



United States  
Department of  
Agriculture

# Wyoming Basin Outlook Report

## Jan 1, 2016

Natural  
Resources  
Conservation  
Service



Med Bow SNOTEL #1196 (Snowy Range) 06H27S  
State Engineers (Robin Blake, Rod Oliver, and Chad Pickett)  
A snowy March 28, 2014

# Basin Outlook Reports

## And

### Federal - State - Private Cooperative Snow Surveys

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#### *How forecasts are made*

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. 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 below median for Jan. 1<sup>st</sup> at 81%. Monthly precipitation for the basins was 54-129% of average for an overall average of 93%. The year-to-date precipitation average for Wyoming basins is now at 81% varying from 52-111% of average. Forecasted runoff varies from 39-100% of average across the Wyoming basins for an overall average of 86%. Basin reservoir levels for Wyoming vary from 80-190% of average for an overall average of 119%.

## Snowpack

Snow water equivalent (SWE), across Wyoming is below median for Jan. 1<sup>st</sup> at 81%. SWE in the Sweetwater River Basin of Wyoming is the lowest basin at 54% of median. While SWE in the Shoshone River Basin is at 129% for the highest basin. *See Appendix A for further information.*

## Precipitation

Last month's precipitation was slightly below average across the Wyoming Mountains at 86% of average. The Shoshone River Basin had the highest precipitation for the month at 129% of average. The Sweetwater River Basin had the lowest precipitation amount at 54% of average. The following table displays the major river basins and their departure from average for last month.

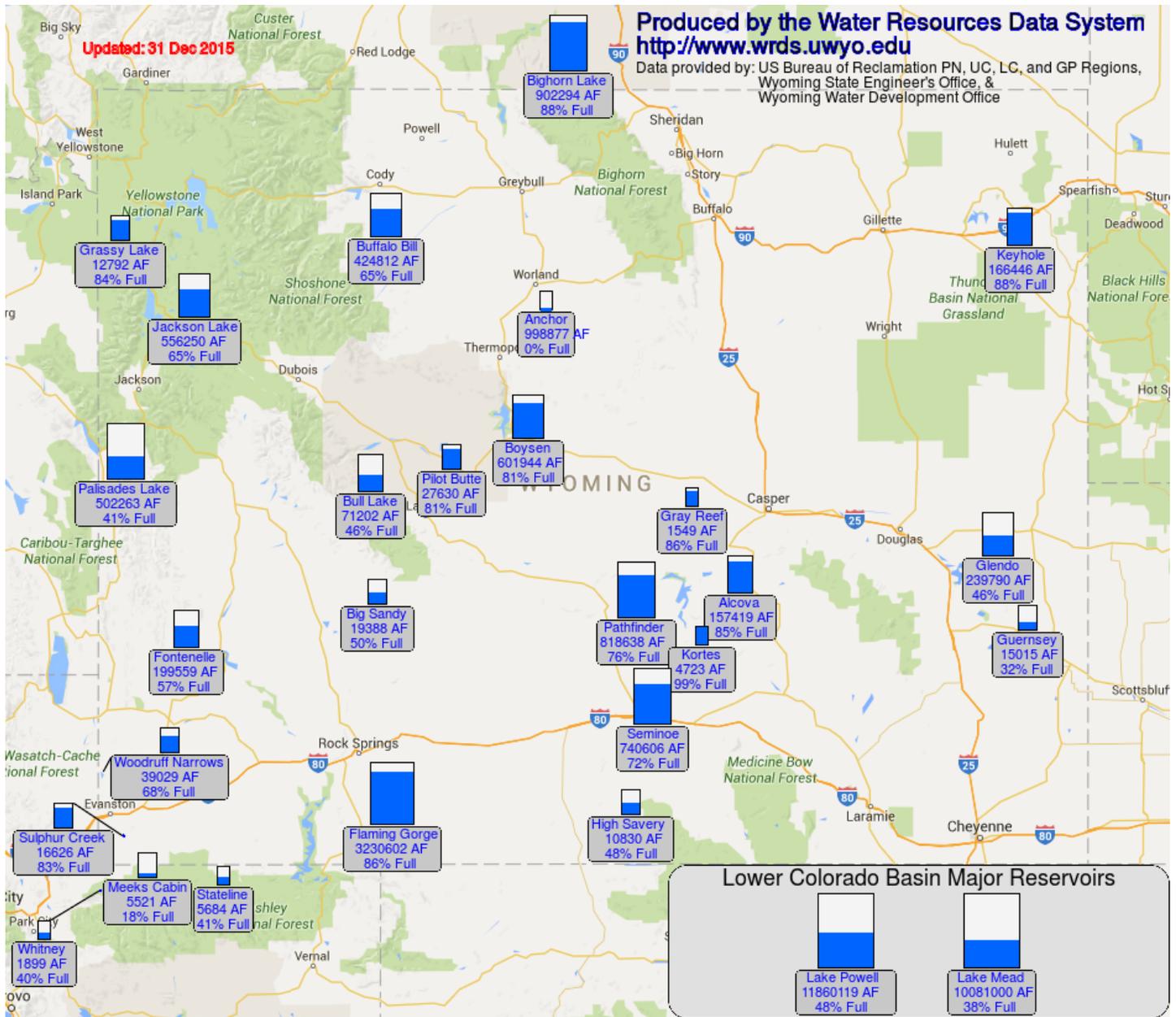
Basin	Departure from average	Basin	Departure from average
Snake River	+17%	Upper North Platte River	+10%
Madison-Gallatin	+23%	Sweetwater River	-46%
Yellowstone River	+22%	Lower North Platte River	+12%
Wind River	-14%	Laramie River	+05%
Bighorn River	-31%	South Platte River	+01%
Shoshone River	+29%	Little Snake River	+04%
Powder River	-33%	Upper Green River	+02%
Tongue River	-41%	Lower Green River	+17%
Belle Fourche River	-29%	Upper Bear River	+21%
Cheyenne River	-39%		

*See Appendix B for further information.*

## Reservoirs

Reservoir storage is above average at 119% for the entire state. Reservoirs in the Snake River Basin are about average at 97%. Reservoirs in the Wind River Basin are above average at 106%. Reservoirs on the Big Horn are above average at 104%. The Buffalo Bill Reservoir on the Shoshone is above average at 119%. Reservoirs in the Belle Fourche and Cheyenne River Basins are above average in storage at 155 & 119% respectively. Reservoirs on the Upper and Lower North Platte River are above average at 134% and 128% respectively. Reservoirs on the Laramie and Little Snake River basins are at 117% and 92% respectively. Reservoirs on the Upper Green River are above average at 114%. Reservoirs on the Lower Green River Basin are above average at 105%. Reservoir on the Upper Bear River Basin is above average at 144%. *See Appendix D for further information.*

## Wyoming Reservoir Levels for December 31<sup>st</sup> 2015



### Streams

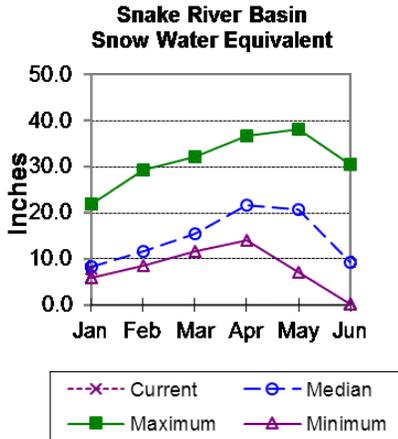
Stream flow yield for June thru September is expected to be below average over Wyoming at 86%. The Snake River, Madison, and Upper Yellowstone River Basins are expected to yield about 91%, 91% and 100% of average, respectively. Yields from the Wind and Bighorn River Basins are expected to be about 62% and 57% of average, respectively. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 98% and 98% of average, respectively. Yields from the Powder & Tongue River Basins are expected to be about 47% and 58% of average, respectively. Yield for the Cheyenne River Basin is expected to be about 64% of average. Yields for the Upper North Platte, Sweetwater, Lower North Platte, and Laramie Rivers of Wyoming are expected to be about 92%, 39%, 86%, and 100% of average, respectively. Yields for the Little Snake, Green River, and Smith's Fork of Wyoming are expected to be 80%, 79%, and 95% of average respectively. *See Appendix C for further information.*



# Snake River Basin

## Snow

Snake River Basin SWE above Palisades is 95% of median. SWE in the Snake River Basin above Jackson Lake is 104% of median. Pacific Creek Basin SWE is 102% of median. Buffalo Fork SWE is 84% of median. Gros Ventre River Basin SWE is 94% of median. SWE in the Hoback River drainage is 99% of median. SWE in the Greys River drainage is 92% of median. In the Salt River area SWE is 83% 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 117% of average (103% last year). Percentages range from 81-140% of average for the 23 reporting stations. Water-year-to-date precipitation is 96% of average for the Snake River Basin (104% last year). Year-to-date percentages range from 68-114% of average.

## Reservoirs

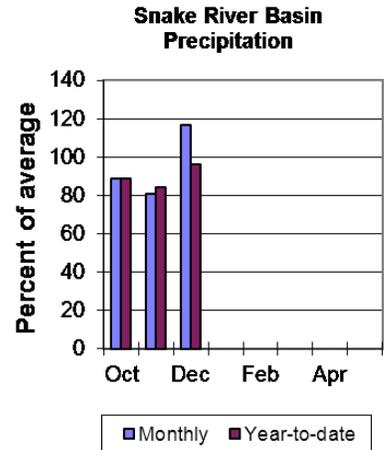
Current reservoir storage is 97% of average for the 3 storage reservoirs in the basin. Grassy Lake storage is about 110% of average (12,800 ac-ft compared to 12,500 last year). Jackson Lake storage is 131% of

average (556,000 ac-ft compared to 649,900 ac-ft last year). Palisades Reservoir storage is about 80% of average (704,300 ac-ft compared to 1,020,800 ac-ft last year).

