



United States  
Department of  
Agriculture

# Wyoming Basin Outlook Report

## April 1, 2016

Natural  
Resources  
Conservation  
Service



Cold Springs SNOTEL #405 (Shoshone Forest above Lander, WY) ID O9F25S

# Basin Outlook Reports

## And

### Federal - State - Private Cooperative Snow Surveys

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*For more water supply and resource management information, contact:*

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#### *How forecasts are made*

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

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

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

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# Wyoming Water Supply Outlook Report

## General

The snow water equivalent (SWE) across Wyoming is at median for Apr. 1<sup>st</sup> at 100%. Monthly precipitation for the basins was 109-200% of average for an overall average of 150%. The year-to-date precipitation average for Wyoming basins is now at 90% varying from 98-231% of average. Forecasted runoff varies from 60-110% of average across the Wyoming basins for an overall average of 94%. Basin reservoir levels for Wyoming vary from 67-185% of average for an overall average of 121%.

## Snowpack

Snow water equivalent (SWE), across Wyoming is at median for April 1<sup>st</sup> at 100%. SWE in the Cheyenne River Basin of Wyoming is the lowest at 65% of median. While SWE in the South Platte River Basin is the highest at 137% of median. *See Appendix A for further information.*

## Precipitation

Last month's precipitation was way above average across the Wyoming Mountains at 150% of average. The Sweetwater River Basin had the highest precipitation for the month at 200% of average. The Little Cheyenne River Basin had the lowest precipitation amount at 109% of average. The following table displays the major river basins and their departure from average for last month.

Basin	Departure from average	Basin	Departure from average
Snake River	+27%	Upper North Platte River	+59%
Madison-Gallatin	+11%	Sweetwater River	+100%
Yellowstone River	+16%	Lower North Platte River	+78%
Wind River	+95%	Laramie River	+80%
Bighorn River	+46%	South Platte River	+82%
Shoshone River	+28%	Little Snake River	+41%
Powder River	+30%	Upper Green River	+37%
Tongue River	+29%	Lower Green River	+54%
Belle Fourche River	+47%	Upper Bear River	+30%
Cheyenne River	+09%		

*See Appendix B for further information.*

## Streams

Stream flow yields for April thru September are below average over Wyoming at 94%. The Snake River, Madison, and Upper Yellowstone River Basins should yield about 96%, 89% and 96% of average, respectively. Yields from the Wind and Bighorn River Basins should be about 110% and 104% of average, respectively. Yields from the Shoshone and Clarks Fork River Basins of Wyoming should be about 103% and 96% of average, respectively. Yields from the Powder & Tongue River Basins should be about 77% and 65% of average, respectively. Yield for the Cheyenne River Basin should be about 60% of average. Yields for the Upper North Platte, Sweetwater, Lower North Platte, and Laramie Rivers of Wyoming should be about 98%, 73%, 98%, and 109% of average, respectively. Yields for the Little Snake, Green River, and Smith's Fork of Wyoming should be 75%, 85%, and 91% of average respectively. *See Appendix C for further information.*

## Reservoirs

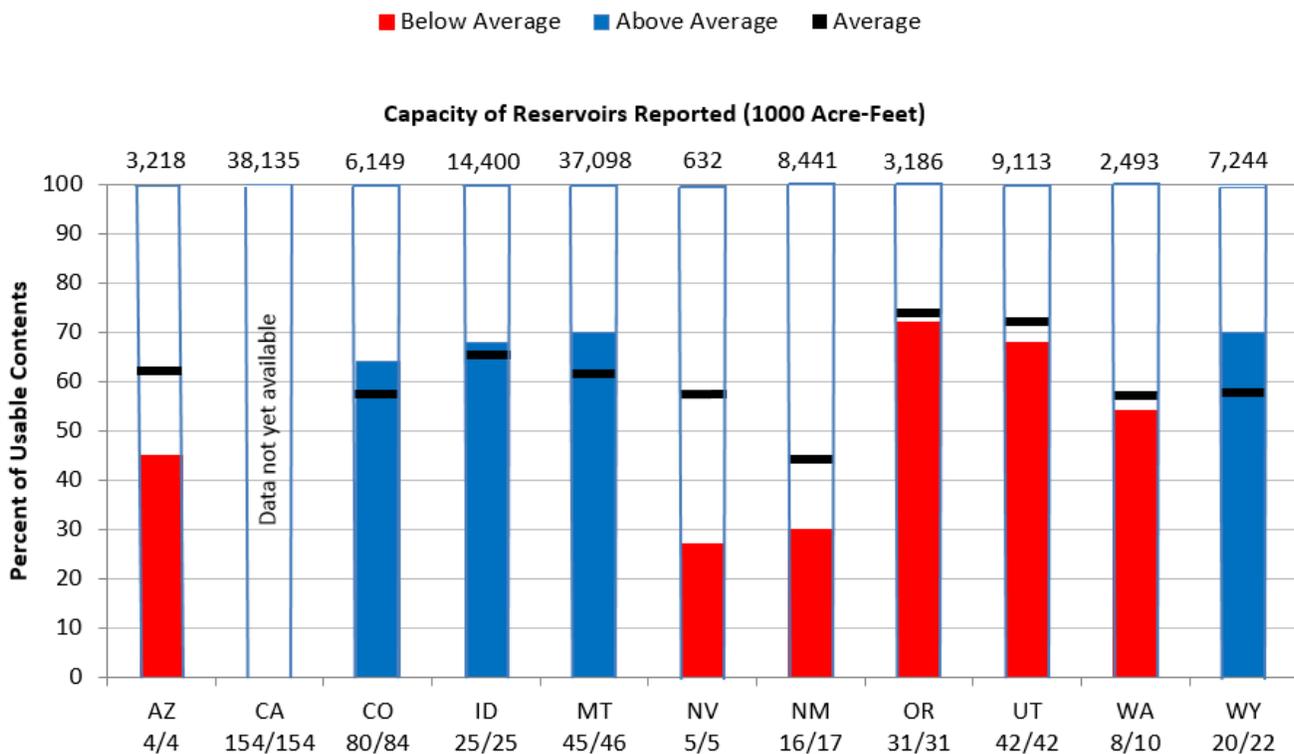
Reservoir storage is above average at 120% for the entire state. Reservoirs in the Snake River Basin are above average at 116%. Reservoirs in the Madison-Gallatin Basin are above average at 107%. Reservoirs in the Wind River Basin are above average at 109%. Reservoirs on the Big Horn are above average at 106%. The Buffalo Bill Reservoir on the Shoshone is above average at 124%. The Tongue River Basin Reservoir is above average at 180%. Reservoirs in the Belle Fourche and Cheyenne River Basins are above average in storage at 127 & 116% respectively. Reservoirs on the Upper and Lower North Platte River are above average at 147% and 122% respectively. Reservoirs on the Laramie and Little Snake River basins are at 138% and 89% respectively. Reservoirs on the Upper Green River

are above average at 113%. Reservoirs on the Lower Green River Basin are above average at 105%. Reservoir on the Upper Bear River Basin is above average at 134%. *See below & Appendix D for further information.*

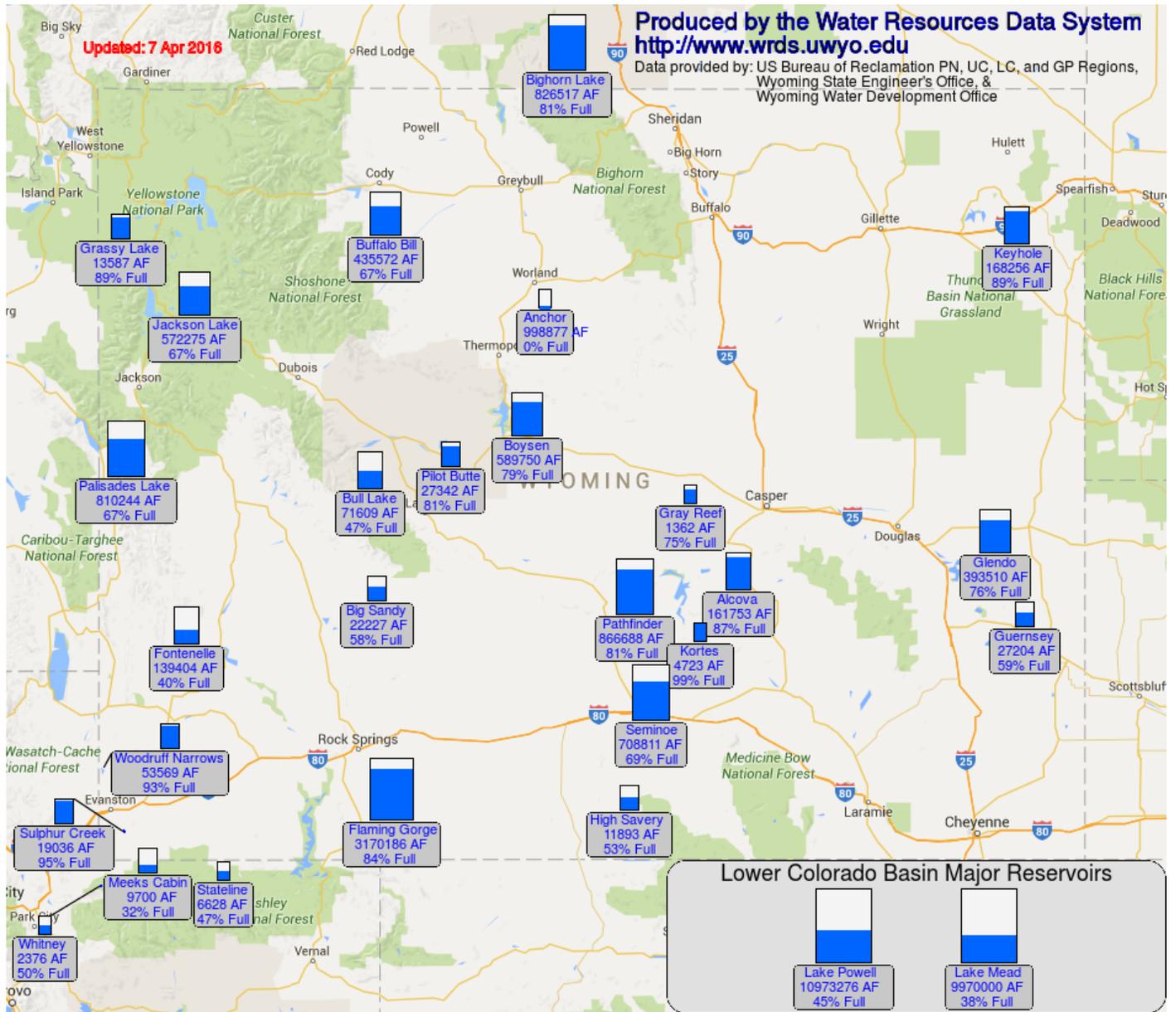
### Wyoming Reservoir Levels for April 4<sup>th</sup>, 2016

WYOMING	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Alova	157.1	157.1	155.8	184.3	85%	85%	85%	101%	101%
Bighorn Lake	836.5	887.7	797.1	1356.0	62%	65%	59%	105%	111%
Big Sandy	19.6	21.7	17.7	38.3	51%	57%	48%	111%	123%
Boysen	541.2	627.1	495.8	596.0	91%	105%	83%	109%	126%
Buffalo Bill	428.1	462.3	350.7	646.6	66%	71%	54%	122%	132%
Bull Lake	70.4	105.2	75.4	151.8	46%	69%	50%	93%	140%
Fontenelle	149.0	209.3	127.6	344.8	43%	61%	37%	117%	164%
Glendo	319.1	252.5	342.9	506.4	63%	50%	68%	93%	74%
Grassy Lake	13.3	12.9	12.1	15.2	87%	85%	80%	110%	107%
Guemsey	21.3	24.7	15.2	45.6	47%	54%	33%	140%	162%
High Savery Reservoir	11.0	14.1	12.0	22.4	49%	63%	53%	92%	118%
Jackson Lake	564.7	646.2	434.7	847.0	67%	76%	51%	130%	149%
Kendrick Project		723.4		1201.7		60%			
Keyhole	168.1	173.0	90.6	193.8	87%	89%	47%	185%	191%
Meeks Cabin Reservoir	8.0	23.9	11.9	32.5	25%	73%	37%	67%	201%
North Platte Project		796.1		1062.1		75%			
Pathfinder	865.7	697.3	582.4	1016.5	85%	69%	57%	149%	120%
Pilot Butte	24.8	23.1	23.3	31.6	78%	73%	74%	108%	99%
Seminole	696.8	713.0	493.1	1016.7	69%	70%	49%	141%	145%
Viva Naughton Res	29.7	29.9	28.8	42.4	70%	71%	68%	103%	104%
Wheatland #2	58.4	76.5	43.9	98.9	59%	77%	44%	133%	174%
Woodruff Narrows Reservoir	42.3	45.1	31.6	57.3	74%	79%	55%	134%	143%
Basin-wide Total	5025.0	5202.6	4142.6	7244.1	69%	72%	57%	121%	126%
# of reservoirs	20	20	20	20	20	20	20	20	20

