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**Natural
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Colorado Basin Outlook Report JANUARY 1, 2003



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

JANUARY 1, 2003

Summary

After the drought of 2002 an excellent snowpack is critical for water users in 2003. To date, the state's snowpack falls short of that mark. A below average snowpack has been measured statewide for the sixth consecutive year. Adding to the water supply concerns are dry soils and well below average reservoir storage across the state. Although this year's snowpack is better than that of last year, adding the carryover effects of last year's drought leaves the state in a similar situation as last year at this time. Water users should keep close tabs on our snowpack and consider all feasible water conservation measures as we look towards the 2003 demand season.

Snowpack

Snowpack data collected through the NRCS SNOTEL network indicates that Colorado's statewide snowpack is 85% of average, and is 131% of last year's snowpack. Below average totals were measured in all of the major river basins on January 1. Percents of average range from only 67% in the Rio Grande Basin, to as high as 93%, in both the Colorado and Gunnison basins. With several consecutive years of good to excellent snowpack needed to recover from our current drought conditions, these snowpack totals are far from a beginning. With the exception of two major storm events this fall, the storm track has been avoiding most of the state this season. Add to that, the fact that most years that begin with a below average snowpack also end with a below average snowpack; and our hope of a significant recovery this year quickly fades. One glimmer of hope, which remains on the horizon, is that in an El Niño year such as this, a wet spring remains a good possibility. With 60% of the winter snowpack accumulation season remaining, there's still time for improvement to the existing conditions. As an example of one drought recovery scenario, snowfall of 200% of average for the next three months would boost the state's snowpack to 150% of average by April 1. This would be an excellent start to drought recovery with abundant runoff and improved reservoir storage.

Precipitation

After making a recovery to above average monthly totals in September and October, 2002, precipitation totals at SNOTEL sites has decreased sharply. November's statewide precipitation was 97% of average, followed by a dismal 58% of average in December. Precipitation across Colorado in December was well below average statewide with many basins receiving less than half of their average for the month. Those basins reporting less than 50% of average for the month include the South Platte, Arkansas and Rio Grande. Elsewhere, the monthly percentages range as high as 70% of average in the Yampa and White River basins. Totals for December 2002 were even worse than last year's, at 94% of those totals. Water year totals (since October 1, 2002) are consistently below average in all basins. While the 2003 water year is only three months old, the percents of average range from 79% of average in the Arkansas to 93% in the Gunnison Basin. Statewide, the water year precipitation stands at 90% of average.

Reservoir Storage

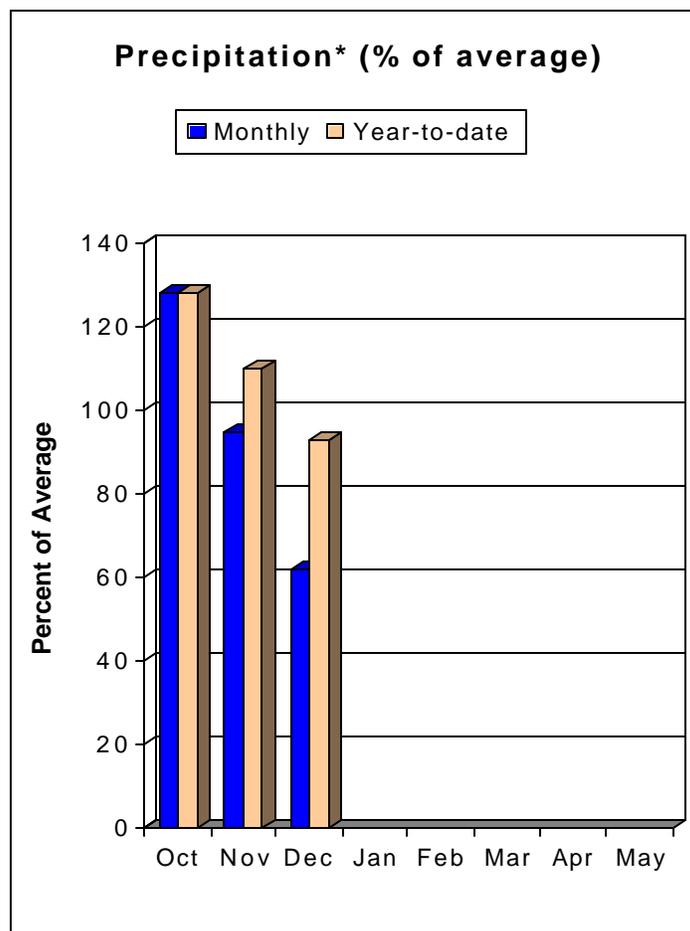
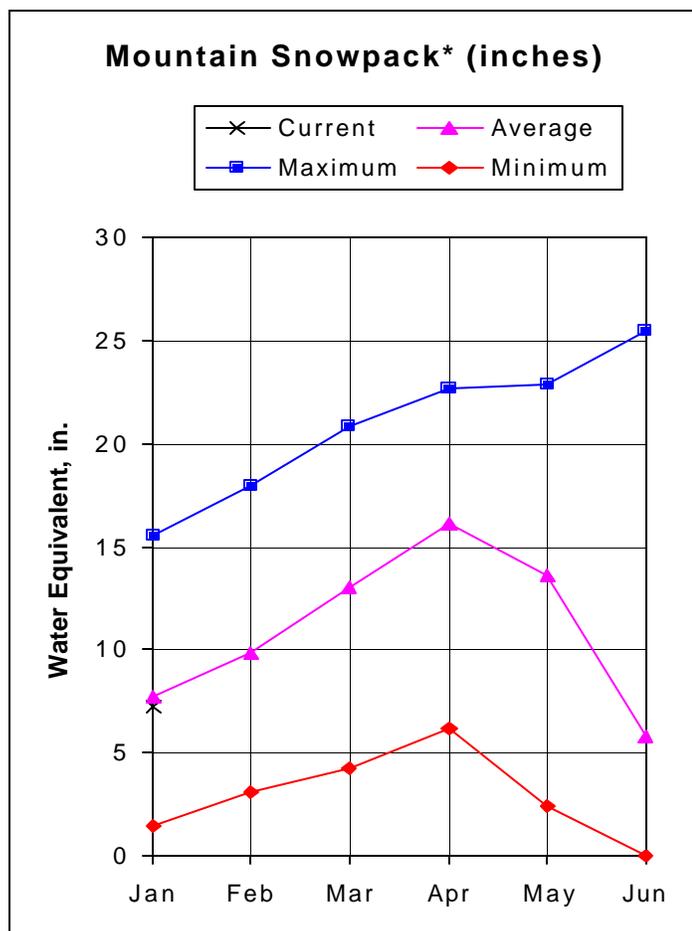
Colorado's statewide reservoir storage has been tracking below average since September 2001. During the summer of 2002, storage volumes dropped to over 1.9 million acre-feet below average by August 1. While those deficits have improved slightly since last summer, they remain at nearly 1.7 million acre-feet on January 1. As a percent of average, the current storage volumes are only 51 % of average, and 60% of last year's storage volumes. Of course, storage is well below average in all basins and ranges from only 40% of average in the Colorado Basin, to as much as 89% of average in the Yampa and White basins. As expected, the current volumes are tracking well below those of last year at this time. Statewide, storage is only 60% of last year's volume. Recovery to pre-drought volumes is expected to take several years of good to excellent runoff.

