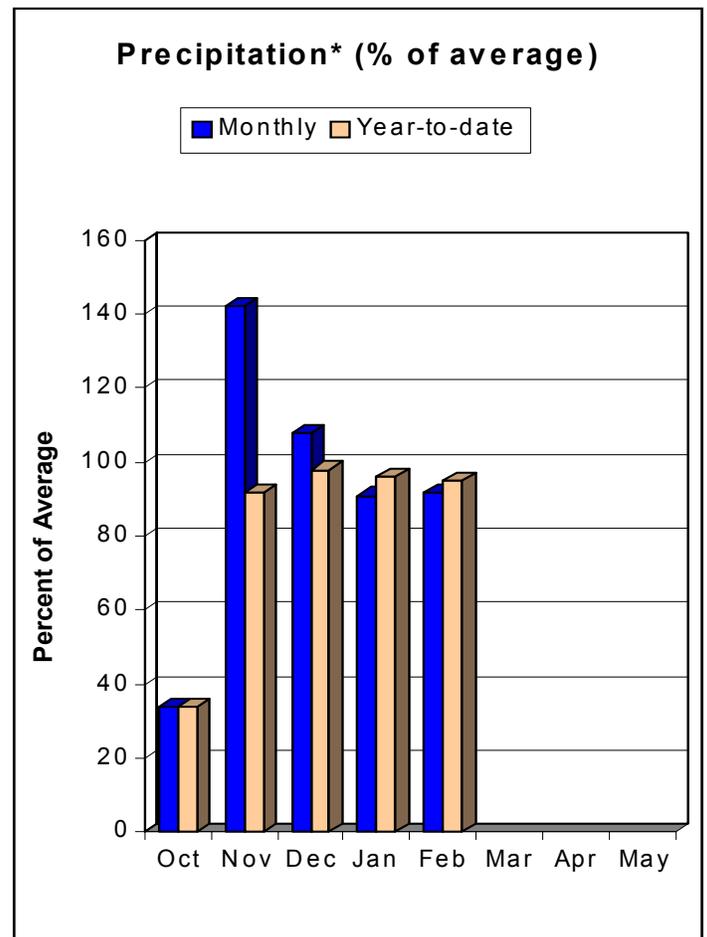
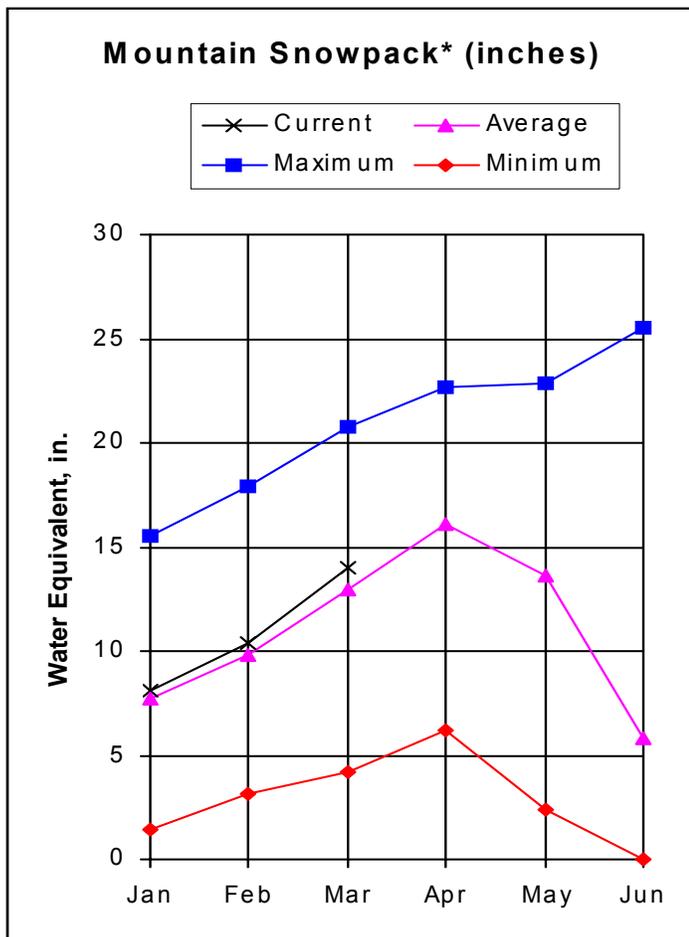
Reservoir storage continues to track below average across most of Colorado. Last year's dry conditions across southwestern Colorado have left those basins with the lowest storage volumes. The Arkansas, Rio Grande and combined San Juan, Animas, Dolores, and San Miguel basins are reporting well below average storage for March 1. Storage volumes improve across northern Colorado with most of those basins reporting volumes of 80% to 90% of average. Currently, the Gunnison Basin is reporting the highest volumes as a percent of average at 93%. Statewide, storage is reported at 78% of average and is 145% of last year's volumes on this date. As a rule, most basins are reporting greater volumes than last year at this time. The Colorado Basin is leading the state at 242% of last year's storage. The only basin reporting less in storage than last year is the Rio Grande, at only 70% of last year's volumes. Considering this year's water supplies, it appears that reservoir storage in the southern basins will improve, while reservoirs in the northern basins may not meet water use demands again.

Streamflow

The 2004 runoff outlook is shaping up to range from near average volumes across southwestern Colorado, and below average across most of the remainder of the state. The highest volumes, as a percent of average, are forecast in the San Juan and Animas basins, where flows of 100% to 110% are generally forecast. Near average volumes are forecast across most of the Rio Grande as well. Toward the north, forecasts deteriorate to below average. The Colorado, Yampa, White, Arkansas and North and South Platte basins are forecast at below average. The lowest forecasts continue to be located in the upper South Platte Basin, where most forecast points are forecast to produce less than 50% of average volumes during 2004. Conditions improve along the Front Range tributaries, yet are consistently below average ranging from 70% to 90% of average.

GUNNISON RIVER BASIN

as of March 1, 2004



*Based on selected stations

Snowpack measurements in the Gunnison Basin remain at near average levels on March 1, which is about where they have been this entire season. There is nearly 20% more snow this year than there was last year at the same time. The measurements are relatively consistent throughout the basin ranging from 98% of average in the Upper Gunnison Watershed, to 115% of average in the Uncompahgre Watershed. Precipitation during February was 92% of average. The total precipitation this water year has been 95% of average. Reservoir storage in the basin has improved slightly from last month, from 86% to 93% of average. The storage amount is 25% above last year's storage measurement at this time. If snowpack and precipitation conditions remain favorable during March, most reservoirs should have no problem filling to desired levels during the runoff season. Streamflow forecasts are reflective of the snowpack levels at near average for most of the forecast points. Forecasts range from only 81% of average at Tomichi Creek at Sargents, to 102% of average on Surface Creek near Cedaredge.

