USDA NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service

Colorado
Water Supply Outlook Report
February 1, 2015

Snow surveyors Michael Crouch and Noah Friesen spend a warm, sunny day measuring snow at Cameron Pass. Michael and Noah are part of a team from Riverside Technology in Fort Collins, CO who measure snow courses in the Poudre River.

Date: 1/15/2015
Photo By: Mage Hultstrand

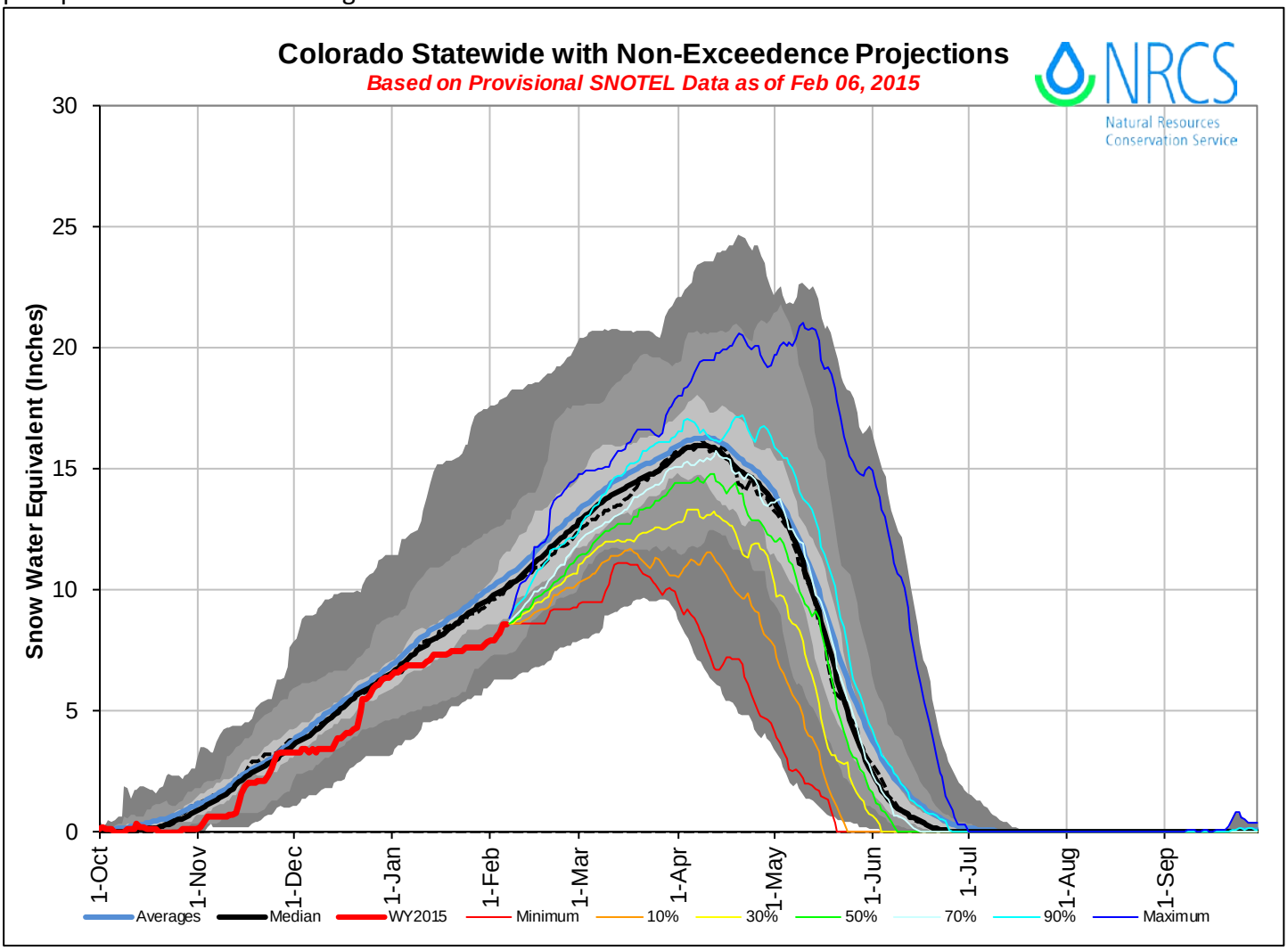
REMINDER: We are soliciting field work photos from our snow surveyors again this year. Each month we will pick one to grace the cover of this report! The photographer will be given proper credit of course. Please include information on where, when and of who/what the photo was taken.

Contents

Statewide Water Supply Conditions

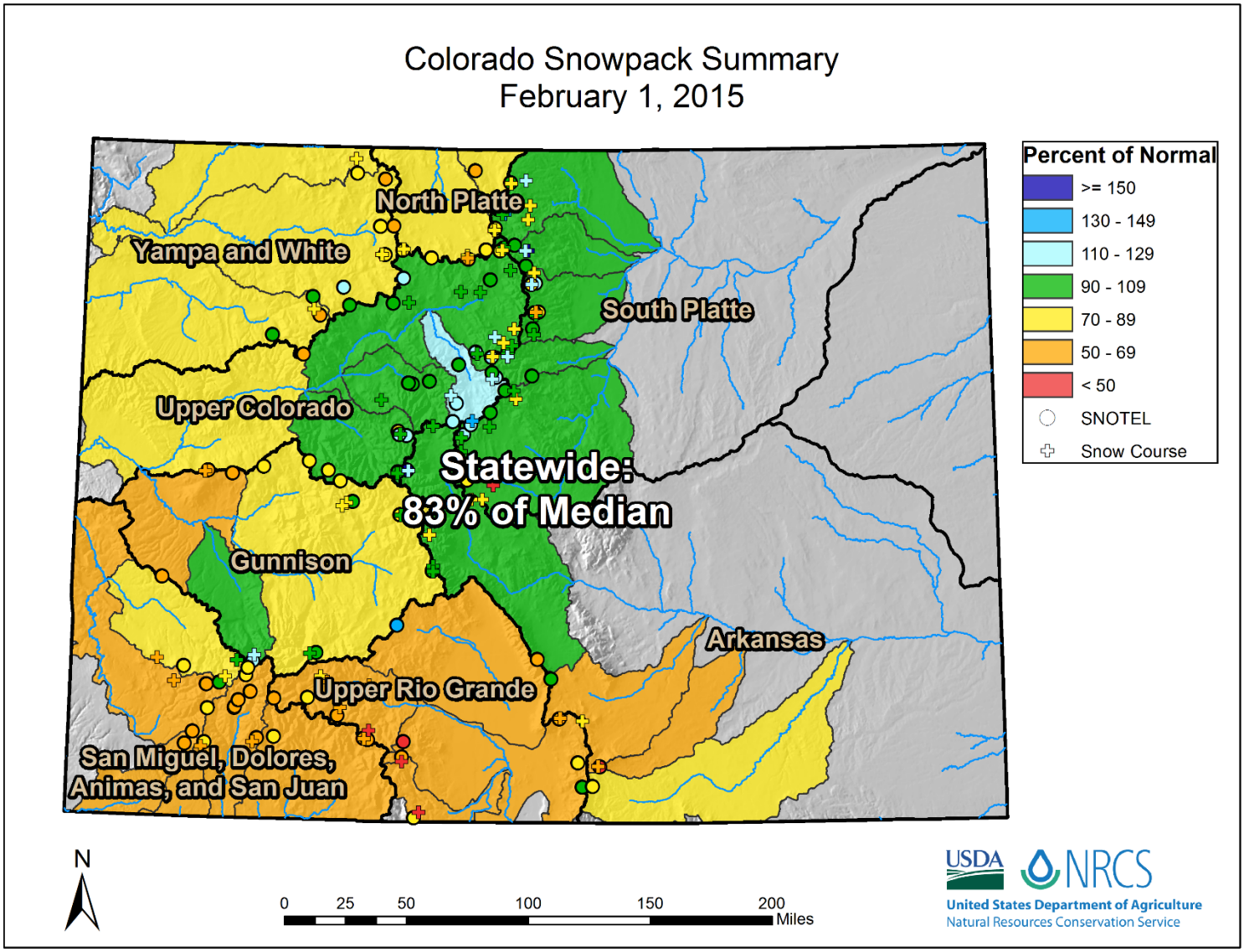
Summary

The 2015 calendar year rang in as one of the slowest starts for precipitation since 1992 according to SNOTEL data. Colorado mountain precipitation during January 2015 fell well below the normal mark only amounting to 45 percent of the 30 year average of 3.2 inches. Snow accumulation in the mountains fared poorly during January as well. On January 1 snowpack levels were at 99 percent of normal, but abnormally dry conditions throughout the month have dropped totals to 83 percent of normal as of February 1. The recent precipitation outlook from the NOAA National Weather Service, Climate Prediction Center calls for above normal precipitation during the February-March-April period for much of Colorado. While any increase in precipitation compared to this past January would be beneficial, it is going to require well above normal snowpack accumulation for the remainder of the winter to boost snowpack to normal conditions in time for snowpack peak levels in mid-April. On average, current statewide streamflow predictions hover around 80 percent but vary from 108 to 49 percent of normal and will not decrease provided the state receives normal precipitation from now through the end of the runoff season.



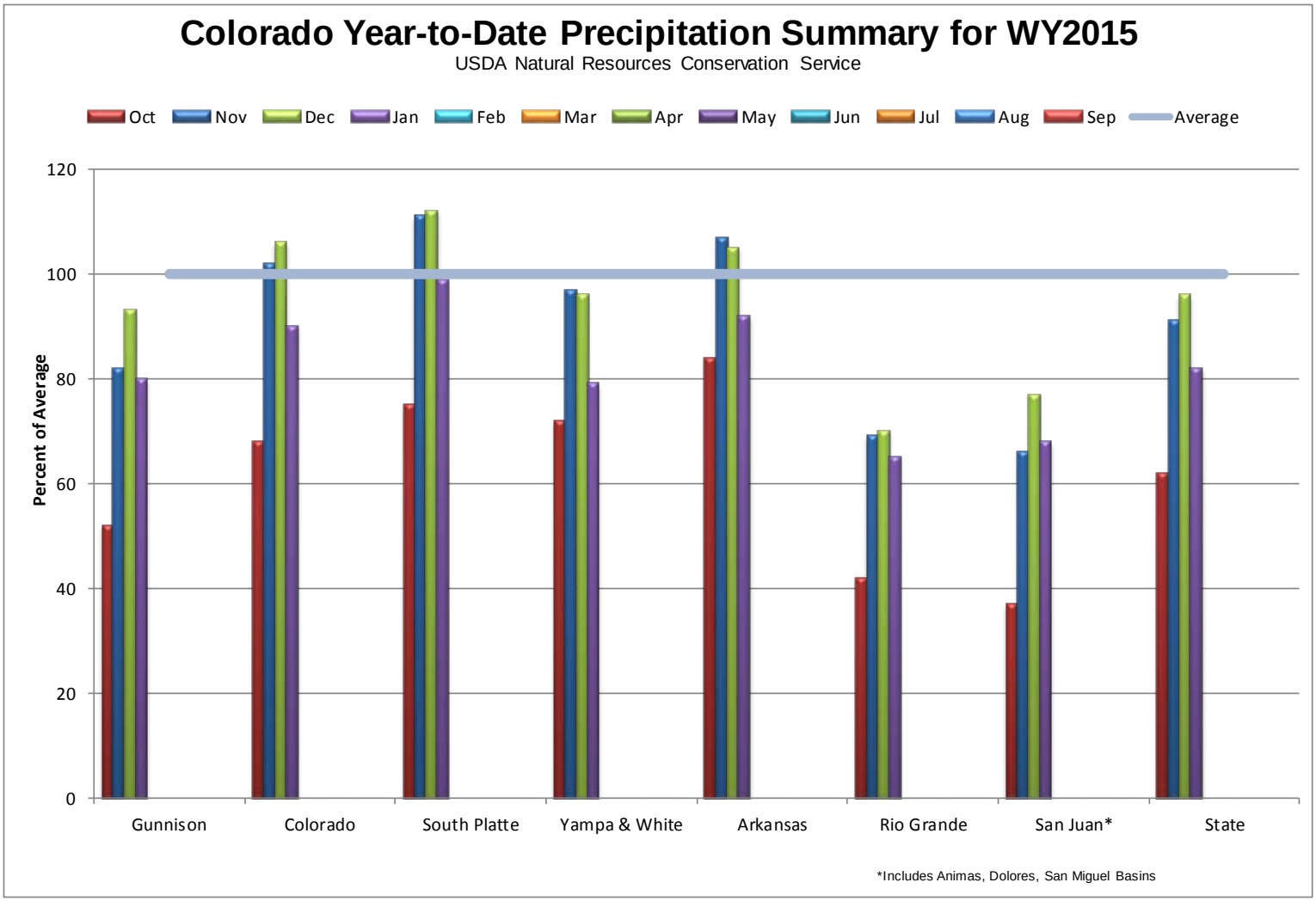
About this Graph: The heavy red line shows the observed accumulation to date. The remaining colored lines (blue through red) indicate the range of possible futures. Shown are the Min, 10%, 30%, 50%, 70%, 90% non-exceedance scenarios and the Max. The dark black line shows the long term normal data on that date. The gray background shows the historical range of all of the daily data. The uppermost edge and lowermost edges of the gray area are the highest and lowest historical values available during the limited historical period, typically beginning in the mid 1980s (Max, Min). In between these bounds are shown the historical 10, 30, 70 and 90% non-exceedance bounds of the data. The historical 50% non-exceedance is shown as a faint dashed black line.

Snowpack



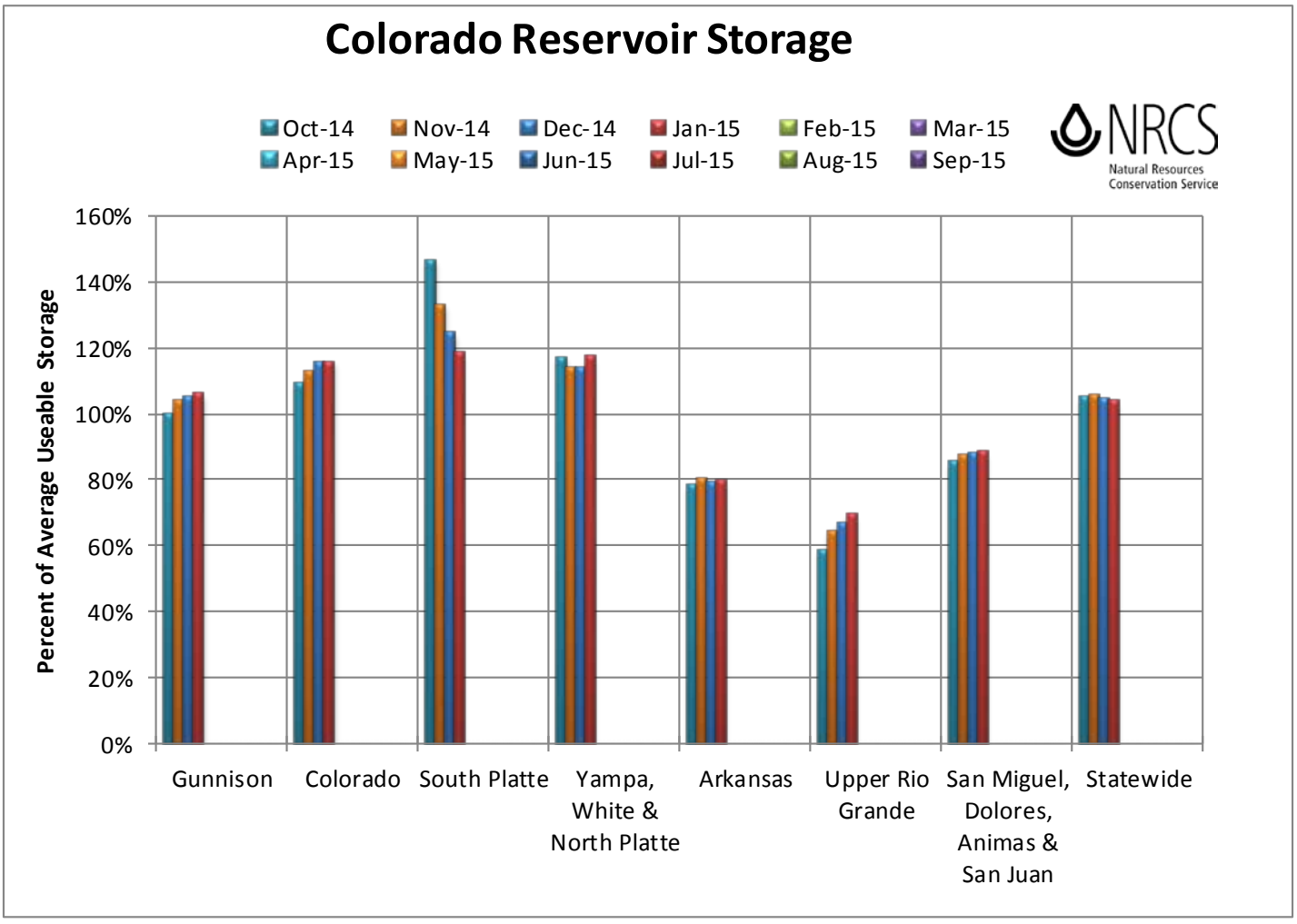
Mountain snowfall was generally below normal across Colorado during January, which resulted in decreases in the percent of normal snowpack in all of the state's major river basins. Although actual snow water equivalent values did not decline, Colorado is no longer where it should be in terms of snowpack accumulation. The state experienced a 16 percent decrease in percent of normal snowpack over the course of January. The combined Yampa, White, and North Platte River basins saw the most dramatic decline in the basin wide snowpack normal, from 103 percent of normal on January 1 to 77 percent on February 1. The southern river basins continue to have the lowest snowpack levels compared to normal, with the Upper Rio Grande and combined San Miguel, Dolores, Animas, and San Juan River basins at 61 and 66 percent respectively. Despite lower than normal monthly snow accumulation in most mountain locations, the state's central and northern river basins still have near normal snowpack levels. The South Platte, Colorado, and Arkansas River basins are at 97, 95, and 94 percent respectively. Across the state, sub-basin snowpack levels range from 44 percent of normal in the Alamosa drainage to 122 percent in the Blue River basin.

Precipitation



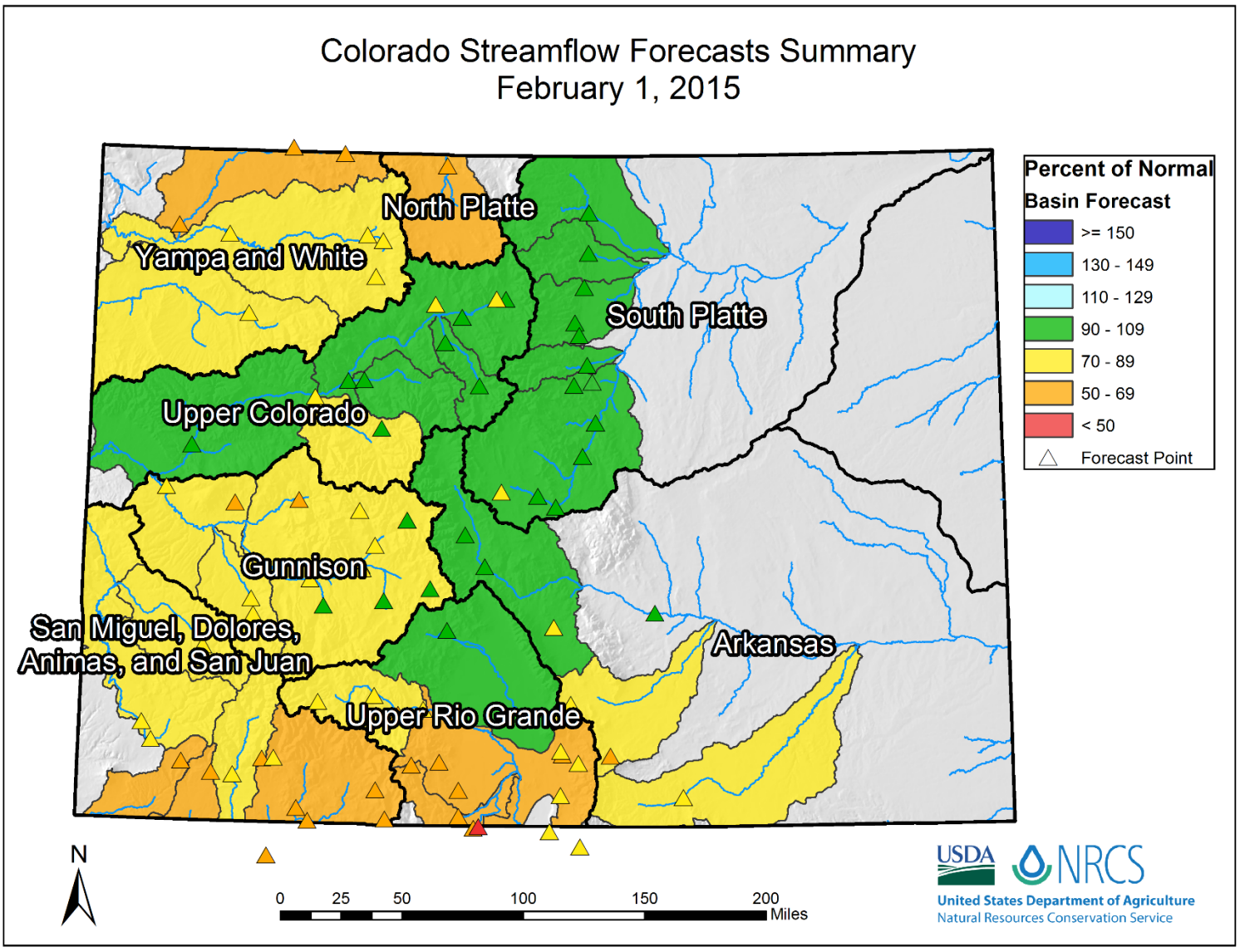
Colorado's major river basins universally experienced below normal precipitation during the month of January, and low moisture accumulations did little to supplement year-to-date precipitation. Statewide monthly precipitation was just 45 percent of the 30-year average. Almost all of the major basins, with the exception of the Arkansas and South Platte River basins, experienced precipitation amounts that were less than half of what typically accumulates during January. The Arkansas and South Platte were only slightly above 50 percent of average, at 51 and 62 percent respectively. Statewide January precipitation ranged from only 32 percent of average in the combined Yampa, White, and North Platte River basins to 62 percent of average in the South Platte River basin. After January's dry conditions, water year-to-date precipitation for Colorado has dropped from being near average and greater than totals experienced last year to 82 percent of average and only 83 percent of last year's precipitation at this time. The southern part of the state continues to report the driest conditions with the Upper Rio Grande and combined San Miguel, Dolores, Animas, and San Juan River basins at 65 and 68 percent of average water year-to-date precipitation for February 1 respectively. Conversely, east of the continental divide, the South Platte and Arkansas River basins have year-to-date precipitation totals that are 99 and 92 percent of average respectively. Due to the above average precipitation that fell in November and December these basins are experiencing closer to normal year-to-date precipitation totals despite the January dry spell.

