Wyoming Basin Outlook Report
April 1, 2017

Natural Resources Conservation Service

South Pass SNOTEL #775 ID 08G03S established 10/01/1985
(In the Shoshone Forest 36 miles S of Lander, WY)
Timothee Hawkins 0n Feb. 28th, 2017

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

For more water supply and resource management information, contact:

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How forecasts are made

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

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

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

Wyoming Water Supply Outlook Report

General

The snow water equivalent (SWE) across Wyoming is above the median on Apr. 1st at 112%. The year-to-date precipitation average for Wyoming basins is now at 132% varying from 74-191% of average. Monthly precipitation for the basins varied from 57-203% of average for an overall average of 126%. Basin reservoir levels for Wyoming vary from 0-169% of average for an overall average of 130%. Forecasted runoff varies from 20-248% of average across the Wyoming basins for an overall average of 167%.

Snowpack

Snow water equivalent (SWE), across Wyoming is above median for Apr. 1st at 112%. SWE in the Belle Fourche River Basin of Wyoming was the lowest at 0%. While SWE in the Wind River Basin is the highest at 190% of median? *See Appendix A for further information*.

Precipitation

Last month's precipitation was above average across the Wyoming Mountains at 126% of average. Year to date precipitation is at 132% of average. The Wind River Basin had the highest precipitation for the month at 203% of average. The Upper North Platte River Basin had the lowest precipitation amount at 57% 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	+43%	Upper North Platte River	-43%
Madison-Gallatin	+28%	Sweetwater River	+68%
Yellowstone River	+60%	Lower North Platte River	+11%
Wind River	+103%	Laramie River	-23%
Bighorn River	+54%	South Platte River	-22%
Shoshone River	+73%	Little Snake River	-42%
Powder River	+27%	Upper Green River	+43%
Tongue River	+64%	Lower Green River	+83%
Belle Fourche River	-27%	Upper Bear River	+27%
Cheyenne River	-24%		

See Appendix B for further information.

Streams

Stream flow yields for April thru September are forecast to be above average statewide over Wyoming at 167%. The Snake, Madison, and Upper Yellowstone River Basins should yield about 166%, 107% and 136% of average, respectively. Yields from the Wind and Bighorn River Basins should be about 248% and 243% of average, respectively. Yields from the Shoshone and Clarks Fork River Basins of Wyoming should be about 177% and 160% of average, respectively. Yields from the Powder & Tongue River Basins should be about 123% and 109% of average, respectively. Yield for the Cheyenne River Basin should be about 20% of average. Yields for the Upper North Platte, Sweetwater, Lower North Platte, and Laramie River Basins of Wyoming should be about 106%, 250%, 140%, and 107% of average, respectively. Yields for the Little Snake, Green River, and Smith's Fork Basins of Wyoming should be 83%, 224%, and 188% of average respectively. *See Appendix C for further information*.

Reservoirs

Reservoir storage is above average at 130% for the entire state. Reservoirs in the Snake River Basin are below average at 75%. Reservoirs in the Madison-Gallatin River Basins are above average at 110%. Reservoirs in the Wind River Basin are above average at 111%. Reservoirs on the Big Horn are above average at 104%. The Buffalo Bill Reservoir on the Shoshone is above average at 131%. The Tongue River Basin Reservoir is above average at 200%. Reservoirs in the Belle Fourche and Cheyenne River Basins are above average in storage at 110 & 111% respectively. Reservoirs on the Upper and Lower North Platte River Basins are above average at 160% and 132% respectively. Reservoirs on the Laramie and Little Snake River basins are at 128% and 118% respectively. Reservoirs on the Upper Green River are above average at 167%. Reservoirs on the Lower Green River Basin are above average at 107%. Reservoir on the Upper Bear River Basin is above average at 127%. *See below*

