USDA United States Department of Agriculture
Natural Resources Conservation Service

Colorado
Water Supply Outlook Report
February 1, 2017

NRCS snow surveyor Stephen Jaouen measures the snowpack at the Nast Lake snow course and adjacent SNOTEL site near the Frying Pan River. With 9.9 inches of snow water equivalent recorded at the SNOTEL site, the area had 225 percent of median snowpack for February 1st.

Date: 01/24/2017 Photos By: Derrick Wyle

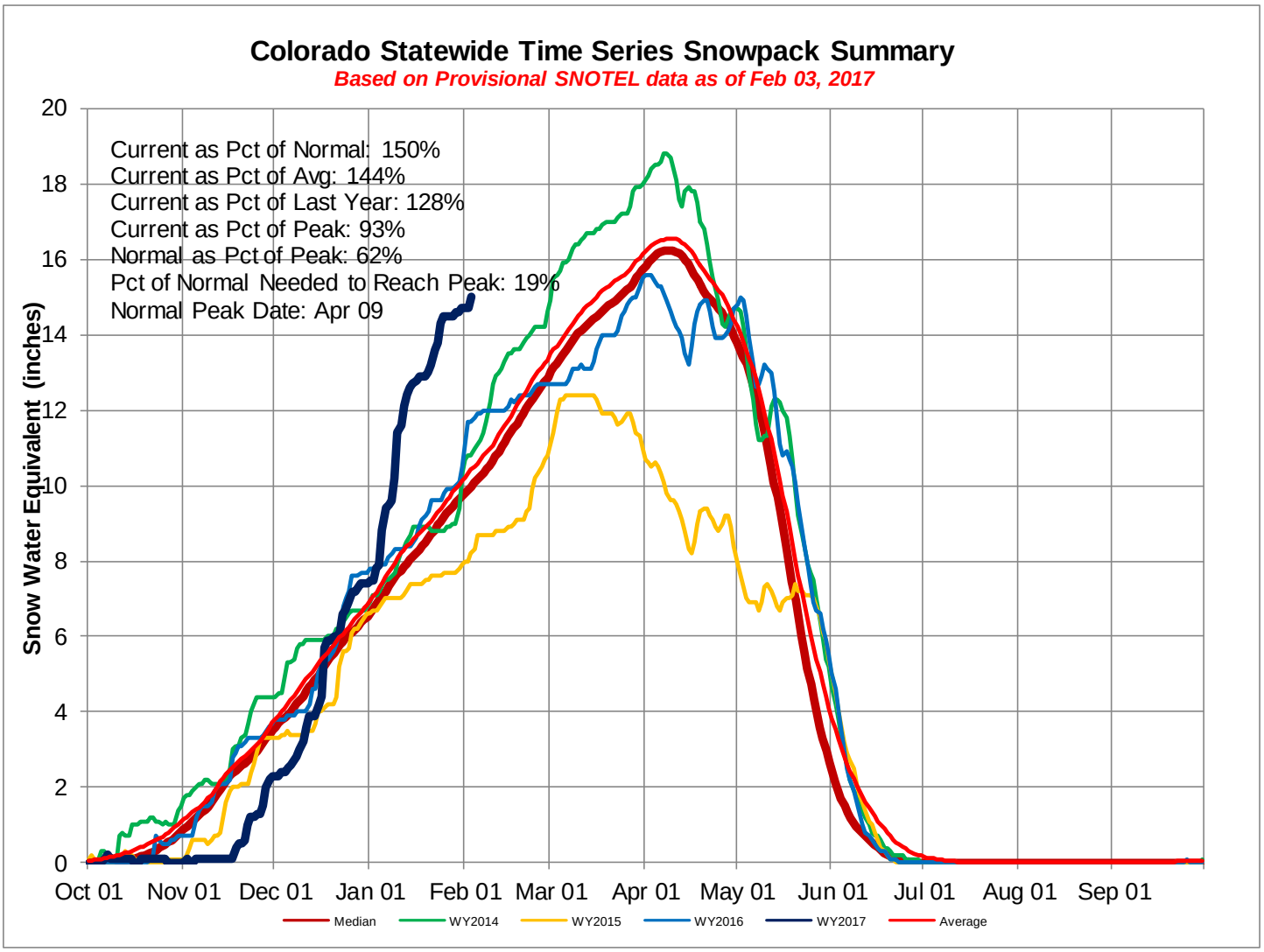
REMINDER: We are soliciting field work photos from our snow surveyors again this year. Each month we will pick one to grace the cover of this report! Please include information on where, when and of who/what the photo was taken.

Contents

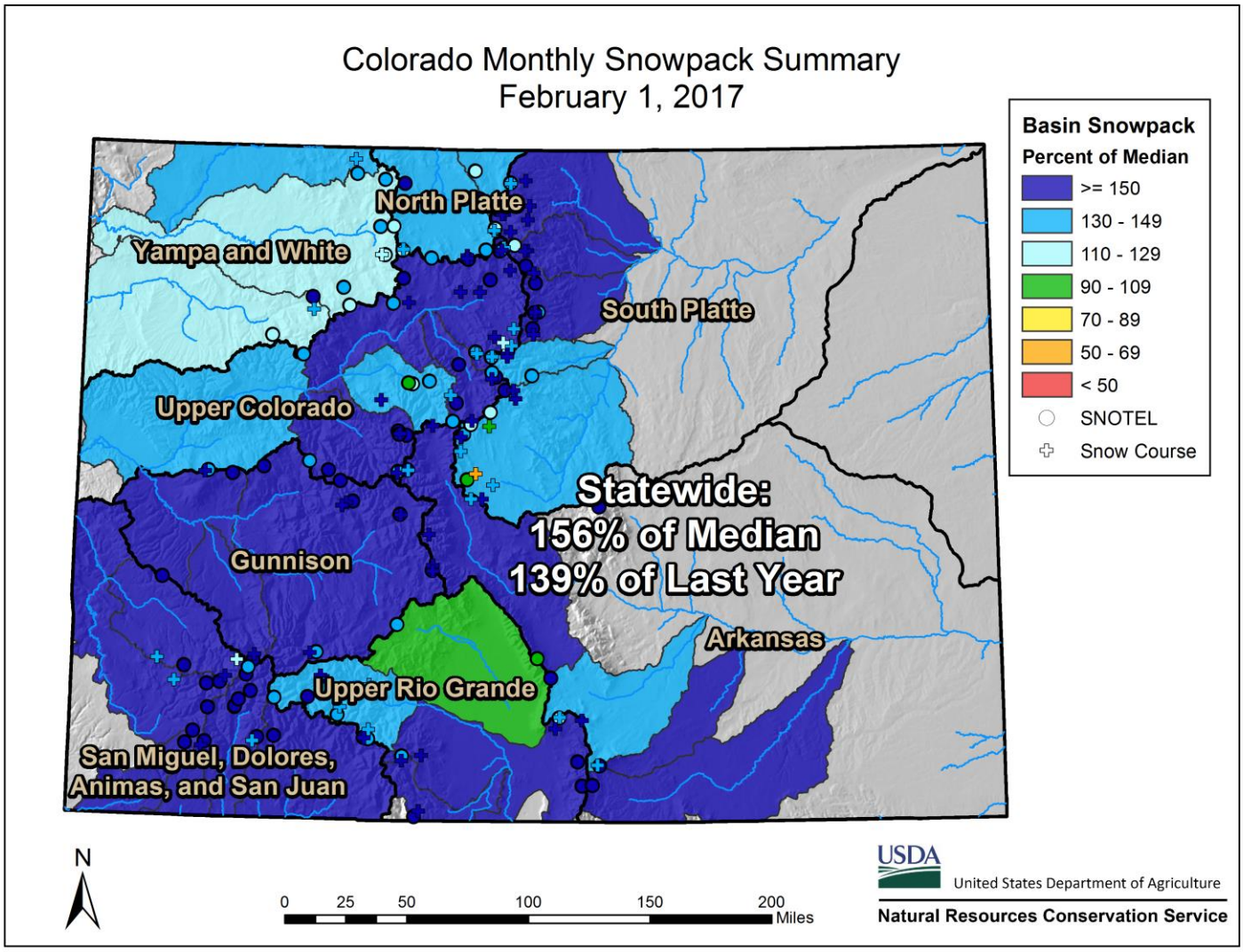
Statewide Water Supply Conditions

Summary

Colorado received well above normal mountain precipitation and snowpack accumulation throughout the month of January, with all but one major basin receiving more than twice the normal amount of monthly precipitation. The combined Yampa, White, and North Platte basins experienced the lowest January precipitation at 187 percent of average and the Gunnison had the highest at 251 percent. Statewide January precipitation was 217 percent of average. This substantial accumulation of precipitation left the statewide snowpack at 156 percent of normal as of February 1st, a notable increase from the 114 percent that was recorded as of January 1st. Streamflow forecasts across the state range from near to well above normal seasonal volumes. On the low end there are several forecast points in the South Platte basin that are currently forecast to have between 101-110 percent of their average April-July streamflow volumes. While most streamflow forecasts in the state range between 110-150 percent of normal, there are several streams in the Upper Rio Grande basin that are forecast to have between 175-185 percent of average streamflow this season. Reservoir storage has remained relatively constant, relative to normal, throughout this water year and is currently 106 percent of average statewide.

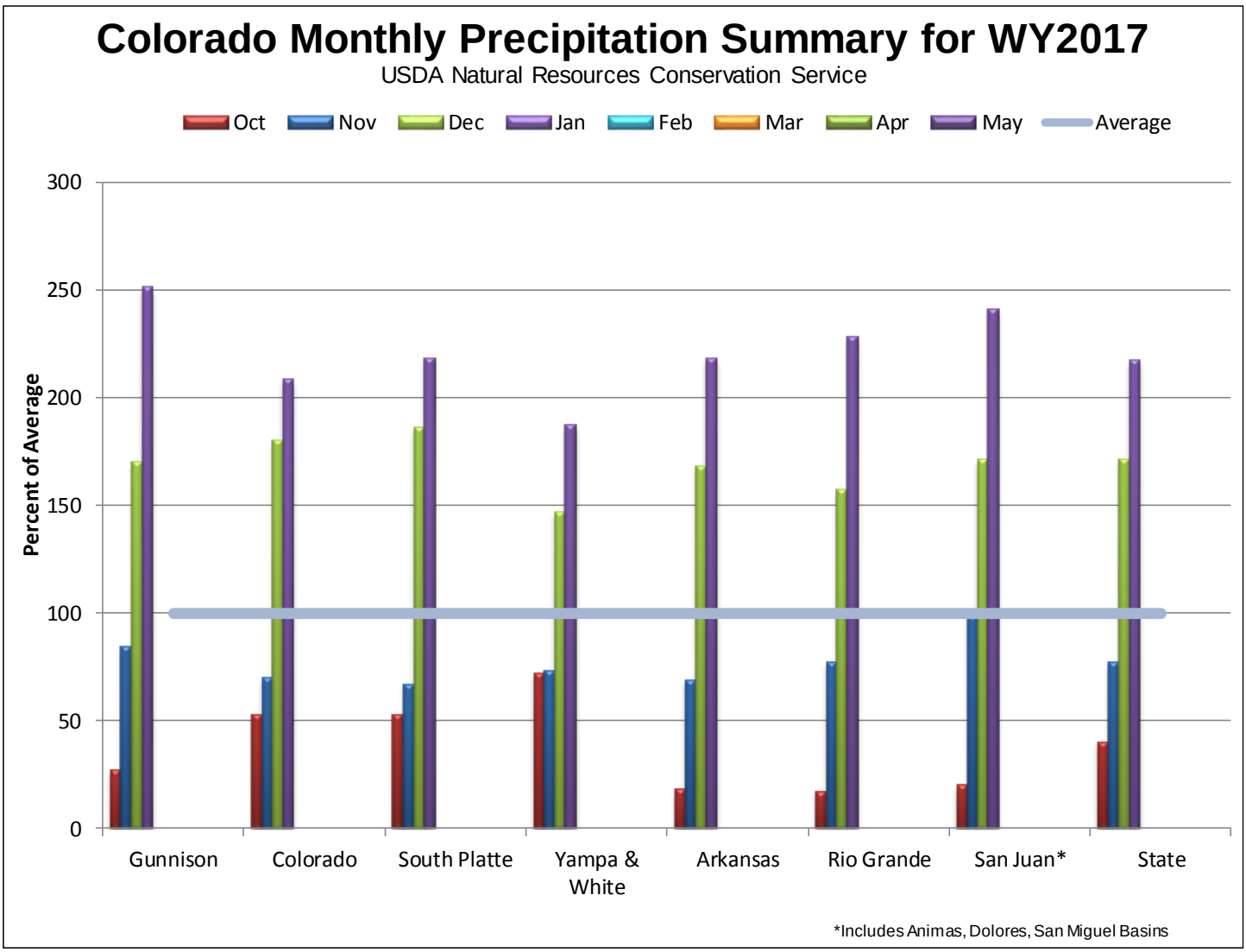


Snowpack



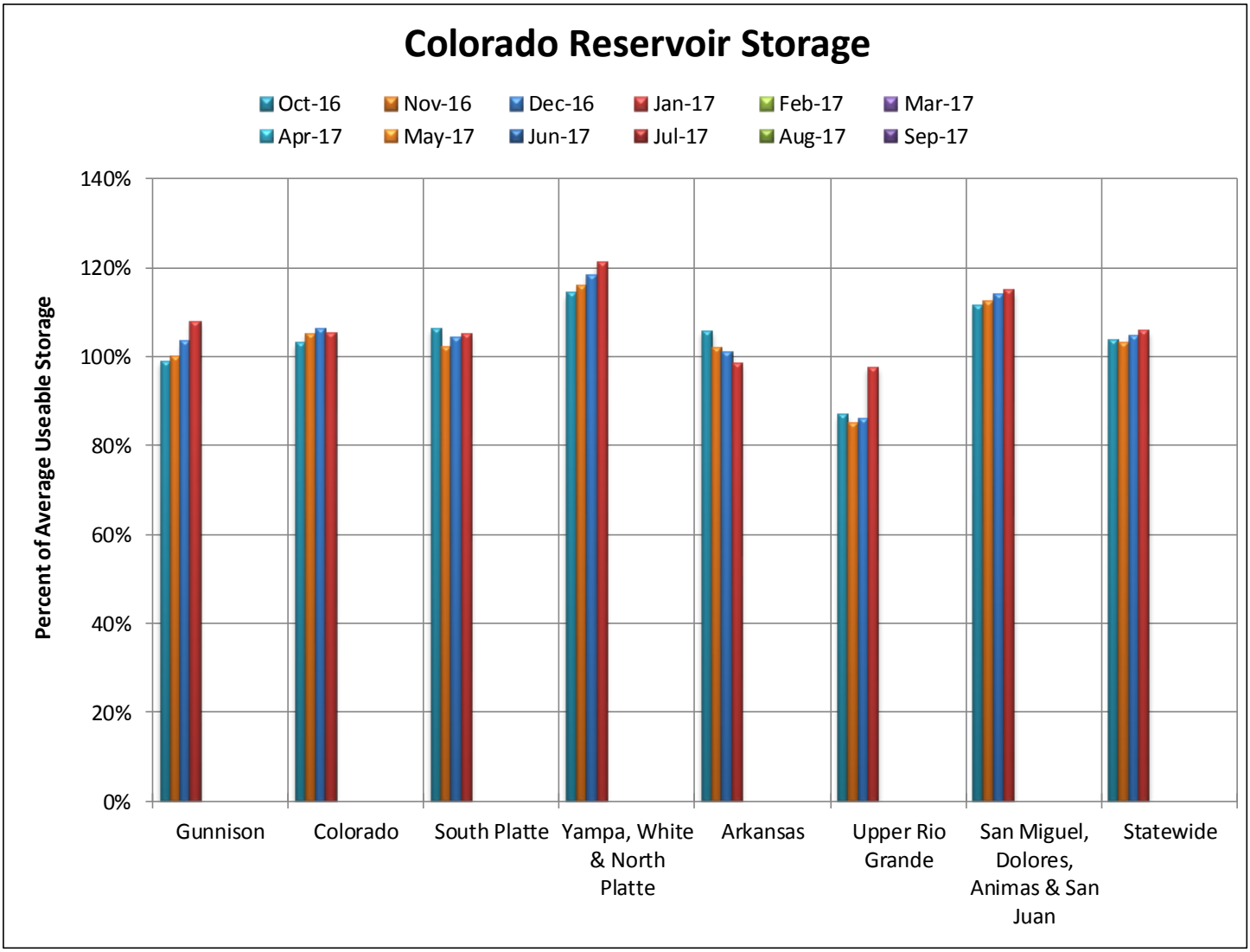
Impressive snowfall accumulations buried Colorado's mountain SNOTEL stations during January. Following a steady stream of storms that benefited the entire state, snowpack on February 1st for Colorado is at 156 percent of the median. Only 1997 had a snowpack on February 1st greater than this year. Nine SNOTEL stations, with at least 20 years of data collection, experienced record accumulations during January this year, and another ten sites had their second best January snowfall accumulations. All of Colorado's major basins now have above normal snowpack for this time of year and many sub-basins have greater than 150 percent of the typical February 1st snowpack. The Gunnison River basin currently has the highest snowpack with respect to normal, at 171 percent of median. The combined San Miguel, Dolores, Animas, San Juan and Arkansas River basins are close behind at 167 and 164 percent of median respectively. The Rio Grande, South Platte, and Colorado are also above 150 percent of normal at 156, 155 and 154 percent of median respectively. The combined Yampa, White, and North Platte River basin is the only region below the 150 percent mark, but it is still much above normal at 132 percent of the median. With about a third of the snow accumulation season remaining, most river basins are well on their way to surpassing typical peak snow accumulations for the water year. A lot can change with the unpredictability of future weather patterns, but many SNOTEL stations are on track to experience record snowfall for the water year.

Precipitation



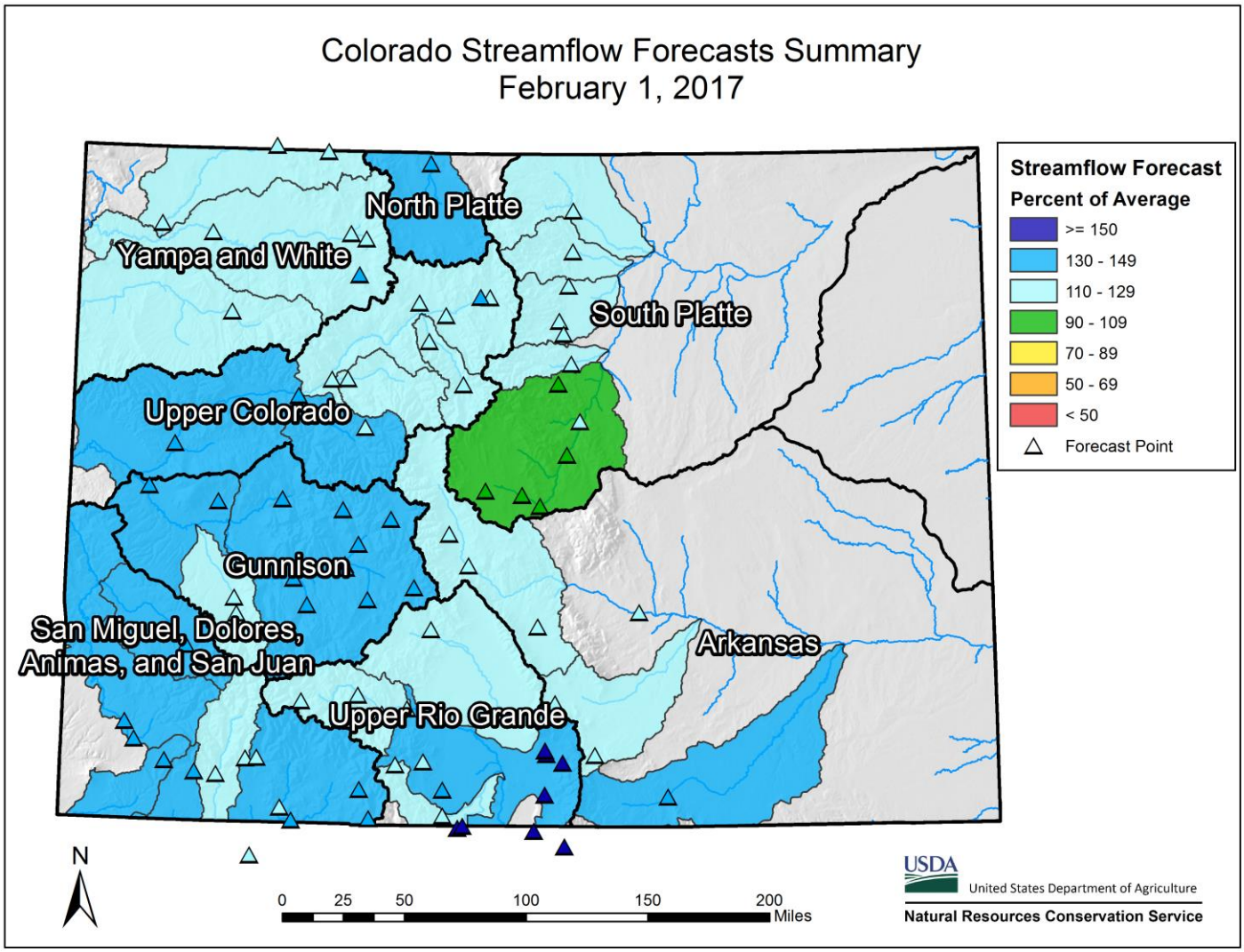
The exceptional December and January precipitation that has pelted Colorado's mountains has now more than made up for the dry conditions that occurred this fall. Monthly precipitation for January alone was more than double what typically accumulates in most of the state's major river basins for the month. Collectively, Colorado's statewide precipitation for January was 217 percent of average for the month. Water year-to-date precipitation is now a healthy amount above normal in all of the major river basins across the state. This winter's precipitation trend as a whole has been slightly favoring the southwest regions of the state providing for the combined San Miguel, Dolores, Animas, and San Juan and Gunnison River basins to have the highest precipitation totals for the water year. The combined San Miguel, Dolores, Animas, and San Juan River basins are currently at 137 percent of average and the Gunnison River basin, which at 251 percent had the most anomalous January precipitation, is currently at 136 percent of average for the water year. The South Platte and Colorado River basins are also quite high at 133 and 131 percent of average respectively. The combined Yampa, White, North Platte, Rio Grande, and Arkansas River basins also made up a lot of ground and are at 124, 120, and 117 percent of average respectively. Statewide, Colorado is currently at 129 percent of average for water year-to-date precipitation, the 2017 water year is currently the second wettest for Colorado since 1986, behind only 1997 for water year-to-date precipitation on February 1st.