Streamflow

At this point the prospects for next spring and summer's runoff is not favorable. A below average snowpack, sitting on very dry soils, translates into very low runoff forecasts across most of the state. Some of the lowest forecasts are in the San Juan, Rio Grande, Arkansas and South Platte basins, where spring and summer flows are only expected to range from 50% to 70% of average. Meanwhile, some of the best prospects for runoff occur in the upper reaches of the Colorado River Basin. With near average snowfall anticipated in the coming months, flows of 85% to 90% of average are predicted in these basins. In most years with below average runoff we've had the benefit of good reservoir storage to supplement the low flows. However, this year is quite a different story. At best, reservoir storage may help extend the runoff season a little longer this year with adding to storage, a limited luxury for most reservoirs.

GUNNISON RIVER BASIN

as of January 1, 2003



*Based on selected stations

The January 1 snowpack measurements are 93% of average in the Gunnison Basin. While these measurements are a good deal better than last year at this time, they are not what water managers in the basin have been hoping for. Because of the extremely low snowpack last season and continued dry conditions through the summer months, snow amounts will need to be very much above average this season to help the water supplies out of a deficit situation. Fortunately at this point these snow amounts could easily be boosted to well above average with a shift to a wetter weather pattern. Precipitation during December was only 62% of average, which is about 13% less than the same period last year. The total precipitation so far this water year is 93% of average. Reservoirs in the basin have only 63% of their average storage for this time of year, which is only 63% of last year's storage. All of the streamflow forecasts are below average at this time. Forecasts range from 74% of average on Tomichi Creek at Gunnison, to 86% of average on the East River at Almont.

GUNNISON RIVER BASIN
Streamflow Forecasts - January 1, 2003

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Taylor River blw Taylor Park Resv	APR-JUL	43	68	85	83	102	127	103
Slate River nr Crested Butte	APR-JUL	49	59	69	78	79	94	89
East River at Almont	APR-JUL	85	132	165	86	198	245	192
Gunnison River nr Gunnison	APR-JUL	151	249	315	81	381	479	390
Tomichi Creek at Sargents	APR-JUL	4.9	16.3	24	75	32	43	32
Cochetopa Creek blw Rock Creek	APR-JUL	3.8	9.2	12.9	75	16.6	22	17.3
Tomichi Creek at Gunnison	APR-JUL	18.5	40	60	74	84	125	81
Lake Fork at Gateview	APR-JUL	50	77	95	75	123	150	126
Blue Mesa Reservoir Inflow	APR-JUL	302	432	575	80	720	850	720
Paonia Reservoir Inflow	MAR-JUN	32	58	80	80	106	150	100
	APR-JUL	27	56	81	79	111	164	102
N.F. Gunnison River nr Somerset	APR-JUL	88	168	245	80	323	400	305
Surface Creek nr Cedaredge	APR-JUL	7.2	10.1	12.7	74	16.0	23	17.1
Ridgway Reservoir Inflow	APR-JUL	44	64	85	83	105	125	102
Uncompahgre River at Colona	APR-JUL	36	72	108	78	145	181	139
Gunnison River nr Grand Junction	APR-JUL	484	842	1200	77	1560	1919	1560

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

GUNNISON RIVER BASIN
Watershed Snowpack Analysis - January 1, 2003

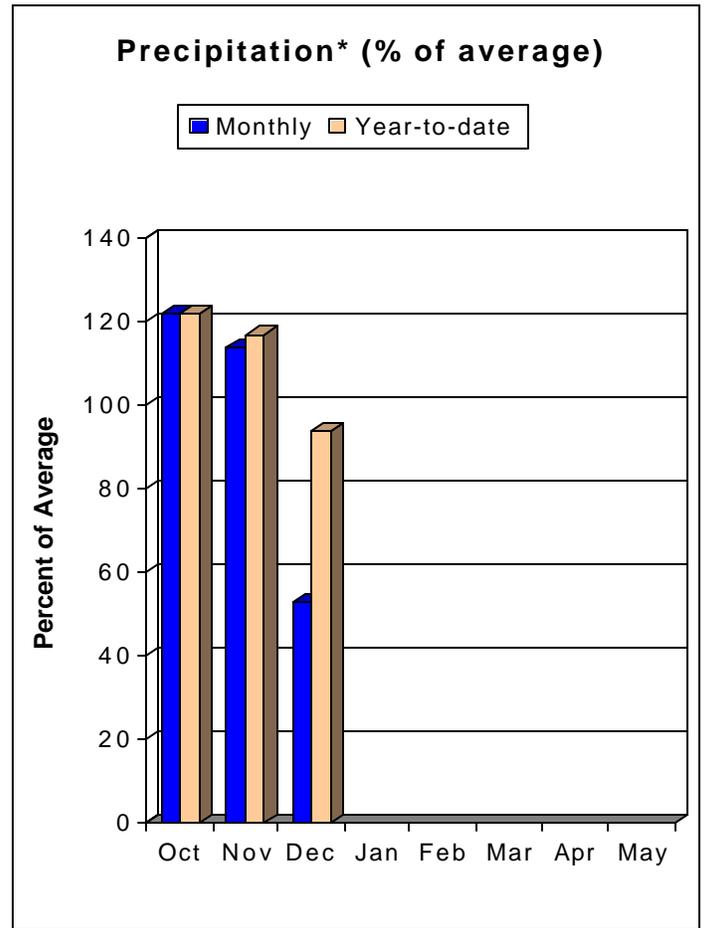
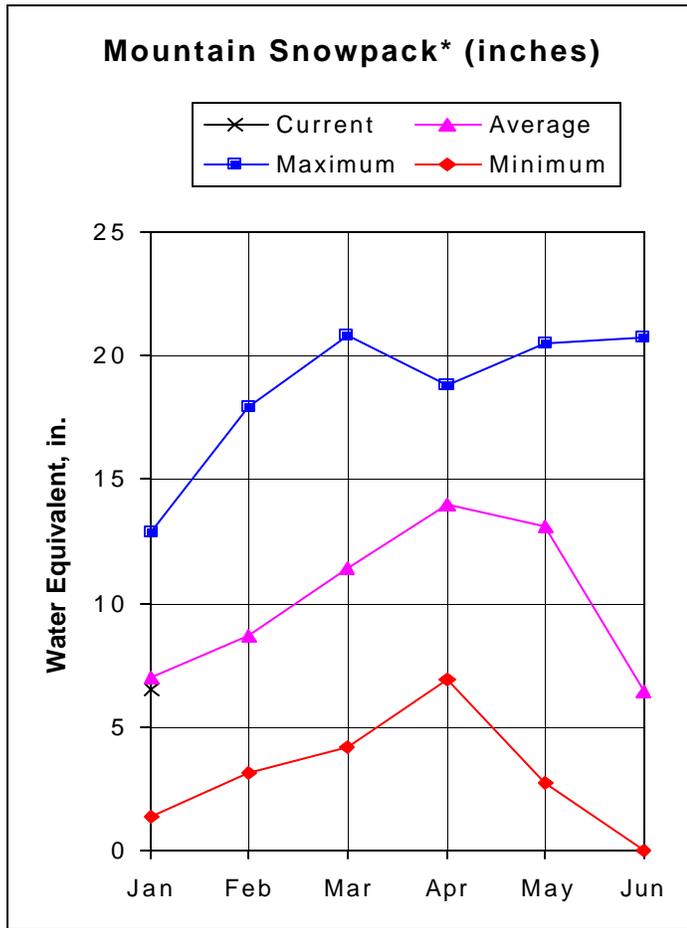
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE MESA	830.0	283.2	544.0	545.8	UPPER GUNNISON BASIN	9	123	91
CRAWFORD	14.3	3.5	3.0	7.5	SURFACE CREEK BASIN	2	132	86
FRUITGROWERS	4.3	1.0	0.8	2.8	UNCOMPAGHRE BASIN	3	117	99
FRUITLAND	9.2	0.1	0.7	1.3	TOTAL GUNNISON RIVER BASIN	12	121	93
MORROW POINT	121.0	109.6	109.3	113.4				
PAONIA	18.0	3.8	2.7	4.7				
RIDGWAY	83.2	59.7	66.4	60.1				
TAYLOR PARK	106.0	41.5	64.9	67.7				

* 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.