Wyoming Reservoir Levels for Apr.1st, 2017

	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Alcova	157.2	157.1	155.8	184.3	85%	85%	85%	101%	101%
Bighorn Lake	900.9	836.5	797.1	1356.0	66%	62%	59%	113%	105%
Big Sandy	24.0	19.6	17.7	38.3	63%	51%	46%	136%	111%
Boysen	620.2	541.2	495.8	596.0	104%	91%	83%	125%	109%
Buffalo Bill	483.2	428.1	350.7	646.6	75%	66%	54%	138%	122%
Bull Lake	46.0	70.4	75.4	151.8	30%	46%	50%	61%	93%
Fontenelle	177.3	149.0	127.6	344.8	51%	43%	37%	139%	117%
Glendo	341.9	319.1	342.9	506.4	68%	63%	68%	100%	93%
Grassy Lake	14.5	13.3	12.1	15.2	95%	88%	80%	120%	110%
Guernsey	0.0	21.3	15.2	45.6	0%	47%	33%	0%	140%
High Savery Reservoir	12.3	11.0	12.0	22.4	55%	49%	53%	103%	92%
Jackson Lake	586.5	564.7	434.7	847.0	69%	67%	51%	135%	130%
Kendrick Project	953.9	937.2		1201.7	79%	78%			
Keyhole	146.5	168.1	90.6	193.8	76%	87%	47%	162%	185%
Meeks Cabin Reservoir	12.5	8.0	11.9	32.5	38%	25%	37%	105%	67%
North Platte Project	885.0	786.4		1062.1	83%	74%			
Pathfinder	940.3	865.7	582.4	1016.5	93%	85%	57%	161%	149%
Pilot Butte	25.6	23.6	23.3	31.6	81%	75%	74%	110%	101%
Seminoe	755.3	696.8	493.1	1016.7	74%	69%	49%	153%	141%
Viva Naughton Res	28.6	29.7	28.8	42.4	68%	70%	68%	99%	103%
Wheatland #2	54.6	58.4	43.9	98.9	55%	59%	44%	124%	133%
Woodruff Narrows Reservoir	53.3	42.3	31.6	57.3	93%	74%	55%	169%	134%
Basin-wide Total	5380.7	5023.9	4142.6	7244.1	74%	69%	57%	130%	121%
# of reservoirs	20	20	20	20	20	20	20	20	20

Updated: 1 Apr 2017

Produced by the Water Resources Data System
http://www.wrds.uwyo.edu
Data provided by: USBR (PN, UC, LC, & GP Regions), WWDO, WSEO

Bighorn Lake
769235 AF
75% Full

Belle Fourche Res
129249 AF
74% Full

Hebgen Lake
301307 AF
78% Full

Grassy Lake
13531 AF
89% Full

Buffalo Bill
457104 AF
70% Full

Keyhole
147349 AF
78% Full

Pactola Res
55178 AF
98% Full

Deerfield Reservoir
15344 AF
98% Full

Jackson Lake
536577 AF
63% Full

Anchor
875 AF
5% Full

Boysen
618270 AF
83% Full

Angostura Rese
108529 AF
88% Full

Palisades Lake
261948 AF
21% Full

Pilot Butte
29521 AF
87% Full

Bull Lake
52380 AF
34% Full

Gray Reef
1486 AF
82% Full

Glendo
428317 AF
82% Full

Big Sandy
30535 AF
79% Full

Alcova
158189 AF
85% Full

Fontenelle
206837 AF
60% Full

Pathfinder
967356 AF
90% Full

Kortes
4717 AF
99% Full

Guernsey
0 AF
0% Full

Woodruff Narrows
48752 AF
85% Full

Seminoe
771175 AF
75% Full

Sulphur Creek
20428 AF
102% Full

Flaming Gorge
3169445 AF
84% Full

High Savery
15579 AF
69% Full

Meeks Cabin
15816 AF
52% Full

Stateline
7439 AF
53% Full

Whitney
1559 AF
33% Full

Lower Colorado Basin Major Reservoirs

Lake Powell
11364007 AF
46% Full

Lake Mead
10707000 AF
41% Full

Wyoming Water Supply Outlook Report 5 Apr. 1, 2017

Snake River Basin

Snow

The Snake River Basin SWE above Palisades is 143% of median (101% last year). SWE in the Snake River Basin above Jackson Lake is 137% of median (101% last year). Pacific Creek Basin SWE is 154% of median (107% last year). Buffalo Fork SWE is 149% of median (108% last year). Gros Ventre River Basin SWE is 150% of median (100% last year). SWE in the Hoback River drainage is 175% of median (94% last year). SWE in the Greys River drainage is 149% of median (109% last year). The Salt River Basin SWE is 119% of median (102% last year).

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

Snake River Basin Snow Water Equivalent

Precipitation

Last month's precipitation for the Snake River Basin was 143% of average (129% last year). Percentages range from 88-214% of average for the 30 reporting stations. Water-year-to-date precipitation is 169% of average for the Snake River Basin (98% last year). Year-to-date percentages range from 132-240% of average.

Reservoirs

Current reservoir storage is 75% of average for the three storage reservoirs in the basin. Grassy Lake storage is about 110% of average (13,500 ac-ft compared to 13,500 last year). Jackson Lake storage is 125% of average (536,600 ac-ft compared to 570,900 ac-ft last year). Palisades Reservoir storage is about 51% of average (461,900 ac-ft compared to 979,100 ac-ft last year).

