

Colorado

Water Supply Outlook Report

March 1, 2014



The burn scar from the Big Fish fire is visible from the Rio Blanco snow course located on the North Fork of the White River. The fire burned in 2002 and the area has not seen much regeneration the past 11 seasons. Photo is courtesy of Christine Shook, snow surveyor and soil conservationist with the NRCS in Steamboat Springs, CO. The course was measured on 2/28/2014, and reported 48" of depth and 13.1" of SWE this month. Normal conditions this time of year are 42" for depth and 11.2" for SWE

REMINDER: We are soliciting field work photos from our snow surveyors again this year. Each month we will pick one to grace the cover of this report! The photographer will be given proper credit of course. Please include information on where, when and of who/what the photo was taken.

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

For more water supply and resource management information, contact:

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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. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

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

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

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Colorado Water Supply Outlook Report March 1, 2014

Summary

For the majority of the state of Colorado the outlook for spring and summer water supplies is encouraging. The snowpack in the northern and central basins continues to track above normal, but the outlook for the southwest portion of the state is not as rosy. The snowpack's in the Upper Rio Grande and the combined San Juan, Dolores, Animas, and San Miguel basins are tracking below normal as of March 1. Both major basins received beneficial moisture from snow storms in the region in early February, but conditions dried up during the latter part of the month. The March 1 streamflow forecasts follow the trends in snow accumulation across the state; above normal runoff throughout the northern and central basins, and below normal runoff forecast for the southwest portion of the state. Improvements in snowpack and streamflow forecasts are still possible for the drier regions with March typically being a big month for snow accumulation throughout the state.

Snowpack

Colorado has now experienced three consecutive months of above normal snowpack readings. Since January 1 the snowpack percentages have been steadily increasing each month. Reports from SNOTEL sites and manual snow courses across the state put the March 1 statewide snowpack at 116 percent of the median, up from 107 percent of median recorded on February 1. The only snowpack percentage in the state to decline this past month was in the Upper Rio Grande basin. This basin's snowpack was just 79 percent of median as of March 1, a 5 percentage point decrease from last month's report. All other basins saw increases in their snowpack percentages this month. The North Platte and South Platte basins had the greatest increases with gains of 18 and 25 percentage points respectively. The Gunnison basin jumped 10 percentage points to 114 percent of median and the Colorado basin gained 9 percentage points putting it at 130 percent of median. The Arkansas basin saw the smallest increase as a whole, up just 1 percentage to 109 percent of median, but the headwaters portion of the watershed gained 15 percentage points. Statewide snowpack totals are an impressive 161 percent of last year's totals for this same date. With roughly twenty percent of the accumulation season remaining, there is still plenty of time for recovery in the southern basins if weather patterns shift favorably over the next few weeks.

Precipitation

February brought some impressive precipitation totals to Colorado's high country. Statewide monthly precipitation for February was 133 percent of average. All the northern and central basins recorded well above average precipitation over the last month with totals ranging from 123 percent of average in the Gunnison basin to 209 percent of average in the South Platte basin. The Upper Rio Grande and combined San Miguel, Dolores, Animas and San Juan basins were the only basins to record below average precipitation during February. The precipitation totals for February in the San Miguel, Dolores, Animas and San Juan basins were 96 percent of average and the Upper Rio Grande basin was at just 67 percent of average which is the lowest percentage statewide. The bright side to this is that both basins recorded higher monthly percentages than they did last month. Total year-to-date precipitation for the state was up to 108 percent of average as of March 1 which is 149 percent of last year's total precipitation at this same time.

Reservoir Storage

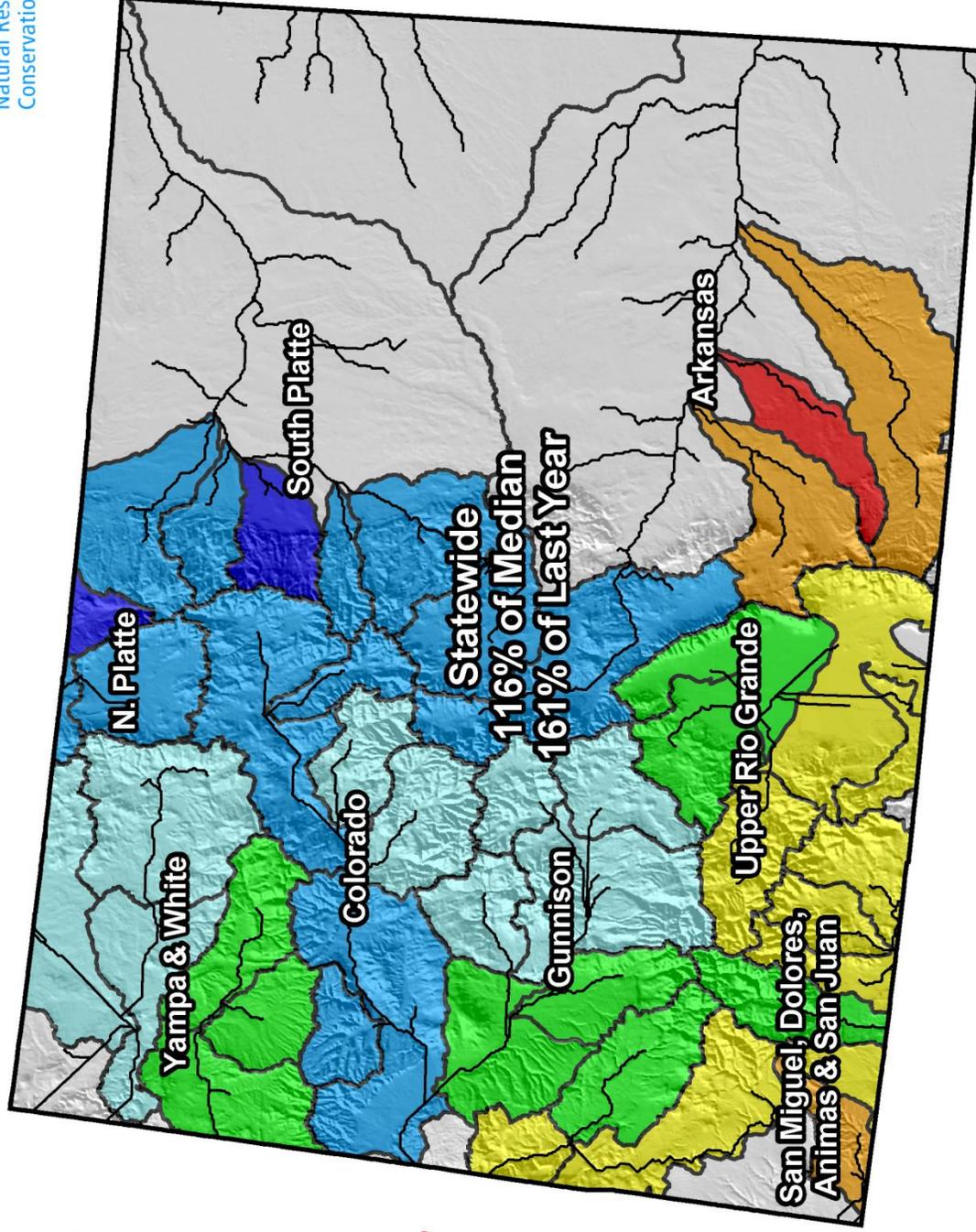
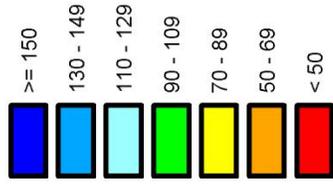
Colorado's reservoir storage remains just slightly below the long term average. As of the end of February reservoirs across the state were storing 90 percent of their average storage volumes. Across the major river basins, storage volumes range from 60 percent of average in the Arkansas basin to 112 percent of average in the South Platte basin. Storage across the state has increased slightly this past month. Currently the state's reservoirs are storing 3,193,700 acre-feet of water, which is 52 percent of the capacity of the reservoirs. At this time last year Colorado's reservoirs were at only 39 percent of capacity, storing 2,419,300 acre feet of water. While it is doubtful that all basins will be able to fill their reservoirs this season, the basins in the northern and central part of the state will have an opportunity to continue improving their storage totals with this spring and summers runoff.