- (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 January 1, 2003



*Based on selected stations

Snowpack measurements in the Colorado Basin are 93% of average on January 1. While this is nearly 30% more snow than last year at this time, it is not nearly enough to help the basin out of the drought conditions brought on by last year's low snowpack and dry summer. Fortunately it is early in the season, and if the weather changes to a wetter pattern much of the basin could still end up with snow amounts well above average by April 1. Precipitation was only 53% of average during December, and the water year total is 94% of average. There has been 26% more precipitation than by this time last water year. Reservoirs in the basin have only 40% of their average storage for this time of year. There is only 47% of last year's storage. Early forecasts for this year's runoff season are all below average at this time. Forecasts range from 80% of average on the Colorado River at Dotsero, to 89% of average at the inflow to Ruedi Reservoir.

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UPPER COLORADO RIVER BASIN
Streamflow Forecasts - January 1, 2003

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Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
Lake Granby Inflow	APR-JUL	127	159	185	82	215	269	225
Willow Creek Reservoir Inflow	APR-JUL	26	37	45	88	54	70	51
Williams Fork Reservoir inflow	APR-JUL	54	69	80	84	92	111	95
Dillon Reservoir Inflow	APR-JUL	72	111	140	84	169	212	167
Green Mountain Reservoir inflow	APR-JUL	185	217	240	86	264	302	280
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	30	40	50	83	62	85	60
Eagle River blw Gypsum	APR-JUL	189	244	290	87	345	446	335
Colorado River nr Dotsero	APR-JUL	576	893	1150	80	1407	1785	1440
Ruedi Reservoir Inflow	APR-JUL	85	107	125	89	146	184	141
Roaring Fork at Glenwood Springs	APR-JUL	417	536	625	88	721	874	710
Colorado River nr Cameo	APR-JUL	1004	1597	2000	83	2403	2996	2420

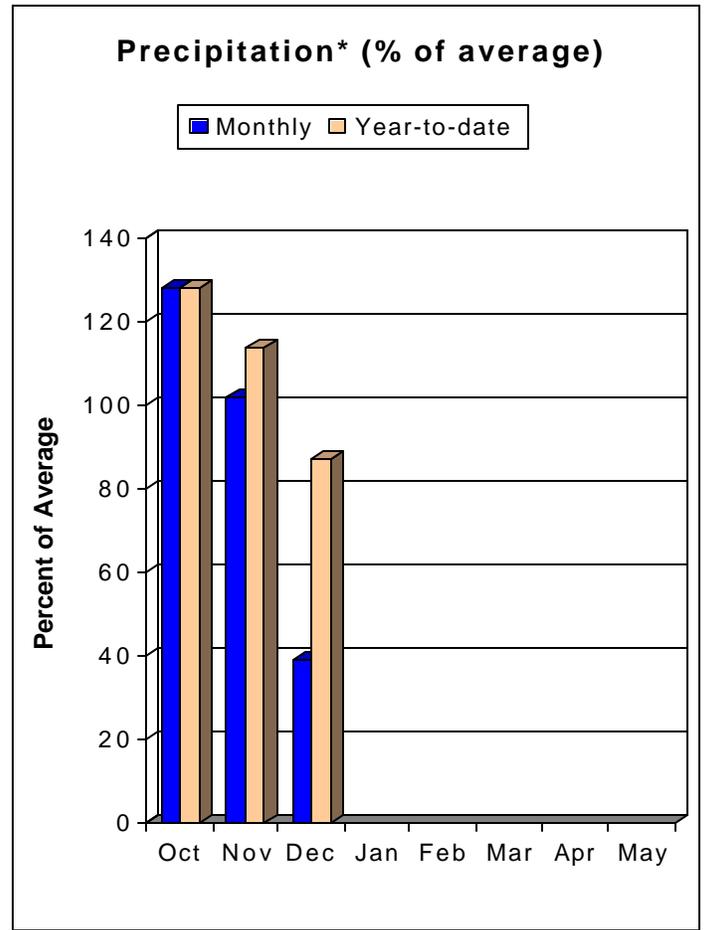
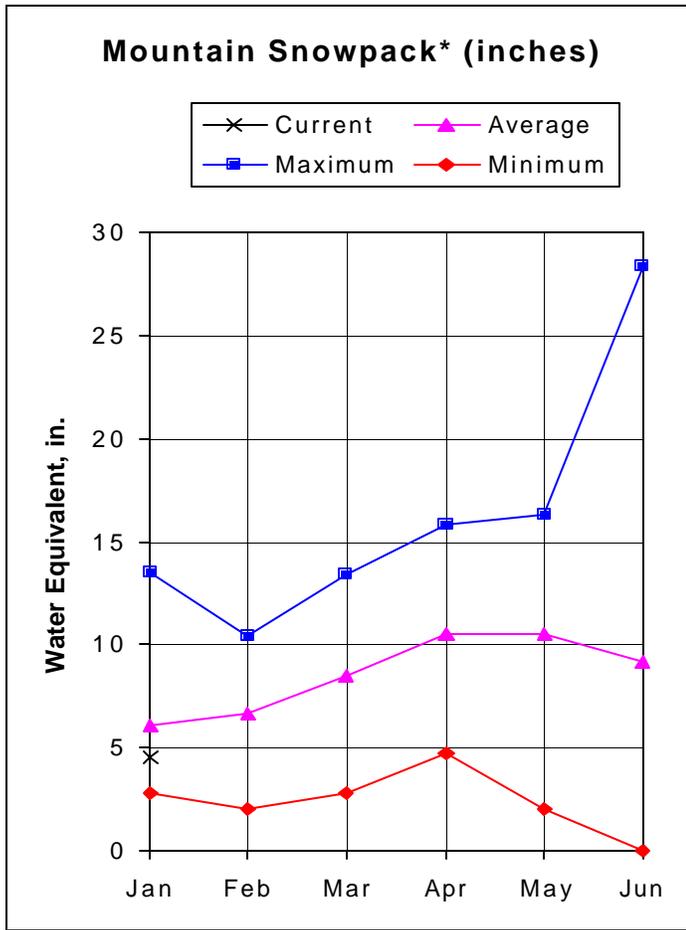
UPPER COLORADO RIVER BASIN Reservoir Storage (1000 AF) - End of December					UPPER COLORADO RIVER BASIN Watershed Snowpack Analysis - January 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DILLON	250.8	140.8	214.1	224.8	BLUE RIVER BASIN	5	133	94
LAKE GRANBY	465.6	70.4	243.3	322.1	UPPER COLORADO RIVER BASI	18	132	92
GREEN MOUNTAIN	139.0	35.7	71.8	90.3	MUDDY CREEK BASIN	2	134	91
HOMESTAKE	43.0	17.0	28.5	28.4	PLATEAU CREEK BASIN	2	132	86
RUEDI	102.0	46.8	66.3	79.7	ROARING FORK BASIN	6	120	98
VEGA	32.0	3.6	8.7	11.0	WILLIAMS FORK BASIN	2	104	78
WILLIAMS FORK	96.8	8.9	58.6	62.9	WILLOW CREEK BASIN	2	185	111
WILLOW CREEK	9.0	6.6	6.3	6.1	TOTAL COLORADO RIVER BASI	26	129	93