*Detailed reservoir data is shown on the following page and Appendix D.*

## Streamflow

The 50% exceedance forecasts for April through September are below average for this basin. The Snake near Moran is 830,000 ac-ft (98% of average). Snake River above reservoir near Alpine is 2,290,000 ac-ft (92% of average). The Snake near Irwin is 3,170,000 ac-ft (91% of average). The Snake near Heise is 3,430,000 ac-ft (91% of average). Pacific Creek near Moran is 162,000 ac-ft (94% of average). Buffalo Fork above Lava near Moran is 310,000 ac-ft (86% of average). Greys River above Palisades Reservoir is 310,000 ac-ft (97% of average). Salt River near Etna is 310,000 ac-ft (84% of average). *See the following page for further information.*



## Snake River Basin Streamflow Forecasts - January 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	545	665	750	98%	835	955	765
	APR-SEP	600	735	830	98%	920	1060	845
Snake R ab Reservoir nr Alpine <sup>2</sup>	APR-JUL	1350	1730	1990	92%	2250	2630	2170
	APR-SEP	1570	2000	2290	92%	2580	3010	2500
Snake R nr Irwin <sup>2</sup>	APR-JUL	1810	2350	2720	90%	3090	3630	3010
	APR-SEP	2130	2750	3170	91%	3590	4210	3500
Snake R nr Heise <sup>2</sup>	APR-JUL	1960	2540	2930	90%	3320	3890	3240
	APR-SEP	2330	2990	3430	91%	3880	4540	3780
Pacific Ck at Moran	APR-JUL	93	129	154	94%	178	215	164
	APR-SEP	101	137	162	94%	187	225	173
Buffalo Fk ab Lava Ck nr Moran	APR-JUL	189	240	275	98%	305	360	280
	APR-SEP	215	270	310	97%	350	405	320
Greys R ab Reservoir nr Alpine	APR-JUL	166	225	265	87%	305	365	305
	APR-SEP	195	265	310	86%	355	425	360
Salt R ab Reservoir nr Etna	APR-JUL	111	193	250	83%	305	385	300
	APR-SEP	152	245	310	84%	370	465	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

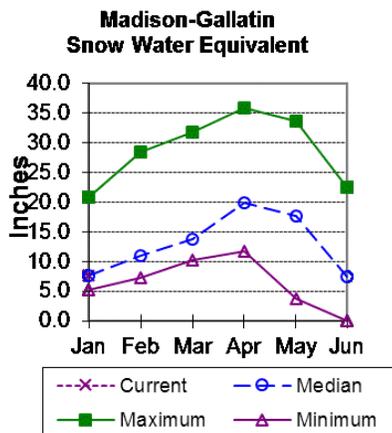
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Grassy Lake	12.8	12.5	11.6	15.2
Jackson Lake	556.0	649.9	424.1	847.0
Palisades Reservoir	704.3	1020.8	882.5	1400.0
Basin-wide Total	1273.1	1683.1	1318.2	2262.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	5	104%	111%
PACIFIC CREEK	2	102%	115%
BUFFALO FORK	1	84%	109%
GROS VENTRE RIVER	4	94%	123%
HOBACK RIVER	3	99%	160%
GREYS RIVER	5	92%	142%
SALT RIVER	3	83%	126%
SNAKE RIVER BASIN	21	95%	120%

# Madison-Gallatin Rivers Basin

## Snow

SWE is 102% 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 123% of average (82% last year). The 5 reporting stations percentages range from 105-141% of average. Water-year-to-date precipitation is about 97% of average, which was 86% last year. Year to date percentage ranges from 85-110%.

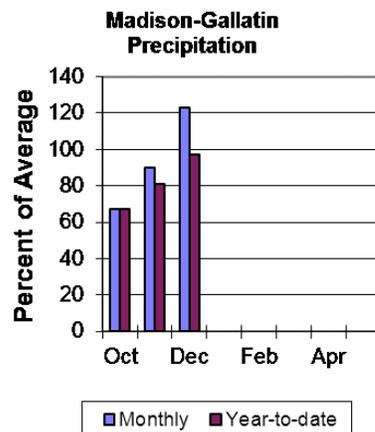
## Reservoirs

Ennis Lake is storing about 28,500 ac-ft of water (70% of capacity, 95% of average or 95% last year). Hebgen Lake is storing about 318,500 ac-ft of water (84%

of capacity, 112 of average or 118% last year). *Detailed reservoir data is shown below & Appendix D.*

## Streamflow

The 50% exceedance forecast for April through September is below average for the basin. Hebgen Reservoir inflow is 430,000 ac-ft (91% of average). *See below for detailed runoff volumes.*



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## Madison-Gallatin River Basins Streamflow Forecasts - January 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-SEP	325	390	430	91%	470	535	470
	APR-JUL	255	305	340	92%	375	425	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Ennis Lake	28.5	28.5	30.0	41.0
Hebgen Lake	318.5	332.8	283.2	378.8
<b>Basin-wide Total</b>	<b>347.0</b>	<b>361.4</b>	<b>313.2</b>	<b>419.8</b>
# of reservoirs	2	2	2	2

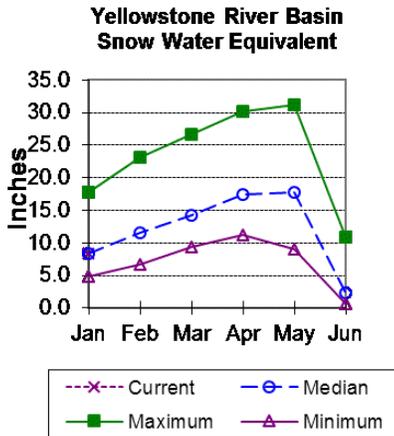
  

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
MADISON-GALLATIN RIVER BASINS	7	102%	89%

# Yellowstone River Basin

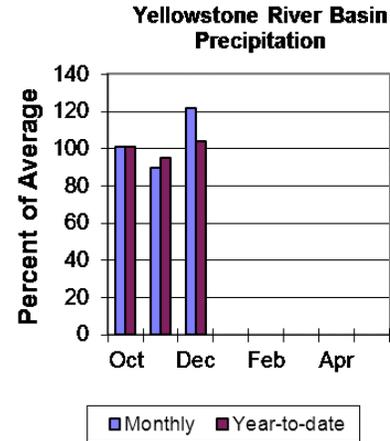
## Snow

SWE in the Yellowstone River Basin is 99% of median. SWE in the Yellowstone River Drainage in WY is 99% of median. SWE in the Clarks Fork Drainage of the Yellowstone River Basin in Wyoming is 98% 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 122% of average (111% last year). The 16 reporting stations percentages range from 82-200% of average. Water-year-to-date precipitation is 104% of average, which was 107% last year. Year to date percentages range from 84-134%.



## Reservoirs

No reservoir data

## Streamflow

The 50% exceedance forecasts for June through September are about average for the basin. Yellowstone at Lake Outlet is 730,000 ac-ft (95% of average). Yellowstone at Corwin Springs will yield around 1,860,000 ac-ft (99% of average). Yellowstone near Livingston will yield around 2,130,000 ac-ft (100% of average). Clarks Fork of the Yellowstone near Belfry 540,000 ac-ft (98% of average).

*See the following for further information.*

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## Yellowstone River Basin Streamflow Forecasts - January 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	410	495	550	96%	605	690	575
	APR-SEP	550	655	730	95%	800	910	770
Yellowstone R at Corwin Springs	APR-JUL	1250	1450	1590	100%	1730	1930	1590
	APR-SEP	1460	1700	1860	99%	2020	2260	1880
Yellowstone R at Livingston	APR-JUL	1410	1650	1810	101%	1980	2210	1800
	APR-SEP	1660	1940	2130	100%	2310	2590	2140
Clarks Fk Yellowstone R nr Belfry <sup>2</sup>	APR-JUL	385	455	500	98%	545	610	510
	APR-SEP	420	495	540	98%	590	665	550

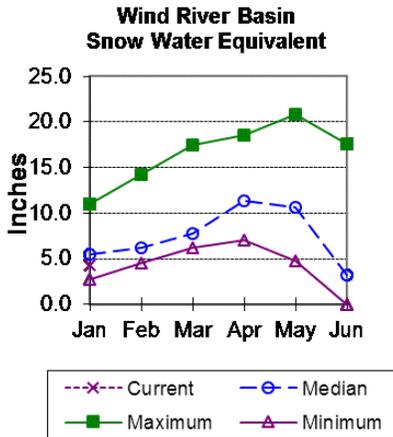
- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
YELLOWSTONE RIVER in WY	9	99%	112%
CLARKS FORK in WY	8	98%	121%

# Wind River Basin

## Snow

Wind River Basin above Boysen Reservoir SWE is 78% of median. SWE in the Wind River above Dubois is 86% of median. Little Wind SWE is 62% of median, and Popo Agie drainage SWE is 69% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

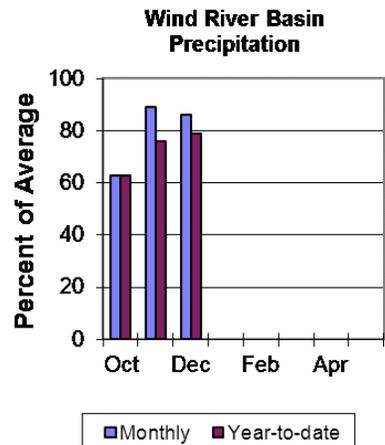
Last month's basin's precipitation varied from 22-114% of average. Precipitation for the basin was 86% of average (112% last year) from the 11 reporting stations. Water year-to-date precipitation is 79% of average and was 95% last year at this time. Year-to-date percentages range from 39-114% of average.

## Reservoirs

Current storage in Bull Lake is 70,500 ac-ft (94% of average) (140% last year). Boysen Reservoir is storing (561,900 ac-ft) about 108% of average 123% last year). Pilot Butte is at 108% of average (25,000 ac-ft) 100% last year). *Detailed reservoir data is shown on the following page and Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September runoff period are below average. Dinwoody Creek near Burris should yield 91,000 ac-ft (99% of average). The Wind River above Bull Lake Creek will yield 420,000 ac-ft (86% of average). Bull Lake Creek near Lenore will yield 142,000 ac-ft (84% of average). Wind River at Riverton will yield around 470,000 ac-ft (85% of average). Little Popo Agie River near Lander should yield around 29,000 ac-ft (59% 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 147,000 ac-ft (50% of average). Boysen Reservoir inflow will yield around 415,000 ac-ft (62% of average). *See the following page for detailed runoff volumes.*



## Wind River Basin Streamflow Forecasts - January 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	48	58	64	97%	70	80	66
	APR-SEP	74	84	91	99%	97	107	92
Wind R Ab Bull Lake Ck	APR-JUL	230	330	400	88%	465	565	455
	APR-SEP	235	345	420	86%	495	605	490
Bull Lake Ck nr Lenore	APR-JUL	82	103	117	84%	131	152	139
	APR-SEP	99	125	142	84%	159	185	169
Wind R at Riverton	APR-JUL	220	335	410	86%	485	600	475
	APR-SEP	265	390	470	85%	555	675	550
Little Popo Agie R nr Lander	APR-JUL	4.4	16.1	24	57%	32	44	42
	APR-SEP	7.9	20	29	59%	37	49	49
Little Wind R nr Riverton	APR-JUL	5	69	134	50%	199	295	270
	APR-SEP	5	78	147	50%	215	315	295
Boysen Reservoir Inflow	APR-JUL	50	260	400	66%	540	750	610
	APR-SEP	44	265	415	62%	565	790	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bull Lake	70.5	105.1	75.2	151.8
Boysen	561.9	642.2	521.7	596.0
Pilot Butte	25.0	23.2	23.1	31.6
Basin-wide Total	657.4	770.5	620.0	779.4
# of reservoirs	3	3	3	3

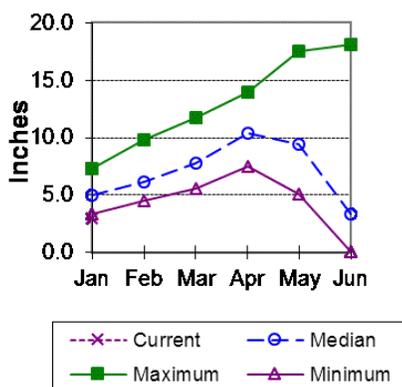
Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
WIND above Dubois	2	86%	113%
LITTLE WIND	2	62%	77%
POPO AGIE	4	69%	83%
WIND RIVER BASIN	9	78%	98%

# Bighorn River Basin

## Snow

The Bighorn River Basin SWE above Bighorn Reservoir is at 59% of median. The Nowood River is at 58% of median. The Greybull River SWE is at 95% of median. Shell Creek SWE is at 50% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Bighorn Basin  
Snow Water Equivalent**



## Precipitation

Last month's precipitation was 69% of average (119% last year). Sites ranged from 32-138% of average for the month. Year-to-date precipitation is 68% of average (98% last year). Year-to-date percentages, from the 15 reporting stations, range from 37-147%.

