

Colorado Basin Outlook Report April 1, 2010



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

For more water supply and resource management information, contact:

Michael A. Gillespie
Data Collection Office Supervisor
USDA, Natural Resources Conservation Service
655 Parfet St., Rm E200C
Lakewood, CO 80215-5517
Phone (720) 544-2852

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

COLORADO

WATER SUPPLY OUTLOOK REPORT

APRIL 1, 2010

Summary

No major improvements occurred in the State's snowpack percentages during March and it appears that the state will record a below average snowfall year for 2010. Most basins are now reporting below average totals for April 1, with the driest conditions prevalent across the northern basins of the state. The outlook for summer water availability is the lowest since 2002 in these drier basins and runoff conditions are expected to be lower than last year across most of the state. Reservoir storage continues to be one of the only bright spots for water supplies and is above average in most basins. How much relief that may provide will certainly depend on any water users individual circumstances.

Snowpack

Colorado's statewide snowpack remains unchanged from last month and is once again only 88% of average. These percentages have barely changed from month-to-month since the first statewide tally of 86% of average back in January. In comparison to last year, the statewide totals improved somewhat, as they have each month this year, and are now at 92% of last year's April 1 readings. This year's snowfall has been strongly influenced by the El Nino weather pattern which has brought most of the state's winter moisture to the southern basins. The highest basinwide percentages have been recorded this month in the Rio Grande and Arkansas basins which benefitted the most from March storms. April 1 snowpacks in these basins were 115% and 102% of average, respectively. Snowpack percentages continued to deteriorate in the combined San Juan, Animas, Dolores and San Miguel basins for the second consecutive month and are now 101% of average. Meanwhile, snowpack percentages across the northern basins of the state remain well below average on April 1. The lowest percentages were measured in the combined Yampa and White basins at only 73% of average. Conditions are only slightly improved in the neighboring North Platte and Colorado basins, at 74% and 76% of average, respectively. April is normally the month in which Colorado's mountain snowpack reaches its maximum total, leaving no significant chance for substantial improvements beyond these conditions. However, snowpack conditions will continue to be monitored for any changes for the remainder of the season.

Precipitation

March was another dry month for Colorado's high country. Statewide precipitation measured at SNOTEL sites was only 77% of average for the month. This was the third consecutive month of below average precipitation and was the second lowest monthly percentage (behind November) for the 2010 water year. Only two basins reported above average monthly totals for March. Those include the Arkansas (at 131% of average) and the Rio Grande (at 105% of average). Precipitation across the remainder of the state was well below average. The lowest percentages for the March were measured in the Colorado, Yampa and White, and the combined San Juan, Animas Dolores and San Miguel basins. This month's below average precipitation marked the fifth consecutive month of below average precipitation in the South Platte, Colorado, and Yampa, White and North Platte basins. These conditions are evident in the water year totals which are only 79% of average in the Colorado and combined Yampa, White and North Platte basins. The dry March also helped to reduce the statewide water year totals which are now standing at only 86% of average.

Reservoir Storage

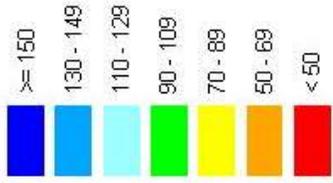
Reservoir storage across most of Colorado remains near to slightly above average. Currently, below average volumes are stored in only the Rio Grande (at 90% of average) and the combined San Juan, Animas, Dolores and San Miguel (at 87% of average) basins. The highest storage volumes, as a percent of average, are currently in the Gunnison basin, at 120% of average. Other basins reporting storage volumes significantly above average include the Colorado and Yampa. This extra storage will surely be put to good use in supplementing the below average runoff from this year's meager snowpacks. Statewide storage on April 1 was 106% of average and is the highest percent of average storage for this time of year since 2001. In comparison to last year's storage volumes the current storage exceeds last year's levels in all basins except the Gunnison and the combined San Juan, Animas, Dolores, and San Miguel. Statewide storage is currently 103% of last year's volumes on this same date.

Streamflow

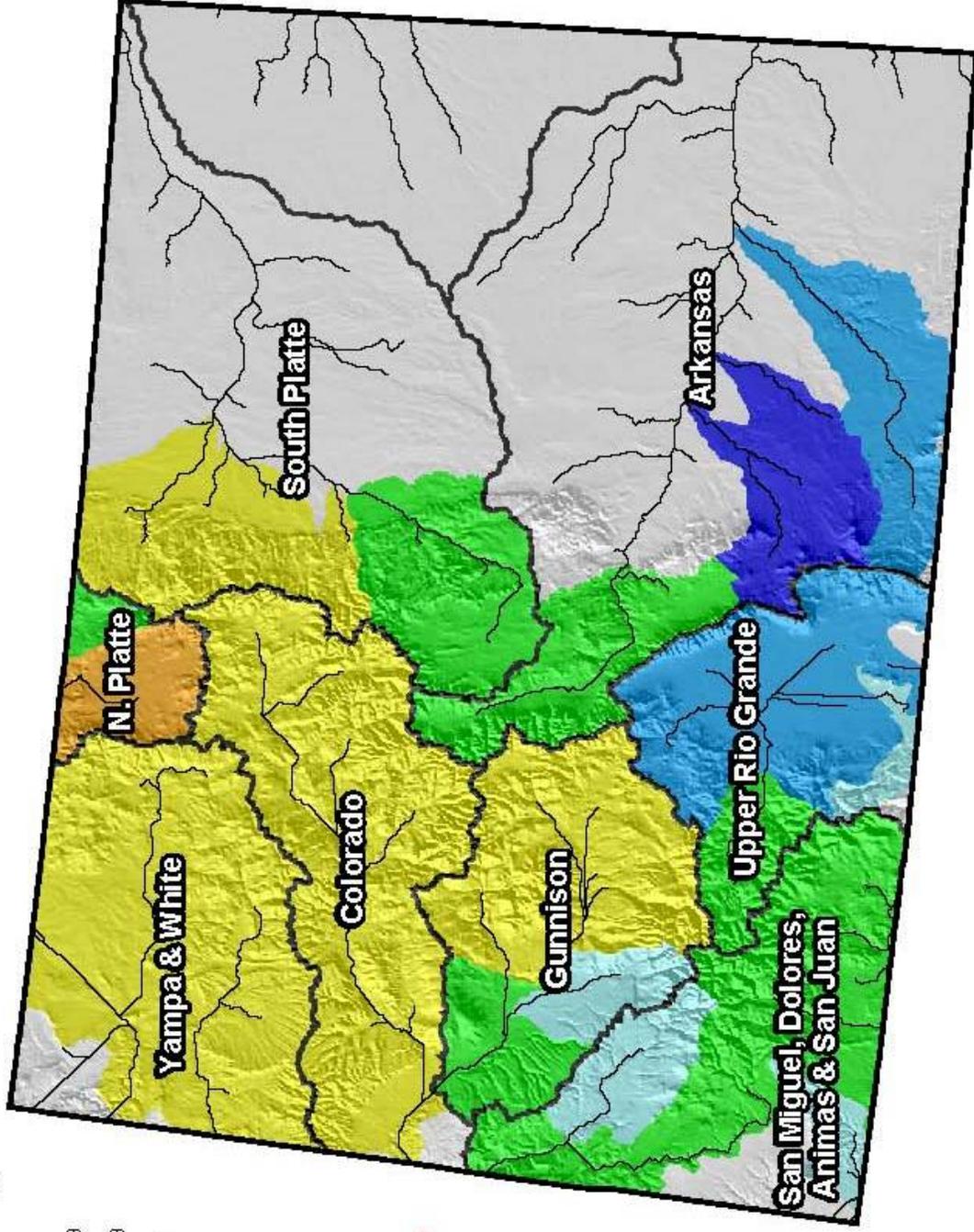
With the lack of relief from additional storms during March most of Colorado is facing a below average runoff year in 2010. In fact, the outlook for spring and summer water supplies have degraded each month since February across southwestern Colorado, and now the only remaining portions of the state which can expect above average runoff include those streams flowing from the Sangre de Cristo Mountains. For most of the remainder of southern Colorado, runoff volumes have dipped to slightly below average. Towards the north, the outlook for summer runoff deteriorates to well below average volumes. The lowest forecasts are confined to an area which includes the upper reaches of the Colorado, Yampa and the North Platte rivers. Runoff in these basins is forecast to produce volumes ranging from 55% to 60% of average volumes. Forecasts this low have not been issued since 2002 in these basins. In fact, this year's forecasts are very similar to those issued at this same time in 2002 for these tributary basins. For the state, 2010 is shaping up to have the lowest runoff potential since 2007.

