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Department of
Agriculture

**Natural
Resources
Conservation
Service**

Colorado Basin Outlook Report May 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

MAY 1, 2004

Summary

Much of Colorado saw a return to wet weather patterns during April. Those basins east of the Continental Divide benefited the most from the April storms. Elsewhere across the state, at least cooler temperatures helped to retard the melt of the existing snowpack. The April storms did not bring enough moisture to alleviate drought concerns to any large degree. Reservoir storage continues to track at below average levels across most of the state. Forecasted runoff for the spring and summer months remains below average nearly statewide, and some basins with the lowest forecasts, can only expect about half or less of their average volumes.

Snowpack

A series of wet and intense storms crossed Colorado during April, bringing a much needed addition to the snowpack in many locations. The most favored locations for additional snowfall were the lower Arkansas and Rio Grande basins. Also benefiting from these storms were the South Platte and San Juan basins. The snowpack percent of average in the Arkansas Basin rebounded to 98% of average on May 1, after dropping to 60% of average on April 1, from the dry March. In the Rio Grande Basin, snowpack percentages increased to the highest in the state, at 102% of average on May 1. Across northwestern Colorado the storm track was greatly reduced during April, leaving the snowpack in the Colorado, Yampa and White River basins to continue their second month of steady declines. The combined Yampa and White basins are now reporting the lowest snowpack percentages in the state, at only 53% of average. The Colorado River Basin is only faring slightly better at 55% of average snowpack. In many respects, this year's snowpack pattern is completely opposite of last year's. With last year's highest snowpack percentages measured across most of northern Colorado, and leaving the southern mountains with well below average totals, this year's pattern reflects the highest percentages across the southern mountains, leaving the northern mountain with well below average totals. Statewide, the current snowpack increased only slightly from last month, at 68% of average, and remains well below last year's snowpack totals at only 78%. With another year of below average snowpack accumulations across the state, water users will now have to look towards the winter of 2005 for any significant relief to water supply shortages. Typically, spring and summer rainfall only tends to reduce demands, while not contributing towards significant long-term water supply reserves.

Precipitation

April was an excellent month for precipitation across most of Colorado. Only two basins reported near average monthly totals. Those include the combined Yampa and White, at 97% of average, and the Colorado Basin, at 101% of average. The remainder of the state recorded basinwide percentages for the month ranging from 139% of average in the South Platte, to 209% of average in the Arkansas. Statewide, precipitation measured at SNOTEL sites was 131% of average for the month of April. In several basins, the April precipitation was more than enough to compensate for the previous dry March. Those basins include the Arkansas, Rio Grande and South Platte. Water year totals are now the highest in the Rio Grande Basin, at 104% of average. Statewide, water year totals returned to the same percentage recorded on March 1, 89% of average.

Reservoir Storage

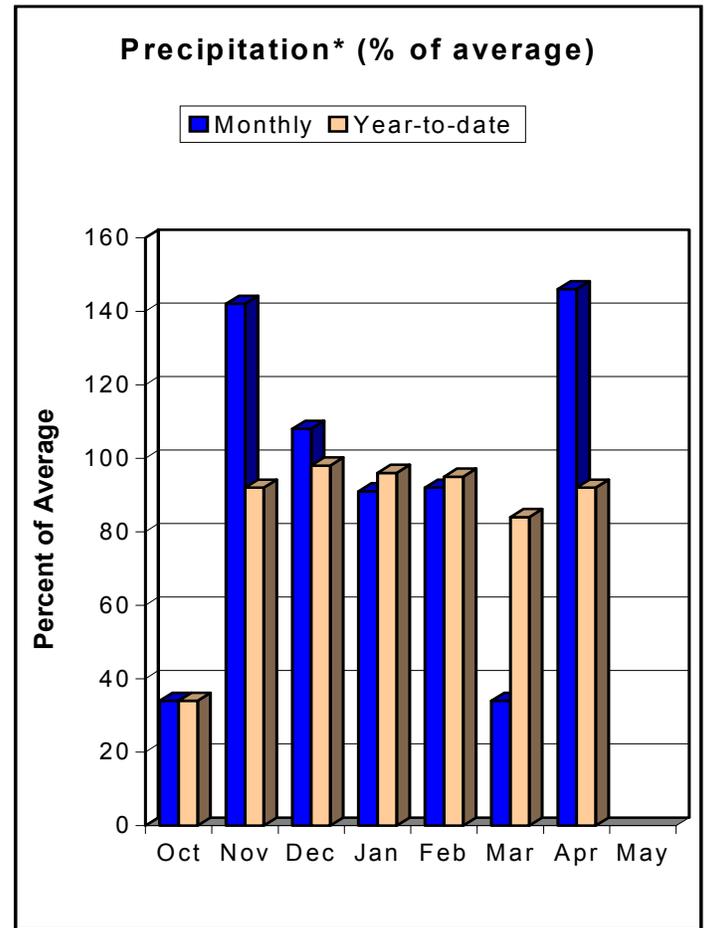
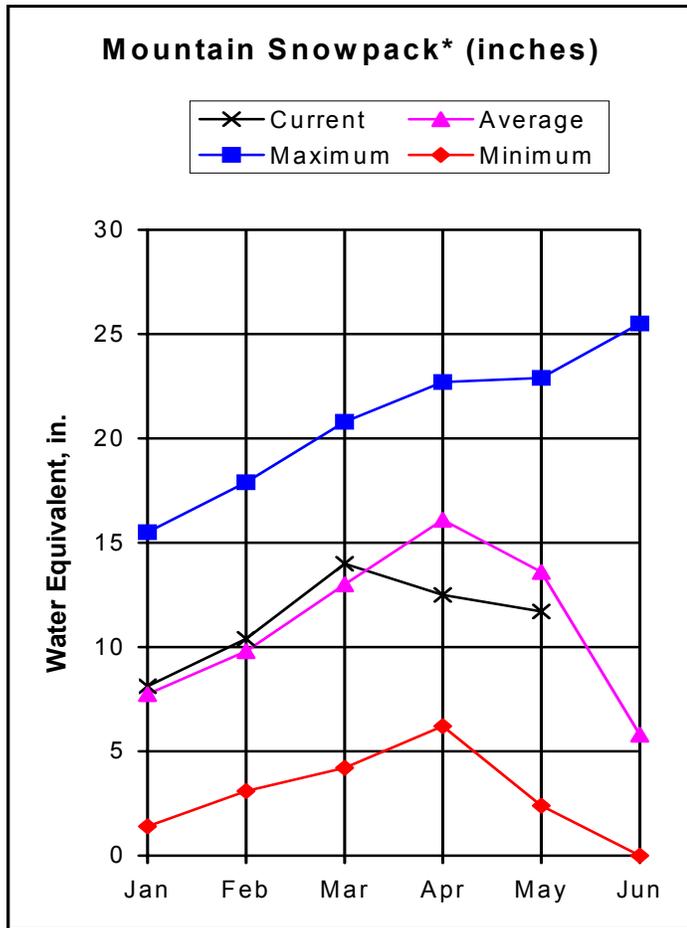
Colorado's reservoirs continue to make slow, but steady improvements in storage across most of the state. While still generally below average, volumes have improved significantly over the past two years. The best storage is reported in the Gunnison and the Yampa White basins at 111%, and 106% of average, respectively. Only two basins continue to report well below average storage volumes. Those include the Arkansas and Rio Grande, at 53% and 54% of average, respectively. Statewide, volumes as a percent of average have improved again for the sixth consecutive month and are now 84% of average. Statewide, storage volumes are now nearly 2.9 million acre feet. While these volumes are 0.5 million acre feet below average, they show a marked improvement from the August 2002 volumes of 1.8 million acre feet, which was 1.9 million acre feet below average. This year's storage is higher in all basins with the single exception of the Rio Grande, which is reporting 91% of last year's volumes. The Colorado Basin is reporting the highest volume over that of last year, at 211%. Statewide, this year's storage is 139% of last year's.