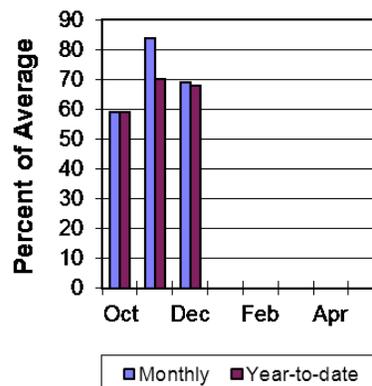
## Reservoirs

Boysen Reservoir is currently storing 561,900 ac-ft (108% of average). Bighorn Lake is now at 883,600 ac-ft (101% of average). Boysen was at 123% of average last year

at this time and Big Horn Lake was at 105% last year.

*Detailed reservoir data is shown on the following page and Appendix D.*

**Bighorn Basin  
Precipitation**



## Streamflow

The 50% exceedance forecasts for the June through September runoffs are anticipated to be below average. Boysen Reservoir inflow should yield 415,000 ac-ft (62% of average); the Greybull River near Meeteetse should yield around 159,000 ac-ft (90% of average); Shell Creek near Shell should yield around 44,000 ac-ft (67% of average) and the Bighorn River at Kane should yield around 515,000 ac-ft (57% of average). *See the following for detailed runoff volumes.*

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**Bighorn River Basin  
Streamflow Forecasts - January 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	50	260	400	66%	540	750	610
	APR-SEP	44	265	415	62%	565	790	665
Greybull R nr Meeteetse	APR-JUL	62	95	118	90%	140	173	131
	APR-SEP	93	132	159	90%	185	225	177
Shell Ck nr Shell	APR-JUL	18.6	28	35	64%	42	51	55
	APR-SEP	26	36	44	67%	51	61	66
Bighorn R at Kane	APR-JUL	25	320	515	61%	715	1010	840
	APR-SEP	20	300	515	57%	730	1050	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

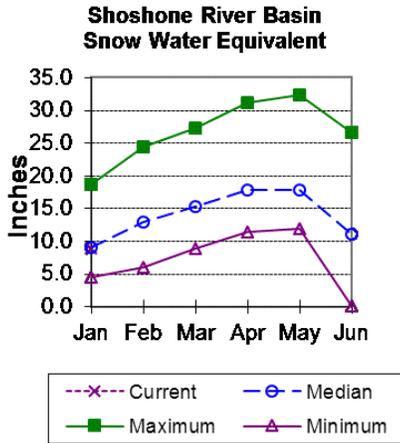
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boysen	561.9	642.2	521.7	596.0
Bighorn Lake	883.6	912.9	871.2	1356.0
Basin-wide Total	1445.5	1555.1	1392.9	1952.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	4	58%	113%
GREYBULL RIVER	2	95%	145%
SHELL CREEK	3	50%	86%
BIGHORN RIVER BASIN	10	59%	104%

# Shoshone River Basin

## Snow

Snowpack in this basin is below median for this time of year. Snow Water Equivalent (SWE) is 97% of median in the Shoshone River Basin. *See Appendix A at the end of this report for a detailed listing of snow course information.*



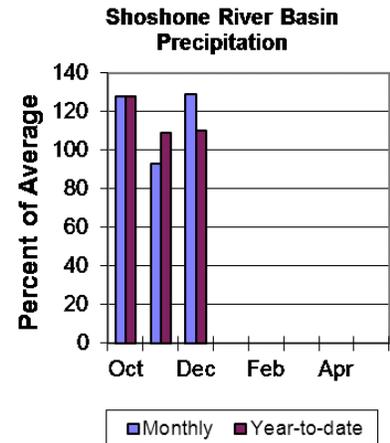
## Precipitation

Precipitation for last month was 129% of average (109% last year). Monthly percentages range from 82-168% of average. The basin year-to-date precipitation is now 110% of average (104% last year). Year-to-date percentages range from 76-126% of average for the 4 reporting stations.

## Reservoirs

Current storage in Buffalo Bill Reservoir is about 119% of average (131% last year) - the reservoir is at about 66% of capacity. Currently, about 424,700 ac-ft are stored in the

reservoir compared to 464,300 ac-ft last year. *Detailed reservoir data is shown on the following page and Appendix D.*



## Streamflow

The 50% exceedance forecasts for the April through September period are expected to be about average for the basin. The North Fork Shoshone River at Wapiti will yield 505,000 ac-ft (98% of average). The South Fork of the Shoshone River near Valley will yield 240,000 ac-ft (98% of average), and the South Fork above Buffalo Bill Reservoir runoff will yield 197,000 ac-ft (99% of average). The Buffalo Bill Reservoir inflow is expected to yield around 730,000 ac-ft (98% of average). *See the following for detailed runoff volumes.*

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**Shoshone River Basin  
Streamflow Forecasts - January 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	350	410	450	98%	490	550	460
	APR-SEP	400	460	505	98%	545	605	515
SF Shoshone R nr Valley	APR-JUL	161	190	210	98%	230	260	215
	APR-SEP	185	220	240	98%	260	295	245
SF Shoshone R ab Buffalo Bill Reservoir	APR-JUL	120	163	193	100%	220	265	193
	APR-SEP	121	166	197	99%	230	275	200
Buffalo Bill Reservoir Inflow <sup>2</sup>	APR-JUL	505	600	665	99%	730	825	675
	APR-SEP	560	660	730	98%	800	900	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Buffalo Bill	424.7	464.3	355.5	646.6
Basin-wide Total	424.7	464.3	355.5	646.6
# of reservoirs	1	1	1	1

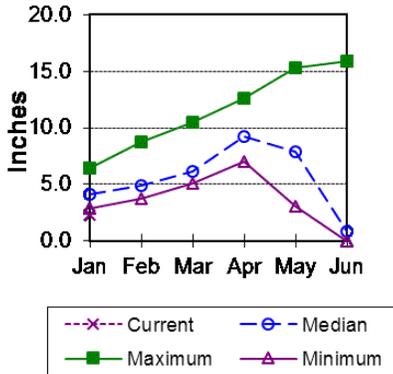
Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER BASIN	4	97%	108%

# Powder River Basin

## Snow

Powder River SWE is 56% of median. Upper Powder River drainage is 58% of median. SWE in the Clear Creek drainage is 54% of median. Crazy Woman Creek drainage SWE is at 48% 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 67% of average (135% last year) for the 9 reporting stations. Monthly percentages range from 37-118% of average. Year-to-date precipitation is 53% of average in the basin (95% last year). Precipitation for the year ranges from 18-90% of average.

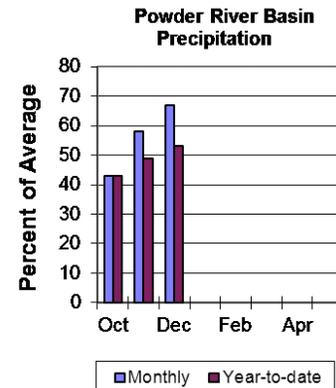
## Reservoirs

No reservoir data for the basin.

## Streamflow

The 50% exceedance forecasts for the April

through September period are expected to be below average for the basin. The Middle Fork of the Powder River near Barnum should yield 10,300 ac-ft (61% of average). The North Fork of the Powder River near Hazelton should yield around 6,000 ac-ft (61% of average). Rock Creek near Buffalo will yield about 15,200 ac-ft (69% of average), and Piney Creek at Kearny should yield about 27,000 ac-ft (57% of average). The Powder River at Moorhead will yield 92,000 ac-ft (47% of average). The Powder River near Locate will yield 98,000 ac-ft (45% of average). See *the following for detailed runoff volumes.*



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**Powder River Basin  
Streamflow Forecasts - January 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	1	5.6	9.7	60%	13.8	19.8	16.1
	APR-SEP	1	6.2	10.3	61%	14.6	21	17
NF Powder R nr Hazelton	APR-JUL	2	4.1	5.5	60%	6.9	9	9.1
	APR-SEP	2.4	4.5	6	61%	7.4	9.6	9.9
Rock Ck nr Buffalo	APR-JUL	2.3	8.1	12.1	65%	16	22	18.6
	APR-SEP	4.7	10.9	15.2	69%	19.5	26	22
Piney Ck at Kearny	APR-JUL	1	13.5	25	57%	37	54	44
	APR-SEP	1	15.3	27	57%	39	57	47
Powder R at Moorehead	APR-JUL	1	29	76	43%	123	192	177
	APR-SEP	1	43	92	47%	141	210	196
Powder R nr Locate	APR-JUL	1	27	83	42%	140	225	199
	APR-SEP	1	37	98	45%	160	250	220

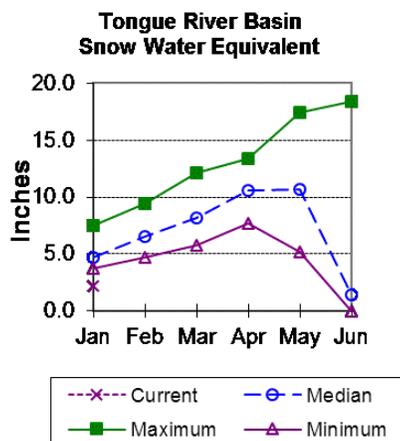
- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	4	58%	113%
CLEAR CREEK	2	54%	111%
CRAZY WOMAN CREEK	1	48%	113%
POWDER RIVER BASIN	6	56%	112%

# Tongue River Basin

## Snow

Upper Tongue River drainage SWE is at 47% of median. The Goose Creek drainage SWE is at 38% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

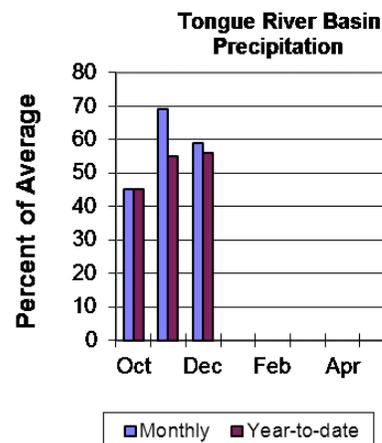


## Precipitation

Last month's precipitation was 59% of average (121% last year) for the 11 reporting stations. Monthly percentages range from 12-177% of average. Year-to-date precipitation is 56% of average in the basin (92% last year). Precipitation for the year ranges from 130-102% of average.