Reservoir Storage



As weather conditions provided little snowpack gains throughout January, reservoirs across the state were able to retain a considerable amount of water from last year and last month and ease the shortage resulting from lackluster January precipitation. Last year in the northern and central regions of the state, February 1 reservoir levels were much lower because water managers were anticipating larger runoff volumes from a snowpack that was above normal. Southern Colorado reservoirs are just fortunate to be able to hold on to any water on the heels of several consecutive years of sub-par snowpack and precipitation. The Upper Rio Grande reservoirs were able to increase their storage by 4700 acre feet this past month to 69 percent of normal at the end of January. Elsewhere in southern Colorado, the Arkansas and combined San Miguel, Dolores, Animas & San Juan basins also improved their storage and were at 80 and 88 percent of normal respectively. All other major watersheds in Colorado maintain above normal cumulative reservoir storage for this time of year from 106 percent in the Gunnison to 119 percent in the South Platte. Statewide reservoir storage totals round out at 104 percent of normal.

Streamflow



Consistent with the well below normal precipitation that was observed throughout January, Colorado water supply forecasts have dropped statewide over the past month. Currently the Upper Colorado, South Platte, and Upper Arkansas River basins are forecasted to have the nearest to normal streamflow in the state, with most streams forecasted in the 85-100 percent of normal range and just a few above normal. The Southern Basins as a whole are still forecasted to produce well below normal streamflow with the majority of streams being forecasted to produce in the 50-80 percent range of normal seasonal volumes. The Yampa and White river basins received only 29 percent of normal January precipitation, the lowest in the state, which was reflected by substantial decreases in streamflow forecasts across this region over the past month. As of February 1 forecasts in the Yampa and White River basins range between 55 and 87 percent of normal. The North Platte and Laramie rivers also noted significant decreases in forecast volumes of 33 and 26 percent from last month and are now forecasted to have 61 and 68 percent of normal seasonal streamflow, respectively. Gunnison Basin forecasts also dropped since January and are currently between 60 and 94 percent of normal.

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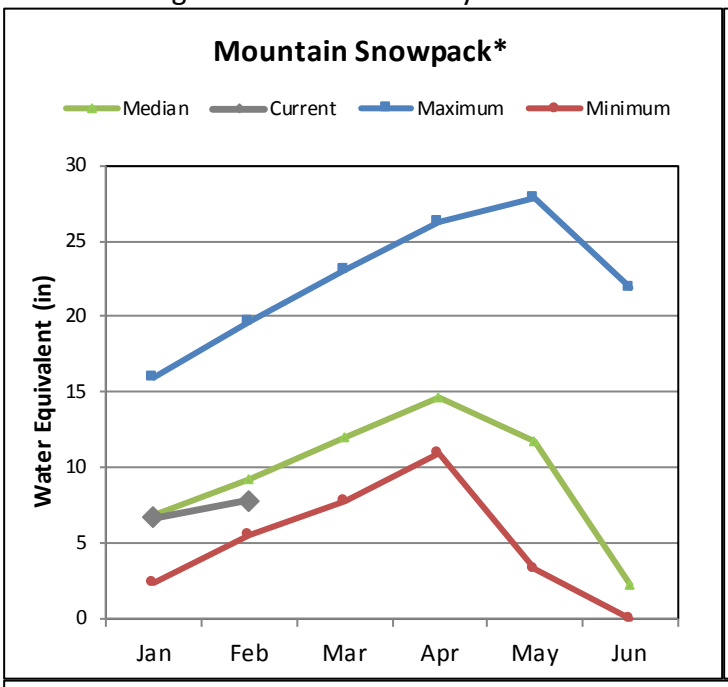
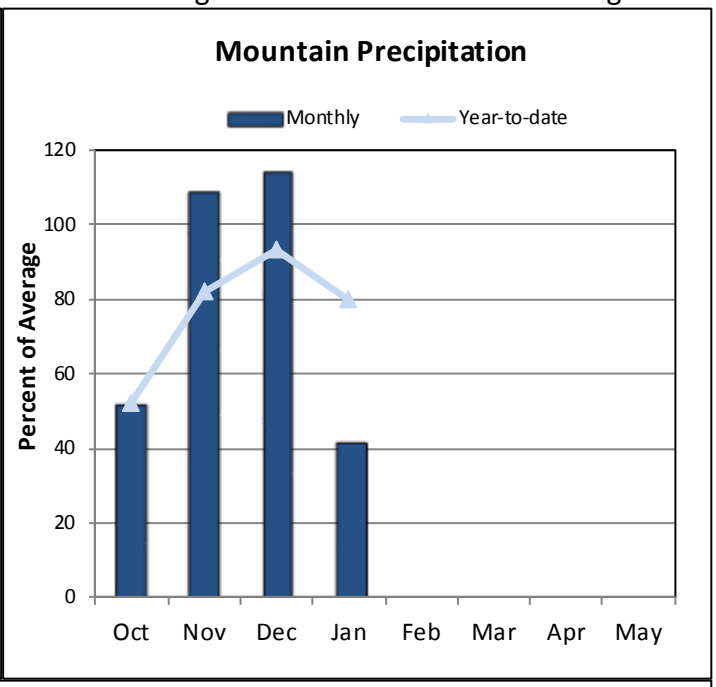
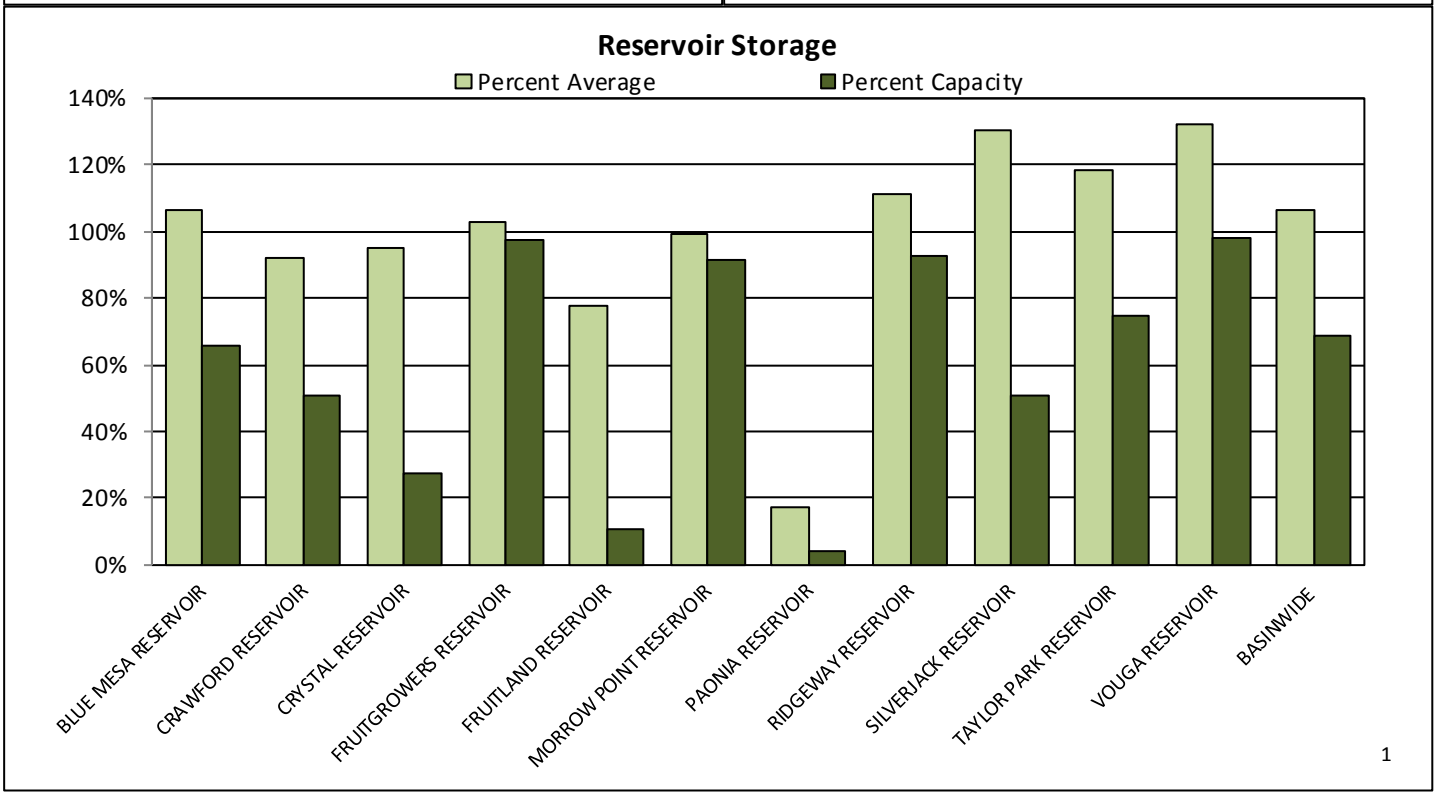
GUNNISON RIVER BASIN

February 1, 2015

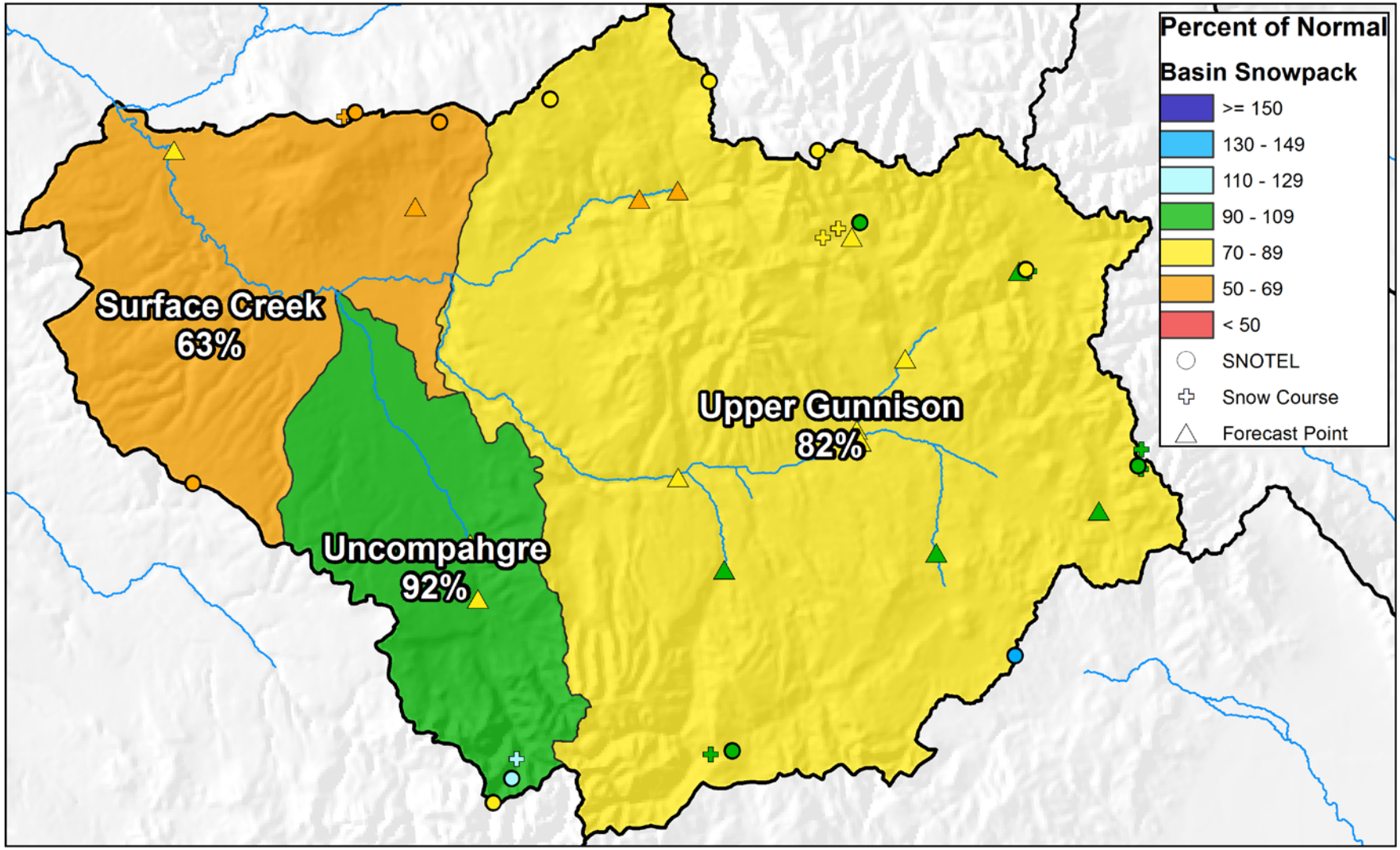
Snowpack in the Gunnison River basin is below normal at 84% of the median. Precipitation for January was 42% of average which brings water year-to-date precipitation down to 80% of average. Reservoir storage at the end of January was 106% of average compared to 84% last year. Current streamflow forecasts range from 94% of average for the Inflow to Taylor Park Reservoir to 60% of average for Surface Creek at Cedaredge.







Gunnison River Basin Snowpack and Streamflow Forecasts
February 1, 2015



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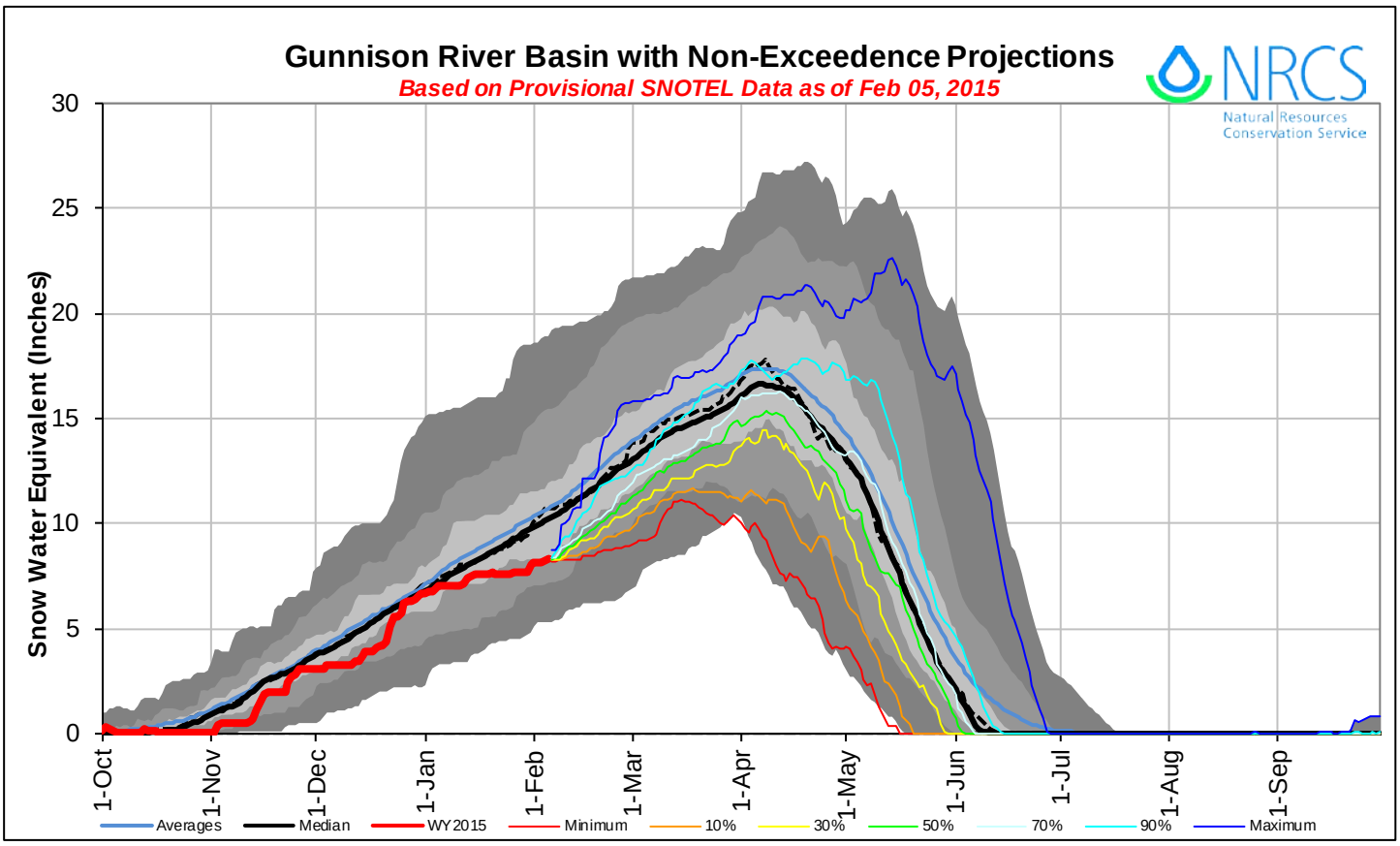
Gunnison River Basin
Streamflow Forecasts - February 1, 2015

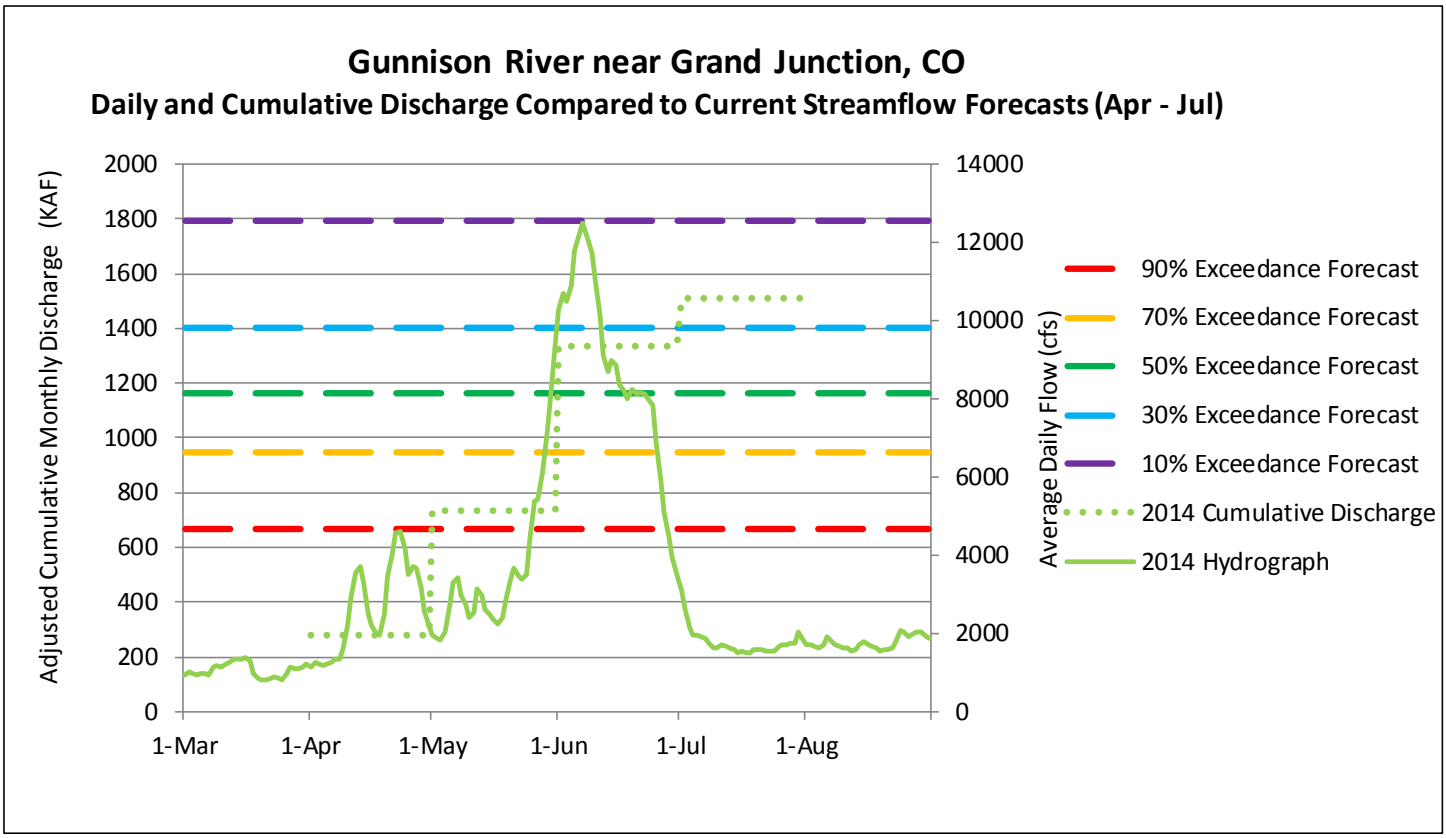
GUNNISON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Taylor Park Reservoir Inflow	APR-JUL	61	79	93	94%	108	132	99
Slate R nr Crested Butte	APR-JUL	52	64	73	88%	82	96	83
East R at Almont	APR-JUL	101	132	155	85%	180	220	182
Gunnison R near Gunnison [2]	APR-JUL	200	270	325	88%	385	480	370
Tomichi Ck at Sargents	APR-JUL	13	21	28	93%	35	48	30
Cochetopa Ck bl Rock Ck nr Parlin	APR-JUL	4.9	9.5	13.5	90%	18.1	26	15
Tomichi Ck at Gunnison	APR-JUL	23	46	66	89%	89	130	74
Lake Fk at Gateview	APR-JUL	73	95	112	91%	130	159	123
Blue Mesa Reservoir Inflow [2]	APR-JUL	370	505	605	90%	715	900	675
Paonia Reservoir Inflow	MAR-JUN	28	45	60	63%	77	104	96
	APR-JUL	26	45	61	63%	79	110	97
NF Gunnison R nr Somerset[2]	APR-JUL	119	165	200	69%	240	300	290
Surface Ck at Cedaredge	APR-JUL	6.3	8.4	10	60%	11.8	14.6	16.8
Ridgway Reservoir Inflow	APR-JUL	56	75	88	87%	104	128	101
Uncompahgre R at Colona [2]	APR-JUL	60	90	114	83%	141	186	137
Gunnison R nr Grand Junction [2]	APR-JUL	665	945	1160	78%	1400	1790	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Blue Mesa Reservoir	546.5	387.7	514.6	830.0
Crawford Reservoir	7.1	4.7	7.7	14.0
Crystal Reservoir	7.2	7.3	7.6	17.5
Fruitgrowers Reservoir	3.5	2.6	3.4	3.6
Fruitland Reservoir	1.0	1.6	1.3	9.2
Morrow Point Reservoir	110.4	107.9	111.4	121.0
Paonia Reservoir	0.6	0.4	3.5	15.4
Ridgway Reservoir	77.0	73.7	69.2	83.0
Silverjack Reservoir	6.9	10.0	5.3	12.8
Taylor Park Reservoir	79.0	71.4	66.9	106.0
Vouga Reservoir	0.9	0.5	0.7	0.9
Basin-wide Total	840.1	667.8	791.6	1213.4
# of reservoirs	11	11	11	11