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

Snake River Basin Precipitation

Streamflow

The 50% exceedance forecasts for April through September are way above average for this basin. The Snake near Moran will yield about 1,220,000 ac-ft (144% of average). Snake River above Reservoir near Alpine will yield about 4,450,000 ac-ft (178% of average). The Snake near Irwin will yield about 5,810,000 ac-ft (166% of average). The Snake near Heise yield will be about 6,260,000 ac-ft (66). Buffalo Fork above Lava near Moran yield will be around 500,000 ac-ft (156% of average). Greys River above Palisades Reservoir yield will be around 610,000 ac-ft (169% of average). Salt River near Etna yield will be around 615,000 ac-ft (166% of average). *See the following page for further information*.
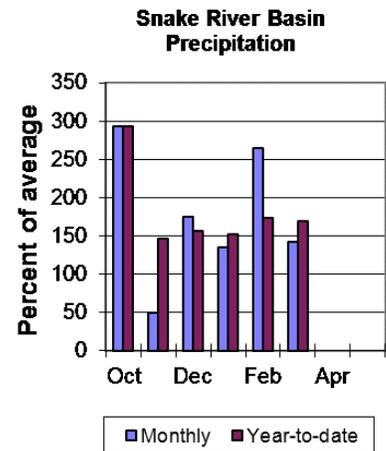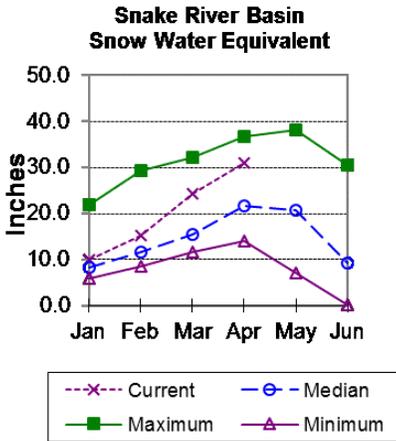
Snake River Basin
Streamflow Forecasts - April 1, 2017

SNAKE RIVER BASIN	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
		90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Snake R nr Moran [2]								
	APR-JUL	975	1050	1110	145%	1160	1240	765
	APR-SEP	1070	1160	1220	144%	1280	1370	845
Snake R ab Reservoir nr Alpine [2]								
	APR-JUL	3590	3780	3900	180%	4030	4210	2170
	APR-SEP	4080	4300	4450	178%	4600	4820	2500
Snake R nr Irwin [2]								
	APR-JUL	4490	4820	5050	168%	5270	5600	3010
	APR-SEP	5190	5560	5810	166%	6060	6430	3500
Snake R nr Heise [2]								
	APR-JUL	4830	5180	5420	167%	5660	6010	3240
	APR-SEP	5600	5990	6260	166%	6530	6920	3780
Pacific Ck at Moran								
	APR-JUL	240	265	280	171%	300	325	164
	APR-SEP	250	275	295	171%	310	340	173
Buffalo Fk ab Lava Ck nr Moran								
	APR-JUL	385	420	440	157%	465	495	280
	APR-SEP	435	475	500	156%	530	570	320
Greys R ab Reservoir nr Alpine								
	APR-JUL	470	505	525	172%	545	580	305
	APR-SEP	545	580	610	169%	635	670	360
Salt R ab Reservoir nr Etna								
	APR-JUL	420	475	515	172%	555	610	300
	APR-SEP	505	570	615	166%	660	730	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Grassy Lake	13.5	13.5	12.3	15.2
Jackson Lake	536.6	570.9	430.7	847.0
Palisades Reservoir	461.9	979.1	902.8	1400.0
Basin-wide Total	1012.0	1563.5	1345.8	2262.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	9	137%	101%
PACIFIC CREEK	3	154%	107%
BUFFALO FORK	4	149%	108%
GROS VENTRE RIVER	4	150%	100%
HOBACK RIVER	5	175%	94%
GREYS RIVER	5	149%	109%
SALT RIVER	5	119%	102%
SNAKE RIVER BASIN	32	143%	101%

Madison-Gallatin Rivers Basin

Snow

In the Madison-Gallatin drainage, SWE is 113% of median (91% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Madison-Gallatin
Snow Water Equivalent**