* 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 January 1, 2003



*Based on selected stations

The January 1 snow measurements in the South Platte Basin are only 73% of average. Although this is 37% more snow than last year at this time, it is far from the amount needed to help pull the basin out of drought conditions. If weather patterns improve for snow accumulation many portions of the basin could easily reach above average amounts by April 1. Unfortunately some portions, such as the Upper South Platte Watershed, which is currently only 59% of average, may be lucky to reach average conditions before the meltout begins. Precipitation was only 39% of average for the month of December, and the water year total is only 87% of average. There has been 37% more precipitation this water year compared to this time last water year. Reservoirs in the basin have only 47% of their average storage for this time of year. There is only 61% of last year's storage amount. The early runoff forecasts are much below average at this time, and only a significantly improved snowpack will allow them to improve. Forecasts range from only 48% of average at the inflow to Antero Reservoir, to 71% of average on the St. Vrain Creek at Lyons.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - January 1, 2003

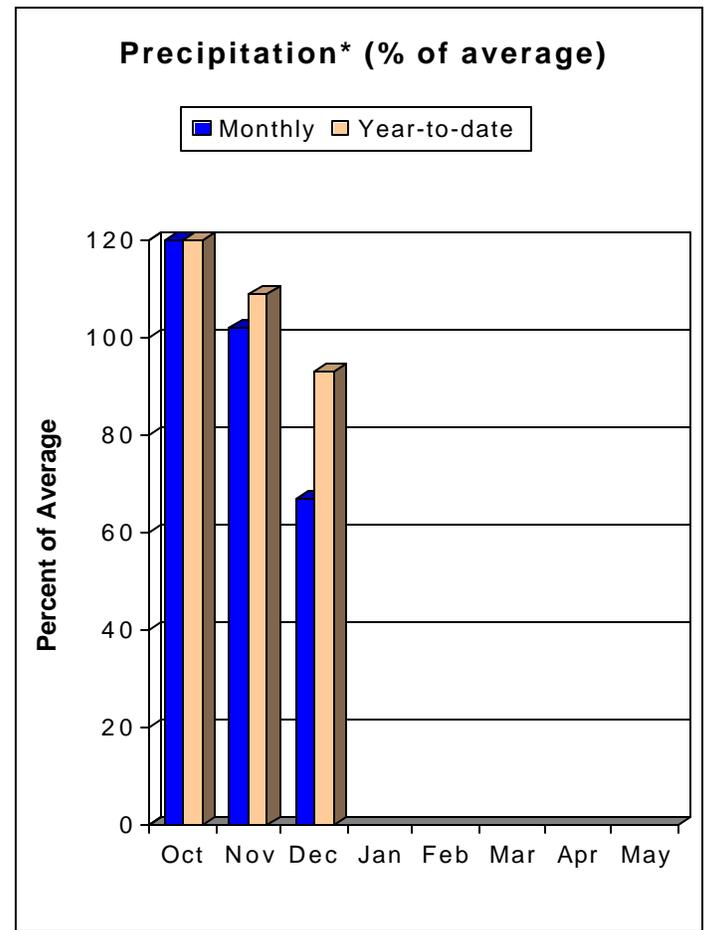
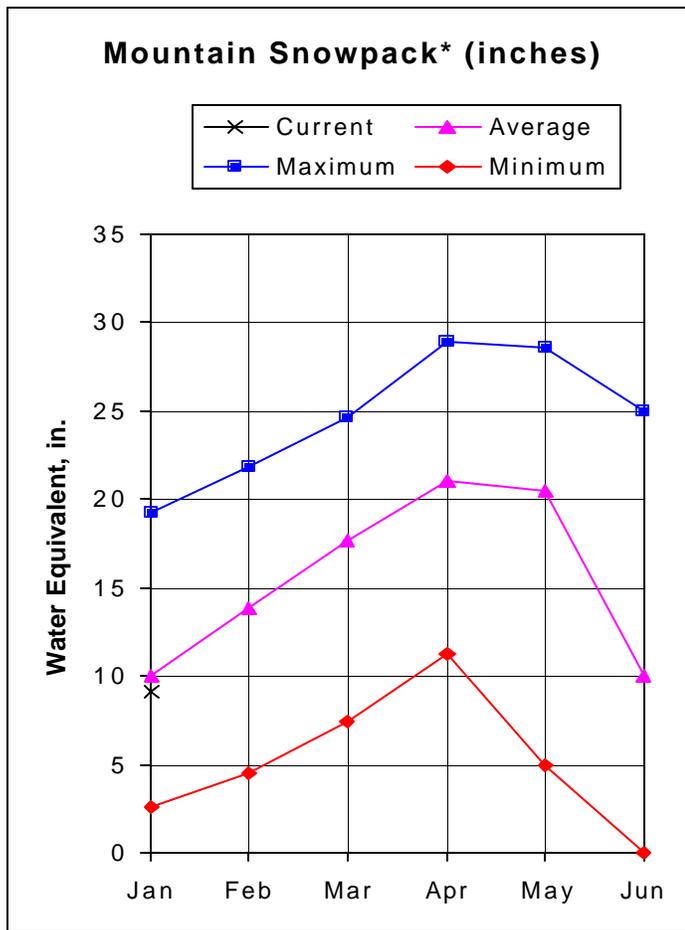
Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
Antero Reservoir inflow	APR-JUL	2.1	3.9	5.8	45	8.7	15.9	13.0
Spinney Mountain Reservoir inflow	APR-JUL	12.9	19.9	27	67	36	55	40
Elevenmile Canyon Reservoir inflow	APR-JUL	0.9	14.4	24	58	33	46	41
Cheesman Lake inflow	APR-JUL	29	43	57	64	75	113	89
South Platte River at South Platte	APR-SEP	14.0	97	153	67	209	292	230
Bear Creek at Morrison	APR-SEP	6.3	13.9	19.0	61	24	32	31
Clear Creek at Golden	APR-SEP	51	74	90	67	106	129	134
St. Vrain Creek at Lyons	APR-SEP	38	51	60	71	69	83	84
Boulder Creek nr Orodell	APR-SEP	22	31	37	70	43	52	53
South Boulder Creek nr Eldorado Spri	APR-SEP	8.7	23	32	70	41	55	46
Big Thompson River at mouth nr Drake	APR-SEP	57	73	83	71	93	109	117
Cache La Poudre at Canyon Mouth	APR-SEP	57	136	190	69	268	383	275

SOUTH PLATTE RIVER BASIN Reservoir Storage (1000 AF) - End of December					SOUTH PLATTE RIVER BASIN Watershed Snowpack Analysis - January 1, 2003			
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	20.0	16.5	BIG THOMPSON BASIN	3	146	86
BARR LAKE	32.0	12.2	17.1	22.4	BOULDER CREEK BASIN	3	170	80
BLACK HOLLOW	8.0	2.1	2.8	3.8	CACHE LA POUFRE BASIN	2	105	70
BOYD LAKE	49.0	6.1	20.4	31.7	CLEAR CREEK BASIN	2	120	85
CACHE LA POUFRE	10.0	1.0	0.7	6.3	SAINT VRAIN BASIN	1	116	116
CARTER	108.9	71.3	60.0	74.7	UPPER SOUTH PLATTE BASIN	5	157	59
CHAMBERS LAKE	9.0	3.2	3.8	2.8	TOTAL SOUTH PLATTE BASIN	15	137	73
CHEESMAN	79.0	51.5	58.5	60.9				
COBB LAKE	34.0	2.5	6.8	13.9				
ELEVEN MILE	97.8	44.6	99.5	95.9				
EMPIRE	38.0	7.9	21.0	22.2				
FOSSIL CREEK	12.0	2.9	6.2	6.3				
GROSS	41.8	17.2	29.2	26.2				
HALLIGAN	6.4	2.5	3.3	3.6				
HORSECREEK	16.0	1.1	11.8	10.9				
HORSETOOTH	149.7	9.8	9.2	87.8				
JACKSON	35.0	24.8	0.0	23.0				
JULESBURG	28.0	15.7	15.3	18.4				
LAKE LOVELAND	14.0	7.6	10.3	8.9				
LONE TREE	9.0	5.1	8.2	6.0				
MARIANO	6.0	0.5	0.7	4.1				
MARSHALL	10.0	2.9	4.6	4.7				
MARSTON	13.0	4.9	8.6	12.7				
MILTON	24.0	2.4	17.3	14.8				
POINT OF ROCKS	70.0	13.7	38.9	51.1				
PREWITT	33.0	0.0	11.3	18.0				
RIVERSIDE	63.1	8.4	41.2	38.1				
SPINNEY MOUNTAIN	48.7	17.0	23.0	35.4				
STANDLEY	42.0	20.7	32.1	32.5				
TERRY LAKE	8.0	1.4	5.1	5.2				
UNION	13.0	5.7	9.2	10.4				
WINDSOR	19.0	0.4	5.3	10.0				

* 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.