Reservoir Storage



Reservoir storage crept up slightly during January in most of Colorado's major river basins, although most changes last month were minimal as is typical mid-winter. The Colorado River basin experienced a small decrease in storage of about 85,000 acre-ft across all reservoirs in the basin. However, the basin still contains 44,000 acre-feet above normal for reservoir storage and is at 105 percent of average. Likewise, reservoir storage is near to above normal in all basins, with the exception of the Rio Grande River basin, which is storing 89 percent of average. The combined Yampa, White, and North Platte River basin has the greatest departure from normal, at 121 percent of average, which is the same level the basin was at last year at this time. Current storage levels for most other basins are also similar to the levels on February 1st last year, with a couple of exceptions; the Arkansas River basin is currently slightly below normal at 99 percent of average compared to 125 percent last year, and the combined San Miguel, Dolores, Animas, and San Juan River basin is above normal at 115 percent of average compared to 103 percent last year. Statewide storage remains above normal for the third consecutive year, and collectively Colorado's reservoirs are currently holding 188,000 ac-ft above normal, at 106 percent of average.

Streamflow



Anticipated spring to summer streamflow volumes have increased for every forecast point in Colorado since the first 2017 forecasts were issued on January 1st. Additionally, the 50 percent exceedance forecasts are calling for above average streamflow volumes for all forecast points in the state. The greatest increases in forecasted streamflow volumes occurred for the southern tributaries of the Rio Grande River basin, where forecasts are now calling for 160 percent of average or greater streamflow volumes. Forecast volumes in the Gunnison River basin are also quite high and range from 124 percent to 151 percent of average. Streams outside of the Rio Grande and Gunnison river basins are also well above normal, and in general range from above 110 percent to 148 percent of average. Forecasts for runoff from the upper tributaries of the South Platte are lower than elsewhere in the state and are between 100 and 105 percent of average. There are still a few months remaining before runoff really begins to take off for most of Colorado's streams, but barring an extreme shift in current precipitation and snowpack trends, this year's water supplies are looking to be more than adequate for the entire state.

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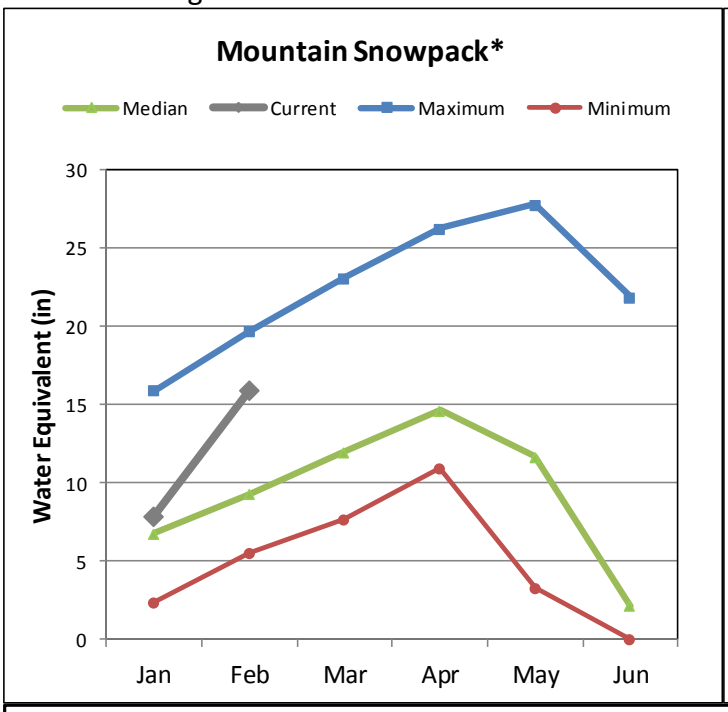
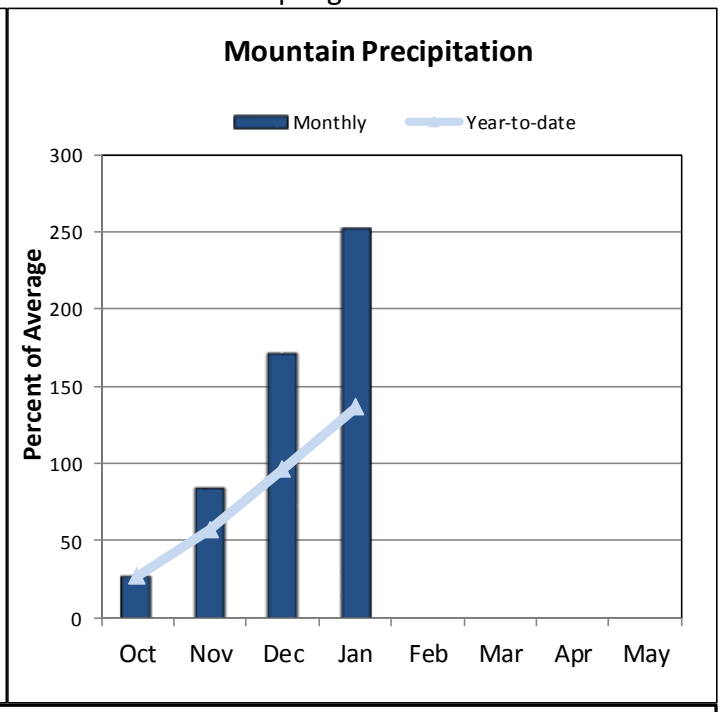
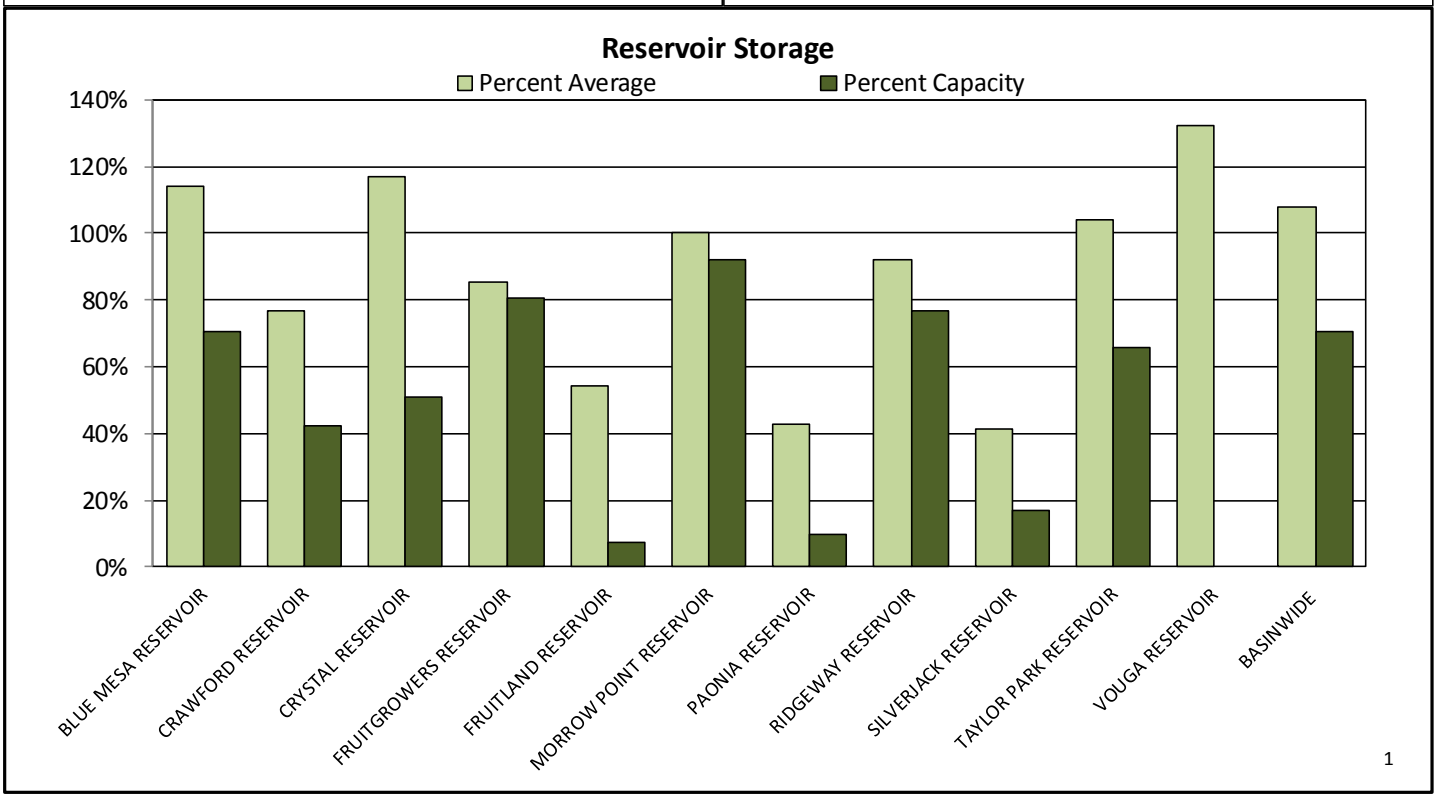
GUNNISON RIVER BASIN

February 1, 2017

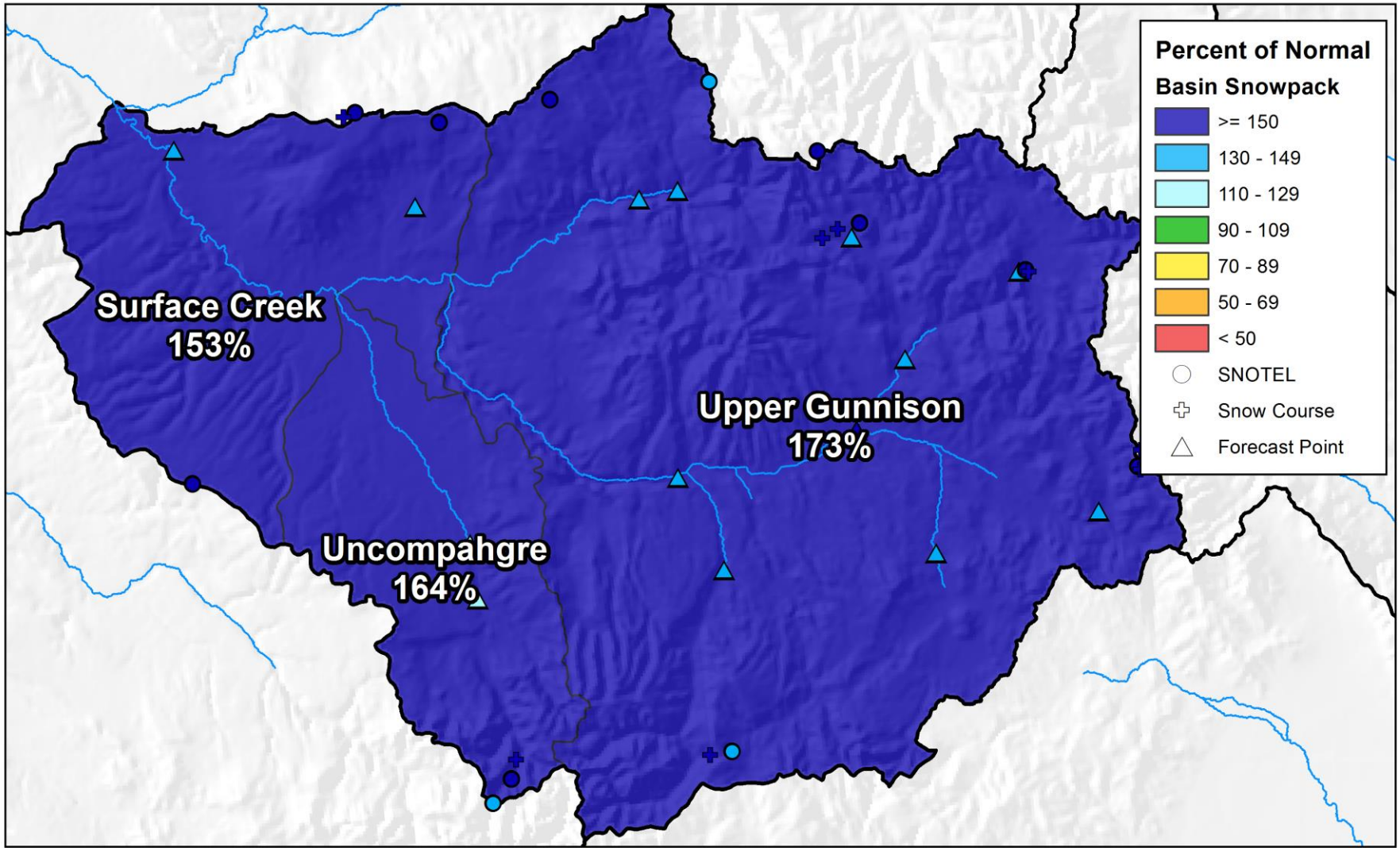
Snowpack in the Gunnison River basin is above normal at 171% of the median. Precipitation for January was 251% of average which brings water year-to-date precipitation to 136% of average. Reservoir storage at the end of January was 108% of average compared to 108% last year. Current streamflow forecasts range from 151% of average for the Gunnison River at Gunnison to 124% for the Uncompahgre River at Colona.







Gunnison River Basin Snowpack and Streamflow Forecasts
February 1, 2017



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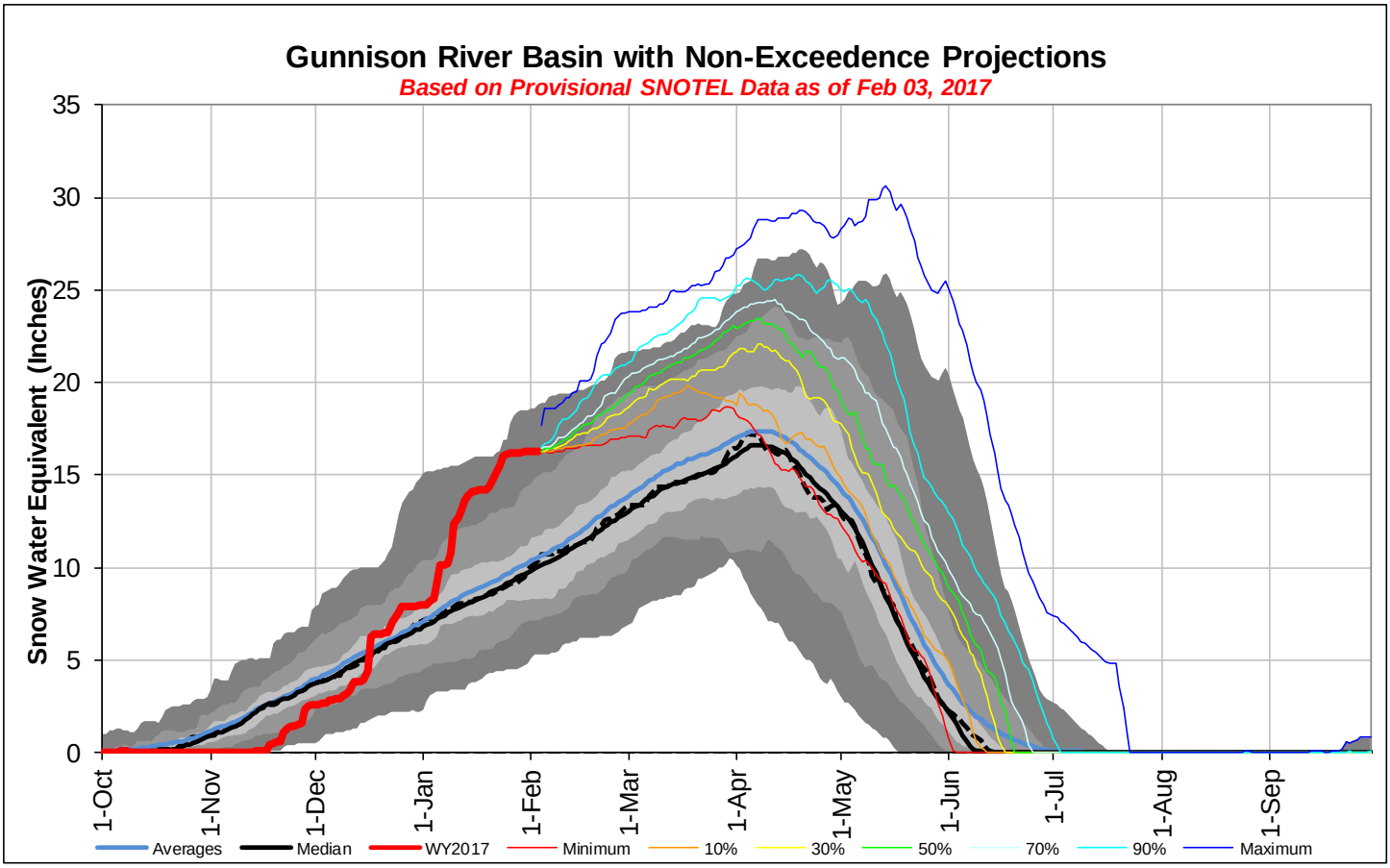
Gunnison River Basin
Streamflow Forecasts - February 1, 2017

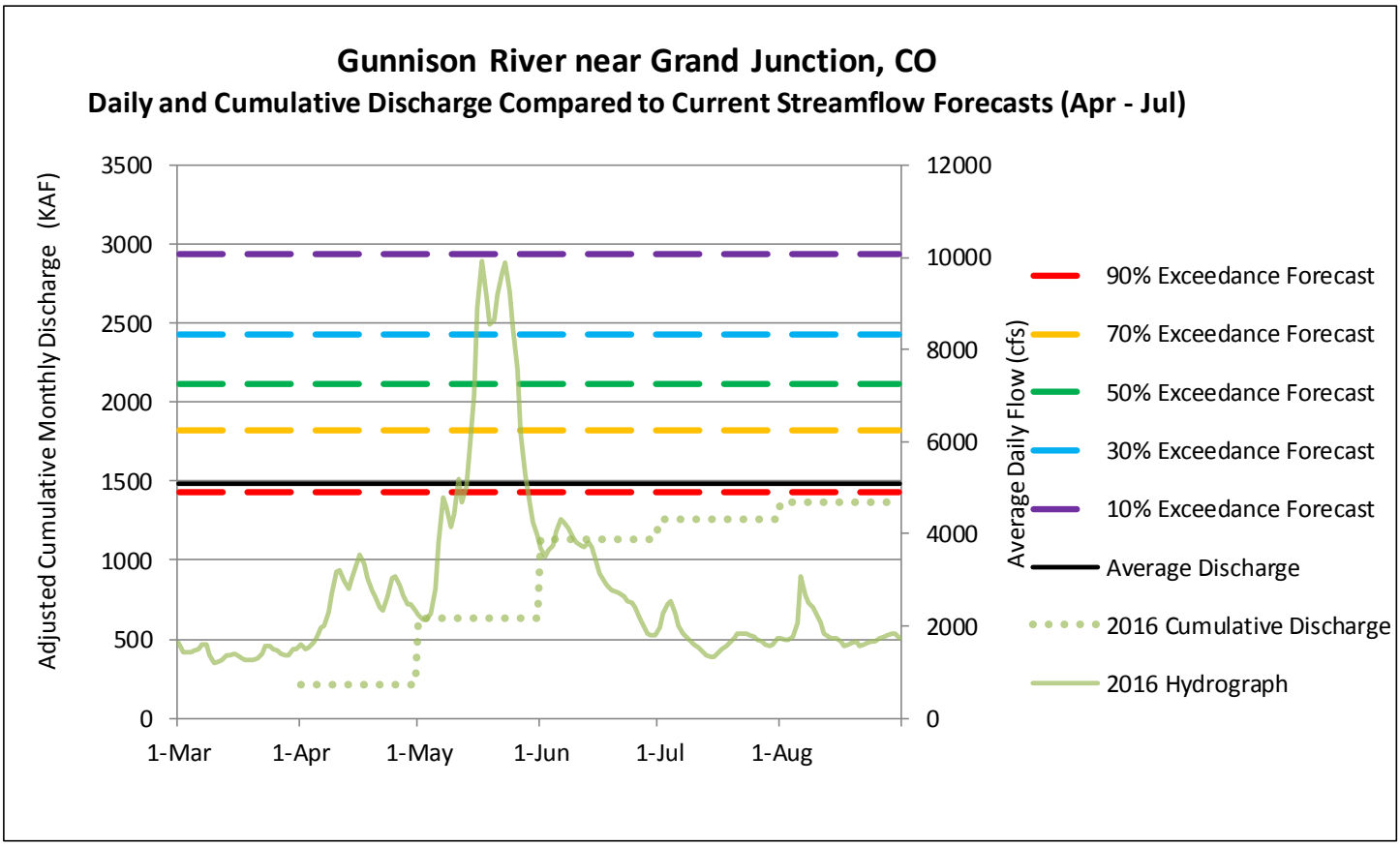
GUNNISON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Taylor Park Reservoir Inflow	APR-JUL	99	123	140	141%	158	187	99
Slate R nr Crested Butte	APR-JUL	89	104	115	139%	126	144	83
East R at Almont	APR-JUL	196	240	270	148%	305	355	182
Gunnison R near Gunnison [2]	APR-JUL	390	490	560	151%	635	760	370
Tomichi Ck at Sargents	APR-JUL	22	33	41	137%	50	64	30
Cochetopa Ck bl Rock Ck nr Parlin	APR-JUL	8.8	14.7	19.5	130%	25	34	15
Tomichi Ck at Gunnison	APR-JUL	51	84	110	149%	140	191	74
Lake Fk at Gateview	APR-JUL	113	140	160	130%	181	215	123
Blue Mesa Reservoir Inflow [2]	APR-JUL	690	865	1000	148%	1140	1370	675
Paonia Reservoir Inflow	MAR-JUN	84	113	135	141%	159	199	96
	APR-JUL	81	113	137	141%	164	205	97
NF Gunnison R nr Somerset[2]	APR-JUL	280	350	400	138%	455	540	290
Surface Ck at Cedaredge	APR-JUL	16.3	19.6	22	131%	25	29	16.8
Ridgway Reservoir Inflow	APR-JUL	88	110	127	126%	145	174	101
Uncompahgre R at Colona [2]	APR-JUL	102	140	170	124%	200	255	137
Gunnison R nr Grand Junction [2]	APR-JUL	1430	1820	2120	143%	2430	2940	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Blue Mesa Reservoir	586.5	590.1	514.6	830.0
Crawford Reservoir	5.9	6.7	7.7	14.0
Crystal Reservoir	8.9	7.9	7.6	17.5
Fruitgrowers Reservoir	2.9	2.5	3.4	3.6
Fruitland Reservoir	0.7	1.7	1.3	9.2
Morrow Point Reservoir	111.4	109.6	111.4	121.0
Paonia Reservoir	1.5	0.9	3.5	15.4
Ridgway Reservoir	63.7	63.5	69.2	83.0
Silverjack Reservoir	2.2	4.3	5.3	12.8
Taylor Park Reservoir	69.5	69.7	66.9	106.0
Vouga Reservoir	0.9	0.9	0.7	0.9
Basin-wide Total	854.1	857.8	791.6	1213.4
# of reservoirs	11	11	11	11

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
UPPER GUNNISON BASIN	17	173%	110%
SURFACE CREEK BASIN	3	153%	113%
UNCOMPAHGRE BASIN	4	164%	132%
GUNNISON RIVER BASIN	21	171%	114%



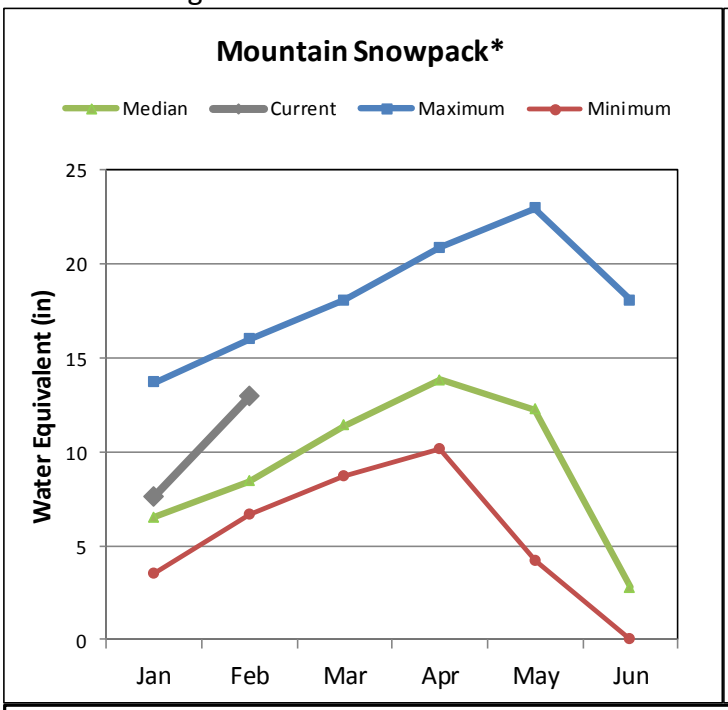


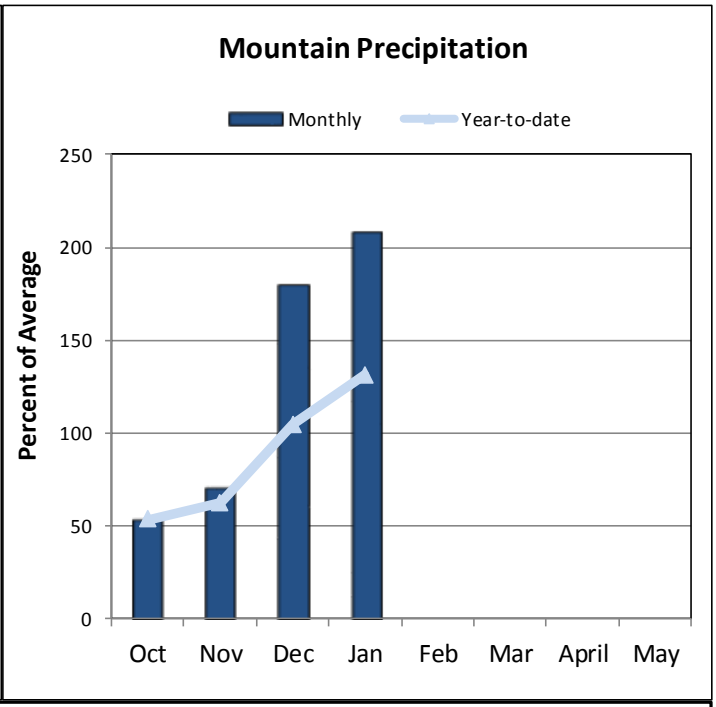
Please refer to the sections at the end of this report for further explanation concerning these graphs.