### Reservoir Storage as of April 1, 2016



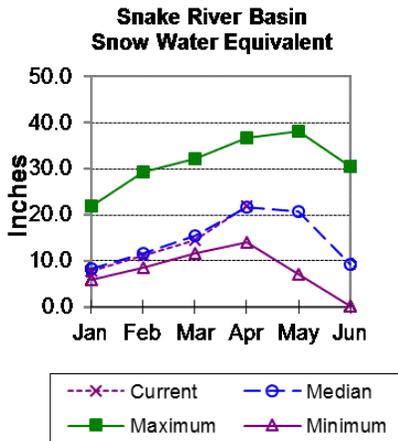
Prepared by: USDA Natural Resources Conservation Service  
National Water and Climate Center, Portland, OR  
[www.wcc.nrcs.usda.gov](http://www.wcc.nrcs.usda.gov)



# Snake River Basin

## Snow

The Snake River Basin SWE above Palisades is 101% of median. SWE in the Snake River Basin above Jackson Lake is 101% of median. Pacific Creek Basin SWE is 107 % of median. Buffalo Fork SWE is 110% of median. Gros Ventre River Basin SWE is 100% of median. SWE in the Hoback River drainage is 94% of median. SWE in the Greys River drainage is 109% of median. In the Salt River Basin SWE is 102% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



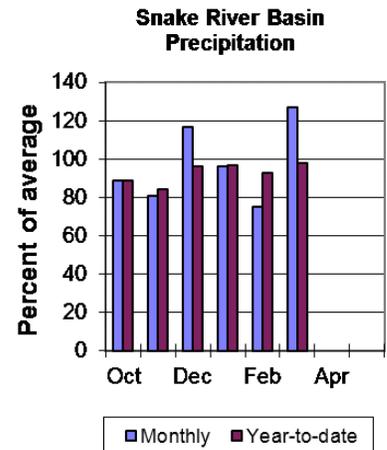
## Precipitation

Last month's precipitation for the Snake River Basin was 127% of average (40% last year). Percentages range from 88-180% of average for the 28 reporting stations. Water-year-to-date precipitation is 98% of average for the Snake River Basin (84% last year). Year-to-date percentages range from 87-124% of average.

## Reservoirs

Current reservoir storage is 116% of average for the three storage reservoirs in the basin. Grassy Lake storage is about 110% of average (13,500 ac-ft compared to 13,100 last year). Jackson Lake storage is 133% of

average (570,900 ac-ft compared to 646,200 ac-ft last year). Palisades Reservoir storage is about 108% of average (797,100 ac-ft compared to 1,250,200 ac-ft last year). *Detailed reservoir data shown on the following page and in Appendix D.*



## Streamflow

The 50% exceedance forecasts for April through September are slightly below average for this basin. The Snake near Moran yield is 795,000 ac-ft (94% of average). Snake River above Reservoir near Alpine will yield about 2,280,000 ac-ft (91% of average). The Snake near Irwin will yield about 3,360,000 ac-ft (96% of average). The Snake near Heise will be about 3,640,000 ac-ft (96% of average). Pacific Creek near Moran Yield will be around 159,000 ac-ft (92% of average). Buffalo Fork above Lava near Moran yield will be around 305,000 ac-ft (95% of average). Greys River above Palisades Reservoir yield will be around 355,000 ac-ft (99% of average). Salt River near Etna yield will be around 375,000 ac-ft (101% of average). *See the following page for further information.*

### Snake River Basin Streamflow Forecasts - April 1, 2016

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

SNAKE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Snake R nr Moran <sup>2</sup>	APR-JUL	590	665	720	94%	770	850	765
	APR-SEP	645	735	795	94%	860	950	845
Snake R ab Reservoir nr Alpine <sup>2</sup>	APR-JUL	1670	1860	1980	91%	2110	2290	2170
	APR-SEP	1910	2130	2280	91%	2430	2650	2500
Snake R nr Irwin <sup>2</sup>	APR-JUL	2330	2660	2880	96%	3110	3440	3010
	APR-SEP	2730	3100	3360	96%	3610	3980	3500
Snake R nr Heise <sup>2</sup>	APR-JUL	2510	2860	3100	96%	3340	3690	3240
	APR-SEP	2980	3370	3640	96%	3910	4300	3780
Pacific Ck at Moran	APR-JUL	107	133	150	91%	168	194	164
	APR-SEP	114	141	159	92%	177	205	173
Buffalo Fk ab Lava Ck nr Moran	APR-JUL	215	245	270	96%	290	325	280
	APR-SEP	235	275	305	95%	330	370	320
Greys R ab Reservoir nr Alpine	APR-JUL	255	285	305	100%	330	360	305
	APR-SEP	295	330	355	99%	385	420	360
Salt R ab Reservoir nr Etna	APR-JUL	210	265	305	102%	345	400	300
	APR-SEP	265	330	375	101%	420	485	370

- 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

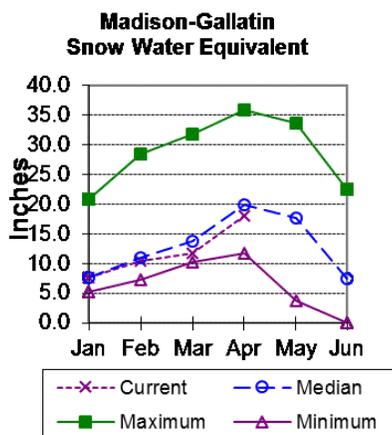
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Grassy Lake	13.5	13.1	12.3	15.2
Jackson Lake	570.9	646.2	430.7	847.0
Palisades Reservoir	979.1	1250.2	902.8	1400.0
Basin-wide Total	1563.5	1909.6	1345.8	2262.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	9	101%	71%
PACIFIC CREEK	3	107%	86%
BUFFALO FORK	3	110%	90%
GROS VENTRE RIVER	4	100%	91%
HOBACK RIVER	5	94%	92%
GREYS RIVER	5	109%	93%
SALT RIVER	5	102%	74%
SNAKE RIVER BASIN	31	101%	80%

# Madison-Gallatin Rivers Basin

## Snow

SWE is 91% of median in the Madison-Gallatin drainage. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Last month precipitation in the Madison-Gallatin drainage was 111% of average (22% last year). The six reporting stations percentages range from 80-124% of average. Water-year-to-date precipitation is about 88% of average, which was 65% last year. Year to date percentage ranges from 82-96%.

## Reservoirs

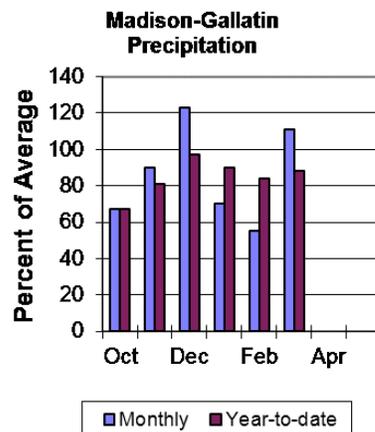
Ennis Lake is storing about 30,700 ac-ft of water (75% of capacity, 104% of average or 97% last year). Hebgen Lake is storing about 291,500 ac-ft of water (77%

of capacity, 108% of average, 138% last year). *Detailed reservoir data shown below & in Appendix D.*

## Streamflow

The 50% exceedance forecast for April through September is below average for the basin. Hebgen Reservoir inflow is 420,000 ac-ft (89% of average). *See below for detailed runoff volumes.*

Data Current as of: 4/6/2016 8:10:30 AM



## Madison-Gallatin River Basins Streamflow Forecasts - April 1, 2016

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

MADISON-GALLATIN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Hebgen Reservoir Inflow	APR-JUL	280	310	330	89%	350	380	370
	APR-SEP	360	395	420	89%	445	480	470

- 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

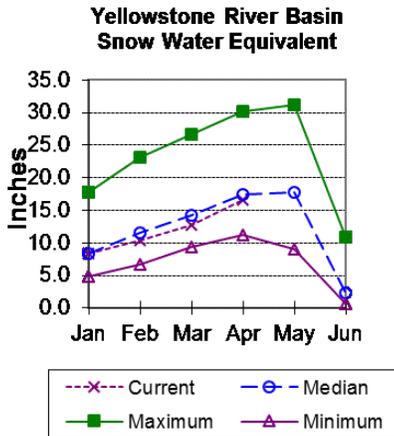
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Ennis Lake	30.7	28.5	29.5	41.0
Hebgen Lake	291.5	314.1	270.4	378.8
Basin-wide Total	322.1	342.6	299.9	419.8
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
MADISON-GALLATIN RIVER BASINS	8	91%	57%

# Yellowstone River Basin

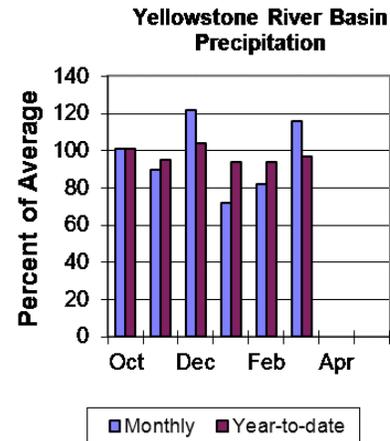
## Snow

SWE in the Yellowstone River Basin is 96% of median. SWE in the Yellowstone River Drainage in WY is 97% of median. SWE in the Clarks Fork Drainage of the Yellowstone River Basin in Wyoming is 96% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Last month's precipitation in the Yellowstone River Basin was 116% of average (39% last year). The 16 reporting stations percentages range from 80-270% of average. Water-year-to-date precipitation is 97% of average, which was 91% last year. Year to date percentages range from 84-160%.