- - x - - Current — ⊖ — Median
- ■ - Maximum —△— Minimum
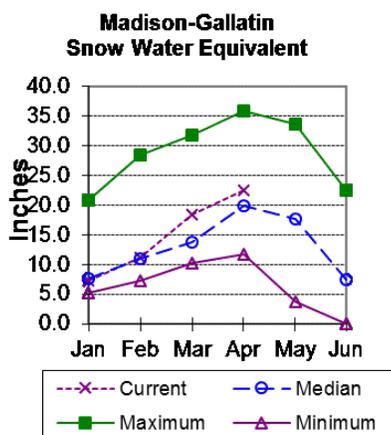
Precipitation

Last month precipitation in the Madison-Gallatin drainage was 128% of average (111% last year). The 6 reporting station percentages range from 110-154% of average. Water-year-to-date precipitation is about 151% of average, which was 88% last year. Year to date percentage ranges from 134-202%.

Reservoirs

Ennis Lake is storing about 34,700 ac-ft of water (85% of capacity, 118% of average this year or about 104% last year). Hebgen Lake is storing about 294,000 ac-ft of water (78% of capacity, 109% of average this year, 108% last year). *Detailed reservoir data shown below & in Appendix D.*
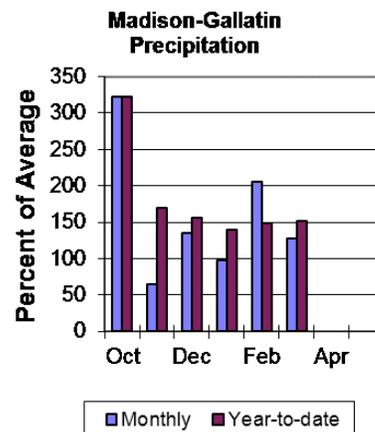
**Madison-Gallatin
Precipitation**

□ Monthly ■ Year-to-date

Streamflow

The 50% exceedance forecast for April through September is above average for the basin. Hebgen Reservoir inflow will be about 505,000 ac-ft (107% of average). *See below for detailed runoff volumes.*

Data Current as of: 4/6/2017 3:17:10 PM

Madison-Gallatin River Basins
Streamflow Forecasts - April 1, 2017

| 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	330	370	400	108%	430	470	370
	APR-SEP	420	470	505	107%	540	590	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Ennis Lake	34.7	30.7	29.5	41.0
Hebgen Lake	294.0	291.5	270.4	378.8
Basin-wide Total	328.7	322.1	299.9	419.8
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
MADISON-GALLATIN RIVER BASINS	8	113%	91%

Yellowstone River Basin

Snow

SWE in the Yellowstone River Basin is 137% of median (96% last year). SWE in the Yellowstone River Drainage in WY is 141% of median (96% last year). SWE in the Clarks Fork Drainage of the Yellowstone River Basin in Wyoming is 140% of median (97% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Yellowstone River Basin Snow Water Equivalent
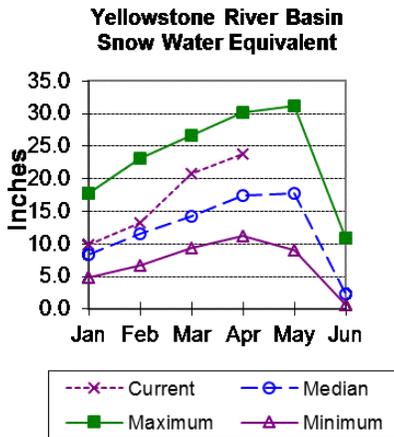
Precipitation

Last month's precipitation in the Yellowstone River Basin was 160% of average (115% last year). The 18 reporting station percentages range from 69-248% of average. Water-year-to-date precipitation is 159% of average, which was 97% last year. Year to date percentages range from 68-199%.
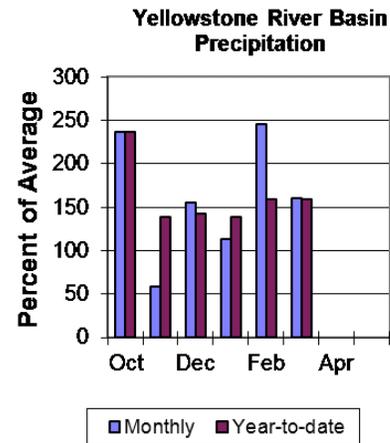
Reservoirs

No reservoir data

Yellowstone River Basin Precipitation

Streamflow

The 50% exceedance forecasts for April through September are way above average for the basin. Yellowstone River at Lake Outlet will yield around 1,080,000 ac-ft (140% of average). Yellowstone at Corwin Springs will yield around 2,530,000 ac-ft (135% of average). Yellowstone near Livingston will yield around 2,900,000 ac-ft (136% of average). Clarks Fork of the Yellowstone near Belfry will yield around 880,000 ac-ft (160% of average). *See the following for further information.*