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
UPPER GUNNISON BASIN	16	81%	109%
SURFACE CREEK BASIN	3	63%	96%
UNCOMPAHGRE BASIN	4	92%	87%
GUNNISON RIVER BASIN	20	83%	104%



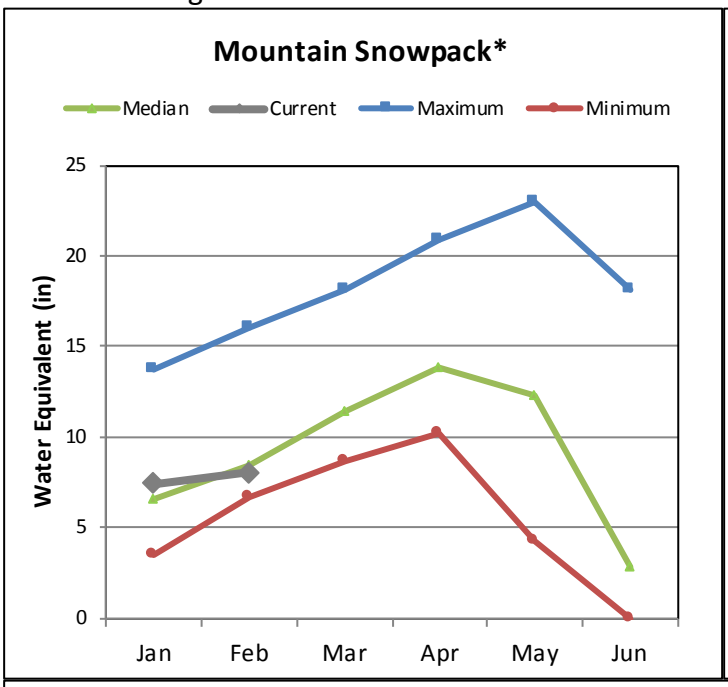


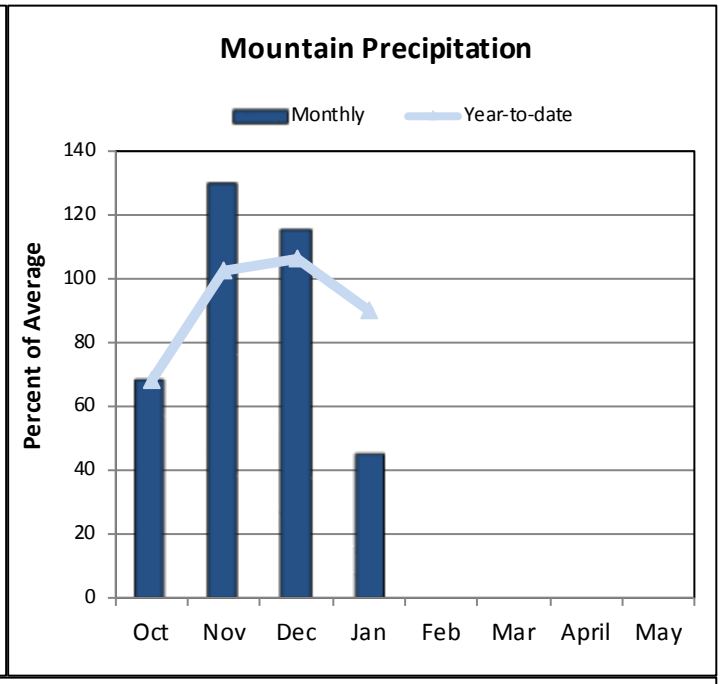
Please refer to the sections at the end of this report for further explanation concerning these graphs.

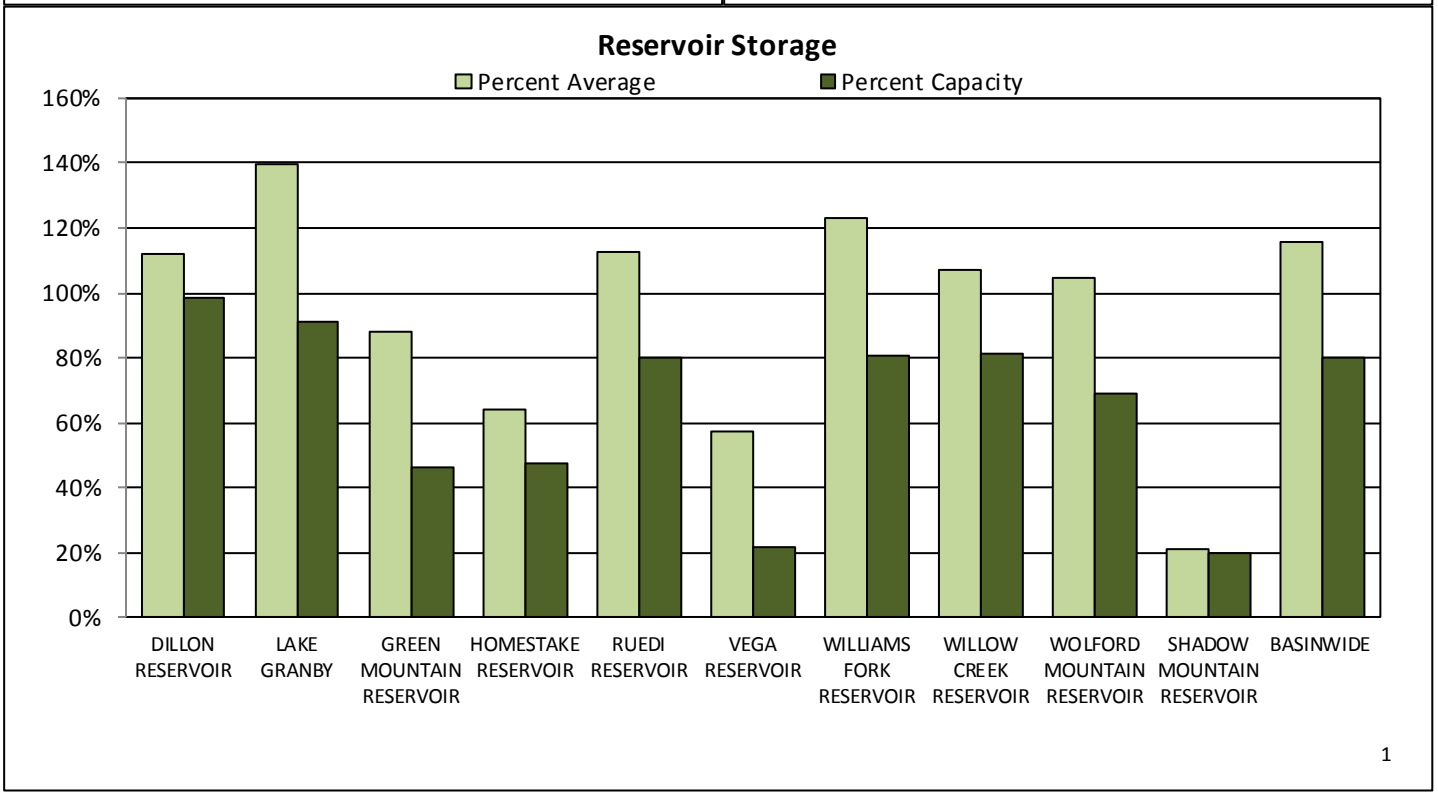
UPPER COLORADO RIVER BASIN

February 1, 2015

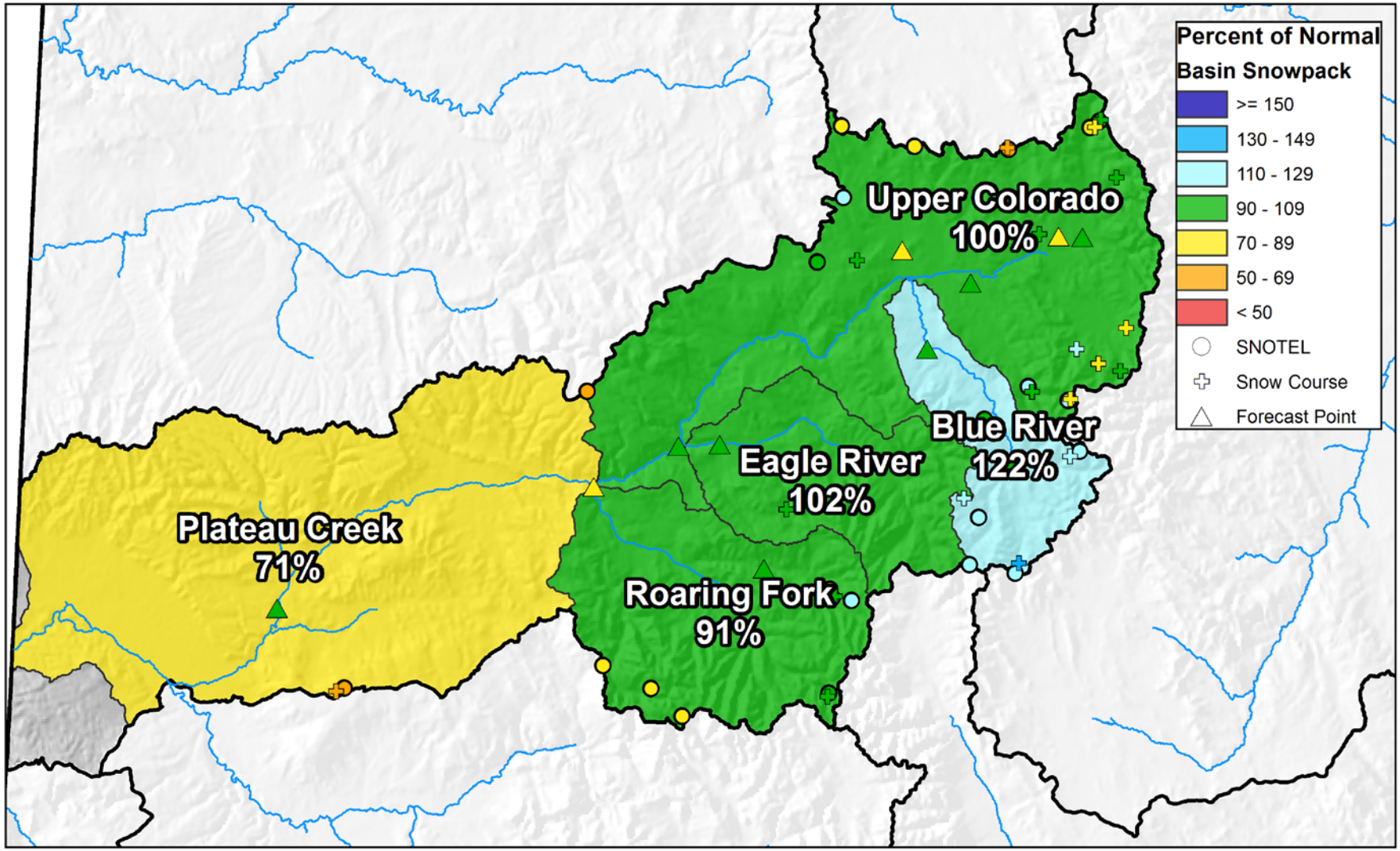
Snowpack in the Colorado River basin is near normal at 95% of the median. Precipitation for January was 45% of average which brings water year-to-date precipitation down to 90% of average. Reservoir storage at the end of January was 116% of average compared to 98% last year. Current streamflow forecasts range from 108% of average for the Inflow to Dillon Reservoir to 83% for the Inflow to Wolford Mountain Reservoir.







Upper Colorado River Basin Snowpack and Streamflow Forecasts
February 1, 2015



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Upper Colorado River Basin
Streamflow Forecasts - February 1, 2015

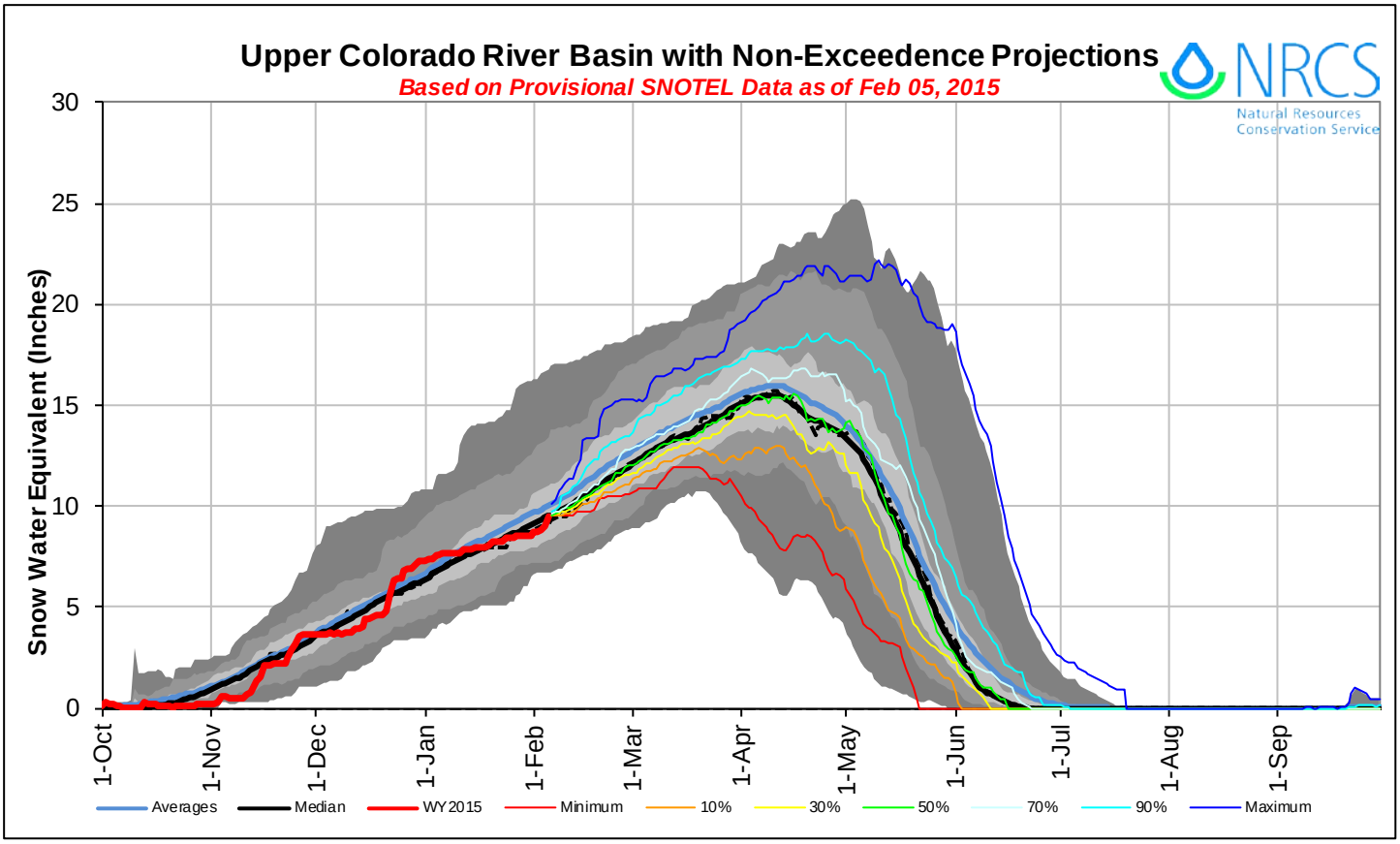
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

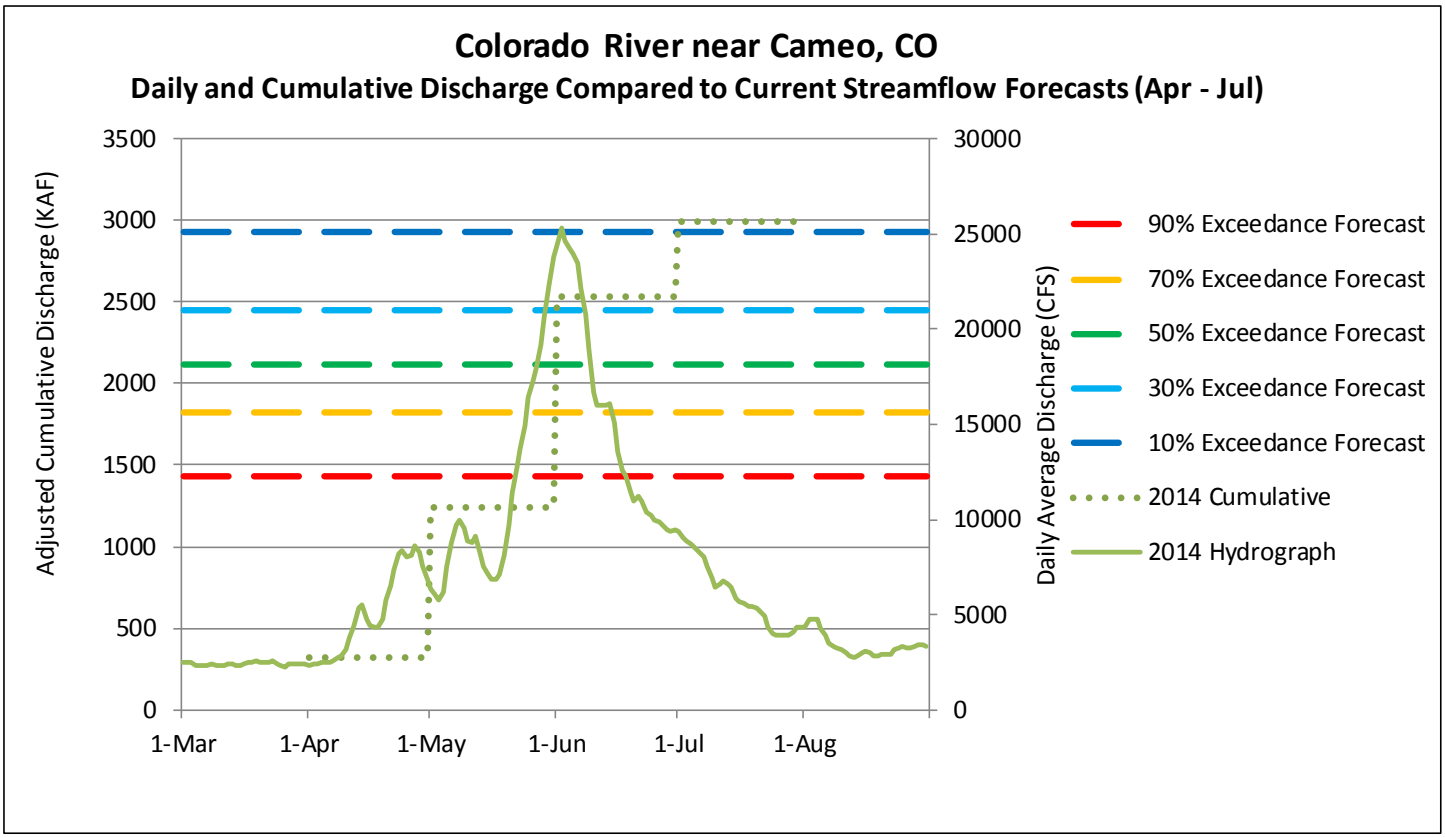
UPPER COLORADO RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lake Granby Inflow [2]	APR-JUL	137	173	200	91%	230	275	220
Willow Ck Reservoir Inflow	APR-JUL	23	32	40	85%	48	62	47
Williams Fk bl Williams Fk Reservoir[2]	APR-JUL	62	81	95	98%	110	134	97
Wolford Mtn Reservoir Inflow	APR-JUL	28	38	45	83%	53	66	54
Dillon Reservoir Inflow[2]	APR-JUL	118	151	176	108%	205	245	163
Green Mountain Reservoir Inflow[2]	APR-JUL	197	255	295	107%	340	415	275
Eagle R bl Gypsum [2]	APR-JUL	210	275	320	96%	375	460	335
Colorado R nr Dotsero [2]	APR-JUL	875	1160	1370	98%	1600	1970	1400
Ruedi Reservoir Inflow [2]	APR-JUL	89	112	130	94%	149	179	139
Roaring Fk at Glenwood Springs[2]	APR-JUL	390	500	580	84%	670	810	690
Colorado R nr Cameo [2]	APR-JUL	1430	1820	2120	90%	2450	2960	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Dillon Reservoir	250.1	239.7	223.3	254.0
Green Mountain Reservoir	67.8	75.5	77.1	146.8
Homestake Reservoir	20.4	0.9	31.7	43.0
Lake Granby	423.7	276.0	302.9	465.6
Ruedi Reservoir	81.6	79.8	72.4	102.0
Shadow Mountain Reservoir	3.7	17.5	17.3	18.4
Vega Reservoir	7.1	15.7	12.4	32.9
Williams Fork Reservoir	78.5	75.9	63.8	97.0
Willow Creek Reservoir	7.4	7.2	6.9	9.1
Wolford Mountain Reservoir	45.7	43.7	43.6	65.9
Basin-wide Total	986.0	831.9	851.4	1234.7
# of reservoirs	10	10	10	10

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
BLUE RIVER BASIN	8	122%	137%
HEADWATERS COLORADO RIVER	36	100%	125%
MUDDY CREEK BASIN	5	92%	132%
EAGLE RIVER BASIN	5	102%	116%
PLATEAU CREEK BASIN	3	63%	96%
ROARING FORK BASIN	9	91%	117%
WILLIAMS FORK BASIN	5	104%	128%
WILLOW CREEK BASIN	5	82%	117%
UPPER COLORADO RIVER BASIN	48	95%	121%



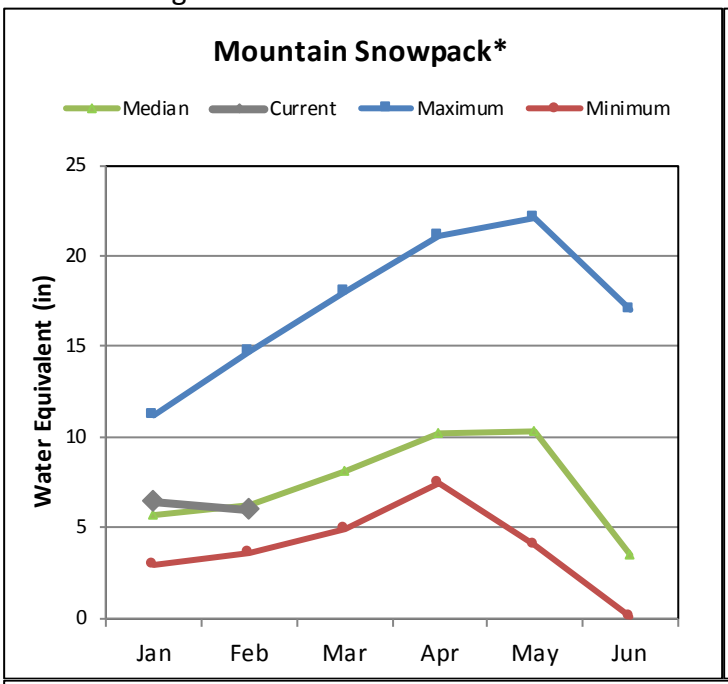


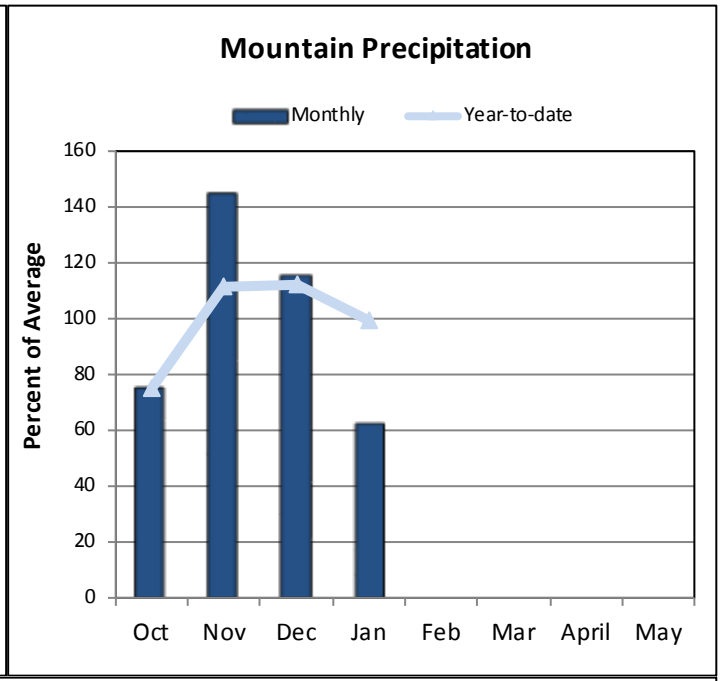
Please refer to the sections at the end of this report for further explanation concerning these graphs.