## Reservoirs

The Tongue River Reservoir currently is storing 49,000 ac-ft, while last year's storage was 51,200 ac-ft. The Tongue River Reservoir is at 186% of average for this time of year



or 62% of capacity. *Detailed reservoir data is shown below and Appendix D.*

## Streamflow

The 50% exceedance forecasts for the April through September period are expected to be below average for the basin. The yield for Tongue River near Dayton is 63,000 ac-ft (64% of average). Big Goose Creek near Sheridan will yield 34,000 ac-ft (63% of average). Little Goose Creek near Bighorn will yield 23,000 ac-ft (59% of average). The Tongue River Reservoir Inflow is 125,000 ac-ft (58% of average). *See below for detailed runoff volumes.*

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### Tongue River Basin Streamflow Forecasts - January 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	21	41	55	64%	69	89	86
	APR-SEP	26	48	63	64%	78	100	98
Big Goose Ck nr Sheridan	APR-JUL	6.9	18.9	27	59%	35	47	46
	APR-SEP	13.5	26	34	63%	42	55	54
Little Goose Ck nr Bighorn	APR-JUL	4.1	11.8	17.1	55%	22	30	31
	APR-SEP	8.6	16.9	23	59%	28	36	39
Tongue River Reservoir Inflow	APR-JUL	5.4	69	112	58%	156	220	193
	APR-SEP	12.3	79	125	58%	171	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

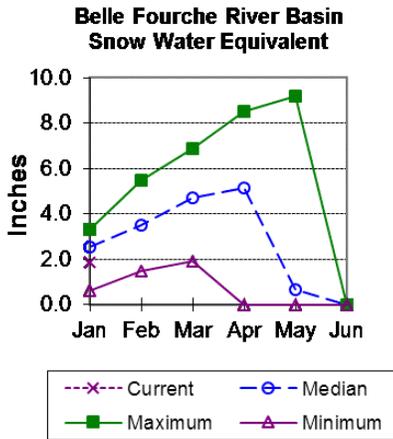
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Tongue River Res	49.0	51.2	26.4	79.1
Basin-wide Total	49.0	51.2	26.4	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
GOOSE CREEK	2	38%	82%
TONGUE RIVER BASIN	6	47%	95%

# Belle Fourche River Basin

## Snow

Belle Fourche River Basin SWE is at 73% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



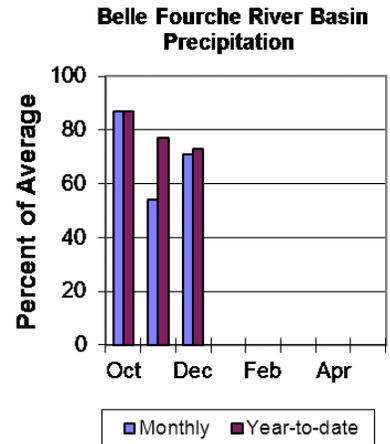
## Precipitation

Precipitation for last month was 71% of average (116% last year) in the Black Hills for the 3 reporting stations. Year-to-date precipitation is 73% of average (93% last year).

## Reservoirs

Belle Fourche Reservoir is storing 140% of average (141,800 ac-ft), about 79% of capacity. Keyhole Reservoir is storing 190% of average (166,100 ac-ft), about 86% of capacity. Shadehill Reservoir is

storing 121% of average (53,400 ac-ft), about 66% of capacity. *Detailed reservoir data is shown below and Appendix D.*



## Streamflow

There are no streamflow forecast points for the basin.

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### Belle Fourche River Basin - January 1, 2016

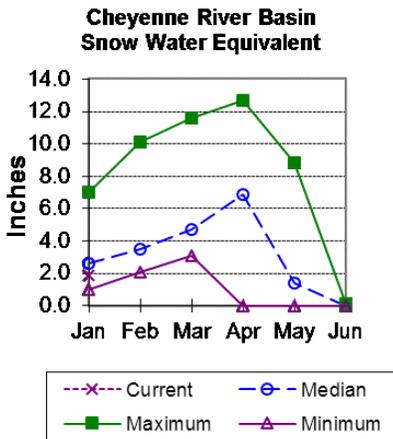
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Belle Fourche	141.8	138.3	101.2	178.4
Keyhole	166.1	168.2	87.4	193.8
Shadehill	53.4	59.9	44.1	81.4
<b>Basin-wide Total</b>	<b>361.3</b>	<b>366.4</b>	<b>232.7</b>	<b>453.6</b>
<b># of reservoirs</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
BELLE FOURCHE RIVER BASIN	1	73%	86%

# Cheyenne River Basin

## Snow

Cheyenne River Basin SWE is at 72% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



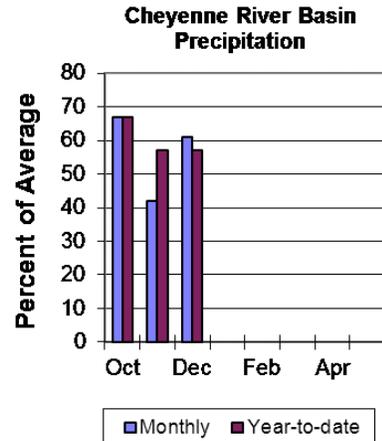
## Precipitation

Precipitation for last month was 61% of average (100% last year) in the Black Hills. There were 3 reporting stations. Year-to-date precipitation is 57% of average (87% last year).

## Reservoirs

Angostura is currently storing 127% of average (103,000 ac-ft), about 84% of capacity. Deerfield reservoir is storing 106% of average (14,300 ac-ft), about 94% of capacity. Pactola Reservoir is

storing 109% of average (49,800 ac-ft), about 91% of capacity. *Detailed reservoir data is shown below and Appendix D.*



## Streamflow

The following runoff values are the 50% exceedance forecasts for the April through July period. The Deerfield Reservoir Inflow is expected to be 3,800 ac-ft (73% of average). Pactola Reservoir Inflow is expected to yield around 12,000 ac-ft (55% of average). *See the following for detailed runoff volumes.*

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### Cheyenne River Basin Streamflow Forecasts - January 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	MAR-JUL	0.13	3	4.9	79%	6.8	9.6	6.2
	APR-JUL	1.36	2.7	3.8	73%	5.2	7.6	5.2
Pactola Reservoir Inflow	MAR-JUL	1.86	5.5	14.8	59%	24	38	25
	APR-JUL	1.86	6.8	12	55%	18.6	31	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

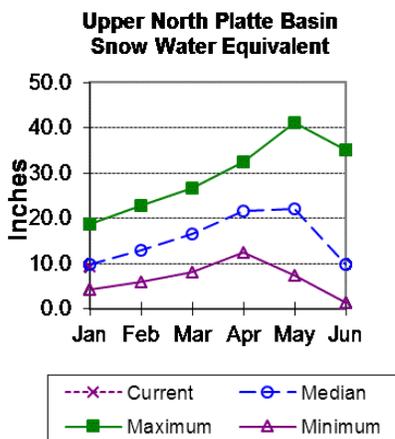
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Angostura	103.0	100.6	81.1	122.1
Deerfield	14.3	15.1	13.5	15.2
Pactola	49.8	51.3	45.6	55.0
<b>Basin-wide Total</b>	<b>167.1</b>	<b>166.9</b>	<b>140.2</b>	<b>192.3</b>
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER BASIN	2	72%	102%

# Upper North Platte River Basin

## Snow

The Upper North Platte River Basin above Seminoe Reservoir SWE is 95% of median. North Platte above Northgate SWE is 100% of median. Encampment River SWE is 93% of median. Brush Creek SWE is 79% of median. Medicine Bow and Rock Creek SWE are 97% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



## Precipitation

17 reporting stations show last month's precipitation at 110% of average (91% last year). Precipitation varied from 51-155% of average last month. Total water-year-to-date precipitation is 90% of average for the basin (93% last year). Year-to-date percentages range from 65-120% of average.

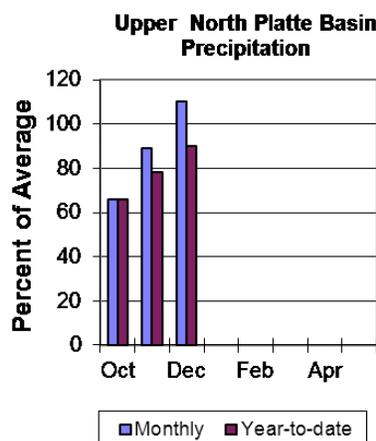
## Reservoirs

Seminoe Reservoir is storing 740,100 ac-ft or 73% of

capacity. Seminoe Reservoir is storing about 134% of average for this time of the year and was at 127% last year. *Detailed reservoir data is shown on the following page and Appendix D.*

## Streamflow

The following yields are the 50% exceedance forecasts for the April through September period and are expected to be below average for the Upper North Platte River Basin. Yield for the North Platte River near Northgate will be 250,000 ac-ft (100% of average). The Encampment River near Encampment yield will be 125,000 ac-ft (91% of average). Rock Creek near Arlington yield will be 51,000 ac-ft (98% of average). Seminoe Reservoir inflow should be around 705,000 ac-ft (92% of average). *See the following page for more detailed information on projected runoff.*



## Upper North Platte River Basin Streamflow Forecasts - January 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	105	176	225	100%	275	345	225
	APR-SEP	118	197	250	100%	305	380	250
Encampment R nr Encampment <sup>2</sup>	APR-JUL	60	94	117	91%	141	175	129
	APR-SEP	64	100	125	91%	149	185	138
Rock Ck nr Arlington	APR-JUL	30	41	48	98%	55	66	49
	APR-SEP	32	43	51	98%	59	70	52
Sweetwater R nr Alcova	APR-JUL	1	7.3	22	37%	37	58	59
	APR-SEP	1	9.3	25	39%	41	64	64
Seminole Reservoir Inflow	APR-JUL	230	480	650	91%	815	1060	715
	APR-SEP	255	520	705	92%	885	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

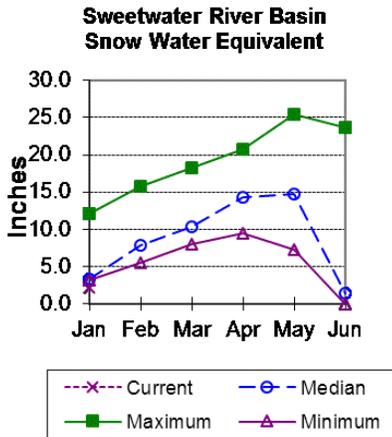
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Seminole	740.1	705.8	553.7	1016.7
Basin-wide Total	740.1	705.8	553.7	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	9	100%	100%
ENCAMPMENT RIVER	3	93%	101%
BRUSH CREEK	2	79%	96%
MEDICINE BOW & ROCK CREEKS	1	97%	96%
UPPER NORTH PLATTE RIVER BASIN	17	95%	96%

# Sweetwater River Basin

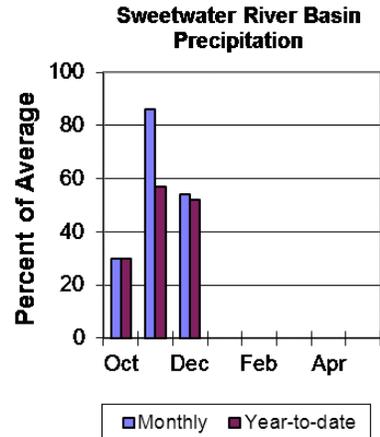
## Snow

Sweetwater River Basin SWE is 66% 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 54% of average (95% last year) for the 2 reporting stations ranging from 45-62%. The water year-to-date precipitation for the basin is currently 52% of average (80% last year). Year-to-date percentages range from 43-61% of average.