Data Current as of: 4/6/2017 3:17:12 PM

Yellowstone River Basin
Streamflow Forecasts - April 1, 2017

YELLOWSTONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
			Forecast Exceedance Probabilities for Risk Assessment — Chance that actual volume will exceed forecast					
Yellowstone R at Yellowstone Lake Outlet								
	APR-JUL	710	775	820	143%	865	930	575
	APR-SEP	935	1020	1080	140%	1150	1240	770
Yellowstone R at Corwin Springs								
	APR-JUL	1870	2040	2150	135%	2260	2430	1590
	APR-SEP	2200	2400	2530	135%	2660	2860	1880
Yellowstone R at Livingston								
	APR-JUL	2110	2320	2470	137%	2620	2830	1800
	APR-SEP	2480	2730	2900	136%	3070	3330	2140
Clarks Fk Yellowstone R nr Belfry[2]								
	APR-JUL	710	765	805	158%	845	900	510
	APR-SEP	775	835	880	160%	925	985	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, 2017	# of Sites	% Median	Last Year % Median
YELLOWSTONE RIVER in WY	11	141%	96%
CLARKS FORK in WY	8	140%	97%

Wind River Basin

Snow

Wind River Basin above Boysen Reservoir SWE is 198% of median (108% last year). SWE in the Wind River above Dubois is 187% of median (93% last year). Little Wind River SWE above Riverton is 195% of median (116% last year), and Popo Agie drainage SWE is 209% of median (118% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Wind River Basin Snow Water Equivalent
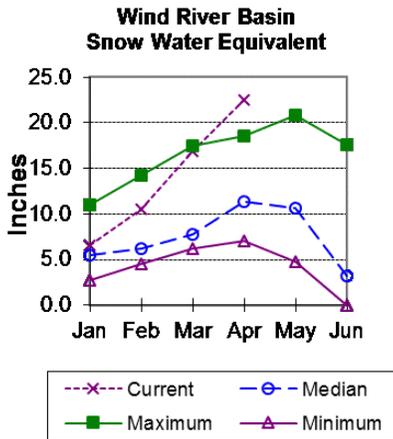
Precipitation

Precipitation for the basin was 203% of average (194% last year) from the 11 reporting stations. Last month's basin's precipitation varied from 135-305% of average. Water year-to-date precipitation is 188% of average and was 101% last year at this time. Year-to-date percentages range from 159-232% of average.

Reservoirs

Current storage in Bull Lake is 51,700 ac-ft (69% of average) (70,600 ac-ft or about 94% last year). Boysen Reservoir is storing (578,200 ac-ft) (118% of average) or (546,000 ac-ft last year at 118% of average). Pilot Butte is at 108% of average (26,900 ac-ft) (23,600 ac-ft or about 95% 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 at record levels for most of the Wind River Basin. Dinwoody Creek near Burris should yield around 128,000 ac-ft (139% of average). The Wind River above Bull Lake Creek will yield around 970,000 ac-ft (198% of average). Bull Lake Creek near Lenore will yield around 300,000 ac-ft (178% of average). Wind River at Riverton will yield around 1,100,000 ac-ft (200% of average). Little Popo Agie River near Lander should yield around 112,000 ac-ft (229% 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 710,000 ac-ft (241% of average). Boysen Reservoir inflow will yield around 1,650,000 ac-ft (248% of average). *See the following page for detailed runoff volumes.*

Wind River Basin Precipitation
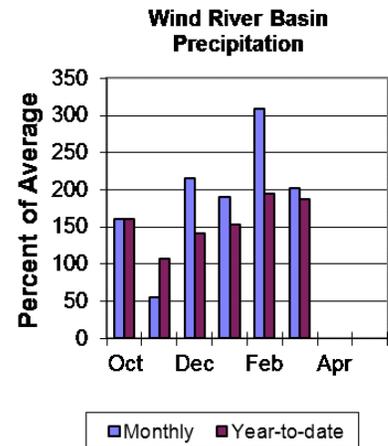
Wind River Basin
Streamflow Forecasts - April 1, 2017