Colorado Snowpack Map

Percent of Average



*Provisional Data
Subject to Revision*

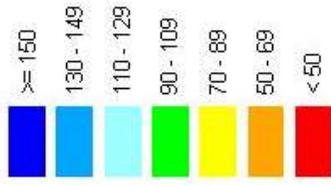


Current as of April 1, 2010

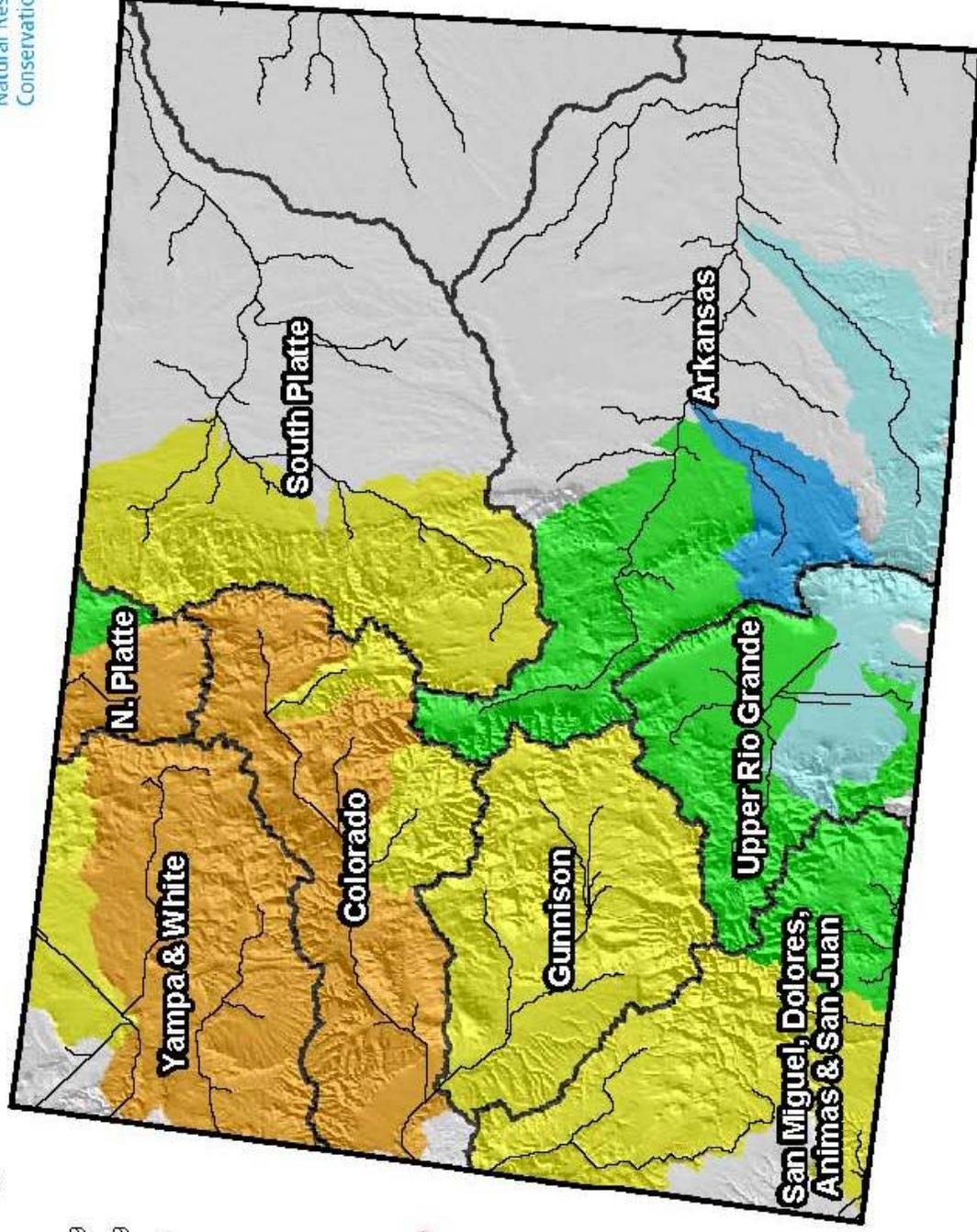
Colorado Streamflow Forecast Map



Percent of Average



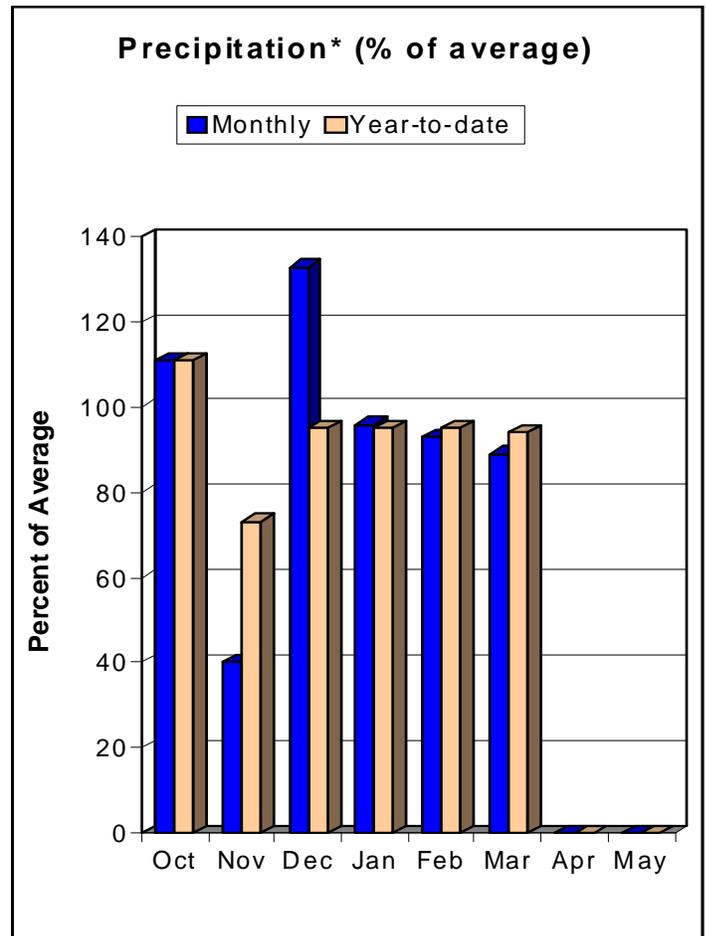
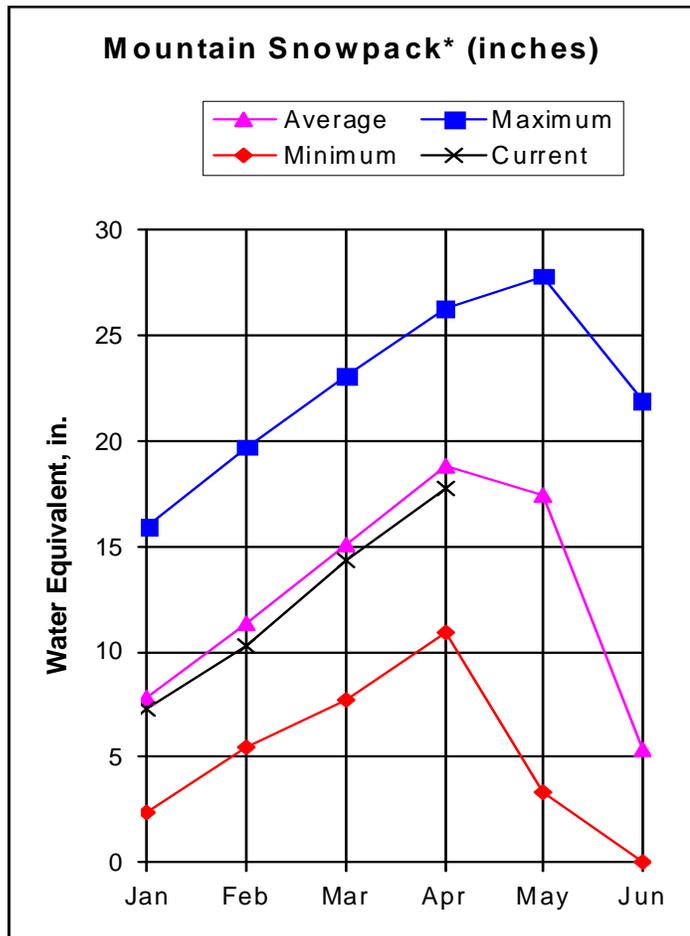
*Provisional Data
Subject to Revision*



Current as of April 1, 2010

GUNNISON RIVER BASIN

as of April 1, 2010



*Based on selected stations

April 1 snowpack conditions in the Gunnison River Basin remain relatively unchanged from last month. Snow survey measurements indicate the basin snowpacks were 94 percent of average, down only 1 percentage point from last month's survey. Looking back, this is the fifth year in the last six that basin has had near average to above average conditions on April 1. This is also the fourth best April 1 snowpack the basin has experienced going back to 1997 (tied with 2006). On an even more positive note, the basin has gotten off to a great start for April. SNOTEL data indicates the basin snowpacks have improved significantly during the first week of the month. At the current time, snowpacks have increased to 101 percent of average and equal the basin's average peak snowpack. Sub-basin snowpacks on April 1 ranged from 89 percent of average in the Upper Gunnison Watershed to 112 percent of average in the Uncompahgre. Mountain precipitation during March was below normal at 89 percent of average. The drier monthly conditions resulted in a slight drop in total precipitation for the water year to 94 percent of average and 93 percent of last year. Although down slightly from the total storage reported a year ago, reservoir storage is in excellent shape at 120 percent of average. Streamflow forecasts continue to predict below average runoff for this spring and summer. April-July volumes are expected to range from 74 percent of average on the Gunnison River near Gunnison to 91 percent of average for Lake Fork at Gateview.