## Reservoirs

Reservoir storage is as follows: Pathfinder 818,600 ac-ft (153% of average or 73% of capacity).

## Streamflow

The following yield is based on the 50% exceedance forecast for the April through September period, and is expected to be near record low. The Sweetwater River near Pathfinder is forecast to yield about 25,000 ac-ft (39% of average). *See below for more detailed information on projected runoff.*

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### Sweetwater River Basin Streamflow Forecasts - January 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	1	7.3	22	37%	37	58	59
	APR-SEP	1	9.3	25	39%	41	64	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

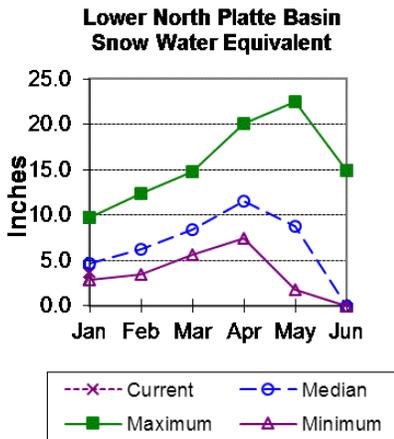
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Pathfinder	818.6	680.9	536.1	1016.5
Basin-wide Total	818.6	680.9	536.1	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER BASIN	3	66%	87%

# Lower North Platte River Basin

## Snow

Lower North Platte River Basin SWE is 80% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*



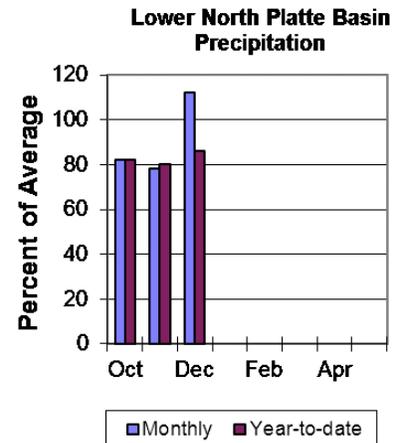
## Precipitation

Last month's precipitation was 112% of average or 120% last year. For the 6 reporting stations percentages for the month range from 88-216%. The water year-to-date precipitation for the basin is currently 86% of average or 73% last year. Year-to-date percentages range from 68-134% of average.

## Reservoirs

Reservoir storage is as follows: Alcova 157,300 ac-ft (102% of average) (85% of capacity); Glendo 232,800 ac-ft (91% of average) (46% of capacity); Guernsey

15,000 ac-ft (163% of average) (33 of capacity); Pathfinder 818,600 ac-ft (153% of average) (81% of capacity) (127% of average last year). *Detailed reservoir data is shown on the following page and Appendix D.*



## Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period, and are expected to be well below average. North Platte - Alcova to Orin Gain is forecast to yield ---- ac-ft. LaPrele Creek above LaPrele Reservoir should yield 12,500 ac-ft (63% of average). North Platte River below Glendo Reservoir should yield 715,000 ac-ft (84% of average), and below Guernsey Reservoir is anticipated to yield around 735,000 ac-ft (86% of average). *See the following for more detailed information on projected runoff.*

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### Lower North Platte River Basin Streamflow Forecasts - January 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	0.7	5.3	12.8	64%	20	31	19.9
	APR-SEP	0.7	5	12.5	63%	20	31	19.9
North Platte R bl Glendo Reservoir	APR-JUL	430	590	695	85%	800	960	820
	APR-SEP	435	600	715	84%	825	990	850
North Platte R bl Guernsey Reservoir	APR-JUL	375	570	705	86%	835	1030	820
	APR-SEP	395	600	735	86%	875	1080	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Alcova	157.3	156.9	154.9	184.3
Glendo	232.8	181.6	254.7	506.4
Guernsey	15.0	19.7	9.2	45.6
Pathfinder	818.6	680.9	536.1	1016.5
Basin-wide Total	1223.7	1039.1	954.9	1752.8
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2	80%	76%
LOWER NORTH PLATTE RIVER BASIN	4	80%	80%

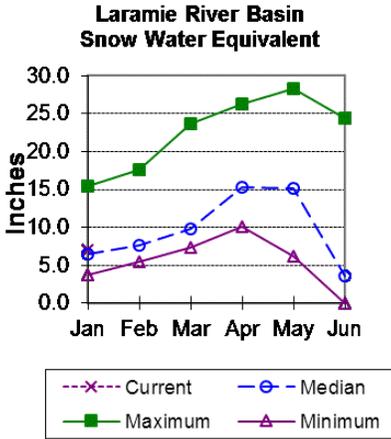
# Laramie River Basin

## Snow

SWE for the entire Laramie River Basin (above mouth entering North Platte) is 110% of median. SWE for the Laramie River above Laramie is 114% of median. SWE for the Little

Laramie River is 107% of median. **SWE total for the entire North Platte River Basin above Torrington is 92% of median.**

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

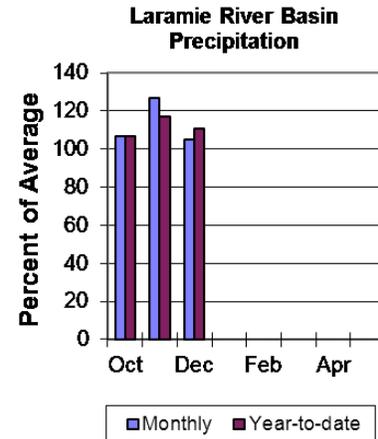


## Precipitation

Last month's precipitation was 105% of average (109% last year). For the 11 reporting stations percentages for the month range from 72-151%. The water year-to-date precipitation for the basin is currently 111% of average (96% last year). Year-to-date percentages range from 85-166% of average.

## Reservoirs

Reservoir storage is as follows: Wheatland #2 49,400 ac-ft (117% of average) (50% of capacity or 150% of average last year).



## Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period, and are expected to be well below average. Laramie River near Woods Landing should yield around 131,000 ac-ft (104% of average). The Little Laramie near Filmore should produce about 52,000 ac-ft (95% of average). *See below for more detailed information on projected runoff.*

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### Laramie River Basin Streamflow Forecasts - January 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	81	104	119	103%	134	156	115
	APR-SEP	91	115	131	104%	147	171	126
Little Laramie R nr Filmore	APR-JUL	28	41	49	96%	57	70	51
	APR-SEP	29	43	52	95%	61	75	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wheatland #2	49.4	63.6	42.4	98.9
Basin-wide Total	49.4	63.6	42.4	98.9
# of reservoirs	1	1	1	1

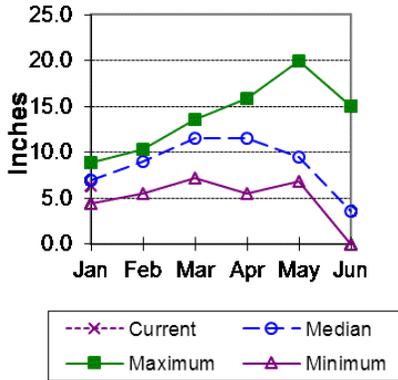
Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	4	114%	97%
LITTLE LARAMIE RIVER	2	107%	103%
LARAMIE RIVER BASIN	7	110%	100%
NORTH PLATTE TOTAL RIVER BASIN	26	92%	93%

# South Platte River Basin (WY)

## Snow

South Platte River Basin SWE in WY is 91% 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.

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## South Platte River Basin - January 1, 2016

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
SOUTH PLATTE RIVER BASIN	4	91%	98%

## Precipitation

Last month's precipitation was 101% of average or 115% last year for the 5 reporting stations. The water year-to-date precipitation for the basin is currently 111% of average or 111% last year. Year-to-date percentages range from 93-182% of average.

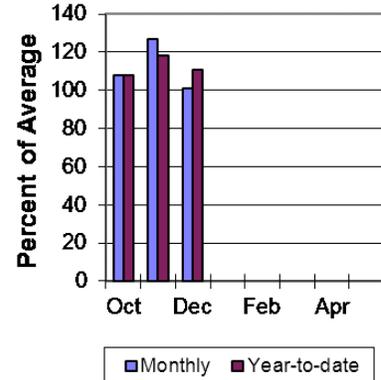
## Reservoirs

No reservoir data for the basin.

## Streamflow

There are no streamflow

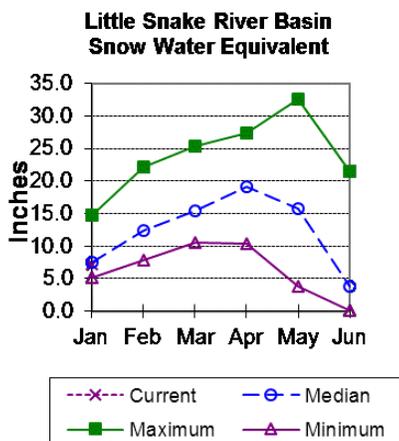
**South Platte River Basin Precipitation**



# Little Snake River Basin

## Snow

Little Snake River drainage SWE is 95% 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 104% of average or 81% last year for the 8 reporting stations. Last month's precipitation ranged from 73-121% of average. The Little Snake River Basin water-year-to-date precipitation is currently 80% of average or 83% last year. Year-to-date percentages range from 55-98% of average.

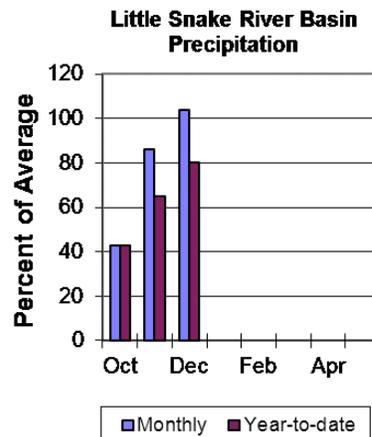
## Reservoirs

High Savery Dam - 10,800 ac-ft (92% of average) (48% of capacity) (117% last year's average).