Streamflow

Even after a wet month during April, Colorado can continue to expect below average runoff for the 2004 season. Only a handful of small tributaries in the Arkansas and Rio Grande basins are forecast to produce near average runoff this year. Elsewhere across the state, runoff volumes are forecast to be below, to well below average. Some of the lowest forecasted volumes, as a percent of average, occur in the Upper South Platte, North Platte, and Yampa basins. Forecasted streamflows in these basins are all less than 50% of average. For the state's larger rivers, the best prospects for runoff are along the Arkansas, the Rio Grande and San Juan. Forecasted volumes along these rivers typically range from 80% to 90% of average. Colorado will make a poor contribution to refilling Lake Powell this year with flows along the Colorado, Yampa, and Dolores Rivers at only about 50% to 65% of average.

GUNNISON RIVER BASIN

as of May 1, 2004



*Based on selected stations

The snowpack in the Gunnison Basin melted at a below average pace during April. This produced a slight increase in the percent of average snowpack totals from last month. The basin is now reporting a snowpack of 77% of average. Although below average, this year's snowpack remains at 17% above that measured last year at this time. Precipitation, as a percent of average, was the highest recorded for the 2004 water year at 146% of average. This helped the basin recover from the dry March, leaving the basin's water year totals at 92% of average. Reservoir storage, as a percent of average, is the highest in the state at 111% of average and is 35% above last year's volumes for May 1. Runoff prospects are the poorest along Tomichi Creek, where volumes at Gunnison have dipped to 49% of average. Meanwhile, the highest forecasts occur along the Uncompahgre River where the expected inflow into Ridgeway Reservoir is 83% of average.

GUNNISON RIVER BASIN
Streamflow Forecasts - May 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	46	60	70	68	80	94	103
Slate River nr Crested Butte	APR-JUL	57	62	65	73	68	73	89
East River at Almont	APR-JUL	95	116	130	68	144	165	192
Gunnison River nr Gunnison	APR-JUL	171	220	250	64	280	330	390
Tomichi Creek at Sargents	APR-JUL	9.5	14.8	18.5	58	23	28	32
Cochetopa Creek blw Rock Creek	APR-JUL	5.3	8.7	11.0	64	13.3	16.7	17.3
Tomichi Creek at Gunnison	APR-JUL	22	32	40	49	49	64	81
Lake Fork at Gateview	APR-JUL	75	87	95	75	103	115	126
Blue Mesa Reservoir Inflow	APR-JUL	295	395	460	64	525	625	720
Paonia Reservoir Inflow	MAR-JUN	46	54	60	60	66	76	100
	APR-JUL	39	50	57	56	65	78	102
N.F. Gunnison River nr Somerset	APR-JUL	159	189	210	69	232	268	305
Surface Creek nr Cedaredge	APR-JUL	9.4	11.2	12.5	73	14.0	16.6	17.1
Ridgway Reservoir Inflow	APR-JUL	67	77	85	83	93	107	102
Uncompahgre River at Colona	APR-JUL	76	93	105	76	118	138	139
Gunnison River nr Grand Junction	APR-JUL	655	860	1000	64	1135	1345	1560

GUNNISON RIVER BASIN
Reservoir Storage (1000 AF) - End of April

GUNNISON RIVER BASIN
Watershed Snowpack Analysis - May 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	453.9	297.4	404.7	UPPER GUNNISON BASIN	15	111	74
CRAWFORD	14.3	10.3	6.8	12.1	SURFACE CREEK BASIN	3	122	94
FRUITGROWERS	4.3	4.4	4.1	4.1	UNCOMPAHGRE BASIN	4	140	71
FRUITLAND	9.2	6.2	3.4	4.9	TOTAL GUNNISON RIVER BASIN	19	117	74
MORROW POINT	121.0	110.0	113.1	113.4				
PAONIA	18.0	5.7	9.8	7.4				
RIDGWAY	83.2	71.6	71.4	57.9				
TAYLOR PARK	106.0	77.1	42.2	59.9				

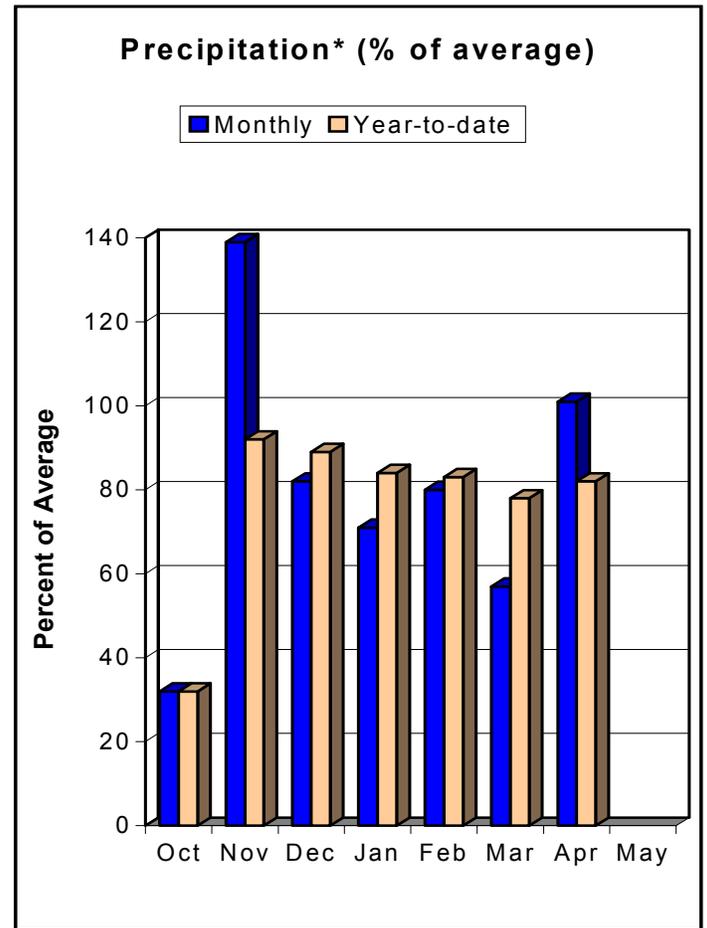
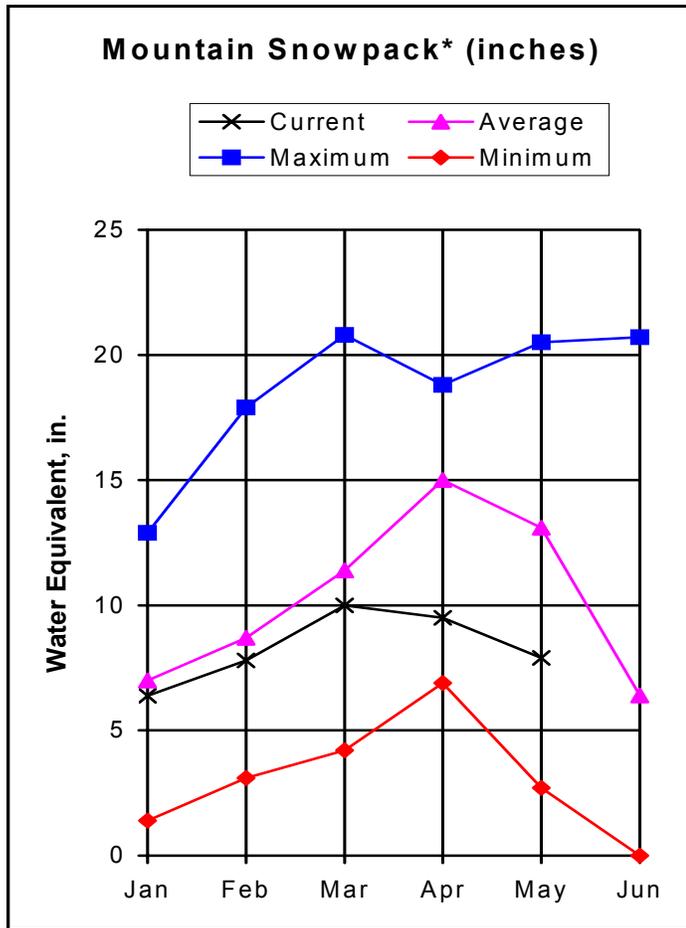
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 May 1, 2004