		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	81	89	94	142%	100	108	66
	APR-SEP	113	122	128	139%	135	144	92
Wind R Ab Bull Lake Ck								
	APR-JUL	745	830	885	195%	940	1030	455
	APR-SEP	815	905	970	198%	1030	1130	490
Bull Lake Ck nr Lenore								
	APR-JUL	215	235	250	180%	265	285	139
	APR-SEP	260	285	300	178%	315	340	169
Wind R at Riverton								
	APR-JUL	795	885	950	200%	1010	1100	475
	APR-SEP	920	1030	1100	200%	1170	1270	550
Little Popo Agie R nr Lander								
	APR-JUL	82	93	101	240%	109	120	42
	APR-SEP	92	104	112	229%	120	132	49
Little Wind R nr Riverton								
	APR-JUL	475	580	645	239%	715	820	270
	APR-SEP	530	640	710	241%	785	895	295
Boysen Reservoir Inflow								
	APR-JUL	1140	1360	1500	246%	1640	1860	610
	APR-SEP	1270	1500	1650	248%	1800	2030	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, 2017**	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bull Lake	51.7	70.6	75.4	151.8
Boysen	578.2	546.0	489.0	596.0
Pilot Butte	26.9	23.6	24.8	31.6
Basin-wide Total	656.8	640.2	589.2	779.4
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis **April 1, 2017**	# of Sites	% Median	Last Year % Median
WIND above Dubois	6	187%	93%
LITTLE WIND	2	195%	116%
POPO AGIE	7	209%	118%
WIND RIVER BASIN	17	198%	108%

Bighorn River Basin

Snow

The Bighorn River Basin SWE above Bighorn Reservoir is 110% of median (89% last year). The Nowood River SWE is 83% of median (91% last year). The Greybull River SWE is 207% of median (120% last year). Shell Creek SWE is at 108% of median (79% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Bighorn Basin Snow Water Equivalent
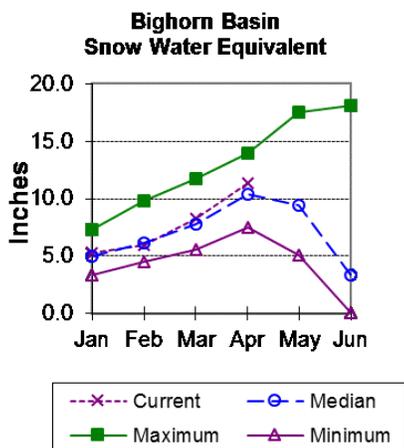
Precipitation

Last month's precipitation was 154% of average (142% last year). Sites ranged from 42-392% of average for the month. Year-to-date precipitation is 132% of average (87% last year). Year-to-date percentages, from the 20 reporting stations, range from 63-262%.

Reservoirs

Boysen Reservoir is currently storing 578,200 ac-ft (118% of average). Bighorn Lake is now at 751,500 ac-ft (95% of average). Boysen was at 546,000 ac-ft or about 112% of average last year and Bighorn Lake was at 813,400 ac-ft or about 103% last year. *Detailed reservoir data shown below and in Appendix D.*

Bighorn Basin Precipitation

Streamflow

The 50% exceedance forecasts for the April through Sept. runoffs are at record levels for most of the basin. Boysen Reservoir inflow should yield 1,650,000 ac-ft (248% of average); the Greybull River near Meeteetse should yield around 295,000 ac-ft (167% of average); Shell Creek near Shell should yield around 73,000 ac-ft (111% of average) and the Bighorn River at Kane should yield around 2,200,000 ac-ft (243% of average). *See the following for detailed runoff.*
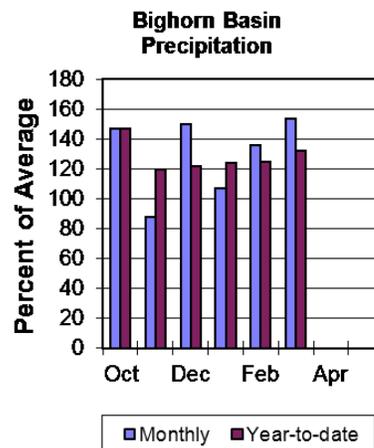
Bighorn River Basin
Streamflow Forecasts - April 1, 2017

| BIGHORN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment — Chance that actual volume will exceed forecast						
Boysen Reservoir Inflow								
	APR-JUL	1140	1360	1500	246%	1640	1860	610
	APR-SEP	1270	1500	1650	248%	1800	2030	665
Greybull R nr Meeteetse								
	APR-JUL	152	189	215	164%	240	275	131
	APR-SEP	225	270	295	167%	325	370	177
Shell Ck nr Shell								
	APR-JUL	46	55	61	111%	67	76	55
	APR-SEP	56	66	73	111%	79	89	66
Bighorn R at Kane								
	APR-JUL	1450	1760	1980	236%	2200	2510	840
	APR-SEP	1630	1970	2200	243%	2430	2770	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boysen	578.2	546.0	489.0	596.0
Bighorn Lake	751.5	813.4	787.5	1356.0
Basin-wide Total	1329.7	1359.4	1276.5	1952.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	7	83%	91%
GREYBULL RIVER	2	207%	120%
SHELL CREEK	4	108%	79%
BIGHORN RIVER BASIN	14	110%	89%