## Streamflow

The following yields are based on the 50% exceedance forecasts for the April through July period, and are expected to be near record lows. The Little Snake River near Slater should yield around 135,000 ac-ft (87% of average). The Little Snake River near Dixon is estimated to yield around 275,000 ac-ft (80% of average). See below for more detailed information on projected runoff.

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## Little Snake River Basin Streamflow Forecasts - January 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	75	109	135	87%	164	210	156
Little Snake R nr Dixon <sup>2</sup>	APR-JUL	103	195	275	80%	370	530	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

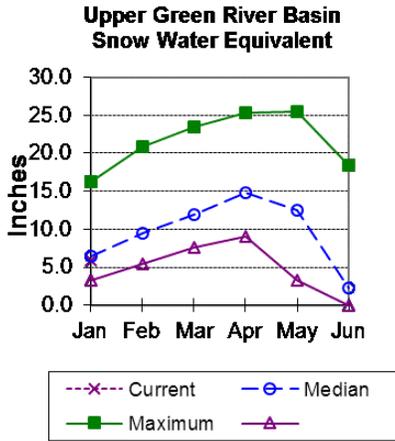
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
High Savery Reservoir	10.8	13.7	11.7	22.4
Basin-wide Total	10.8	13.7	11.7	22.4
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER BASIN	8	95%	99%

# Upper Green River Basin

## Snow

Upper Green River Basin above Fontenelle Reservoir SWE is 91% of median. Green River Basin above Warren Bridge SWE is 92% of median. West Side of Upper Green River Basin SWE is 98% of median. New Fork River SWE is 84% of median. Big Sandy-Eden Valley Basin SWE is 59% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

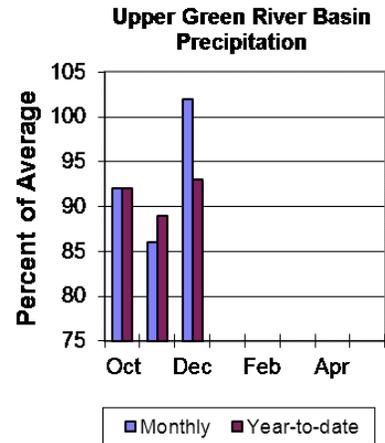


## Precipitation

The 15 reporting precipitation sites in the basin were 103% of average last month or 121% last year). Last month's precipitation varied from 74-125% of average. Water year-to-date precipitation is 93% of average or 119% last year. Year to date percentages of average range from 74-127%.

## Reservoir

Storage in Big Sandy Reservoir is 18,700 ac-ft or 49% of capacity (115% of average) (126% last year). Fontenelle Reservoir is 199,000 ac-ft (58% of capacity) (114% of average) (151% last year). *Detailed reservoir data is shown on the following page and Appendix D.*



## Streamflow

The following yields are based on the 50% exceedance forecasts for the April through July period, and are expected to be below average. The yield on the Green River at Warren Bridge is 210,000 ac-ft (86% of average). Pine Creek above Fremont Lake yield will be 85,000 ac-ft (87% of average). New Fork River near Big Piney yield will be 270,000 ac-ft (76% of average). Fontenelle Reservoir Inflow is estimated to be 565,000 ac-ft (78% of average), and Big Sandy near Farson yield will be 36,000 ac-ft (69% of average). *See the following page for more detailed information on projected runoff.*

## Upper Green River Basin Streamflow Forecasts - January 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	138	179	210	86%	245	295	245
Pine Creek ab Fremont Lake	APR-JUL	66	77	85	87%	93	106	98
New Fork R nr Big Piney	APR-JUL	137	210	270	76%	335	450	355
Fontenelle Reservoir Inflow	APR-JUL	275	435	565	78%	710	955	725
Big Sandy R nr Farson	APR-JUL	19.8	29	36	69%	43	56	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

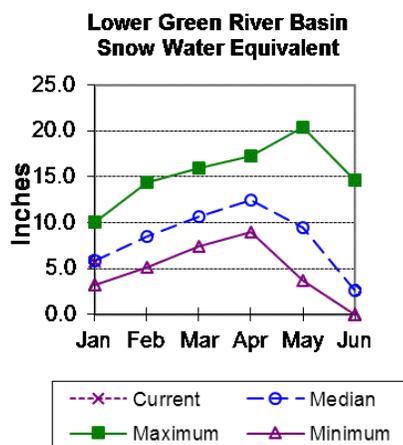
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Big Sandy	18.7	20.6	16.3	38.3
Fontenelle	199.0	265.1	175.3	344.8
Basin-wide Total	217.7	285.7	191.6	383.1
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	92%	141%
UPPER GREEN - West Side	4	98%	152%
NEWFORK RIVER	2	84%	126%
BIG SANDY-EDEN VALLEY	2	59%	94%
GREEN above Fontenelle	12	91%	141%

## Lower Green River Basin

### Snow

Lower Green River Basin SWE is 98% of median. Hams Fork drainage SWE is 85% of median. Blacks Fork drainage SWE is 107% of median. Henrys Fork SWE is 126% of median. *SWE for the entire Green River Basin (above Flaming Gorge) is 93% of median. See Appendix A at the end of this report for a detailed listing of snow course information.*



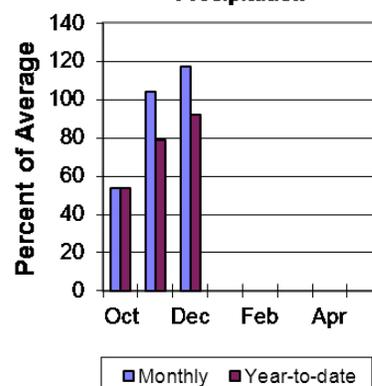
### Precipitation

Precipitation for the 10 reporting stations during last month was 117% of average or 105% last year. Precipitation ranged from 8-227% of average for the month. The basin year-to-date precipitation is currently 92% of average or 90% last year. Year-to-date percentages range from 19-154% of average.

### Reservoirs

Fontenelle Reservoir is currently storing 199,000 ac-ft; this is 114% of average (151% last year) (58% of capacity). Flaming Gorge is currently storing 3,217,900 ac-ft; this is 104% of average (106% last year) (86% of capacity). Viva Naughton is currently storing 31,500 ac-ft; this is 100% of average (107% last year) (74% of capacity). *Detailed reservoir data is shown on the following page and Appendix*

**Lower Green River Basin Precipitation**



### Streamflow

The following yields are based on the 50% exceedance forecasts for the April through July period and are expected to be below average. The Green River near Green River is forecast to yield about 580,000 ac-ft (79% of average). The Blacks Fork near Robertson is forecast to yield 85,000 ac-ft (96% of average). East Fork of Smiths Fork near Robertson is forecast to yield 26,000 ac-ft (96% of average). Hams Fork below Pole Creek near Frontier is forecast to yield 40,000 ac-ft (74% of average). The Hams Fork Inflow to Viva Naughton Reservoir is forecast to be 52,000 ac-ft (70% of average). The Flaming Gorge Reservoir inflow will be about 775,000 ac-ft (79% of average). *See the following page for more detailed information on projected runoff.*

## Lower Green River Basin Streamflow Forecasts - January 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	265	435	580	79%	745	1020	730
Blacks Fk nr Robertson	APR-JUL	54	71	85	96%	100	124	89
EF of Smiths Fork nr Robertson <sup>2</sup>	APR-JUL	16.6	22	26	96%	31	38	27
Hams Fk bl Pole Ck nr Frontier	APR-JUL	19.6	31	40	74%	50	68	54
Viva Naughton Reservoir Inflow	APR-JUL	21	38	52	70%	68	96	74
Flaming Gorge Reservoir Inflow <sup>2</sup>	APR-JUL	345	580	775	79%	995	1380	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

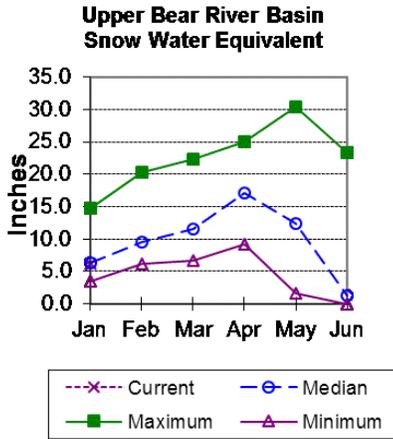
Reservoir Storage End of December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Fontenelle	199.0	265.1	175.3	344.8
Flaming Gorge Reservoir	3217.9	3261.5	3091.0	3749.0
Viva Naughton Res	31.5	33.6	31.4	42.4
Basin-wide Total	3448.3	3560.2	3297.7	4136.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	3	85%	114%
BLACKS FORK	2	109%	82%
HENRYS FORK	2	126%	107%
LOWER GREEN RIVER BASIN	7	98%	104%
GREEN above FLAMING GORGE	19	93%	129%

# Upper Bear River Basin

## Snow

Upper Bear River Basin in Utah SWE is 96% of median. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is 84% of median. Bear River Basin SWE, above the Idaho State line, is 94% of median. *See Appendix A at the end of this report for a detailed listing of snow course information.*

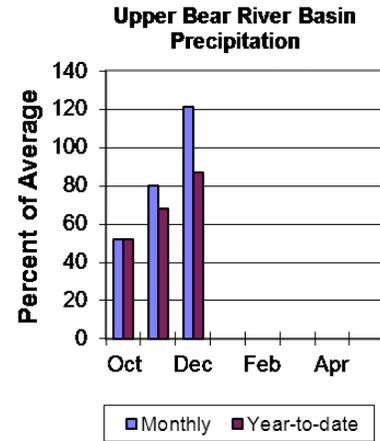


## Precipitation

Precipitation for last month was 121% of average for the 8 reporting stations; this was 95% last year. The year-to-date precipitation for the basin is 87% of average; this was 82% last year. Year-to-date percentages range from 76-99% of average.

## Reservoirs

Storage in Woodruff Narrows Reservoir was 39,200 ac-ft about 68% of capacity (144% of average) (138% last



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

## Streamflow

The following 50% exceedance forecasts are for the April through September period, and are expected to be below average. The Bear River near the Utah-Wyoming State Line should yield 110,000 ac-ft (89% of average). The Bear River above Reservoir near Woodruff should yield 105,000 ac-ft (82% of average). The Smiths Fork River near Border Jct. will yield 85,000 ac-ft (82% of average).