Streamflow

Where snowpack totals are above normal, the outlook for summer water supplies are positive. The opposite is also true for areas with below normal snowpack's. As of March 1, the highest streamflow forecasts with respect to average are for the headwaters of the Colorado River basin. All forecasts in this region are calling for well above normal April to July flows; the highest percentage is for the Inflow to Willow Creek Reservoir which predicts flows at 147 percent of average for that time period. Forecasts for the South Platte basin are also in good shape with the headwater streams predicted to flow at around 135 percent of average and the northern tributaries in the 120 percent of average range. The Upper Rio Grande and the San Juan and Animas basins currently have the lowest forecasts statewide. Streamflows in these regions are expected to be 70 to 80 percent of average for the spring and summer period. The lowest forecast percentage statewide is for Sangre de Cristo Creek in the San Luis Valley, at just 40 percent of average for the April to September period. We are still in the snow accumulation season, so expect changes to these forecasts if weather patterns change drastically over the next month.

Colorado Snowpack Map

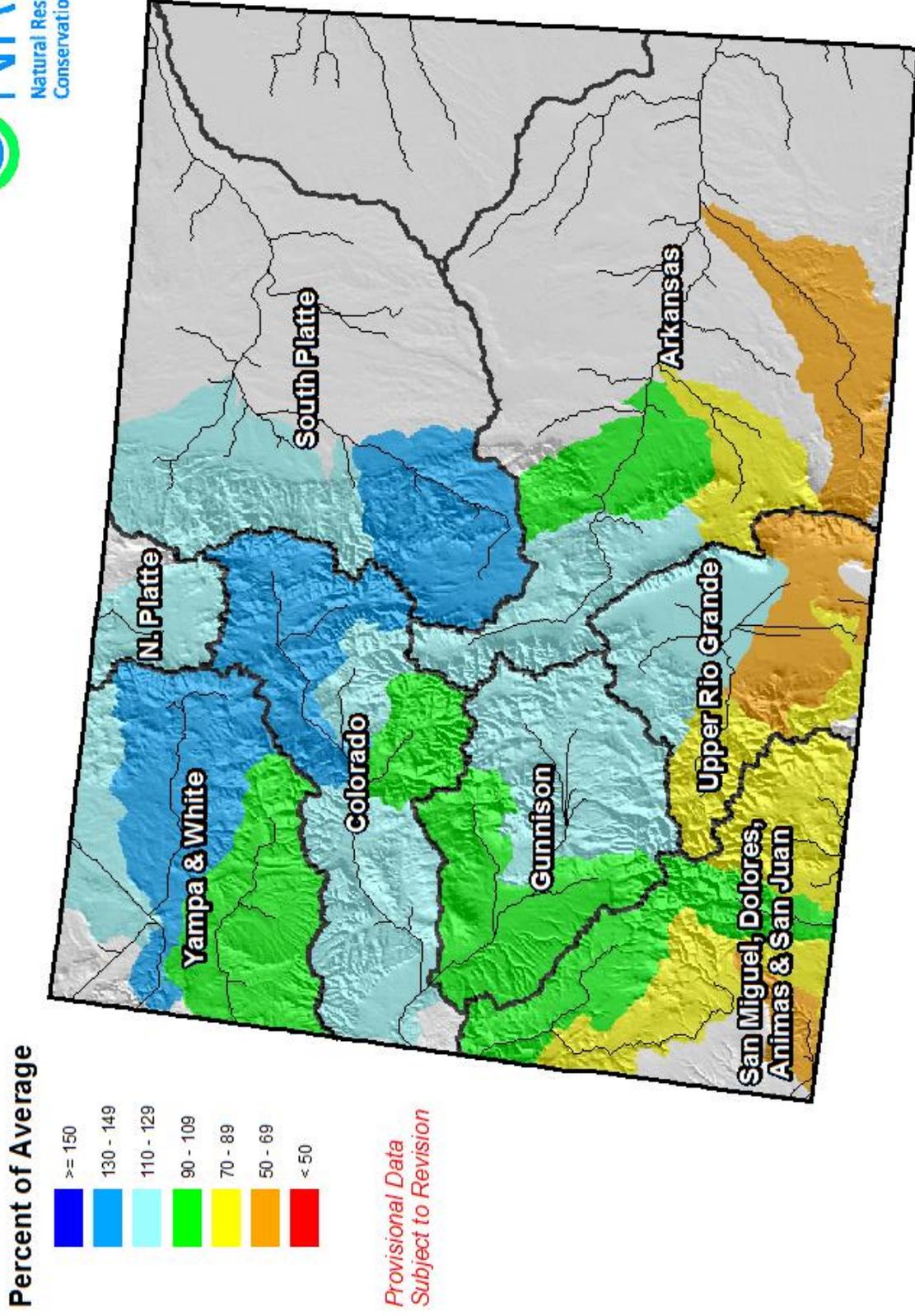
Percent of Median



*Provisional Data
Subject to Revision*

Current as of March 1, 2014

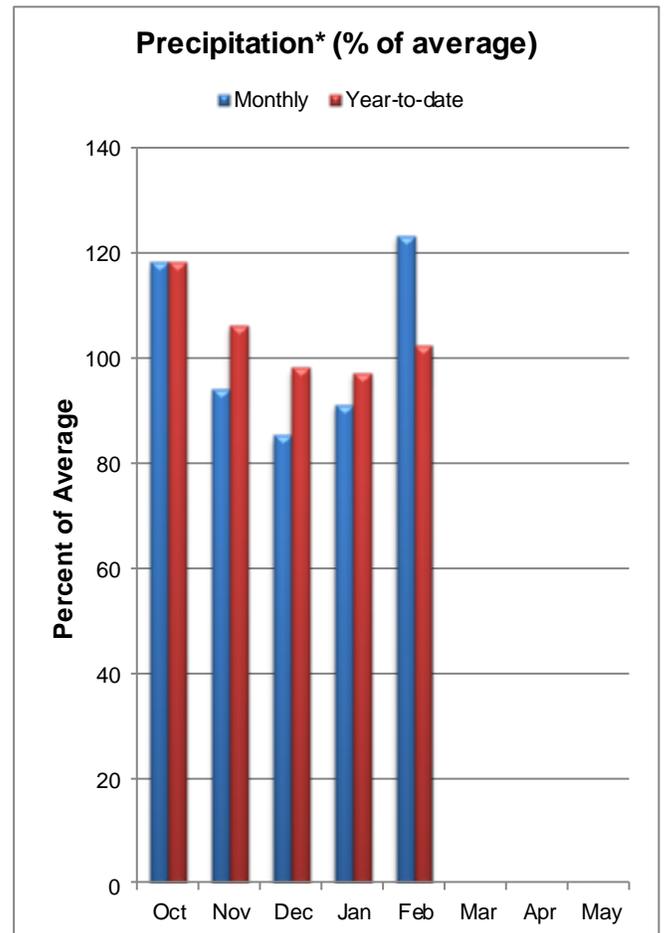
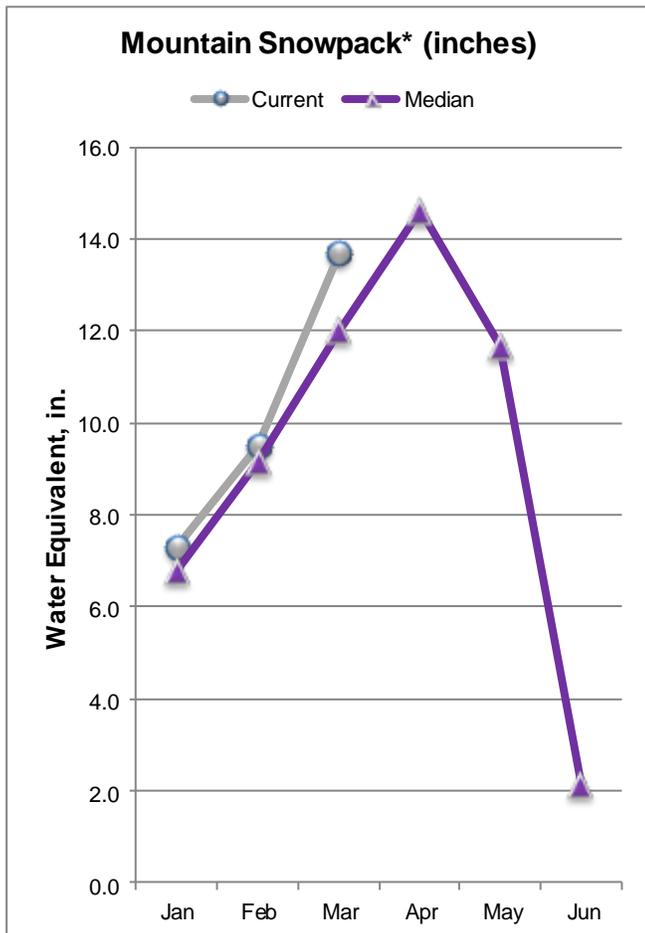
Colorado Streamflow Forecast Map



Current as of March 1, 2014

GUNNISON RIVER BASIN

as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

After a relatively dry January, the month of February brought multiple snow storms to the Gunnison basin. The snowpack rose 10 percentage points this past month, to 114 percent of median as of March 1.