## Reservoirs

No reservoir data

## Streamflow

The 50% exceedance forecasts for April through September are slightly below average for the basin. Yellowstone at Lake Outlet will yield around 725,000 ac-ft (94% of average). Yellowstone at Corwin Springs will yield around 1,800,000 ac-ft (96% of average). Yellowstone near Livingston will yield around 2,060,000 ac-ft (96% of average). Clarks Fork of the Yellowstone near Belfry will yield around 530,000 ac-ft (96% of average). *See the following for further information.*

Data Current as of: 4/6/2016 8:10:31 AM

### Yellowstone River Basin Streamflow Forecasts - April 1, 2016

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

YELLOWSTONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet	APR-JUL	450	505	545	95%	585	640	575
	APR-SEP	600	675	725	94%	775	850	770
Yellowstone R at Corwin Springs	APR-JUL	1250	1420	1530	96%	1640	1810	1590
	APR-SEP	1450	1660	1800	96%	1940	2150	1880
Yellowstone R at Livingston	APR-JUL	1380	1590	1740	97%	1890	2100	1800
	APR-SEP	1630	1890	2060	96%	2230	2490	2140
Clarks Fk Yellowstone R nr Belfry <sup>2</sup>	APR-JUL	405	455	490	96%	525	575	510
	APR-SEP	435	490	530	96%	570	625	550

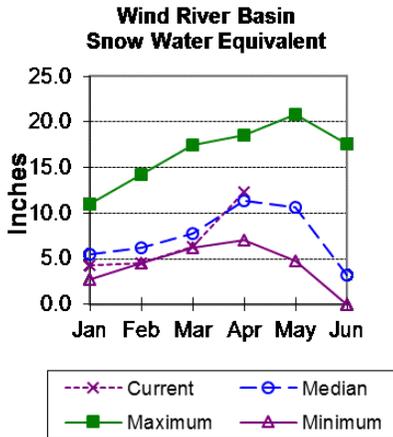
- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
YELLOWSTONE RIVER in WY	8	97%	78%
CLARKS FORK in WY	8	96%	92%

# Wind River Basin

## Snow

Wind River Basin above Boysen Reservoir SWE is 108% of median. SWE in the Wind River above Dubois is 93% of median. Little Wind SWE is 116% of median, and Popo Agie drainage SWE is 118% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

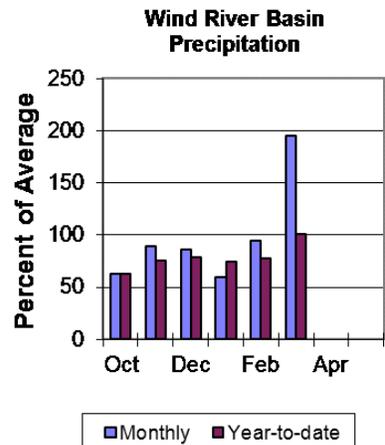
Last month's basin's precipitation varied from 104-317% of average. Precipitation for the basin was 195% of average (40% last year) from the 11 reporting stations. Water year-to-date precipitation is 101% of average and was 79% last year at this time. Year-to-date percentages range from 77-135% of average.

## Reservoirs

Current storage in Bull Lake is 70,600 ac-ft (94% of average) (139% last year). Boysen Reservoir is storing (546,000 ac-ft) about 112% of average 127% last year). Pilot Butte is at 100% of average (24,700 ac-ft) (92% last year). *Detailed reservoir data shown on the following page and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September runoff period are below average. Dinwoody Creek near Burris should yield around 94,000 ac-ft (102% of average). The Wind River above Bull Lake Creek will yield around 500,000 ac-ft (102% of average). Bull Lake Creek near Lenore will yield around 183,000 ac-ft (108% of average). Wind River at Riverton will yield around 560,000 ac-ft (102% of average). Little Popo Agie River near Lander should yield around 55,000 ac-ft (112% of average). South Fork of Little Wind near Fort Washakie will yield around ac-ft (% of average). Little Wind River near Riverton will yield around 340,000 ac-ft (115% of average). Boysen Reservoir inflow will yield around 730,000 ac-ft (110% of average). *See the following page for detailed runoff volumes.*



## Wind River Basin Streamflow Forecasts - April 1, 2016

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

WIND RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dinwoody Ck nr Burris	APR-JUL	57	63	67	102%	71	77	66
	APR-SEP	81	89	94	102%	99	107	92
Wind R Ab Bull Lake Ck	APR-JUL	375	430	470	103%	510	565	455
	APR-SEP	385	455	500	102%	545	615	490
Bull Lake Ck nr Lenore	APR-JUL	115	136	151	109%	166	187	139
	APR-SEP	137	164	183	108%	200	230	169
Wind R at Riverton	APR-JUL	355	435	485	102%	535	615	475
	APR-SEP	400	495	560	102%	625	720	550
Little Popo Agie R nr Lander	APR-JUL	35	43	49	117%	55	63	42
	APR-SEP	39	49	55	112%	61	71	49
Little Wind R nr Riverton	APR-JUL	180	255	310	115%	365	440	270
	APR-SEP	195	280	340	115%	400	485	295
Boysen Reservoir Inflow	APR-JUL	340	540	675	111%	810	1010	610
	APR-SEP	360	580	730	110%	880	1100	665

- 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

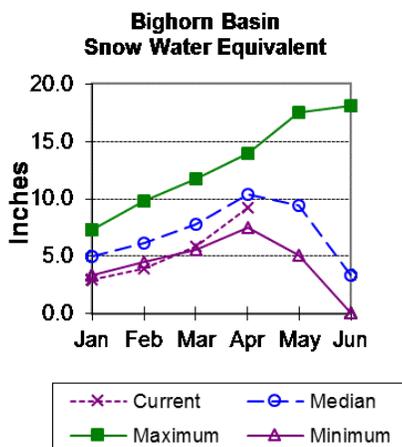
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bull Lake	70.6	105.1	75.4	151.8
Boysen	546.0	619.7	489.0	596.0
Pilot Butte	24.7	22.9	24.8	31.6
Basin-wide Total	641.3	747.7	589.2	779.4
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
WIND above Dubois	6	93%	97%
LITTLE WIND	2	116%	42%
POPO AGIE	7	118%	61%
WIND RIVER BASIN	17	108%	74%

# Bighorn River Basin

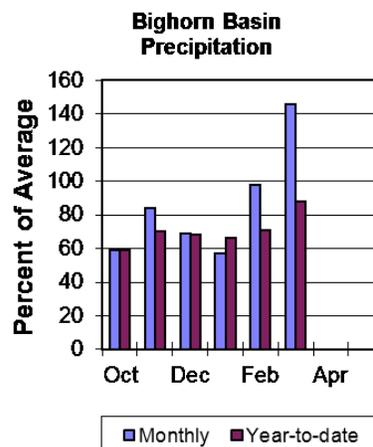
## Snow

The Bighorn River Basin SWE above Bighorn Reservoir is 89% of median. The Nowood River is at 91% of median. The Greybull River SWE is at 120% of median. Shell Creek SWE is at 79% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Last month's precipitation was 146% of average (41% last year). Sites ranged from 84-290% of average for the month. Year-to-date precipitation is 88% of average (91% last year). Year-to-date percentages, from the 19 reporting stations, range from 62-133%.



## Reservoirs

Boysen Reservoir is currently storing 546,000 ac-ft (112% of average). Bighorn Lake is now at 813,400 ac-ft (103% of average). Boysen was at 127% of average last year

at this time and Big Horn Lake was at 108% last year.

*Detailed reservoir data shown below and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September runoffs are about average. Boysen Reservoir inflow should yield 730,000 ac-ft (110% of average); the Greybull River near Meeteetse should yield around 190,000 ac-ft (107% of average); Shell Creek near Shell should yield around 51,000 ac-ft (77% of average) and the Bighorn River at Kane should yield around 940,000 ac-ft (104% of average). *See the following for detailed runoff volumes.*

Data Current as of: 4/6/2016 8:10:34 AM

## Bighorn River Basin Streamflow Forecasts - April 1, 2016

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

BIGHORN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Boysen Reservoir Inflow	APR-JUL	340	540	675	111%	810	1010	610
	APR-SEP	360	580	730	110%	880	1100	665
Greybull R nr Meeteetse	APR-JUL	96	122	140	107%	158	184	131
	APR-SEP	136	168	190	107%	210	245	177
Shell Ck nr Shell	APR-JUL	25	34	40	73%	46	54	55
	APR-SEP	35	45	51	77%	58	68	66
Bighorn R at Kane	APR-JUL	350	660	870	104%	1080	1390	840
	APR-SEP	370	710	940	104%	1170	1510	905

- 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

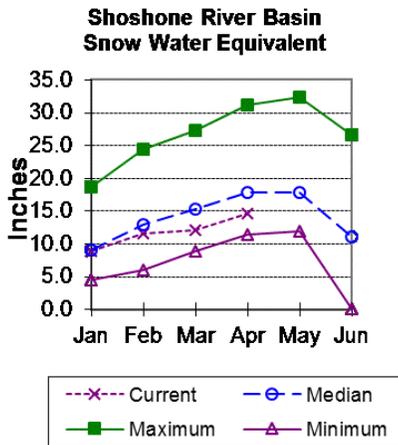
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boysen	546.0	619.7	489.0	596.0
Bighorn Lake	813.4	848.6	787.5	1356.0
<b>Basin-Wide Total</b>	<b>1359.4</b>	<b>1468.3</b>	<b>1276.5</b>	<b>1952.0</b>
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	7	91%	100%
GREYBULL RIVER	2	120%	89%
SHELL CREEK	4	79%	86%
<b>BIGHORN RIVER BASIN</b>	<b>14</b>	<b>89%</b>	<b>91%</b>

# Shoshone River Basin

## Snow

Snowpack in this basin is below median for this time of year. Snow Water Equivalent (SWE) is 95% of median in the Shoshone River Basin. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Precipitation for last month was 128% of average (39% last year). Monthly percentages range from 29-164% of average. The basin year-to-date precipitation is now 107% of average (93% last year). Year-to-date percentages range from 73-129% of average for the 8 reporting stations.

## Reservoirs

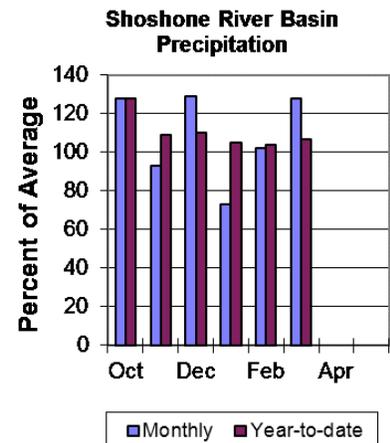
Current storage in Buffalo Bill Reservoir is about 124% of average (137% last year) - the reservoir is at about 67% of capacity. Currently, about 432,700 ac-ft are stored in the

reservoir compared to 478,200 ac-ft last year. *Detailed reservoir data shown on the following page and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September period are above average for the basin. The North Fork Shoshone River at Wapiti will yield around 505,000 ac-ft (98% of average). The South Fork of the Shoshone River near Valley will yield around 260,000 ac-ft (106% of average), and the South Fork above Buffalo Bill Reservoir runoff will yield around 215,000 ac-ft (108% of average). The Buffalo Bill Reservoir inflow will yield around 770,000 ac-ft (103% of average). *See the following for detailed runoff volumes.*

Data Current as of: 4/6/2016 8:10:35 AM



## Shoshone River Basin Streamflow Forecasts - April 1, 2016

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

SHOSHONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
NF Shoshone R at Wapiti	APR-JUL	375	420	450	98%	480	525	460
	APR-SEP	415	470	505	98%	540	590	515
SF Shoshone R nr Valley	APR-JUL	188	210	225	105%	240	260	215
	APR-SEP	215	240	260	106%	280	305	245
SF Shoshone R ab Buffalo Bill Reservoir	APR-JUL	142	180	205	106%	230	270	193
	APR-SEP	147	187	215	108%	245	285	200
Buffalo Bill Reservoir Inflow <sup>2</sup>	APR-JUL	565	645	700	104%	755	835	675
	APR-SEP	610	705	770	103%	835	930	745

- 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 March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Buffalo Bill	432.7	478.2	348.9	646.6
Basin-wide Total	432.7	478.2	348.9	646.6
# of reservoirs	1	1	1	1

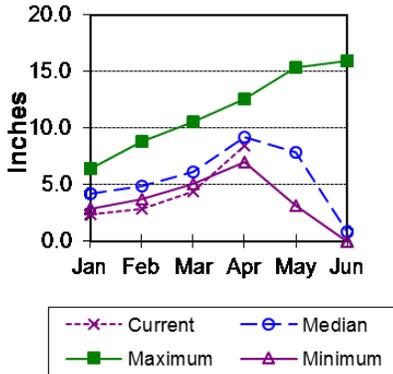
Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER BASIN	4	95%	75%

# Powder River Basin

## Snow

Powder River SWE is 92% of median. Upper Powder River drainage is 94% of median. SWE in the Clear Creek drainage is 90% of median. Crazy Woman Creek drainage SWE is at 81% of median. See *Appendix A at the end of this report for a detailed listing of snow course information.*

**Powder River Basin  
Snow Water Equivalent**



## Precipitation

Last month's precipitation was 130% of average (33% last year) for the nine reporting stations. Monthly percentages range from 72-160% of average. Year-to-date precipitation is 77% of average in the basin (87% last year). Precipitation for the year ranges from 61-96% of average.