*See below for more detailed information on projected runoff.*

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### Upper Bear River Basin Streamflow Forecasts - January 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	55	82	99	88%	117	143	112
	APR-SEP	61	90	110	89%	129	158	123
Bear R ab Resv nr Woodruff	APR-JUL	38	75	100	83%	125	162	121
	APR-SEP	42	80	105	82%	130	168	128
Smiths Fk nr Border	APR-JUL	34	57	72	81%	87	109	89
	APR-SEP	44	68	85	82%	102	126	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 December, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Woodruff Narrows Reservoir	39.2	37.6	27.3	57.3
Basin-wide Total	39.2	37.6	27.3	57.3
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2016	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	94%	83%
SMITHS & THOMAS FORKS	2	84%	120%
UPPER BEAR RIVER BASIN	7	96%	102%

**Appendix A**  
**Double click the object below to view**

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

Snowpack Summary for January 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			11.4			
Glade Creek	SC		7040			8.5			
Grassy Lake	SNOTEL		7285	54	13.0	12.8	102%	13.8	108%
Huckleberry Divide	SC		7300			8.0			
Lewis Lake Divide	SNOTEL		7850	56	14.2	13.3	107%	13.1	98%
Moran	SC		6750			5.1			
Snake River Station	SNOTEL		8920	31	7.2	6.4	113%	9.4	147%
Thumb Divide	SNOTEL		7980	32	6.4	6.2	103%	6.2	100%
Two Ocean Plateau	SNOTEL		9240	48	12.5	12.5	100%	14.3	114%
<b>Basin Index</b>							<b>104%</b>		<b>111%</b>
# of sites							5		5
<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	33	7.5	7.2	104%	8.3	115%
Moran	SC		6750			5.1			
Two Ocean Plateau	SNOTEL		9240	48	12.5	12.5	100%	14.3	114%
<b>Basin Index</b>							<b>102%</b>		<b>115%</b>
# of sites							2		2
<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						
Togwotee Pass	SNOTEL		9580	38	9.3	11.1	84%	12.1	109%
Turpin Meadows	SC		6900						
Younts Peak	SNOTEL		8350	21	5.4	7.0	77%		
<b>Basin Index</b>							<b>84%</b>		<b>109%</b>
# of sites							1		1
<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	24	5.1	3.9	131%	6.4	164%
Gros Ventre Summit	SNOTEL		8750	25	5.3	6.2	85%	8.1	131%
Gunsight Pass	SNOTEL		9820	26	6.0	6.1	98%	7.1	116%
Togwotee Pass	SNOTEL		9580	38	9.3	11.1	84%	12.1	109%
<b>Basin Index</b>							<b>94%</b>		<b>123%</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	40	9.7	9.1	107%	13.9	153%
East Rim Divide	SNOTEL		7930	23	3.8	4.3	88%	7.3	170%
Granite Creek	SNOTEL		6770	31	6.3	6.5	97%	10.7	165%
Hoback GS	SC		6684						
Snow King Mountain	SC		7660						
<b>Basin Index</b>							<b>99%</b>		<b>160%</b>
# of sites							3		3
<b>GREYS RIVER</b>		Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Blind Bull Sum	SNOTEL		8650	40	9.7	9.1	107%	13.9	153%

## Appendix B

Double click the object below to view

Report Created: 1/5/2016 11:51:06 AM

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

		Monthly Total Precipitation for December 2015						Water Year to Date Precipitation through December 2015					
SNAKE above Jackson Lake	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	9.4	7.2	131%	7	97%	17.4	17.1	102%	14.8	87%	
Lewis Lake Divide	SNOTEL	7850	10.1	7.2	140%	8	111%	17.8	17	104%	15.7	92%	
Snake River Station	SNOTEL	6920	5.9	4.4	134%	5.2	118%	12.5	11	114%	11.2	102%	
Thumb Divide	SNOTEL	7980	4.1	3.4	121%	3.3	97%	8.5	8.8	97%	7.4	84%	
Two Ocean Plateau	SNOTEL	9240	6.4	4.6	139%	4.8	104%	13.3	12.7	105%	12.4	98%	
<b>Basin Index</b>					<b>134%</b>		<b>106%</b>			<b>104%</b>		<b>92%</b>	
<b># of sites</b>						<b>5</b>	<b>5</b>				<b>5</b>	<b>5</b>	
<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	4.7	4	118%	4	100%	10.9	10	109%	9.5	95%	
Two Ocean Plateau	SNOTEL	9240	6.4	4.6	139%	4.8	104%	13.3	12.7	105%	12.4	98%	
<b>Basin Index</b>					<b>129%</b>		<b>102%</b>			<b>107%</b>		<b>96%</b>	
<b># of sites</b>						<b>2</b>	<b>2</b>				<b>2</b>	<b>2</b>	
<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	
Toywolee Pass	SNOTEL	9580	4.9	4.3	114%	4.3	100%	11.8	11.6	102%	13.2	114%	
Younts Peak	SNOTEL	8350	2.3	2.8	82%			5.9	7.8	76%			
<b>Basin Index</b>					<b>114%</b>		<b>100%</b>			<b>102%</b>		<b>114%</b>	
<b># of sites</b>						<b>1</b>	<b>1</b>				<b>1</b>	<b>1</b>	
<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	2.5	2	125%	2.6	130%	5.7	6.2	92%	6.4	103%	
Gunsight Pass	SNOTEL	9620	2.5	2.4	104%	2.5	104%	7.3	6.5	112%	7.1	109%	
Toywolee Pass	SNOTEL	9580	4.9	4.3	114%	4.3	100%	11.8	11.6	102%	13.2	114%	
<b>Basin Index</b>					<b>114%</b>		<b>108%</b>			<b>102%</b>		<b>110%</b>	
<b># of sites</b>						<b>3</b>	<b>3</b>				<b>3</b>	<b>3</b>	
<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	3.2	3.7	86%	4	108%	7	9.4	74%	10.2	109%	
East Rim Divide	SNOTEL	7930	2.2	2.1	105%	2.7	129%	5.2	5.5	95%	6.9	125%	
Granite Creek	SNOTEL	6770	4.5	4.1	110%	4.3	105%	8.9	9.5	94%	11.2	118%	
<b>Basin Index</b>					<b>100%</b>		<b>111%</b>			<b>86%</b>		<b>118%</b>	
<b># of sites</b>						<b>3</b>	<b>3</b>				<b>3</b>	<b>3</b>	
<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	3.2	3.7	86%	4	108%	7	9.4	74%	10.2	109%	
Cottonwood Creek	SNOTEL	7670	4.4	4.3	102%	4.8	112%	9.3	11.2	83%	14.3	128%	
Spring Creek Divide	SNOTEL	9000	4.5	4.3	105%	4.9	114%	9	10.9	83%	14	128%	
Triple Peak	SNOTEL	8500	5.1	4.2	121%	5	119%	10.8	11	98%	15.4	140%	
Willow Creek	SNOTEL	8380	5.8	6.1	95%	6	98%	12.5	15.7	80%	16.2	103%	
<b>Basin Index</b>					<b>102%</b>		<b>109%</b>			<b>83%</b>		<b>120%</b>	
<b># of sites</b>						<b>5</b>	<b>5</b>				<b>5</b>	<b>5</b>	
<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	7670	4.4	4.3	102%	4.8	112%	9.3	11.2	83%	14.3	128%	
Salt River Summit	SNOTEL	7760	2.6	3.2	81%	2.8	88%	5.9	7.6	78%	7.8	103%	
Willow Creek	SNOTEL	8380	5.8	6.1	95%	6	98%	12.5	15.7	80%	16.2	103%	
<b>Basin Index</b>					<b>94%</b>		<b>100%</b>			<b>80%</b>		<b>111%</b>	
<b># of sites</b>						<b>3</b>	<b>3</b>				<b>3</b>	<b>3</b>	
<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	1.02	1.25	82%	1.48	118%	2.97	4.38	68%	3.69	85%	
Alta 1 NW	COOP	6430	2.34	2.34	100%	1.85	79%	6.28	6.49	96%	5.77	89%	
Base Camp	SNOTEL	7030	4.7	4	118%	4	100%	10.9	10	109%	9.5	95%	
Bedford 3 SE	COOP	6430	2.11	1.98	107%	2.85	144%	5.47	5.85	97%	6.94	123%	
Black Bear	SNOTEL	8170	10.4	7.4	141%	7	95%	18.2	18	101%	16.2	90%	
Blind Bull Sum	SNOTEL	8650	3.2	3.7	86%	4	108%	7	9.4	74%	10.2	109%	
Bondurant	COOP	6620	2.49	2.35	106%	2.91	124%	5.24	5.62	93%	6.58	117%	
Cottonwood Creek	SNOTEL	7670	4.4	4.3	102%	4.8	112%	9.3	11.2	83%	14.3	128%	
Darwin Ranch	COOP	8180	1.24	1.22	102%	1.36	111%	3.88	3.74	104%	4.37	117%	
East Rim Divide	SNOTEL	7930	2.2	2.1	105%	2.7	129%	5.2	5.5	95%	6.9	125%	
Grand Targhee	SNOTEL	9260	6	5	120%	5	100%	14.5	14.8	98%	16.4	111%	
Granite Creek	SNOTEL	6770	4.5	4.1	110%	4.3	105%	8.9	9.5	94%	11.2	118%	
Grassy Lake	SNOTEL	7265	9.4	7.2	131%	7	97%	17.4	17.1	102%	14.8	87%	
Gros Ventre Summit	SNOTEL	8750	2.5	2	125%	2.6	130%	5.7	6.2	92%	6.4	103%	
Gunsight Pass	SNOTEL	9620	2.5	2.4	104%	2.5	104%	7.3	6.5	112%	7.1	109%	
Jackson	COOP	6230	1.9	1.53	124%	1.69	110%	4.38	4.43	98%	4.7	106%	
Lewis Lake Divide	SNOTEL	7850	10.1	7.2	140%	8	111%	17.8	17	104%	15.7	92%	
Loomis Park	SNOTEL	8240	3.4	3.4	100%	4.1	121%	7.8	8.2	93%	10	122%	
Moose	COOP	6470	3.93	2.67	147%	3.28	122%	7.98	6.78	118%	7.35	108%	
Moran 5 WNW	COOP	6790	3.3	2.88	115%	2.78	96%	7.55	7.57	100%	7.56	100%	

**Appendix C**  
**Double click the object below to view**

Report Created:  
 1/7/2016 11:49:56 AM

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

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

<b>SNAKE RIVER BASIN</b>	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	545	665	750	98%	835	955	785
	APR-SEP	600	735	830	98%	920	1060	845
Snake R ab Reservoir nr Alpine <sup>2</sup>	APR-JUL	1350	1730	1990	92%	2250	2630	2170
	APR-SEP	1570	2000	2290	92%	2580	3010	2500
Snake R nr Irwin <sup>2</sup>	APR-JUL	1810	2350	2720	90%	3090	3630	3010
	APR-SEP	2130	2750	3170	91%	3590	4210	3500
Snake R nr Heise <sup>2</sup>	APR-JUL	1960	2540	2930	90%	3320	3890	3240
	APR-SEP	2330	2990	3430	91%	3880	4540	3780
Pacific Ck at Moran	APR-JUL	93	129	154	94%	178	215	164
	APR-SEP	101	137	162	94%	187	225	173
Buffalo Fk ab Lava Ck nr Moran	APR-JUL	189	240	275	98%	305	360	280
	APR-SEP	215	270	310	97%	350	405	320
Greys R ab Reservoir nr Alpine	APR-JUL	166	225	265	87%	305	365	305
	APR-SEP	195	265	310	86%	355	425	360
Salt R ab Reservoir nr Etna	APR-JUL	111	193	250	83%	305	385	300
	APR-SEP	152	245	310	84%	370	465	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