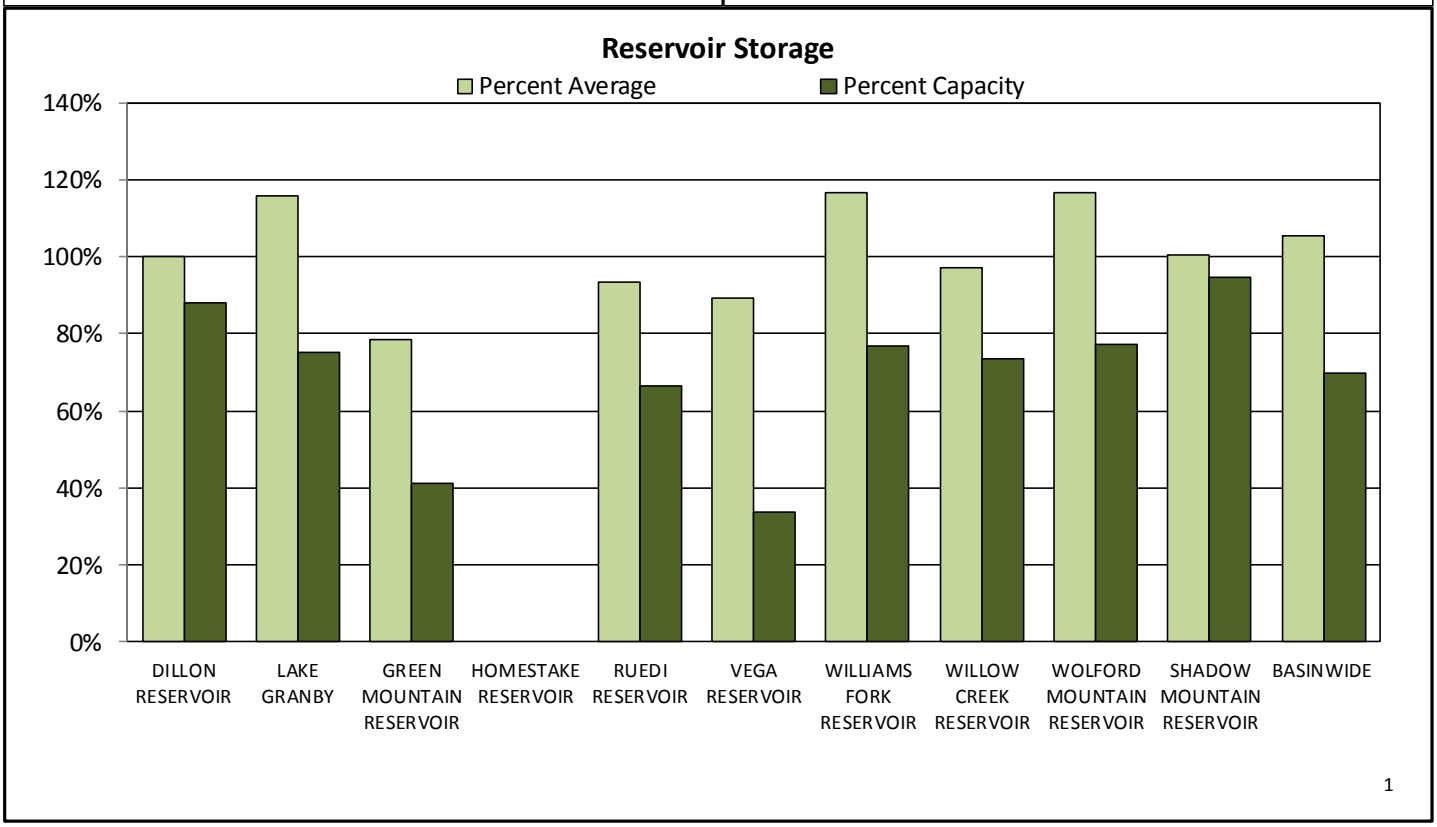
UPPER COLORADO RIVER BASIN

February 1, 2017

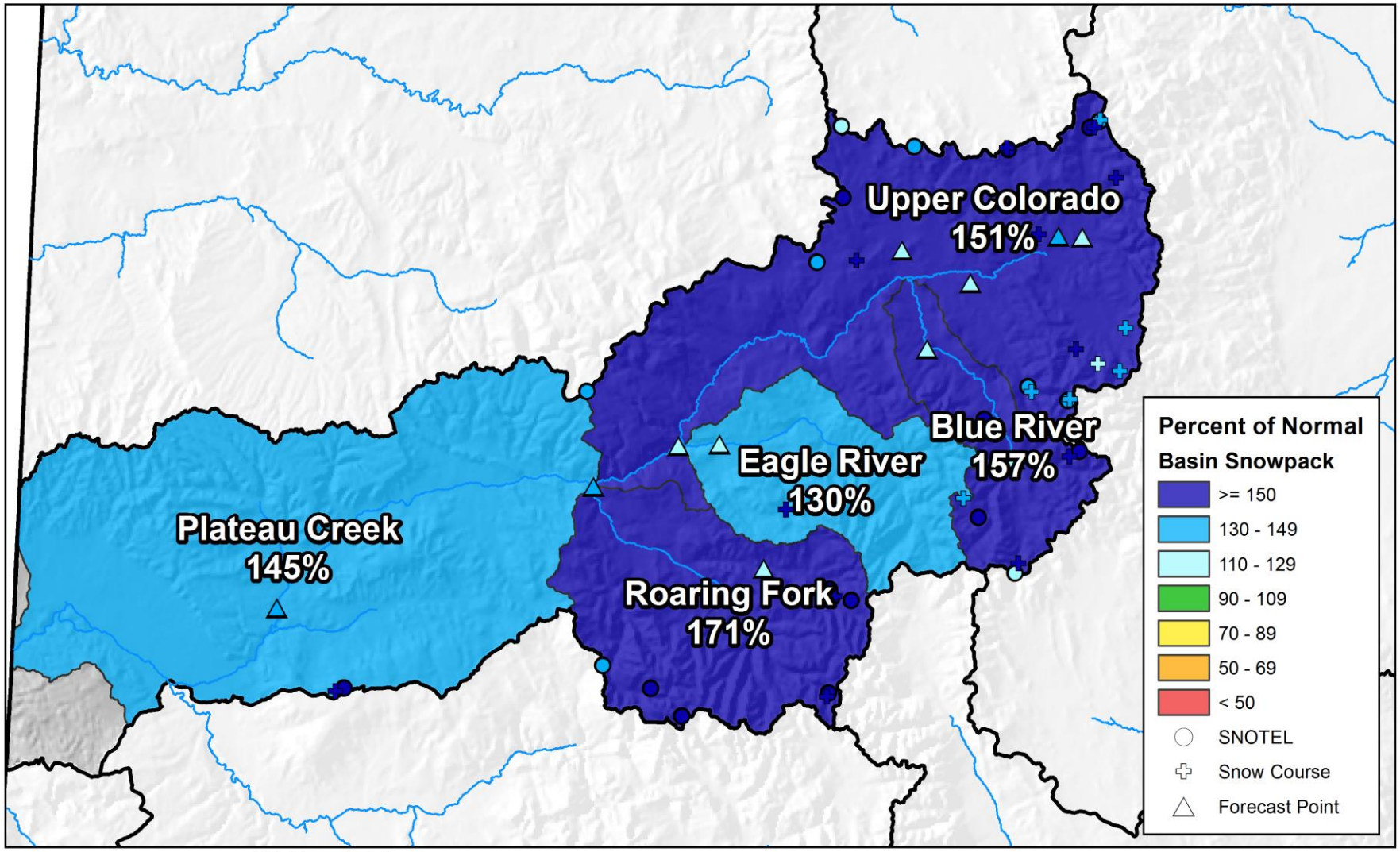
Snowpack in the Colorado River basin is above normal at 154% of the median. Precipitation for January was 207% of average which brings water year-to-date precipitation to 131% of average. Reservoir storage at the end of January was 105% of average compared to 109% last year. Current streamflow forecasts range from 149% of average for the inflow to Willow Creek Reservoir to 115% for the Wolford Mountain Reservoir inflow.







Upper Colorado River Basin Snowpack and Streamflow Forecasts
February 1, 2017



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Upper Colorado River Basin
Streamflow Forecasts - February 1, 2017

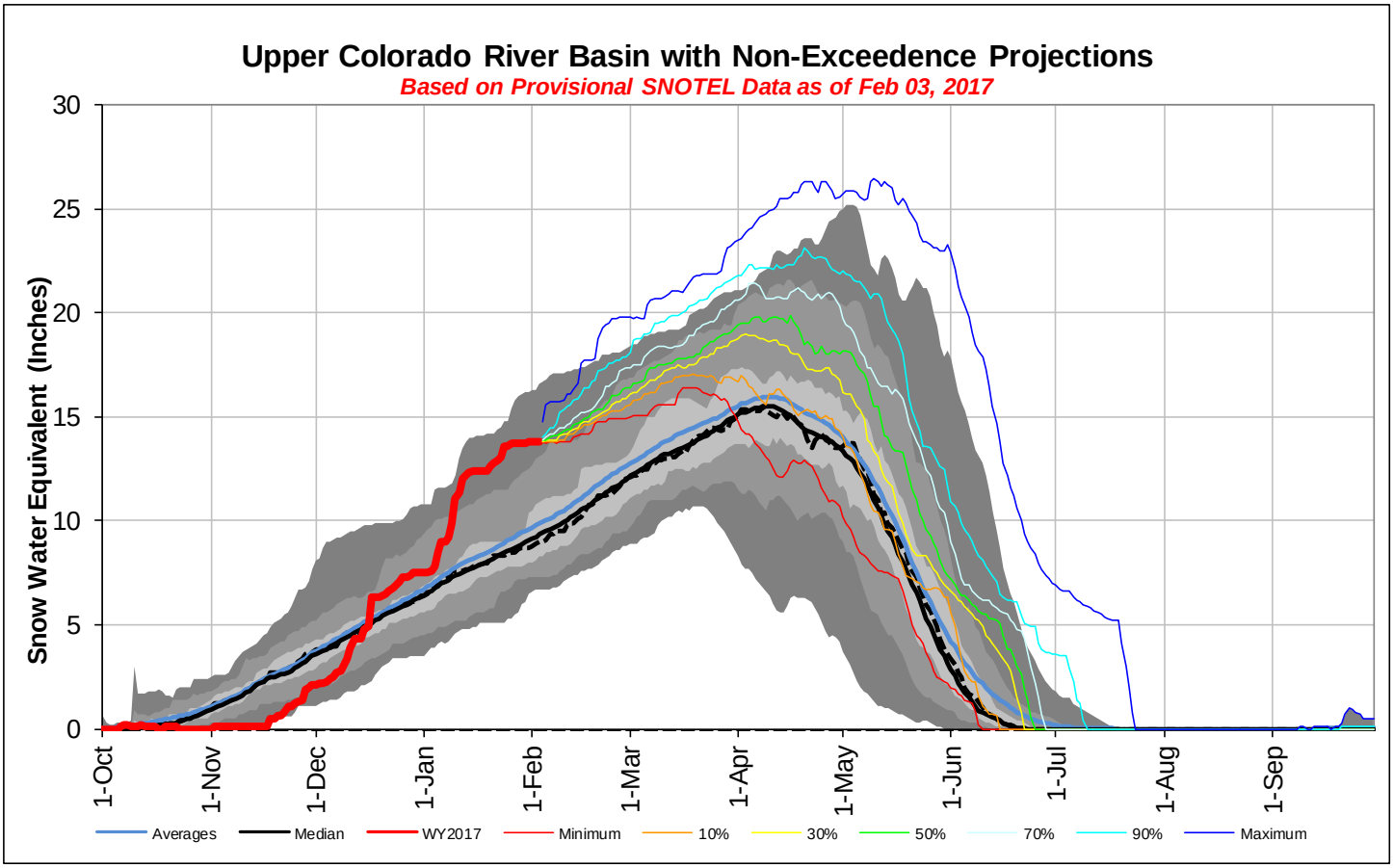
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

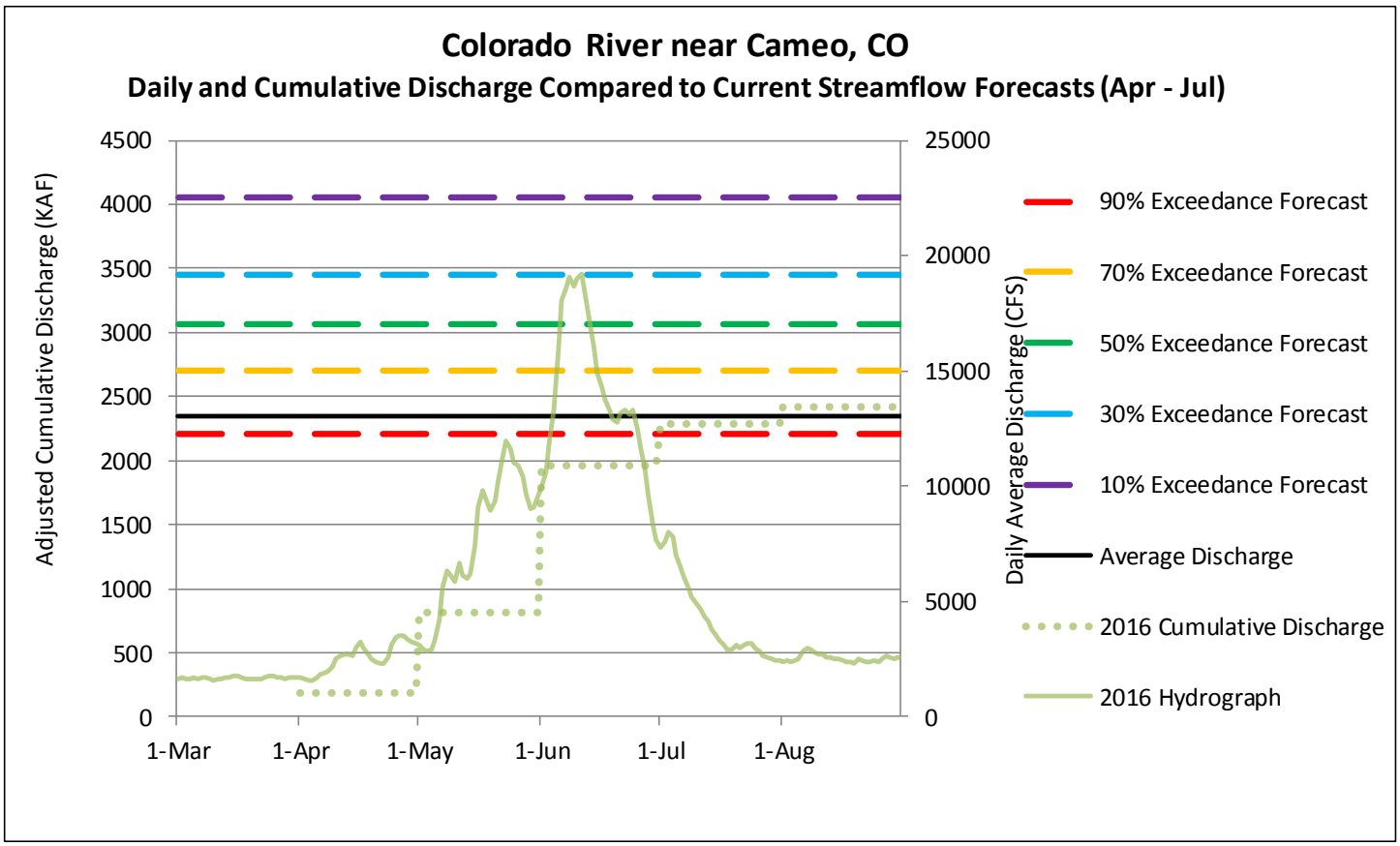
UPPER COLORADO RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lake Granby Inflow [2]	APR-JUL	192	235	265	120%	300	350	220
Willow Ck Reservoir Inflow	APR-JUL	46	60	70	149%	81	99	47
Williams Fk bl Williams Fk Reservoir[2]	APR-JUL	87	109	125	129%	142	170	97
Wolford Mtn Reservoir Inflow	APR-JUL	42	53	62	115%	71	86	54
Dillon Reservoir Inflow[2]	APR-JUL	142	179	205	126%	235	280	163
Green Mountain Reservoir Inflow[2]	APR-JUL	240	300	345	125%	395	470	275
Eagle R bl Gypsum [2]	APR-JUL	270	340	395	118%	455	545	335
Colorado R nr Dotsero [2]	APR-JUL	1200	1530	1770	126%	2030	2450	1400
Ruedi Reservoir Inflow [2]	APR-JUL	122	150	170	122%	192	225	139
Roaring Fk at Glenwood Springs[2]	APR-JUL	660	800	900	130%	1010	1180	690
Colorado R nr Cameo [2]	APR-JUL	2210	2700	3070	131%	3450	4060	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Dillon Reservoir	219.0	231.9	218.4	249.1
Green Mountain Reservoir	60.4	61.0	77.1	146.8
Homestake Reservoir		41.3	31.7	43.0
Lake Granby	351.1	365.4	302.9	465.6
Ruedi Reservoir	67.8	70.2	72.4	102.0
Shadow Mountain Reservoir	17.4	17.4	17.3	18.4
Vega Reservoir	11.1	11.1	12.4	32.9
Williams Fork Reservoir	74.4	78.0	63.8	97.0
Willow Creek Reservoir	6.7	6.8	6.9	9.1
Wolford Mountain Reservoir	50.8	42.7	43.6	65.9
Basin-wide Total	858.7	884.5	814.8	1186.8
# of reservoirs	9	9	9	9

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
BLUE RIVER BASIN	8	157%	116%
HEADWATERS COLORADO RIVER	36	151%	114%
MUDDY CREEK BASIN	5	151%	116%
EAGLE RIVER BASIN	5	130%	100%
PLATEAU CREEK BASIN	3	153%	113%
ROARING FORK BASIN	9	171%	113%
WILLIAMS FORK BASIN	5	137%	128%
WILLOW CREEK BASIN	5	187%	121%
UPPER COLORADO RIVER BASIN	48	154%	113%