GUNNISON RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Taylor River blw Taylor Park Resv	APR-JUL	56	76	90	87	104	124	103
Slate River nr Crested Butte	APR-JUL	59	71	80	90	89	101	89
East River at Almont	APR-JUL	110	143	165	86	187	222	192
Gunnison River nr Gunnison	APR-JUL	210	280	330	85	380	450	390
Tomichi Creek at Sargents	APR-JUL	10.8	20	26	81	32	41	32
Cochetopa Creek blw Rock Creek	APR-JUL	5.7	10.7	14.0	81	17.3	23	17.3
Tomichi Creek at Gunnison	APR-JUL	33	53	70	86	89	121	81
Lake Fork at Gateview	APR-JUL	63	94	115	91	136	167	126
Blue Mesa Reservoir Inflow	APR-JUL	345	510	620	86	730	895	720
Paonia Reservoir Inflow	MAR-JUN	61	83	100	100	119	149	100
	APR-JUL	54	81	102	100	126	165	102
N.F. Gunnison River nr Somerset	APR-JUL	202	258	300	98	345	418	305
Surface Creek nr Cedaredge	APR-JUL	11.7	14.9	17.5	102	21	26	17.1
Ridgway Reservoir Inflow	APR-JUL	69	87	102	100	119	150	102
Uncompahgre River at Colona	APR-JUL	85	112	132	95	154	190	139
Gunnison River nr Grand Junction	APR-JUL	845	1170	1400	90	1630	1960	1560

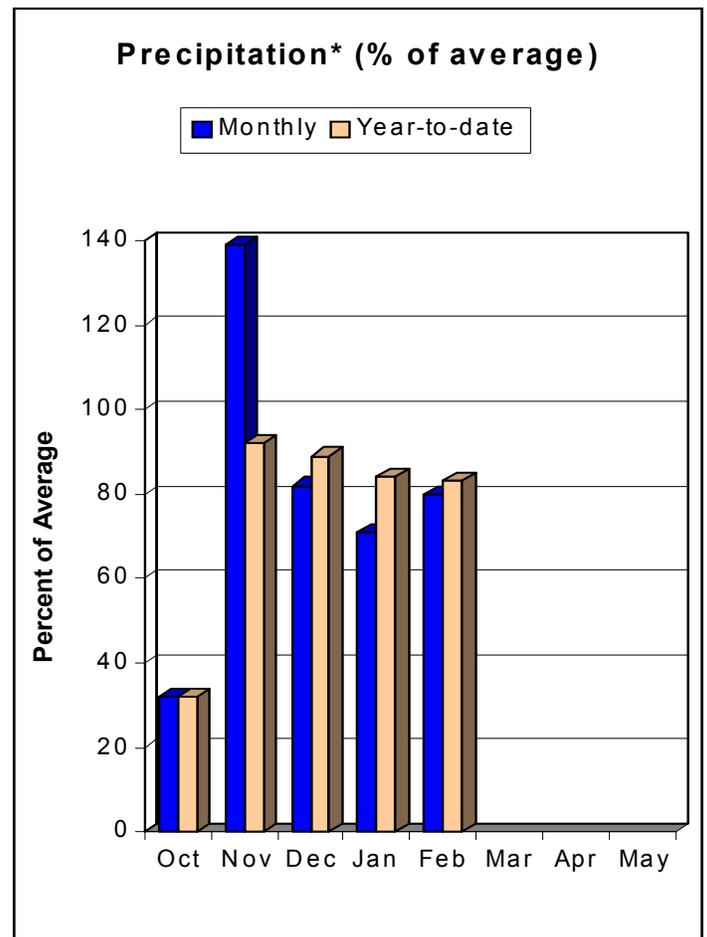
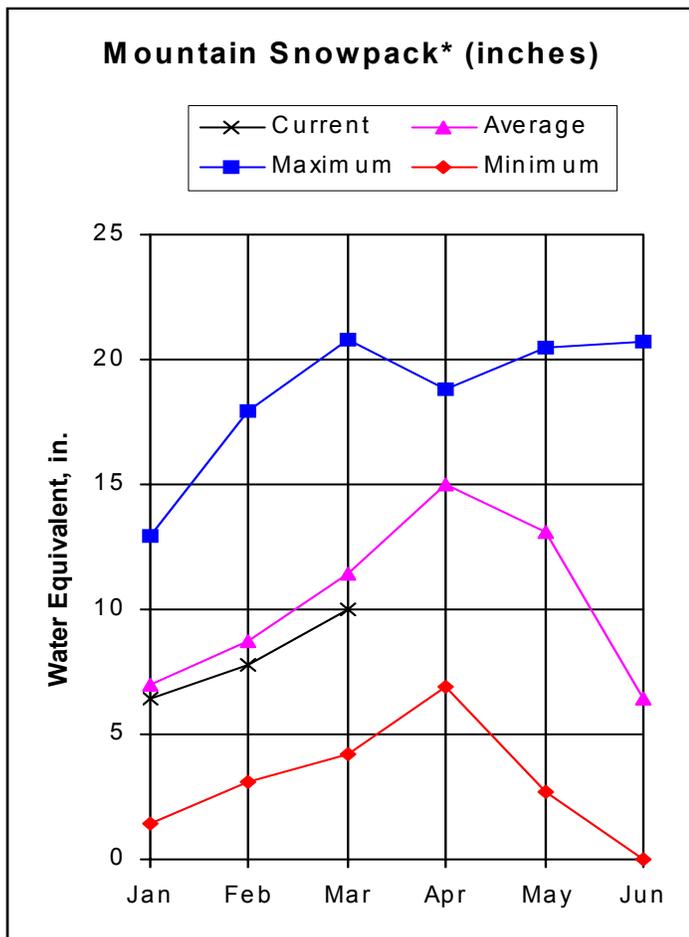
GUNNISON RIVER BASIN Reservoir Storage (1000 AF) - End of February					GUNNISON RIVER BASIN Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE MESA	830.0	390.8	295.3	446.5	UPPER GUNNISON BASIN	15	116	96
CRAWFORD	14.3	3.6	4.6	9.2	SURFACE CREEK BASIN	3	128	109
FRUITGROWERS	4.3	2.2	1.9	3.7	UNCOMPAHGRE BASIN	4	135	115
FRUITLAND	9.2	0.4	0.7	2.1	TOTAL GUNNISON RIVER BASIN	19	122	100
MORROW POINT	121.0	109.3	111.0	113.4				
PAONIA	18.0	3.4	5.9	4.9				
RIDGWAY	83.2	71.5	62.4	60.5				
TAYLOR PARK	106.0	72.3	39.7	65.5				

* 90%, 70%, 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, 2004



*Based on selected stations

The Colorado Basin's snowpack measurements have slipped from 85% of average on February 1, to 83% of average on March 1. Measurements are 10% less than last year at this time. On average, March is the highest snow accumulation month of the season, but to reach average conditions by April 1, accumulation during March will need to be nearly 140% of the average monthly amount. Measurements range from only 76% of average in the Muddy Creek Watershed, to 109% of average in the Plateau Creek Watershed. The precipitation during February was only 80% of average, and the water year total is now only 83% of average. The combined reservoir storage remains at 86% of average on March 1. There is 242% of the storage there was last year at this time. Streamflow forecasts have been bumped down from last month's forecasts and all of them are below average. Forecasts range from only 73% of average at the Inflow to Willow Creek Reservoir, to 85% of average on the Roaring Fork at Glenwood Springs.