*Based on selected stations

The Colorado Basin was unable to take advantage of the exceptionally wet month which soaked most of the state. As a result, snowpack levels remain at only 55% of average and are only 54% of last year's snowpack. At least cooler temperatures during April, helped to slow the melt which began in March. Precipitation during April was 101% of average offering only a slight improvement to the water year totals which are only 83% of average. Reservoir storage is more than two times that of last year, but remains below average. The eight major reservoirs in the basin are reporting a combined storage of 89% of average. Runoff prospects throughout the Colorado Basin are very poor this year. Most of the forecasts along the main stem range from 58% to 60% of average. The highest forecast volumes, as a percent of average, occur along the tributaries toward the south and include the Roaring Fork, Eagle, Blue and William's Fork. Forecast volumes along these reaches range from 63% to 66% of average.

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - May 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	111	122	130	58	139	152	225
Willow Creek Reservoir Inflow	APR-JUL	16.4	22	27	53	32	40	51
Williams Fork Reservoir inflow	APR-JUL	48	56	62	65	68	78	95
Dillon Reservoir Inflow	APR-JUL	72	88	100	60	112	128	167
Green Mountain Reservoir inflow	APR-JUL	147	166	180	64	194	216	280
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	23	26	28	47	30	34	60
Eagle River blw Gypsum	APR-JUL	179	202	220	66	239	270	335
Colorado River nr Dotsero	APR-JUL	540	730	860	60	985	1185	1440
Ruedi Reservoir Inflow	APR-JUL	59	71	80	57	91	109	141
Roaring Fork at Glenwood Springs	APR-JUL	337	402	450	63	500	579	710
Colorado River nr Cameo	APR-JUL	865	1180	1400	58	1620	1940	2420

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

UPPER COLORADO RIVER BASIN
Watershed Snowpack Analysis - May 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	209.7	125.3	212.8	BLUE RIVER BASIN	9	53	62
LAKE GRANBY	465.6	163.4	32.2	259.5	UPPER COLORADO RIVER BASIN	35	44	51
GREEN MOUNTAIN	139.0	68.5	35.8	54.3	MUDDY CREEK BASIN	3	29	26
HOMESTAKE	43.0	13.6	17.2	16.8	PLATEAU CREEK BASIN	3	122	94
RUEDI	102.0	65.5	49.4	59.7	ROARING FORK BASIN	8	78	55
VEGA	32.0	16.2	8.8	16.6	WILLIAMS FORK BASIN	4	44	53
WILLIAMS FORK	96.8	63.8	12.5	55.3	WILLOW CREEK BASIN	3	37	62
WILLOW CREEK	9.0	6.6	6.5	5.9	TOTAL COLORADO RIVER BASIN	46	54	56

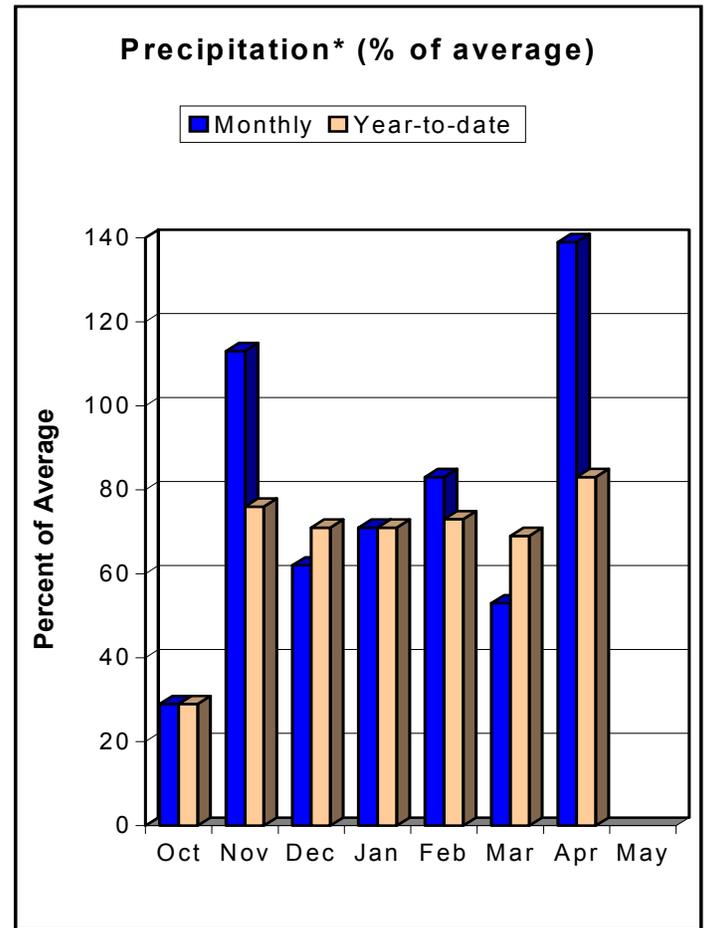
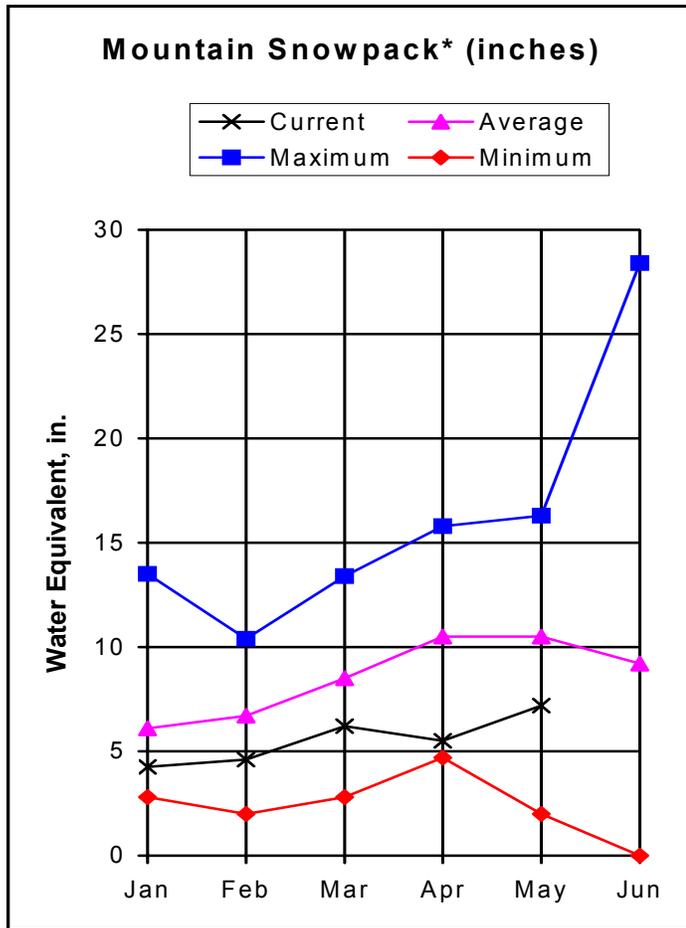
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 May 1, 2004