GUNNISON RIVER BASIN
Streamflow Forecasts - April 1, 2010

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)	(1000AF)	(1000AF)
Taylor Park blw Taylor Park Res (2)	APR-JUL	60	73	82	80	92	107	103				
Slate River nr Crested Butte	APR-JUL	57	63	67	75	71	78	89				
East River at Almont	APR-JUL	112	131	145	76	160	182	192				
Gunnison River nr Gunnison (2)	APR-JUL	210	255	290	74	325	380	390				
Tomichi Creek at Sargents	APR-JUL	18.8	24	28	88	32	40	32				
Cochetopa Creek blw Rock Ck nr Parli	APR-JUL	7.2	10.3	12.9	75	15.9	21	17.3				
Tomichi Creek at Gunnison	APR-JUL	35	50	62	77	76	100	81				
Lake Fork at Gateview	APR-JUL	89	104	115	91	127	145	126				
Blue Mesa Reservoir Inflow (2)	APR-JUL	430	505	560	78	620	710	720				
Paonia Reservoir Inflow	MAR-JUN	49	64	75	75	87	108	100				
	APR-JUN	48	62	73	77	85	105	95				
	APR-JUL	50	65	77	76	90	112	102				
North Fork Gunnison R nr Somerset (2)	APR-JUL	177	210	235	77	260	305	305				
Surface Creek at Cedaredge	APR-JUL	10.0	12.3	14.0	82	15.9	19.0	17.1				
Ridgway Reservoir Inflow	APR-JUL	66	79	90	88	101	120	102				
Uncompahgre River at Colona (2)	APR-JUL	79	102	120	86	140	173	139				
Gunnison River nr Grand Junction (2)	APR-JUL	755	1020	1200	77	1380	1650	1560				

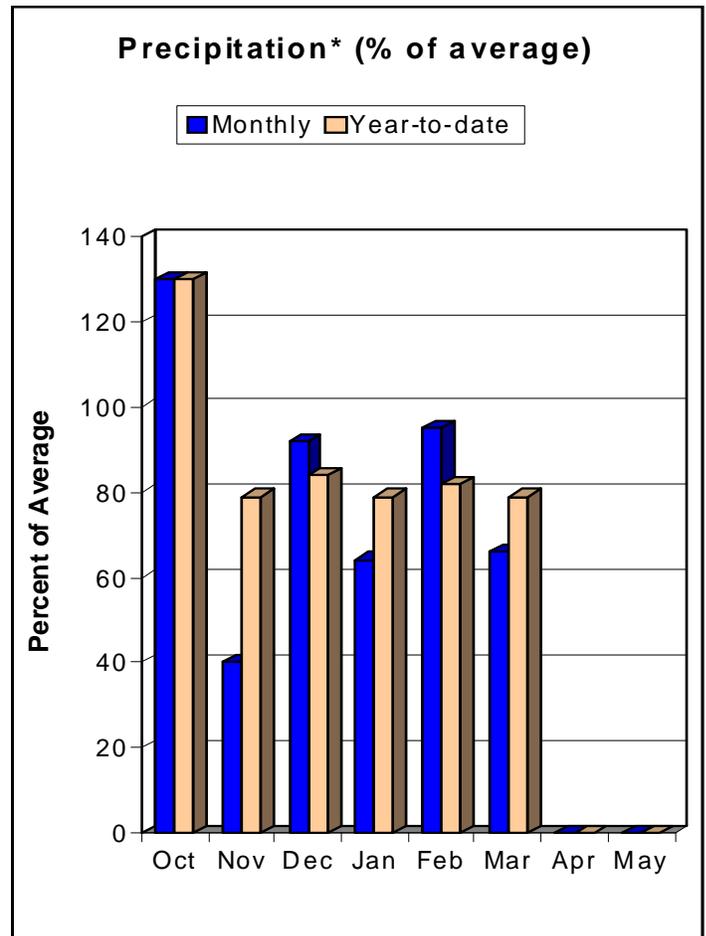
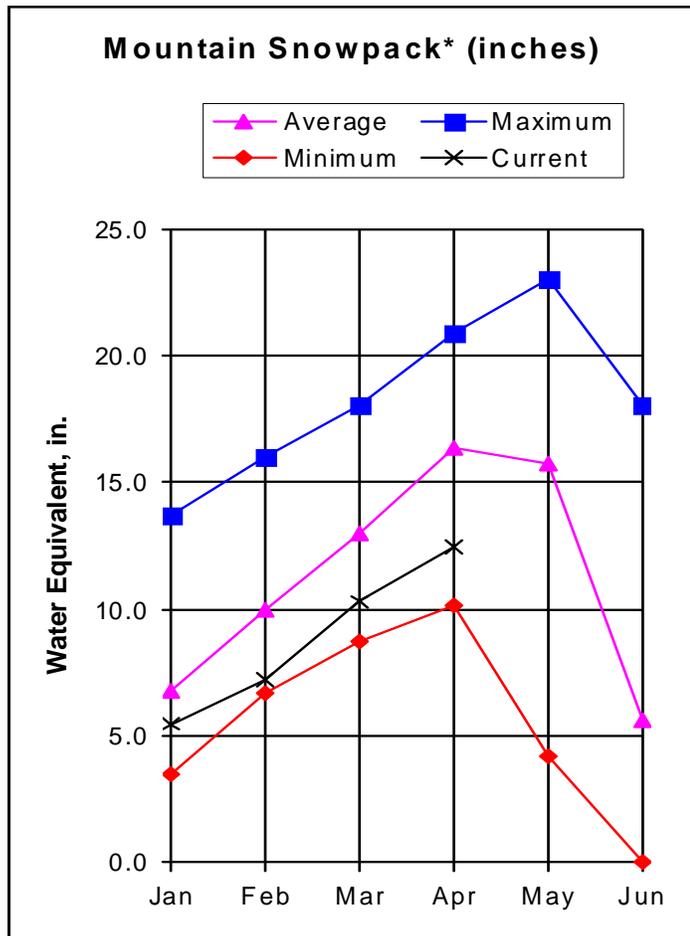
GUNNISON RIVER BASIN Reservoir Storage (1000 AF) - End of March					GUNNISON RIVER BASIN Watershed Snowpack Analysis - April 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE MESA	830.0	542.1	542.5	404.5	UPPER GUNNISON BASIN	15	89	89
CRAWFORD	14.0	7.0	10.4	10.8	SURFACE CREEK BASIN	3	103	91
FRUITGROWERS	3.6	3.6	3.6	4.0	UNCOMPAHGRE BASIN	4	125	112
FRUITLAND	9.2	1.6	2.2	2.5	TOTAL GUNNISON RIVER BASIN	19	97	94
MORROW POINT	121.0	107.0	107.3	113.6				
PAONIA	15.4	1.5	2.0	4.6				
RIDGWAY	83.0	67.3	70.6	60.9				
TAYLOR PARK	106.0	62.7	71.0	61.9				

* 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.
- (3) - Median value used in place of average.

UPPER COLORADO RIVER BASIN as of April 1, 2010



*Based on selected stations

At 76 percent of average, down slightly from last month's 79 percent of average conditions, April 1 snowpacks in the Upper Colorado River Basin were the lowest of the major basins in the state. This is the lowest April 1 snowpack percentage the basin has seen in the last six years and is the fourth lowest snowpack going back to 1987. SNOTEL data indicates that early April snowfall has helped to improve conditions in the basin somewhat but projections based on historical data give the basin a less than 10 percent chance of reaching the average peak this year. Sub-basin snowpacks are below average throughout the basin, ranging from 68 percent of average in the Willow Creek Drainage to 91 percent of average in the Plateau Creek area. Precipitation in the mountainous areas of the basin was well below normal at 66 percent of average during March. As a consequence of the low monthly precipitation, totals for the water year dropped to 79 percent of average. Both the monthly and water year total percentages were the lowest of the major basins in the state. The bright spot to the water supply picture remains the condition of storage available in the basin. At the end of March, reservoir storage was 111 percent of average. As you might expect given current conditions, streamflow forecasts are calling for below average to well below average runoff for the April-July forecast period. Spring and summer volumes are expected to range from 45 percent of average for the Inflow to Willow Creek Reservoir to 80 percent of average for the Roaring Fork at Glenwood Springs.