PRECIPITATION

Precipitation during February in the basin was 123 percent of average. Year-to-date precipitation as of March 1 was at 102 percent of average. Last year at this same time year-to-date precipitation was only 72 percent of average.

RESERVOIR

As a percentage, storage amounts improved slightly for the second month in a row. Storage volumes were 89 percent of average as of the end of February.

STREAMFLOW FORECASTS

Current April to July streamflow forecasts range from 127 percent of average for Tomichi Creek at Gunnison to 83 percent of average for Surface Creek at Cedaredge. All forecasts have improved from last month.

Gunnison River Basin Streamflow Forecasts - March 1, 2014

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

GUNNISON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Taylor Park Reservoir Inflow	APR-JUL	84	101	114	115%	127	148	99
Slate R nr Crested Butte	APR-JUL	75	85	92	111%	100	111	83
East R at Almont	APR-JUL	163	189	205	113%	225	255	182
Gunnison R near Gunnison ²	APR-JUL	315	380	425	115%	475	555	370
Tomichi Ck at Sargents	APR-JUL	21	30	36	120%	44	55	30
Cochetopa Ck bl Rock Ck nr Parlin	APR-JUL	7.7	12.9	17.2	115%	22	30	15
Tomichi Ck at Gunnison	APR-JUL	45	72	94	127%	119	161	74
Lake Fk at Gateview	APR-JUL	98	122	140	114%	159	189	123
Blue Mesa Reservoir Inflow ²	APR-JUL	575	695	785	116%	880	1030	675
Paonia Reservoir Inflow	MAR-JUN	62	80	94	98%	109	133	96
	APR-JUL	59	79	95	98%	112	139	97
NF Gunnison R nr Somerset ²	APR-JUL	210	255	285	98%	320	370	290
Surface Ck at Cedaredge	APR-JUL	10.1	12.3	14	83%	15.8	18.6	16.8
Ridgway Reservoir Inflow	APR-JUL	67	86	100	99%	115	139	101
Uncompahgre R at Colona ²	APR-JUL	75	107	132	96%	159	205	137
Gunnison R nr Grand Junction ²	APR-JUL	1070	1340	1550	105%	1770	2120	1480

1) 90% and 10% exceedance probabilities are actually 95% and 5%

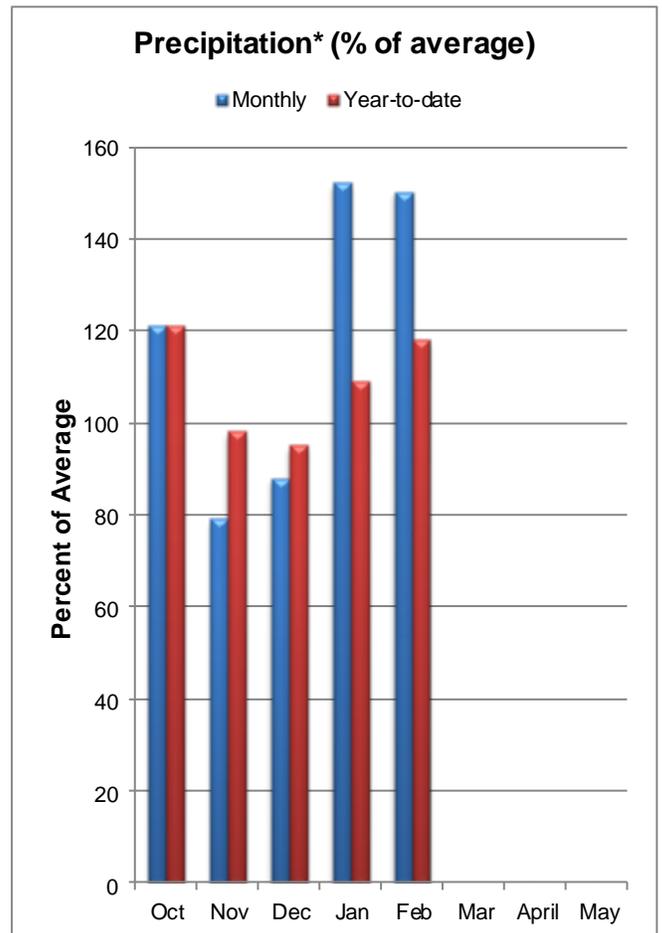
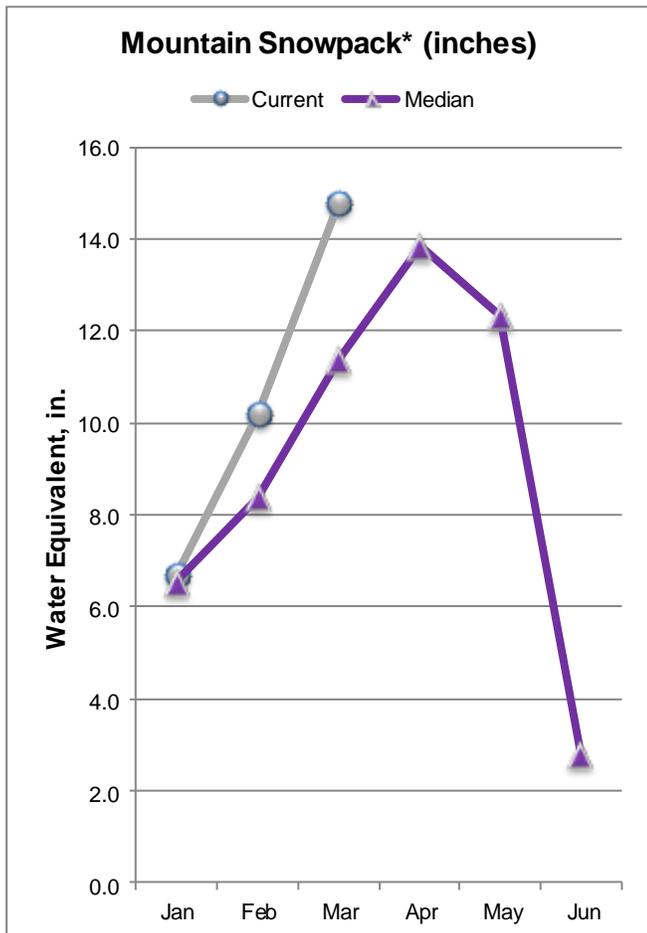
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BLUE MESA RESERVOIR	397.6	329.0	482.2	830.0
CRAWFORD RESERVOIR	5.6	1.6	8.5	14.0
CRYSTAL RESERVOIR	6.6	7.1	8.1	17.5
FRUITGROWERS RESERVOIR	3.3	1.9	3.7	3.6
FRUITLAND RESERVOIR	1.8	1.1	1.7	9.2
MORROW POINT RESERVOIR	107.7	104.9	111.1	121.0
PAONIA RESERVOIR	0.5	1.3	4.0	15.4
RIDGEWAY RESERVOIR	75.4	0.0	69.4	83.0
SILVERJACK RESERVOIR	9.6	2.6	5.5	12.8
TAYLOR PARK RESERVOIR	71.6	56.5	65.7	106.0
VOUGA RESERVOIR	0.4	0.5	0.7	
Basin-wide Total	680.1	506.5	760.6	1212.5
# of reservoirs	11	11	11	10

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
UPPER GUNNISON BASIN	18	118%	71%
SURFACE CREEK BASIN	3	98%	81%
UNCOMPAHGRE BASIN	4	99%	89%
GUNNISON RIVER BASIN	22	114%	75%

UPPER COLORADO RIVER BASIN as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

The Upper Colorado basin received well above normal snow accumulation during February. The March 1 surveys put the snowpack total at 130 percent of median. The basin has already exceeded its typical peak snow water equivalent (SWE) total this season.

PRECIPITATION

Precipitation received in the mountains during the past month was 150 percent of average. Two consecutive months of above average precipitation put the year-to-date precipitation at 118 percent of average.

RESERVOIR

The reservoir storage in this basin remains in good shape. Current storage totals are at 97 percent of average and 64 percent of capacity.