## Reservoirs

No reservoir data for the basin.

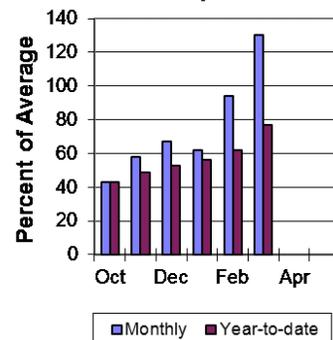
## Streamflow

The 50% exceedance forecasts for the April

through September period are below average for the basin. The Middle Fork of the Powder River near Barnum should yield around 11,200 ac-ft (66% of average). The North Fork of the Powder River near Hazelton should yield around 8,000 ac-ft (81% of average). Rock Creek near Buffalo will yield about 18,500 ac-ft (84% of average), and Piney Creek at Kearny should yield about 39,000 ac-ft (83% of average). The Powder River at Moorhead will yield around 151,000 ac-ft (77% of average). The Powder River near Locate will yield around 170,000 ac-ft (77% of average). *See the following for detailed runoff volumes.*

Data Current as of: 4/6/2016 8:10:37 AM

**Powder River Basin  
Precipitation**



**Powder River Basin  
Streamflow Forecasts - April 1, 2016**

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

POWDER RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
MF Powder R nr Barnum	APR-JUL	4.8	8.2	10.5	65%	12.8	16.2	16.1
	APR-SEP	5.4	8.9	11.2	66%	13.6	17.1	17
NF Powder R nr Hazelton	APR-JUL	5	6.4	7.4	81%	8.4	9.8	9.1
	APR-SEP	5.4	6.9	8	81%	9.1	10.6	9.9
Rock Ck nr Buffalo	APR-JUL	8.1	12.4	15.3	82%	18.2	23	18.6
	APR-SEP	10.9	15.4	18.5	84%	22	26	22
Piney Ck at Kearny	APR-JUL	16.1	28	36	82%	44	56	44
	APR-SEP	18.4	31	39	83%	47	60	47
Powder R at Moorehead	APR-JUL	22	90	137	77%	184	250	177
	APR-SEP	32	103	151	77%	199	270	196
Powder R nr Locate	APR-JUL	17.6	100	156	78%	210	295	199
	APR-SEP	22	110	170	77%	230	320	220

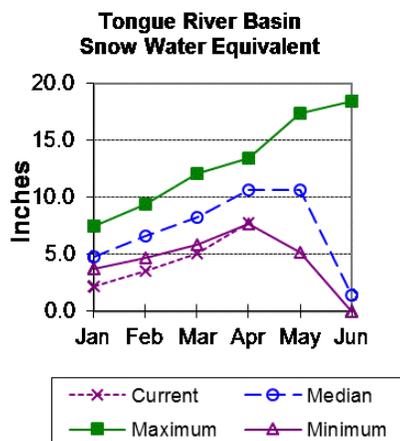
- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	5	94%	95%
CLEAR CREEK	3	90%	84%
CRAZY WOMAN CREEK	3	81%	107%
POWDER RIVER BASIN	8	92%	91%

# Tongue River Basin

## Snow

Upper Tongue River drainage SWE is at 73% of median. The Goose Creek drainage SWE is at 77% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



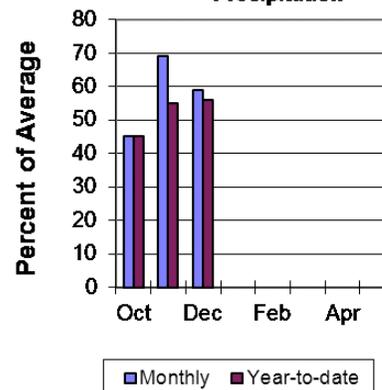
## Precipitation

Last month's precipitation was 129% of average (37% last year) for 10 reporting stations. Monthly percentages range from 84-161% of average. Year-to-date precipitation is 79% of average in the basin (87% last year). Precipitation for the year ranges from 63-122% of average.

## Reservoirs

The Tongue River Reservoir currently is storing 58,300 ac-ft, while last year's storage was 56,100 ac-ft. The Tongue River Reservoir is at 180% of average for this time of year

Tongue River Basin Precipitation



or 74% of capacity. *Detailed reservoir data shown below and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September period are below average for the basin. The yield for Tongue River near Dayton will be around 63,000 ac-ft (64% of average). Big Goose Creek near Sheridan will yield around 39,000 ac-ft (72% of average). Little Goose Creek near Bighorn will yield around 27,000 ac-ft (69% of average). The Tongue River Reservoir Inflow will be around 140,000 ac-ft (65% of average). *See below for detailed runoff volumes.*

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### Tongue River Basin Streamflow Forecasts - April 1, 2016

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

TONGUE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Tongue R nr Dayton	APR-JUL	26	42	53	62%	64	80	86
	APR-SEP	33	51	63	64%	75	93	98
Big Goose Ck nr Sheridan	APR-JUL	16.1	26	32	70%	38	48	46
	APR-SEP	23	32	39	72%	46	55	54
Little Goose Ck nr Bighorn	APR-JUL	10.4	16.3	20	65%	24	30	31
	APR-SEP	16.2	23	27	69%	31	38	39
Tongue River Reservoir Inflow	APR-JUL	25	84	124	64%	164	225	193
	APR-SEP	35	98	140	65%	182	245	215

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

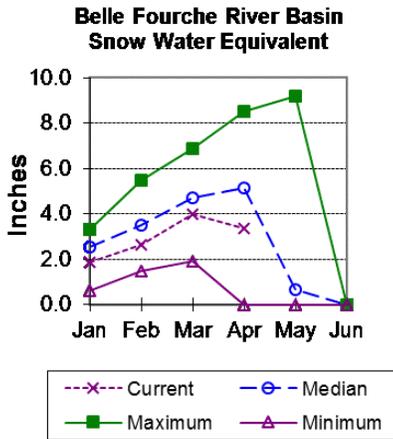
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Tongue River Res	58.3	56.1	32.3	79.1
Basin-wide Total	58.3	56.1	32.3	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
GOOSE CREEK	3	77%	81%
TONGUE RIVER BASIN	9	73%	79%

# Belle Fourche River Basin

## Snow

Belle Fourche River Basin SWE is at 65% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



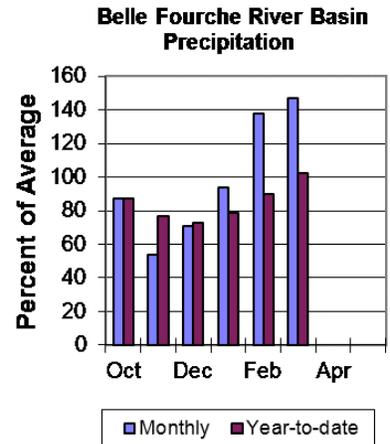
## Precipitation

Precipitation for last month was 147% of average (47% last year) in the Black Hills for the four reporting stations. Year-to-date precipitation is 102% of average (83% last year).

## Reservoirs

Belle Fourche Reservoir is storing 111% of average (148,700 ac-ft), about 83% of capacity. Keyhole Reservoir is storing 174% of average (168,200 ac-ft), about 87% of capacity. Shadehill Reservoir is

storing 87% of average (51,500 ac-ft), about 63% of capacity. *Detailed reservoir data shown below and in Appendix D.*



## Streamflow

There are no streamflow forecast points for the basin.

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## Belle Fourche River Basin - April 1, 2016

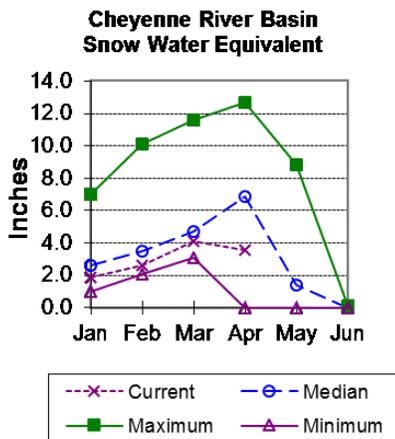
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Belle Fourche	148.7	155.8	133.5	178.4
Keyhole	168.2	173.6	96.8	193.8
Shadehill	51.5	61.3	59.0	81.4
<b>Basin-wide Total</b>	<b>368.4</b>	<b>390.6</b>	<b>289.3</b>	<b>453.6</b>
<b># of reservoirs</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
<b>BELLE FOURCHE RIVER BASIN</b>	<b>6</b>	<b>65%</b>	<b>12%</b>

# Cheyenne River Basin

## Snow

Cheyenne River Basin SWE is at 52% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



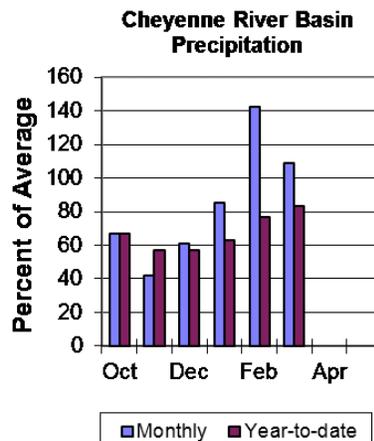
## Precipitation

Precipitation for last month was 109% of average (24% last year) in the Black Hills. There were three reporting stations. Year-to-date precipitation is 83% of average (75% last year).

## Reservoirs

Angostura is currently storing 118% of average (111,200 ac-ft), about 91% of capacity. Deerfield reservoir is storing 100% of average (14,200 ac-ft), about 93% of capacity. Pactola Reservoir is

storing 116% of average (54,000 ac-ft), about 98% of capacity. *Detailed reservoir data shown below and in Appendix D.*



## Streamflow

The following runoff values are the 50% exceedance forecasts for the April through July period. The Deerfield Reservoir Inflow yield is around 3,600 ac-ft (69% of average). Pactola Reservoir Inflow yield is around 13,200 ac-ft (60% of average). *See the following for detailed runoff volumes.*

Data Current as of: 4/6/2016 8:10:41 AM

## Cheyenne River Basin Streamflow Forecasts - April 1, 2016

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

CHEYENNE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Deerfield Reservoir Inflow	APR-JUL	0.59	2.4	3.6	69%	4.8	6.6	5.2
Pactola Reservoir Inflow	APR-JUL	1	6.4	13.2	60%	20	30	22

- 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

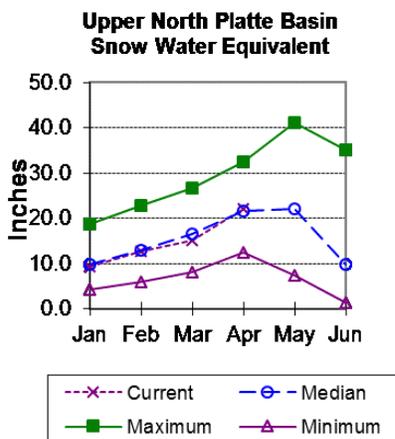
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Angostura	111.2	108.6	94.3	122.1
Deerfield	14.2	15.4	14.1	15.2
Pactola	54.0	52.1	46.4	55.0
Basin-wide Total	179.4	176.2	154.8	192.3
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER BASIN	7	52%	11%

# Upper North Platte River Basin

## Snow

The Upper North Platte River Basin above Seminoe Reservoir SWE is 102% of median. North Platte above Northgate SWE is 104% of median. Encampment River SWE is 102% of median. Brush Creek SWE is 99% of median. Medicine Bow and Rock Creek SWE are 95% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Nineteen reporting stations show last month's precipitation at 159% of average (72% last year). Precipitation varied from 128-414% of average last month. Total water-year-to-date precipitation is 103% of average for the basin (82% last year). Year-to-date percentages range from 81-174% of average.