=====

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - April 1, 2010

=====

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)		
Lake Granby Inflow (2)	APR-JUL	112	134	150	67	167	193	225
Willow Creek Reservoir Inflow	APR-JUL	15.2	19.6	23	45	27	33	51
Williams Fork Reservoir Inflow (2)	APR-JUL	51	61	68	72	75	87	95
Dillon Reservoir Inflow (2)	APR-JUL	92	108	120	72	133	153	167
Green Mountain Reservoir Inflow (2)	APR-JUL	157	185	205	73	225	260	280
Muddy Creek blw Wolford Mtn Resv (2)	APR-JUL	21	27	31	52	36	43	60
Eagle River blw Gypsum (2)	APR-JUL	161	195	220	66	245	290	335
Colorado River nr Dotsero (2)	APR-JUL	700	815	920	64	1030	1250	1440
Ruedi Reservoir Inflow (2)	APR-JUL	76	91	102	72	114	133	141
Roaring Fork at Glenwood Springs (2)	APR-JUL	440	510	565	80	620	710	710
Colorado River nr Cameo (2)	APR-JUL	1200	1380	1640	68	1900	2250	2420

UPPER COLORADO RIVER BASIN Reservoir Storage (1000 AF) - End of March					UPPER COLORADO RIVER BASIN Watershed Snowpack Analysis - April 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DILLON	254.0	241.2	219.5	214.5	BLUE RIVER BASIN	9	65	74
LAKE GRANBY	465.6	278.4	209.8	263.7	UPPER COLORADO RIVER BASI	37	68	71
GREEN MOUNTAIN	146.8	70.6	56.3	59.8	MUDDY CREEK BASIN	4	67	69
HOMESTAKE	43.0	21.8	24.6	22.5	PLATEAU CREEK BASIN	3	103	91
RUEDI	102.0	66.3	68.1	61.9	ROARING FORK BASIN	8	76	86
VEGA	32.9	13.3	15.4	13.1	WILLIAMS FORK BASIN	4	79	79
WILLIAMS FORK	97.0	74.8	79.6	54.8	WILLOW CREEK BASIN	4	67	68
WILLOW CREEK	9.1	6.0	7.7	6.8	TOTAL COLORADO RIVER BASI	48	73	76

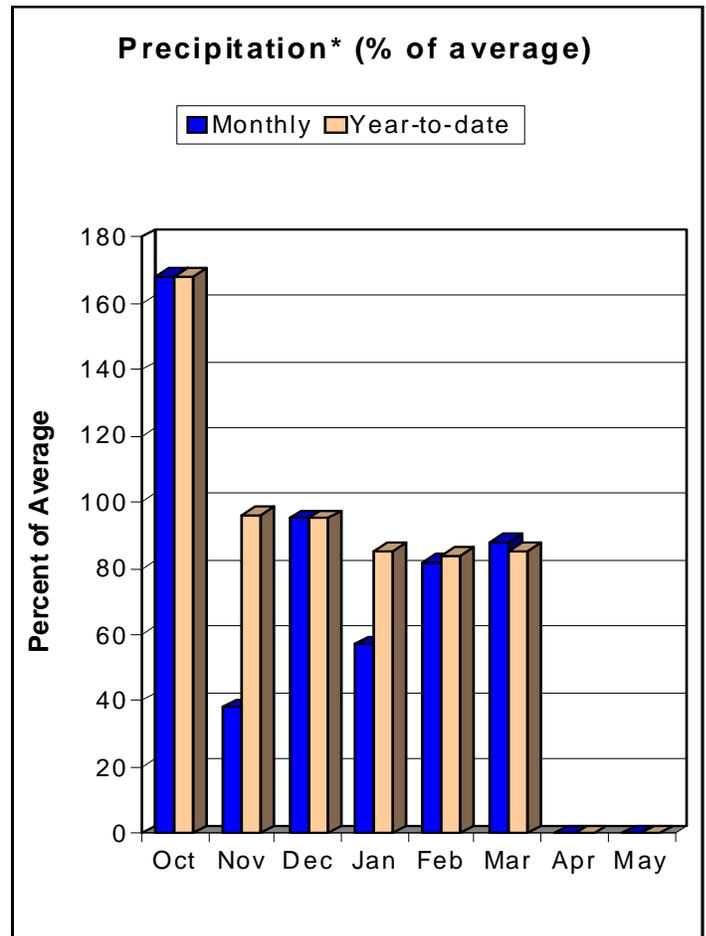
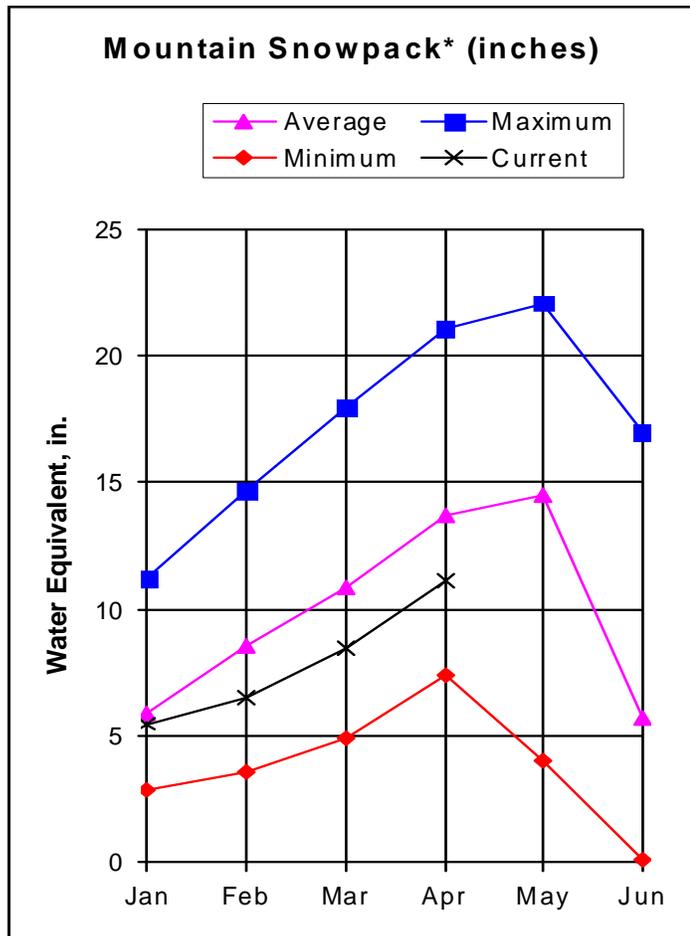
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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.
- (3) - Median value used in place of average.

SOUTH PLATTE RIVER BASIN

as of April 1, 2010



*Based on selected stations

Over the course of March, the South Platte River Basin has posted increases to its snowpack totals. Unfortunately, the data shows that the gains were minimal. Up only three percentage points from March 1, the snowpack was 81 percent of average on April 1. Compared to the other sub drainages, both the Upper South Platte and Saint Vrain River Basins experienced relatively large improvements to their snowpacks, at nine percent and 16 percent respectively. The Big Thompson was the only basin with a decrease in snowpack, whittling down two percentage points to 73 percent of average. With nearly three weeks remaining until the average snowpack peak is reached, it is unlikely that the South Platte River Basin will climb the steep slope back to 100 percent of average. Year-to-date precipitation saw little progress during March, up only one percentage point to 85 percent. Reservoir storage is, again this month, right on track at 102 percent of average and 86 percent of full capacity. Despite small gains in year-to-date precipitation and snowpack, streamflow forecasts did improve. Forecasts range from 68 percent of average on the Saint Vrain at Lyons to 83 percent of average on South Boulder Creek near Eldorado Springs. Remember, last month's forecasts were in the 60 to low 70 percentage range, proving a little bit does go a long way. The Upper South Platte forecasts seemed to follow the changes in snowpack exactly increasing about nine percent.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - April 1, 2010

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 (2)	APR-JUL	8.5	12.4	13.4	80	21	30	16.8				
	APR-SEP	10.1	15.2	17.6	81	26	39	22				
SPINNEY MOUNTAIN RESV Inflow (2)	APR-JUL	24	35	45	80	58	83	56				
	APR-SEP	31	47	55	80	80	119	69				
ELEVENMILE CANYON RESV Inflow (2)	APR-JUL	25	36	47	81	61	89	58				
	APR-SEP	28	43	58	81	77	118	72				
CHEESMAN LAKE Inflow (2)	APR-JUL	46	69	91	80	120	179	114				
	APR-SEP	56	84	112	80	149	225	140				
SOUTH PLATTE R at South Platte (2)	APR-JUL	74	117	160	78	220	345	205				
	APR-SEP	91	145	199	78	275	435	255				
BEAR CREEK abv Evergreen	APR-JUL	7.2	11.3	15.4	80	21	33	19.3				
	APR-SEP	9.4	14.8	20	80	27	42	25				
BEAR CREEK at Morrison	APR-JUL	7.6	13.2	19.2	77	28	48	25				
	APR-SEP	9.7	16.6	24	77	35	60	31				
CLEAR CREEK at Golden	APR-JUL	50	68	81	74	94	112	110				
	APR-SEP	60	85	98	73	119	144	134				
ST. VRAIN CREEK at Lyons (2)	APR-JUL	49	59	66	70	73	83	94				
	APR-SEP	54	66	74	68	82	94	109				
BOULDER CREEK nr Orodell (2)	APR-JUL	31	37	42	81	47	53	52				
	APR-SEP	33	42	48	80	54	63	60				
SOUTH BOULDER CK nr Eldorado Spgs	APR-JUL	26	32	34	83	38	44	41				
	APR-SEP	28	34	38	83	44	50	46				
BIG THOMPSON R at Canyon Mouth (2)	APR-JUL	46	59	69	70	77	90	99				
	APR-SEP	55	71	82	69	93	109	119				
CACHE LAPOUDRE at Canyon Mouth (2)	APR-JUL	119	152	179	73	210	270	245				
	APR-SEP	134	170	200	73	235	300	275				