STREAMFLOW FORECASTS

Forecasts improved significantly across the basin this month. They currently range from 147 percent of average for the Inflow to Willow Creek Reservoir to 107 percent for the Roaring Fork at Glenwood Springs.

Upper Colorado River Basin Streamflow Forecasts - March 1, 2014

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

UPPER COLORADO RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lake Granby Inflow ²	APR-JUL	225	270	300	136%	335	385	220
Willow Ck Reservoir Inflow	APR-JUL	45	59	69	147%	80	97	47
Williams Fk bl Williams Fk Reservoir ²	APR-JUL	91	111	126	130%	141	166	97
Wolford Mtn Reservoir Inflow	APR-JUL	53	66	76	141%	86	102	54
Dillon Reservoir Inflow ²	APR-JUL	169	205	225	138%	255	295	163
Green Mountain Reservoir Inflow ²	APR-JUL	275	330	375	136%	415	485	275
Eagle R bl Gypsum ²	APR-JUL	295	355	405	121%	455	530	335
Colorado R nr Dotsero ²	APR-JUL	1360	1670	1900	136%	2140	2520	1400
Ruedi Reservoir Inflow ²	APR-JUL	117	140	158	114%	176	205	139
Roaring Fk at Glenwood Springs ²	APR-JUL	570	670	740	107%	815	930	690
Colorado R nr Cameo ²	APR-JUL	2230	2610	2890	123%	3190	3650	2350

1) 90% and 10% exceedance probabilities are actually 95% and 5%

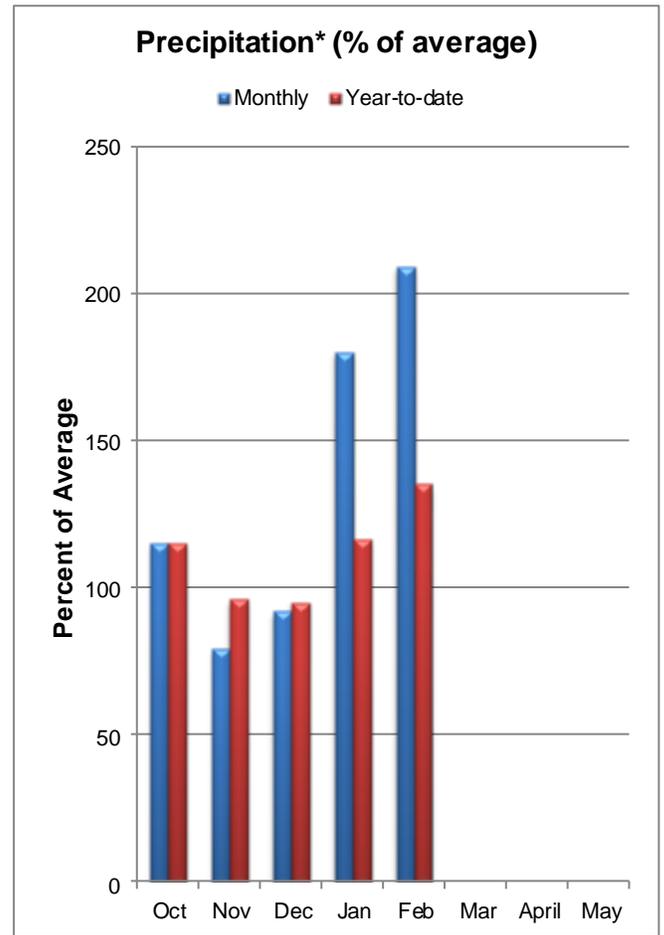
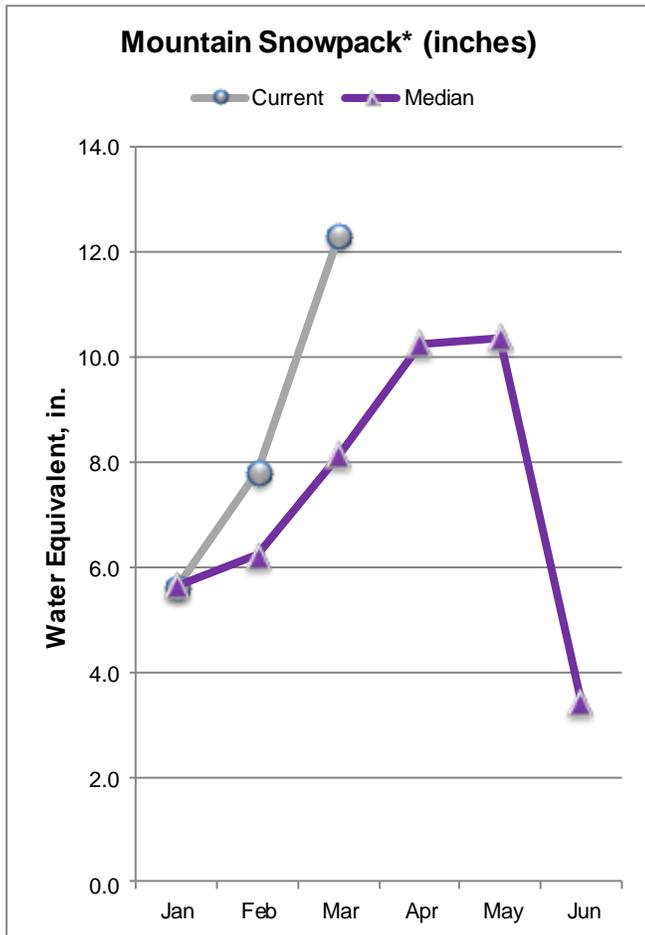
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
DILLON RESERVOIR	237.2	166.9	219.4	254.0
GREEN MOUNTAIN RESERVOIR	65.9	53.8	68.7	146.8
HOMESTAKE RESERVOIR	0.9	0.3	31.0	43.0
LAKE GRANBY	250.8	149.0	282.6	465.6
RUEDI RESERVOIR	74.5	62.0	67.9	102.0
SHADOW MOUNTAIN RESERVOIR	17.3	17.4	17.3	18.4
VEGA RESERVOIR		8.3	13.1	32.9
WILLIAMS FORK RESERVOIR	76.5	42.1	62.4	97.0
WILLOW CREEK RESERVOIR	7.6	6.8	7.2	9.1
WOLFORD MOUNTAIN RESERVOIR	43.6	24.1	43.2	65.9
Basin-wide Total	774.3	530.7	812.8	1234.7
# of reservoirs	9	10	10	10

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
BLUE RIVER BASIN	8	143%	62%
HEADWATERS COLORADO RIVER	32	137%	70%
MUDDY CREEK BASIN	4	151%	82%
EAGLE RIVER BASIN	4	123%	69%
PLATEAU CREEK BASIN	3	98%	81%
ROARING FORK BASIN	10	120%	69%
WILLIAMS FORK BASIN	4	135%	76%
WILLOW CREEK BASIN	5	136%	78%
UPPER COLORADO RIVER BASIN	45	130%	71%

SOUTH PLATTE RIVER BASIN as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

The snowpack in this basin was 151 percent of median as of March 1! The measurements in the Boulder Creek sub-basin were 171 percent of median, which is the highest percentage statewide. The South Platte basin has well exceeded its normal peak snowpack which typically occurs on April 26th.

PRECIPITATION

Precipitation was a whopping 209 percent of average for February. The wet month boosted year-to-date precipitation to 135 percent of average as of March 1. Current totals are 193 percent of last year's at this same time.

RESERVOIR

Storage volumes remain fairly constant at 112 percent of average as of the end of February. Storage conditions will likely improve this spring.

STREAMFLOW FORECASTS

All April to July forecasts improved considerably this month thanks to the constant moisture. They currently range from 137 percent of average for the Inflow to Cheesman Lake to 113 percent of average for Bear Creek above Evergreen.