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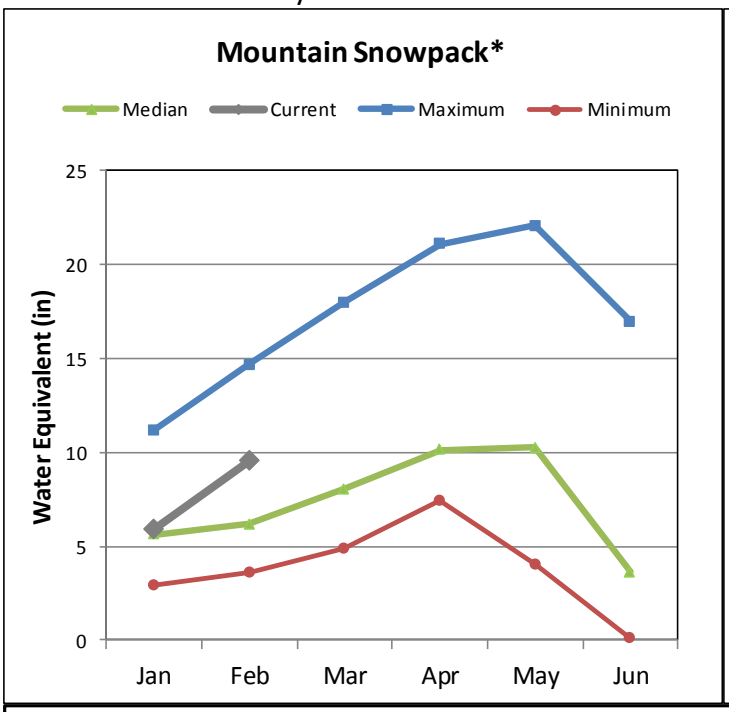
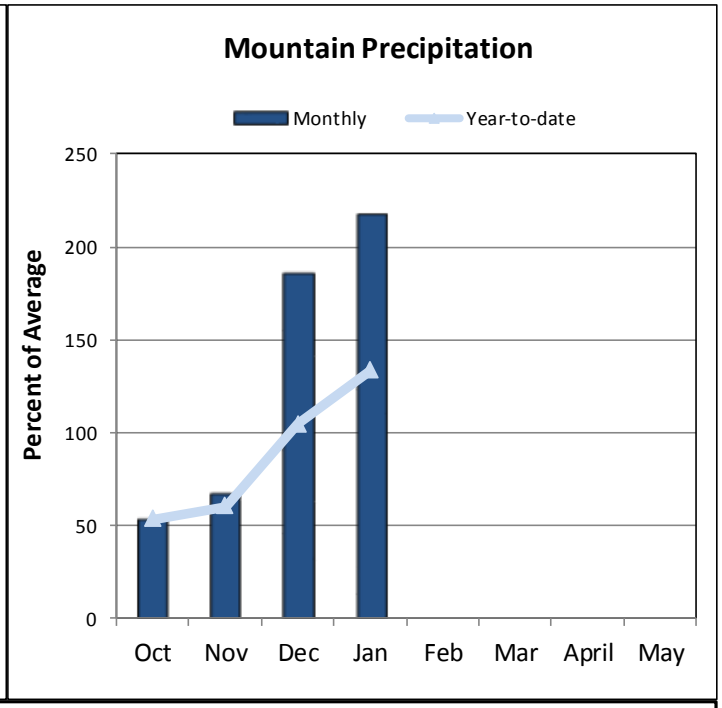
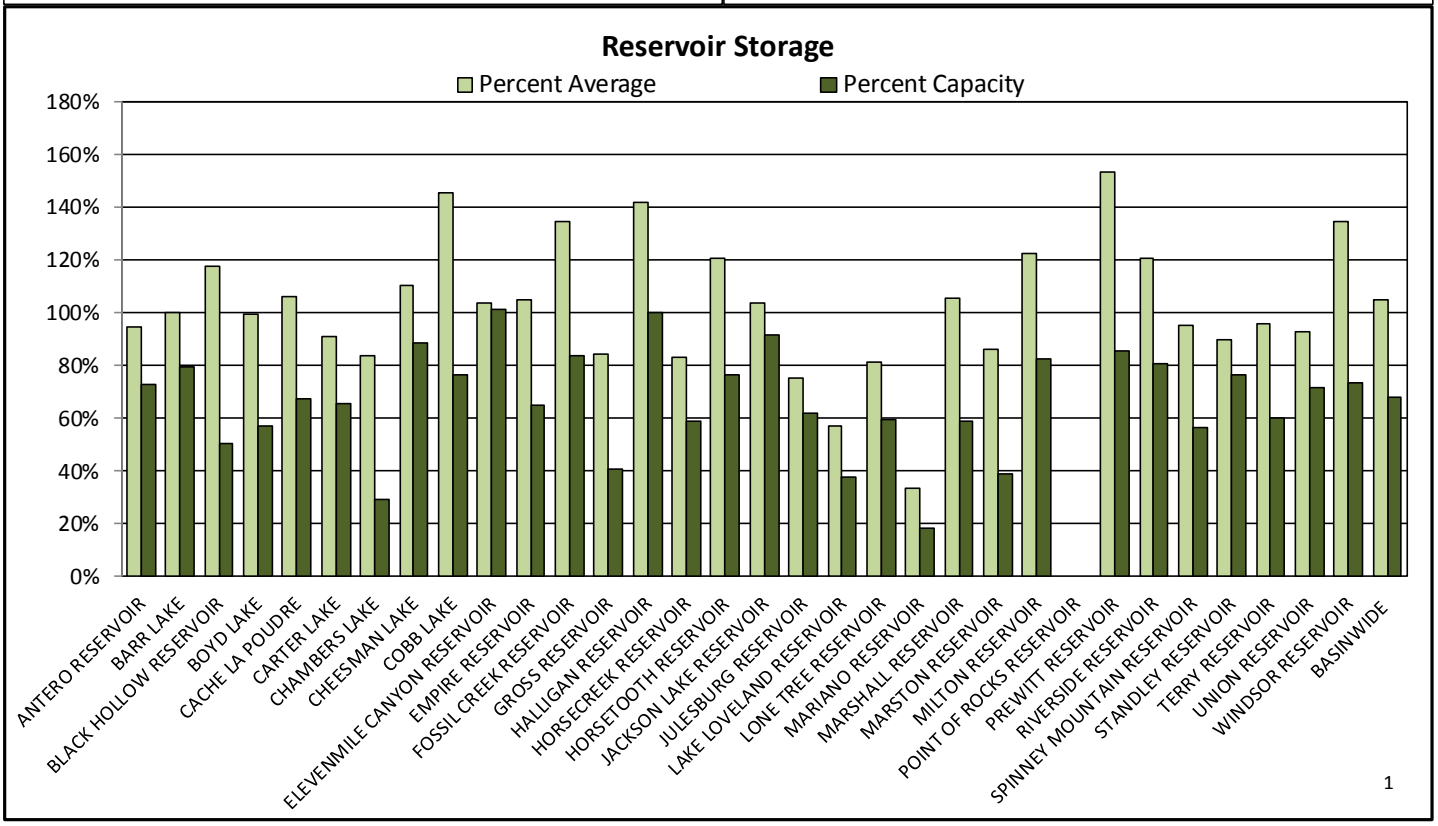
SOUTH PLATTE RIVER BASIN

February 1, 2017

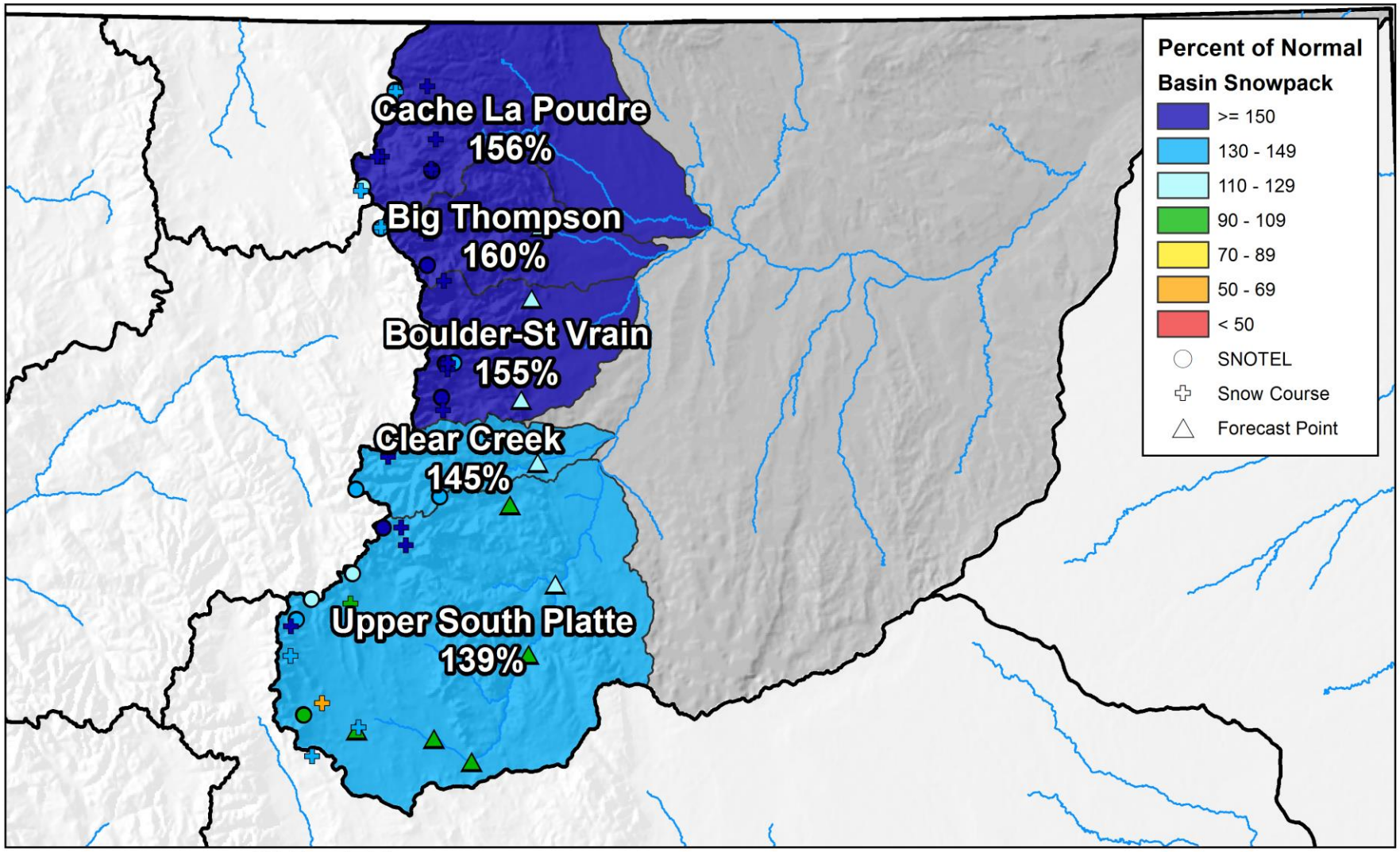
Snowpack in the South Platte River basin is above normal at 156% of the median. Precipitation for January was 217% of average which brings water year-to-date precipitation to 132%. Reservoir storage at the end of January was 105% of average compared to 104% last year. Streamflow forecasts range from 124% of average for St. Vrain Creek at Lyons to 101% for the inflow to Antero Reservoir.







South Platte River Basin Snowpack and Streamflow Forecasts
February 1, 2017



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South Platte River Basin
Streamflow Forecasts - February 1, 2017

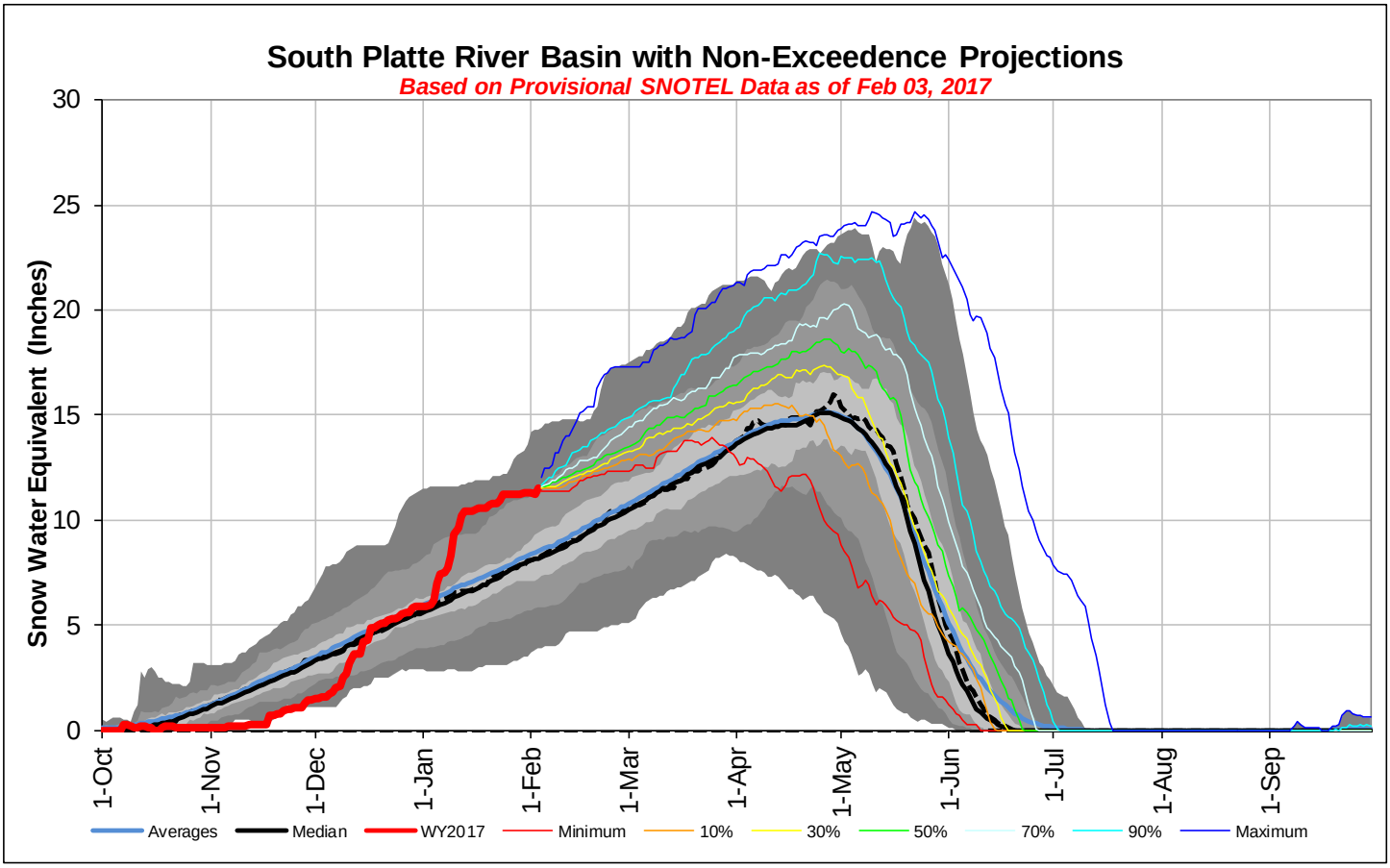
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

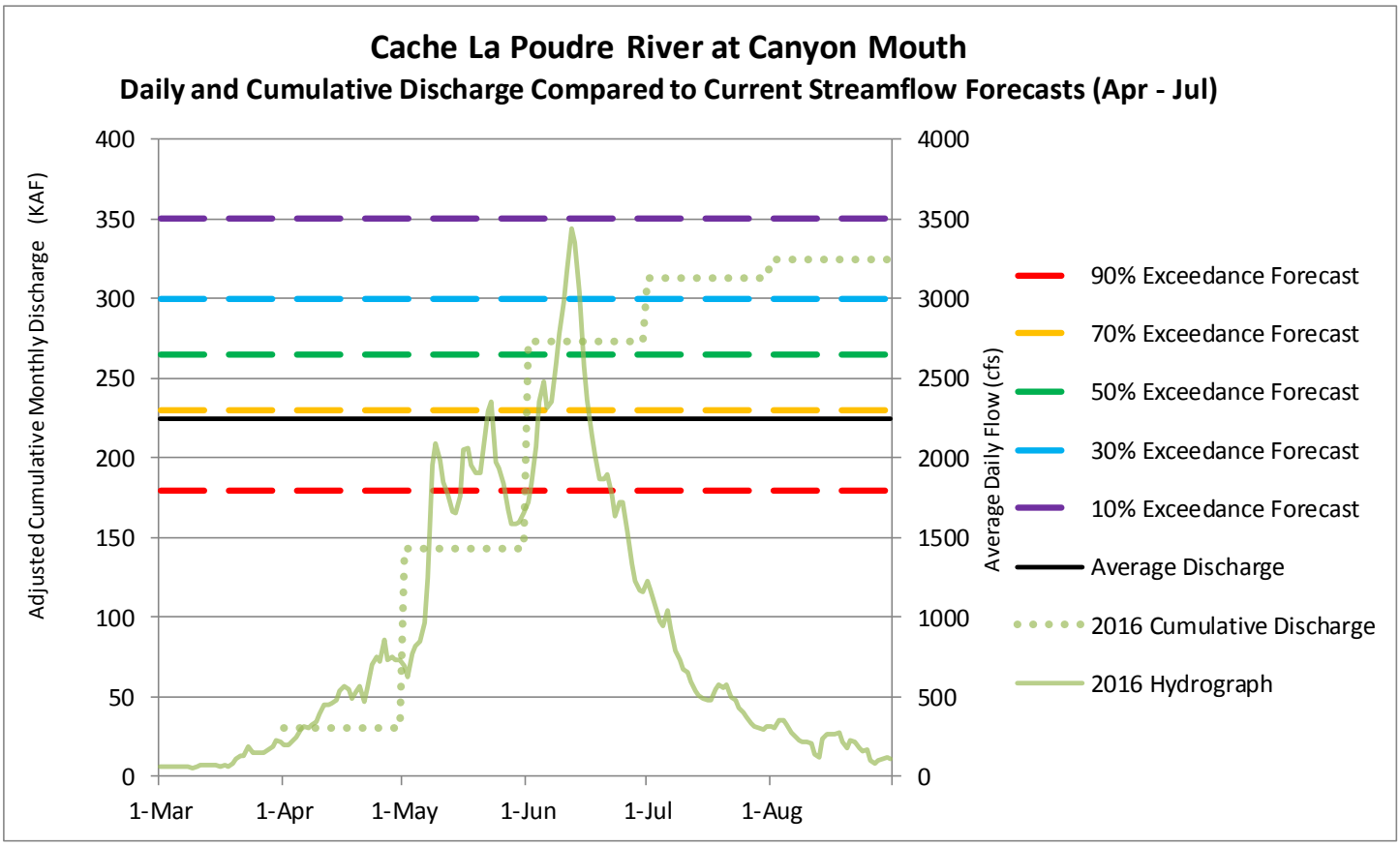
SOUTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Antero Reservoir Inflow[2]								
	APR-JUL	7.8	11.8	14.6	101%	17.3	21	14.5
	APR-SEP	9.6	14.2	17.4	98%	21	25	17.8
Spinney Mountain Reservoir Inflow[2]								
	APR-JUL	30	42	51	106%	59	71	48
	APR-SEP	37	53	63	103%	74	89	61
Elevenmile Canyon Reservoir Inflow[2]								
	APR-JUL	30	43	52	104%	61	74	50
	APR-SEP	38	54	65	102%	77	93	64
Cheesman Lake Inflow[2]								
	APR-JUL	63	86	101	101%	116	138	100
	APR-SEP	79	107	126	100%	145	173	126
South Platte R at South Platte[2]								
	APR-JUL	127	169	198	110%	225	270	180
	APR-SEP	155	205	240	107%	280	330	225
Bear Ck ab Evergreen								
	APR-JUL	9.3	14.2	17.4	106%	21	26	16.4
	APR-SEP	12.4	18.1	22	105%	26	32	21
Clear Ck at Golden								
	APR-JUL	98	114	126	120%	137	154	105
	APR-SEP	114	137	152	119%	168	190	128
St. Vrain Ck at Lyons[2]								
	APR-JUL	84	99	109	124%	119	134	88
	APR-SEP	99	117	129	125%	141	159	103
Boulder Ck nr Orodell[2]								
	APR-JUL	47	56	62	115%	68	77	54
	APR-SEP	53	64	72	114%	80	91	63
South Boulder Ck nr Eldorado Springs[2]								
	APR-JUL	32	39	44	113%	49	56	39
	APR-SEP	34	42	48	112%	54	62	43
Big Thompson R at Canyon Mouth[2]								
	APR-JUL	79	95	107	119%	118	134	90
	APR-SEP	91	112	127	119%	141	162	107
Cache La Poudre at Canyon Mouth[2]								
	APR-JUL	179	230	265	118%	300	350	225
	APR-SEP	194	250	290	116%	330	385	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Antero Reservoir	14.5	0.0	15.3	19.9
Barr Lake	24.0	20.7	24.0	30.1
Black Hollow Reservoir	3.3	3.0	2.8	6.5
Boyd Lake	27.6	35.2	27.8	48.4
Cache La Poudre	6.8	8.5	6.4	10.1
Carter Lake	71.2	71.1	78.3	108.9
Chambers Lake	2.6	4.0	3.1	8.8
Cheesman Lake	70.2	68.3	63.7	79.0
Cobb Lake	17.0	18.6	11.7	22.3
Elevenmile Canyon Reservoir	99.4	99.5	95.9	98.0
Empire Reservoir	23.7	23.6	22.6	36.5
Fossil Creek Reservoir	9.3	7.9	6.9	11.1
Gross Reservoir	12.1	16.5	14.3	29.8
Halligan Reservoir	6.4	6.4	4.5	6.4
Horsecreek Reservoir	8.6	8.8	10.4	14.7
Horsetooth Reservoir	114.4	102.0	94.7	149.7
Jackson Lake Reservoir	24.0	24.0	23.1	26.1
Julesburg Reservoir	12.7	16.0	16.9	20.5
Lake Loveland Reservoir	3.9	0.5	6.8	10.3
Lone Tree Reservoir	5.2	6.0	6.4	8.7
Mariano Reservoir	1.0	1.1	3.0	5.4
Marshall Reservoir	5.9	6.8	5.6	10.0
Marston Reservoir	5.1	9.6	5.9	13.0
Milton Reservoir	19.4	19.4	15.8	23.5
Point Of Rocks Reservoir		61.5	51.1	70.6
Prewitt Reservoir	24.1	17.4	15.7	28.2
Ralph Price Reservoir	11.4	12.7		16.2
Riverside Reservoir	45.1	40.4	37.3	55.8
Spinney Mountain Reservoir	27.6	32.9	29.0	49.0
Standley Reservoir	32.1	38.8	35.7	42.0
Terry Reservoir	4.8	5.7	5.0	8.0
Union Reservoir	9.3	11.7	10.0	13.0
Windsor Reservoir	11.2	10.0	8.3	15.2
Basin-wide Total	742.5	734.4	706.9	1008.9
# of reservoirs	31	31	31	31

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
BIG THOMPSON BASIN	7	160%	98%
BOULDER CREEK BASIN	6	170%	105%
CACHE LA POUDRE BASIN	10	156%	100%
CLEAR CREEK BASIN	4	145%	120%
SAINT VRAIN BASIN	2	245%	90%
UPPER SOUTH PLATTE BASIN	16	139%	115%
SOUTH PLATTE RIVER BASIN	45	156%	106%



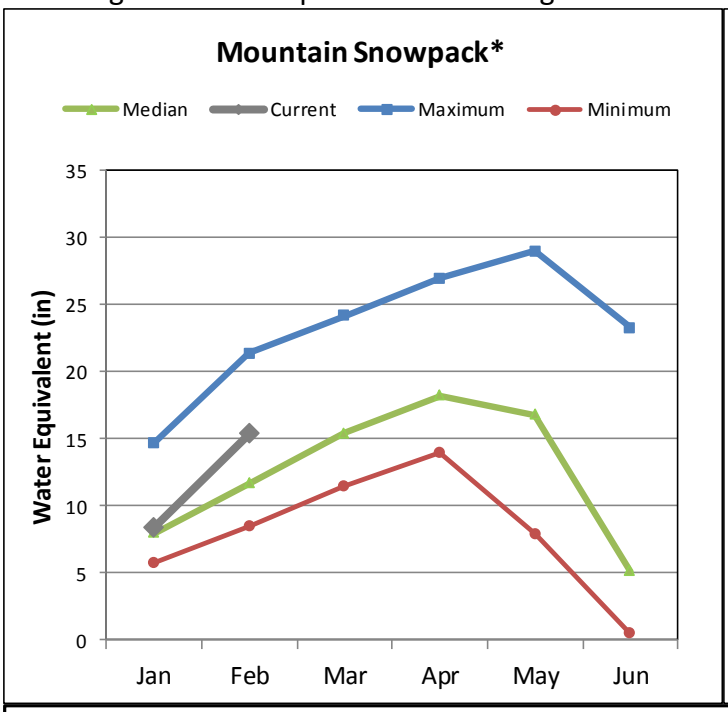


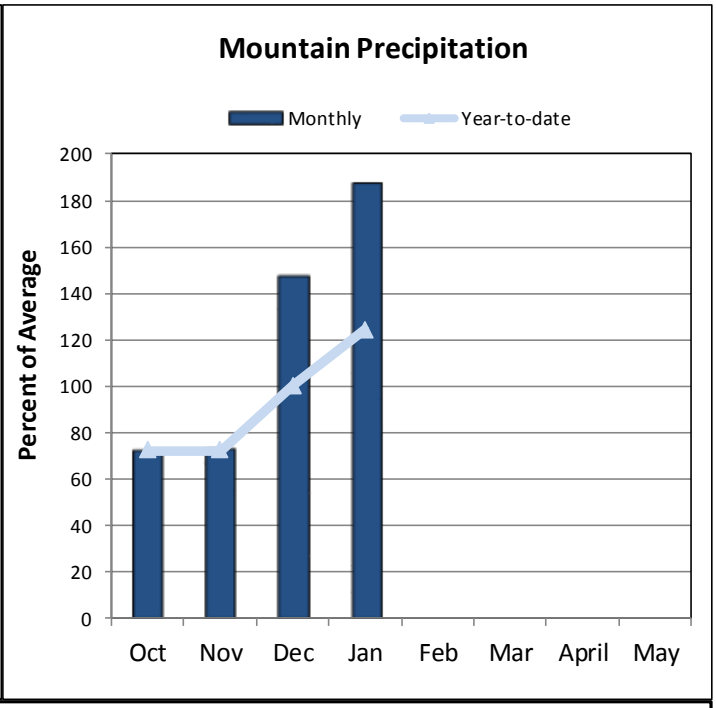
Please refer to the sections at the end of this report for further explanation concerning these graphs.