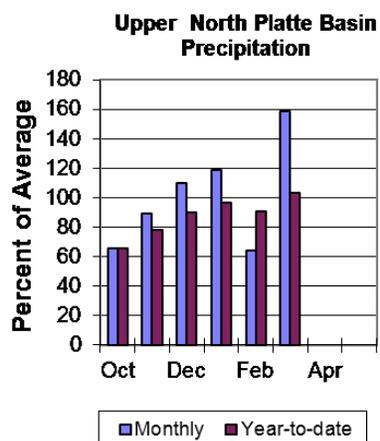
## Reservoirs

Seminoe Reservoir is storing 707,000 ac-ft or 70% of

capacity. Seminoe Reservoir is at 147% of average and was at 154% of average last year. *Detailed reservoir data shown on the following page and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September period are below average for the Upper North Platte River Basin. The yield for the North Platte River near Northgate will be around 275,000 ac-ft (110% of average). The Encampment River near Encampment yield will be around 130,000 ac-ft (94% of average). Rock Creek near Arlington yield will be around 52,000 ac-ft (100% of average). Sweetwater River near Pathfinder will yield about 47,000 ac-ft (73% of average). Seminoe Reservoir inflow should be around 755,000 ac-ft (98% of average). *See the following page for more detailed information on projected runoff.*



## Upper North Platte River Basin Streamflow Forecasts - April 1, 2016

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

UPPER NORTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
<hr/>								
North Platte R nr Northgate	APR-JUL	159	215	250	111%	290	345	225
	APR-SEP	169	230	275	110%	320	380	250
Encampment R nr Encampment <sup>2</sup>	APR-JUL	86	107	121	94%	135	156	129
	APR-SEP	92	115	130	94%	145	168	138
Rock Ck nr Arlington	APR-JUL	36	44	49	100%	54	62	49
	APR-SEP	38	46	52	100%	58	66	52
Sweetwater R nr Alcova	APR-JUL	14.9	32	43	73%	54	71	59
	APR-SEP	16.5	35	47	73%	59	78	64
Seminole Reservoir Inflow	APR-JUL	335	550	695	97%	845	1060	715
	APR-SEP	355	595	755	98%	915	1150	770

- 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

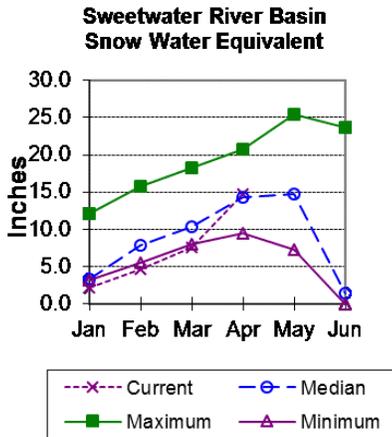
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Seminole	707.0	743.2	481.2	1016.7
Basin-wide Total	707.0	743.2	481.2	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	11	104%	74%
ENCAMPMENT RIVER	4	102%	73%
BRUSH CREEK	5	99%	64%
MEDICINE BOW & ROCK CREEKS	3	95%	74%
UPPER NORTH PLATTE RIVER BASIN	24	102%	69%

# Sweetwater River Basin

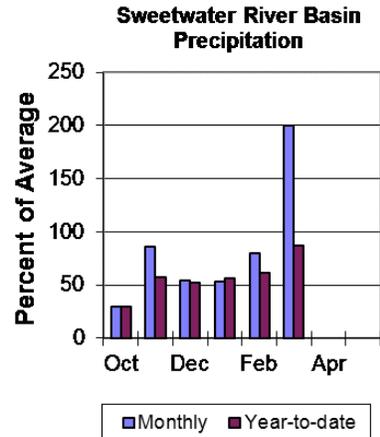
## Snow

Sweetwater River Basin SWE is 103% of median. See *Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

Last month's precipitation was 200% of average (53% last year) for the four reporting stations ranging from 114-230%. The water year-to-date precipitation for the basin is currently 87% of average (68% last year). Year-to-date percentages range from 77-100% of average.



## Reservoirs

Reservoir storage is as follows: Pathfinder 865,100 ac-ft (143% of average or 85% of capacity).

## Streamflow

The 50% exceedance forecast for the April through September period will be low. The Sweetwater River near Pathfinder will yield about 47,000 ac-ft (73% of average). See below for detailed information on projected runoff.

Data Current as of: 4/6/2016 8:10:44 AM

## Sweetwater River Basin Streamflow Forecasts - April 1, 2016

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

SWEETWATER RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Sweetwater R nr Alcova	APR-JUL	14.9	32	43	73%	54	71	59
	APR-SEP	16.5	35	47	73%	59	78	64

- 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

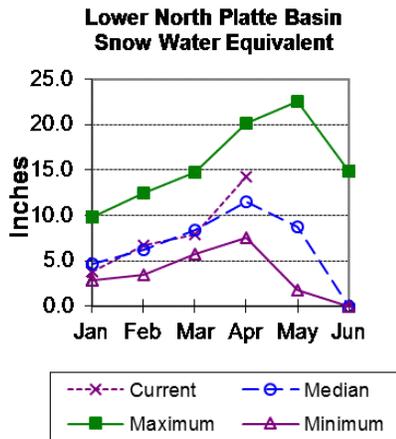
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Pathfinder	865.1	687.0	604.6	1016.5
Basin-wide Total	865.1	687.0	604.6	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER BASIN	4	103%	52%

# Lower North Platte River Basin

## Snow

Lower North Platte River Basin SWE is 123% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



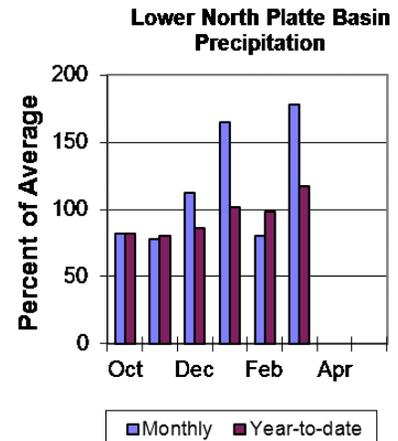
## Precipitation

Last month's precipitation was 178% of average (53% last year). For the eight reporting stations percentages for the month range from 114-292%. The water year-to-date precipitation for the basin is currently 117% of average (72% last year). Year-to-date percentages range from 97-173% of average.

## Reservoirs

Reservoir storage is as follows: Alcova 157,700 ac-ft (99% of average) (86% of capacity); Glendo 376,500 ac-ft (97% of average) (74% of capacity); Guernsey

25,600 ac-ft (128% of average) (56% of capacity); Pathfinder 865,100 ac-ft (143% of average) (85% of capacity) (143% of average last year). *Detailed reservoir data shown on the following page and in Appendix D.*



## Streamflow

The 50% exceedance forecasts for the April through September period will be below average. North Platte - Alcova to Orin Gain will yield ---- ac-ft. LaPrele Creek above LaPrele Reservoir should yield around 24,000 ac-ft (121% of average). North Platte River below Glendo Reservoir should yield around 810,000 ac-ft (95% of average), and below Guernsey Reservoir should yield around 835,000 ac-ft (98% of average). *See the following for more detailed information on projected runoff.*

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### Lower North Platte River Basin Streamflow Forecasts - April 1, 2016

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

LOWER NORTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
La Prele Ck ab La Prele Reservoir	APR-JUL	11.2	18.8	24	121%	29	37	19.9
	APR-SEP	11.1	18.8	24	121%	29	37	19.9
North Platte R bl Glendo Reservoir	APR-JUL	520	675	785	96%	890	1050	820
	APR-SEP	530	695	810	95%	920	1090	850
North Platte R bl Guernsey Reservoir	APR-JUL	470	665	800	98%	930	1130	820
	APR-SEP	495	700	835	98%	975	1180	850

- 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 March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Alcova	157.7	158.3	158.5	184.3
Glendo	376.5	308.2	389.4	506.4
Guernsey	25.6	27.2	20.0	45.6
Pathfinder	865.1	687.0	604.6	1016.5
<b>Basin-wide Total</b>	<b>1424.9</b>	<b>1180.7</b>	<b>1172.5</b>	<b>1752.8</b>
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2	118%	67%
LOWER NORTH PLATTE RIVER BASIN	4	123%	58%

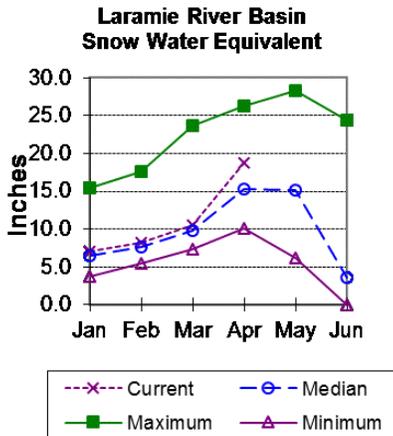
# Laramie River Basin

## Snow

SWE for the entire Laramie River Basin (above mouth entering North Platte) is 123% of median. SWE for the Laramie River above Laramie is 133% of median. SWE for the Little

Laramie River is 114% of median. **SWE total for the entire North Platte River Basin above Torrington is 107% of median.**

*See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

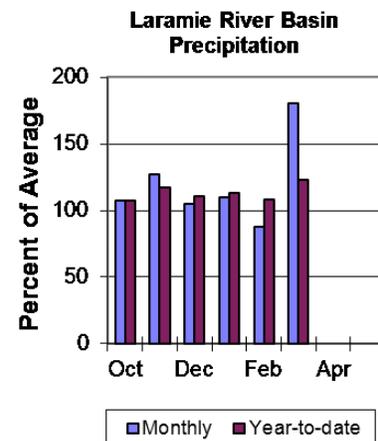
Last month's precipitation was 180% of average (55% last year). For the 12 reporting stations percentages for the month range from 47-200%. The water year-to-date precipitation for the basin is currently 108% of average (95% last year). Year-to-date percentages range from 148-302% of average.

## Reservoirs

Reservoir storage is as follows: Wheatland #2 70,300 ac-ft (138% of average) (71% of capacity) was (138% of average last year). *Detailed reservoir data shown on the following page and in Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September period will be above average. Laramie River near Woods Landing should yield around 137,000 ac-ft (109% of average). The Little Laramie near Filmore should produce about 58,000 ac-ft (105% of average). *See below for detailed information on projected runoff.*



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## Laramie River Basin Streamflow Forecasts - April 1, 2016

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

LARAMIE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Laramie R nr Woods	APR-JUL	86	109	125	109%	141	164	115
	APR-SEP	94	120	137	109%	155	181	126
Little Laramie R nr Filmore	APR-JUL	37	46	53	104%	60	69	51
	APR-SEP	39	50	58	105%	66	77	55

- 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 March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wheatland #2	70.3	79.5	51.0	98.9
Basin-wide Total	70.3	79.5	51.0	98.9
# of reservoirs	1	1	1	1

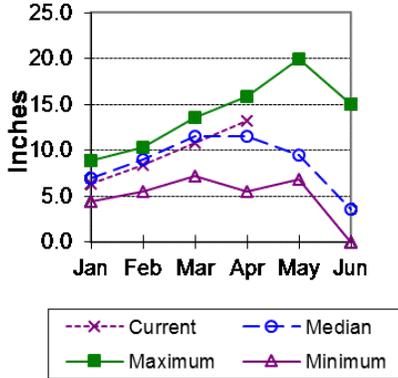
Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	7	133%	71%
LITTLE LARAMIE RIVER	5	114%	82%
LARAMIE RIVER BASIN	13	123%	75%
NORTH PLATTE TOTAL RIVER BASIN	39	107%	68%

## South Platte River Basin (WY)

### Snow

South Platte River Basin SWE in WY is 114% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

**South Platte River Basin  
Snow Water Equivalent**



forecast points for the basin.

### Precipitation

Last month's precipitation was 182% of average (58% last year) for the six reporting stations. The water year-to-date precipitation for the basin is currently 119% of average (97% last year). Year-to-date percentages range from 102-194% of average.

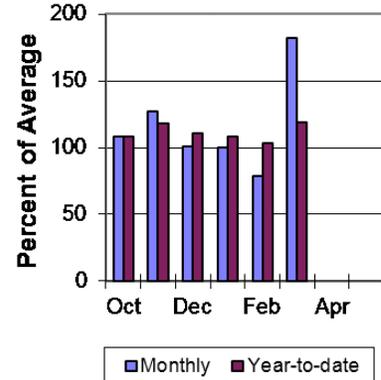
### Reservoirs

No reservoir data for the basin.