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Lake Granby Inflow	APR-JUL	121	146	165	73	187	225	225
Willow Creek Reservoir Inflow	APR-JUL	23	31	37	73	44	55	51
Williams Fork Reservoir inflow	APR-JUL	60	72	80	84	89	103	95
Dillon Reservoir Inflow	APR-JUL	71	103	125	75	147	179	167
Green Mountain Reservoir inflow	APR-JUL	167	195	215	77	236	269	280
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	26	38	48	80	61	88	60
Eagle River blw Gypsum	APR-JUL	170	214	250	75	292	369	335
Colorado River nr Dotsero	APR-JUL	585	890	1100	76	1310	1620	1440
Ruedi Reservoir Inflow	APR-JUL	75	94	110	78	128	160	141
Roaring Fork at Glenwood Springs	APR-JUL	416	522	600	85	684	817	710
Colorado River nr Cameo	APR-JUL	1020	1510	1850	76	2190	2680	2420

UPPER COLORADO RIVER BASIN
Reservoir Storage (1000 AF) - End of February

UPPER COLORADO RIVER BASIN
Watershed Snowpack Analysis - March 1, 2004

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DILLON	250.8	218.6	126.0	216.8	BLUE RIVER BASIN	9	83	79
LAKE GRANBY	465.6	198.2	23.6	281.1	UPPER COLORADO RIVER BASIN	37	84	80
GREEN MOUNTAIN	139.0	59.6	30.9	70.0	MUDDY CREEK BASIN	4	84	76
HOMESTAKE	43.0	21.9	17.0	26.6	PLATEAU CREEK BASIN	3	128	109
RUEDI	102.0	62.2	46.3	68.0	ROARING FORK BASIN	8	103	88
VEGA	32.0	10.9	4.4	12.2	WILLIAMS FORK BASIN	4	88	85
WILLIAMS FORK	96.8	57.8	7.7	57.3	WILLOW CREEK BASIN	4	70	74
WILLOW CREEK	9.0	7.2	7.1	6.7	TOTAL COLORADO RIVER BASIN	48	90	84

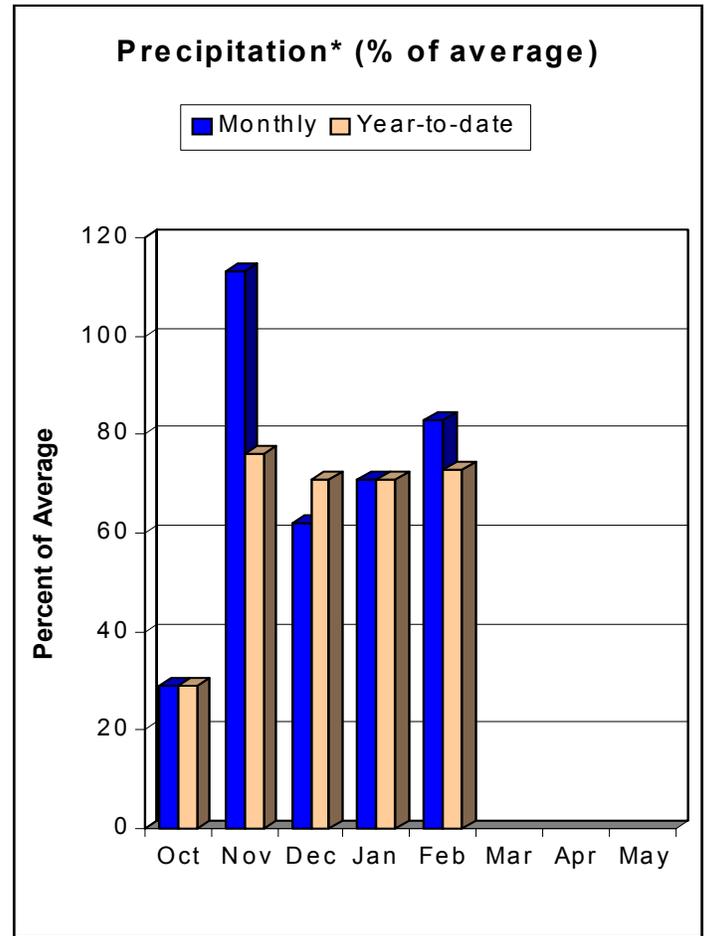
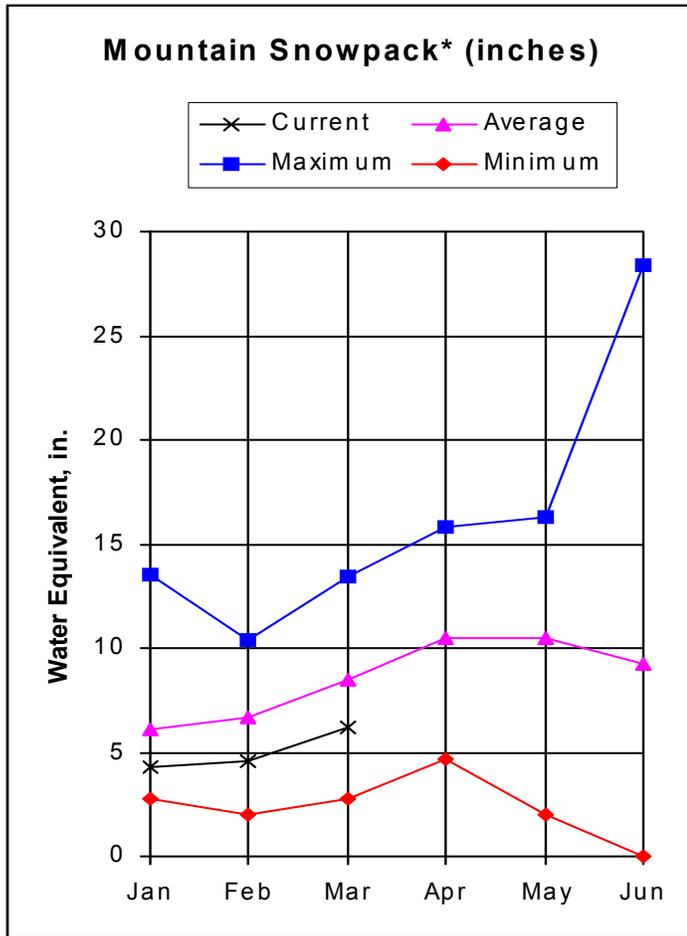
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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, 2004



*Based on selected stations

The March 1 snowpack measurements in the South Platte Basin are the lowest in the state at only 69% of average. There is only 87% of the amount there was last year at this time. The measurements are highly variable, ranging from only 65% of average in the Upper South Platte Watershed, to 82% of average in the Clear Creek Watershed. While measurements are well above the record lows at this time, without a very wet spring, water shortages are almost assured for many areas in this basin. Precipitation during February was 83% of average, and the water year total is only 73% of average. The combined reservoir storage for 31 major reservoirs in the basin is 83% of average, which is about 53% more storage than last year at this time. The streamflow forecasts for this runoff season do not provide much hope to ease any water shortage issues. All of the streamflow forecasts for the runoff season remain below, to much below average at this time. They are highly variable ranging from only 22% of average at the Inflow to Antero Reservoir, to 91% of average on Boulder Creek near Orodell. .