*Based on selected stations

After four consecutive dry months, above average moisture finally returned to the South Platte Basin in April. Snowpack, as a percent of average, increased from a dismal 51% of average measured on April 1, to 65% of average on May 1. This year's snowpack remains well below that of last year and is only 60% of those readings. April's precipitation was an impressive 139% of average and more than helped to restore the declines which were measured last month. The South Platte Basin would still need about three months of similar April precipitation to approach an average water year total. Reservoir storage in the 32 major reservoirs is now 81% of average and is 28% above last year's volumes on this date. The outlook for spring and summer water supplies is poor throughout the South Platte Basin this year. The lowest runoff forecasts occur throughout the upper South Platte Basin where volumes of well below 50% of average are expected. Forecasts improve significantly along the Front Range from near Boulder Creek, north through the Cache la Poudre.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - May 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	2.0	3.0	3.9	22	5.1	7.4	17.5
Spinney Mountain Reservoir inflow	APR-JUL	12.4	16.3	19.7	35	24	31	57
Elevenmile Canyon Reservoir inflow	APR-JUL	6.0	13.2	18.0	31	23	30	59
Cheesman Lake inflow	APR-JUL	29	35	40	35	46	56	114
South Platte River at South Platte	APR-SEP	61	102	130	51	158	199	254
Bear Creek abv Evergreen	MAY-SEP	6.3	9.3	12.1	53	15.8	23	23
Bear Creek at Morrison	MAY-SEP	5.8	9.3	12.9	48	17.8	29	27
Clear Creek at Golden	APR-SEP	52	66	75	56	84	98	134
St. Vrain Creek at Lyons	APR-SEP	45	57	65	77	73	85	84
Boulder Creek nr Orodell	APR-SEP	37	43	46	87	49	55	53
South Boulder nr Eldorado Spgs	APR-SEP	23	30	34	74	38	45	46
Big Thompson River at mouth nr Drake	APR-SEP	59	72	81	69	90	103	117
CACHE LAPOUDRE at Canyon Mouth	APR-SEP	160	195	215	78	235	270	275