<b>MADISON-GALLATIN RIVER BASINS</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Hebgen Reservoir Inflow	APR-SEP	325	390	430	91%	470	535	470
	APR-JUL	255	305	340	92%	375	425	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

<b>YELLOWSTONE RIVER BASIN</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet	APR-JUL	410	495	550	96%	605	690	575
	APR-SEP	550	655	730	95%	800	910	770
Yellowstone R at Corwin Springs	APR-JUL	1250	1450	1590	100%	1730	1930	1590
	APR-SEP	1460	1700	1860	99%	2020	2260	1880
Yellowstone R at Livingston	APR-JUL	1410	1650	1810	101%	1980	2210	1800
	APR-SEP	1660	1940	2130	100%	2310	2590	2140

## Appendix D

Double click the object below to view

Report Created: 1/6/2016 8:19:39 AM

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

Reservoir Storage Summary for the end of December 2015
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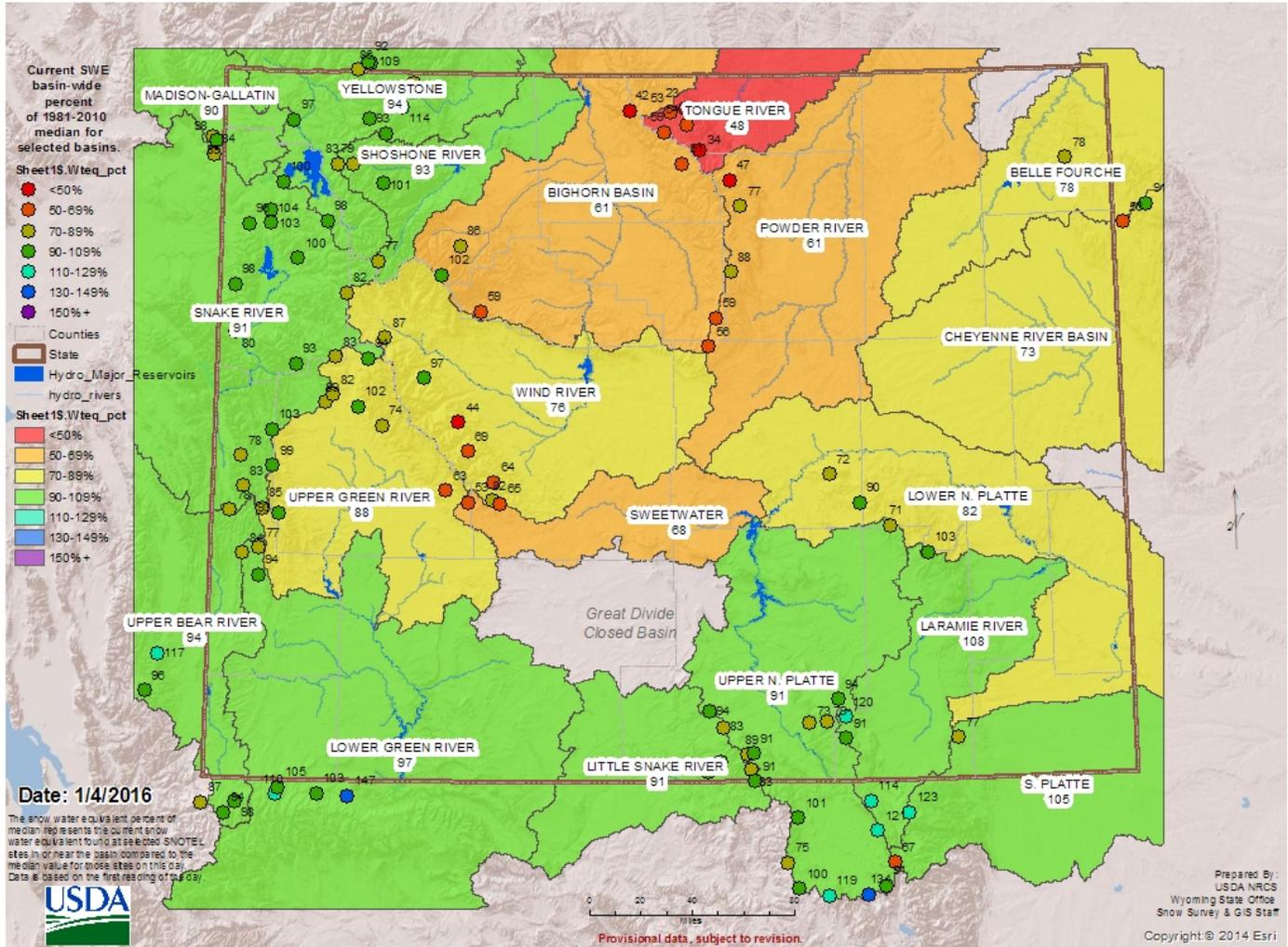
SNAKE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Grassy Lake	12.8	12.5	11.6	15.2	84%	82%	76%	110%	107%
Jackson Lake	556.0	649.9	424.1	847.0	66%	77%	50%	131%	153%
Fallsades Reservoir	704.3	1020.8	882.5	1400.0	50%	73%	63%	80%	116%
Basin-wide Total	1273.1	1683.1	1318.2	2262.2	56%	74%	58%	97%	128%
# of reservoirs	3	3	3	3	3	3	3	3	3
MADISON-GALLATIN RIVER BASINS	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Ennis Lake	28.5	28.5	30.0	41.0	70%	70%	73%	95%	95%
Hebgen Lake	318.5	332.8	283.2	378.8	84%	88%	75%	112%	118%
Basin-wide Total	347.0	361.4	313.2	419.8	83%	86%	75%	111%	115%
# of reservoirs	2	2	2	2	2	2	2	2	2
WIND RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Bull Lake	70.5	105.1	75.2	151.8	46%	69%	50%	94%	140%
Boysen	561.9	642.2	521.7	596.0	94%	108%	88%	108%	123%
Pilot Butte	25.0	23.2	23.1	31.6	79%	73%	73%	108%	100%
Basin-wide Total	657.4	770.5	620.0	779.4	84%	99%	80%	106%	124%
# of reservoirs	3	3	3	3	3	3	3	3	3
BIGHORN RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Boysen	561.9	642.2	521.7	596.0	94%	108%	88%	108%	123%
Bighorn Lake	883.6	912.9	871.2	1356.0	65%	67%	64%	101%	105%
Basin-wide Total	1445.5	1555.1	1392.9	1952.0	74%	80%	71%	104%	112%
# of reservoirs	2	2	2	2	2	2	2	2	2
SHOŠHONE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Buffalo Bill	424.7	464.3	355.5	646.6	66%	72%	55%	119%	131%
Basin-wide Total	424.7	464.3	355.5	646.6	66%	72%	55%	119%	131%
# of reservoirs	1	1	1	1	1	1	1	1	1
TONGUE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Tongue River Res	49.0	51.2	26.4	79.1	62%	65%	33%	186%	194%
Basin-wide Total	49.0	51.2	26.4	79.1	62%	65%	33%	186%	194%
# of reservoirs	1	1	1	1	1	1	1	1	1
BELLE FOURCHE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Belle Fourche	141.8	138.3	101.2	178.4	79%	78%	57%	140%	137%
Keyhole	166.1	168.2	87.4	193.8	86%	87%	45%	190%	192%
Shadehill	53.4	59.9	44.1	81.4	66%	74%	54%	121%	136%
Basin-wide Total	361.3	366.4	232.7	453.6	80%	81%	51%	155%	157%
# of reservoirs	3	3	3	3	3	3	3	3	3
CHEYENNE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Angostura	103.0	100.6	81.1	122.1	84%	82%	66%	127%	124%
Deerfield	14.3	15.1	13.5	15.2	94%	99%	89%	106%	112%
Pactola	49.8	51.3	45.6	55.0	91%	93%	83%	109%	113%
Basin-wide Total	167.1	166.9	140.2	192.3	87%	87%	73%	119%	119%
# of reservoirs	3	3	3	3	3	3	3	3	3
UPPER NORTH PLATTE RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Seminole	740.1	705.8	553.7	1016.7	73%	69%	54%	134%	127%
Basin-wide Total	740.1	705.8	553.7	1016.7	73%	69%	54%	134%	127%
# of reservoirs	1	1	1	1	1	1	1	1	1
SWEETWATER RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Pathfinder	818.6	680.9	536.1	1016.5	81%	67%	53%	153%	127%
Basin-wide Total	818.6	680.9	536.1	1016.5	81%	67%	53%	153%	127%
# of reservoirs	1	1	1	1	1	1	1	1	1

Jason Weller (Chief)  
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State Con.  
N R C S  
Casper, Wyoming

Jan 1, 2016

Wyoming SNOTEL Current Snow Water Equivalent (SWE) % of Median



The above map is only for SNOTELS and does not include snow courses. The Outlook Report includes the snow courses.

**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:**

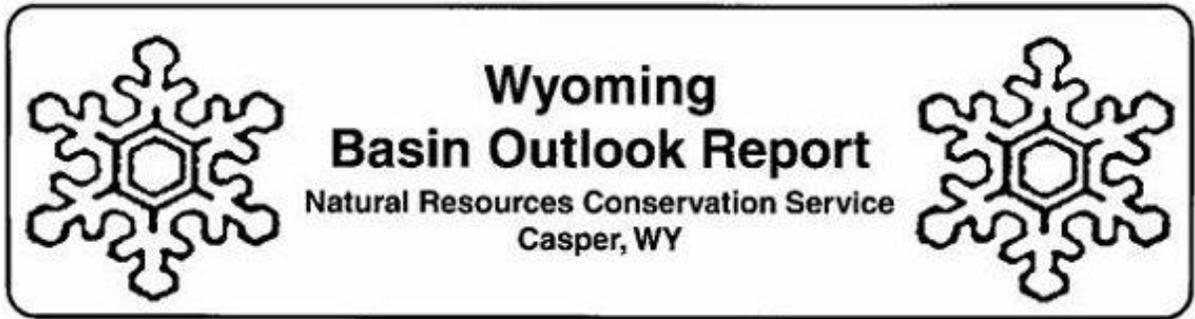
The Wyoming State Engineer's Office

The University of Wyoming

**Local:**

The City of Cheyenne

The City of Rawlins



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