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		Future Conditions		===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Antero Reservoir inflow	APR-JUL	2.1	3.0	3.9	22	5.0	7.2	17.5
Spinney Mountain Reservoir inflow	APR-JUL	12.0	16.2	19.8	35	24	33	57
Elevenmile Canyon Reservoir inflow	APR-JUL	3.9	12.3	18.0	31	24	32	59
Cheesman Lake inflow	APR-JUL	28	35	41	36	48	60	114
South Platte River at South Platte	APR-SEP	53	100	133	52	166	215	254
Bear Creek abv Evergreen	APR-SEP	6.5	10.4	14.4	58	19.9	32	25
Bear Creek at Morrison	APR-SEP	6.4	11.3	16.7	54	25	44	31
Clear Creek at Golden	APR-SEP	61	86	103	77	120	145	134
St. Vrain Creek at Lyons	APR-SEP	38	53	63	75	73	88	84
Boulder Creek nr Orodell	APR-SEP	34	43	48	91	53	62	53
South Boulder nr Eldorado Spgs	APR-SEP	23	30	34	74	38	45	46
Big Thompson River at mouth nr Drake	APR-SEP	65	82	93	80	104	121	117
CACHE LAPOUDRE at Canyon Mouth	APR-SEP	126	179	215	78	250	305	275

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

SOUTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2004

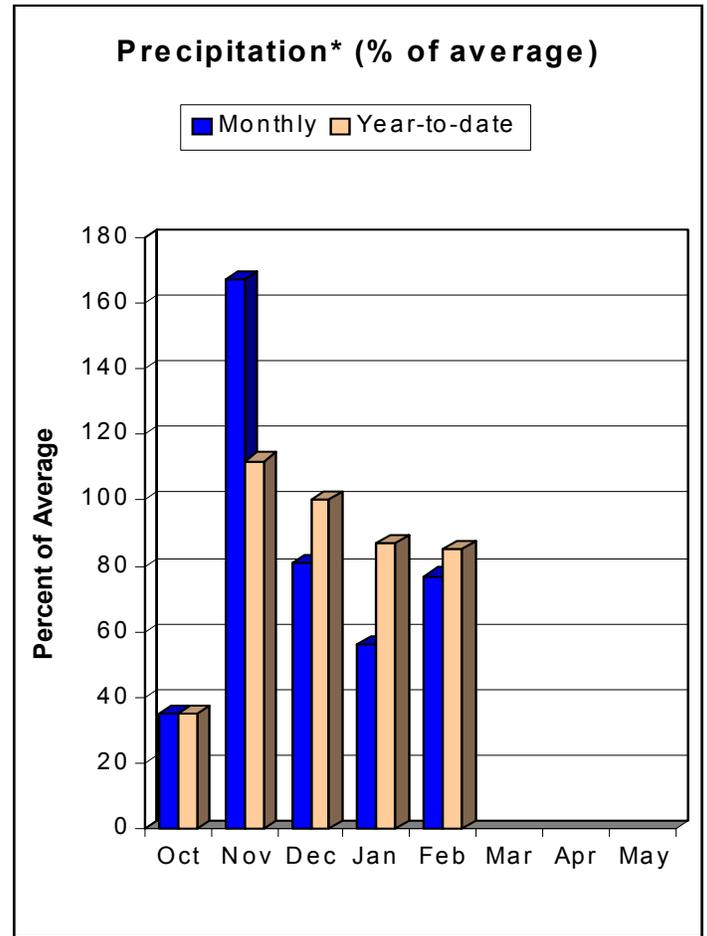
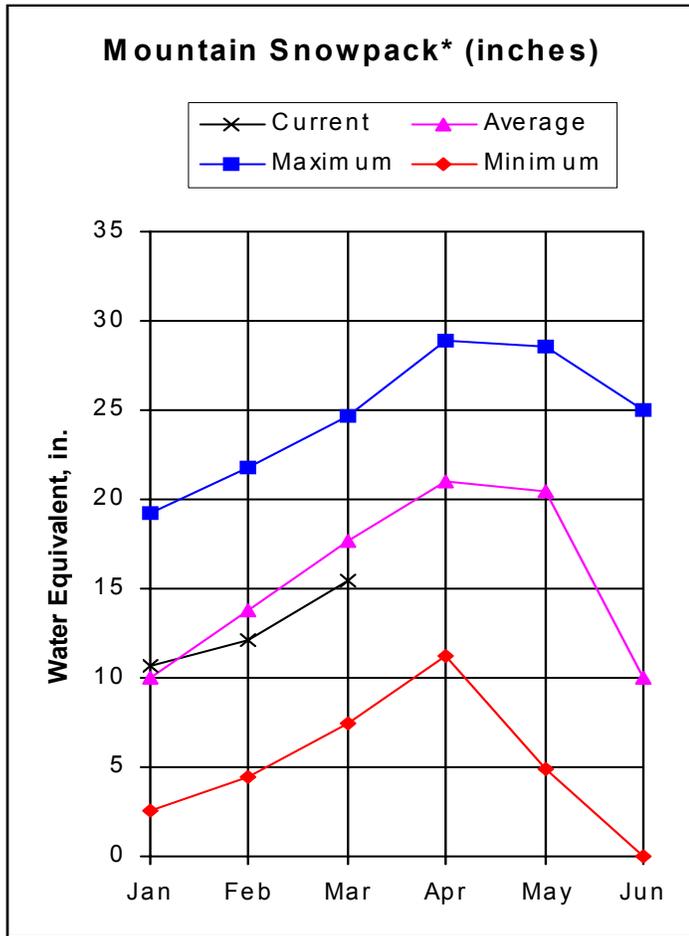
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
		ANTERO	20.0	0.0			0.0	16.3
BARR LAKE	32.0	20.3	13.8	26.0	BOULDER CREEK BASIN	5	82	67
BLACK HOLLOW	8.0	2.0	2.1	3.9	CACHE LA POUUDRE BASIN	8	90	72
BOYD LAKE	49.0	31.1	6.0	32.4	CLEAR CREEK BASIN	4	86	82
CACHE LA POUUDRE	10.0	3.1	2.6	7.8	SAINT VRAIN BASIN	4	82	57
CARTER	108.9	51.0	101.2	93.4	UPPER SOUTH PLATTE BASIN	15	87	65
CHAMBERS LAKE	9.0	5.6	2.0	3.1	TOTAL SOUTH PLATTE BASIN	43	87	70
CHEESMAN	79.0	59.4	46.2	59.0				
COBB LAKE	34.0	5.2	2.5	13.9				
ELEVEN MILE	97.8	72.9	44.5	95.8				
EMPIRE	38.0	25.0	24.0	25.6				
FOSSIL CREEK	12.0	6.0	6.0	7.4				
GROSS	41.8	26.0	15.9	25.3				
HALLIGAN	6.4	3.7	2.8	4.8				
HORSECREEK	16.0	12.6	1.1	12.5				
HORSETOOTH	149.7	120.4	20.4	109.2				
JACKSON	35.0	23.5	23.5	27.3				
JULESBURG	28.0	15.3	16.9	18.9				
LAKE LOVELAND	14.0	10.4	8.1	8.8				
LONE TREE	9.0	8.0	6.6	6.7				
MARIANO	6.0	1.0	0.5	4.3				
MARSHALL	10.0	6.1	3.5	5.4				
MARSTON	13.0	14.3	13.4	12.9				
MILTON	24.0	11.6	3.0	17.1				
POINT OF ROCKS	70.0	45.8	25.0	65.4				
PREWITT	33.0	7.7	5.1	21.0				
RIVERSIDE	63.1	43.3	30.6	48.9				
SPINNEY MOUNTAIN	48.7	20.6	13.2	32.2				
STANDLEY	42.0	38.8	20.7	33.6				
TERRY LAKE	8.0	5.8	1.4	5.3				
UNION	13.0	10.2	6.0	11.0				
WINDSOR	19.0	9.1	0.4	11.5				