### Streamflow

There are no streamflow

**South Platte River Basin  
Precipitation**



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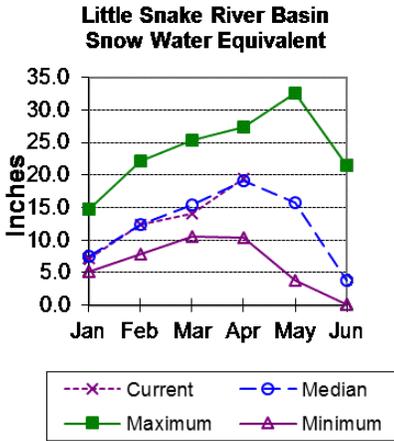
## South Platte River Basin - April 1, 2016

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
SOUTH PLATTE RIVER BASIN	8	114%	82%

# Little Snake River Basin

## Snow

Little Snake River drainage SWE is 102% of median. See *Appendix A at the end of this report for a detailed listing of snow course information.*

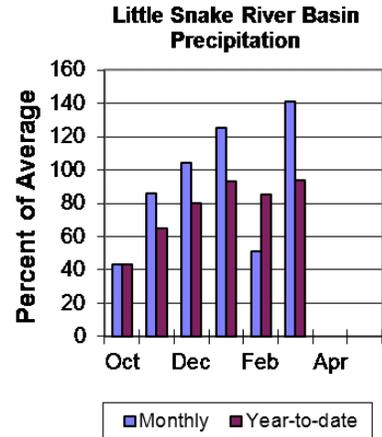


## Precipitation

Precipitation across the basin was 141% of average (77% last year) for the eight reporting stations. Last month's precipitation ranged from 81-203% of average. The Little Snake River Basin water-year-to-date precipitation is currently 94% of average (70% last year). Year-to-date percentages range from 65-108% of average.

## Reservoirs

High Savery Dam - 11,600 ac-ft (89% of average) (52% of capacity) (115% last year's average). See below for detailed information on reservoirs and in Appendix D.



## Streamflow

The 50% exceedance forecasts for the April through July period will be low. The Little Snake River near Slater should yield around 125,000 ac-ft (80% of average). The Little Snake River near Dixon should yield around 260,000 ac-ft (75% of average). See below for detailed information on projected runoff.

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## Little Snake River Basin Streamflow Forecasts - April 1, 2016

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

LITTLE SNAKE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Little Snake R nr Slater <sup>2</sup>	APR-JUL	89	110	125	80%	142	168	156
Little Snake R nr Dixon <sup>2</sup>	APR-JUL	143	210	260	75%	315	415	345

- 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

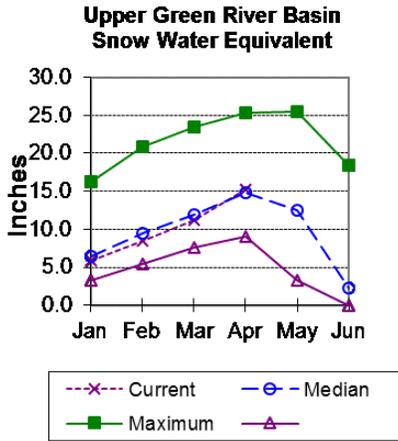
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
High Savery Reservoir	11.6	15.0	13.1	22.4
Basin-wide Total	11.6	15.0	13.1	22.4
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER BASIN	10	102%	54%

# Upper Green River Basin

## Snow

Upper Green River Basin above Fontenelle Reservoir SWE is 103% of median. Green River Basin above Warren Bridge SWE is 97% of median. West Side of Upper Green River Basin SWE is 114% of median. New Fork River SWE is 83% of median. Big Sandy-Eden Valley Basin SWE is 85% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

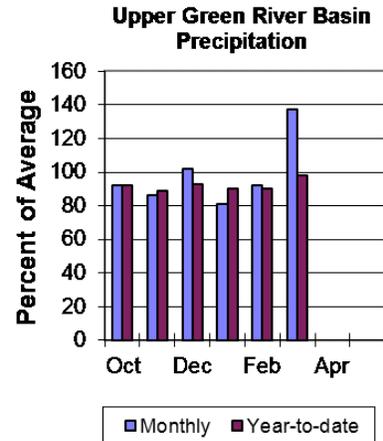


## Precipitation

The 15 reporting precipitation sites in the basin were 137% of average last month (43% last year). Last month's precipitation varied from 90-236% of average. Water year-to-date precipitation is 98% of average (89% last year). Year to date percentages of average range from 66-121%.

## Reservoir

Storage in Big Sandy Reservoir is 21,100 ac-ft or 55% of capacity (106% of average) (118% last year). Fontenelle Reservoir is 139,200 ac-ft (40% of capacity) (114% of average) (165% last year). *Detailed reservoir data shown on the following page and in Appendix D.*



## Streamflow

The 50% exceedance forecasts for the April through July period will be below average. The yield on the Green River at Warren Bridge is about 215,000 ac-ft (88% of average). Pine Creek above Fremont Lake yield will be about 85,000 ac-ft (87% of average). New Fork River near Big Piney yield will be about 285,000 ac-ft (80% of average). Fontenelle Reservoir Inflow is estimated to be around 580,000 ac-ft (80% of average), and Big Sandy near Farson yield will be around 40,000 ac-ft (77% of average). *See the following for a more detailed forecast.*

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### Upper Green River Basin Streamflow Forecasts - April 1, 2016

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

UPPER GREEN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Green R at Warren Bridge	APR-JUL	166	195	215	88%	235	270	245
Pine Creek ab Fremont Lake	APR-JUL	72	80	85	87%	90	99	98
New Fork R nr Big Piney	APR-JUL	183	240	285	80%	330	410	355
Fontenelle Reservoir Inflow	APR-JUL	355	485	580	80%	685	860	725
Big Sandy R nr Farson	APR-JUL	26	34	40	77%	46	57	52

- 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

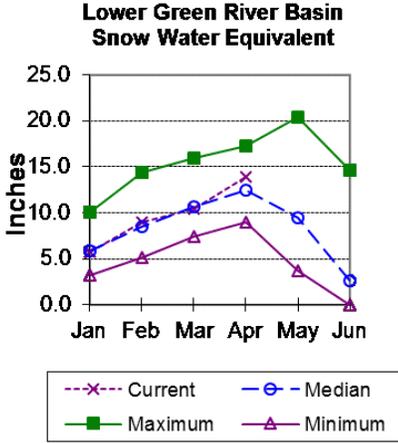
Reservoir Storage End of March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Big Sandy	21.1	23.4	19.9	38.3
Fontenelle	139.2	200.6	121.7	344.8
<b>Basin-wide Total</b>	<b>160.3</b>	<b>224.0</b>	<b>141.6</b>	<b>383.1</b>
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	97%	84%
UPPER GREEN - West Side	5	114%	99%
NEWFORK RIVER	2	83%	82%
BIG SANDY-EDEN VALLEY	2	85%	53%
GREEN above Fontenelle	14	103%	90%

# Lower Green River Basin

## Snow

Lower Green River Basin SWE is 111% of median. Hams Fork drainage SWE is 99% of median. Blacks Fork drainage SWE is 112% of median. Henrys Fork SWE is 154% of median. SWE for the entire Green River Basin (above Flaming Gorge) is 106% of median. See Appendix A at the end of this report for a detailed listing of snow course information.

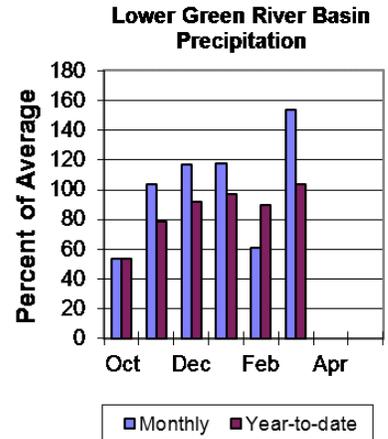


## Precipitation

Precipitation for the 10 reporting stations during last month was 154% of average (49% last year). Precipitation ranged from 133-297% of average for the month. The basin year-to-date precipitation is currently 104% of average (73% last year). Year-to-date percentages range from 72-179% of average.

## Reservoirs

Fontenelle Reservoir is currently storing 139,200 ac-ft; this is 114% of average (165% last year) (40% of capacity). Flaming Gorge is currently storing 3,166,500 ac-ft; this is 105% of average (105% last year) (84% of capacity). Viva Naughton is currently storing 31,100 ac-ft; this is 114% of average (125% last year) (73% of capacity). Detailed reservoir data shown on the following page and in Appendix D.



## Streamflow

The 50% exceedance forecasts for the April through July period will be below average. The Green River near Green River will yield about 590,000 ac-ft (81% of average). The Blacks Fork near Robertson will yield about 85,000 ac-ft (96% of average). East Fork of Smiths Fork near Robertson will yield around 26,000 ac-ft (96% of average). Hams Fork below Pole Creek near Frontier will yield around 40,000 ac-ft (74% of average). The Hams Fork Inflow to Viva Naughton Reservoir will yield about 53,000 ac-ft (72% of average). The Flaming Gorge Reservoir inflow will be about 830,000 ac-ft (85% of average). See the following page for more detailed information on projected runoff.

## Lower Green River Basin Streamflow Forecasts - April 1, 2016

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

LOWER GREEN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Green R nr Green River, WY <sup>2</sup>	APR-JUL	365	495	590	81%	695	865	730
Blacks Fk nr Robertson	APR-JUL	62	75	85	96%	95	112	89
EF of Smiths Fork nr Robertson <sup>2</sup>	APR-JUL	17.8	23	26	96%	30	36	27
Hams Fk bl Pole Ck nr Frontier	APR-JUL	26	34	40	74%	47	58	54
Viva Naughton Reservoir Inflow	APR-JUL	31	43	53	72%	63	81	74
Flaming Gorge Reservoir Inflow <sup>2</sup>	APR-JUL	495	685	830	85%	990	1250	980

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 March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Fontenelle	139.2	200.6	121.7	344.8
Flaming Gorge Reservoir	3166.5	3165.7	3020.0	3749.0
Viva Naughton Res	31.1	34.1	27.2	42.4
Basin-wide Total	3336.8	3400.4	3168.9	4136.2
# of reservoirs	3	3	3	3

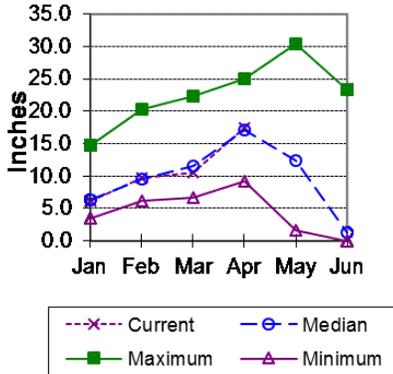
Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	3	99%	76%
BLACKS FORK	2	112%	52%
HENRYS FORK	2	154%	7%
LOWER GREEN RIVER BASIN	7	111%	59%
GREEN above FLAMING GORGE	20	106%	80%

# Upper Bear River Basin

## Snow

Upper Bear River Basin in Utah SWE is 102% of median. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is 101% of median. Bear River Basin SWE, above the Idaho State line, is 99% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Upper Bear River Basin Snow Water Equivalent**



## Precipitation

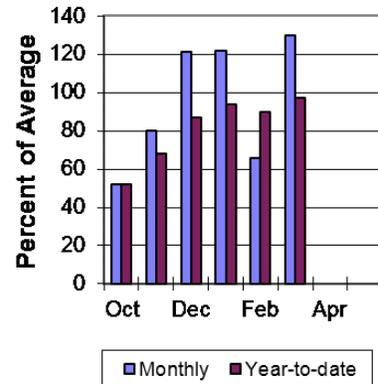
Precipitation for last month was 130% of average for the 8 reporting stations; this was 46% last year. The year-to-date precipitation for the basin is 97% of average; this was 68% last year. Year-to-date percentages range from 79-117% of average.