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

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

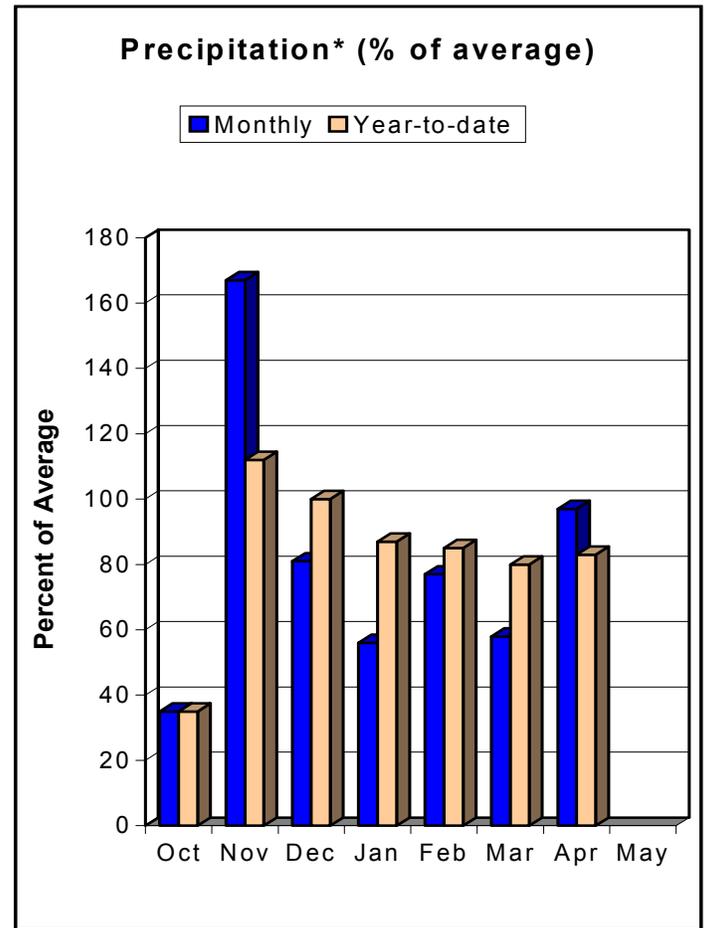
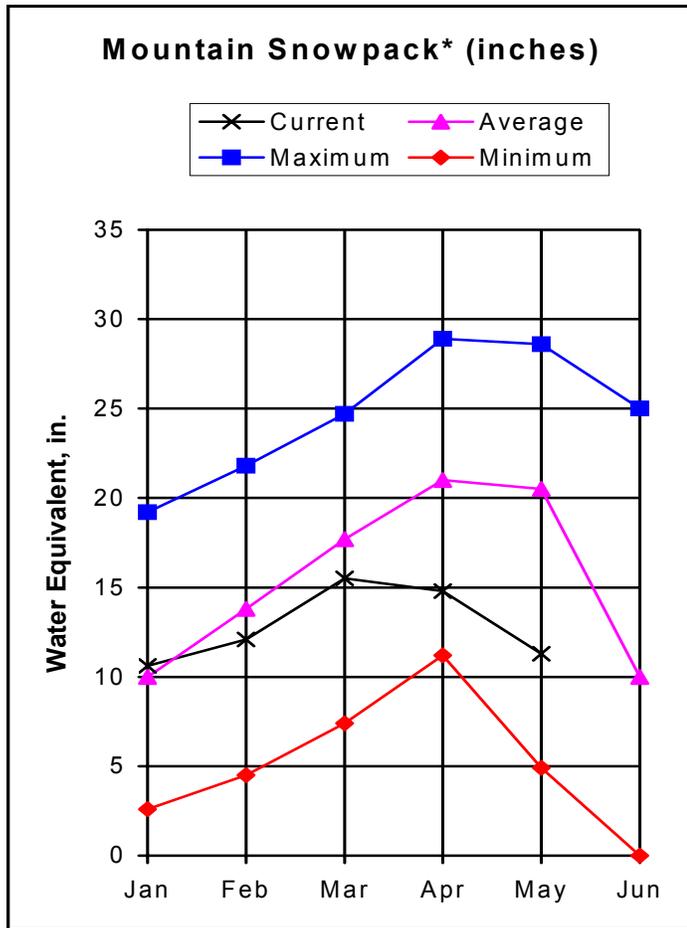
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
		ANTERO	20.0	0.0			0.0	15.7
BARR LAKE	32.0	19.6	30.6	28.6	BOULDER CREEK BASIN	5	54	65
BLACK HOLLOW	8.0	2.7	2.0	4.2	CACHE LA POUUDRE BASIN	8	51	56
BOYD LAKE	49.0	30.5	6.1	35.2	CLEAR CREEK BASIN	4	54	62
CACHE LA POUUDRE	10.0	5.2	4.6	8.9	SAINT VRAIN BASIN	4	52	52
CARTER	108.9	64.8	96.7	103.0	UPPER SOUTH PLATTE BASIN	15	76	75
CHAMBERS LAKE	9.0	5.8	1.6	3.6	TOTAL SOUTH PLATTE BASIN	43	60	64
CHEESMAN	79.0	63.6	53.7	64.8				
COBB LAKE	34.0	5.2	2.5	14.2				
ELEVEN MILE	97.8	78.9	45.9	96.4				
EMPIRE	38.0	19.9	21.6	33.0				
FOSSIL CREEK	12.0	6.7	9.9	8.1				
GROSS	41.8	17.5	15.1	20.9				
HALLIGAN	6.4	3.4	6.4	4.8				
HORSECREEK	16.0	12.3	8.1	14.5				
HORSETOOTH	149.7	148.9	30.6	123.0				
JACKSON	35.0	23.7	24.1	30.4				
JULESBURG	28.0	18.6	19.7	21.3				
LAKE LOVELAND	14.0	10.6	11.7	10.1				
LONE TREE	9.0	8.9	8.4	7.9				
MARIANO	6.0	2.2	4.7	5.0				
MARSHALL	10.0	8.0	9.5	7.4				
MARSTON	13.0	4.8	12.4	14.5				
MILTON	24.0	18.1	12.3	19.2				
POINT OF ROCKS	70.0	56.1	49.7	69.8				
PREWITT	33.0	8.5	12.2	25.9				
RIVERSIDE	63.1	43.0	46.9	57.9				
SPINNEY MOUNTAIN	48.7	17.3	11.9	32.1				
STANDLEY	42.0	38.8	26.1	35.3				
TERRY LAKE	8.0	5.7	6.0	5.7				
UNION	13.0	9.8	7.2	11.7				
WINDSOR	19.0	9.5	4.6	13.6				

* 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 May 1, 2004



*Based on selected stations

It appears that 2004 will go into the books as another significant drought year for these basins. With snowpack levels reaching their peak in March, followed by melting one to two months early, the May 1 snowpack percentages are the lowest in the state. Snowpack readings for these basins are only 53% of average and are only 57% of last year's totals for this date. These basins were the only major basins in Colorado to report below average precipitation for the month of April. While better than most months for the 2004 water year, the April totals were 97% of average. This leaves the water year totals at only 83% of average. Reservoir storage for the two reservoirs in these basins is slightly above average. Forecasted runoff in these basins is some of the lowest in the state. Volumes forecast in the North Platte are only a dismal 32% of average and improve only slightly along the upper tributaries to the Yampa River.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - May 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)	
NORTH PLATTE RIVER nr Northgate	MAY-SEP	13.0	49	74	32	99	135	230
LARAMIE RIVER nr Woods	MAY-SEP	25	52	70	55	88	115	127
Yampa R abv Stagecoach Res	APR-JUL	4.6	8.3	13.0	45	17.8	25	29
Yampa River at Steamboat Springs	APR-JUL	118	140	155	55	169	194	280
Elk River nr Milner	APR-JUL	107	137	160	49	185	224	325
Elkhead Creek nr Elkhead	APR-JUL	11.8	14.6	17.0	44	19.7	25	39
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	12.3	22	29	49	36	46	59
Fortification Ck nr Fortification	MAR-JUN	2.00	2.50	3.00	40	4.30	6.20	7.50
Yampa River nr Maybell	APR-JUL	295	410	490	50	570	685	990
Little Snake River nr Slater	APR-JUL	62	81	96	60	112	137	159
LITTLE SNAKE R nr Dixon	APR-JUL	84	147	190	58	232	297	330
LITTLE SNAKE R nr Lily	APR-JUL	95	160	205	56	250	315	365
White River nr Meeker	APR-JUL	120	142	160	55	180	213	290

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

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Watershed Snowpack Analysis - May 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	30.5	30.0	28.1	LARAMIE RIVER BASIN	4	63	64
YAMCOLO	9.1	7.0	4.9	7.4	NORTH PLATTE RIVER BASIN	11	65	62
					TOTAL NORTH PLATTE BASIN	14	66	64
					ELK RIVER BASIN	2	43	34
					YAMPA RIVER BASIN	12	52	48
					WHITE RIVER BASIN	6	80	62
					TOTAL YAMPA AND WHITE RIV	17	57	50
					LITTLE SNAKE RIVER BASIN	8	64	59