* 90%, 70%, 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, 2004



*Based on selected stations

Snowfall during February was just enough to keep the measured accumulation nearly the same percent of average as last month. Snowpack measurements in the North Platte Basin are 81% of average, while the Yampa and White basins have measurements at 89% of average. These measurements are slightly below the measurements last year at this time. The Elk River Watershed is the best off, at 93% of average, while the Laramie Basin is only 78% of average. Precipitation in these basins during February was only 77% of average, which brought the water year total down to only 85% of average. The two major reservoirs in these basins remain at 110% of average storage volume for this time of year, which is 119% of the storage volume last year at this time. Streamflow forecasts for the runoff season are slightly lower than last month at many of the forecast points, and most are well below average. Forecasts range from only 74% of average on the Laramie River near Woods, to 100% of average at Little Snake River near Dixon.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
NORTH PLATTE RIVER nr Northgate	APR-SEP	99	168	215	80	260	330	270
LARAMIE RIVER nr Woods	APR-SEP	34	73	100	74	127	166	135
Yampa R abv Stagecoach Res	APR-JUL	11.4	17.7	22	76	26	33	29
Yampa River at Steamboat Springs	APR-JUL	136	186	220	79	255	305	280
Elk River nr Milner	APR-JUL	171	225	265	82	309	379	325
Elkhead Creek nr Elkhead	APR-JUL	15.2	23	30	77	40	59	39
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	21	38	50	85	62	79	59
Fortification Ck nr Fortification	MAR-JUN	1.80	4.50	6.40	85	8.30	11.00	7.50
Yampa River nr Maybell	APR-JUL	455	645	775	78	905	1100	990
Little Snake River nr Slater	APR-JUL	105	136	159	100	184	224	159
LITTLE SNAKE R nr Dixon	APR-JUL	218	285	330	100	375	440	330
LITTLE SNAKE R nr Lily	APR-JUL	239	310	355	97	400	470	365
White River nr Meeker	APR-JUL	153	193	225	78	263	331	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, 2004

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	27.7	24.4	24.0	LARAMIE RIVER BASIN	3	118	78
YAMCOLO	9.1	5.9	3.8	6.5	NORTH PLATTE RIVER BASIN	11	93	81
					TOTAL NORTH PLATTE BASIN	13	97	81
					ELK RIVER BASIN	2	108	93
					YAMPA RIVER BASIN	12	96	88
					WHITE RIVER BASIN	6	110	93
					TOTAL YAMPA AND WHITE RIV	17	100	89
					LITTLE SNAKE RIVER BASIN	8	110	97

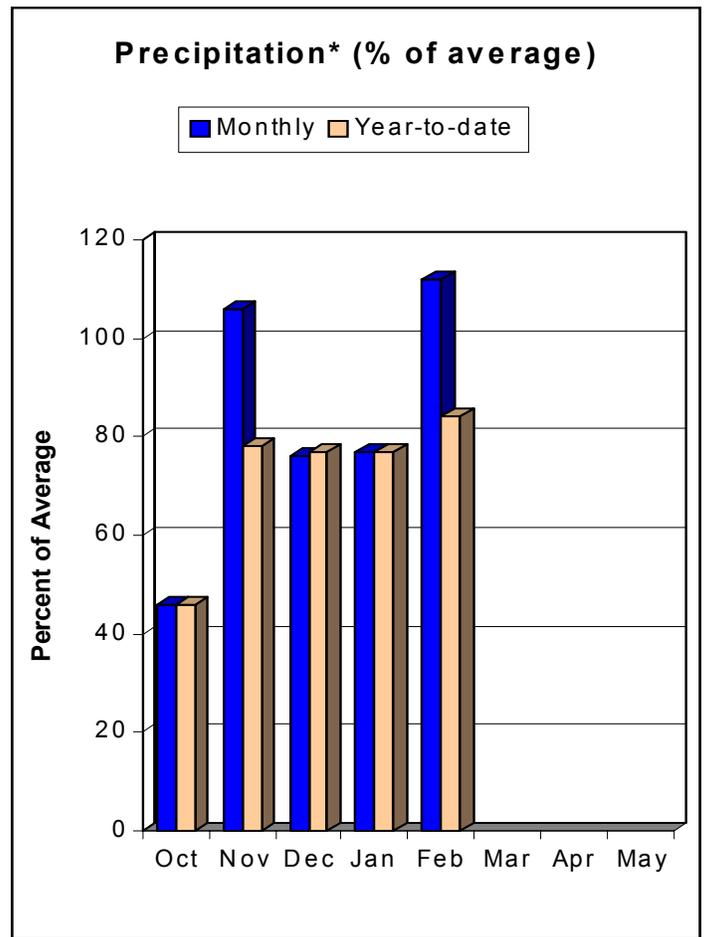
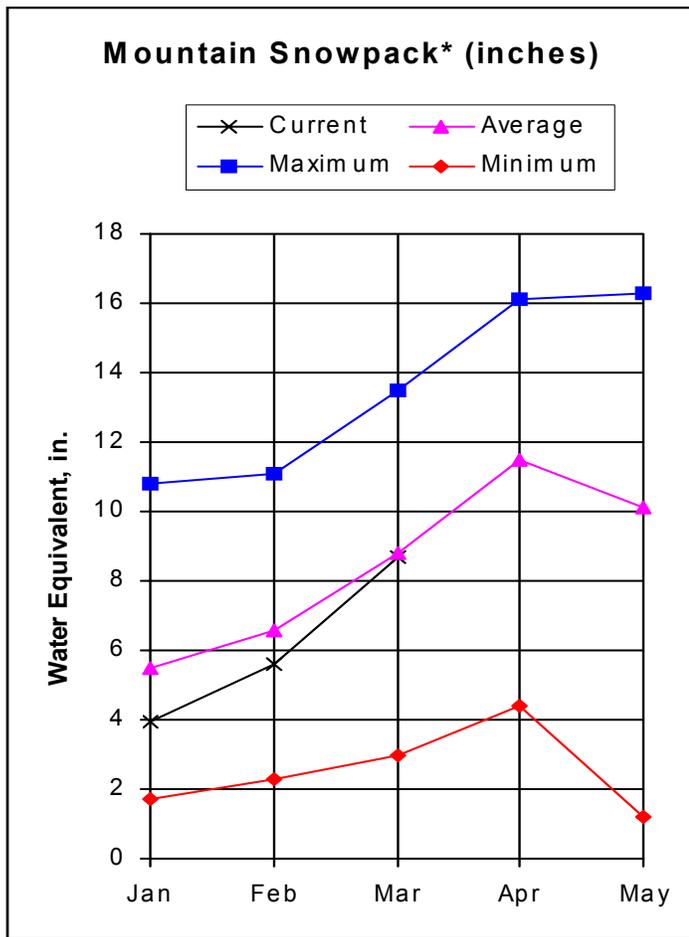
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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, 2004