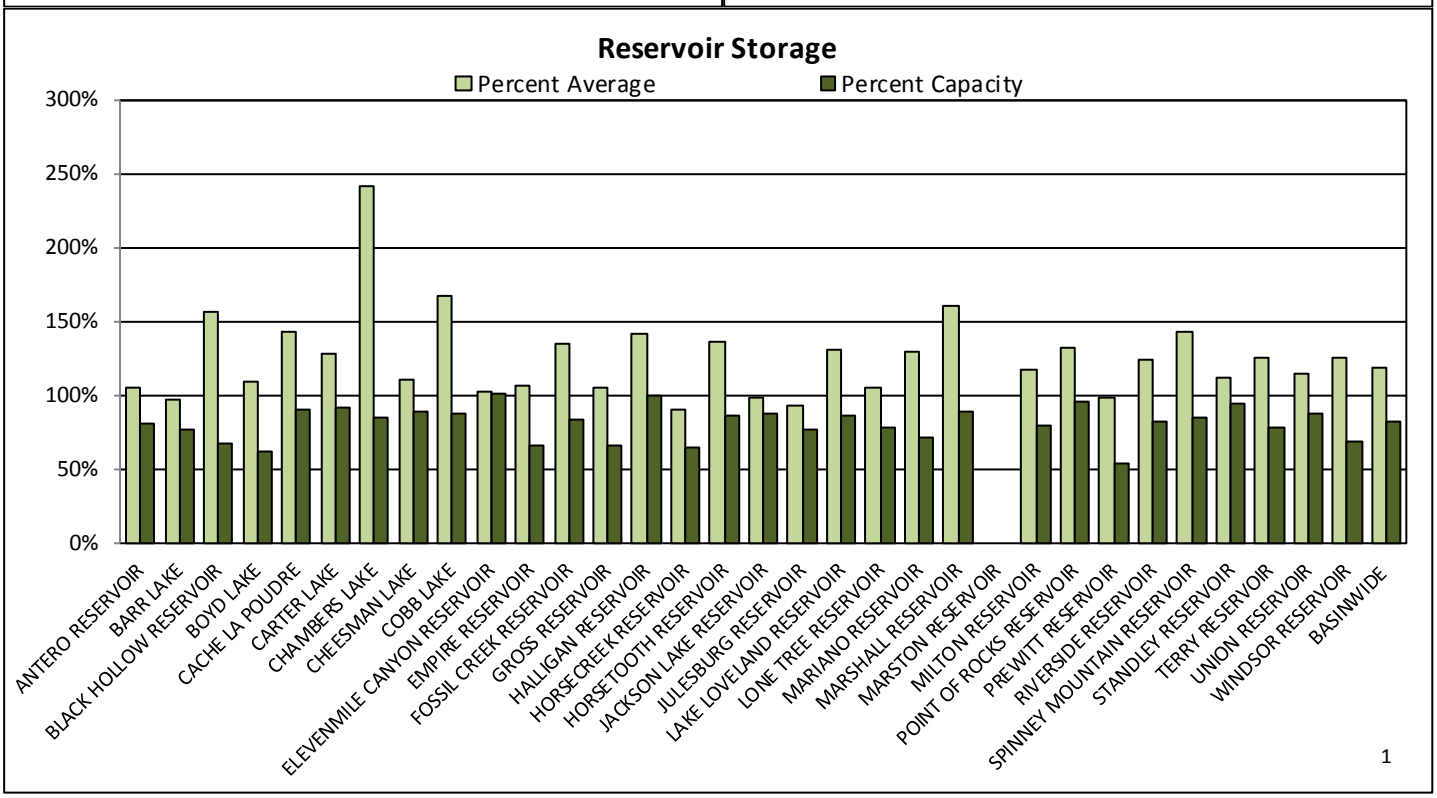
SOUTH PLATTE RIVER BASIN

February 1, 2015

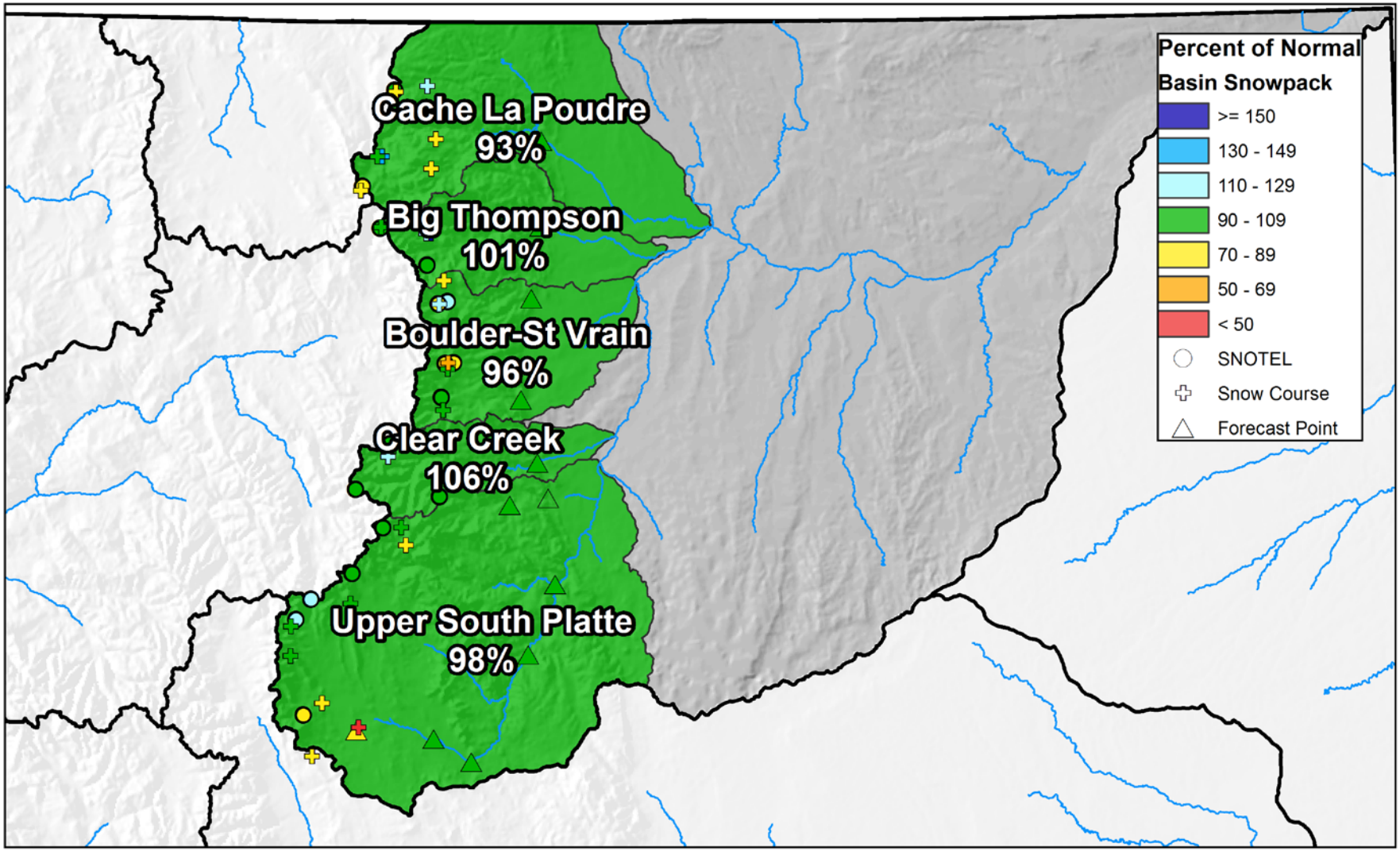
Snowpack in the South Platte River basin is near normal at 97% of the median. Precipitation for January was 62% of average which brings water year-to-date precipitation down to 99%. Reservoir storage at the end of January was 119% of average compared to 113% last year. Streamflow forecasts for April to July range from 96% of average for Boulder Creek near Orodell to 86% for the Inflow to Antero Reservoir.







South Platte River Basin Snowpack and Streamflow Forecasts
February 1, 2015



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South Platte River Basin
Streamflow Forecasts - February 1, 2015

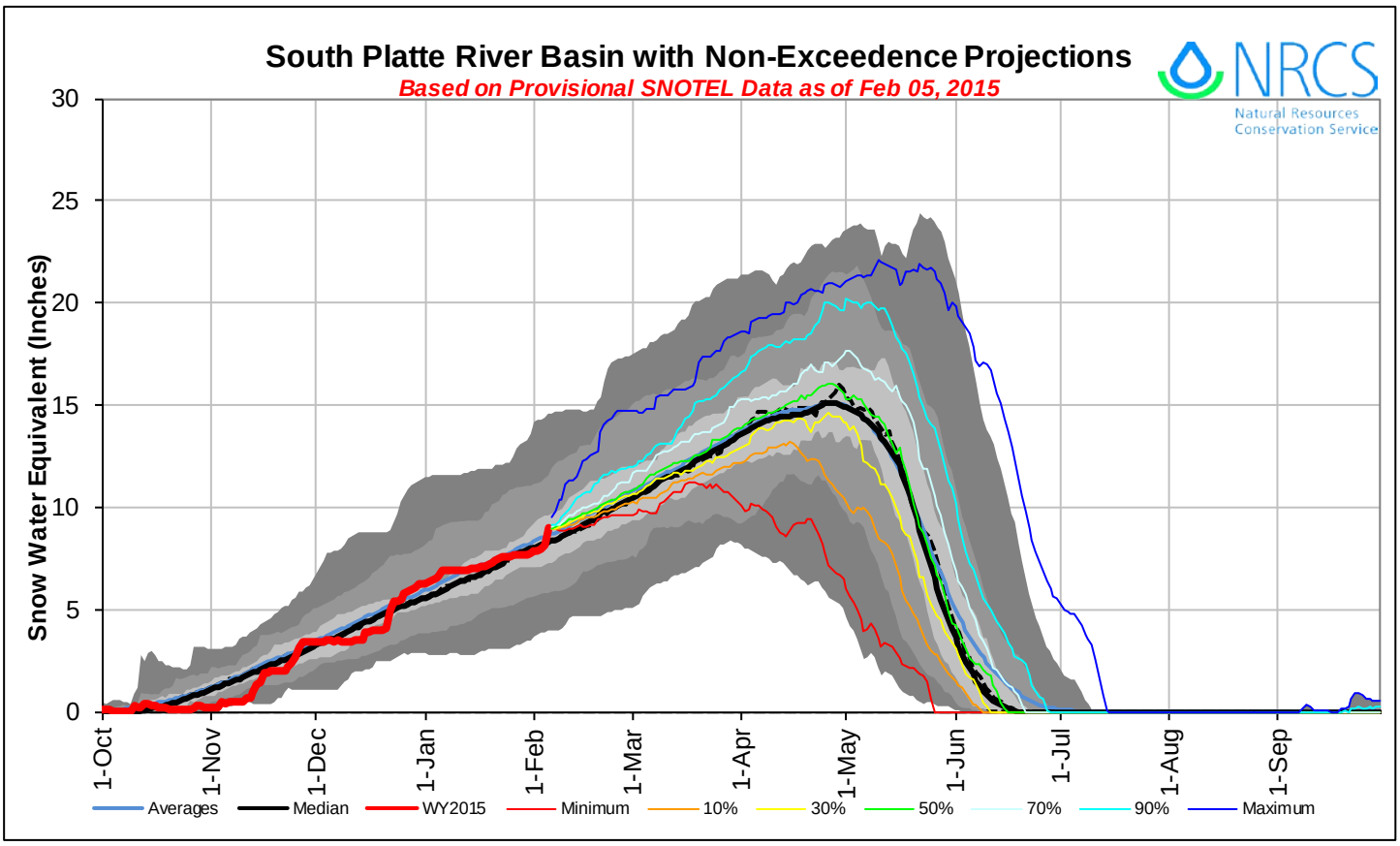
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

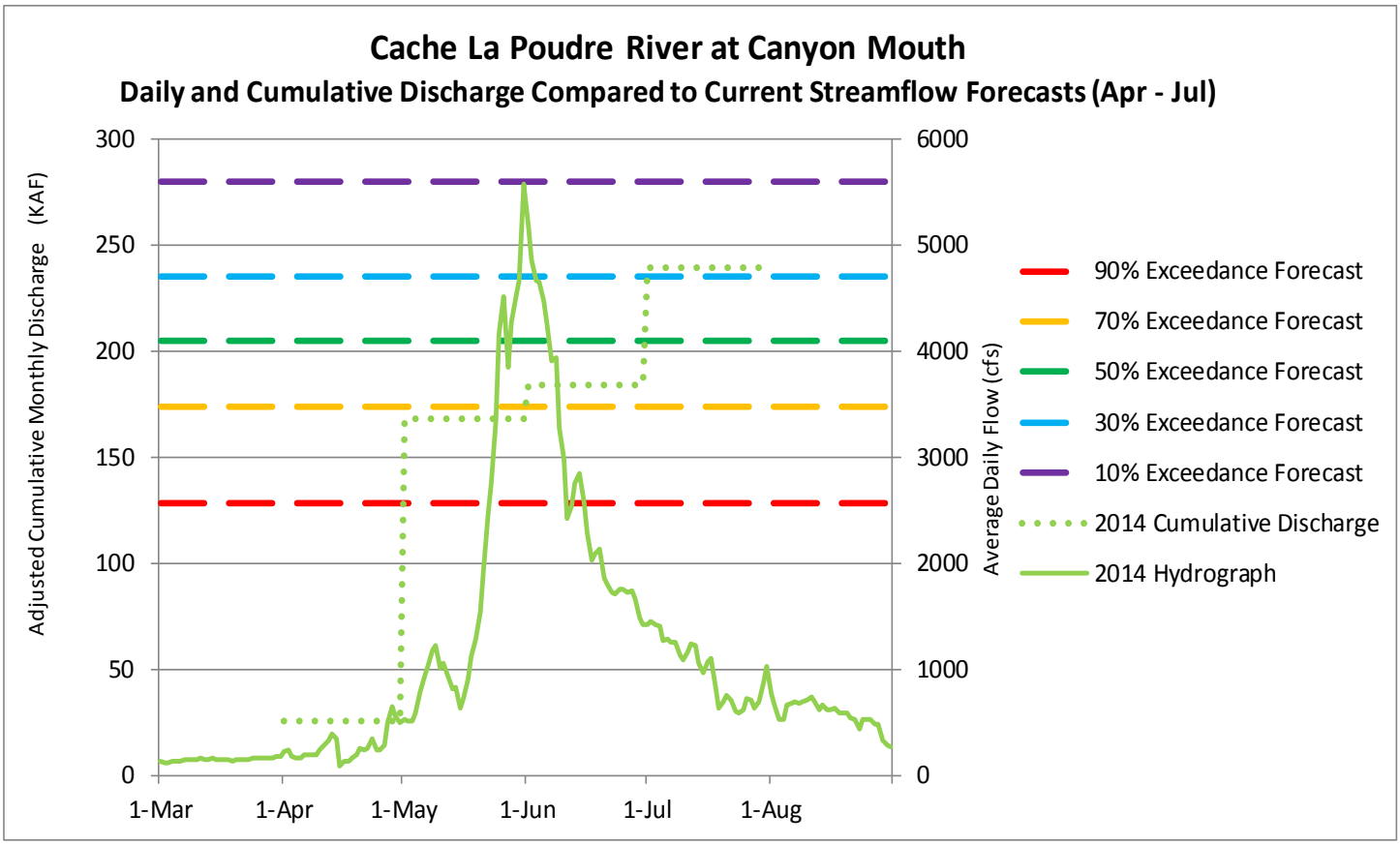
SOUTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Antero Reservoir Inflow[2]								
	APR-JUL	5.9	9.9	12.5	86%	15.2	19.1	14.5
	APR-SEP	8	12.4	15.5	87%	18.5	23	17.8
Spinney Mountain Reservoir Inflow[2]								
	APR-JUL	22	33	44	92%	58	89	48
	APR-SEP	26	41	55	90%	74	115	61
Elevenmile Canyon Reservoir Inflow[2]								
	APR-JUL	22	34	46	92%	62	96	50
	APR-SEP	26	42	58	91%	80	127	64
Cheesman Lake Inflow[2]								
	APR-JUL	44	70	95	95%	129	205	100
	APR-SEP	55	88	120	95%	164	260	126
South Platte R at South Platte[2]								
	APR-JUL	74	121	170	94%	240	395	180
	APR-SEP	92	152	215	96%	300	495	225
Bear Ck ab Evergreen								
	APR-JUL	6.8	11.1	15.6	95%	22	36	16.4
	APR-SEP	9.1	14.6	20	95%	28	44	21
Clear Ck at Golden								
	APR-JUL	70	87	99	94%	111	128	105
	APR-SEP	83	105	119	93%	134	155	128
St. Vrain Ck at Lyons[2]								
	APR-JUL	63	75	84	95%	93	105	88
	APR-SEP	72	87	97	94%	107	122	103
Boulder Ck nr Orodell[2]								
	APR-JUL	41	48	52	96%	56	63	54
	APR-SEP	47	55	60	95%	65	73	63
South Boulder Ck nr Eldorado Springs[2]								
	APR-JUL	28	33	36	92%	39	44	39
	APR-SEP	30	36	40	93%	44	50	43
Big Thompson R at Canyon Mouth[2]								
	APR-JUL	60	75	85	94%	95	110	90
	APR-SEP	73	91	103	96%	115	132	107
Cache La Poudre at Canyon Mouth[2]								
	APR-JUL	128	174	205	91%	235	280	225
	APR-SEP	139	190	225	90%	260	310	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Antero Reservoir	16.1	16.9	15.3	19.9
Barr Lake	23.4	25.9	24.0	30.1
Black Hollow Reservoir	4.4	3.6	2.8	6.5
Boyd Lake	30.5	33.5	27.8	48.4
Cache La Poudre	9.2	9.1	6.4	10.1
Carter Lake	100.6	59.9	78.3	108.9
Chambers Lake	7.5	7.0	3.1	8.8
Cheesman Lake	70.4	74.5	63.7	79.0
Cobb Lake	19.6	19.7	11.7	22.3
Elevenmile Canyon Reservoir	99.1	100.3	95.9	98.0
Empire Reservoir	24.2	28.8	22.6	36.5
Fossil Creek Reservoir	9.3	9.2	6.9	11.1
Gross Reservoir	27.8	33.7	26.3	41.8
Halligan Reservoir	6.4	4.4	4.5	6.4
Horsecreek Reservoir	9.5	11.8	10.4	14.7
Horsetooth Reservoir	129.3	94.8	94.7	149.7
Jackson Lake Reservoir	22.9	26.0	23.1	26.1
Julesburg Reservoir	15.8	15.2	16.9	20.5
Lake Loveland Reservoir	8.9	8.5	6.8	10.3
Lone Tree Reservoir	6.8	7.6	6.4	8.7
Mariano Reservoir	3.9	4.3	3.0	5.4
Marshall Reservoir	9.0	8.8	5.6	10.0
Marston Reservoir	0.0	7.5	5.9	13.0
Milton Reservoir	18.7	19.5	15.8	23.5
Point Of Rocks Reservoir	67.7	56.4	51.1	70.6
Prewitt Reservoir	15.5	22.3	15.7	28.2
Ralph Price Reservoir	12.9	13.9		16.2
Riverside Reservoir	46.5	44.3	37.3	55.8
Spinney Mountain Reservoir	41.8	43.9	29.0	49.0
Standley Reservoir	40.0	40.0	35.7	42.0
Terry Reservoir	6.3	5.6	5.0	8.0
Union Reservoir	11.5	11.7	10.0	13.0
Windsor Reservoir	10.5	12.4	8.3	15.2
Basin-wide Total	913.1	867.1	770.0	1091.5
# of reservoirs	32	32	32	32

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
BIG THOMPSON BASIN	7	101%	122%
BOULDER CREEK BASIN	6	88%	131%
CACHE LA POUDRE BASIN	10	93%	121%
CLEAR CREEK BASIN	4	106%	125%
SAINT VRAIN BASIN	3	102%	116%
UPPER SOUTH PLATTE BASIN	16	98%	136%
SOUTH PLATTE RIVER BASIN	46	97%	126%



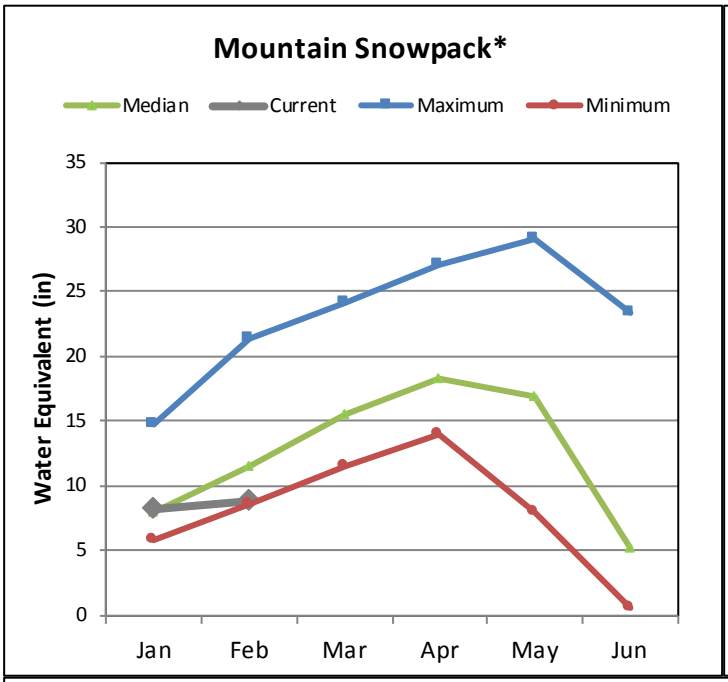


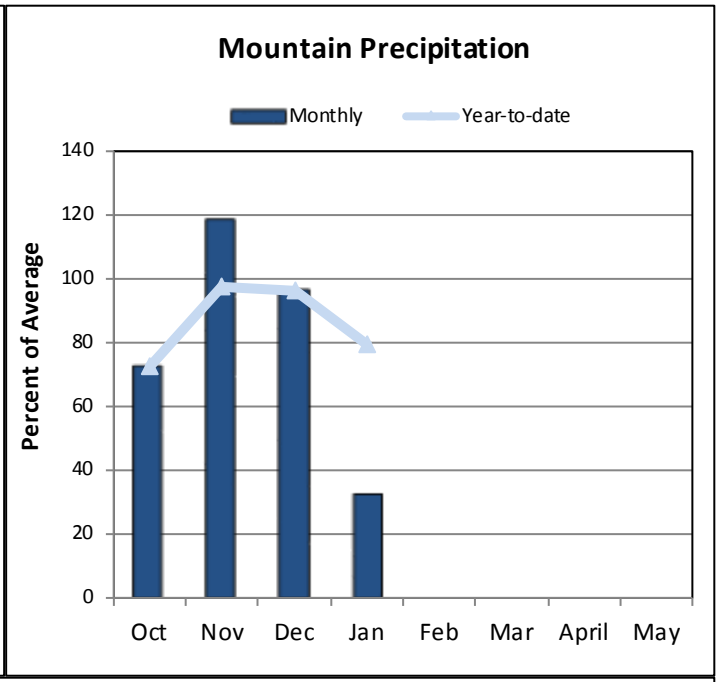
Please refer to the sections at the end of this report for further explanation concerning these graphs.