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of January 1, 2003



Snowpack measurements in these basins range from only 61% of average in the Laramie Basin, to 94% of average in the Yampa Basin. The measurements are 30% above last year at this time. If weather patterns manage to turn a little wetter for the remaining snow season most portions of these basins could end up with well above average snow accumulation by April 1. On the other hand, if significant snowfall does not occur in the coming months, water supplies from the spring snowmelt will be much lower than what will be required to relieve the water shortages brought on by last year's low snowpack. Precipitation was only 67% of average during December, and the water year total is 93% of average. There has been about 28% more precipitation this water year compared to last water year by this time. Reservoirs in the basin have only 89% of their average storage for this time of year. There is only 88% of last year's storage amount. Early forecasts for this year's runoff season are all below average. Forecasts range from 70% of average on the Laramie River near Woods, to 82% of average on the Yampa River at Steamboat Springs.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - January 1, 2003

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
North Platte River nr Northgate	APR-SEP	54	141	200	74	259	346	270
Laramie River nr Woods	APR-SEP	25	67	95	70	123	165	135
Yampa R abv Stagecoach Res	APR-JUL	6.1	14.4	20	69	26	34	29
Yampa River at Steamboat Springs	APR-JUL	137	192	230	82	268	323	280
Elk River nr Milner	APR-JUL	123	183	230	71	283	371	325
Elkhead Creek nr Elkhead	APR-JUL	15.9	22	28	72	35	50	39
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	23	37	47	80	57	71	59
Fortification Ck nr Fortification	MAR-JUN	1.61	4.23	6.00	80	7.77	10.39	7.50
Yampa River nr Maybell	APR-JUL	394	630	790	80	950	1186	990
Little Snake River nr Slater	APR-JUL	60	93	120	76	150	200	159
LITTLE SNAKE R nr Dixon	APR-JUL	133	203	250	76	297	367	330
LITTLE SNAKE R nr Lily	APR-JUL	154	226	275	75	324	396	365
White River nr Meeker	APR-JUL	143	192	235	81	288	387	290

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

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2003

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	24.5	29.0	26.4	LARAMIE RIVER BASIN	2	138	61
YAMCOLO	9.1	4.0	3.5	5.5	NORTH PLATTE RIVER BASIN	7	138	88
					TOTAL NORTH PLATTE BASIN	9	138	84
					ELK RIVER BASIN	2	120	74
					YAMPA RIVER BASIN	9	132	94
					WHITE RIVER BASIN	4	126	91
					TOTAL YAMPA AND WHITE RIV	12	130	91
					LITTLE SNAKE RIVER BASIN	6	101	78

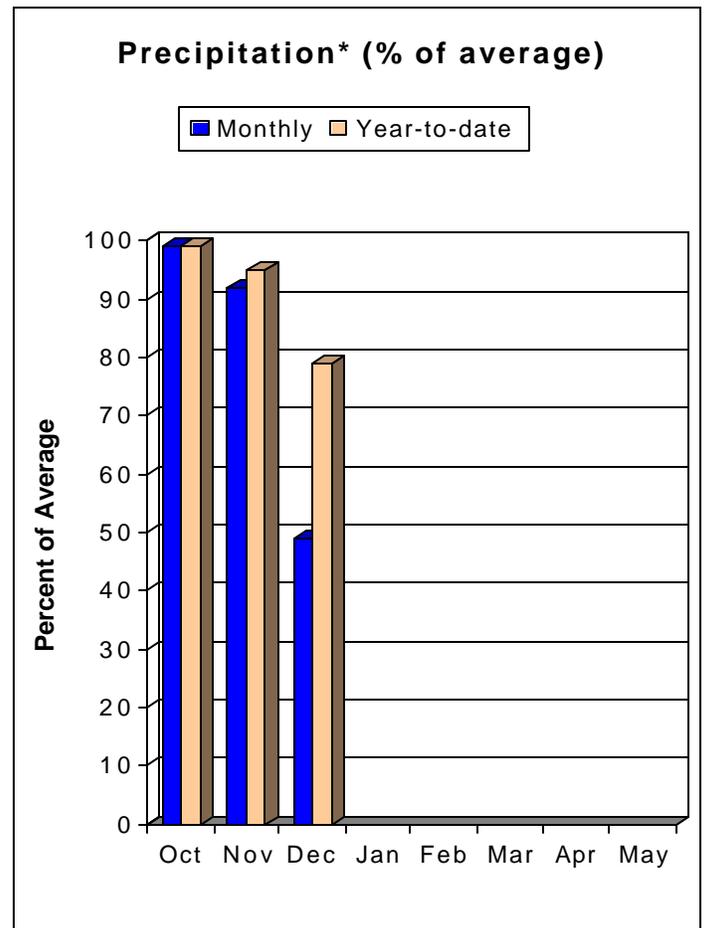
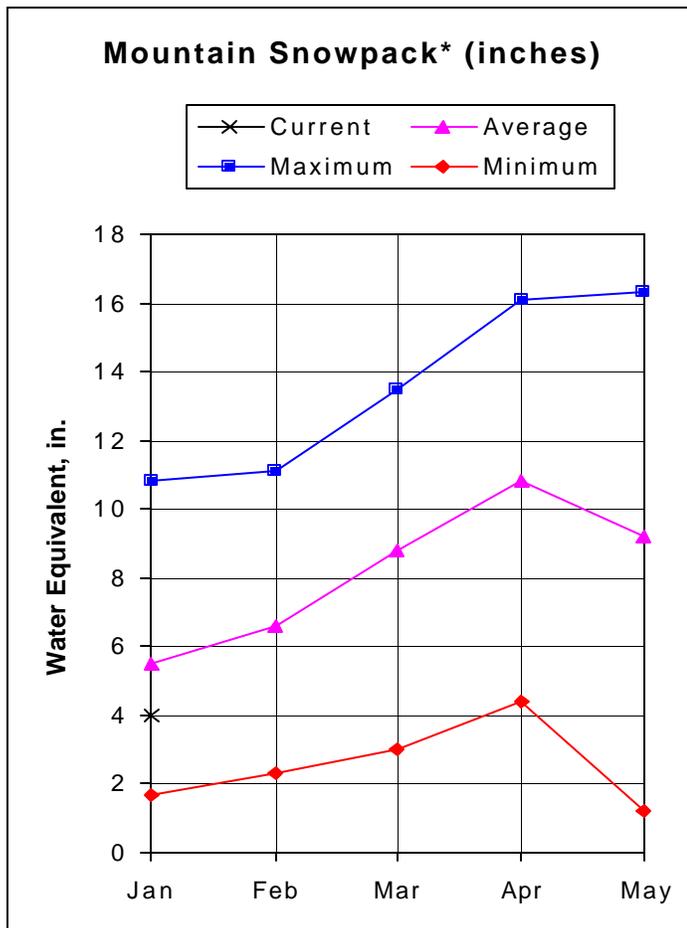
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 January 1, 2003