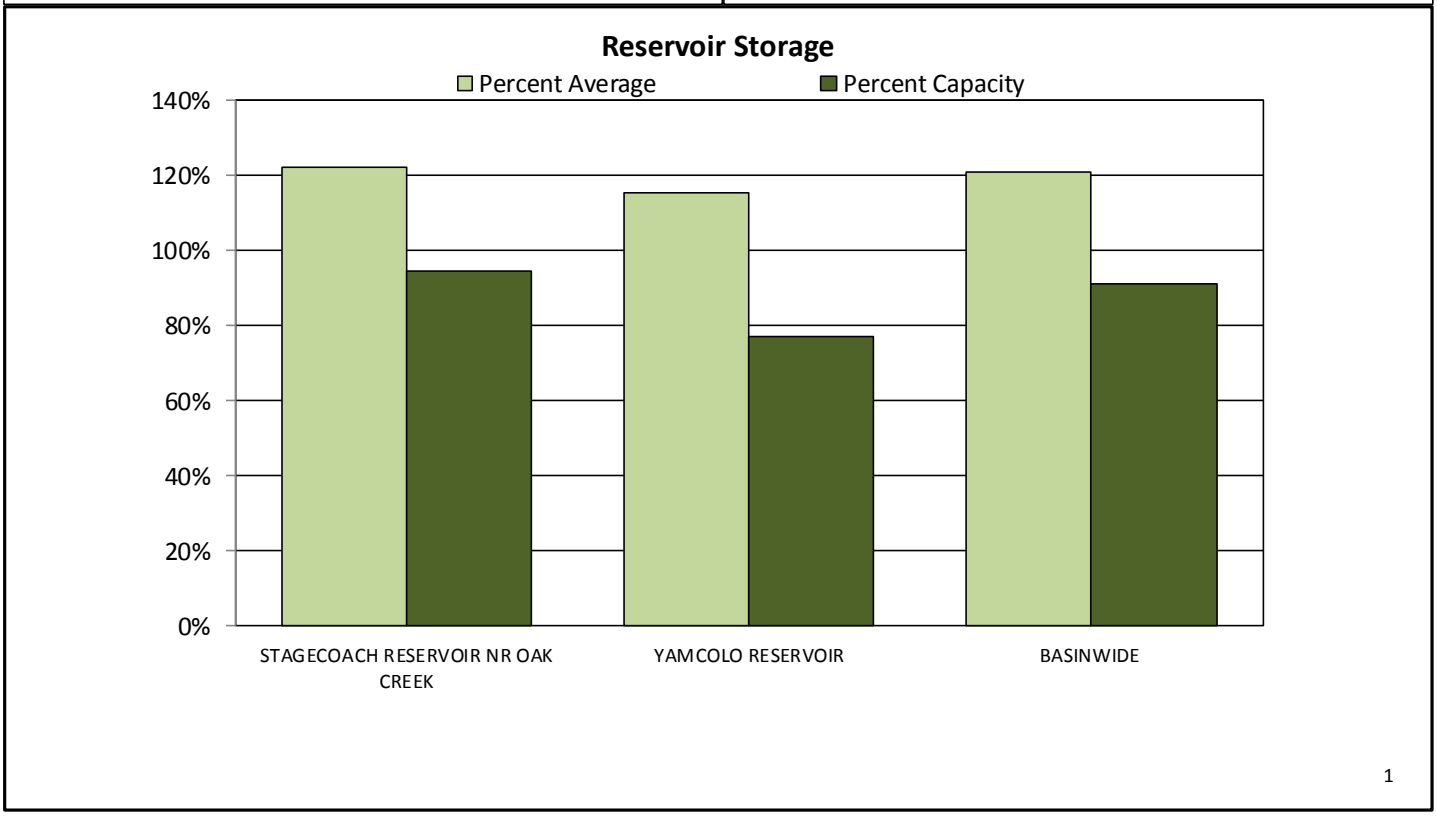
YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS

February 1, 2017

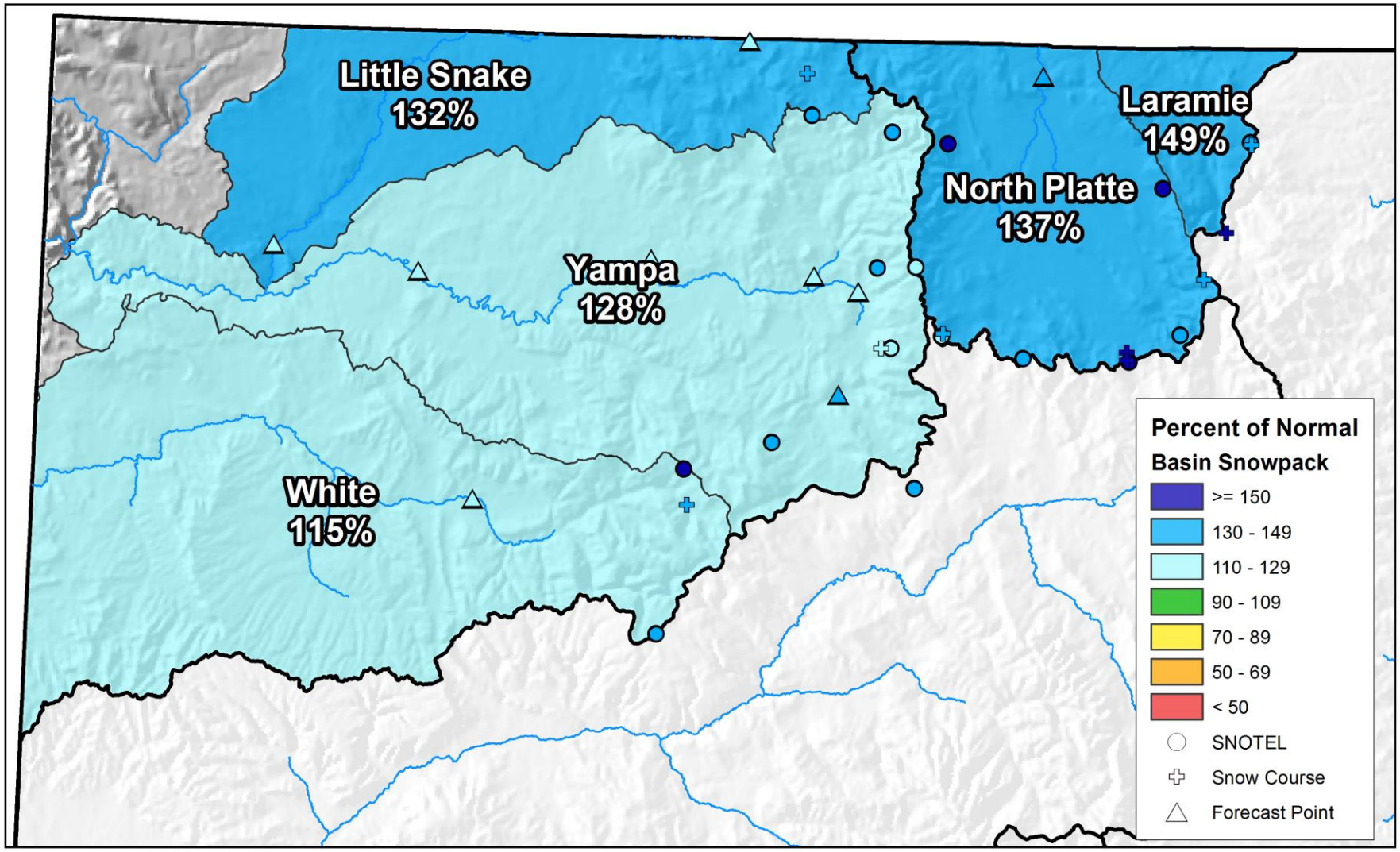
Snowpack in the Yampa, White & North Platte basins is above normal at 135% of the median. Precipitation for January was 189% of average and water year-to-date precipitation is 125% of average. Reservoir storage at the end of January was 121% of average compared to 121% last year. Streamflow forecasts range from 143% of average for the Yampa River above Stagecoach Reservoir to 111% for the White River near Meeker.







Yampa, White, and North Platte River Basins Snowpack and Streamflow Forecasts
February 1, 2017



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Yampa-White-North Platte River Basins
Streamflow Forecasts - February 1, 2017

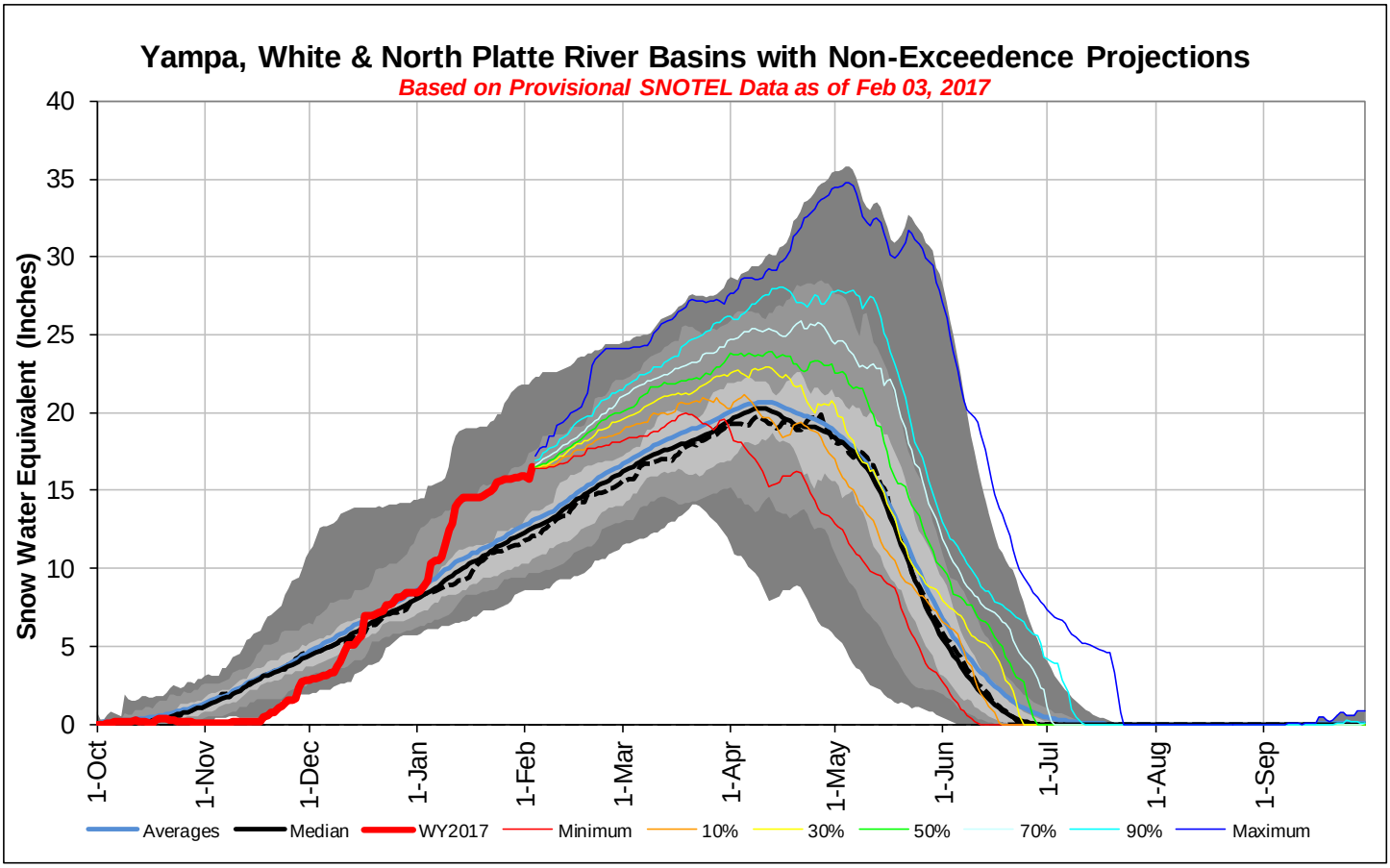
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

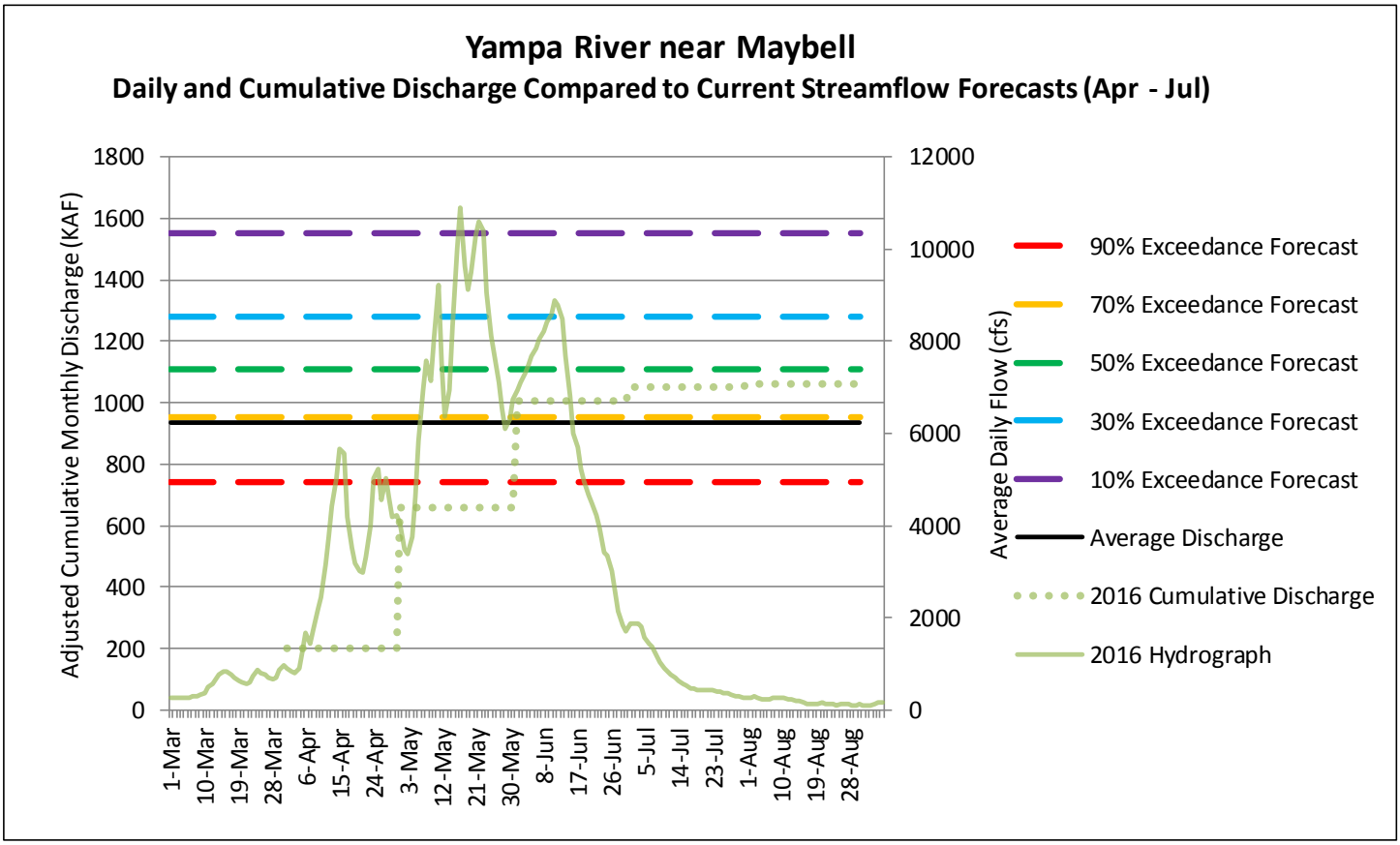
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
North Platte R nr Northgate								
	APR-JUL	175	250	305	136%	360	435	225
	APR-SEP	194	280	335	134%	390	475	250
Laramie R nr Woods[2]								
	APR-JUL	97	132	156	136%	180	215	115
	APR-SEP	108	146	171	136%	197	235	126
Yampa R ab Stagecoach Reservoir [2]								
	APR-JUL	18.1	27	33	143%	39	48	23
Yampa R at Steamboat Springs[2]								
	APR-JUL	225	275	310	119%	345	395	260
Elk R nr Milner								
	APR-JUL	265	335	385	120%	440	530	320
Elkhead Ck ab Long Gulch								
	APR-JUL	50	70	86	118%	104	133	73
Yampa R nr Maybell[2]								
	APR-JUL	740	950	1110	119%	1280	1550	935
Little Snake R nr Slater[2]								
	APR-JUL	127	158	181	116%	205	245	156
Little Snake R nr Dixon[2]								
	APR-JUL	250	335	400	116%	475	590	345
Little Snake R nr Lily[2]								
	APR-JUL	265	360	435	126%	515	645	345
White R nr Meeker								
	APR-JUL	215	270	310	111%	350	420	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Stagecoach Reservoir nr Oak Creek	34.5	34.4	28.2	36.5
Yamcolo Reservoir	6.7	6.6	5.8	8.7
Basin-wide Total	41.2	41.0	34.0	45.2
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
LARAMIE RIVER BASIN	4	149%	106%
NORTH PLATTE RIVER BASIN	12	137%	97%
LARAMIE & NORTH PLATTE RIVER BASINS	16	139%	99%
ELK RIVER BASIN	2	135%	94%
YAMPA RIVER BASIN	11	128%	108%
WHITE RIVER BASIN	4	134%	115%
YAMPA & WHITE RIVER BASINS	14	128%	108%
LITTLE SNAKE RIVER BASIN	9	132%	99%
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	35	135%	104%



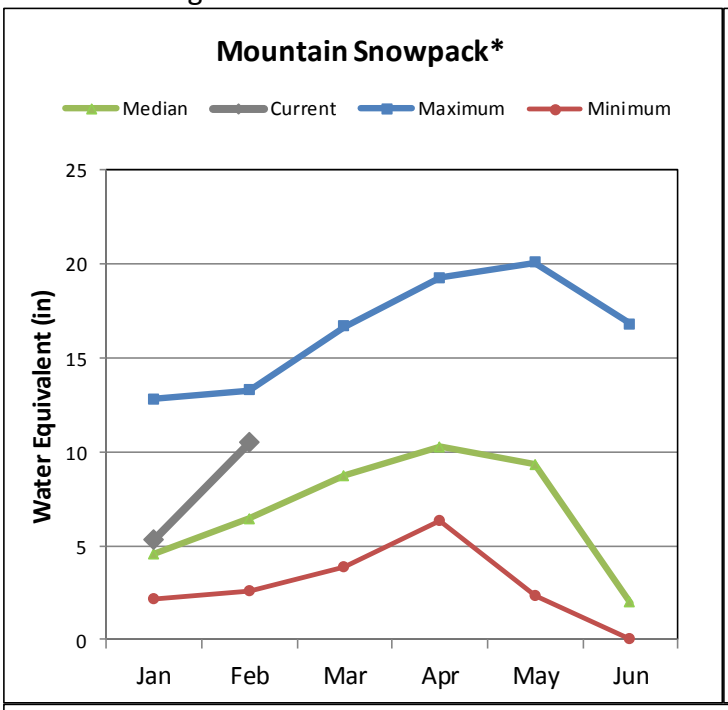


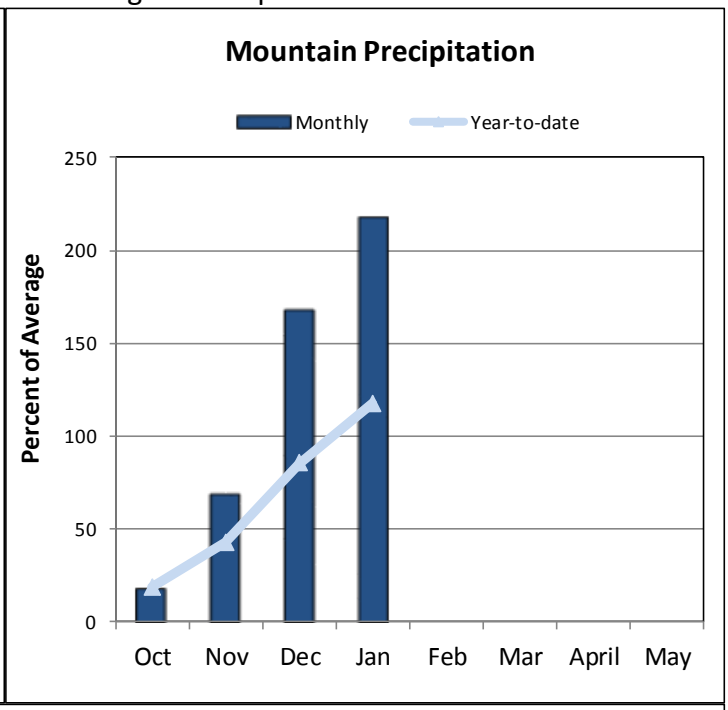
Please refer to the sections at the end of this report for further explanation concerning these graphs.