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

SOUTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010

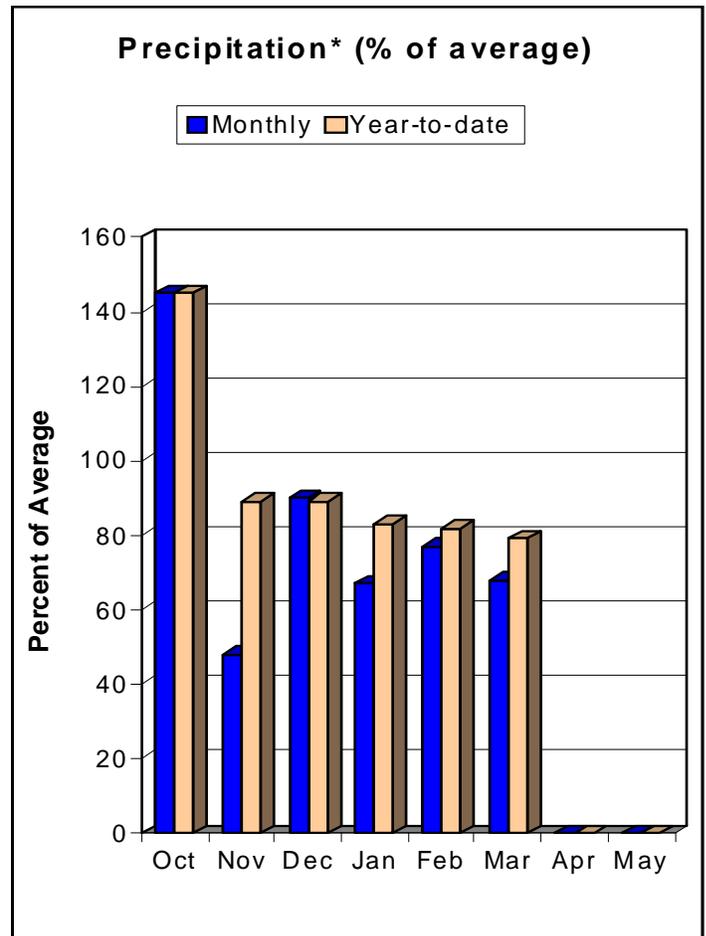
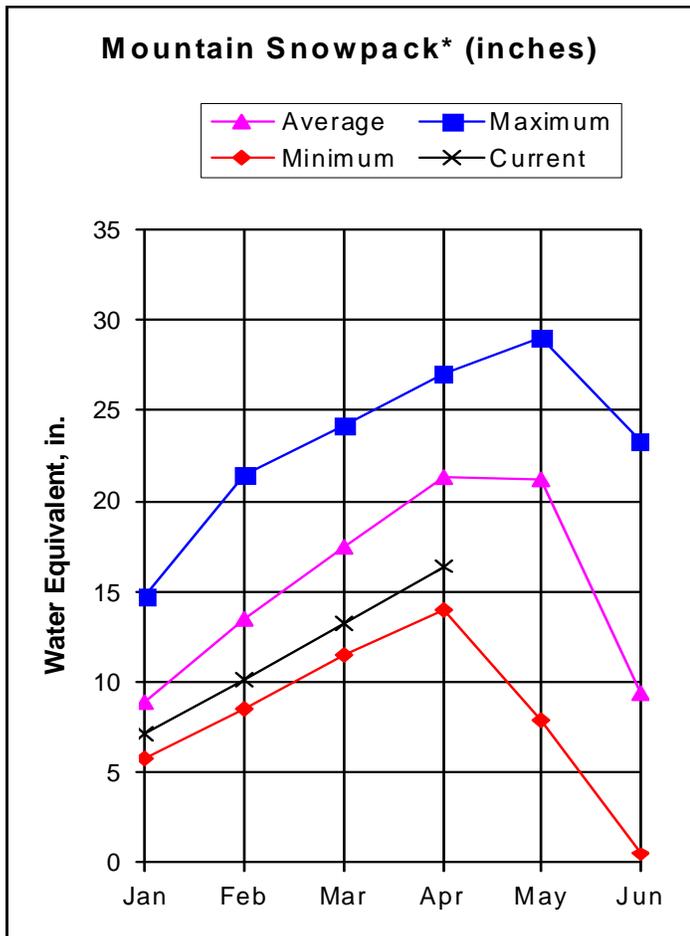
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ANTERO	19.9	20.1	20.1	15.9	BIG THOMPSON BASIN	7	83	73
BARR LAKE	30.1	28.2	23.8	27.9	BOULDER CREEK BASIN	5	101	83
BLACK HOLLOW	6.5	3.2	2.6	4.0	CACHE LA POUDRE BASIN	8	84	83
BOYD LAKE	48.4	40.6	27.4	33.0	CLEAR CREEK BASIN	4	85	89
BUTTON ROCK/RALPH PRICE	16.2	12.0	12.1	12.1	SAINT VRAIN BASIN	4	106	75
CACHE LA POUDRE	10.1	10.1	8.4	8.6	UPPER SOUTH PLATTE BASIN	16	120	90
CARTER	108.9	103.9	99.0	100.9	TOTAL SOUTH PLATTE BASIN	44	95	83
CHAMBERS LAKE	8.8	6.4	2.0	3.3				
CHEESMAN	79.0	59.1	74.1	60.8				
COBB LAKE	22.3	20.7	11.8	13.9				
ELEVEN MILE	98.0	99.7	100.4	96.4				
EMPIRE	36.5	36.5	35.9	31.8				
FOSSIL CREEK	11.1	9.7	9.8	7.9				
GROSS	41.8	20.7	22.1	23.9				
HALLIGAN	6.4	2.7	4.0	4.7				
HORSECREEK	14.7	13.8	14.2	13.9				
HORSETOOTH	149.7	107.8	100.6	119.1				
JACKSON	26.1	25.9	25.7	29.9				
JULESBURG	20.5	20.5	20.5	20.8				
LAKE LOVELAND	10.3	9.3	11.4	9.0				
LONE TREE	8.7	7.4	8.5	7.2				
MARIANO	5.4	4.1	1.8	4.5				
MARSHALL	10.0	8.1	4.9	6.0				
MARSTON	13.0	10.6	7.7	13.3				
MILTON	23.5	21.7	22.7	18.3				
POINT OF ROCKS	70.6	70.6	69.6	68.8				
PREWITT	28.2	24.6	24.4	25.0				
RIVERSIDE	55.8	55.2	55.5	58.2				
SPINNEY MOUNTAIN	49.0	33.5	39.1	32.1				
STANDLEY	42.0	35.4	35.4	34.6				
TERRY LAKE	8.0	6.0	5.2	5.4				
UNION	13.0	12.3	10.2	11.1				
WINDSOR	15.2	12.9	14.1	12.4				

* 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.
- (3) - Median value used in place of average.

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of April 1, 2010



*Based on selected stations

Snowpacks in the combined Yampa, White, North Platte and Laramie River remain below normal at 77 percent of average, increasing by only one percentage point over last month's figure. Despite some positive storm activity recorded by the SNOTEL network during the first week in April, snowpack projections show less than a 10 percent chance the combined basins will reach the average peak snow water content. Sub-basin snowpacks are all below average, ranging from 69 percent of average in the North Platte Watershed to 93 percent of average in the Laramie Drainage. Snowpacks in the Yampa and White River Basins are the lowest they've been in the last three years. Only three years have had a lower April 1 snowpack percentage going back to 1987. Snowpacks in the North Platte and Laramie River basins are the lowest they've been in the past six years, with only two years having lower percentages going back to 1987. Mountain precipitation during March was a mere 68 percent of average. Total precipitation for the water year dropped to 79 percent of average as a result of the poor monthly totals. Reservoir storage at Stagecoach and Yamcolo reservoirs is above normal at 114 and 113 percent of average, respectively. The basin can expect below average to well below average runoff this spring and summer. April-July forecasts predict volumes should range from 54 percent of average for the Yampa River above Stagecoach Reservoir and the North Platte River near Northgate to 93 percent of average for the Laramie River near Woods.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - April 1, 2010