*Based on selected stations

Snowpack measurements in the Arkansas Basin are only 72% of average for January 1. The snowpack is highly variable ranging from only 52% of average in the Cucharas and Huerfano watersheds, to 93% of average in the Upper Arkansas Watershed. Although there is about 30% more snow in the basin than last year, much more snow will need to fall between now and April 1 to provide enough runoff this spring to relieve the water shortages brought on by the low snowpack and dry conditions last season. Precipitation during December was only 49% of average, and the water year total is only 79% of average. There has been about 20% more precipitation this water year compared to last water year by this time. Reservoirs in the basin have only 46% of their average storage amount for this time of year. There is only 59% of the storage there was last year on January 1. Forecasted runoff this season is as low and variable as the snowpack, ranging from only 50% of average at the Cucharas River near La Veta, to 79% of average in the Chalk Creek near Nathrop.

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ARKANSAS RIVER BASIN
Streamflow Forecasts - January 1, 2003

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Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>>		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Chalk Creek nr Nathrop	APR-SEP	2.8	13.7	21	79	29	40	27
Arkansas River at Salida	APR-SEP	124	199	250	81	301	376	310
Grape Creek nr Westcliffe	APR-SEP	2.5	4.7	10.4	53	21	36	19.6
Pueblo Reservoir Inflow	APR-SEP	125	229	300	70	371	475	430
Huerfano River nr Redwing	APR-SEP	2.4	6.7	9.6	62	14.6	22	15.5
Cucharas River nr La Veta	APR-SEP	1.8	3.7	6.5	50	12.6	22	13.0
Trinidad Lake Inflow	APR-SEP	8.8	13.6	22	51	40	65	44

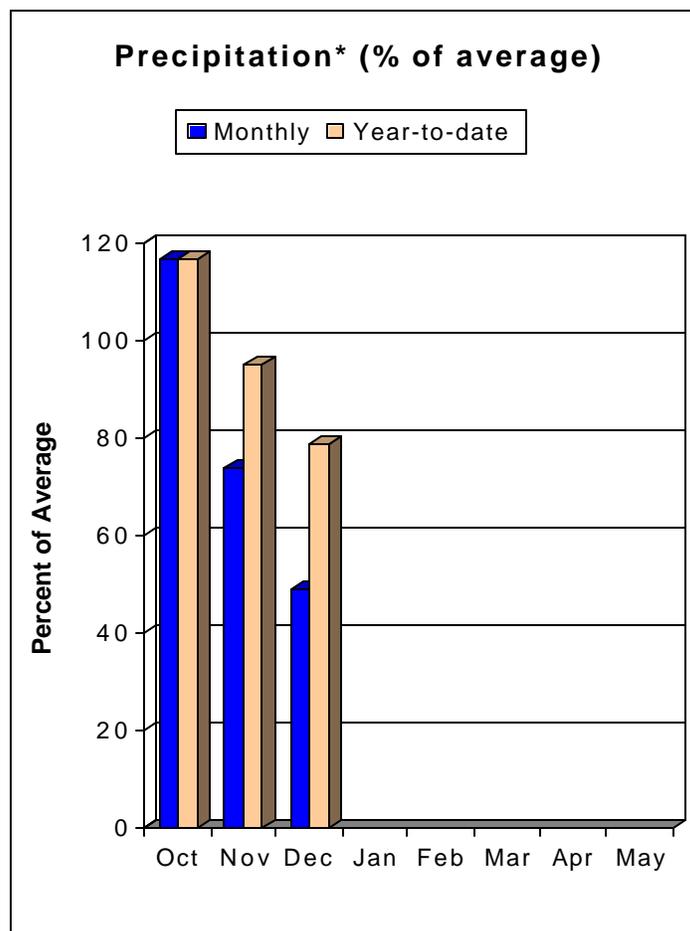
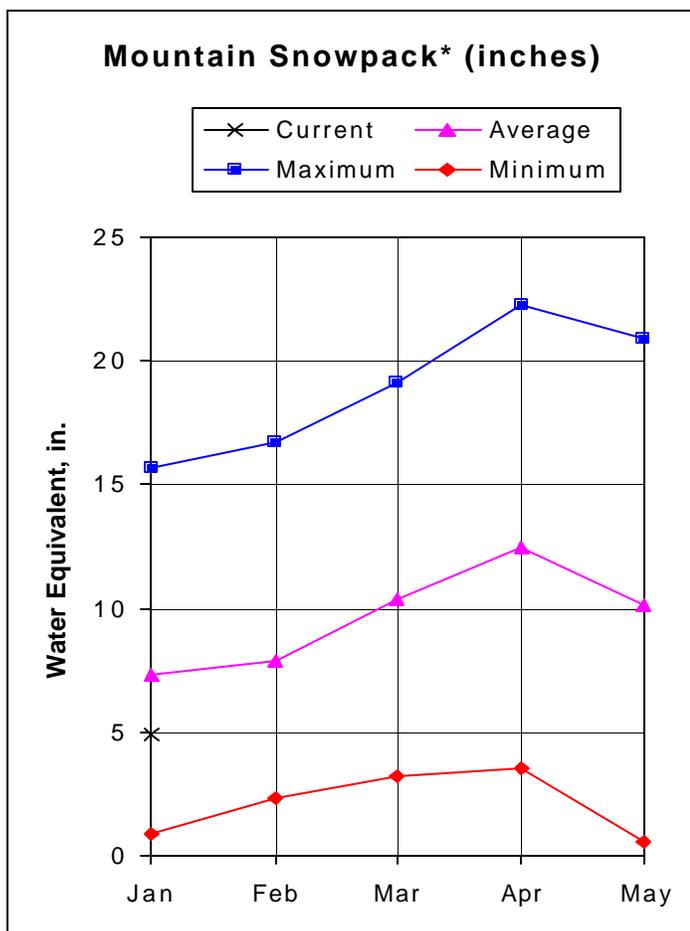
ARKANSAS RIVER BASIN Reservoir Storage (1000 AF) - End of December					ARKANSAS RIVER BASIN Watershed Snowpack Analysis - January 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ADOBE	70.0	0.0	17.3	23.4	UPPER ARKANSAS BASIN	2	118	93
CLEAR CREEK	11.0	6.4	5.6	5.9	CUCHARAS & HUERFANO RIVER	2	144	52
GREAT PLAINS	150.0	6.8	25.8	32.2	PURGATOIRE RIVER BASIN	2	152	56
HOLBROOK	7.0	0.0	0.0	3.0	TOTAL ARKANSAS RIVER BASIN	5	131	72
HORSE CREEK	28.0	0.0	0.0	8.4				
JOHN MARTIN	335.7	26.8	69.0	108.7				
LAKE HENRY	8.0	0.5	2.9	3.7				
MEREDITH	42.0	5.8	7.6	13.6				
PUEBLO	236.7	88.8	113.8	144.0				
TRINIDAD	72.3	14.9	16.2	24.2				
TURQUOISE	126.6	41.6	88.1	87.9				
TWIN LAKES	86.0	39.9	46.5	46.3				

* 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.