*Based on selected stations

February was another good month of snow accumulation in the Arkansas Basin. Regular snowfall throughout the month has driven the snowpack measurements from only 76% of average last month, to 90% of average on March 1. The most dramatic increase was in the Purgatorie Watershed, where snowpack measurements went from only 75% of average last month, to 99% of average on March 1. The Upper Arkansas remains the watershed with the lowest percent of average in the basin at only 82% of average. The precipitation during February was a whopping 112% of average, which was the largest monthly accumulation this water year. The water year total is now at 84% of average. The improved snowpack must be great news for many reservoir operators, as the combined reservoir storage remains at only 53% of average. With the improved snowpack conditions, the streamflow forecasts have also improved, but most remain well below average. Forecasts range from 77% of average in the Cucharas River near La Veta, to 93% of average at the Inflow to Trinidad Lake.

ARKANSAS RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Chalk Creek nr Nathrop	APR-SEP	7.6	17.0	24	89	31	40	27
Arkansas River at Salida	APR-SEP	145	210	250	81	290	355	310
Grape Creek nr Westcliffe	APR-SEP	4.3	8.7	17.0	87	25	37	19.6
Pueblo Reservoir Inflow	APR-SEP	190	275	335	78	395	480	430
Huerfano River nr Redwing	APR-SEP	4.1	10.0	14.0	90	18.0	24	15.5
Cucharas River nr La Veta	APR-SEP	2.6	5.3	10.0	77	14.7	22	13.0
Trinidad Lake Inflow	APR-SEP	3.5	26	41	93	56	78	44

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

ARKANSAS RIVER BASIN
Watershed Snowpack Analysis - March 1, 2004

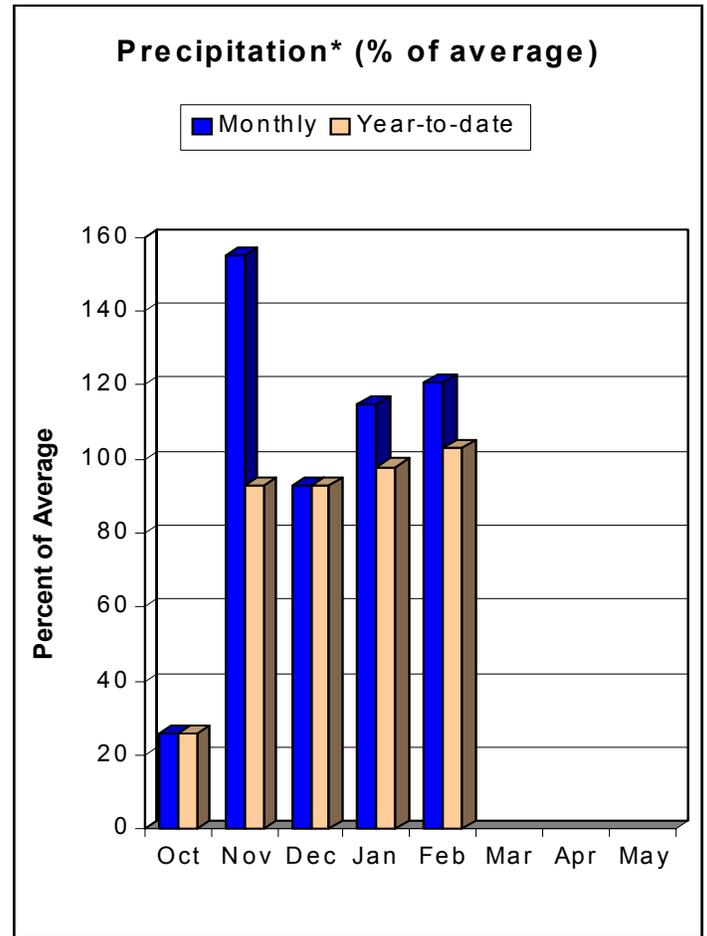
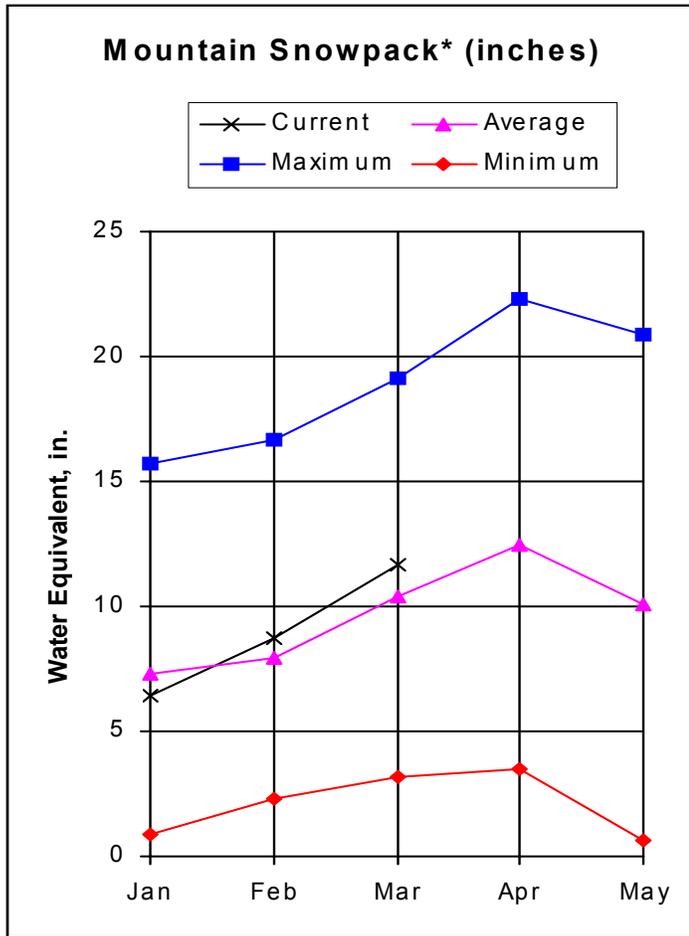
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ADOBE	70.0	0.0	0.0	36.0	UPPER ARKANSAS BASIN	6	95	86
CLEAR CREEK	11.0	8.3	6.9	6.8	CUCHARAS & HUERFANO RIVER	4	129	98
GREAT PLAINS	150.0	0.0	3.8	38.9	PURGATOIRE RIVER BASIN	2	106	99
HOLBROOK	7.0	0.0	2.3	4.8	TOTAL ARKANSAS RIVER BASIN	11	106	90
HORSE CREEK	28.0	0.0	0.0	12.7				
JOHN MARTIN	335.7	36.0	37.7	132.2				
LAKE HENRY	8.0	4.7	4.4	5.6				
MEREDITH	42.0	23.4	15.3	18.1				
PUEBLO	236.7	108.1	106.8	168.7				
TRINIDAD	72.3	17.8	16.3	26.2				
TURQUOISE	126.6	66.3	37.8	77.3				
TWIN LAKES	86.0	38.5	31.0	44.0				