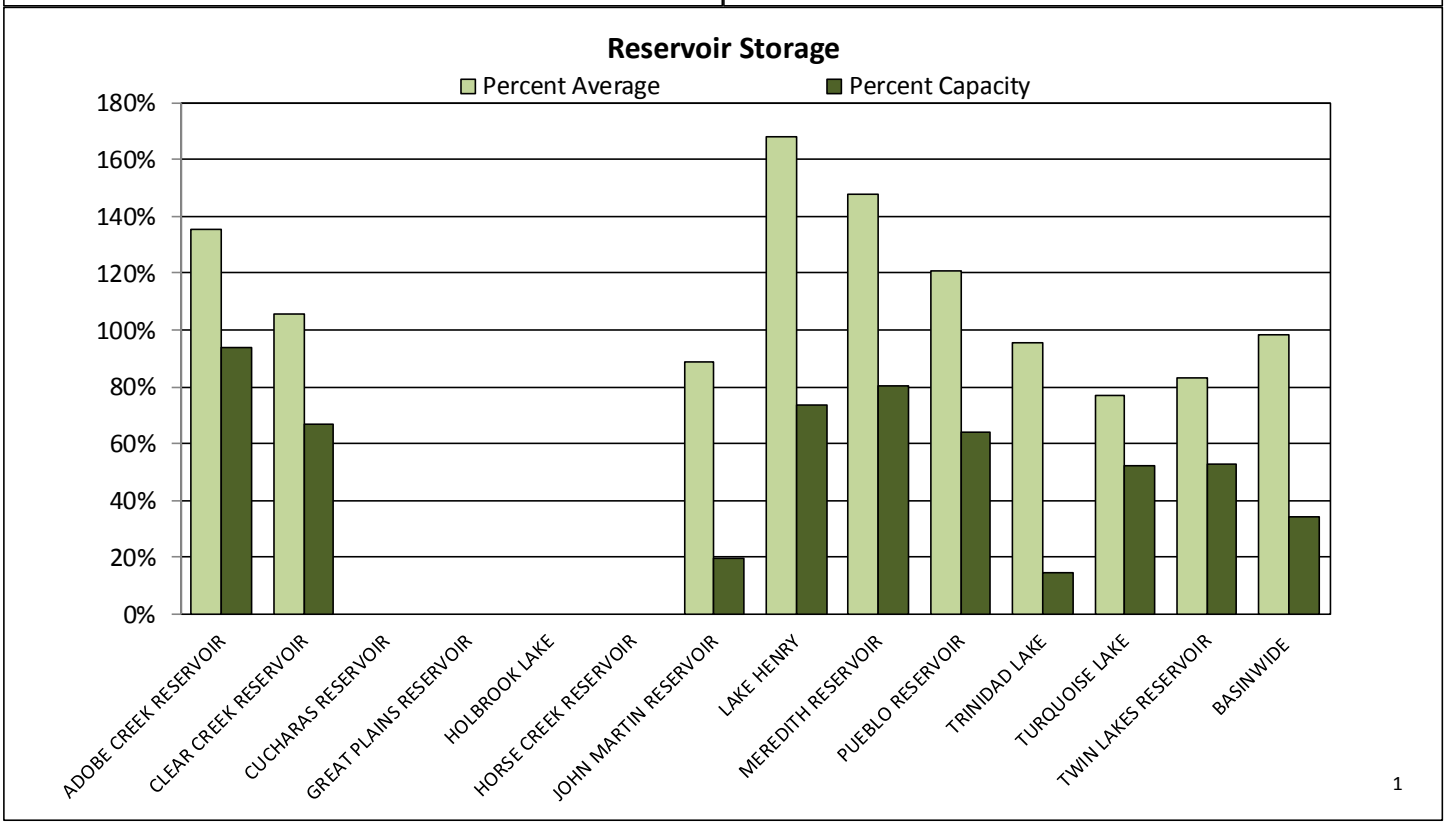
ARKANSAS RIVER BASIN

February 1, 2017

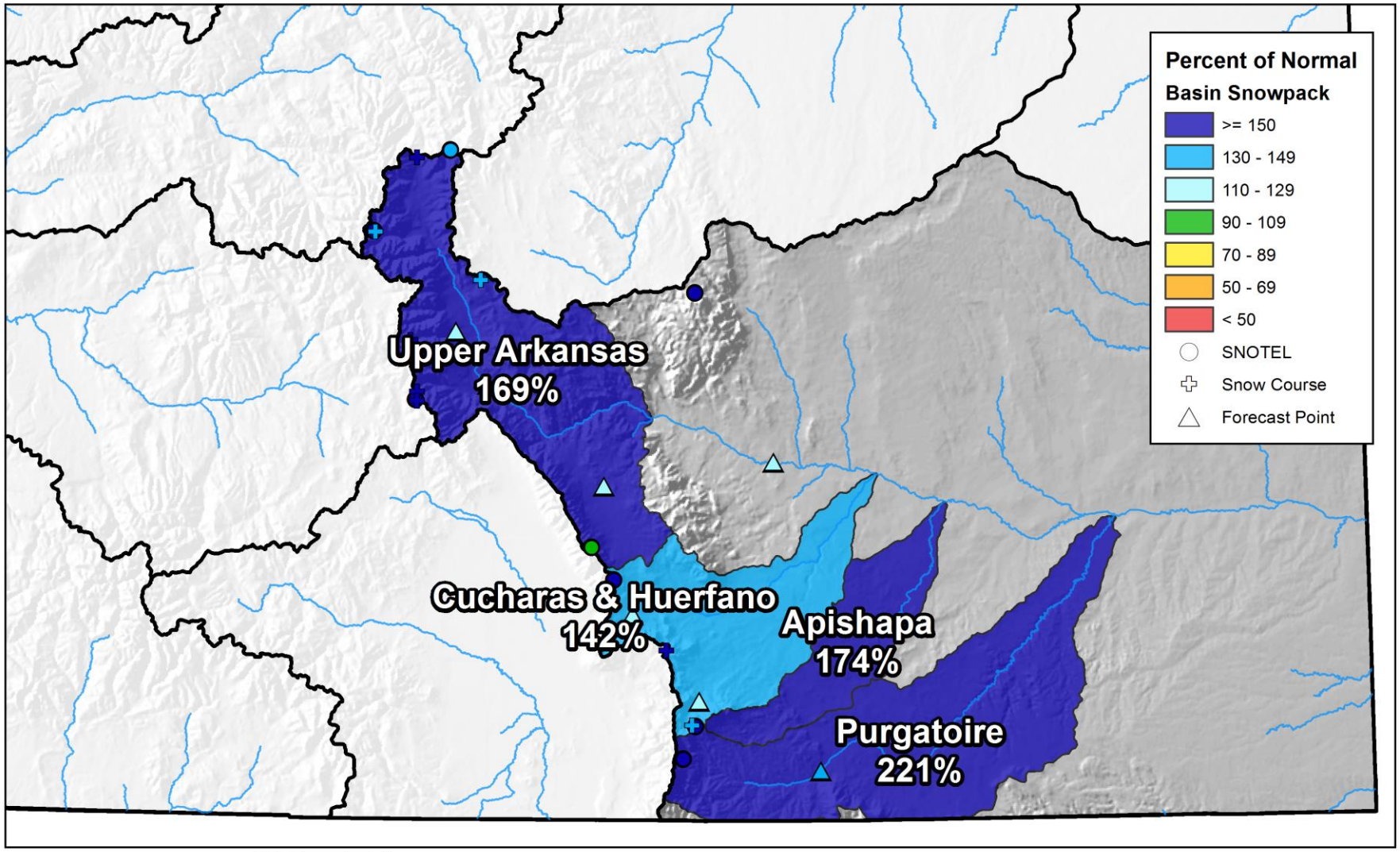
Snowpack in the Arkansas River basin is above normal at 164% of the median. Precipitation for January was 217% of average which brings water year-to-date precipitation to 117% of average. Reservoir storage at the end of January was 99% of average compared to 125% last year. Current streamflow forecasts range from 135% of average for the inflow to Trinidad Lake to 117% of average for Grape Creek near Westcliffe.







Arkansas River Basin Snowpack and Streamflow Forecasts
February 1, 2017



USDA United States Department of Agriculture

Natural Resources Conservation Service

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Arkansas River Basin
Streamflow Forecasts - February 1, 2017

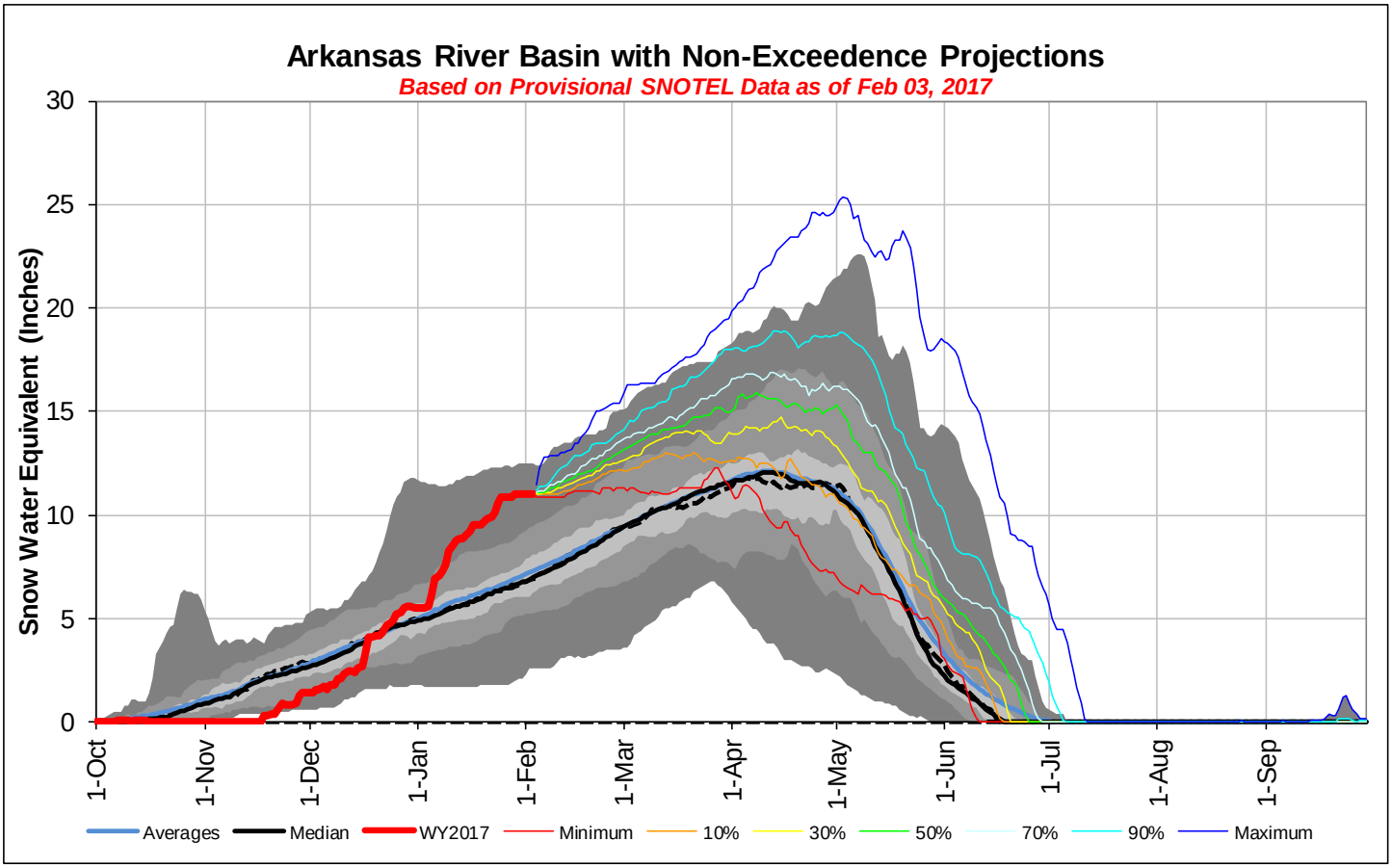
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

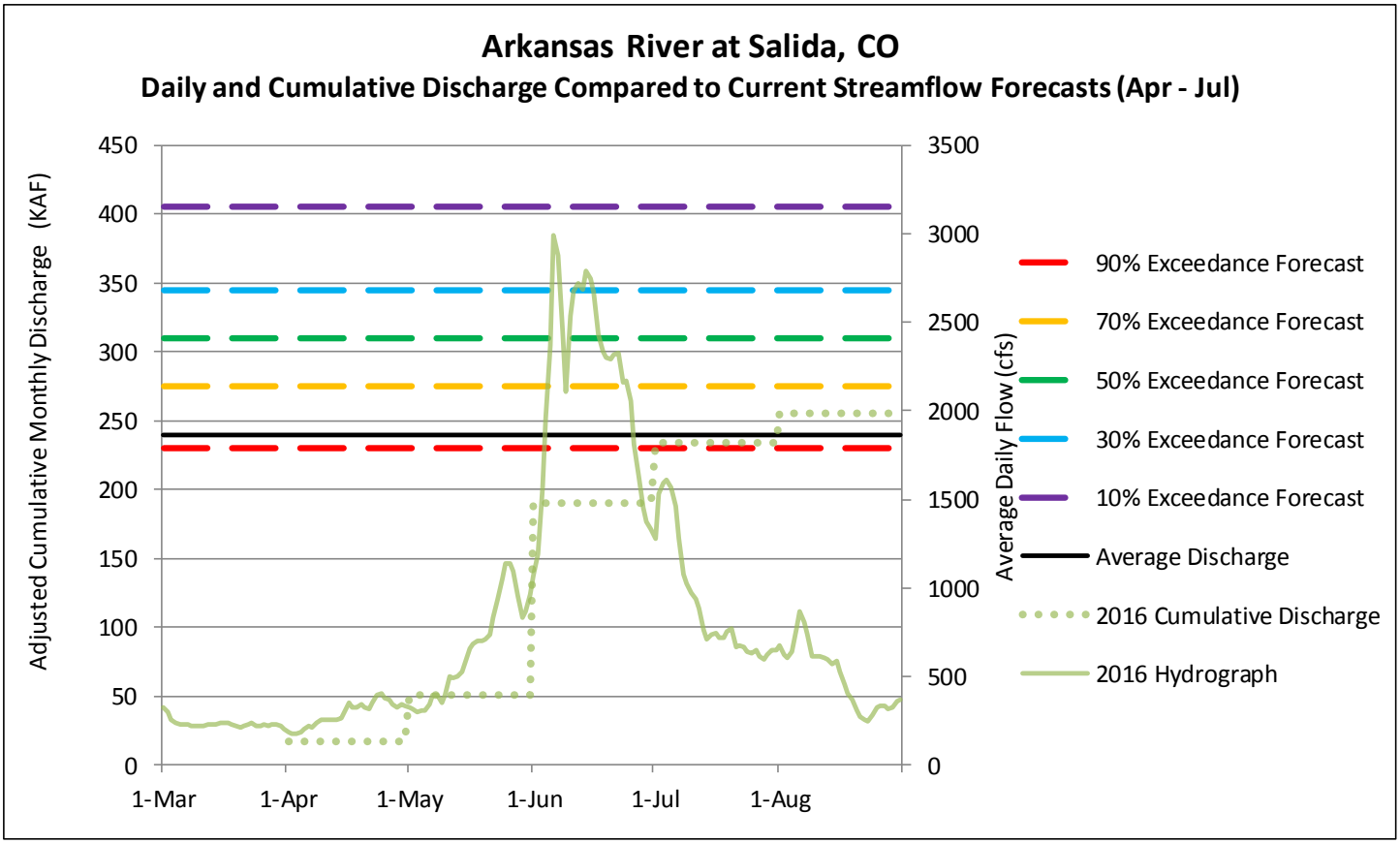
ARKANSAS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Chalk Ck nr Nathrop								
	APR-JUL	15.6	22	27	129%	32	41	21
	APR-SEP	19.8	27	33	127%	39	50	26
Arkansas R at Salida[2]								
	APR-JUL	230	275	310	129%	345	405	240
	APR-SEP	280	335	380	129%	425	495	295
Grape Ck nr Westcliffe								
	APR-JUL	4.7	11.9	18.6	117%	27	42	15.9
	APR-SEP	8.2	16.1	23	117%	31	45	19.6
Pueblo Reservoir Inflow[2]								
	APR-JUL	295	390	465	129%	545	675	360
	APR-SEP	385	500	585	129%	675	825	455
Huerfano R nr Redwing								
	APR-JUL	9	12.3	14.9	125%	17.7	22	11.9
	APR-SEP	12	16	19	125%	22	28	15.2
Cucharas R nr La Veta								
	APR-JUL	7.3	11.8	15.5	127%	19.7	27	12.2
	APR-SEP	8.9	13.8	17.7	126%	22	29	14.1
Trinidad Lake Inflow[2]								
	MAR-JUL	23	38	50	135%	64	88	37
	APR-SEP	28	46	61	130%	78	106	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Adobe Creek Reservoir	58.0	66.6	42.9	62.0
Clear Creek Reservoir	7.6	7.8	7.2	11.4
Cucharas Reservoir			5.5	40.0
Great Plains Reservoir	0.0	0.0	30.7	150.0
Holbrook Lake		2.1	3.6	7.0
Horse Creek Reservoir		18.9	12.0	27.0
John Martin Reservoir	120.3	232.0	135.9	616.0
Lake Henry	6.9	6.4	4.1	9.4
Meredith Reservoir	33.8	34.7	22.9	42.0
Pueblo Reservoir	226.9	249.6	187.5	354.0
Trinidad Lake	24.4	26.4	25.6	167.0
Turquoise Lake	66.3	74.3	86.3	127.0
Twin Lakes Reservoir	45.2	47.9	54.3	86.0
Basin-wide Total	589.4	745.7	597.4	1624.8
# of reservoirs	10	10	10	10

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
UPPER ARKANSAS BASIN	9	169%	114%
CUCHARAS & HUERFANO BASINS	4	139%	105%
PURGATOIRE RIVER BASIN	2	221%	117%
ARKANSAS RIVER BASIN	15	164%	111%



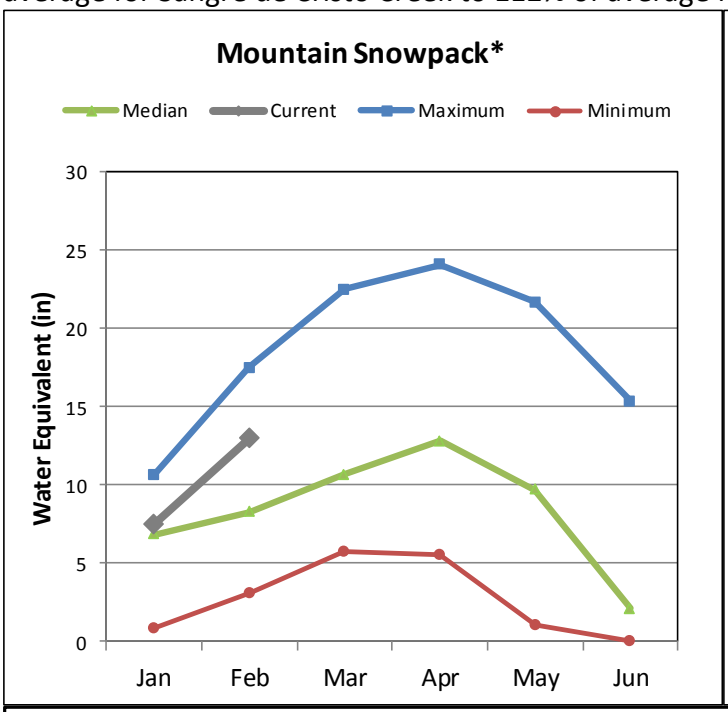


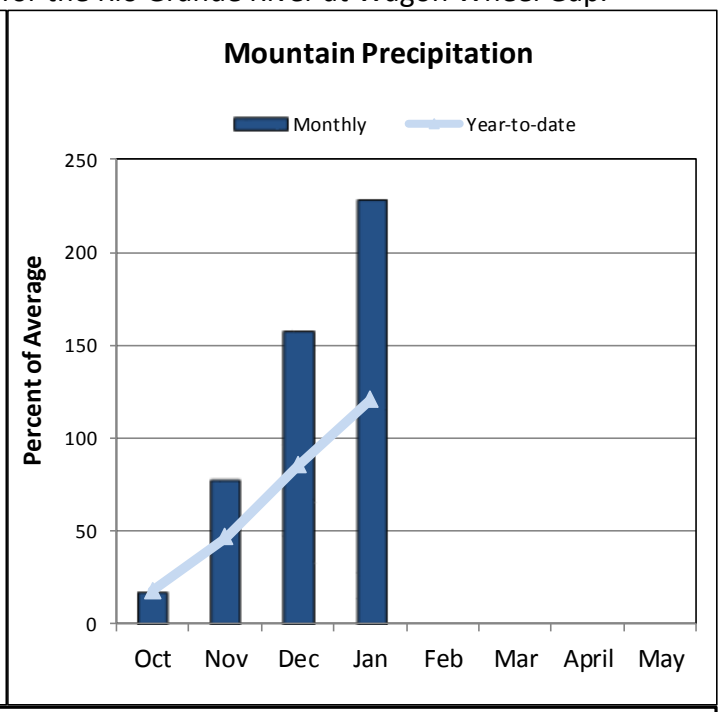
Please refer to the sections at the end of this report for further explanation concerning these graphs.