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
NORTH PLATTE RIVER nr Northgate	APR-JUL	40	95	133	54	171	225	245
	APR-SEP	42	105	148	55	191	255	270
LARAMIE RIVER nr Woods	APR-JUL	76	99	115	94	131	154	123
	APR-SEP	83	109	127	94	145	171	135
Yampa R ab Stagecoach Reservoir (2)	APR-JUL	11.1	16.0	20	54	25	33	37
Yampa River at Steamboat Springs (2)	APR-JUL	110	138	160	57	183	220	280
Elk River nr Milner	APR-JUL	180	215	245	75	275	320	325
Elkhead Creek nr Elkhead	APR-JUL	16.5	23	28	72	34	43	39
Elkhead Creek blw Maynard Gulch (2)	APR-JUL	24	33	40	68	48	60	59
Fortification Ck nr Fortification	MAR-JUN	2.6	4.0	5.1	68	6.4	8.8	7.5
	APR-JUN	2.2	3.2	4.1	65	5.1	6.8	6.3
Yampa River nr Maybell (2)	APR-JUL	325	465	575	58	695	900	990
Little Snake River nr Slater	APR-JUL	85	105	120	76	136	161	159
Little Snake River nr Dixon	APR-JUL	150	205	250	76	300	375	330
Little Snake River nr Lily	APR-JUL	153	215	260	71	310	395	365
White River nr Meeker	APR-JUL	140	174	200	69	225	270	290

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS Reservoir Storage (1000 AF) - End of March					YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS Watershed Snowpack Analysis - April 1, 2010			
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	28.1	26.8	24.6	LARAMIE RIVER BASIN	4	107	93
YAMCOLO	8.7	7.8	8.1	6.9	NORTH PLATTE RIVER BASIN	12	71	68
					TOTAL NORTH PLATTE BASIN	15	78	73
					ELK RIVER BASIN	2	73	83
					YAMPA RIVER BASIN	12	70	73
					WHITE RIVER BASIN	6	70	72
					TOTAL YAMPA AND WHITE RIV	17	70	73
					LITTLE SNAKE RIVER BASIN	8	77	89
TOTAL YAMPA, WHITE AND NO	37	74	76					

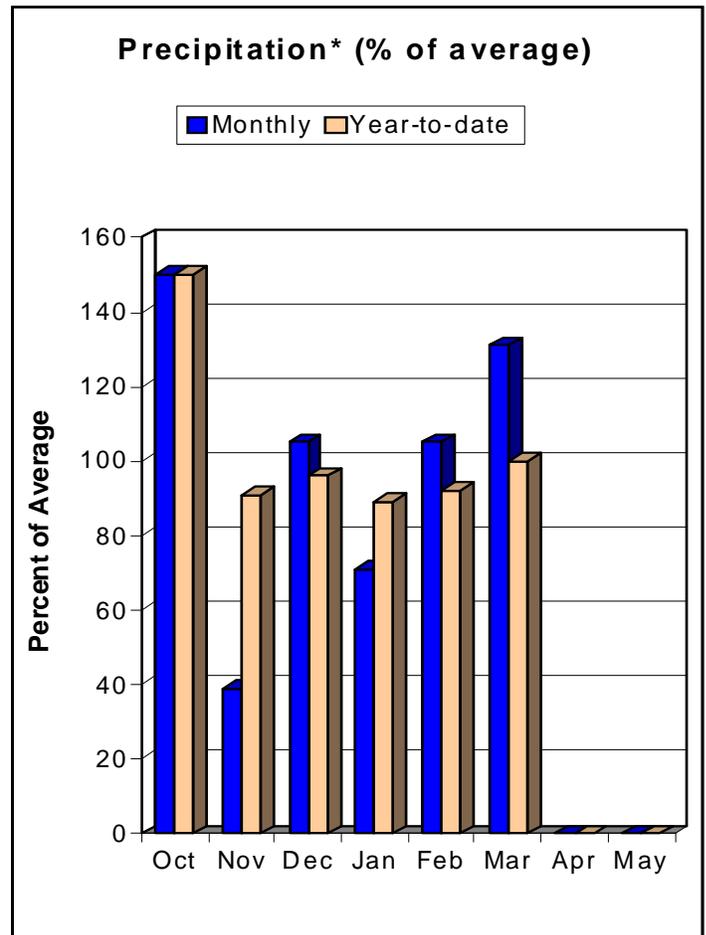
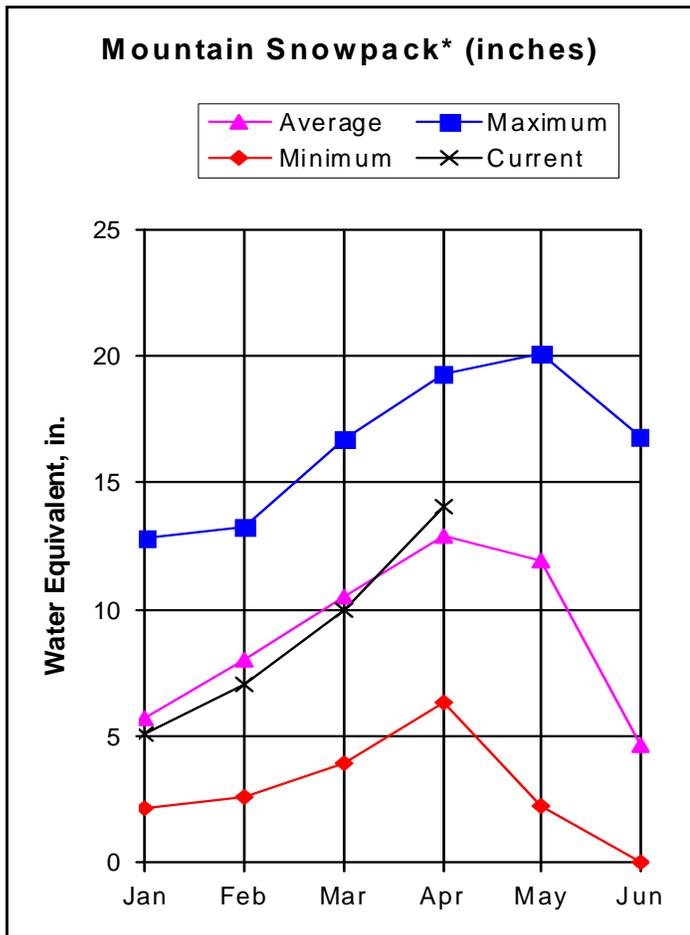
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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.
- (3) - Median value used in place of average.

ARKANSAS RIVER BASIN

as of April 1, 2010



*Based on selected stations

Over the course of the 2010 water year, the snowpack of the Arkansas River Basin has flirted with average but never exceeded average. Finally during March, a consistent storm pattern brought enough steady precipitation to drive both snowpack and year-to-date precipitation to average or greater. The predominant storm track remained to the south as it has for the majority of the year. This explains why the southern end of the Arkansas River Basin saw above average snow totals over the course of March and the Upper Arkansas River Basin only saw average snow totals. Snowpack over the entire basin amounted to 102 percent of average, up from 95 percent from last month. While the Cucharas and Huerfano sub-drainage as well as the Purgatorie saw a 20 and 22 percent improvement respectively over last month, the Upper Arkansas River Basin to the north saw no improvement. With a strong monthly total of 131 percent of average, year-to-date precipitation finished the month right at average. The Arkansas reservoir system in Colorado is looking great at 107 percent of average with two reservoirs already at capacity, Lake Henry and Meredith. Forecasted streamflows are looking up across the entire basin but more specifically on the Cucharas River, Huerfano River, Trinidad Lake Inflow, and Grape Creek, all above 116 percent of average.

=====

ARKANSAS RIVER BASIN
Streamflow Forecasts - April 1, 2010

=====

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	12.5	17.3	21	91	25	32	23
	APR-SEP	14.8	21	25	93	30	38	27
ARKANSAS RIVER at Salida (2)	APR-JUL	220	230	240	94	250	260	255
	APR-SEP	260	280	295	95	310	335	310
GRAPE CK nr Westcliffe	APR-JUL	14.5	17.0	18.8	117	21	24	16.1
	APR-SEP	19.5	22	23	117	24	27	19.6
PUEBLO RESERVOIR Inflow (2)	APR-JUL	173	290	370	96	450	570	385
	APR-SEP	220	365	465	96	570	720	485
HUERFANO RIVER nr Redwing	APR-JUL	10.6	13.9	16.4	133	19.1	23	12.3
	APR-SEP	13.1	17.0	20	129	23	28	15.5
CUCHARAS RIVER nr La Veta	APR-JUL	8.6	12.4	15.3	135	18.6	24	11.3
	APR-SEP	10.3	14.1	17.0	131	20	25	13.0
TRINIDAD LAKE Inflow (2)	MAR-JUL	32	38	42	124	47	54	34
	APR-JUL	27	33	37	116	42	49	32
	APR-SEP	38	46	51	116	57	66	44