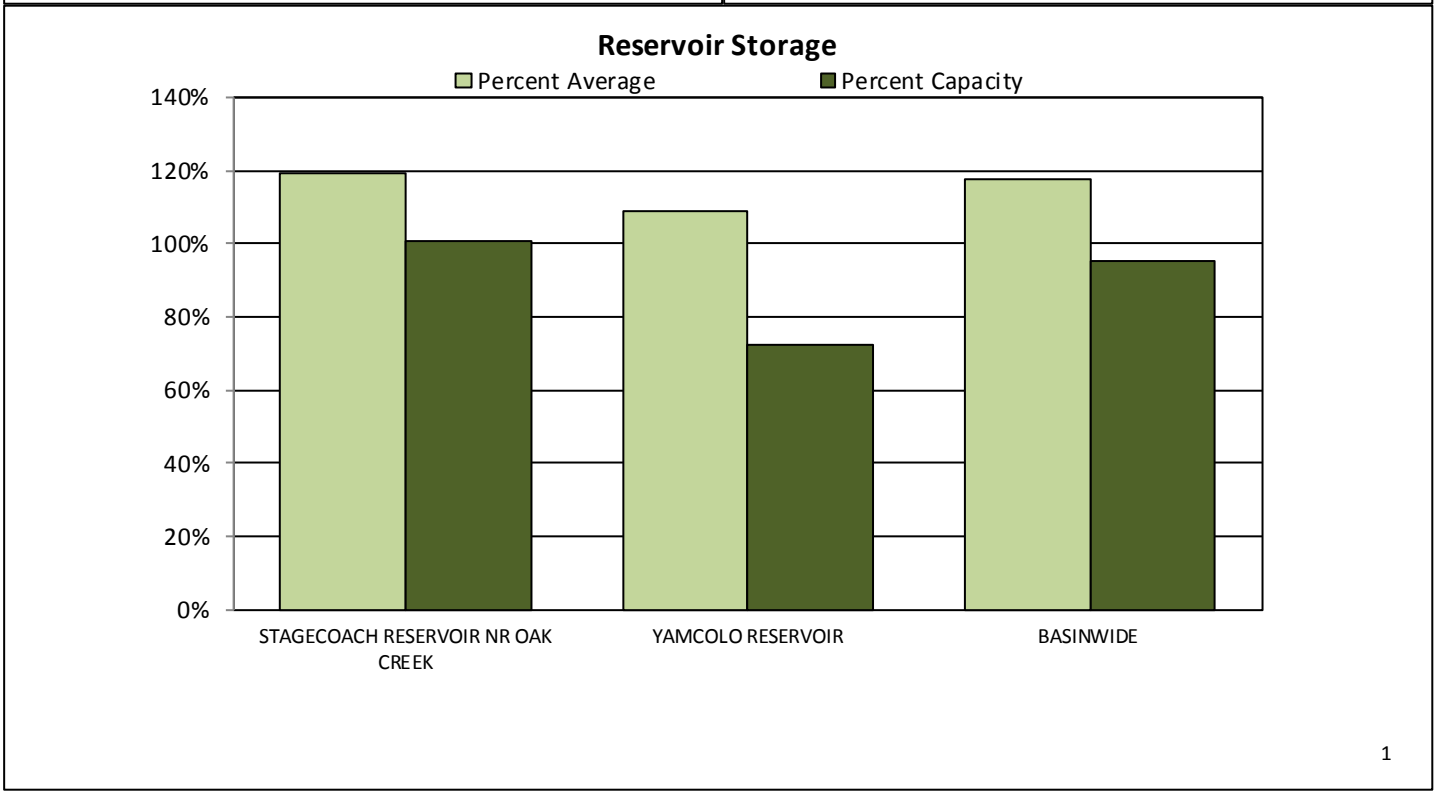
YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS

February 1, 2015

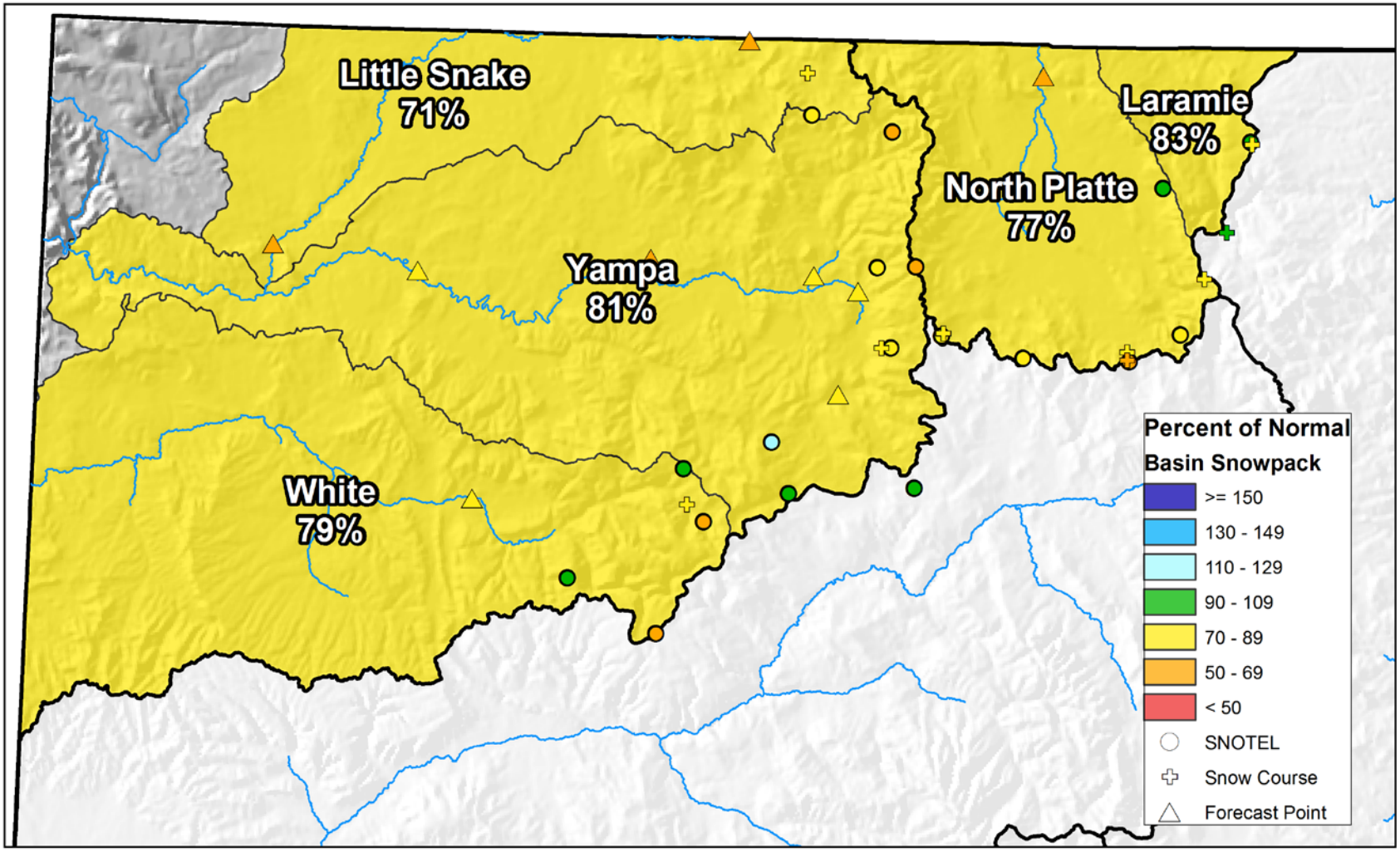
Snowpack in the Yampa, White, North Platte & Laramie basins is below normal at 77% of the median. Precipitation for January was just 32% of average which brings water year-to-date precipitation down to 79%. Reservoir storage at the end of January was 117% of average compared to 112% last year. Streamflow forecasts range from 87% of average for the Yampa River above Stagecoach Reservoir to 55% for the Little Snake River near Dixon.







Yampa, White, and North Platte River Basins Snowpack and Streamflow Forecasts
February 1, 2015



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Yampa-White-North Platte River Basins
Streamflow Forecasts - February 1, 2015

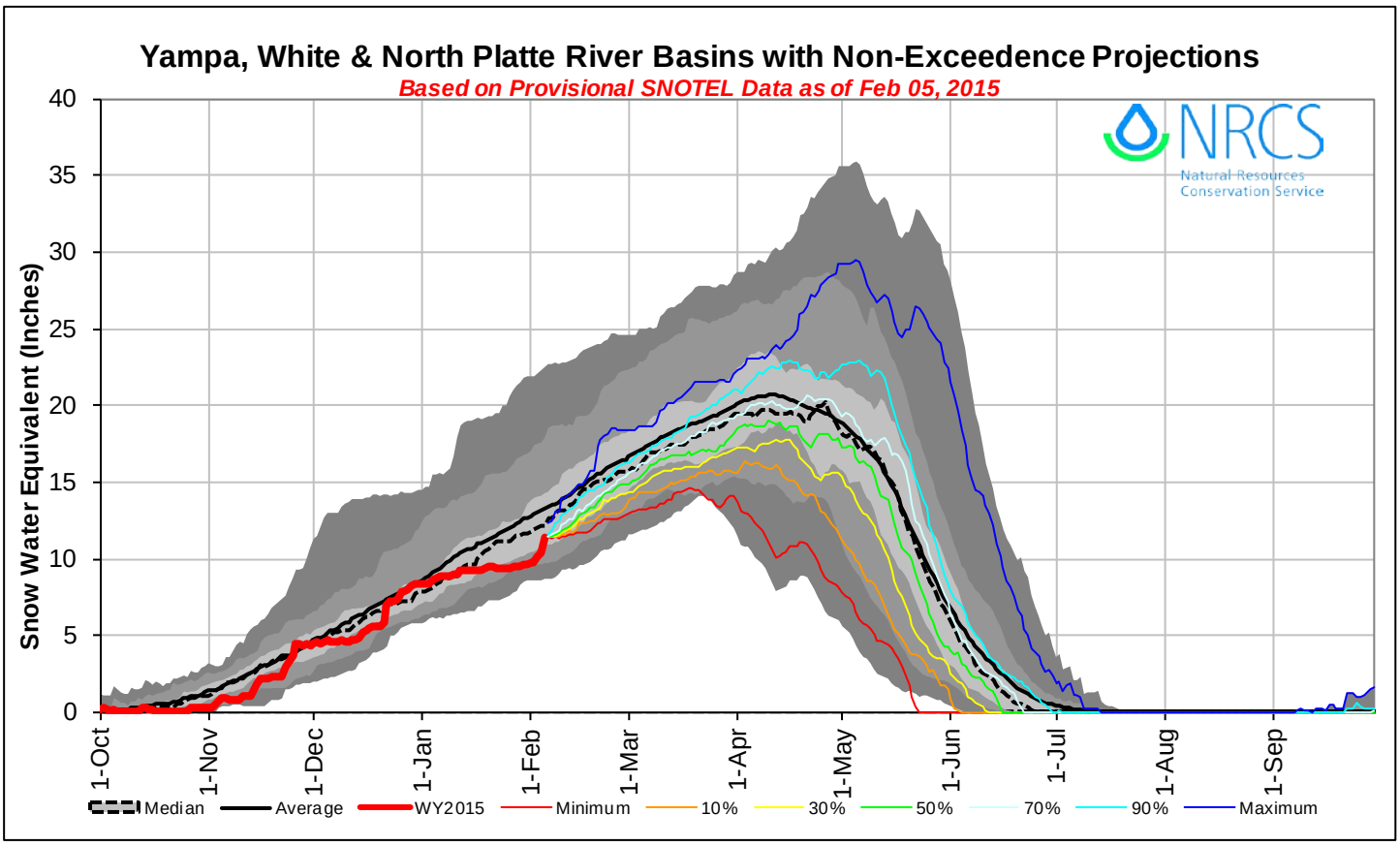
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

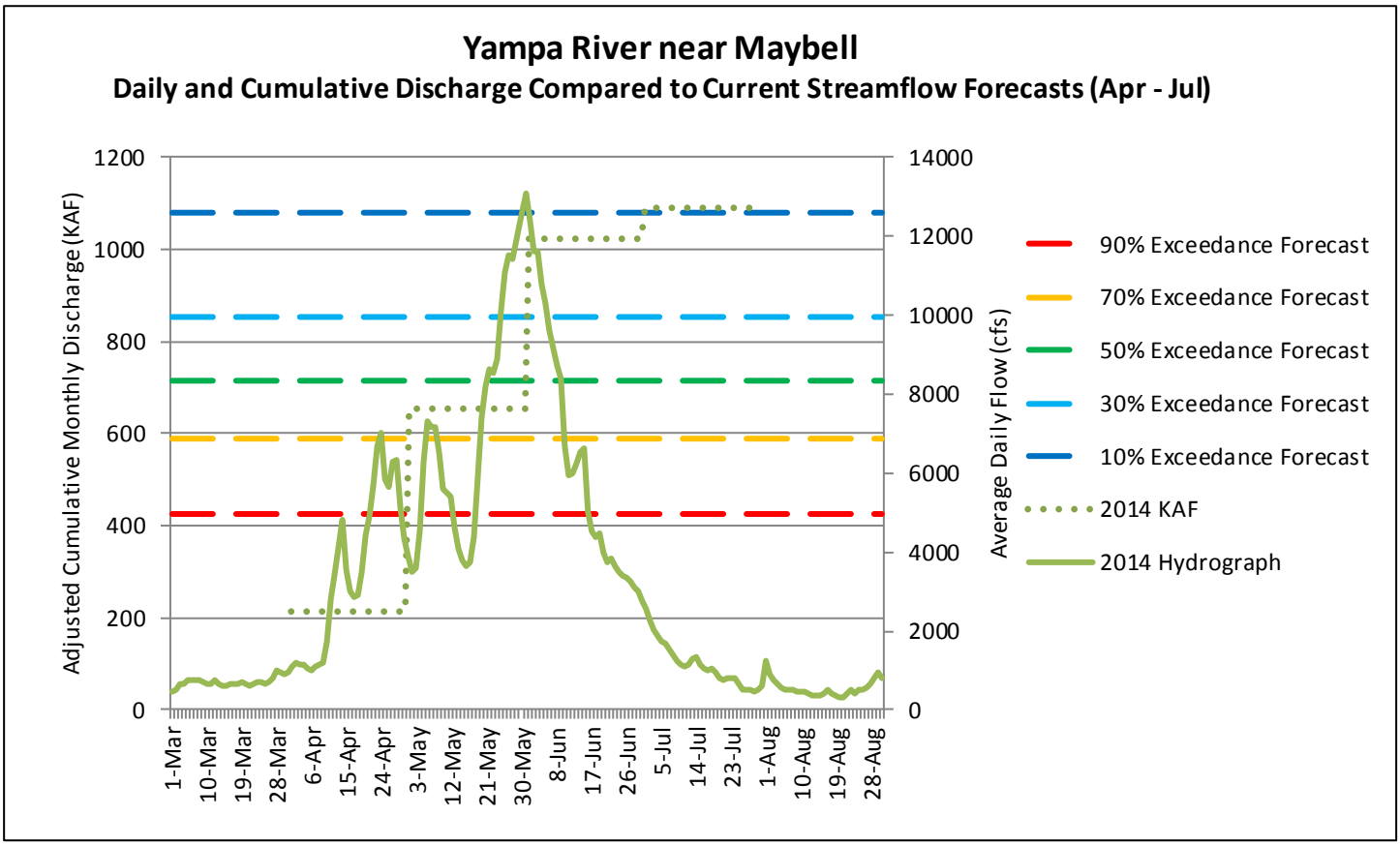
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
North Platte R nr Northgate								
	APR-JUL	19.7	90	137	61%	184	255	225
	APR-SEP	21	98	150	60%	200	280	250
Laramie R nr Woods[2]								
	APR-JUL	39	62	78	68%	94	117	115
	APR-SEP	43	68	86	68%	103	128	126
Yampa R ab Stagecoach Reservoir [2]								
	APR-JUL	10.7	15.9	20	87%	25	32	23
Yampa R at Steamboat Springs[2]								
	APR-JUL	155	192	220	85%	250	295	260
Elk R nr Milner								
	APR-JUL	158	215	255	80%	300	375	320
Elkhead Ck ab Long Gulch								
	APR-JUL	23	38	50	68%	64	87	73
Yampa R nr Maybell[2]								
	APR-JUL	425	590	715	76%	855	1080	935
Little Snake R nr Slater[2]								
	APR-JUL	61	83	100	64%	118	148	156
Little Snake R nr Dixon[2]								
	APR-JUL	90	145	190	55%	240	325	345
Little Snake R nr Lily[2]								
	APR-JUL	88	146	193	56%	245	340	345
White R nr Meeker								
	APR-JUL	147	192	225	80%	260	320	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Stagecoach Reservoir nr Oak Creek	33.6	33.6	28.2	33.3
Yamcolo Reservoir	6.3	4.5	5.8	8.7
Basin-wide Total	39.9	38.1	34.0	42.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
LARAMIE RIVER BASIN	4	83%	127%
NORTH PLATTE RIVER BASIN	11	77%	119%
LARAMIE & NORTH PLATTE RIVER BASINS	15	78%	120%
ELK RIVER BASIN	2	70%	104%
YAMPA RIVER BASIN	11	81%	121%
WHITE RIVER BASIN	5	79%	106%
YAMPA & WHITE RIVER BASINS	15	79%	115%
LITTLE SNAKE RIVER BASIN	9	71%	112%
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	35	77%	115%



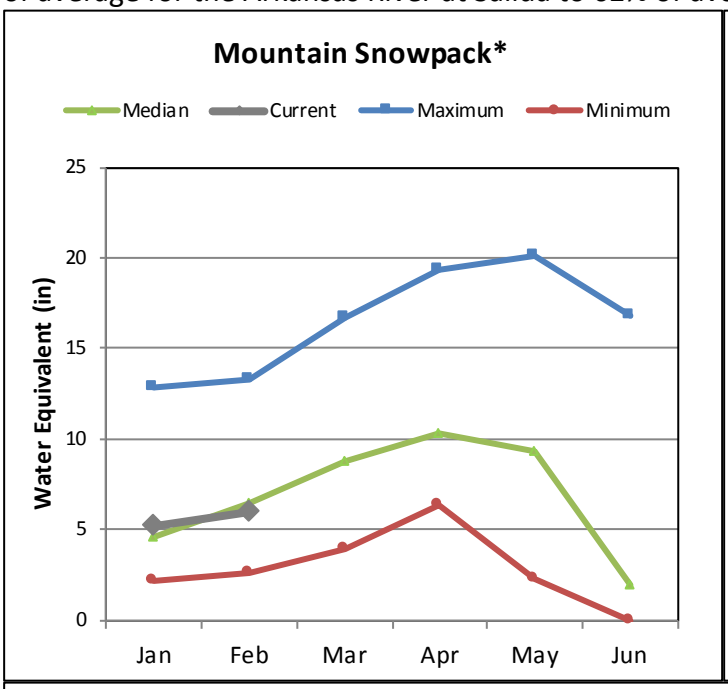


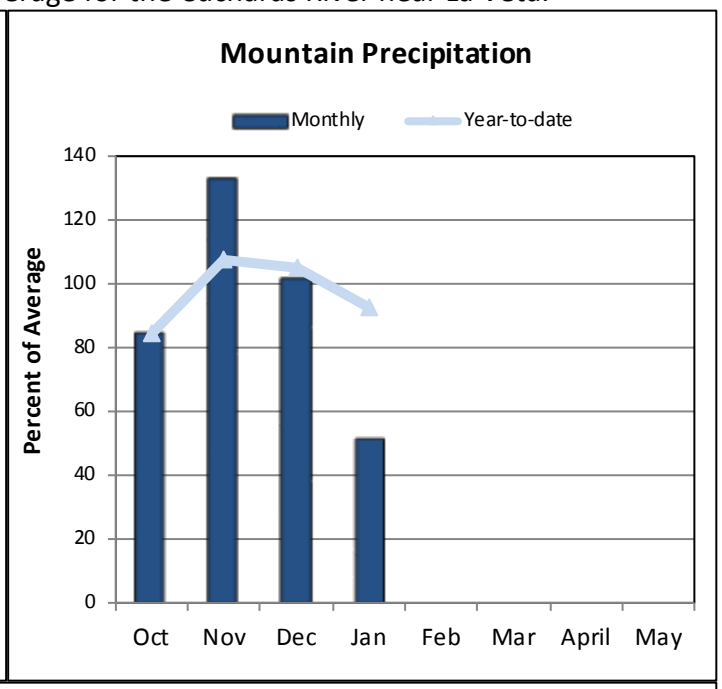
Please refer to the sections at the end of this report for further explanation concerning these graphs.