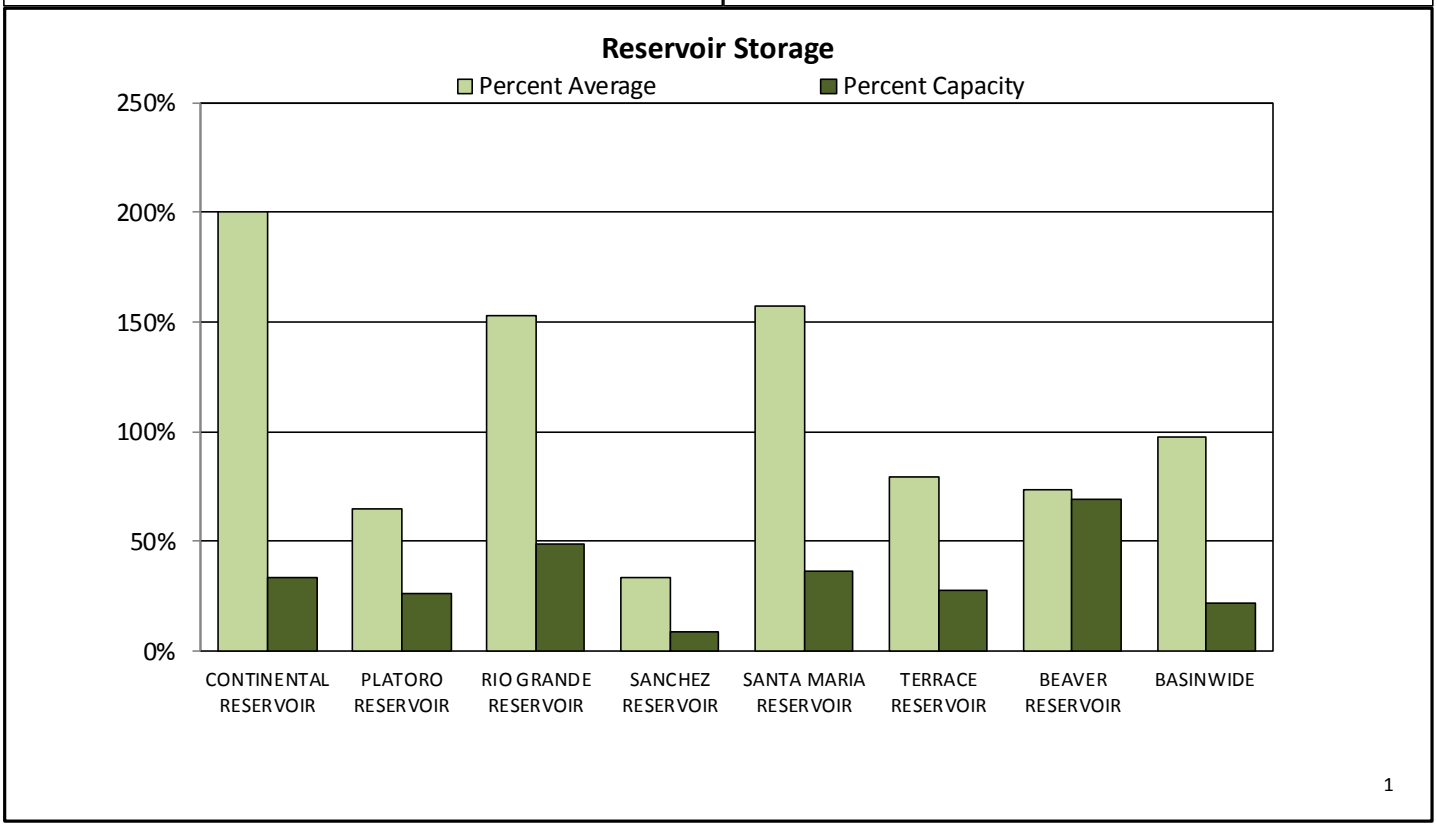
UPPER RIO GRANDE RIVER BASIN

February 1, 2017

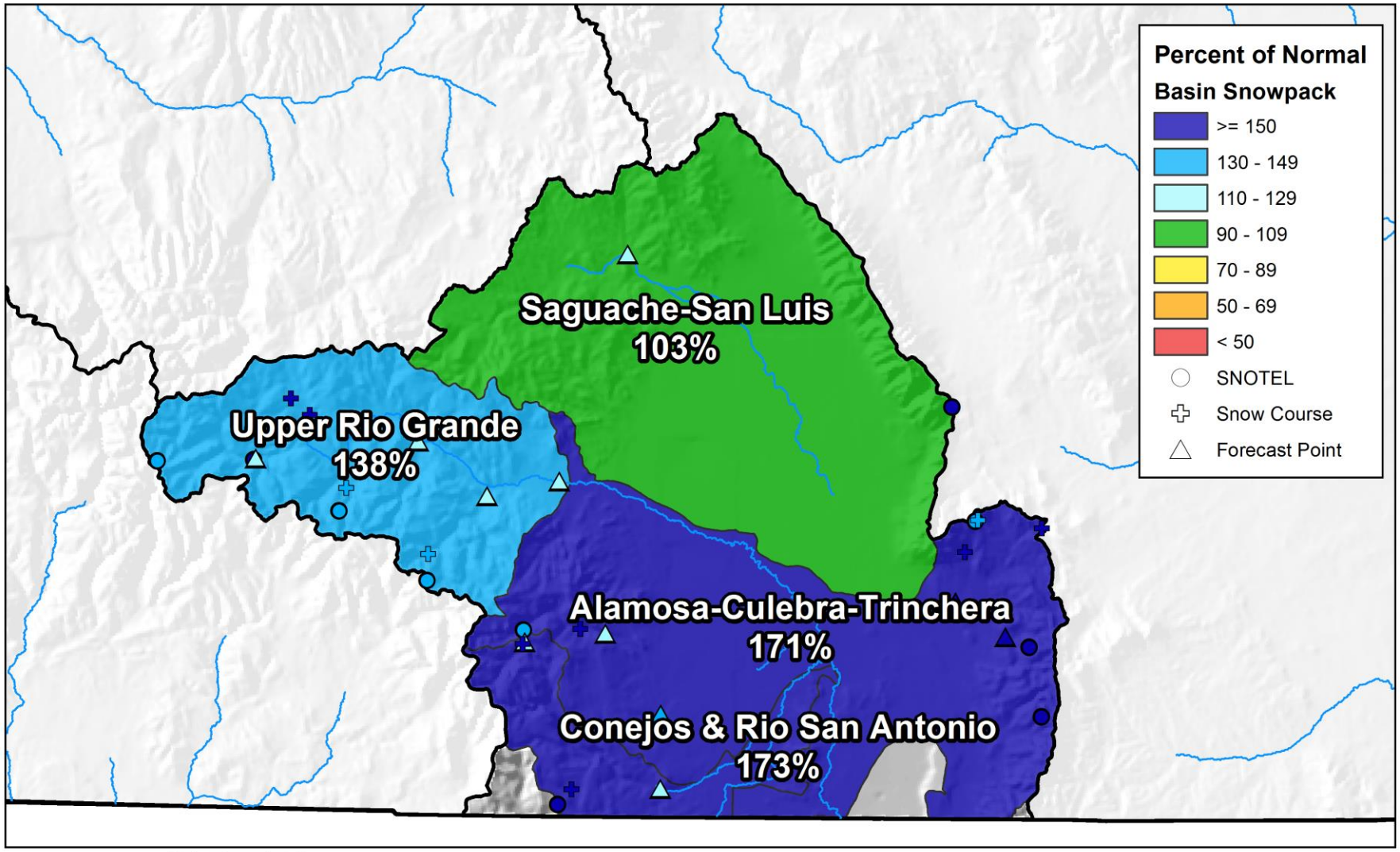
Snowpack in the Upper Rio Grande River basin is above normal at 154% of median. Precipitation for January was 227% of average which brings water year-to-date precipitation to 120% of average. Reservoir storage at the end of January was 89% of average compared to 90% last year. Streamflow forecasts range from 184% of average for Sangre de Cristo Creek to 112% of average for the Rio Grande River at Wagon Wheel Gap.







Upper Rio Grande River Basin Snowpack and Streamflow Forecasts
February 1, 2017



USDA United States Department of Agriculture

Natural Resources Conservation Service

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Upper Rio Grande Basin
Streamflow Forecasts - February 1, 2017

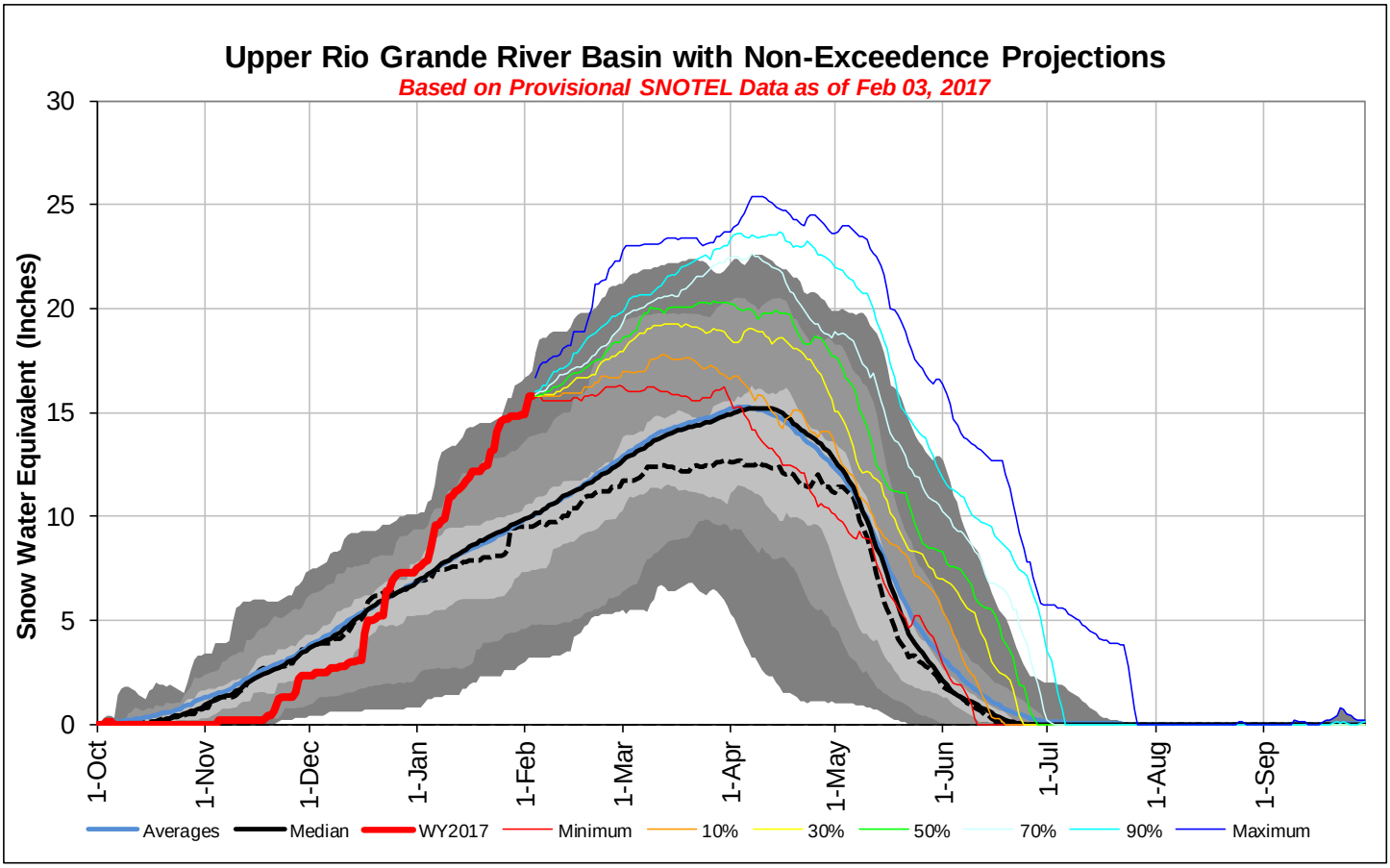
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

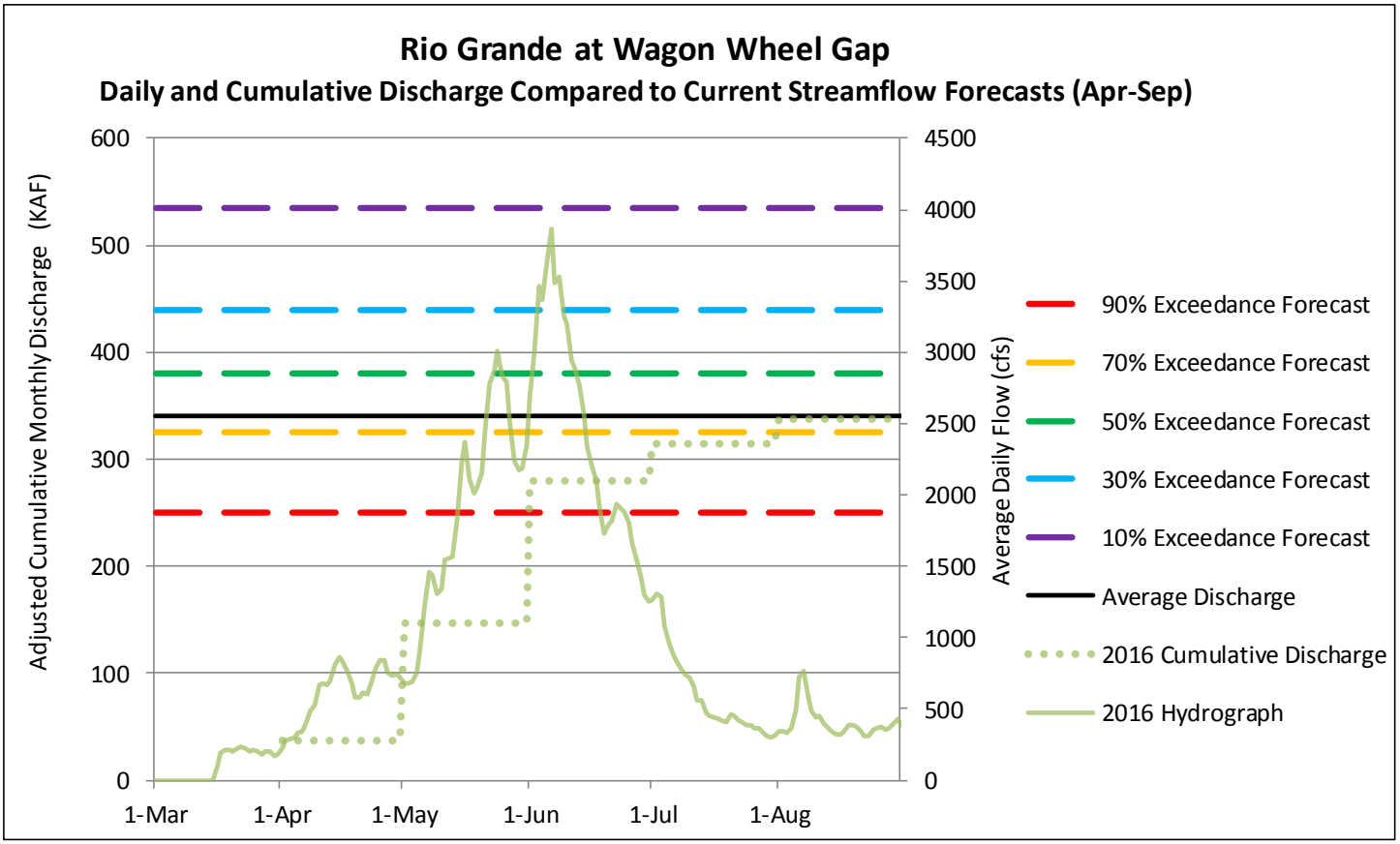
UPPER RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande at Thirty Mile Bridge[2]								
	APR-JUL	87	110	127	112%	145	174	113
	APR-SEP	98	124	144	112%	165	199	129
Rio Grande at Wagon Wheel Gap[2]								
	APR-SEP	250	325	380	112%	440	535	340
SF Rio Grande at South Fork[2]								
	APR-SEP	105	131	150	118%	170	200	127
Rio Grande nr Del Norte [2]								
	APR-SEP	395	515	600	117%	695	845	515
Saguache Ck nr Saguache								
	APR-SEP	23	32	40	125%	48	62	32
Alamosa Ck ab Terrace Reservoir								
	APR-SEP	57	71	81	119%	92	109	68
La Jara Ck nr Capulin								
	MAR-JUL	7.4	9.9	11.8	133%	13.9	17.2	8.9
Trinchera Ck ab Turners Ranch								
	APR-SEP	16.6	19.7	22	175%	24	28	12.6
Sangre de Cristo Ck [2]								
	APR-SEP	16.9	24	30	184%	36	47	16.3
Ute Ck nr Fort Garland								
	APR-SEP	13.8	18.5	22	172%	26	32	12.8
Platoro Reservoir Inflow								
	APR-JUL	48	58	65	116%	73	85	56
	APR-SEP	53	64	72	116%	81	95	62
Conejos R nr Mogote [2]								
	APR-SEP	179	220	250	129%	280	330	194
San Antonio R at Ortiz								
	APR-SEP	15.3	21	25	160%	30	37	15.6
Los Pinos R nr Ortiz								
	APR-SEP	78	96	110	151%	125	148	73
Culebra Ck at San Luis								
	APR-SEP	26	35	41	178%	48	59	23
Costilla Reservoir Inflow								
	MAR-JUL	12.4	15.5	17.8	160%	20	24	11.1
Costilla Ck nr Costilla [2]								
	MAR-JUL	31	40	46	177%	53	65	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Beaver Reservoir	3.1	1.5	4.2	4.5
Continental Reservoir	9.0	2.2	4.5	27.0
Platoro Reservoir	15.6	13.0	24.0	60.0
Rio Grande Reservoir	24.9	30.2	16.3	51.0
Sanchez Reservoir	9.2	12.4	27.6	103.0
Santa Maria Reservoir	16.5	19.5	10.5	45.0
Terrace Reservoir	4.9	4.8	6.2	18.0
Basin-wide Total	83.2	83.6	93.3	308.5
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
ALAMOSA CREEK BASIN	3	162%	98%
CONEJOS & RIO SAN ANTONIO BASINS	4	173%	103%
CULEBRA & TRINCHERA BASINS	4	165%	124%
HEADWATERS RIO GRANDE RIVER BASIN	11	138%	103%
UPPER RIO GRANDE BASIN	21	154%	107%



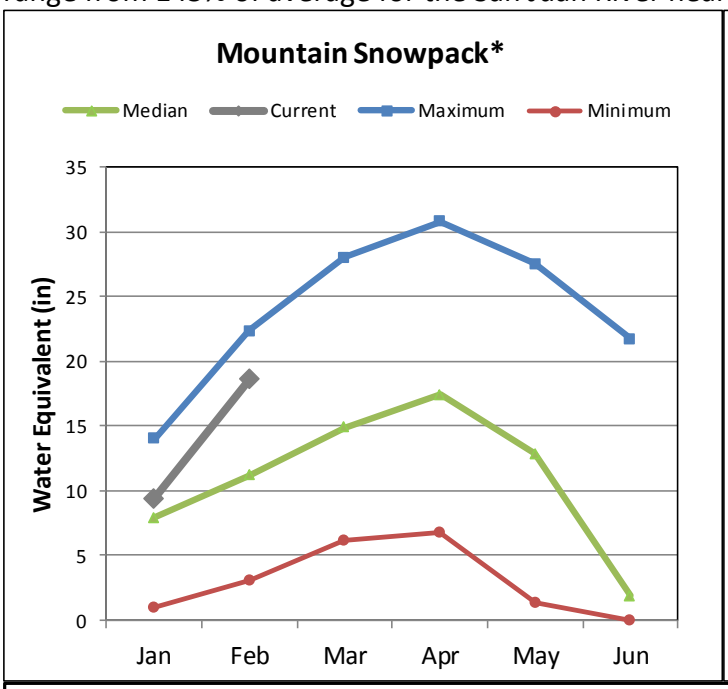


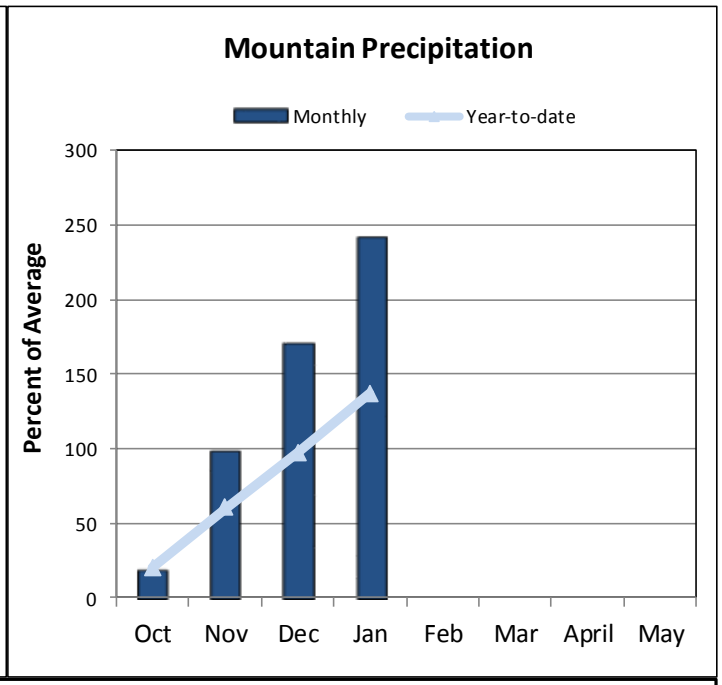
Please refer to the sections at the end of this report for further explanation concerning these graphs.