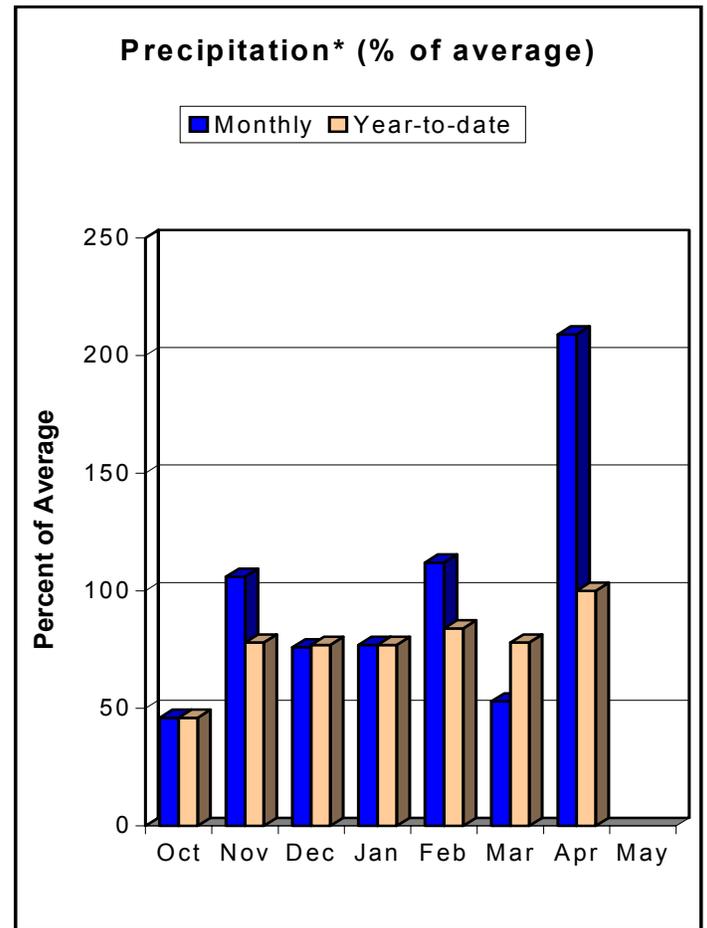
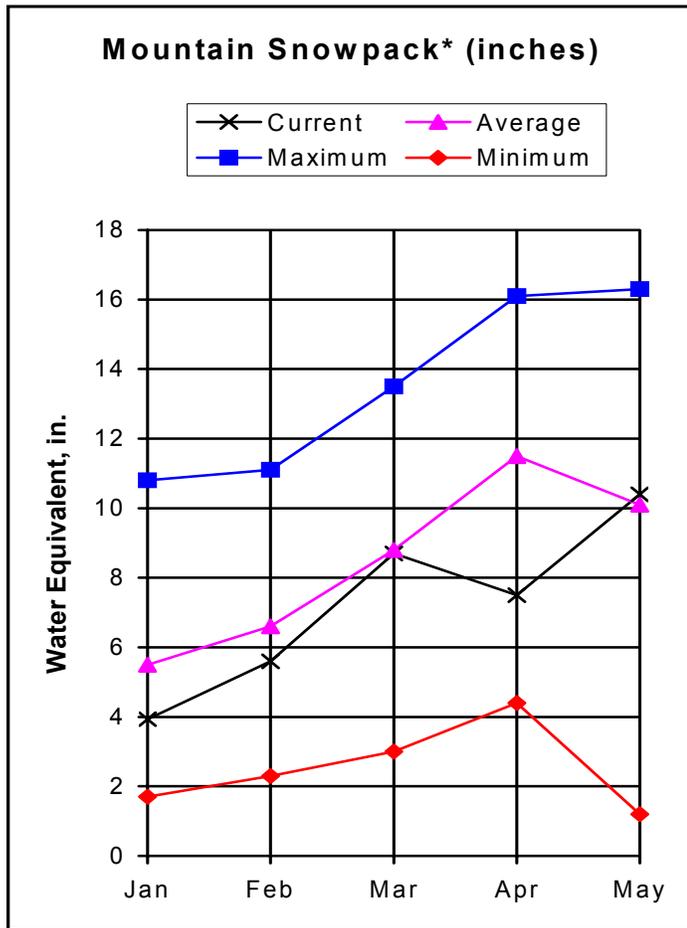
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The average is computed for the 1971-2000 base period.

- (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 May 1, 2004



*Based on selected stations

The Arkansas Basin was favored by the April storms which brought heavy snowfalls to the Sangre de Cristo Mountains. These storms helped to significantly improve the snowpack along that range, but had a reduced contribution in the mountains of the headwaters. Snowpack readings for May 1, rebound to 98% of average and are 101% of last year's readings on this date. The Arkansas Basin recorded the highest monthly percent of average precipitation in the state in April with 209% of the monthly average. This allowed the water year totals to reach 100% of average this month. Reservoir storage within the Arkansas Basin continues to track at well below average volumes. This month's statistics for the 12 reservoirs in the basin are only 53% of average, but remain 20% above that in storage a year ago. Runoff forecasts in the Arkansas Basin range from 102% of average along the Purgatoire River, to only about 85% of average along the main stem of the Arkansas River.

ARKANSAS RIVER BASIN
Streamflow Forecasts - May 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	11.9	18.5	23	85	27	34	27
Arkansas River at Salida	APR-SEP	179	225	260	84	295	340	310
Grape Creek nr Westcliffe	APR-SEP	8.8	17.0	22	112	27	35	19.6
Pueblo Reservoir Inflow	APR-SEP	250	320	365	85	410	480	430
Huerfano River nr Redwing	APR-SEP	10.4	13.2	15.0	97	16.7	19.7	15.5
Cucharas River nr La Veta	APR-SEP	6.9	9.9	12.0	92	14.1	17.1	13.0
Trinidad Lake Inflow	APR-SEP	26	37	45	102	53	64	44