Shoshone River Basin

Snow

Snowpack in this basin is above median for this time of year. Snow Water Equivalent (SWE) is 146% of median (96% last year) in the Shoshone River Basin. *See Appendix A at the end of this report for a detailed listing of snow course information.*

Shoshone River Basin Snow Water Equivalent

Legend: ---X--- Current   ---O--- Median   ■ Maximum   △ Minimum
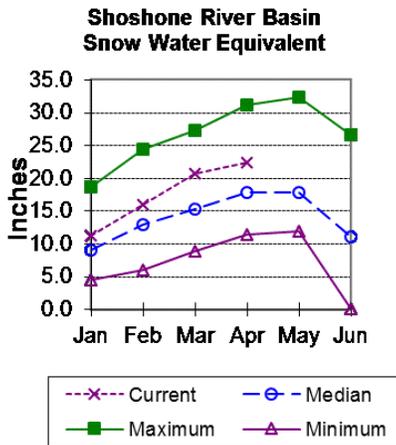
Precipitation

Precipitation for last month was 173% of average (125% last year). Monthly percentages range from 24-222% of average. The basin year-to-date precipitation is now 189% of average (105% last year). Year-to-date percentages range from 167-294% of average for the 10 reporting stations.

Reservoirs

Current storage in Buffalo Bill Reservoir is about 131% of average this year (124% last year) – the reservoir is at 71% of capacity. Currently, about 457,100 ac-ft are stored in the reservoir compared to 432,700 ac-ft last year. *Detailed reservoir data shown on the following page and in Appendix D.*
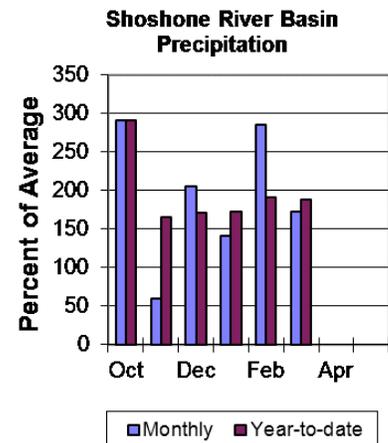
Shoshone River Basin Precipitation

Legend: ■ Monthly   ■ Year-to-date

Streamflow

The 50% exceedance forecasts for the April through Sept. period are extremely high for the Shoshone River Basin. The North Fork Shoshone River at Wapiti will yield around 830,000 ac-ft (161% of average). The South Fork of the Shoshone River near Valley will yield around 440,000 ac-ft (180% of average), and the South Fork above Buffalo Bill Reservoir runoff will yield a record of 445,000 ac-ft (223% of average). The Buffalo Bill Reservoir inflow will yield around 1,320,000 ac-ft (177% of average). *See the following for detailed runoff volumes.*

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Shoshone River Basin
Streamflow Forecasts - April 1, 2017

SHOSHONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment — Chance that actual volume will exceed forecast						
NF Shoshone R at Wapiti								
	APR-JUL	665	715	750	163%	785	835	460
	APR-SEP	730	790	830	161%	870	930	515
SF Shoshone R nr Valley								
	APR-JUL	320	345	380	177%	385	410	215
	APR-SEP	365	400	440	180%	440	475	245
SF Shoshone R ab Buffalo Bill Reservoir								
	APR-JUL	345	385	415	215%	445	485	193
	APR-SEP	365	415	445	223%	475	525	200
Buffalo Bill Reservoir Inflow[2]								
	APR-JUL	1040	1140	1200	178%	1260	1360	675
	APR-SEP	1150	1250	1320	177%	1390	1490	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Buffalo Bill	457.1	432.7	348.9	646.6
Basin-wide Total	457.1	432.7	348.9	646.6
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER BASIN	5	146%	96%