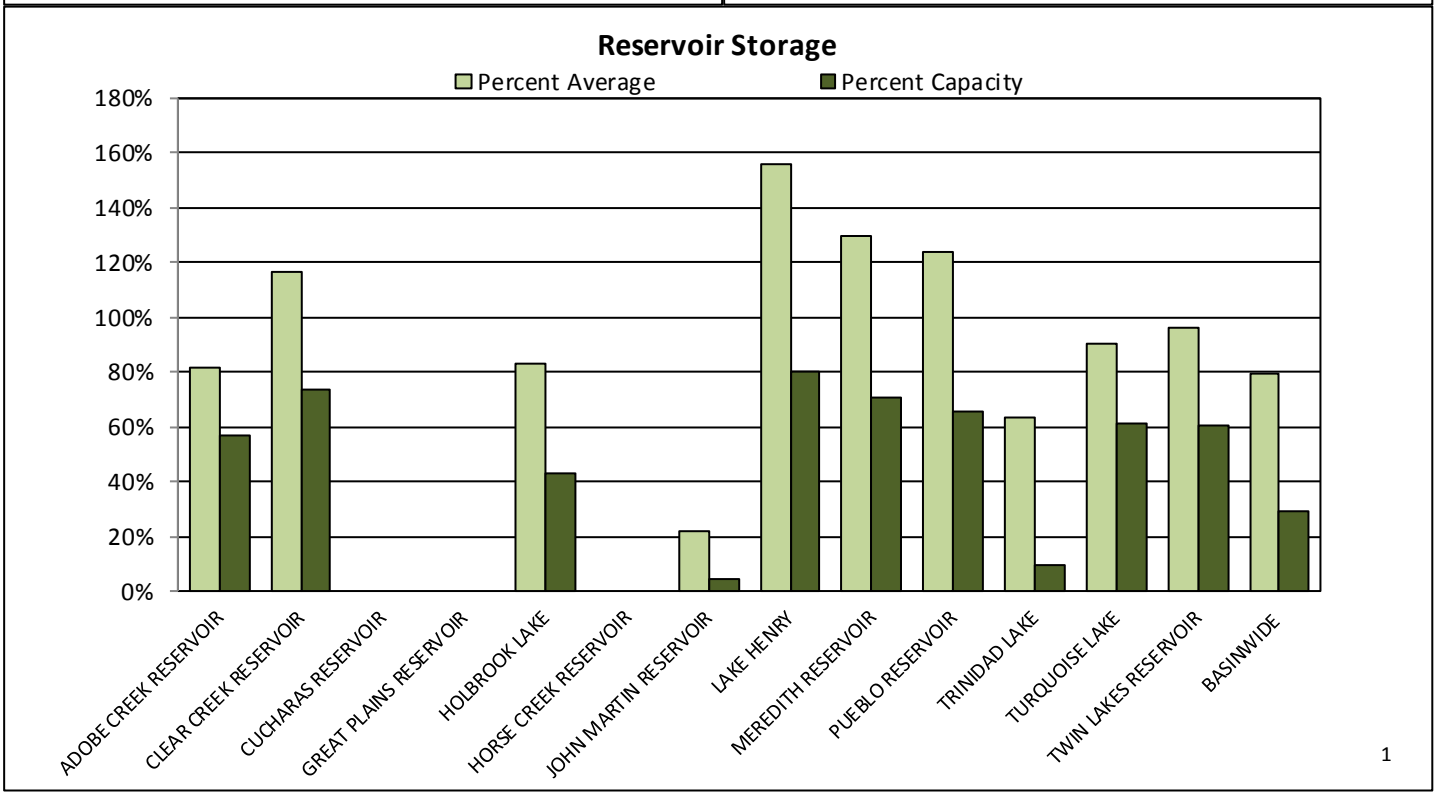
ARKANSAS RIVER BASIN

February 1, 2015

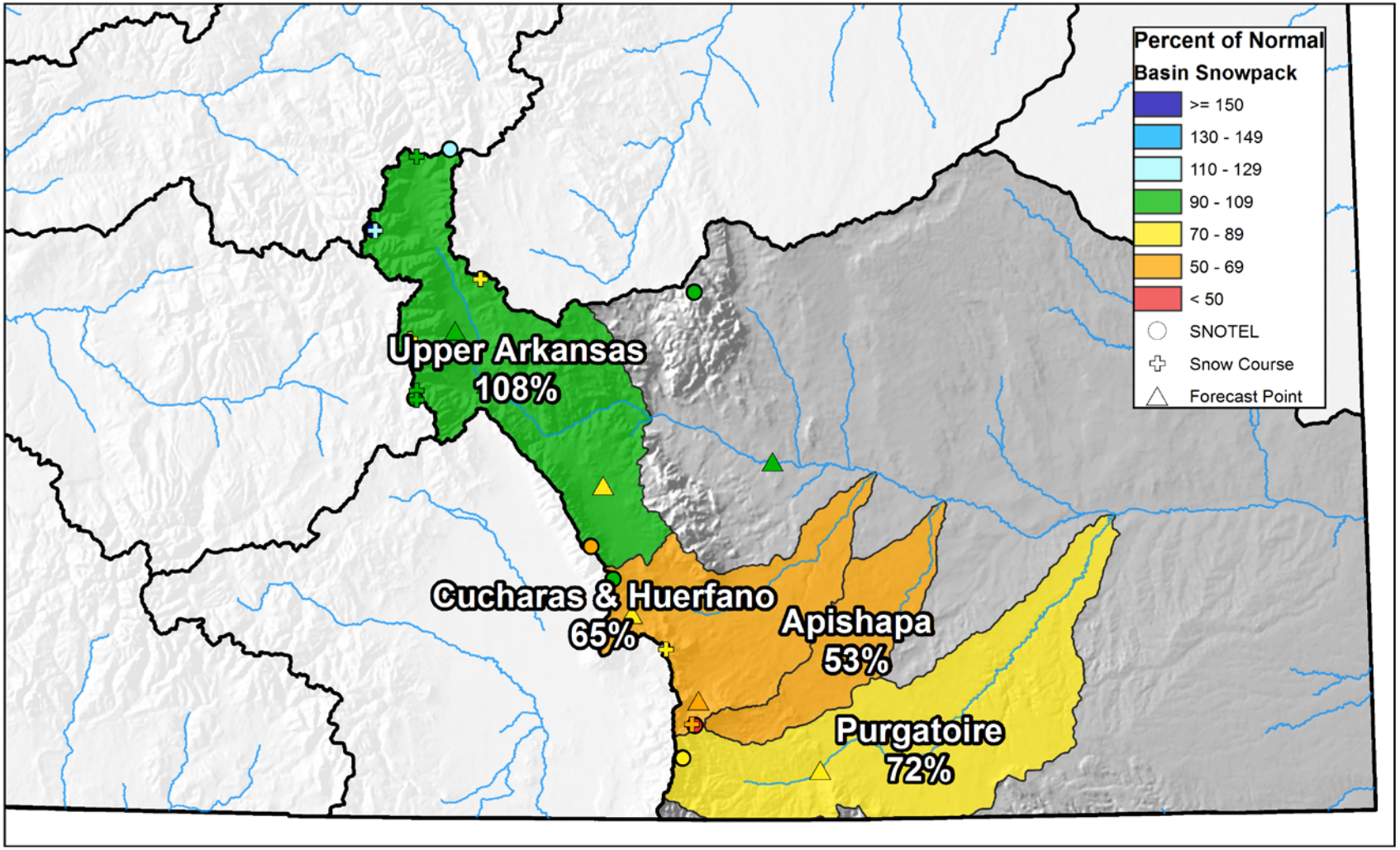
Snowpack in the Arkansas River basin is near normal at 94% of the median. Precipitation for January was 51% of average which brings water year-to-date precipitation down to 92% of average. Reservoir storage at the end of January was 80% of average compared to 59% last year. Current streamflow forecasts range from 102% of average for the Arkansas River at Salida to 62% of average for the Cucharas River near La Veta.







Arkansas River Basin Snowpack and Streamflow Forecasts
February 1, 2015



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Arkansas River Basin
Streamflow Forecasts - February 1, 2015

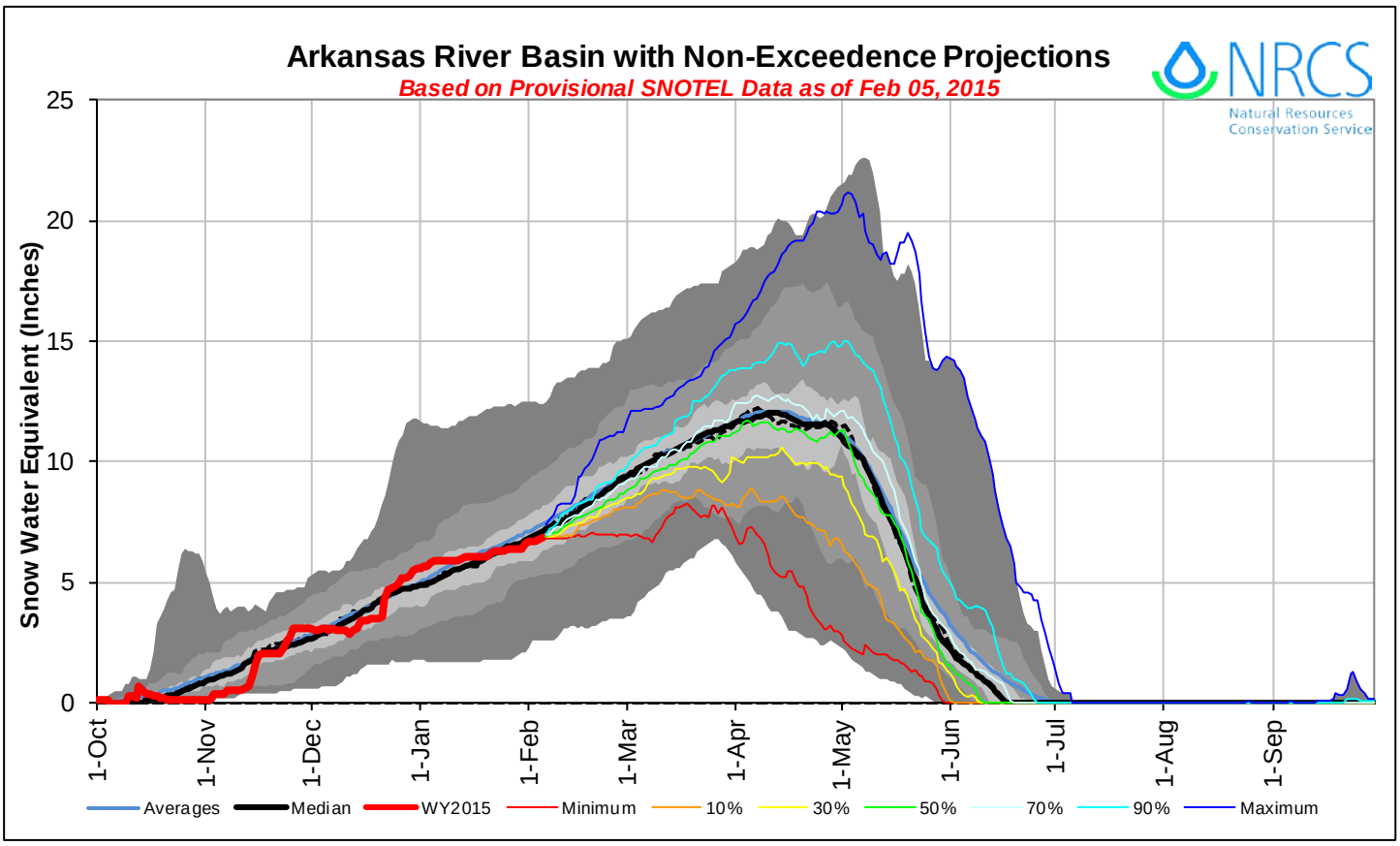
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

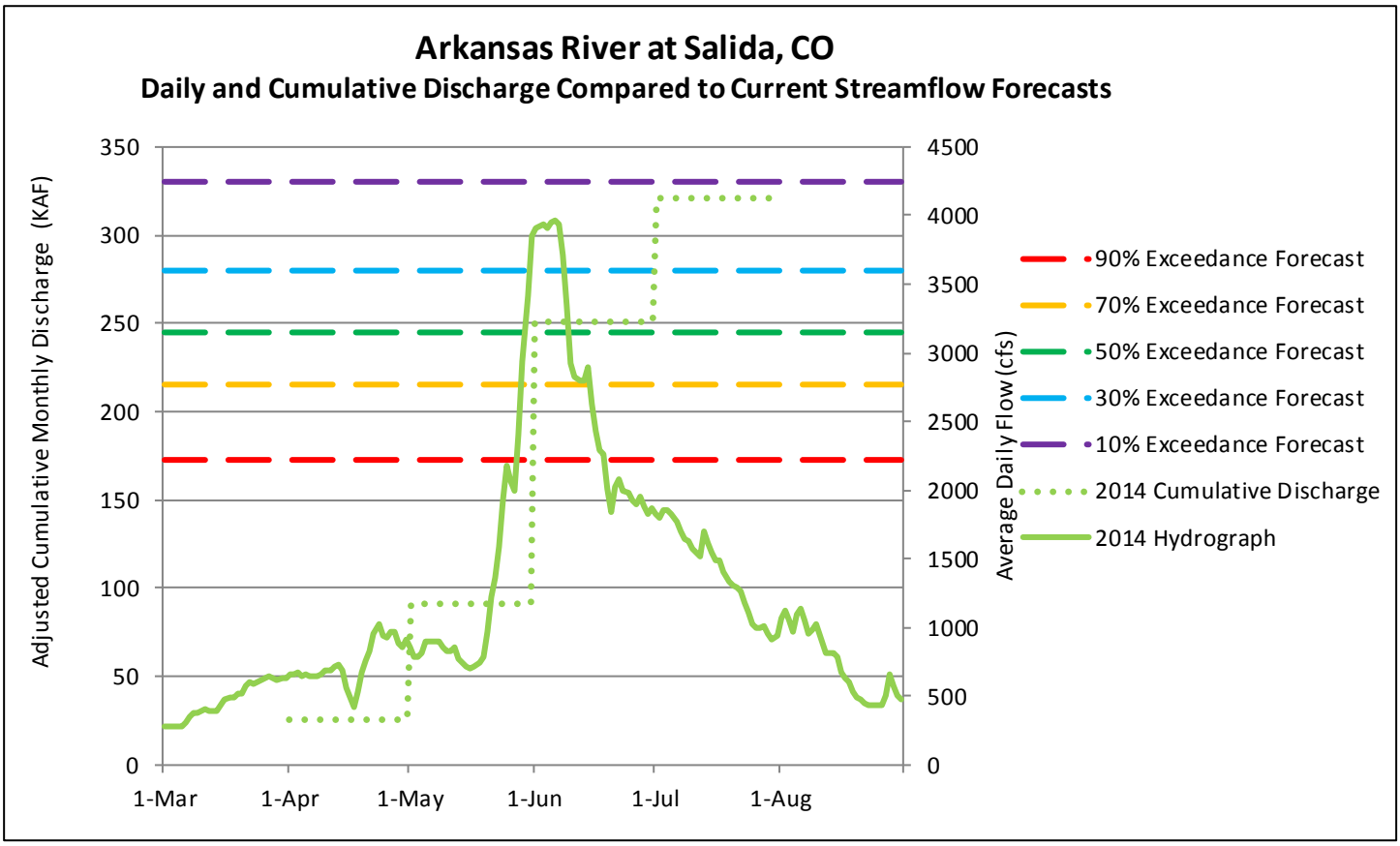
ARKANSAS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Chalk Ck nr Nathrop								
	APR-JUL	11.1	16.6	21	100%	26	34	21
	APR-SEP	14.8	21	26	100%	32	42	26
Arkansas R at Salida[2]								
	APR-JUL	173	215	245	102%	280	330	240
	APR-SEP	210	260	300	102%	340	405	295
Grape Ck nr Westcliffe								
	APR-JUL	1.83	6.9	12.2	77%	19	32	15.9
	APR-SEP	4.5	10.7	16.4	84%	23	36	19.6
Pueblo Reservoir Inflow[2]								
	APR-JUL	198	280	340	94%	410	520	360
	APR-SEP	260	355	430	95%	510	640	455
Huerfano R nr Redwing								
	APR-JUL	3.9	6.2	8.1	68%	10.2	13.8	11.9
	APR-SEP	6.1	9	11.3	74%	13.9	18.2	15.2
Cucharas R nr La Veta								
	APR-JUL	2.3	5.1	7.6	62%	10.6	15.9	12.2
	APR-SEP	3.2	6.4	9.1	65%	12.3	18	14.1
Trinidad Lake Inflow[2]								
	MAR-JUL	6.8	15.9	24	65%	34	52	37
	APR-SEP	10.7	22	33	70%	46	68	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Adobe Creek Reservoir	35.1	21.1	42.9	62.0
Clear Creek Reservoir	8.4	8.2	7.2	11.4
Cucharas Reservoir	0.0		5.5	40.0
Great Plains Reservoir	0.0	0.0	30.7	150.0
Holbrook Lake	3.0		3.6	7.0
Horse Creek Reservoir	0.0	0.0	12.0	27.0
John Martin Reservoir	30.0	33.6	135.9	616.0
Lake Henry	6.4	8.6	4.1	8.0
Meredith Reservoir	29.7	7.6	22.9	42.0
Pueblo Reservoir	232.4	154.3	187.5	354.0
Trinidad Lake	16.2	16.1	25.6	167.0
Turquoise Lake	78.1	83.1	86.3	127.0
Twin Lakes Reservoir	52.1	28.5	54.3	86.0
Basin-wide Total	488.4	361.1	609.4	1650.4
# of reservoirs	11	11	11	11

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
UPPER ARKANSAS BASIN	9	108%	119%
CUCHARAS & HUERFANO BASINS	5	65%	84%
PURGATOIRE RIVER BASIN	2	72%	84%
ARKANSAS RIVER BASIN	16	94%	108%



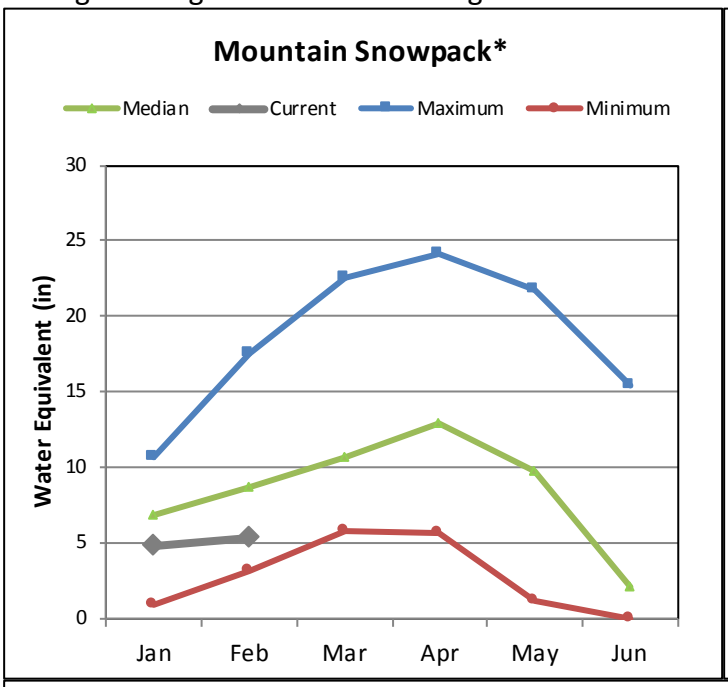


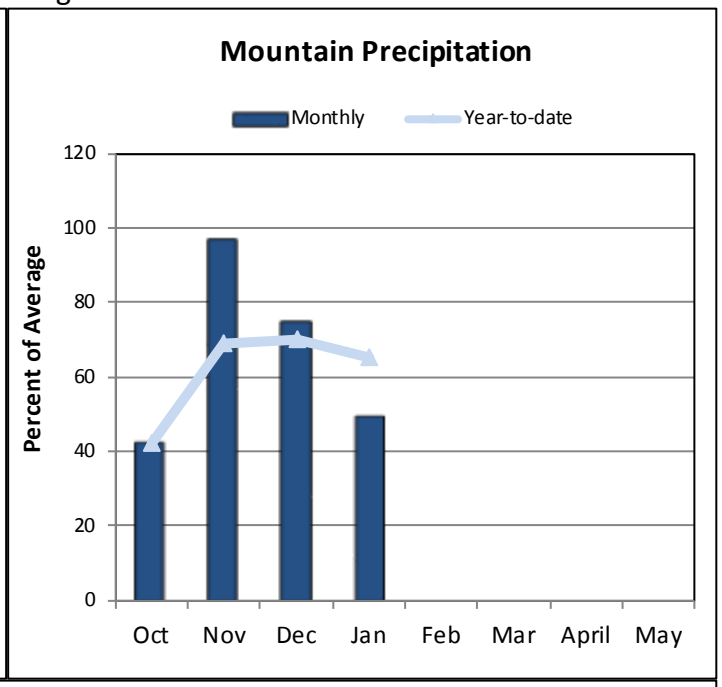
Please refer to the sections at the end of this report for further explanation concerning these graphs.