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

UPPER RIO GRANDE RIVER BASIN as of January 1, 2003



*Based on selected stations

Low snowpack measurements that have plagued the Rio Grande Basin for the past few years are not letting up, and this year's January 1 measurements are once again the lowest in the state at only 67% of average. Although there is 32% more snow now than last year at this time, the amount is significantly below what will be required to replenish the water supply shortages in this basin. Measurements range from only 57% of average in the Alamosa Creek Watershed, to 83% of average in the Culebra and Trinchera Watersheds. Precipitation was only 49% of average during December, and the water year total is only 80% of average. There has been 45% more precipitation this water year compared to last water year by this time. Reservoirs in the basin have only 59% of their average storage amount for this time of year. There is only 83% of the storage amount there was last year at this time. Most of the streamflow forecasts are much below average at this time, with the exception of forecasted flows on Costilla Creek, which are around 95% of average.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - January 1, 2003

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Rio Grande at Thirty Mile Bridge	APR-SEP	56	72	85	63	101	129	136
Rio Grande Reservoir Inflow	APR-JUL	53	67	78	66	91	116	118
Rio Grande at Wagon Wheel Gap	APR-SEP	83	177	241	70	305	399	345
South Fork Rio Grande at South Fork	APR-SEP	40	64	86	65	108	140	132
Rio Grande nr Del Norte	APR-SEP	104	264	372	70	480	640	531
Saguache Creek nr Saguache	APR-SEP	6.6	16.4	23	70	30	39	33
Alamosa Creek abv Terrace Reservoir	APR-SEP	17.1	34	45	64	56	73	70
La Jara Creek nr Capulin	MAR-JUL	2.17	3.34	5.70	66	8.06	11.53	8.70
Trinchera Water Supply	APR-SEP	5.4	13.2	26	65	39	58	40
Platoro Reservoir Inflow	APR-JUL	22	35	43	67	52	64	64
	APR-SEP	25	39	48	68	57	71	71
Conejos River nr Mogote	APR-SEP	62	111	144	72	177	226	200
San Antonio River at Ortiz	APR-SEP	3.0	7.4	11.4	70	16.3	25	16.4
Los Pinos River nr Ortiz	APR-SEP	17.7	40	55	75	71	93	74
Culebra Creek at San Luis	APR-SEP	3.2	11.7	17.4	76	23	32	23
Costilla Reservoir inflow	MAR-JUL	4.5	7.9	10.1	95	12.3	15.7	10.6
Costilla Creek nr Costilla	MAR-JUL	11.6	19.6	25	96	30	38	26

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

UPPER RIO GRANDE BASIN
Watershed Snowpack Analysis - January 1, 2003

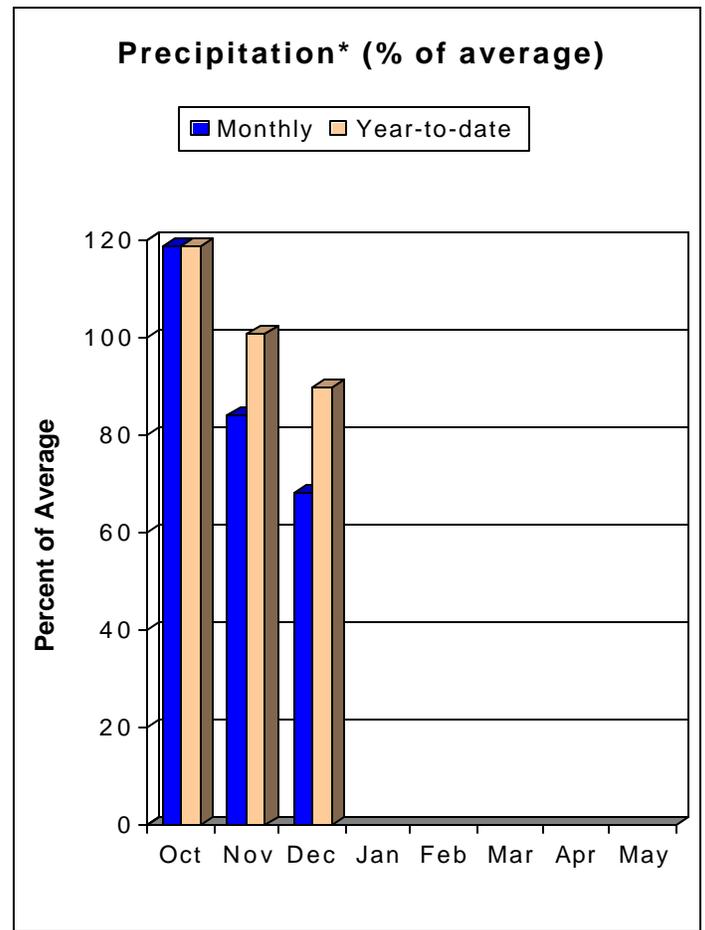
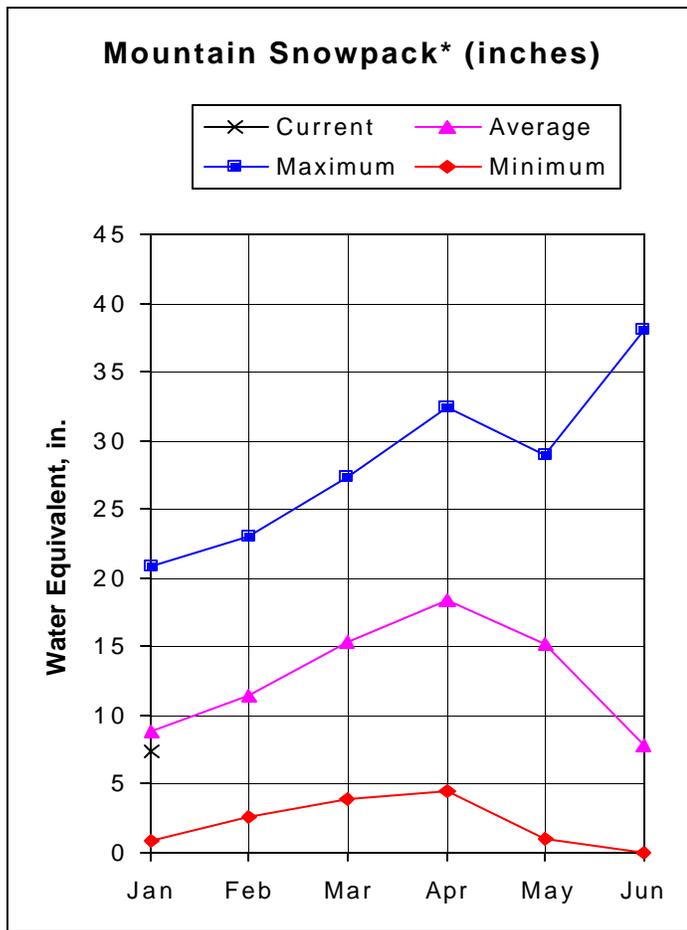
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	15.0	2.1	2.1	4.9	ALAMOSA CREEK BASIN	1	126	57
PLATORO	53.7	7.8	14.1	24.3	CONEJOS & RIO SAN ANTONIO	2	123	74
RIO GRANDE	51.0	16.3	10.0	15.1	CULEBRA & TRINCHERA CREEK	3	122	83
SANCHEZ	103.0	10.8	23.7	23.9	UPPER RIO GRANDE BASIN	4	151	59
SANTA MARIA	45.0	11.1	7.2	10.1	TOTAL UPPER RIO GRANDE BA	10	132	67
TERRACE	13.1	1.8	2.7	5.6				

* 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.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of January 1, 2003