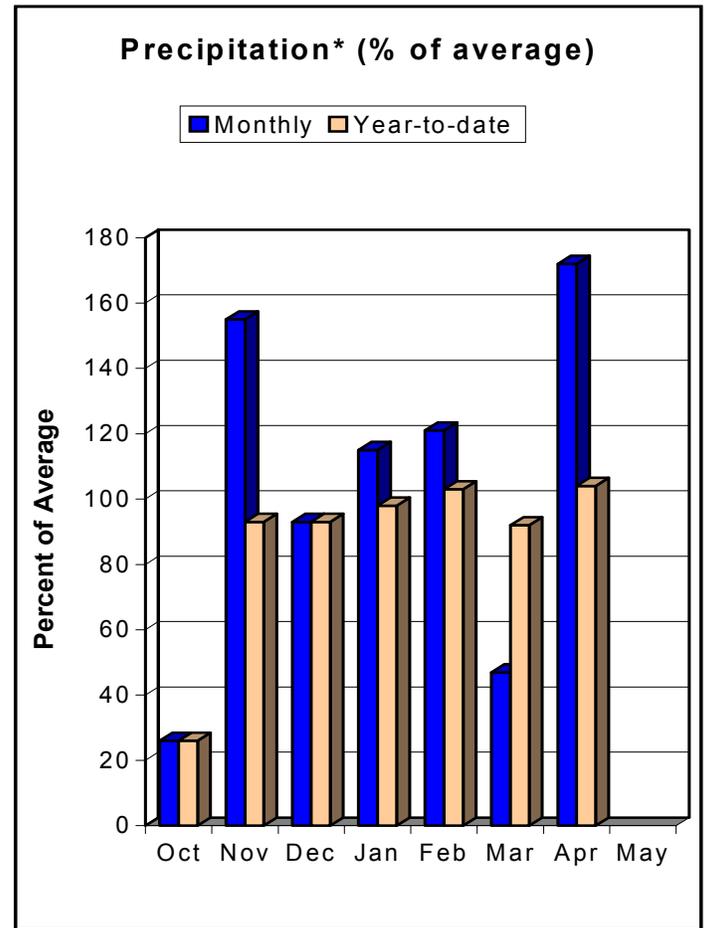
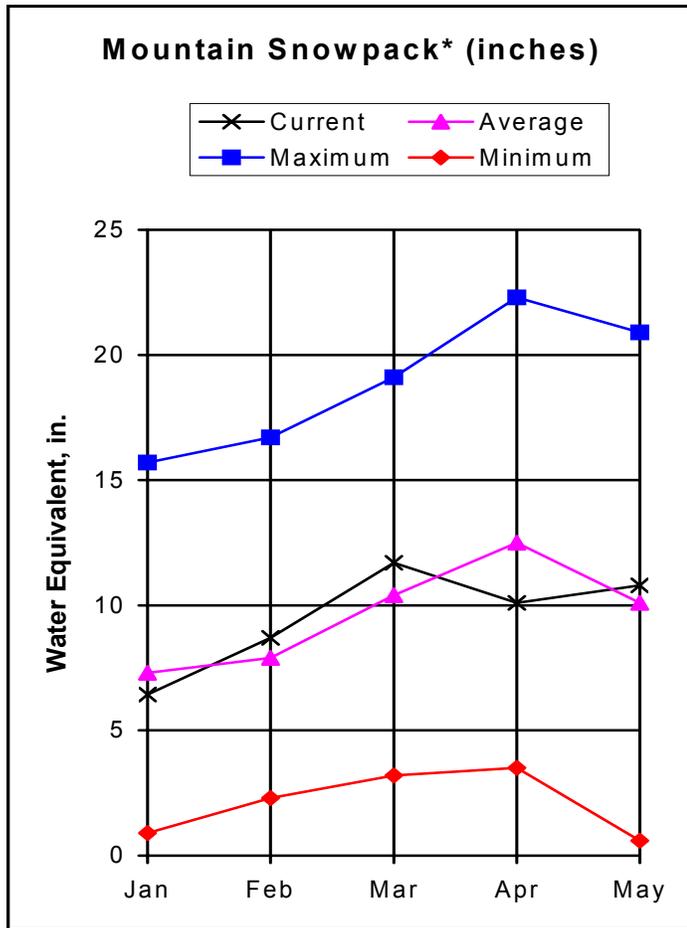
ARKANSAS RIVER BASIN Reservoir Storage (1000 AF) - End of April					ARKANSAS RIVER BASIN Watershed Snowpack Analysis - May 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr Average	
ADOBE	70.0	0.0	0.0	34.3	UPPER ARKANSAS BASIN	6	86	81
CLEAR CREEK	11.0	8.4	7.0	6.0	CUCHARAS & HUERFANO RIVER	4	110	110
GREAT PLAINS	150.0	0.0	0.8	40.6	PURGATOIRE RIVER BASIN	2	215	120
HOLBROOK	7.0	0.0	1.7	4.7	TOTAL ARKANSAS RIVER BASIN	11	101	92
HORSE CREEK	28.0	0.0	0.0	11.3				
JOHN MARTIN	335.7	12.4	41.8	123.7				
LAKE HENRY	8.0	6.4	6.1	6.0				
MEREDITH	42.0	24.0	10.7	20.1				
PUEBLO	236.7	113.5	103.7	163.5				
TRINIDAD	72.3	25.4	19.6	29.1				
TURQUOISE	126.6	64.2	29.9	70.8				
TWIN LAKES	86.0	37.1	21.2	41.3				

* 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.

UPPER RIO GRANDE BASIN as of May 1, 2004



*Based on selected stations

Most of the additional snowpack accumulations received during April were centered along the Sangre de Cristo Mountains, which helped to improve the May 1 percentages to 102% of average, the highest in the state. This year's snowpack is approaching nearly two times that measured last year at this time, at 186% of those readings. April's precipitation, which was 172% of average, helped to erase the effects of the dry March, allowing water year totals to recover to 104% of average. Reservoir storage remains in poor conditions at only 54% of the average volumes for May 1. The Rio Grande Basin is the only basin in Colorado which is storing less water in reservoirs than last year. The current volumes are 91% of last year's. While water supplies are expected to be much better than the past two years in the Rio Grande Basin, they remain consistently below average. For the most part, main stem forecasts remain unchanged from last month, with the only significant improvements in forecasts concentrated along those tributaries flowing from the Sangre de Cristo Mountains.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - May 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	109	115	120	88	125	132	136
Rio Grande Reservoir Inflow	APR-JUL	90	97	101	86	106	113	118
Rio Grande at Wagon Wheel Gap	APR-SEP	255	280	295	86	310	335	345
South Fork Rio Grande at South Fork	APR-SEP	104	114	120	91	126	136	132
Rio Grande nr Del Norte	APR-SEP	405	440	460	87	480	515	531
Saguache Creek nr Saguache	APR-SEP	14.6	21	26	79	31	37	33
Alamosa Creek abv Terrace Reservoir	APR-SEP	51	59	64	91	69	77	70
La Jara Creek nr Capulin	MAR-JUL	4.40	6.70	8.30	95	9.90	12.20	8.70
Trinchera Creek	APR-SEP	7.4	9.4	10.8	90	12.2	14.2	12.0
Sangre de Cristo Creek	APR-SEP	2.90	5.30	7.10	81	9.10	11.90	8.80
Ute Creek	APR-SEP	6.0	8.3	9.8	80	11.3	13.8	12.2
Platoro Reservoir Inflow	APR-JUL	48	53	57	89	61	66	64
	APR-SEP	53	59	63	89	67	73	71
Conejos River nr Mogote	APR-SEP	149	169	182	91	194	214	200
San Antonio River at Ortiz	APR-SEP	9.7	12.1	14.0	85	16.0	19.1	16.4
Los Pinos River nr Ortiz	APR-SEP	54	60	65	88	70	76	74
Culebra Creek at San Luis	APR-SEP	13.8	16.1	20	87	24	29	23
Costilla Reservoir inflow	MAR-JUL	7.6	9.0	10.0	94	11.0	12.4	10.6
Costilla Creek nr Costilla	MAR-JUL	19.1	23	25	96	27	31	26