* 90%, 70%, 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 BASIN as of March 1, 2004



*Based on selected stations

The Rio Grande Basin is enjoying one of the best snow seasons since 2001. Snowfall during February has boosted the measurements from an already impressive 106% of average on February 1, to 108% of average on March 1. There is 50% more snow than there was last year at this time. Measurements range from only 100% of average in the Culebra and Trinchera Creek watersheds, to 117% of average in the Alamosa Creek Watershed. The precipitation during February was 121% of average, and the water year total is now 103% of average. Reservoir storage in the six major reservoirs combined remains extremely low at only 43% of average, which is only 70% of last year's storage. Most of the streamflow forecasts are at or near average at this time, which should help to relieve much of the reservoir storage deficit during the upcoming runoff season. If the seasons wet pattern continues through March forecasts could be expected to be well above average at many of the points next month. Forecasts range from 83% of average at Culebra Creek at San Luis, to 103% of average on the Conejos River near Mogote.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Rio Grande at Thirty Mile Bridge	APR-SEP	87	108	125	92	145	180	136
Rio Grande Reservoir Inflow	APR-JUL	77	95	110	93	127	157	118
Rio Grande at Wagon Wheel Gap	APR-SEP	180	260	310	90	360	440	345
South Fork Rio Grande at South Fork	APR-SEP	88	114	132	100	150	176	132
Rio Grande nr Del Norte	APR-SEP	270	405	495	93	585	720	531
Saguache Creek nr Saguache	APR-SEP	13.1	23	30	91	37	47	33
Alamosa Creek abv Terrace Reservoir	APR-SEP	47	62	72	103	82	97	70
La Jara Creek nr Capulin	MAR-JUL	3.20	6.50	8.70	100	10.90	14.20	8.70
Trinchera Creek	APR-SEP	4.6	8.2	10.6	88	13.0	16.6	12.0
Sangre de Cristo Creek	APR-SEP	3.06	5.10	7.90	90	10.70	14.90	8.80
Ute Creek	APR-SEP	3.7	7.6	10.3	84	13.0	16.9	12.2
Platoro Reservoir Inflow	APR-JUL	47	58	65	102	72	83	64
	APR-SEP	51	63	71	100	79	91	71
Conejos River nr Mogote	APR-SEP	133	176	205	103	235	275	200
San Antonio River at Ortiz	APR-SEP	7.7	12.5	16.4	100	21	28	16.4
Los Pinos River nr Ortiz	APR-SEP	43	61	74	100	87	105	74
Culebra Creek at San Luis	APR-SEP	6.6	12.0	19.0	83	26	36	23
Costilla Reservoir inflow	MAR-JUL	5.5	8.2	10.0	94	11.8	14.5	10.6
Costilla Creek nr Costilla	MAR-JUL	14.1	21	25	96	29	36	26