South Platte River Basin Streamflow Forecasts - March 1, 2014

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

SOUTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Antero Reservoir Inflow ²	APR-JUL	13.1	16.6	19	131%	21	25	14.5
	APR-SEP	16.1	20	23	129%	26	30	17.8
Spinney Mountain Reservoir Inflow ²	APR-JUL	34	50	65	135%	84	124	48
	APR-SEP	41	62	82	134%	109	164	61
Elevenmile Canyon Reservoir Inflow ²	APR-JUL	34	51	67	134%	88	133	50
	APR-SEP	40	63	85	133%	115	180	64
Cheesman Lake Inflow ²	APR-JUL	65	101	137	137%	185	290	100
	APR-SEP	81	128	174	138%	235	375	126
South Platte R at South Platte ²	APR-JUL	115	180	245	136%	335	525	180
	APR-SEP	141	225	305	136%	415	660	225
Bear Ck ab Evergreen	APR-JUL	8	13.2	18.5	113%	26	43	16.4
	APR-SEP	10.8	17.4	24	114%	33	53	21
Bear Ck at Morrison	APR-JUL	9.3	16.7	25	114%	37	67	22
	APR-SEP	11.9	21	31	111%	46	81	28
Clear Ck at Golden	APR-JUL	102	120	133	127%	146	164	105
	APR-SEP	118	143	160	125%	177	205	128
St. Vrain Ck at Lyons ²	APR-JUL	86	99	107	122%	115	128	88
	APR-SEP	101	116	126	122%	136	151	103
Boulder Ck nr Orodell ²	APR-JUL	56	63	67	124%	71	78	54
	APR-SEP	63	72	77	122%	82	91	63
South Boulder Ck nr Eldorado Springs ²	APR-JUL	39	44	47	121%	50	55	39
	APR-SEP	41	48	52	121%	56	63	43
Big Thompson R at Canyon Mouth ²	APR-JUL	93	107	116	129%	125	139	90
	APR-SEP	109	125	137	128%	148	164	107
Cache La Poudre at Canyon Mouth ²	APR-JUL	200	250	280	124%	310	360	225
	APR-SEP	215	270	305	122%	340	395	250

1) 90% and 10% exceedance probabilities are actually 95% and 5%

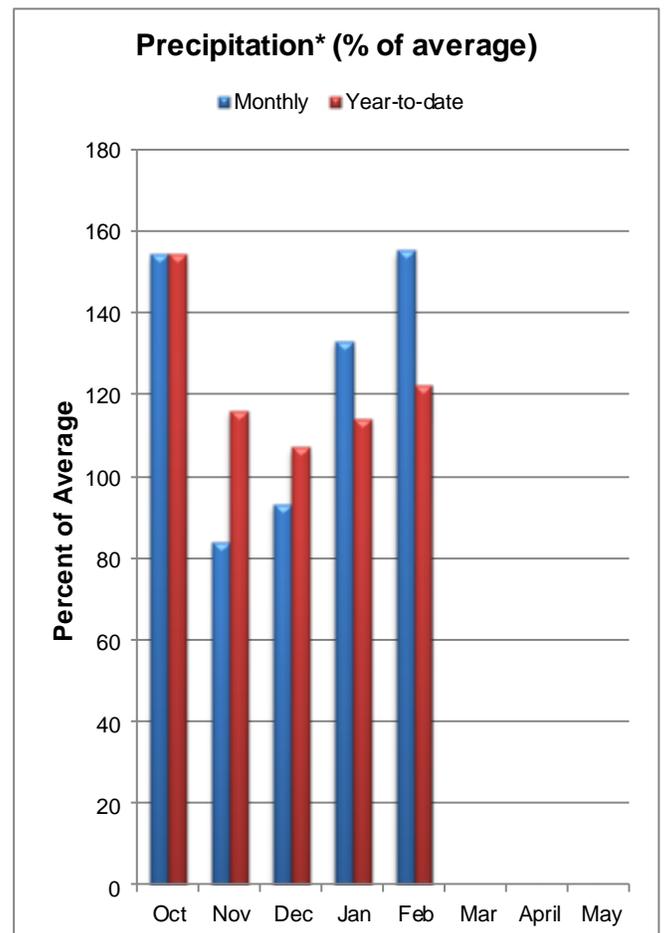
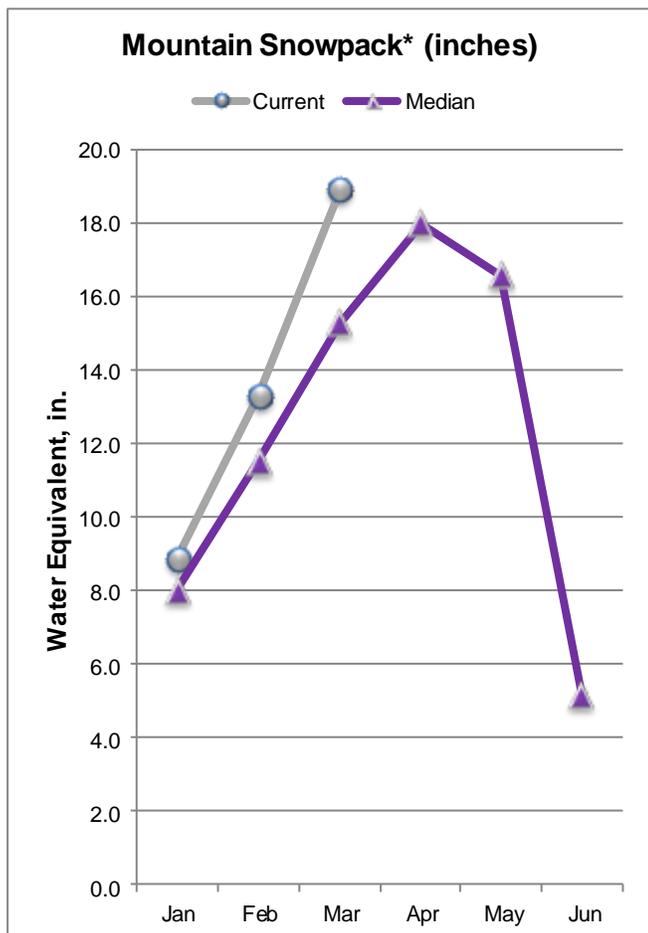
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
ANTERO RESERVOIR	15.8	15.1	15.2	19.9
BARR LAKE	28.2	15.1	26.0	30.1
BLACK HOLLOW RESERVOIR	3.6	2.4	2.8	6.5
BOYD LAKE	32.9	15.7	28.2	48.4
CACHE LAPOUDRE	9.7	4.3	7.2	10.1
CARTER LAKE	76.2	82.1	87.0	108.9
CHAMBERS LAKE	6.9	1.2	3.2	8.8
CHEESMAN LAKE	75.9	44.7	63.4	79.0
COBB LAKE	19.6	11.8	11.6	22.3
ELEVENMILE CANYON RESERVOIR	100.0	99.2	95.8	98.0
EMPIRE RESERVOIR	35.9	24.3	25.9	36.5
FOSSIL CREEK RESERVOIR	9.2	10.3	7.7	11.1
GROSS RESERVOIR	33.9	26.9	24.8	41.8
HALLIGAN RESERVOIR	6.2	4.6	4.8	6.4
HORSECREEK RESERVOIR	11.8	0.5	11.7	14.7
HORSETOOTH RESERVOIR	103.6	85.9	104.8	149.7
JACKSON LAKE RESERVOIR	26.1	22.6	24.2	26.1
JULESBURG RESERVOIR	15.0	15.6	16.9	20.5
LAKE LOVELAND RESERVOIR	8.4	3.2	6.8	10.3
LONE TREE RESERVOIR	7.6	6.2	6.8	8.7
MARIANO RESERVOIR	4.3	2.4	3.2	5.4
MARSHALL RESERVOIR	8.7	5.9	5.9	10.0
MARSTON RESERVOIR	4.8	11.1	5.7	13.0
MILTON RESERVOIR	20.0	17.1	17.0	23.5
POINT OF ROCKS RESERVOIR	67.6	54.5	59.2	70.6
PREWITT RESERVOIR	22.3	5.8	17.7	28.2
RALPH PRICE RESERVOIR	13.9	13.5		16.2
RIVERSIDE RESERVOIR	49.3	46.1	43.5	55.8
SPINNEY MOUNTAIN RESERVOIR	35.5	22.5	28.1	49.0
STANDLEY RESERVOIR	40.0	28.4	35.7	42.0
TERRY RESERVOIR	5.9	4.8	5.0	8.0
UNION RESERVOIR	11.8	5.6	10.2	13.0
WINDSOR RESERVOIR	12.7	9.6	8.9	15.2
Basin-wide Total	923.3	719.0	814.9	1107.7
# of reservoirs	33	33	32	33

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
BIG THOMPSON BASIN	7	147%	59%
BOULDER CREEK BASIN	6	171%	65%
CACHE LAPOUDRE BASIN	10	147%	71%
CLEAR CREEK BASIN	4	139%	71%
SAINT VRAIN BASIN	4	159%	56%
UPPER SOUTH PLATTE BASIN	16	147%	63%
SOUTH PLATTE RIVER BASIN	47	151%	65%

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

February was also a banner month for snow accumulation in these basins. Normal peak snow water equivalent (SWE) amounts have already been exceeded in these basins with over a month left in the typical accumulation season. March 1 snowpack totals were at 124 percent of median and 161 percent of last year's totals.