## Reservoirs

Storage in Woodruff Narrows Reservoir was 51,600 ac-ft about 90% of capacity (134% of average) (133% last

year). *Detailed reservoir data shown below and in Appendix D.*

**Upper Bear River Basin Precipitation**



## Streamflow

The following 50% exceedance forecasts for the April through September period will be below average. The Bear River near the Utah-Wyoming State Line should yield about 101,000 ac-ft (82% of average). The Bear River above Reservoir near Woodruff should yield around 95,000 ac-ft (74% of average). The Smiths Fork River near Border Jct. will yield around 95,000 ac-ft (91% of average). *See below for detailed information on projected runoff.*

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**Upper Bear River Basin Streamflow Forecasts - April 1, 2016**

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

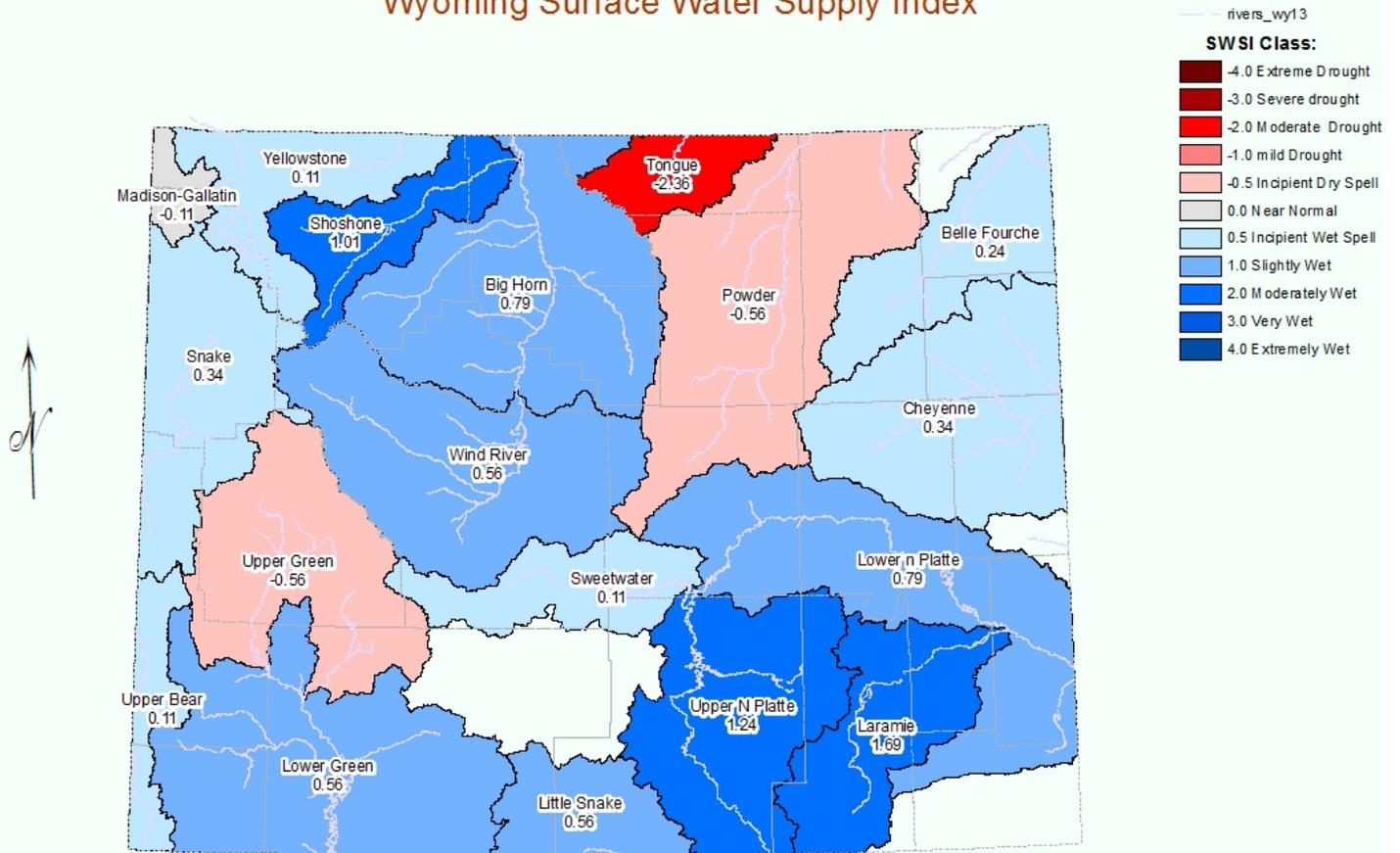
UPPER BEAR RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Bear R nr UT-WY State Line	APR-JUL	62	80	91	81%	103	121	112
	APR-SEP	69	88	101	82%	114	133	123
Bear R ab Resv nr Woodruff	APR-JUL	50	75	92	76%	109	134	121
	APR-SEP	52	78	95	74%	112	138	128
Smiths Fk nr Border	APR-JUL	60	73	82	92%	91	104	89
	APR-SEP	70	85	95	91%	105	120	104

- 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 March, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Woodruff Narrows Reservoir	51.6	50.9	38.4	57.3
Basin-wide Total	51.6	50.9	38.4	57.3
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2016	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	99%	33%
SMITHS & THOMAS FORKS	3	101%	78%
UPPER BEAR RIVER BASIN	8	102%	55%

# Wyoming Surface Water Supply Index



The Surface Water Supply Index (SWSI) is computed using only surface water supplies for the drainage. The computation includes reservoir storage, if applicable, plus the forecast runoff. The index is purposely created to resemble the Palmer Drought Index, with normal conditions centered near zero. Adequate and excessive supply has a positive number and deficit water supply has a negative value. Soil moisture and forecast precipitation are not considered as such, but the forecast runoff may consider these values.

Date: 4/8/2016

## Appendix A

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Report Created: 4/6/2016 8:08:46 AM

**Basinwide Summary: April 1, 2016**  
(Averages/Medians based on 1981-2010 reference period)

Snowpack Summary for April 1, 2016
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<b>SNAKE above Jackson Lake</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Aster Creek	SC	7750	64	23.0	25.7	89%	14.4	56%
Glade Creek	SC	7040	60	22.0	21.2	104%	16.5	78%
Grassy Lake	SNOTEL	7285	83	30.4	31.8	96%	23.7	75%
Huckleberry Divide	SC	7300	57	19.2	18.5	104%	13.5	73%
Lewis Lake Divide	SNOTEL	7850	80	29.8	29.5	101%	19.9	67%
Moran	SC	6750	39	12.0	10.6	113%	6.3	59%
Snake River Station	SNOTEL	6920	50	17.5	15.5	113%	11.7	75%
Thumb Divide	SNOTEL	7980	47	14.3	14.9	96%	6.4	43%
Two Ocean Plateau	SNOTEL	9240	79	26.3	25.6	103%	23.9	93%
<b>Basin Index</b>						<b>101%</b>		<b>71%</b>
# of sites						9		9
<b>PACIFIC CREEK</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Base Camp	SNOTEL	7030	49	16.2	14.8	109%	13.8	93%
Moran	SC	6750	39	12.0	10.6	113%	6.3	59%
Two Ocean Plateau	SNOTEL	9240	79	26.3	25.6	103%	23.9	93%
<b>Basin Index</b>						<b>107%</b>		<b>86%</b>
# of sites						3		3
<b>BUFFALO FORK</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Four Mile	SC	6900	29	8.4	7.0	120%	2.4	34%
Togwotee Pass	SNOTEL	9580	71	21.3	21.6	99%	21.5	100%
Turpin Meadows	SC	6900	36	11.8	9.0	131%	9.8	109%
Younts Peak	SNOTEL	8350	42	14.1	14.1	100%		
<b>Basin Index</b>						<b>110%</b>		<b>90%</b>
# of sites						3		3
<b>GROS VENTRE RIVER</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Elbo Ranch	SC	7100	41	12.0	10.2	118%	10.6	104%
Gros Ventre Summit	SNOTEL	8750	43	11.3	12.9	88%	9.1	71%
Gunsight Pass	SNOTEL	9820	47	13.7	13.4	102%	11.4	85%
Togwotee Pass	SNOTEL	9580	71	21.3	21.6	99%	21.5	100%
<b>Basin Index</b>						<b>100%</b>		<b>91%</b>
# of sites						4		4
<b>HOBACK RIVER</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Blind Bull Sum	SNOTEL	8650	78	25.0	22.4	112%	22.9	102%
East Rim Divide	SNOTEL	7930	38	11.1	10.0	111%	9.1	91%
Granite Creek	SNOTEL	6770	42	14.0	14.9	94%	14.1	95%
Hoback GS	SC	6864	24	7.5	8.5	88%	7.1	84%
Snow King Mountain	SC	7680	42	7.2	13.0	55%	10.0	77%
<b>Basin Index</b>						<b>94%</b>		<b>92%</b>
# of sites						5		5
<b>GREYS RIVER</b>	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median