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

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

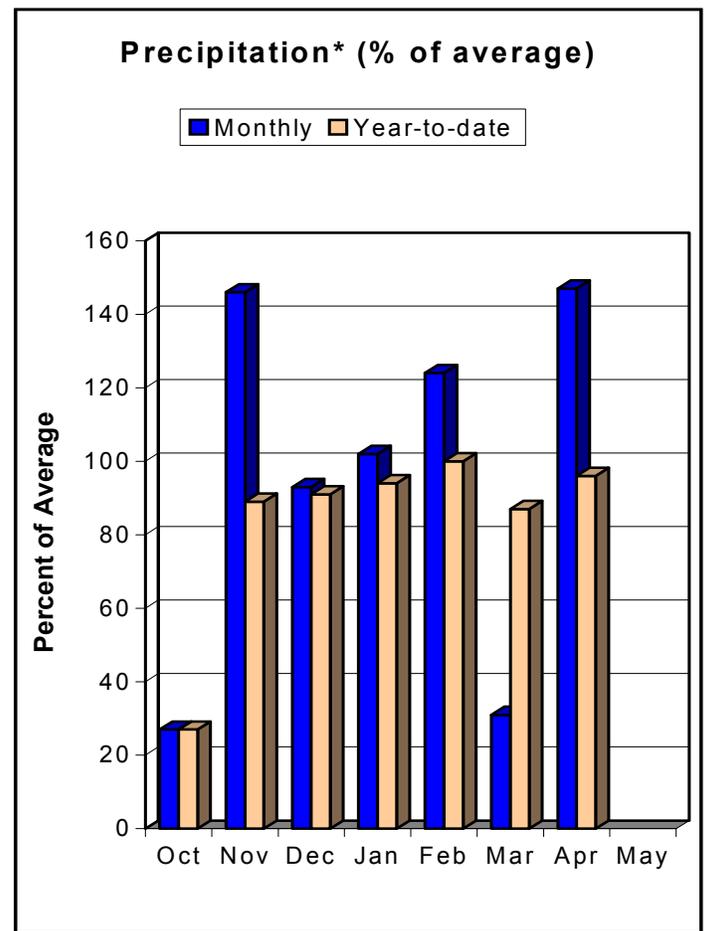
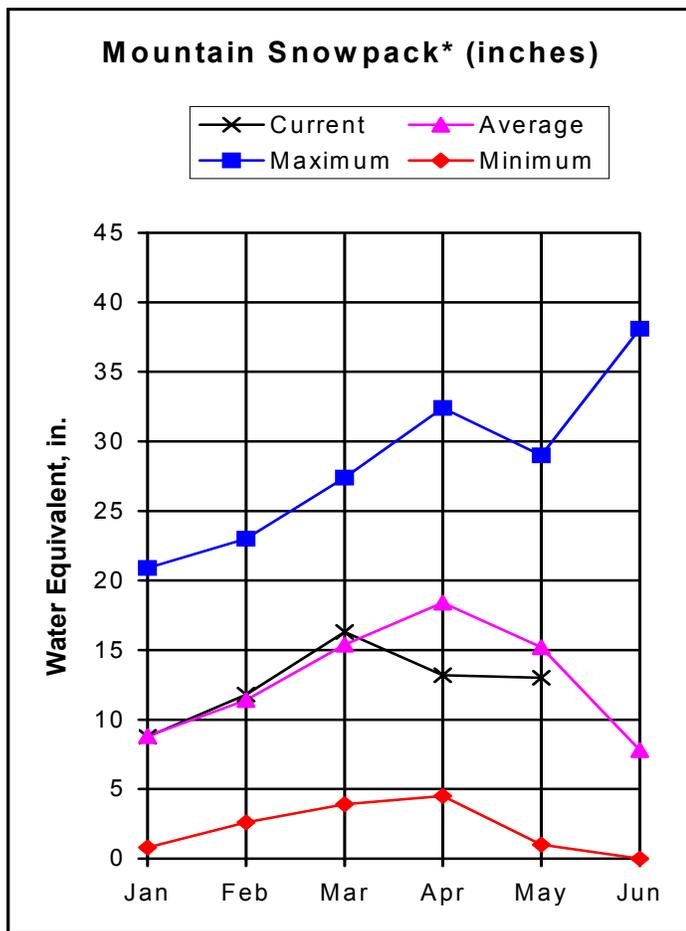
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	15.0	5.8	5.1	6.6	ALAMOSA CREEK BASIN	2	664	99
PLATORO	53.7	5.6	7.7	23.3	CONEJOS & RIO SAN ANTONIO	4	158	100
RIO GRANDE	51.0	14.4	19.0	21.4	CULEBRA & TRINCHERA CREEK	5	151	133
SANCHEZ	103.0	15.7	12.8	25.8	UPPER RIO GRANDE BASIN	12	222	96
SANTA MARIA	45.0	4.0	9.3	11.1	TOTAL UPPER RIO GRANDE BA	23	186	102
TERRACE	13.1	6.6	3.2	7.8				

* 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.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of May 1, 2004



*Based on selected stations

Cooler temperatures, coupled with good moisture during April, helped to slow the melt rates, and at higher elevations, add to the snowpack. Snowpack percentages improved to 85% of average this month, while the actual water content dropped by slightly more than one inch on average for the month. This year's snowpack continues to track well ahead of last year's at 165% of those totals. For the six major reservoirs in these basins, storage volumes are only 85% of average, yet remain at 30% more than the volumes measured last year. While this year's water supplies are expected to be markedly improved over those of the last two years, volumes are consistently forecast below average. The best forecasts are located from the Animas River, east to the San Juan River, where most forecasts range from 80 to 90% of average. Meanwhile, the lowest forecasts occur along the Dolores River where volumes of only about 65% of average are anticipated this year.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - May 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	122	153	175	66	196	226	265
McPhee Reservoir inflow	APR-JUL	143	180	205	64	230	265	320
San Miguel River nr Placerville	APR-JUL	68	87	100	76	113	132	132
Gurley Reservoir Inlet	MAY-JUL	5.2	7.6	9.3	63	11.0	13.4	14.8
	MAY			6.90	78			8.83
	JUNE			2.10	45			4.67
	JULY			0.33	25			1.32
Cone Reservoir Inlet	MAY-JUL	1.25	1.59	1.82	60	2.02	2.42	3.06
	MAY			1.22	74			1.64
	JUNE			0.50	48			1.04
	JULY			0.10	26			0.38
Lilylands Reservoir Inlet	MAY-JUL	0.61	1.16	1.53	62	1.93	2.43	2.45
	MAY			1.00	76			1.32
	JUNE			0.43	49			0.87
	JULY			0.10	37			0.27
Rio Blanco at Blanco Diversion	APR-JUL	30	38	43	81	48	56	53
Navajo River at Oso Diversion	APR-JUL	39	49	56	81	63	73	69
San Juan River nr Carracus	APR-JUL	211	268	310	77	356	428	405
Piedra River nr Arboles	APR-JUL	162	179	190	83	203	218	230
Vallecito Reservoir Inflow	APR-JUL	103	137	170	83	205	235	205
Navajo Reservoir Inflow	APR-JUL	455	560	625	78	690	790	800
Animas River at Durango	APR-JUL	230	310	350	80	410	470	440
Lemon Reservoir Inflow	APR-JUL	42	49	53	91	57	64	58
La Plata River at Hesperus	APR-JUL	14.4	16.5	18.0	72	19.7	22	25
Mancos River nr Mancos	APR-JUL	14.0	22	28	70	34	42	40
	MAY			13.0	82			15.9
	JUNE			7.3	53			13.7
	JULY			2.00	44			4.60

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

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - May 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	10.4	5.9	14.2	ANIMAS RIVER BASIN	9	173	91
JACKSON GULCH	10.0	6.3	5.1	7.4	DOLORES RIVER BASIN	6	166	68
LEMON	40.0	17.0	9.0	23.4	SAN MIGUEL RIVER BASIN	5	145	72
MCPHEE	381.2	228.7	193.7	304.6	SAN JUAN RIVER BASIN	4	154	91
NARRAGUINNEP	19.0	19.0	17.1	17.1	TOTAL SAN MIGUEL, DOLORES	23	165	84
VALLECITO	126.0	88.6	54.4	70.3	SAN JUAN RIVER BASINS			

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

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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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