PRECIPITATION

Precipitation received during February was 155 percent of average. Year-to-date precipitation is up to 122 percent of average.

RESERVOIR

Storage in these basins remains in good condition at 111 percent of average, and 88 percent of capacity.

STREAMFLOW FORECASTS

The White River near Meeker is the only forecast that did not improve this month. April to July predictions actually dropped 4 percentage points to 89 percent of average as of March 1. The Elk River near Milner currently has the highest forecast in these basins, at 142 percent of average.

Yampa-White-North Platte River Basins Streamflow Forecasts - March 1, 2014

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

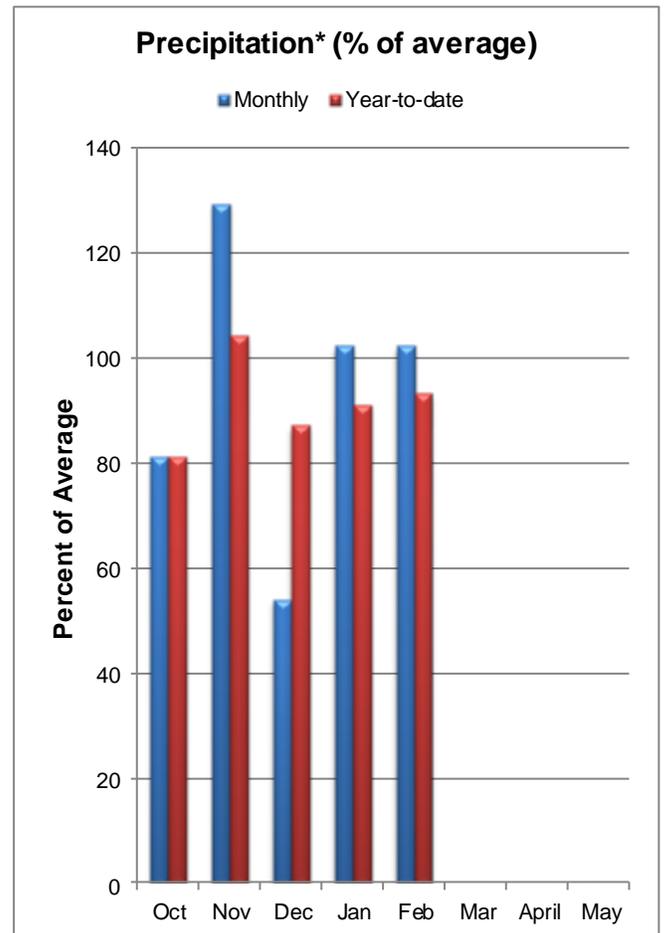
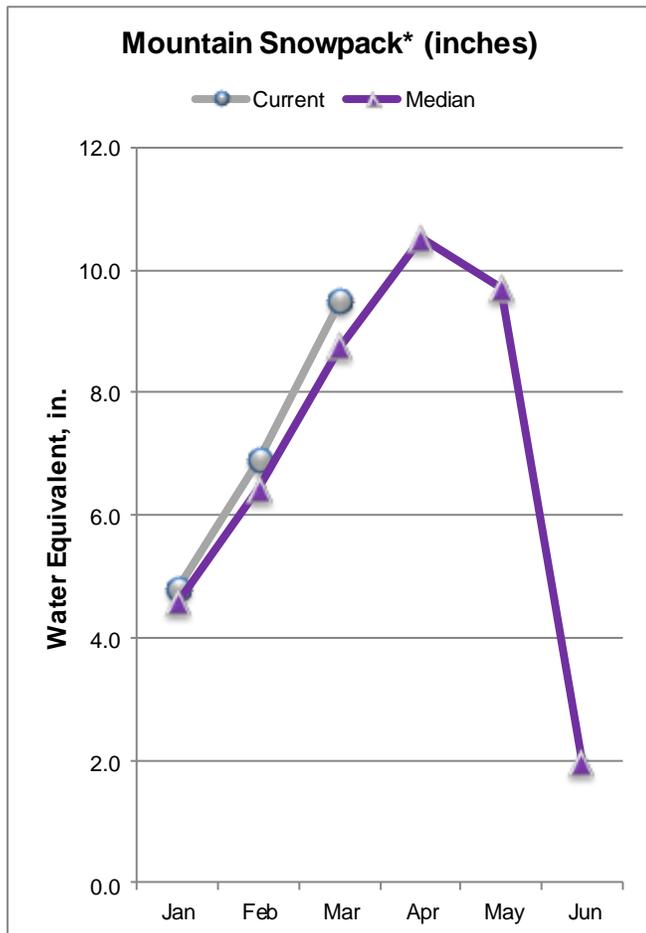
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
<hr/>								
North Platte R nr Northgate	APR-JUL	164	230	275	122%	320	385	225
	APR-SEP	180	255	305	122%	355	430	250
Laramie R nr Woods ²	APR-JUL	99	120	134	117%	148	169	115
	APR-SEP	108	131	147	117%	163	186	126
Yampa R ab Stagecoach Reservoir ²	APR-JUL	18.2	25	30	130%	36	45	23
Yampa R at Steamboat Springs ²	APR-JUL	240	285	320	123%	355	410	260
Elk R nr Milner	APR-JUL	330	405	455	142%	510	600	320
Elkhead Ck ab Long Gulch	APR-JUL	53	74	90	123%	108	136	73
Yampa R nr Maybell ²	APR-JUL	840	1070	1240	133%	1420	1720	935
Little Snake R nr Slater ²	APR-JUL	135	164	185	119%	210	245	156
Little Snake R nr Dixon ²	APR-JUL	245	335	400	116%	475	590	345
Little Snake R nr Lily ²	APR-JUL	245	345	420	122%	505	640	345
White R nr Meeker	APR-JUL	169	215	250	89%	285	345	280

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
STAGECOACH RESERVOIR NR OAK CREEK	31.9	28.9	26.9	33.3
YAMCOLO RESERVOIR	4.9	3.4	6.2	8.7
Basin-wide Total	36.8	32.3	33.1	42.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
LARAMIE RIVER BASIN	4	151%	76%
NORTH PLATTE RIVER BASIN	37	124%	77%
LARAMIE & NORTH PLATTE RIVER BASINS	16	137%	76%
ELK RIVER BASIN	2	116%	68%
YAMPA RIVER BASIN	12	126%	76%
WHITE RIVER BASIN	5	109%	76%
YAMPA & WHITE RIVER BASINS	16	121%	75%
LITTLE SNAKE RIVER BASIN	9	116%	78%
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	37	124%	77%

ARKANSAS RIVER BASIN as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

The Arkansas basin received good snow accumulation during the first part of February, nearly all of which was received in the headwaters portion of the basin. The snowpack for basin as whole was at 109 percent of median on March 1, and the Upper Arkansas sub-basin was at 134 percent of median.

PRECIPITATION

February's precipitation totals were 102 percent of average. This is the second consecutive month the basin has reported above average precipitation. Year-to-date precipitation is at 93 percent of average.

RESERVOIR

Storage in the Arkansas basin remains the lowest as a percent of average statewide. Reservoirs are storing volumes at just 60 percent of average.

STREAMFLOW FORECASTS

April to July forecasts for Chalk Creek near Nathrop at 129 percent of average, and the Arkansas River at Salida at 121 percent of average, improved this month. Forecasts for the rest of the basin are persistent with those issued last month.