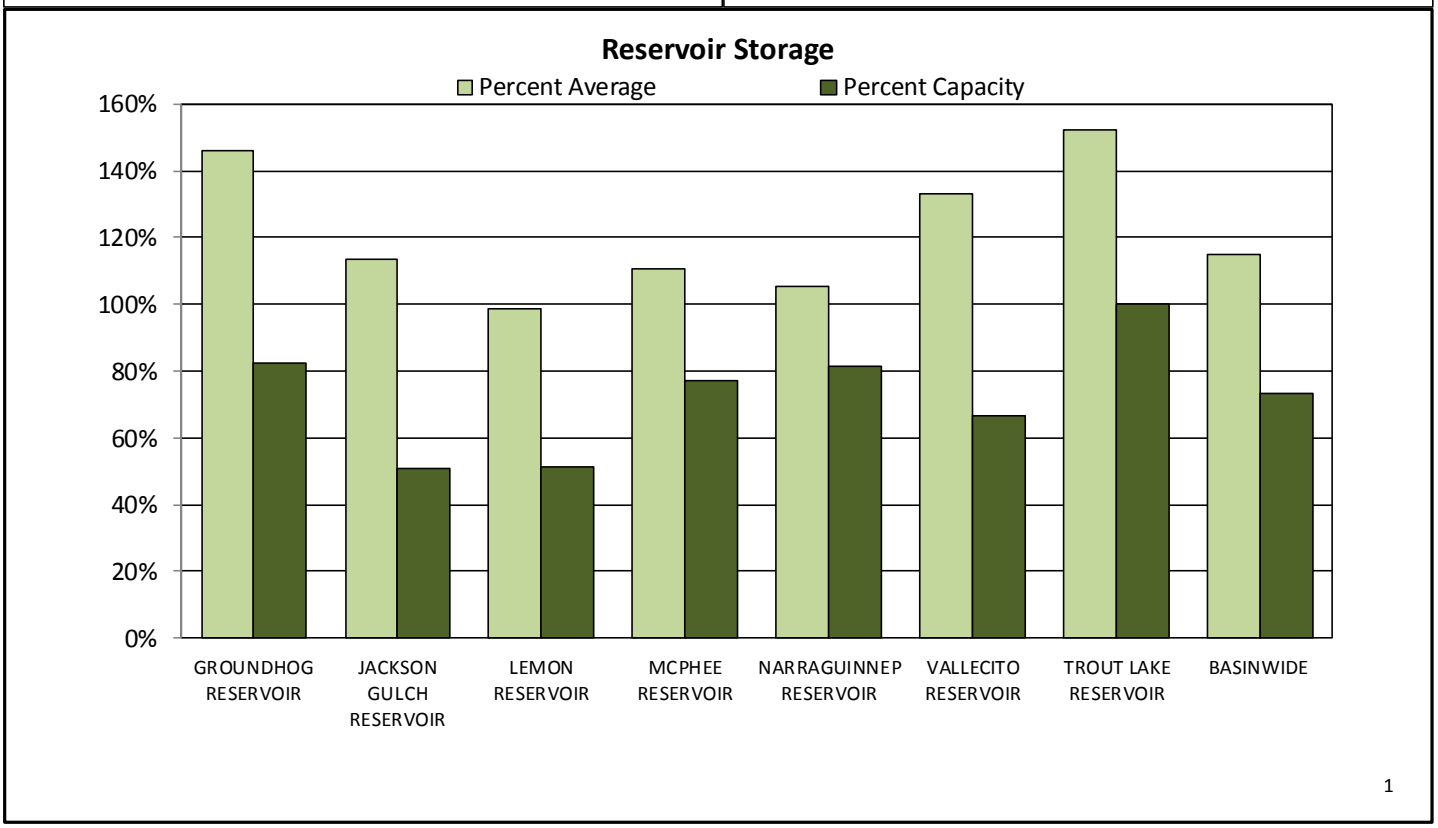
SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

February 1, 2017

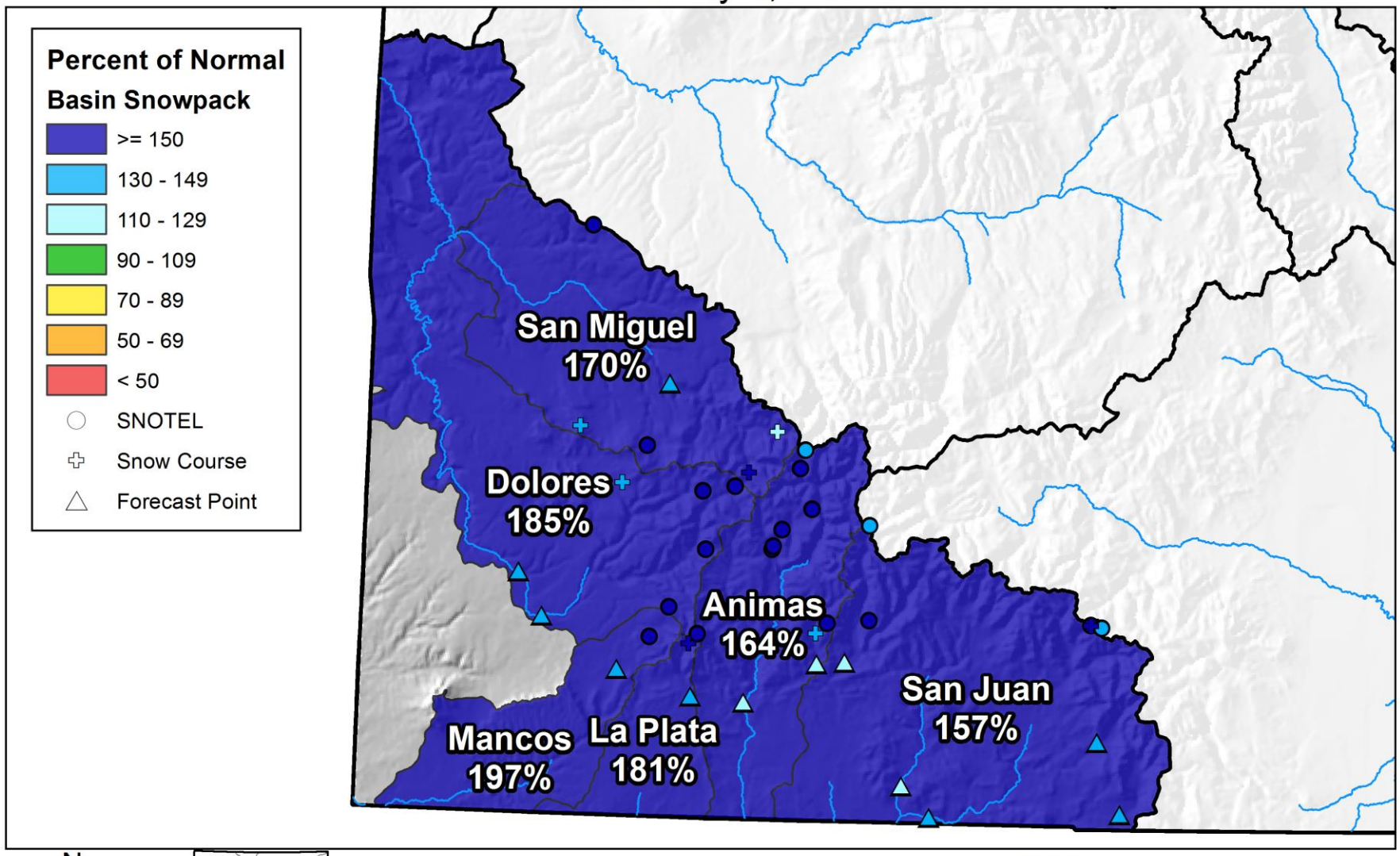
Snowpack in the combined southwest river basins is above normal at 169% of median. Precipitation for January was 240% of average which brings water year-to-date precipitation to 137% of average. Reservoir storage at the end of January was 115% of average compared to 103% last year. Current streamflow forecasts range from 145% of average for the San Juan River near Carracas to 116% for the inflow to Vallecito Reservoir.







San Miguel, Dolores, Animas, and San Juan River Basins
Snowpack and Streamflow Forecasts
February 1, 2017



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San Miguel-Dolores-Animas-San Juan River Basins
Streamflow Forecasts - February 1, 2017

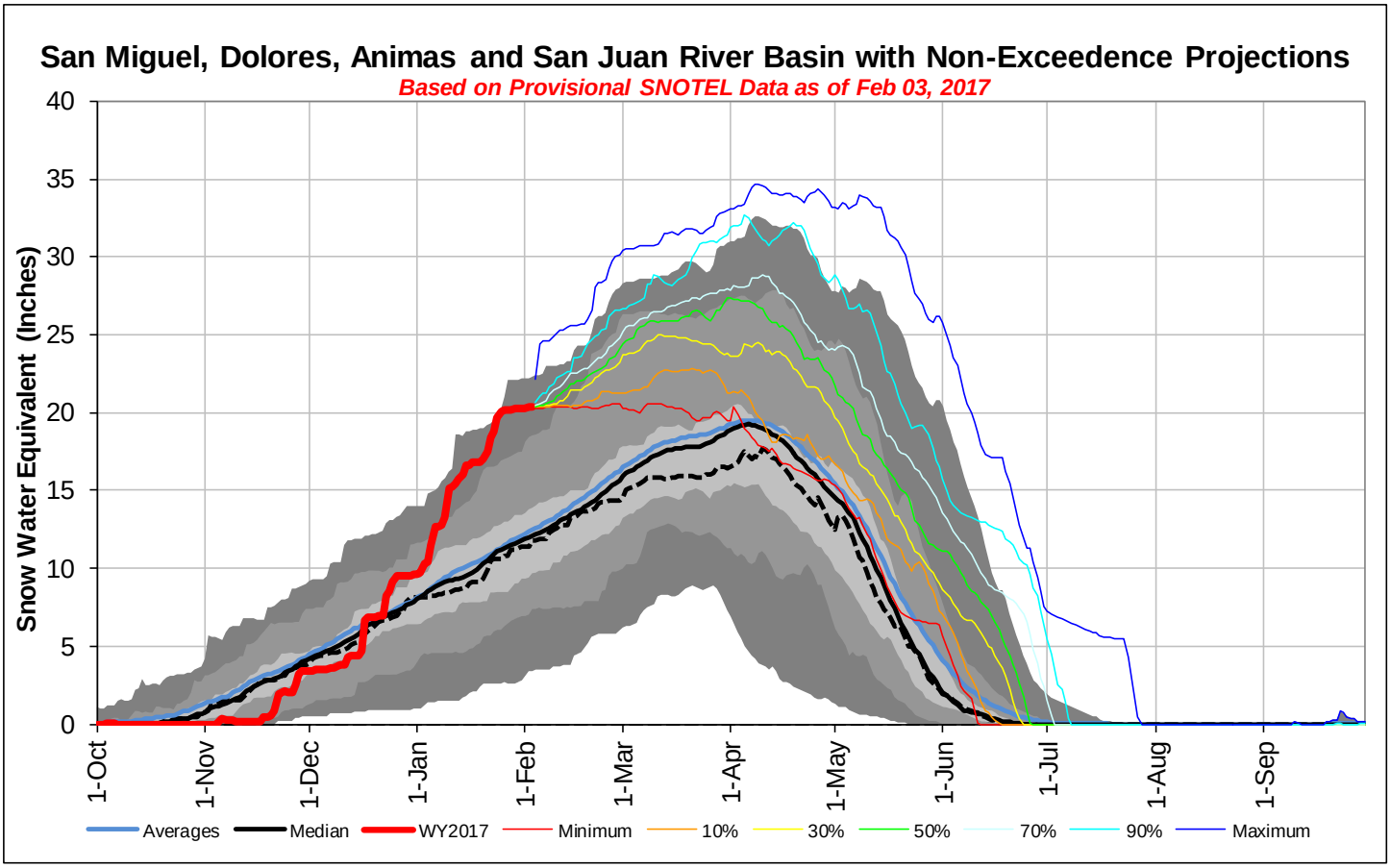
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

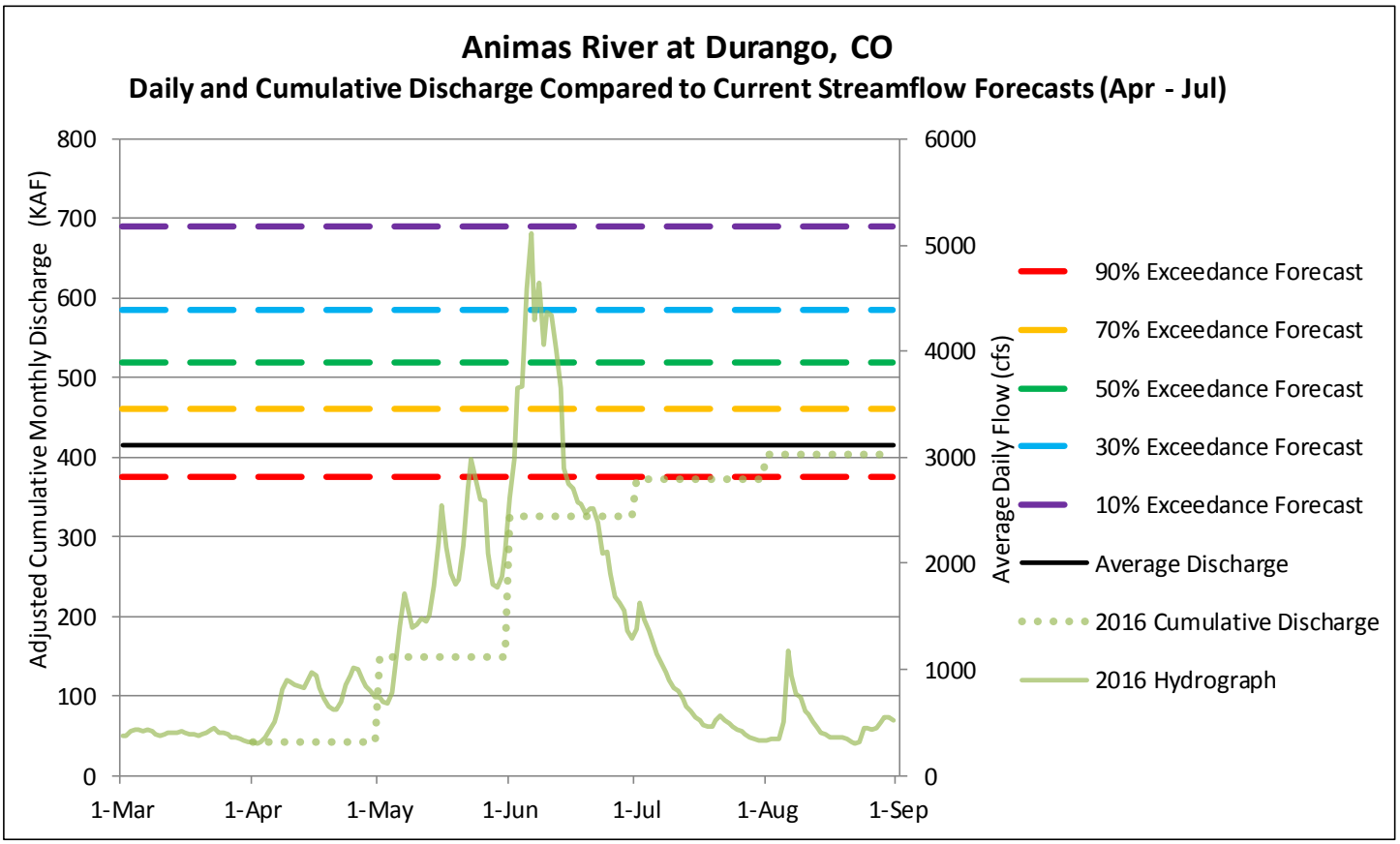
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dolores R at Dolores	APR-JUL	235	295	340	139%	390	470	245
McPhee Reservoir Inflow	APR-JUL	275	355	420	142%	485	590	295
San Miguel R nr Placerville	APR-JUL	114	146	170	133%	196	235	128
Cone Reservoir Inlet	APR-JUL	2.9	3.6	4.2	135%	4.8	5.7	3.1
Gurley Reservoir Inlet	APR-JUL	16.5	19.7	22	135%	24	28	16.3
Lilylands Reservoir Inlet	APR-JUL	2.1	3	3.7	137%	4.4	5.6	2.7
Rio Blanco at Blanco Diversion [2]	APR-JUL	51	65	75	139%	86	104	54
Navajo R at Oso Diversion [2]	APR-JUL	61	78	90	138%	103	125	65
San Juan R nr Carracas [2]	APR-JUL	370	475	550	145%	635	765	380
Piedra R nr Arboles	APR-JUL	170	220	255	121%	295	355	210
Vallecito Reservoir Inflow	APR-JUL	161	199	225	116%	255	300	194
Navajo Reservoir Inflow [2]	APR-JUL	650	815	940	128%	1070	1290	735
Animas R at Durango	APR-JUL	375	460	520	125%	585	690	415
Lemon Reservoir Inflow	APR-JUL	44	56	65	118%	74	90	55
La Plata R at Hesperus	APR-JUL	22	27	31	135%	35	42	23
Mancos R nr Mancos [2]	APR-JUL	28	36	43	139%	50	61	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Groundhog Reservoir	18.1	19.1	12.4	22.0
Jackson Gulch Reservoir	5.1	5.2	4.5	10.0
Lemon Reservoir	20.6	21.1	20.9	40.0
Mcphee Reservoir	294.5	246.3	266.4	381.0
Narraguinnep Reservoir	15.5	15.8	14.7	19.0
Trout Lake Reservoir	3.2	2.6	2.1	3.2
Vallecito Reservoir	84.2	85.1	63.3	126.0
Basin-wide Total	441.2	395.2	384.3	601.2
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis February 1, 2017	# of Sites	% Median	Last Year % Median
ANIMAS RIVER BASIN	11	164%	111%
DOLORES RIVER BASIN	6	193%	145%
SAN MIGUEL RIVER BASIN	4	185%	150%
SAN JUAN RIVER BASIN	4	157%	113%
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	24	169%	122%





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

How to Read Non-Exceedance Projections Graphs

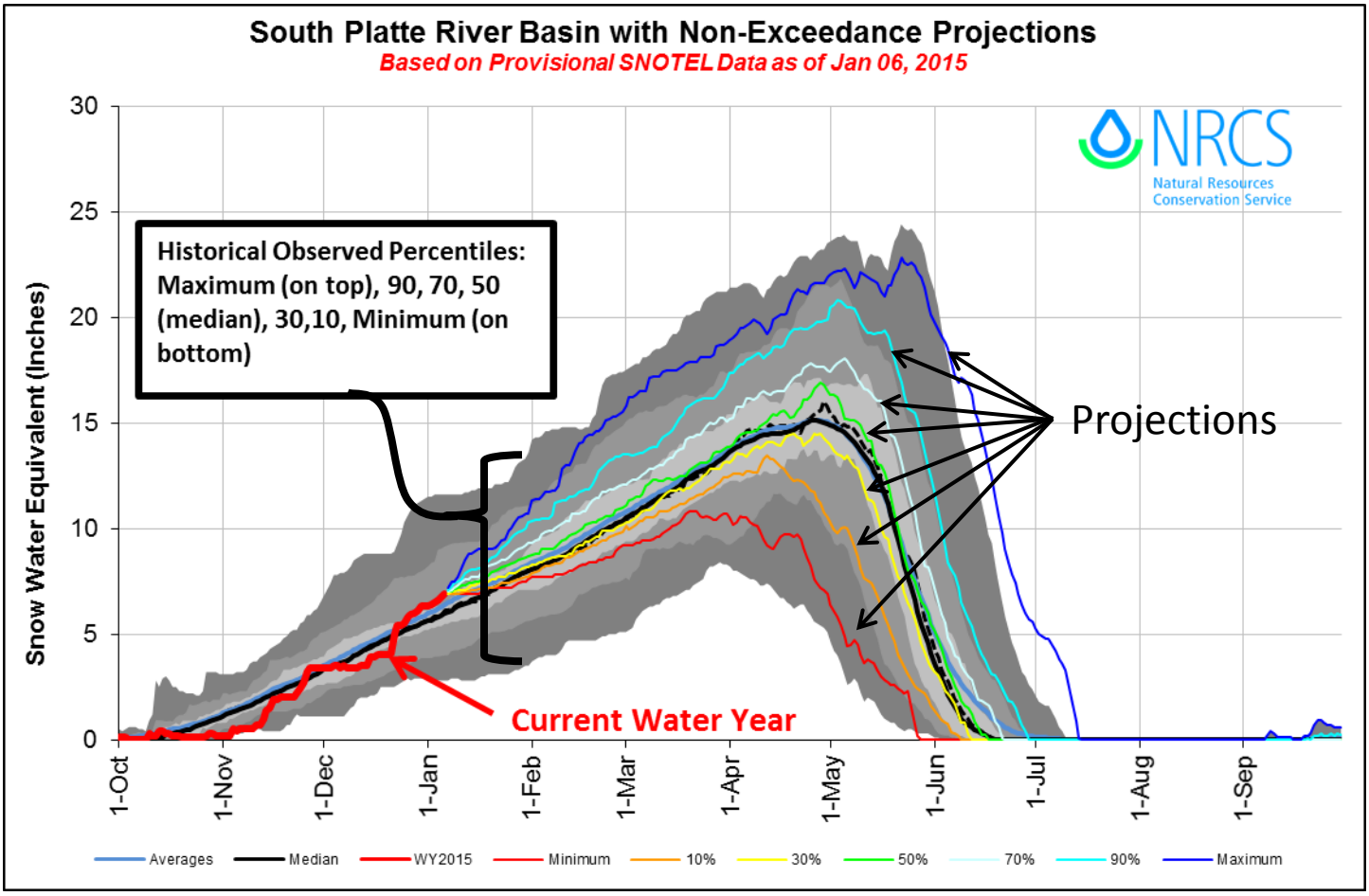
The graphs show snow water equivalent (SWE) projections (in inches) for the October 1 through September 30 water year. Basin "observed" SWE values are computed using SNOTEL sites which are characteristic of the snowpack of the particular basin. The SWE observations at these sites are averaged and normalized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

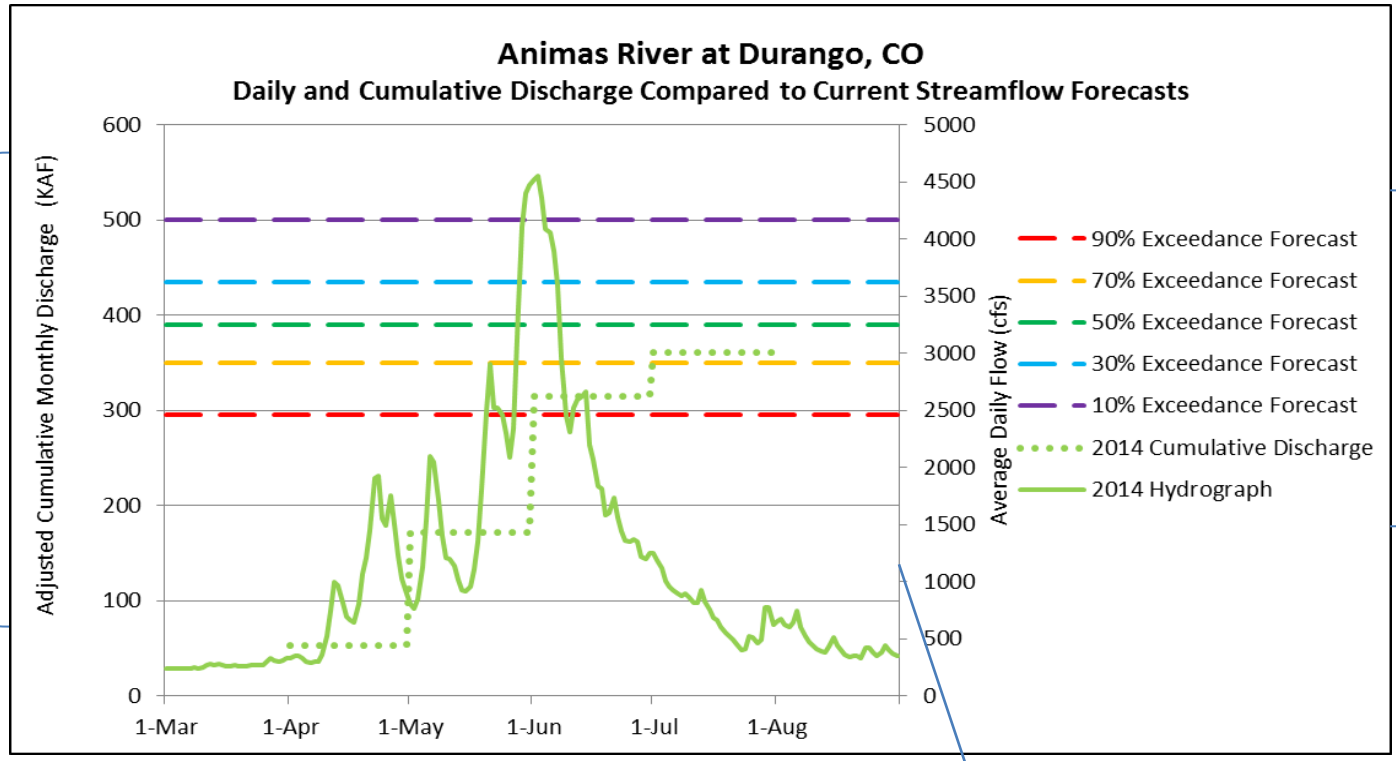
For more detailed information on these graphs visit:
http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_062291.pdf



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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