*Based on selected stations

These basins have been fortunate enough to receive at least moderate amounts of snow from storms that moved in from the south and southwest this snow season. Measurements are at 84% of average on January 1, which is significantly higher than the other basins in southern Colorado. Weather conditions permitting, there is still hope for these basins to receive enough snow this season to end up above average by April 1, and relieve the water shortages brought on by last year's dismal snow amounts. Snowpack measurements range from 76% of average in the San Juan Basin, to 103% of average in the Dolores Basin. Precipitation during December was only 68% of average, and the water year total is 90% of average. There has been about 40% more precipitation compared to last water year at this time. Reservoirs in these basins have only 56% of their average storage amount for this time of year. There is only 69% of last year's storage. The early forecasts for the runoff season are all below average. They range from 64% of average at the inflow to Navajo Reservoir, to 81% of average on the San Miguel River near Placerville.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - January 1, 2003

Forecast Point	Forecast Period	Future Conditions				Wetter		30-Yr Avg. (1000AF)
		Chance Of Exceeding *				30%	10%	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)			
Dolores River at Dolores	APR-JUL	93	151	210	79	268	326	265
McPhee Reservoir inflow	APR-JUL	102	176	250	78	323	400	320
San Miguel River nr Placerville	APR-JUL	51	79	107	81	135	162	132
Gurley Reservoir Inlet	APR-JUL	2.2	8.0	12.0	73	16.0	22	16.5
	APRIL			1.25	75			1.66
	MAY			6.50	74			8.83
	JUNE			3.50	75			4.67
	JULY			0.75	57			1.32
Cone Reservoir Inlet	APR-JUL	0.39	1.69	2.57	73	3.45	4.75	3.53
	APRIL			0.25	54			0.46
	MAY			1.60	98			1.64
	JUNE			0.65	63			1.04
	JULY			0.15	40			0.38
Lilylands Reservoir Inlet	APR-JUL	0.77	1.06	2.00	70	2.94	4.32	2.86
	APRIL			0.15	38			0.40
	MAY			1.10	83			1.32
	JUNE			0.50	58			0.87
	JULY			0.15	56			0.27
Rio Blanco at Blanco Diversion	APR-JUL	11.7	26	35	66	44	58	53
Navajo River at Oso Diversion	APR-JUL	13.8	34	48	70	62	82	69
San Juan River nr Carracus	APR-JUL	160	228	280	69	338	433	405
Piedra River nr Arboles	APR-JUL	44	107	150	65	193	256	230
Vallecito Reservoir Inflow	APR-JUL	42	98	136	66	174	230	205
Navajo Reservoir Inflow	APR-JUL	163	370	510	64	650	857	800
Animas River at Durango	APR-JUL	124	247	330	75	413	536	440
Lemon Reservoir Inflow	APR-JUL	14.0	31	42	72	53	70	58
La Plata River at Hesperus	APR-JUL	6.2	13.6	18.6	74	24	31	25
Mancos River nr Mancos	APR-JUL	2.1	18.7	30	75	41	58	40
	APRIL			6.00	103			5.80
	MAY			15.0	94			15.9
	JUNE			7.0	51			13.7
	JULY			2.00	44			4.60

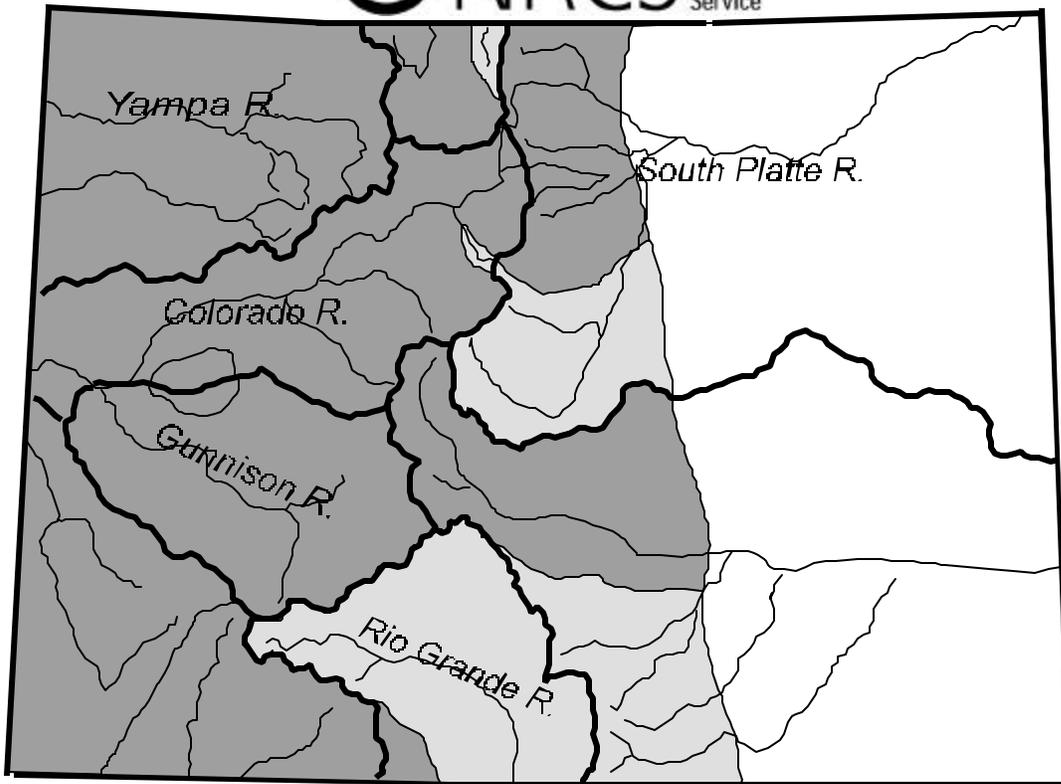
SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Reservoir Storage (1000 AF) - End of December

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - January 1, 2003

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	3.8	11.1	12.0	ANIMAS RIVER BASIN	7	124	80
JACKSON GULCH	10.0	2.5	2.3	4.6	DOLORES RIVER BASIN	4	116	103
LEMON	40.0	5.8	13.0	20.1	SAN MIGUEL RIVER BASIN	3	112	95
MCPHEE	381.2	159.1	206.4	271.1	SAN JUAN RIVER BASIN	3	171	76
NARRAGUINNEP	19.0	7.8	18.0	12.7	TOTAL SAN MIGUEL, DOLORES	16	128	84
VALLECITO	126.0	32.5	54.8	58.6	AN 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. The average is computed for the 1971-2000 base period.

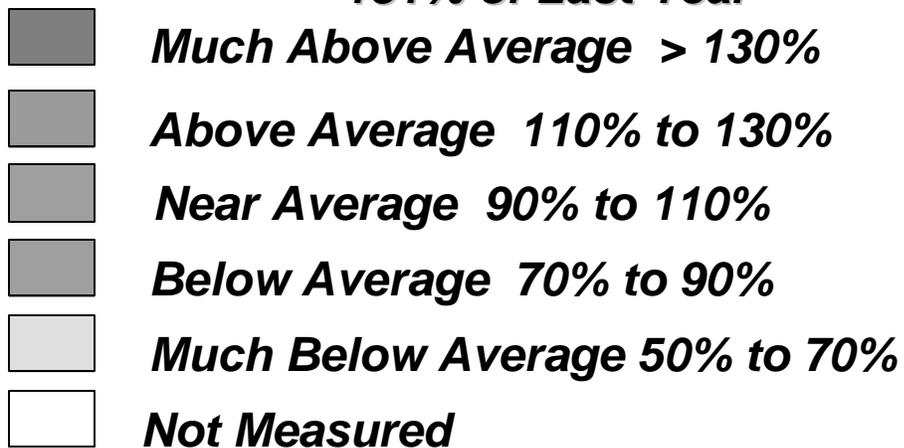
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Snowpack January 1, 2003

Statewide: 85% of Average

131% of Last Year





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 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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