Arkansas River Basin Streamflow Forecasts - March 1, 2014

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

ARKAN SAS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Chalk Ck nr Nathrop	APR-JUL	16.1	22	27	129%	32	40	21
	APR-SEP	19.5	27	32	123%	38	47	26
Arkansas R at Salida ²	APR-JUL	215	260	290	121%	325	375	240
	APR-SEP	255	310	350	119%	390	455	295
Grape Ck nr Westcliffe	APR-JUL	2.5	7.7	12.9	81%	19.5	32	15.9
	APR-SEP	4.8	11	16.7	85%	24	36	19.6
Pueblo Reservoir Inflow ²	APR-JUL	240	325	390	108%	460	575	360
	APR-SEP	310	415	490	108%	575	710	455
Huerfano R nr Redwing	APR-JUL	5	7.7	9.8	82%	12.2	16.3	11.9
	APR-SEP	6.6	9.8	12.4	82%	15.3	20	15.2
Cucharas R nr La Veta	APR-JUL	2.3	4.9	7.2	59%	9.9	14.8	12.2
	APR-SEP	3.3	6.3	8.8	62%	11.8	16.9	14.1
Trinidad Lake Inflow ²	MAR-JUL	6.7	15.7	24	65%	34	52	37
	APR-SEP	10	22	32	68%	44	66	47

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

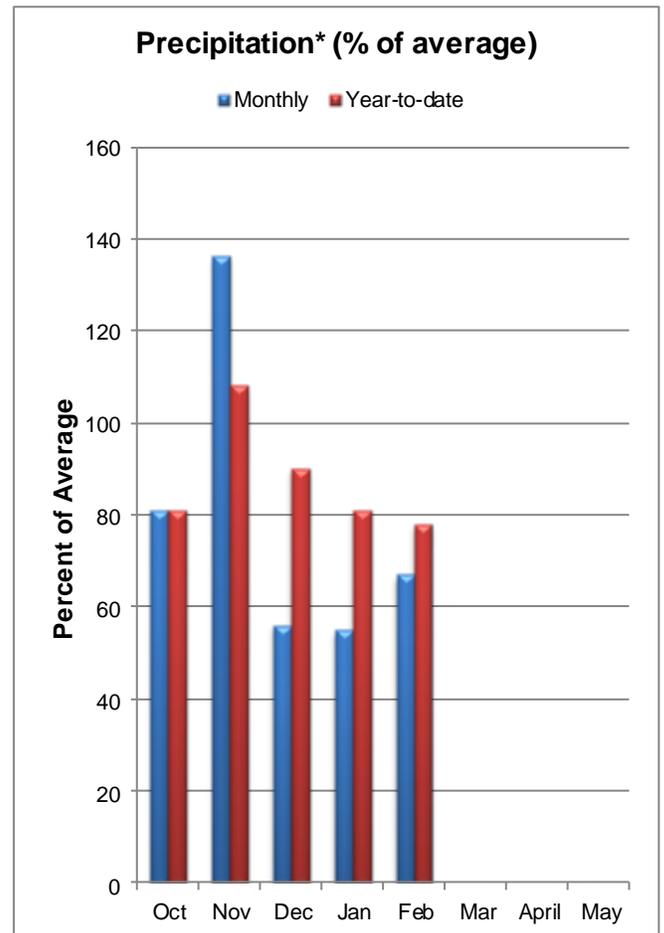
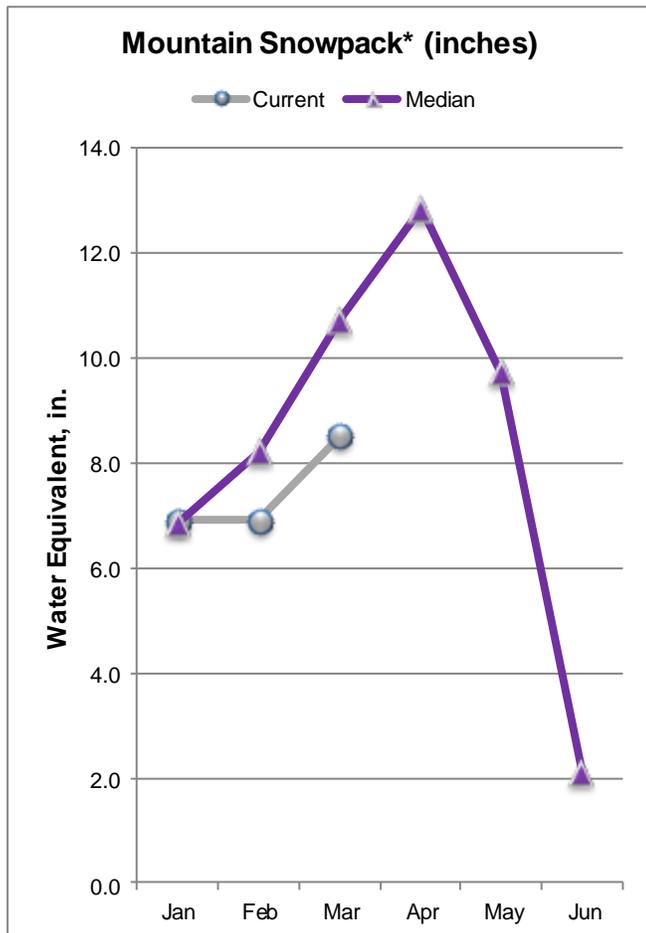
3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
ADOBE CREEK RESERVOIR	20.9	6.8	48.9	62.0
CLEAR CREEK RESERVOIR	8.5	7.1	7.6	11.4
CUCHARAS RESERVOIR		0.1	5.9	40.0
GREAT PLAINS RESERVOIR	0.0	0.0	33.7	150.0
HOLBROOK LAKE	0.0	4.1	4.6	7.0
HORSE CREEK RESERVOIR	0.0	0.0	12.7	27.0
JOHN MARTIN RESERVOIR	40.7	29.0	148.2	616.0
LAKE HENRY	8.8	4.9	6.2	8.0
MEREDITH RESERVOIR	18.4	28.5	27.4	42.0
PUEBLO RESERVOIR	164.7	173.2	200.6	354.0
TRINIDAD LAKE	17.1	12.8	26.8	167.0
TURQUOISE LAKE	83.0	31.7	78.5	127.0
TWIN LAKES RESERVOIR	23.0	24.5	51.8	86.0
Basin-wide Total	385.1	322.7	652.9	1697.4
# of reservoirs	12	13	13	13

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
UPPER ARKANSAS BASIN	9	134%	68%
CUCHARAS & HUERFANO BASINS	5	67%	76%
PURGATOIRE RIVER BASIN	2	56%	79%
ARKANSAS RIVER BASIN	16	109%	71%

UPPER RIO GRANDE RIVER BASIN

as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

In early February this basin benefited from a couple of decent snow storms, but the moisture dried up during the latter half of the month. The overall snowpack reports for the Upper Rio Grande fell for the second month. As of March 1 it was reported to be just 79 percent of the median.

PRECIPITATION

For the third consecutive month the basin recorded well below normal precipitation totals. February precipitation was 67 percent of average and year-to-date precipitation fell to 78 percent of average.

RESERVOIR

Storage in this basin remains well below normal at 68 percent of average. This is still an improvement from conditions last year when storage was just 51 percent of the long term average.

STREAMFLOW FORECASTS

Current streamflow forecasts did not change much from those issued last month. Forecasts range from 116 percent of average for Saguache Creek near Saguache to 40 percent of average for Sangre de Cristo Creek.

Upper Rio Grande Basin Streamflow Forecasts - March 1, 2014

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

UPPER RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande at Thirty Mile Bridge ²	APR-SEP	75	97	114	88%	132	161	129
	APR-JUL	68	87	100	88%	115	139	113
Rio Grande at Wagon Wheel Gap ²	APR-SEP	190	250	300	88%	350	435	340
SF Rio Grande at South Fork ²	APR-SEP	63	83	98	77%	114	140	127
Rio Grande nr Del Norte ²	APR-SEP	270	365	435	84%	515	640	515
Saguache Ck nr Saguache	APR-SEP	21	30	37	116%	45	58	32
Alamosa Ck ab Terrace Reservoir	APR-SEP	32	43	51	75%	60	74	68
La Jara Ck nr Capulin	MAR-JUL	3	4.8	6.2	70%	7.8	10.4	8.9
Trinchera Ck ab Turners Ranch	APR-SEP	4.4	5.8	6.8	54%	7.9	9.7	12.6
Sangre de Cristo Ck ²	APR-SEP	1.95	4.3	6.5	40%	9.1	13.7	16.3
Ute Ck nr Fort Garland	APR-SEP	3.5	5.6	7.3	57%	9.2	12.4	12.8
Platoro Reservoir Inflow	APR-SEP	33	42	49	79%	56	68	62
	APR-JUL	31	39	44	79%	51	60	56
Conejos R nr Mogote ²	APR-SEP	92	122	144	74%	168	205	194
San Antonio R at Ortiz	APR-SEP	2.9	5.2	7.1	46%	9.4	13.3	15.6
Los Pinos R nr Ortiz	APR-SEP	26	36	44	60%	54	69	73
Culebra Ck at San Luis	APR-SEP	6.3	10.5	14	61%	18	25	23
Costilla Reservoir Inflow	MAR-JUL	3.9	5.9	7.4	67%	9.1	12	11.1
Costilla Ck nr Costilla ²	MAR-JUL	5.6	10.2	14	54%	18.5	26	26