## Appendix B

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		Monthly Total Precipitation for March 2016						Water Year to Date Precipitation through March 2016				
		Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
<b>Basinwide Summary: April 1, 2016</b> (Averages/Medians based on 1981-2010 reference period)												
<b>SNAKE above Jackson Lake</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Grassy Lake	SNOTEL 7265	6.3	5.2	121%	1.7	33%	34.8	34.6	101%	26.6	77%	
Lewis Lake Divide	SNOTEL 7850	5.9	5.3	111%	1.9	36%	31.8	34.1	93%	25.1	74%	
Snake River Station	SNOTEL 6620	4.1	3	137%	0.8	27%	22.9	21.8	106%	17.5	81%	
Thumb Divide	SNOTEL 7980	3.4	3.2	106%	1.2	38%	15	17.8	84%	11.1	62%	
Two Ocean Plateau	SNOTEL 9240	5.1	4.6	111%	2	43%	24.6	26.2	94%	21.9	84%	
<b>Basin Index</b>				<b>116%</b>		<b>36%</b>			<b>96%</b>		<b>76%</b>	
# of sites				5		5			5		5	
<b>PACIFIC CREEK</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Base Camp	SNOTEL 7030	3.5	3	117%	1.2	40%	19.8	20.2	98%	16.9	84%	
Two Ocean Plateau	SNOTEL 9240	5.1	4.6	111%	2	43%	24.6	26.2	94%	21.9	84%	
<b>Basin Index</b>				<b>113%</b>		<b>42%</b>			<b>96%</b>		<b>84%</b>	
# of sites				2		2			2		2	
<b>BUFFALO FORK</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Togwolee Pass	SNOTEL 9680	4.7	3.9	121%	2	51%	24.1	23.3	103%	23.5	101%	
Younts Peak	SNOTEL 8350	3.1	2.6	119%			13.2	15.2	87%			
<b>Basin Index</b>				<b>121%</b>		<b>51%</b>			<b>103%</b>		<b>101%</b>	
# of sites				1		1			1		1	
<b>GROS VENTRE RIVER</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Gros Ventre Summit	SNOTEL 8750	2.6	2.3	113%	0.7	30%	10.8	12.4	87%	9.2	74%	
Gunsight Pass	SNOTEL 9820	3.3	2.3	143%	1	43%	14.3	13.2	108%	11.8	89%	
Togwolee Pass	SNOTEL 9680	4.7	3.9	121%	2	51%	24.1	23.3	103%	23.5	101%	
<b>Basin Index</b>				<b>125%</b>		<b>44%</b>			<b>101%</b>		<b>91%</b>	
# of sites				3		3			3		3	
<b>HOBACK RIVER</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Blind Bull Sum	SNOTEL 8650	3.9	2.8	139%	1.3	46%	16.5	18.8	88%	15.7	84%	
East Rim Divide	SNOTEL 7930	2.4	1.7	141%	0.7	41%	10.8	11.3	96%	10.6	94%	
Granite Creek	SNOTEL 6770	2.3	2.6	89%	0.8	31%	16.9	19.1	88%	16.4	89%	
<b>Basin Index</b>				<b>121%</b>		<b>39%</b>			<b>90%</b>		<b>87%</b>	
# of sites				3		3			3		3	
<b>GREYS RIVER</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Blind Bull Sum	SNOTEL 8650	3.9	2.8	139%	1.3	46%	16.5	18.8	88%	15.7	84%	
Cottonwood Creek	SNOTEL 7870	5.7	4.1	139%	2	49%	25.5	23.7	108%	24.1	102%	
Spring Creek Divide	SNOTEL 9000	4.9	3.6	136%	1.9	53%	23.3	22.9	102%	22.9	100%	
Triple Peak	SNOTEL 8500	6.2	4.2	148%	2.2	52%	26.9	24.4	110%	24.6	101%	
Willow Creek	SNOTEL 8380	6.9	5.4	128%	2.2	41%	31.6	32.2	98%	26.4	82%	
<b>Basin Index</b>				<b>137%</b>		<b>48%</b>			<b>101%</b>		<b>93%</b>	
# of sites				5		5			5		5	
<b>SALT RIVER</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Cottonwood Creek	SNOTEL 7870	5.7	4.1	139%	2	49%	25.5	23.7	108%	24.1	102%	
Salt River Summit	SNOTEL 7760	4.2	2.6	162%	1.2	46%	15.3	16	96%	12.9	81%	
Willow Creek	SNOTEL 8380	6.9	5.4	128%	2.2	41%	31.6	32.2	98%	26.4	82%	
<b>Basin Index</b>				<b>139%</b>		<b>45%</b>			<b>101%</b>		<b>88%</b>	
# of sites				3		3			3		3	
<b>SNAKE RIVER BASIN</b>												
Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	
Afton	COOP 6210	2.11	1.4	151%	0.82	44%	7.49	8.25	91%	5.77	70%	
Alta 1 NW	COOP 6430	3.05	1.91	160%	0.58	30%	13.55	12.74	106%	9.44	74%	
Base Camp	SNOTEL 7030	3.5	3	117%	1.2	40%	19.8	20.2	98%	16.9	84%	
Bedford 3 SE	COOP 6430		1.68		1.01	60%		11.19		10.76	98%	
Black Bear	SNOTEL 8170	7.2	5.8	124%	1.7	29%	33.7	36.8	92%	25.1	69%	
Blind Bull Sum	SNOTEL 8650	3.9	2.8	139%	1.3	46%	16.5	18.8	88%	15.7	84%	
Bondurant	COOP 6620	2.11	1.41	150%	0.6	43%	9.98	10.67	94%	9.96	93%	
Cottonwood Creek	SNOTEL 7870	5.7	4.1	139%	2	49%	25.5	23.7	108%	24.1	102%	
Darwin Ranch	COOP 8160	1.38	1.22	113%	0.21	17%	6.39	6.91	92%	5.94	82%	
East Rim Divide	SNOTEL 7930	2.4	1.7	141%	0.7	41%	10.8	11.3	96%	10.6	94%	
Grand Targhee	SNOTEL 9260	6.1	4.6	133%	1.9	41%	29.9	29.4	102%	27.6	94%	
Granite Creek	SNOTEL 6770	2.3	2.6	89%	0.8	31%	16.9	19.1	88%	16.4	86%	
Grassy Lake	SNOTEL 7265	6.3	5.2	121%	1.7	33%	34.8	34.6	101%	26.6	77%	
Gros Ventre Summit	SNOTEL 8750	2.6	2.3	113%	0.7	30%	10.8	12.4	87%	9.2	74%	
Gunsight Pass	SNOTEL 9820	3.3	2.3	143%	1	43%	14.3	13.2	108%	11.8	89%	
Jackson	COOP 6230	2.23	1.24	180%	0.49	40%	8.1	7.88	103%	6.91	88%	
Lewis Lake Divide	SNOTEL 7850	5.9	5.3	111%	1.9	36%	31.8	34.1	93%	25.1	74%	
Loomis Park	SNOTEL 8240	3.1	2.7	115%	1.2	44%	16.2	16.7	97%	15.1	90%	
Moose	COOP 6470	2.28	1.62	141%	0.87	41%	14.11	12.8	110%	11.9	93%	

## Appendix C

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**Basinwide Summary: April 1, 2016**  
(averages based on 1981-2010 reference period)

Reservoir Storage Summary for the end of March 2016

<b>SNAKE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Grassy Lake	13.5	13.1	12.3	15.2	89%	86%	81%	110%	107%	
Jackson Lake	570.9	646.2	430.7	847.0	67%	76%	51%	133%	150%	
Palisades Reservoir	979.1	1250.2	902.8	1400.0	70%	89%	64%	108%	138%	
Basin-wide Total	1563.5	1909.6	1345.8	2262.2	69%	84%	59%	116%	142%	
# of reservoirs	3	3	3	3	3	3	3	3	3	
<b>MADISON-GALLATIN RIVER BASINS</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Ennis Lake	30.7	28.5	29.5	41.0	75%	70%	72%	104%	97%	
Hebgen Lake	291.5	314.1	270.4	378.8	77%	83%	71%	108%	108%	
Basin-wide Total	322.1	342.6	299.9	419.8	77%	82%	71%	107%	114%	
# of reservoirs	2	2	2	2	2	2	2	2	2	
<b>WIND RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Bull Lake	70.6	105.1	75.4	151.8	47%	69%	50%	94%	139%	
Boysen	546.0	619.7	489.0	596.0	92%	104%	82%	112%	127%	
Pilot Butte	24.7	22.9	24.8	31.6	78%	73%	78%	100%	92%	
Basin-wide Total	641.3	747.7	589.2	779.4	82%	96%	76%	109%	127%	
# of reservoirs	3	3	3	3	3	3	3	3	3	
<b>BIGHORN RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Boysen	546.0	619.7	489.0	596.0	92%	104%	82%	112%	127%	
Bighorn Lake	813.4	848.6	787.5	1356.0	60%	63%	58%	103%	108%	
Basin-wide Total	1359.4	1468.3	1276.5	1952.0	70%	75%	65%	106%	115%	
# of reservoirs	2	2	2	2	2	2	2	2	2	
<b>SHOSHONE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Buffalo Bill	432.7	478.2	348.9	646.6	67%	74%	54%	124%	137%	
Basin-wide Total	432.7	478.2	348.9	646.6	67%	74%	54%	124%	137%	
# of reservoirs	1	1	1	1	1	1	1	1	1	
<b>TONGUE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Tongue River Res	58.3	56.1	32.3	79.1	74%	71%	41%	180%	174%	
Basin-wide Total	58.3	56.1	32.3	79.1	74%	71%	41%	180%	174%	
# of reservoirs	1	1	1	1	1	1	1	1	1	
<b>BELLE FOURCHE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Belle Fourche	148.7	155.8	133.5	178.4	83%	87%	75%	111%	117%	
Keyhole	168.2	173.6	96.8	193.8	87%	90%	50%	174%	179%	
Shadehill	51.5	61.3	50.0	81.4	63%	75%	72%	87%	104%	
Basin-wide Total	368.4	390.6	289.3	453.6	81%	86%	64%	127%	135%	
# of reservoirs	3	3	3	3	3	3	3	3	3	
<b>CHEYENNE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Angostura	111.2	108.6	94.3	122.1	91%	89%	77%	118%	115%	
Deerfield	14.2	15.4	14.1	15.2	93%	102%	93%	100%	109%	
Pactola	54.0	52.1	48.4	55.0	98%	95%	84%	116%	112%	
Basin-wide Total	179.4	176.2	154.8	192.3	93%	92%	80%	116%	114%	
# of reservoirs	3	3	3	3	3	3	3	3	3	
<b>UPPER NORTH PLATTE RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Seminole	707.0	743.2	481.2	1016.7	70%	73%	47%	147%	154%	
Basin-wide Total	707.0	743.2	481.2	1016.7	70%	73%	47%	147%	154%	
# of reservoirs	1	1	1	1	1	1	1	1	1	
<b>SWEETWATER RIVER BASIN</b>										
	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average	
Pathfinder	865.1	687.0	604.6	1016.5	85%	68%	59%	143%	114%	
Basin-wide Total	865.1	687.0	604.6	1016.5	85%	68%	59%	143%	114%	
# of reservoirs	1	1	1	1	1	1	1	1	1	

## Appendix D

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### Streamflow Forecast Summary: April 1, 2016 (averages based on 1981-2010 reference period)

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
SNAKE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Snake R nr Moran <sup>2</sup>	APR-JUL	590	665	720	94%	770	850	765
	APR-SEP	645	735	795	94%	860	950	845
Snake R ab Reservoir nr Alpine <sup>2</sup>	APR-JUL	1670	1860	1980	91%	2110	2290	2170
	APR-SEP	1910	2130	2280	91%	2430	2650	2500
Snake R nr Irwin <sup>2</sup>	APR-JUL	2330	2660	2880	96%	3110	3440	3010
	APR-SEP	2730	3100	3360	96%	3610	3980	3500
Snake R nr Heise <sup>2</sup>	APR-JUL	2510	2860	3100	96%	3340	3690	3240
	APR-SEP	2980	3370	3640	96%	3910	4300	3780
Pacific Ck at Moran	APR-JUL	107	133	150	91%	168	194	164
	APR-SEP	114	141	159	92%	177	205	173
Buffalo Fk ab Lava Ck nr Moran	APR-JUL	215	245	270	96%	290	325	280
	APR-SEP	235	275	305	95%	330	370	320
Greys R ab Reservoir nr Alpine	APR-JUL	255	285	305	100%	330	360	305
	APR-SEP	295	330	355	99%	385	420	360
Salt R ab Reservoir nr Etna	APR-JUL	210	265	305	102%	345	400	300
	APR-SEP	265	330	375	101%	420	485	370

- 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

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
MADISON-GALLATIN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Hebgen Reservoir Inflow	APR-JUL	280	310	330	89%	350	380	370
	APR-SEP	360	395	420	89%	445	480	470

- 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

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
YELLOWSTONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet	APR-JUL	450	505	545	95%	585	640	575
	APR-SEP	600	675	725	94%	775	850	770
Yellowstone R at Conwin Springs	APR-JUL	1250	1420	1530	96%	1640	1810	1590
	APR-SEP	1450	1660	1800	96%	1940	2150	1880
Yellowstone R at Livingston	APR-JUL	1380	1590	1740	97%	1890	2100	1800
	APR-SEP	1630	1890	2060	96%	2230	2490	2140



**The Following Agencies and Organizations Cooperate with the Natural Resources Conservation Service on the Snow Survey Work.**

**FEDERAL:**

United States Department of the Interior (National Park Service) United States Department of Agriculture  
(Forest Service)

United States Department of the Interior (Bureau of Reclamation)

United States Department of Commerce NOAA (National Weather Service)

**State:**

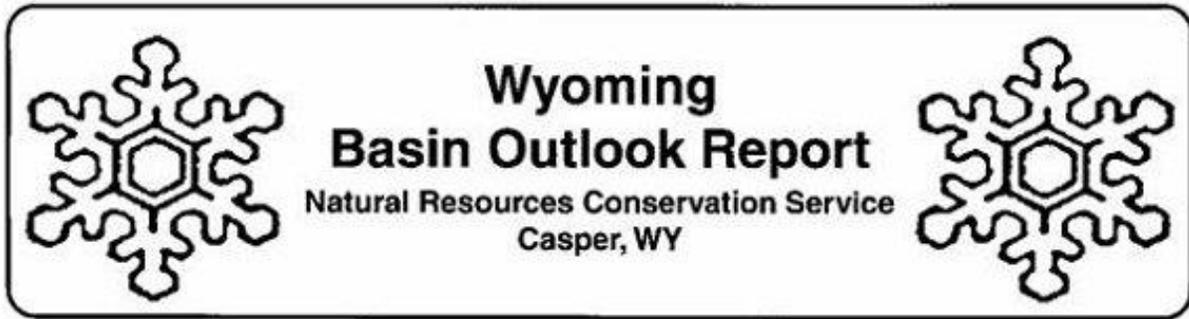
The Wyoming State Engineer's Office

The University of Wyoming

**Local:**

The City of Cheyenne

The City of Rawlins



Natural Resources Conservation Service  
100 East B Street  
Box 33124  
Casper, WY 82601

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