UPPER RIO GRANDE BASIN
Reservoir Storage (1000 AF) - End of February

UPPER RIO GRANDE BASIN
Watershed Snowpack Analysis - March 1, 2004

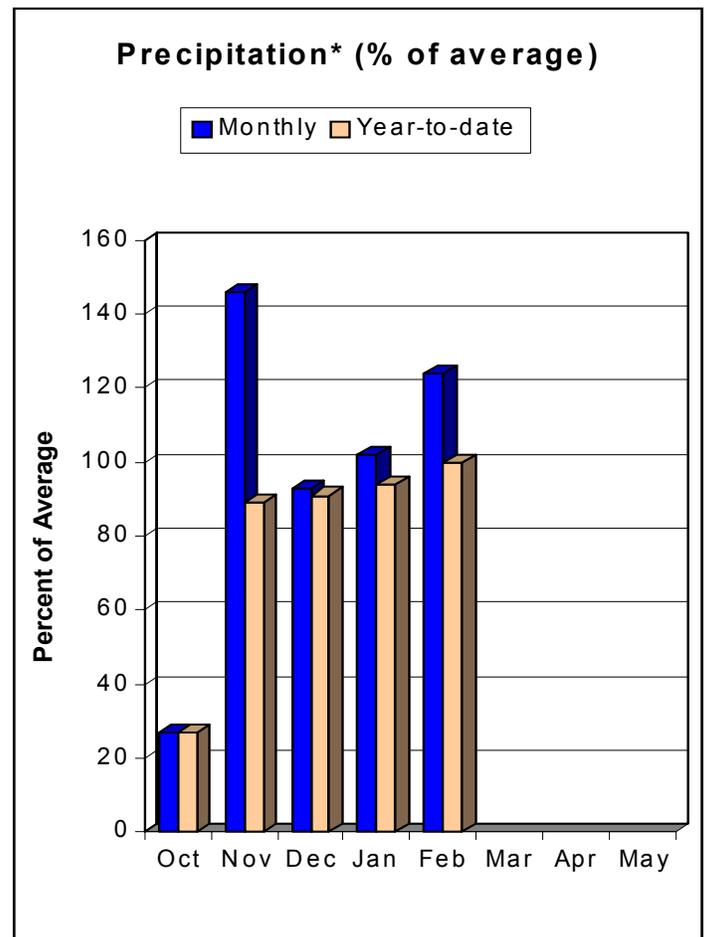
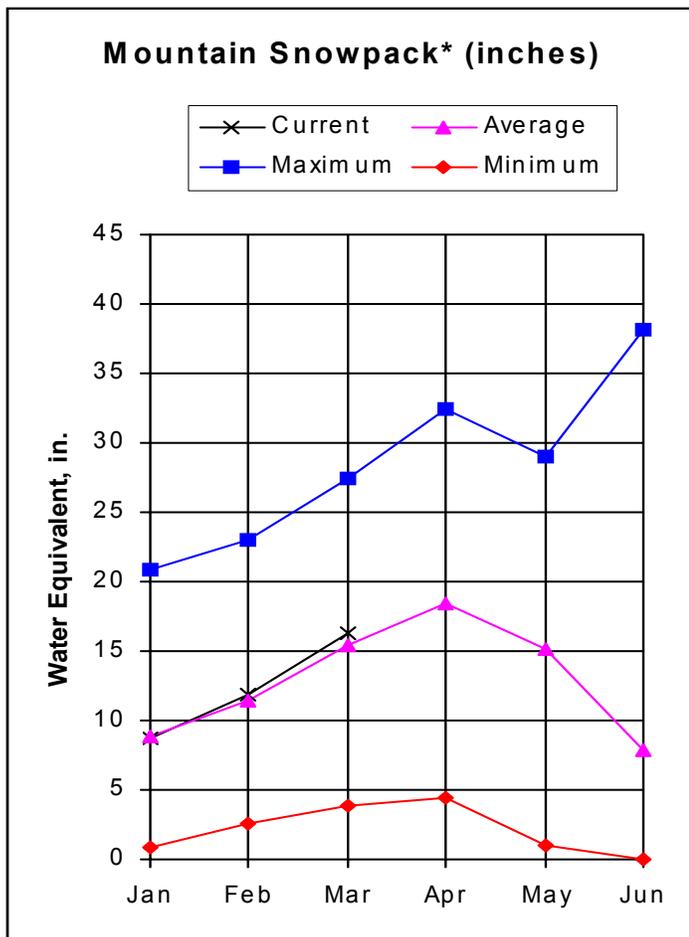
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	15.0	3.3	3.1	5.3	ALAMOSA CREEK BASIN	2	208	117
PLATORO	53.7	5.2	7.8	24.3	CONEJOS & RIO SAN ANTONIO	4	140	107
RIO GRANDE	51.0	11.0	18.1	17.6	CULEBRA & TRINCHERA CREEK	5	110	100
SANCHEZ	103.0	12.8	11.8	24.1	UPPER RIO GRANDE BASIN	12	178	109
SANTA MARIA	45.0	5.1	11.0	10.6	TOTAL UPPER RIO GRANDE BA	23	150	108
TERRACE	13.1	0.3	2.2	6.7				

* 90%, 70%, 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.

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- (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, 2004



*Based on selected stations

These basins are enjoying the best snow season since 1997. Abundant snowfall during February has bumped the snowpack measurements from 102% of average on February 1, to 105% of average on March 1. There is 36% more snow than last year at this time. The measurements range from 100% of average in the Dolores River Basin, to 115% of average in the San Juan River Basin. Precipitation during February was 124% of the average, and the water year total is now 100% of average. Reservoirs in the basins have a combined storage level of only 67% of average, but at least the levels are 18% higher than last year at this time. Streamflow forecasts are slightly higher than last month, making most of them at near average, with a few that are well above average. Forecasts range from 88% of average on the La Plata River at Hesperus, to 113% of average on the Piedra River near Arboles.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		Future Conditions		----- Wetter ----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Dolores River at Dolores	APR-JUL	160	215	255	96	295	350	265
McPhee Reservoir inflow	APR-JUL	195	260	305	95	350	415	320
San Miguel River nr Placerville	APR-JUL	77	105	125	95	145	173	132
Gurley Reservoir Inlet	APR-JUL	9.7	13.5	16.0	97	18.5	23	16.5
	APRIL			1.66	100			1.66
	MAY			8.50	96			8.83
	JUNE			4.50	96			4.67
	JULY			1.34	102			1.32
Cone Reservoir Inlet	APR-JUL	1.29	2.60	3.50	99	4.40	5.70	3.53
	APRIL			0.46	100			0.46
	MAY			1.62	99			1.64
	JUNE			1.04	100			1.04
	JULY			0.38	100			0.38
Lilylands Reservoir Inlet	APR-JUL	1.62	2.30	2.70	94	3.10	3.80	2.86
	APRIL			0.40	100			0.40
	MAY			1.20	91			1.32
	JUNE			0.80	92			0.87
	JULY			0.30	111			0.27
Rio Blanco at Blanco Diversion	APR-JUL	33	47	57	108	67	81	53
Navajo River at Oso Diversion	APR-JUL	43	61	73	106	85	103	69
San Juan River nr Carracus	APR-JUL	261	367	450	111	541	691	405
Piedra River nr Arboles	APR-JUL	172	225	260	113	295	350	230
Vallecito Reservoir Inflow	APR-JUL	147	187	215	105	245	285	205
Navajo Reservoir Inflow	APR-JUL	555	745	880	110	1015	1205	800
Animas River at Durango	APR-JUL	305	390	450	102	510	595	440
Lemon Reservoir Inflow	APR-JUL	36	50	60	103	70	84	58
La Plata River at Hesperus	APR-JUL	11.5	18.0	22	88	26	32	25
Mancos River nr Mancos	APR-JUL	13.0	27	36	90	45	59	40
	APRIL			6.00	103			5.80
	MAY			15.0	94			15.9
	JUNE			11.0	80			13.7
	JULY			4.00	87			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, 2004

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GROUNDHOG	21.7	7.0	3.8	12.0	ANIMAS RIVER BASIN	9	142	104
JACKSON GULCH	10.0	2.9	2.6	4.6	DOLORES RIVER BASIN	7	120	100
LEMON	40.0	9.9	6.0	20.4	SAN MIGUEL RIVER BASIN	5	117	101
MCPHEE	381.2	169.6	162.9	276.3	SAN JUAN RIVER BASIN	4	162	114
NARRAGUINNEP	19.0	14.5	8.5	13.5	TOTAL SAN MIGUEL, DOLORES	24	136	105
VALLECITO	126.0	56.9	37.6	60.8	AN JUAN RIVER BASINS			

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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/water/quantity/westwide.html>.

Issued by

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Colorado
Basin Outlook Report
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