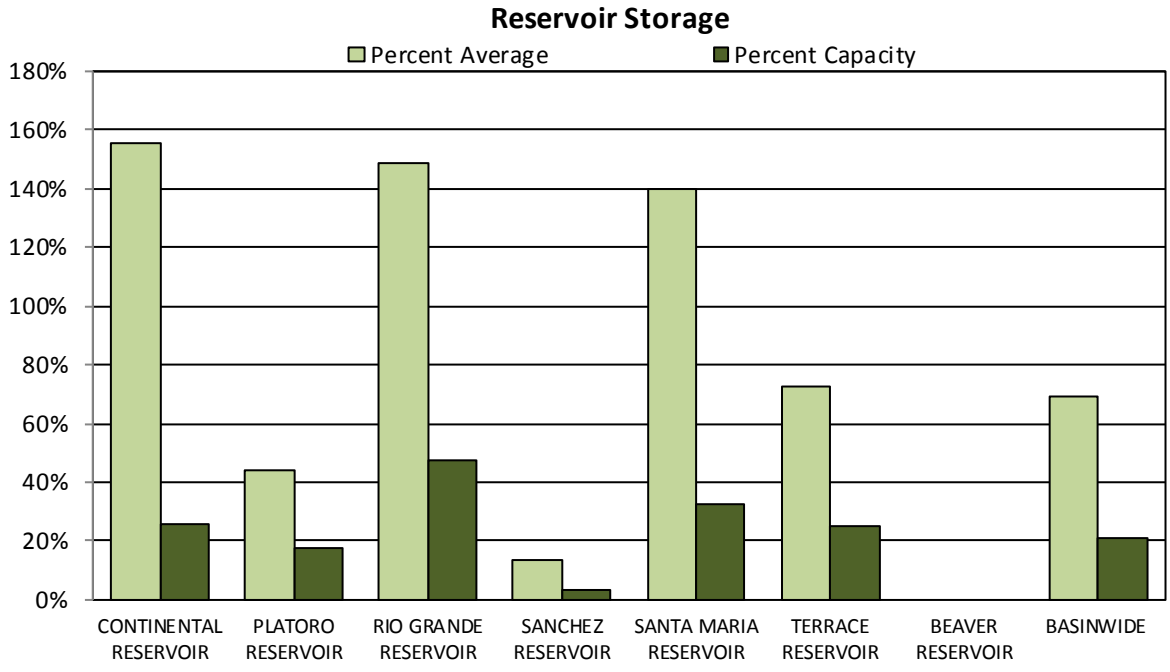
UPPER RIO GRANDE RIVER BASIN

February 1, 2015

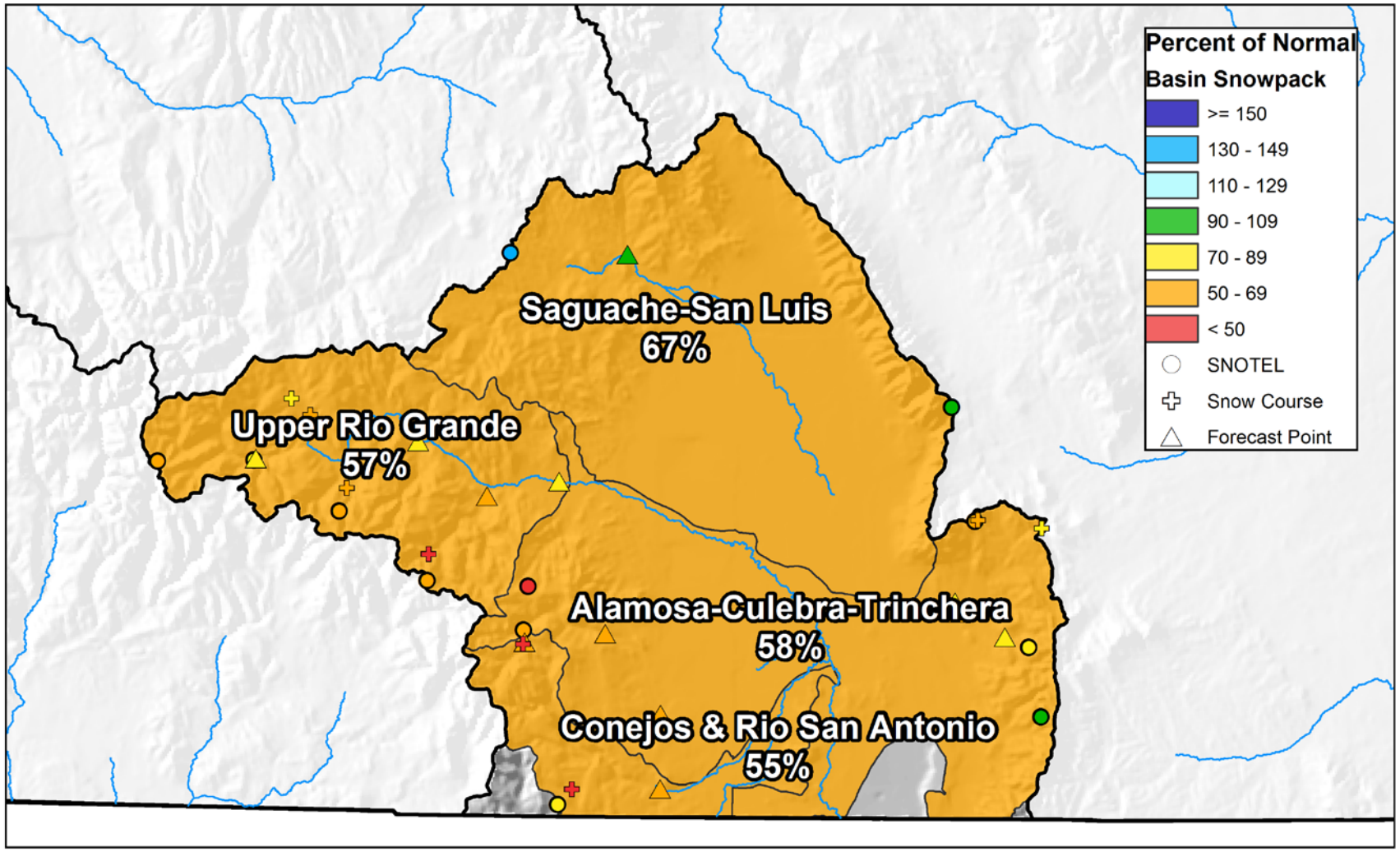
Snowpack in the Upper Rio Grande River basin is below normal at 61% of median. Precipitation for January was 49% of average which brings water year-to-date precipitation down to 65% of average. Reservoir storage at the end of January was 69% of average compared to 65% last year. Streamflow forecasts range from 97% of average for Saguache Creek near Saguache to 49% of average for the San Antonio River at Ortiz.







Upper Rio Grande River Basin Snowpack and Streamflow Forecasts
February 1, 2015



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Upper Rio Grande Basin
Streamflow Forecasts - February 1, 2015

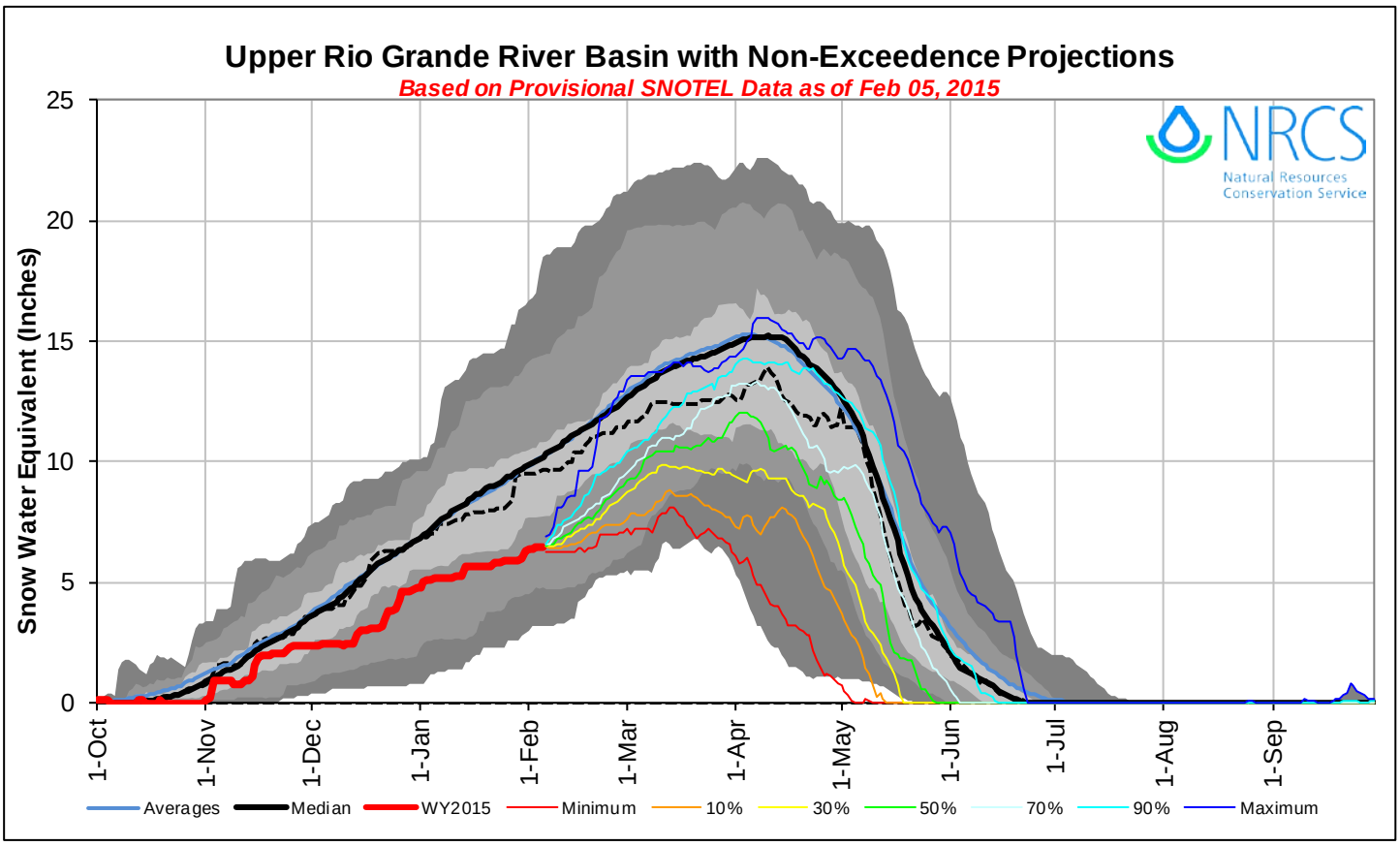
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

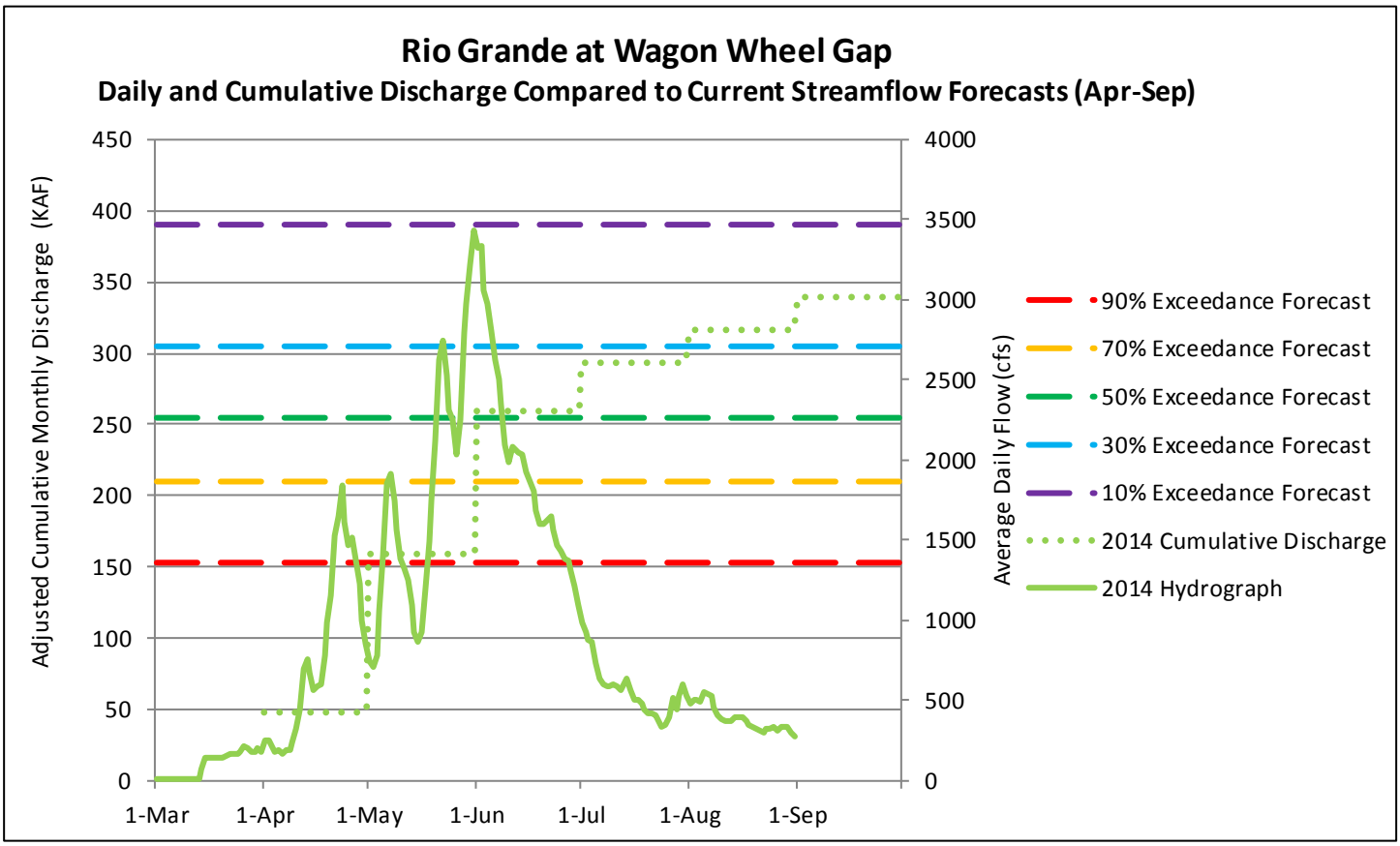
UPPER RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande at Thirty Mile Bridge[2]								
	APR-JUL	53	71	85	75%	100	124	113
	APR-SEP	60	80	96	74%	114	142	129
Rio Grande at Wagon Wheel Gap[2]								
	APR-SEP	153	210	255	75%	305	390	340
SF Rio Grande at South Fork[2]								
	APR-SEP	51	69	83	65%	98	123	127
Rio Grande nr Del Norte [2]								
	APR-SEP	210	300	365	71%	440	560	515
Saguache Ck nr Saguache								
	APR-SEP	15.8	24	31	97%	38	51	32
Alamosa Ck ab Terrace Reservoir								
	APR-SEP	24	34	41	60%	49	61	68
La Jara Ck nr Capulin								
	MAR-JUL	2.4	3.9	5.1	57%	6.5	8.8	8.9
Trinchera Ck ab Turners Ranch								
	APR-SEP	6	7.9	9.4	75%	11	13.6	12.6
Sangre de Cristo Ck [2]								
	APR-SEP	3.7	7.5	10.9	67%	14.8	22	16.3
Ute Ck nr Fort Garland								
	APR-SEP	4.8	7.7	10	78%	12.6	17.1	12.8
Platoro Reservoir Inflow								
	APR-JUL	25	32	37	66%	43	52	56
	APR-SEP	26	35	41	66%	47	58	62
Conejos R nr Mogote [2]								
	APR-SEP	80	107	128	66%	151	187	194
San Antonio R at Ortiz								
	APR-SEP	2.8	5.4	7.7	49%	10.3	14.9	15.6
Los Pinos R nr Ortiz								
	APR-SEP	26	37	46	63%	56	71	73
Culebra Ck at San Luis								
	APR-SEP	8	13	17	74%	22	29	23
Costilla Reservoir Inflow								
	MAR-JUL	5.3	7.4	9	81%	10.8	13.7	11.1
Costilla Ck nr Costilla [2]								
	MAR-JUL	10.8	16.2	21	81%	25	33	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Beaver Reservoir	0.0	2.5	4.2	4.5
Continental Reservoir	7.0	9.7	4.5	27.0
Platoro Reservoir	10.6	9.4	24.0	60.0
Rio Grande Reservoir	24.2	20.0	16.3	51.0
Sanchez Reservoir	3.7	5.9	27.6	103.0
Santa Maria Reservoir	14.7	8.4	10.5	45.0
Terrace Reservoir	4.5	4.8	6.2	18.0
Basin-wide Total	64.7	60.7	93.3	308.5
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
ALAMOSA CREEK BASIN	2	44%	81%
CONEJOS & RIO SAN ANTONIO BASINS	4	55%	73%
CULEBRA & TRINCHERA BASINS	5	76%	93%
HEADWATERS RIO GRANDE RIVER BASIN	11	57%	86%
UPPER RIO GRANDE BASIN	21	61%	84%



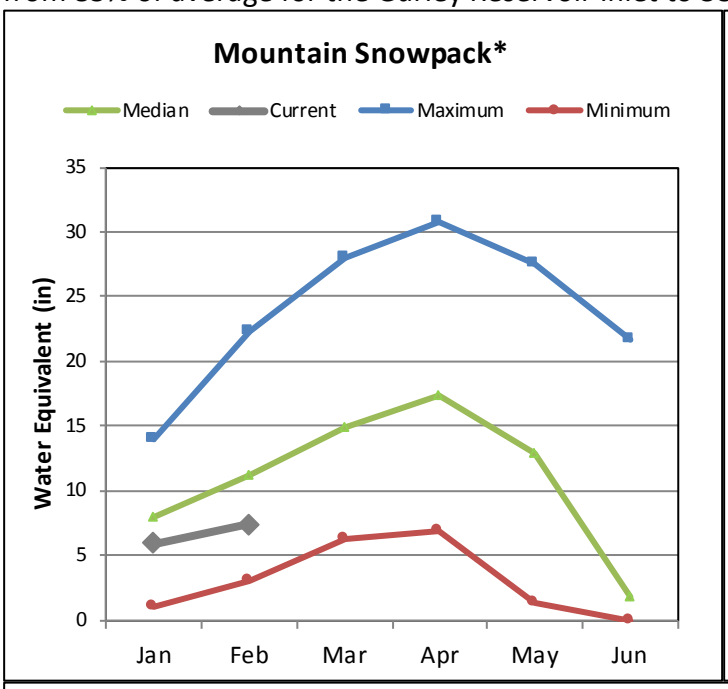


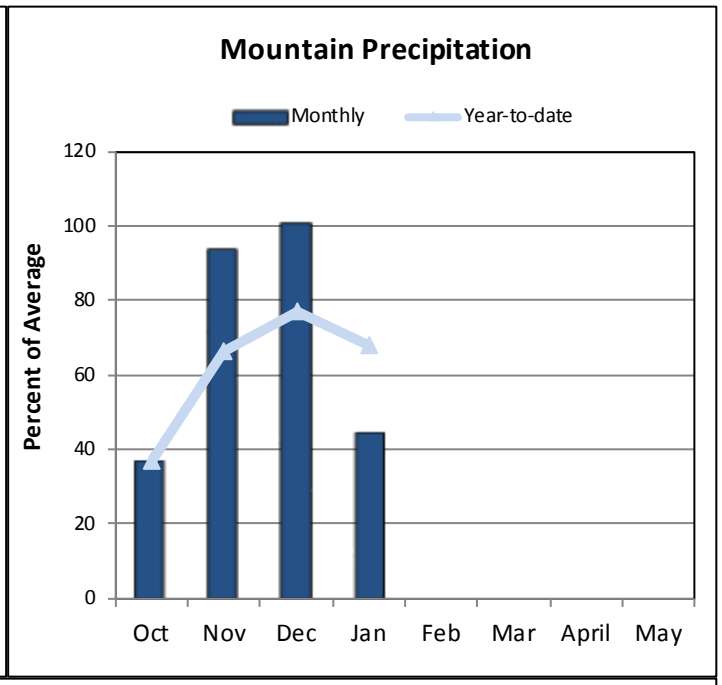
Please refer to the sections at the end of this report for further explanation concerning these graphs.

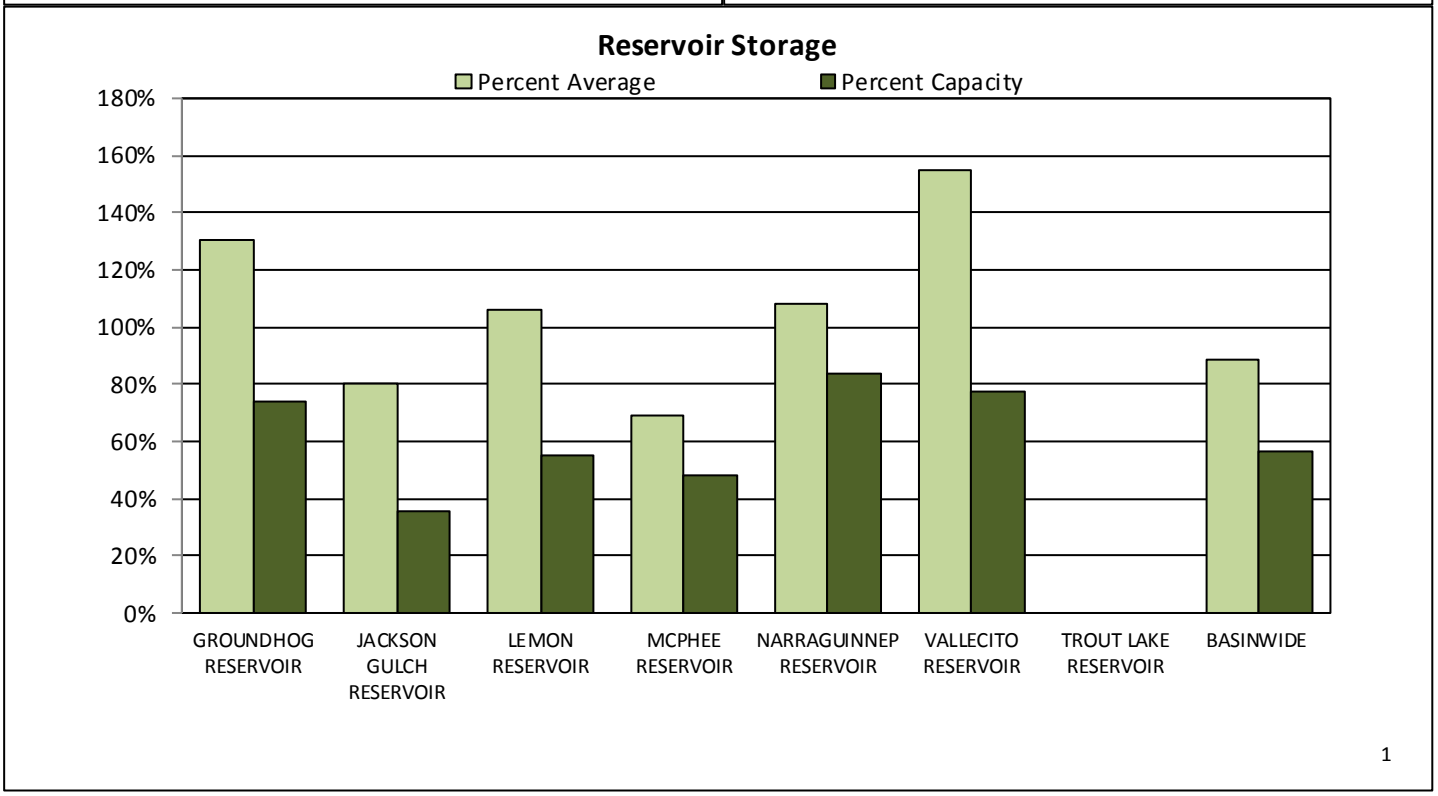
SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

February 1, 2015

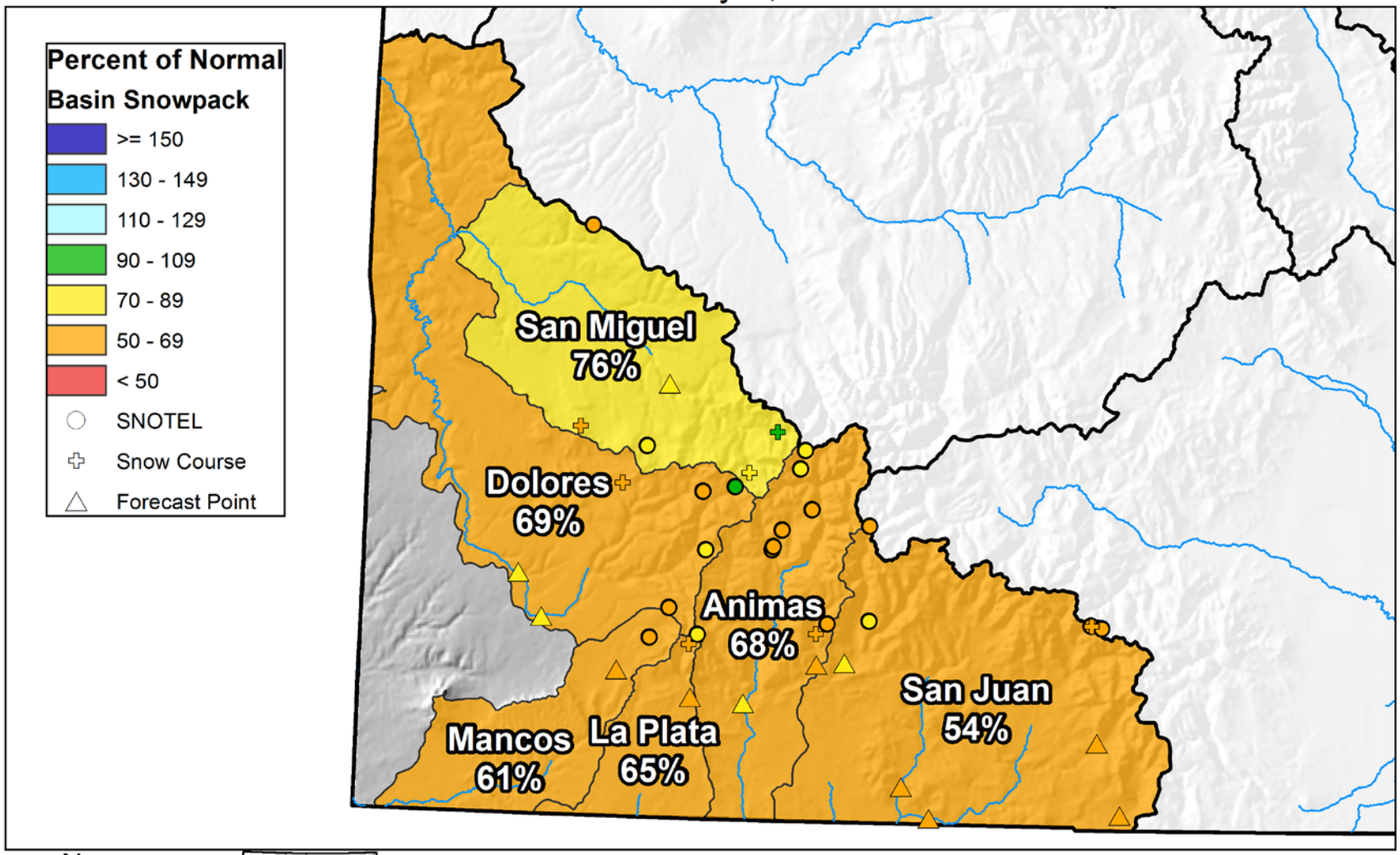
Snowpack in the combined southwest river basins is below normal at 66% of median. Precipitation for January was 44% of average which brings water year-to-date precipitation down to 68% of average. Reservoir storage at the end of January was 88% of average compared to 84% last year. Current streamflow forecasts range from 85% of average for the Gurley Reservoir Inlet to 58% for the San Juan River near Carracas.