1) 90% and 10% exceedance probabilities are actually 95% and 5%

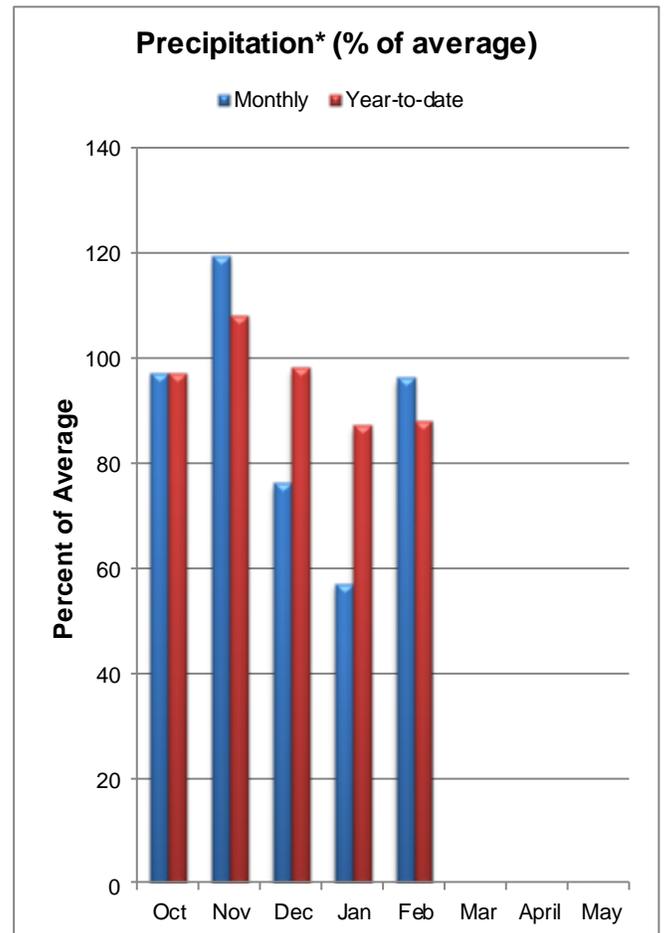
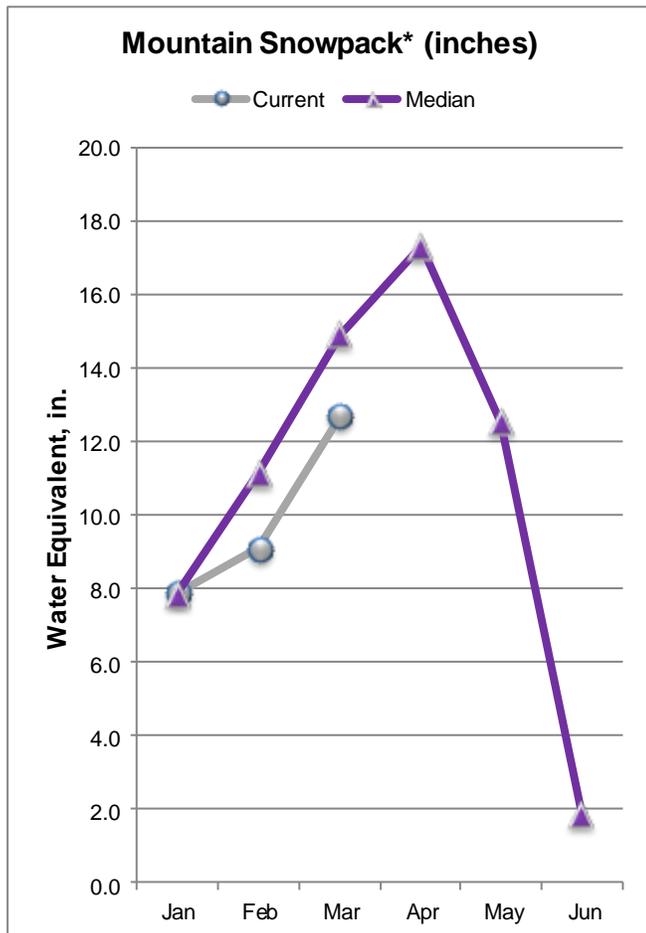
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BEAVER RESERVOIR	2.5	1.9	4.2	4.5
CONTINENTAL RESERVOIR	10.3	7.8	5.1	27.0
PLATORO RESERVOIR	9.7	8.8	23.9	60.0
RIO GRANDE RESERVOIR	21.8	13.0	17.6	51.0
SANCHEZ RESERVOIR	6.5	6.7	27.6	103.0
SANTA MARIA RESERVOIR	8.9	7.5	10.7	45.0
TERRACE RESERVOIR	5.5	3.5	6.9	18.0
Basin-wide Total	65.3	49.2	96.0	308.5
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
ALAMOSA CREEK BASIN	3	78%	66%
CONEJOS & RIO SAN ANTONIO BASINS	4	70%	73%
CULEBRA & TRINCHERA BASINS	5	77%	85%
HEADWATERS RIO GRANDE RIVER BASIN	13	84%	77%
UPPER RIO GRANDE BASIN	24	79%	78%

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of March 1, 2014



*Based on selected stations

SUMMARY OF WATER SUPPLY CONDITIONS

SNOWPACK

The storm systems that moved through the southwest corner of the state in early February dried up during the latter part of the month. This put the snowpack report for March 1 for these combined basins at 85 percent of the median. The Animas basin had the highest report at 91 percent of median.

PRECIPITATION

Total precipitation recorded during February was just below normal at 96 percent of average. Year-to-date precipitation remains relatively constant at 88 percent of average as of March 1.

RESERVOIR

Storage volumes in these basins remains fairly constant compared to last month at 85 percent of average and 55 percent of capacity.

STREAMFLOW FORECASTS

Forecasts in the Dolores and San Miguel sub-basins improved this month with some expected to be above average. Those in the San Juan and Animas sub-basins have stayed constant or declined slightly. The lowest forecast in these basins is 68 percent of average for the Mancos River near Mancos.

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San Miguel-Dolores-Animas-San Juan River Basins Streamflow Forecasts - March 1, 2014

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dolores R at Dolores	APR-JUL	144	184	215	88%	250	300	245
McPhee Reservoir Inflow	APR-JUL	158	210	250	85%	295	365	295
San Miguel R nr Placerville	APR-JUL	92	118	138	108%	159	193	128
Cone Reservoir Inlet	APR-JUL	0.78	1.86	3	100%	4.5	7.6	3
Gurley Reservoir Inlet	APR-JUL	12.3	15.5	18	110%	21	25	16.4
Lilyands Reservoir Inlet	APR-JUL	1.16	1.62	2	104%	2.4	3.2	1.92
Rio Blanco at Blanco Diversion ²	APR-JUL	25	35	43	80%	51	65	54
Navajo R at Oso Diversion ²	APR-JUL	29	41	50	77%	60	76	65
San Juan R nr Carracas ²	APR-JUL	167	235	290	76%	350	445	380
Piedra R nr Arboles	APR-JUL	116	151	177	84%	205	250	210
Vallecito Reservoir Inflow	APR-JUL	116	144	165	85%	187	220	194
Navajo Reservoir Inflow ²	APR-JUL	365	485	580	79%	680	845	735
Animas R at Durango	APR-JUL	280	350	400	96%	455	540	415
Lemon Reservoir Inflow	APR-JUL	33	42	49	89%	56	68	55
La Plata R at Hesperus	APR-JUL	10.1	13.4	16	70%	18.8	23	23
Mancos R nr Mancos ²	APR-JUL	11.4	16.8	21	68%	26	34	31

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
GROUNDHOG RESERVOIR	7.1	5.7	12.4	22.0
JACKSON GULCH RESERVOIR	3.2	1.4	4.6	10.0
LEMON RESERVOIR	17.5	8.2	21.0	40.0
MCPHEE RESERVOIR	187.6	188.9	268.0	381.0
NARRAGUINNEP RESERVOIR	13.6	7.6	15.1	19.0
TROUT LAKE RESERVOIR	1.2	1.1	1.8	3.2
VALLECITO RESERVOIR	98.6	46.0	63.6	126.0
Basin-wide Total	328.8	258.9	386.5	601.2
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
ANIMAS RIVER BASIN	11	91%	78%
DOLORES RIVER BASIN	7	83%	82%
SAN MIGUEL RIVER BASIN	6	90%	83%
SAN JUAN RIVER BASIN	26	85%	82%
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	26	85%	82%



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

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Colorado
Basin Outlook Report
Natural Resources Conservation Service
Lakewood, CO