ARKANSAS RIVER BASIN Reservoir Storage (1000 AF) - End of March					ARKANSAS RIVER BASIN Watershed Snowpack Analysis - April 1, 2010			
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	54.1	44.5	37.0	UPPER ARKANSAS BASIN	10	97	94
CLEAR CREEK	11.4	7.9	8.4	6.7	CUCHARAS & HUERFANO RIVER	4	144	129
CUCHARAS RESERVOIR	40.0	1.6	0.9	5.4	PURGATOIRE RIVER BASIN	2	172	133
GREAT PLAINS	150.0	18.0	0.0	41.9	TOTAL ARKANSAS RIVER BASIN	15	109	104
HOLBROOK	7.0	6.3	0.6	4.9				
HORSE CREEK	27.0	0.0	0.0	12.6				
JOHN MARTIN	616.0	86.2	81.0	137.3				
LAKE HENRY	8.0	9.6	9.5	6.7				
MEREDITH	42.0	43.1	41.4	19.0				
PUEBLO	354.0	263.9	249.2	173.3				
TRINIDAD	167.0	24.4	24.7	27.5				
TURQUOISE	127.0	58.7	57.6	74.0				
TWIN LAKES	86.0	53.9	33.6	42.5				

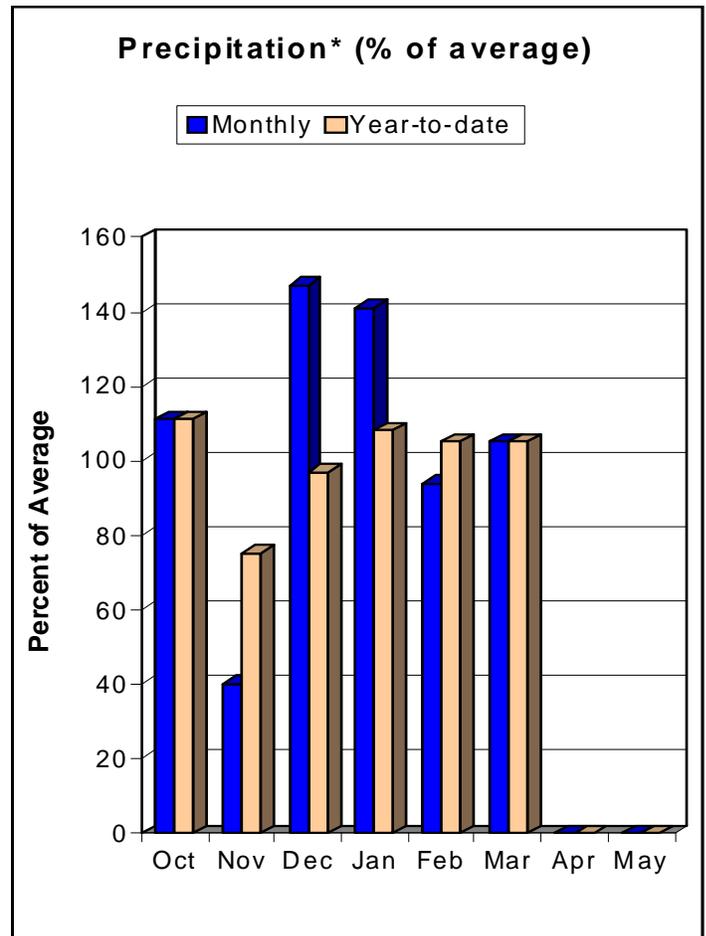
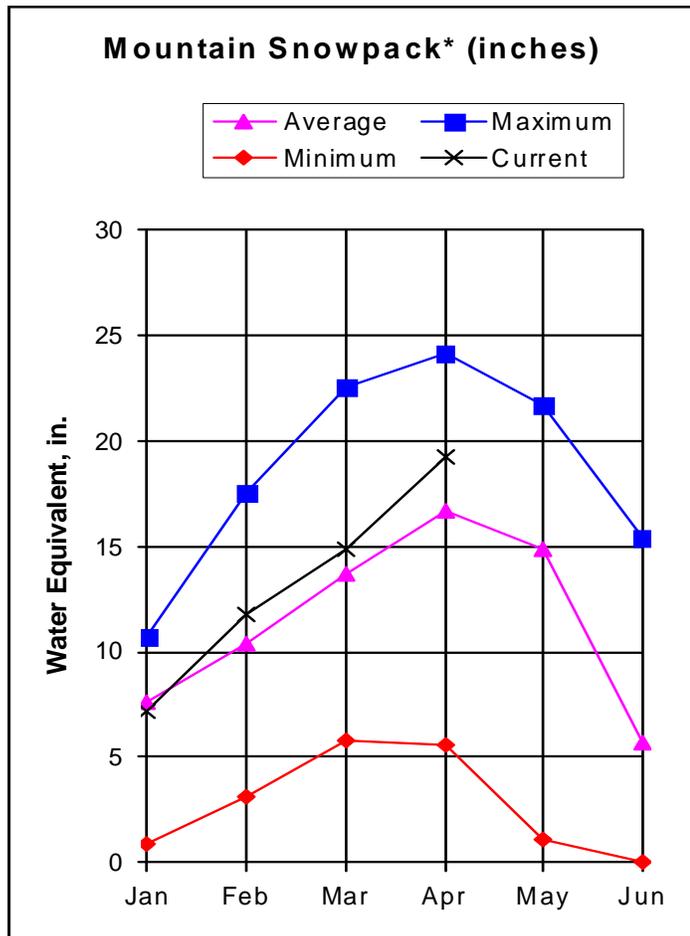
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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.
- (3) - Median value used in place of average.

UPPER RIO GRANDE RIVER BASIN

as of April 1, 2010



*Based on selected stations

This month the Upper Rio Grande Basin has made positive progress in snowpack and reached a new high for the year. Despite slight losses going into March, a stronger storm pattern in the southern part of the state enhanced snow water equivalent totals across the basin to a state high of 115 percent of average. The combined Culebra and Trinchera Creeks watershed has the highest snowpack percentage of the Upper Rio Grande Basin at 136 percent of average. This sub-drainage started out in January at a four year low and built itself up to a five year high at present. Typically the snowpack of the Upper Rio Grande peaks in the first or second week of April, without cooler temperatures expect snowmelt to begin soon. Precipitation fell just above average during the past month at 105 percent of average for both a monthly and year-to-date total. This puts the Upper Rio Grande Basin exactly where it was at this time last year in terms of year-to-date precipitation. Storage in the reservoirs is currently below average at 89 percent, but should not be of concern due to the expectedly higher than average streamflow forecasts. Streamflow forecasts within the Upper Rio Grande span a wide range this month. Forecasts in the Upper Arkansas are in the 90 to 100 percent range. On the other hand, at the south western end of the basin near the New Mexico border, Rio Grande forecasts are a good bit higher ranging from 117 at Trinchera Creek near Turners Ranch to 135 percent of average at Ute Creek near Fort Garland.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - April 1, 2010

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	91	110	124	91	139	162	136				
	APR-JUL	85	99	110	93	121	140	118				
Rio Grande at Wagon Wheel Gap (2)	APR-SEP	227	281	320	93	362	428	345				
South Fork Rio Grande at South Fork	APR-SEP	97	113	125	95	138	158	132				
Rio Grande nr Del Norte (2)	APR-SEP	370	445	500	94	560	660	531				
Saguache Creek nr Saguache (2)	APR-SEP	19.1	26	31	94	37	46	33				
Alamosa Creek abv Terrace Reservoir	APR-SEP	50	60	67	96	75	87	70				
	MAR-JUL	5.1	6.9	8.3	95	9.9	12.7	8.7				
La Jara Creek nr Capulin	APR-JUL	4.2	6.0	7.4	93	9.0	11.8	8.0				
	APR-SEP	8.8	11.9	14.0	117	16.1	19.2	12.0				
Trinchera Creek abv Turners Ranch	APR-SEP	8.8	11.9	14.0	117	16.1	19.2	12.0				
Sangre de Cristo Creek (2)	APR-SEP	6.0	9.6	12.0	136	14.4	18.0	8.8				
Ute Ck nr Fort Garland	APR-SEP	9.9	13.5	16.5	135	19.9	26	12.2				
Platoro Reservoir Inflow	APR-JUL	47	54	60	94	66	75	64				
	APR-SEP	51	60	66	93	73	83	71				
Conejos River nr Mogote (2)	APR-SEP	155	181	200	100	220	255	200				
San Antonio River at Ortiz	APR-SEP	10.0	13.4	16.0	98	19.0	24	16.4				
Los Pinos River nr Ortiz	APR-SEP	54	65	74	100	84	99	74				
Culebra Creek at San Luis (2)	APR-SEP	16.8	24	30	130	37	49	23				
Costilla Reservoir Inflow	MAR-JUL	8.5	11.2	13.4	126	15.8	19.9	10.6				
	APR-JUL	8.1	10.8	13.0	129	15.4	19.6	10.1				
Costilla Creek nr Costilla (2)	MAR-JUL	21	28	33	127	41	53	26				
	APR-JUL	19.6	27	32	133	40	52	24				