San Miguel, Dolores, Animas, and San Juan River Basins
Snowpack and Streamflow Forecasts
February 1, 2015



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San Miguel-Dolores-Animas-San Juan River Basins
Streamflow Forecasts - February 1, 2015

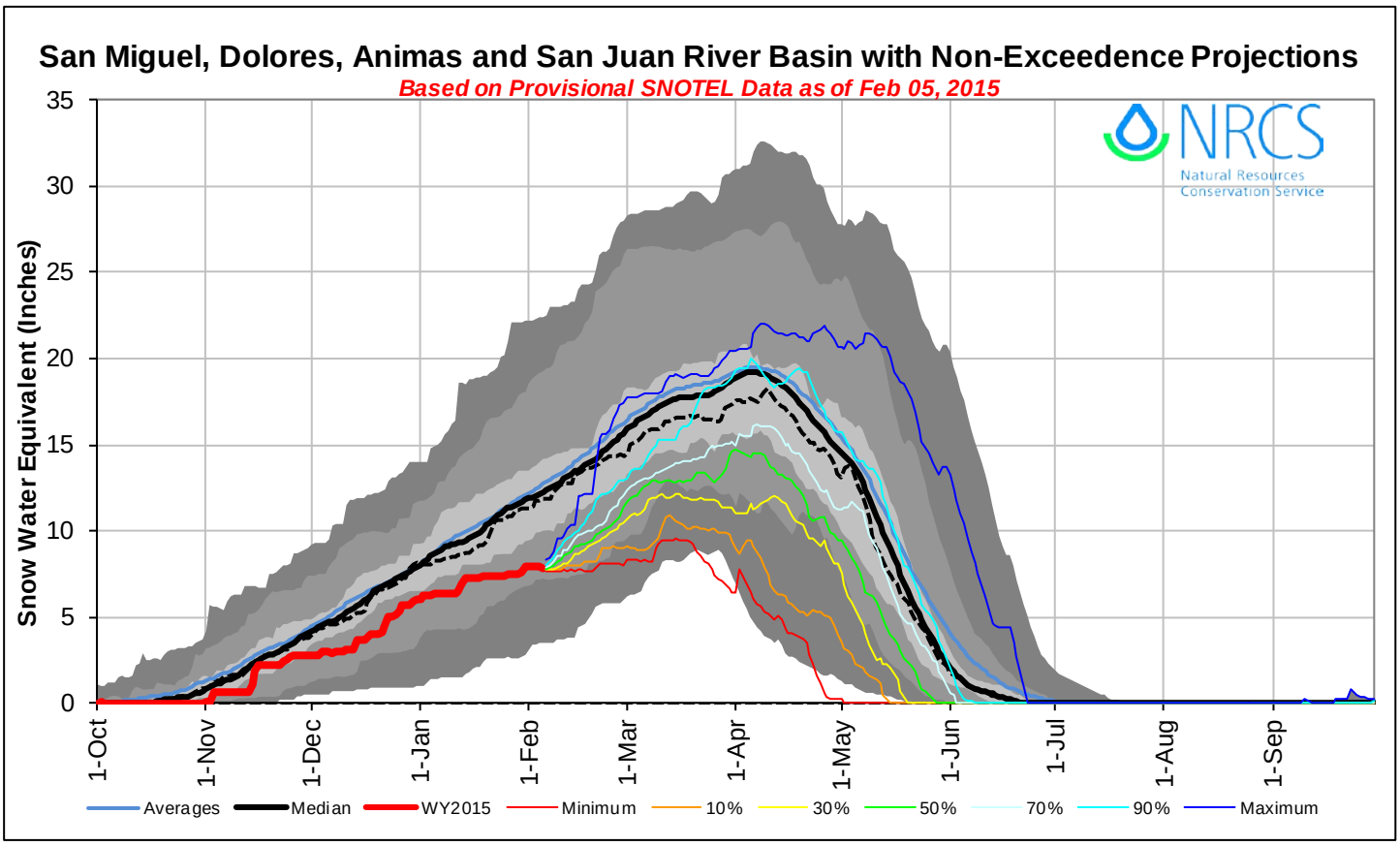
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

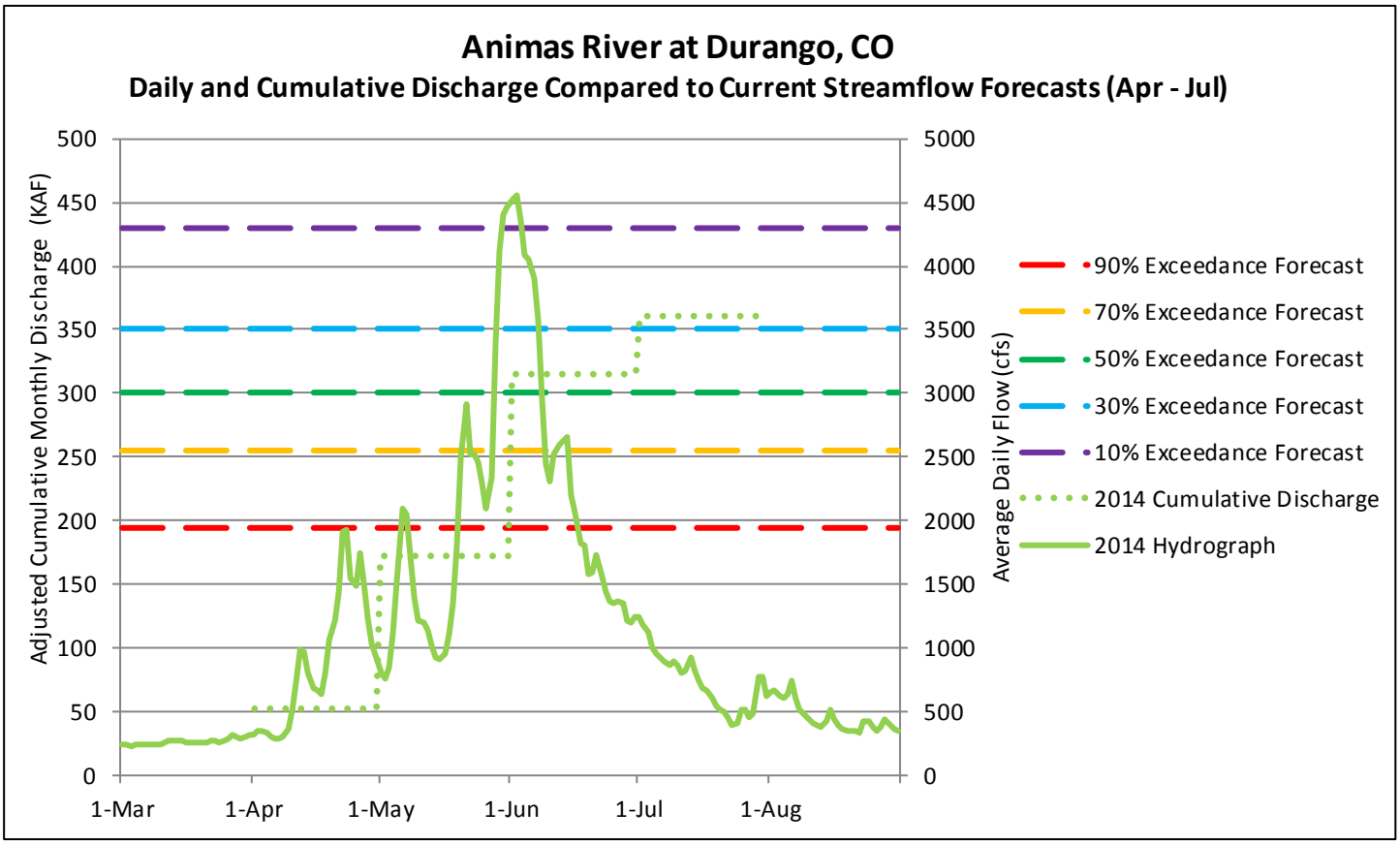
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dolores R at Dolores	APR-JUL	104	147	180	73%	215	275	245
McPhee Reservoir Inflow	APR-JUL	109	163	205	69%	250	330	295
San Miguel R nr Placerville	APR-JUL	64	89	108	84%	128	162	128
Cone Reservoir Inlet	APR-JUL	1.53	2.1	2.5	83%	3	3.7	3
Gurley Reservoir Inlet	APR-JUL	9.7	12.2	14	85%	16	19.1	16.4
Lilylands Reservoir Inlet	APR-JUL	0.66	1.17	1.6	83%	2.1	2.9	1.92
Rio Blanco at Blanco Diversion [2]	APR-JUL	19.3	28	35	65%	43	55	54
Navajo R at Oso Diversion [2]	APR-JUL	23	34	42	65%	51	67	65
San Juan R nr Carracas [2]	APR-JUL	113	172	220	58%	275	360	380
Piedra R nr Arboles	APR-JUL	73	106	132	63%	161	210	210
Vallecito Reservoir Inflow	APR-JUL	89	117	138	71%	161	198	194
Navajo Reservoir Inflow [2]	APR-JUL	235	345	425	58%	515	665	735
Animas R at Durango	APR-JUL	194	255	300	72%	350	430	415
Lemon Reservoir Inflow	APR-JUL	22	31	37	67%	45	56	55
La Plata R at Hesperus	APR-JUL	7.9	11.3	14	61%	17	22	23
Mancos R nr Mancos [2]	APR-JUL	8.8	13.9	18	58%	23	31	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 January, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Groundhog Reservoir	16.2	7.1	12.4	22.0
Jackson Gulch Reservoir	3.6	2.8	4.5	10.0
Lemon Reservoir	22.1	17.4	20.9	40.0
Mcphee Reservoir	183.6	184.5	266.4	381.0
Narraguinnep Reservoir	15.9	13.6	14.7	19.0
Trout Lake Reservoir	0.0	1.2	2.1	3.2
Vallecito Reservoir	98.0	96.5	63.3	126.0
Basin-wide Total	339.4	323.1	384.3	601.2
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis February 1, 2015	# of Sites	% Median	Last Year % Median
ANIMAS RIVER BASIN	11	68%	90%
DOLORES RIVER BASIN	7	69%	80%
SAN MIGUEL RIVER BASIN	6	76%	80%
SAN JUAN RIVER BASIN	4	54%	77%
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	26	66%	82%





Please refer to the sections at the end of this report for further explanation concerning these graphs.

How to Read Non-Exceedance Projections Graphs

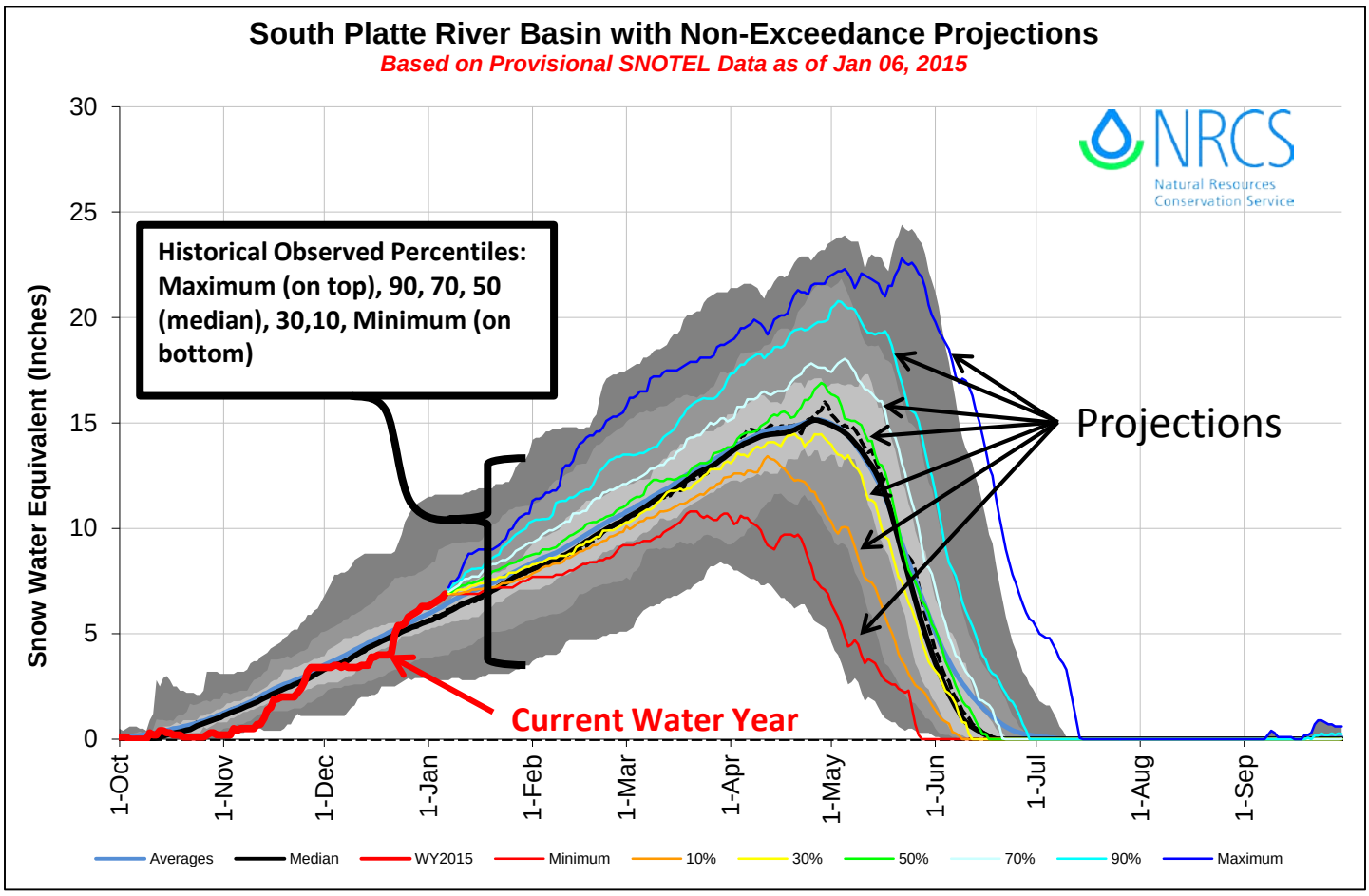
The graphs show snow water equivalent (SWE) projections (in inches) for the October 1 through September 30 water year. Basin "observed" SWE values are computed using SNOTEL sites which are characteristic of the snowpack of the particular basin. The SWE observations at these sites are averaged and normalized to produce these basin snowpack graphs. This new graph format uses non-exceedance projections.

Current water year is represented by the heavy red line terminating on the last day the graphic was updated.

Historical observed percentile range is shown as a gray background area on the graph. Shades of gray indicate maximum, 90 percentile, 70 percentile, 50 percentile (solid black line), 30 percentile, 10 percentile, and minimum for the period of record.

Projections for maximum, 90 percent, 70 percent, 50 percent (most probabilistic snowpack projection, based on median), 30 percent, 10 percent, and minimum exceedances are projected forward from the end of the current line as different colored lines.

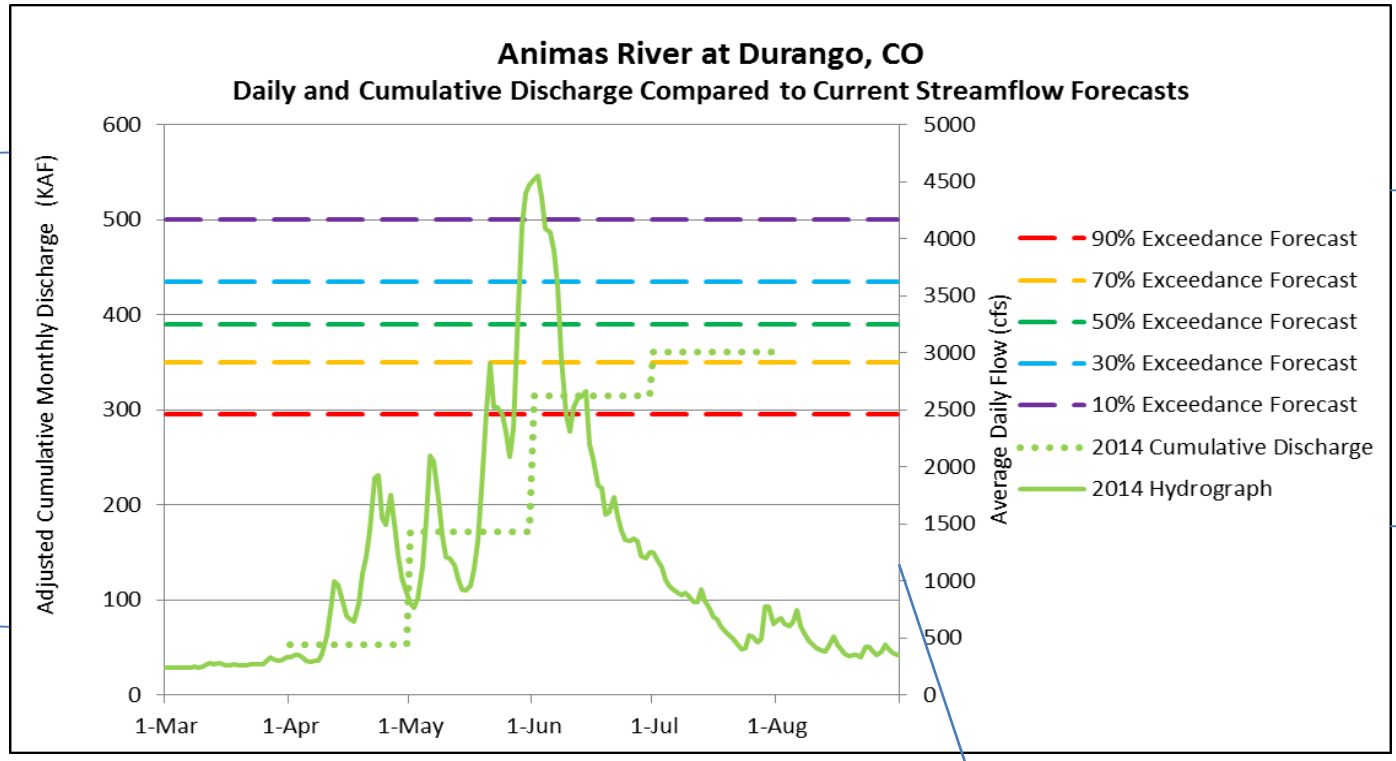
For more detailed information on these graphs visit:
http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_062291.pdf



Explanation of Flow Comparison Charts

The flow comparison charts were developed to provide a quick comparison between the previous years' observed hydrograph, cumulative seasonal discharge, the current streamflow forecasts, and the current years' observed discharge (both hydrograph and cumulative discharge, as the season progresses). Forecast points for these products were generally chosen to be lower in the basin to best represent the basin-wide streamflow response for the season; the true degree of representativeness will vary between basins. When making comparisons of how the shape of the hydrograph relates to the monthly (and seasonal) cumulative discharges it is important to note that the hydrograph represents observed daily flows at the forecast point while the cumulative values may be adjusted for changes in reservoir storage and diversions to best represent what would be "natural flows" if these impoundments and diversions did not exist. This product can provide additional guidance regarding how to most wisely utilize the five exceedance forecasts based on past observations, current trends, and future uncertainty for a wide variety of purposes and water users.

The left y-axis represents values of adjusted cumulative discharge (KAF). This axis is to be used for comparing the current and previous years to the current five volumetric seasonal exceedance forecasts. This graphic only displays the previous years data but data for the current water year will be added as the season progresses.



The legend displays the symbology and color schemes for the various parameters represented. Exceedance forecasts represent total cumulative discharge for the April through July time period with the exception of the Rio Grande at Wagon Wheel Gap (Apr-Sep).

The right y-axis represents observed daily average discharge at the forecast point of interest. This graphic only displays the previous years data but data for the current water year will be added as the Season progresses.

How Forecasts Are Made

For more water supply and resource management information, contact:

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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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In addition to the water supply 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 June. 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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