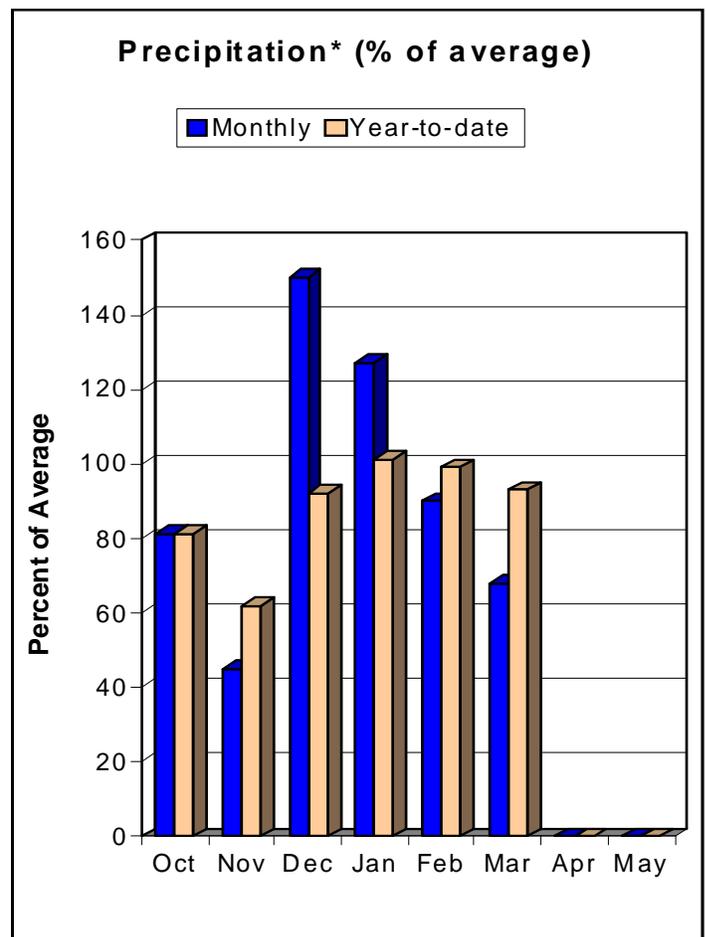
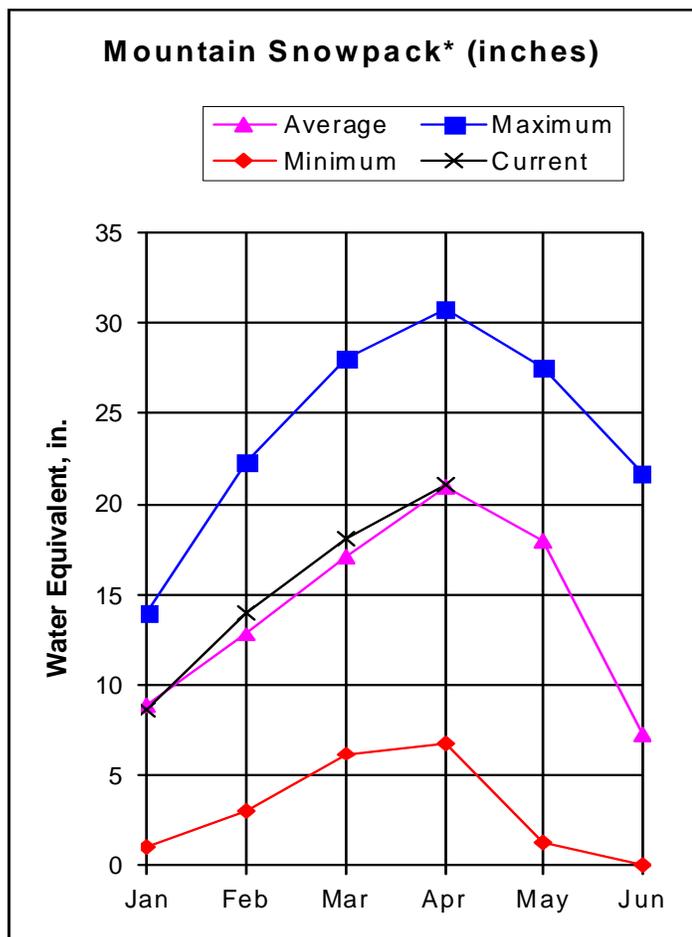
UPPER RIO GRANDE BASIN Reservoir Storage (1000 AF) - End of March					UPPER RIO GRANDE BASIN Watershed Snowpack Analysis - April 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	27.0	5.0	4.4	5.9	ALAMOSA CREEK BASIN	2	120	114
PLATORO	60.0	30.1	18.1	24.5	CONEJOS & RIO SAN ANTONIO	4	97	112
RIO GRANDE	51.0	15.1	19.2	19.3	CULEBRA & TRINCHERA CREEK	5	151	136
SANCHEZ	103.0	19.9	25.3	24.9	UPPER RIO GRANDE BASIN	12	117	106
SANTA MARIA	45.0	7.0	6.2	10.8	TOTAL UPPER RIO GRANDE BA	23	119	115
TERRACE	18.0	6.3	8.1	7.6				

* 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.
- (3) - Median value used in place of average.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of April 1, 2010



*Based on selected stations

Snowpacks in the San Miguel, Dolores, Animas and San Juan River basins saw another drop in their snowpack percentage from 106 percent last month to 101 percent of average on April 1. Even given this setback, this year's snowpack is 16 percent higher than the snowpack measured last year at this time. It should also be noted that 2010 is the third year since 1987 that the April 1 snowpack has been above average, along with 2008 and 2005. Given that the combined basin usually reach their peak on April 7, it is safe to assume that this year's peak snowpack should be fairly close to average. Sub-basin snowpacks are near average to above average. At the lower end of the spectrum is the Animas River Watershed at 95 percent of average. Filling the top bill is the San Miguel Watershed which reported a respectable 110 percent of average snowpack. Precipitation at the higher elevations as measured by the SNOTEL network show only 68 percent of average conditions during March. As a result, total precipitation for the water year dropped from 99 percent of average last month to 93 percent of average currently. Reservoir storage remains below normal at 87 percent of average. Streamflow forecasts are lower than those issued last month at many of the forecast points. Below average to near average runoff is expected throughout the basin. April-July streamflows should range from 81 percent of average for the Dolores River at Dolores and the Inflow to McPhee Reservoir to 100 percent of average for the Rio Blanco at the Blanco Diversion.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - April 1, 2010

Forecast Point	Forecast Period	Future Conditions				Wetter		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	30% (1000AF)	10% (1000AF)		
Dolores River at Dolores	APR-JUL	152	188	215	81	245	295	265
McPhee Reservoir Inflow	APR-JUL	179	225	260	81	300	360	320
San Miguel River nr Placerville	APR-JUL	82	101	115	87	130	155	132
Gurley Reservoir Inlet	APR-JUL	11.3	14.0	16.0	87	18.2	22	18.3
Cone Reservoir Inlet	APR-JUL	1.0	1.9	3.0	92	3.8	5.8	3.3
Lilylands Reservoir Inlet	APR-JUL	1.7	2.3	2.7	92	3.2	4.0	2.9
Rio Blanco at Blanco Diversion (2)	APR-JUL	39	47	53	100	59	69	53
Navajo River at Oso Diversion (2)	APR-JUL	48	57	65	94	73	86	69
San Juan River nr Carracas (2)	APR-JUL	270	325	365	90	410	480	405
Piedra River nr Arboles	APR-JUL	153	185	210	91	235	280	230
Vallecito Reservoir Inflow	APR-JUL	137	162	180	88	200	230	205
Navajo Reservoir Inflow (2)	APR-JUL	515	610	700	89	800	930	785
Animas River at Durango	APR-JUL	295	345	385	88	425	495	440
Lemon Reservoir Inflow	APR-JUL	37	45	50	86	56	65	58
La Plata River at Hesperus	APR-JUL	15.7	19.3	22	88	25	30	25
Mancos River nr Mancos (2)	APR-JUL	10.4	21	28	85	35	46	33

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

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - April 1, 2010

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	14.2	14.2	12.2	ANIMAS RIVER BASIN	9	115	95
JACKSON GULCH	10.0	3.6	3.5	5.1	DOLORES RIVER BASIN	7	125	109
LEMON	40.0	9.7	19.5	21.2	SAN MIGUEL RIVER BASIN	5	116	110
MCPHEE	381.0	251.5	283.2	273.6	SAN JUAN RIVER BASIN	4	109	97
NARRAGUINNEP	19.0	17.8	18.7	15.5	TOTAL SAN MIGUEL, DOLORES	24	117	101
VALLECITO	126.0	42.2	80.8	62.0	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.
- (3) - Median value used in place of average.



655 Parfet Street, Room E200C
Lakewood, CO 80215-5517

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 Natural Resources Conservation Service web page at <http://www.wcc.nrcs.usda.gov/wsf/westwide.html>

Issued by

Dave White
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

Allen Green
State Conservationist
Natural Resources Conservation Service
Lakewood, Colorado

Colorado
Basin Outlook Report
Natural Resources Conservation Service
Lakewood, CO