Powder River Basin

Snow

Powder River SWE is 101% of median (92% last year). Upper Powder River drainage is 79% of median (94% last year). SWE in the Clear Creek drainage is 138% of median (90% last year). Crazy Woman Creek drainage SWE is 90% of median (78% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Powder River Basin
Snow Water Equivalent**
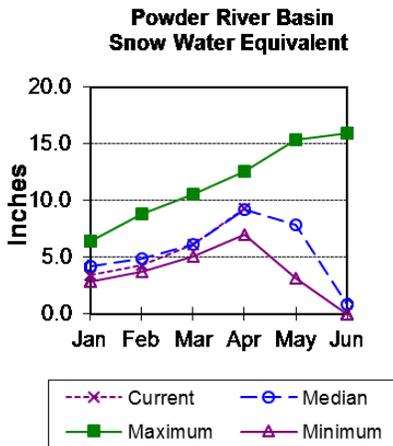
Precipitation

Last month's precipitation was 127% of average (130% last year) for the nine reporting stations. Monthly percentages range from 42-230% of average. Year-to-date precipitation is 102% of average in the basin (78% last year). Precipitation for the year ranges from 63-163% of average.

Reservoirs

No reservoir data for the basin.

Streamflow

The 50% exceedance forecasts for the April through September period are above average for most of the basin. The Middle Fork of the Powder River near Barnum should yield around 10,500 ac-ft (62% of average). The North Fork of the Powder River near Hazelton should yield around 8,700 ac-ft (88% of average). Rock Creek near Buffalo will yield about 29,000 ac-ft (132% of average), and Piney Creek at Kearny should yield about 61,000 ac-ft (130% of average). The Powder River at Moorhead will yield around 240,000 ac-ft (122% of average). The Powder River near Locate will yield around 270,000 ac-ft (123% of average). *See the following for detailed runoff volumes.*

**Powder River Basin
Precipitation**
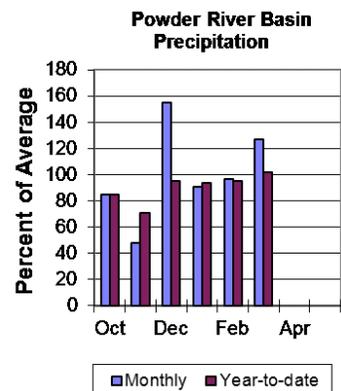
Data Current as of: 4/6/2017 3:17:21 PM

**Powder River Basin
Streamflow Forecasts - April 1, 2017**

| POWDER RIVER BASIN	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
		90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
MF Powder R nr Barnum								
	APR-JUL	3.3	7.1	9.7	60%	12.4	16.2	16.1
	APR-SEP	3.8	7.8	10.5	62%	13.2	17.1	17
NF Powder R nr Hazelton								
	APR-JUL	4.6	6.7	8.1	89%	9.5	11.6	9.1
	APR-SEP	5	7.2	8.7	88%	10.2	12.4	9.9
Rock Ck nr Buffalo								
	APR-JUL	15.4	21	25	134%	29	35	18.6
	APR-SEP	18.8	25	29	132%	33	39	22
Piney Ck at Kearny								
	APR-JUL	29	46	57	130%	68	85	44
	APR-SEP	32	49	61	130%	73	90	47
Powder R at Moorehead								
	APR-JUL	78	163	220	124%	275	360	177
	APR-SEP	97	182	240	122%	300	385	196
Powder R nr Locate								
	APR-JUL	90	182	245	123%	310	400	199
	APR-SEP	107	205	270	123%	335	430	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, 2017	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	5	79%	94%
CLEAR CREEK	3	138%	90%
CRAZY WOMAN CREEK	2	90%	78%
POWDER RIVER BASIN	8	101%	92%

Tongue River Basin

Snow

Upper Tongue River SWE is 111% of median (73% last year). The Goose Creek drainage SWE is 126% of median (77% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Tongue River Basin
Snow Water Equivalent**

- ---×--- Current
- --○-- Median
- ■ Maximum
- △ Minimum
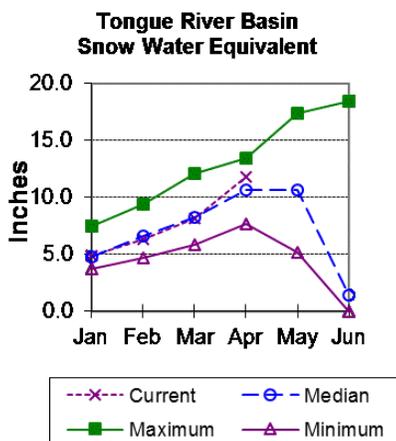
Precipitation

Last month's precipitation was 164% of average (131% last year) for 13 reporting stations. Monthly percentages range from 89-350% of average. Year-to-date precipitation is 119% of average in the basin (80% last year). Precipitation for the year ranges from 94-186% of average.
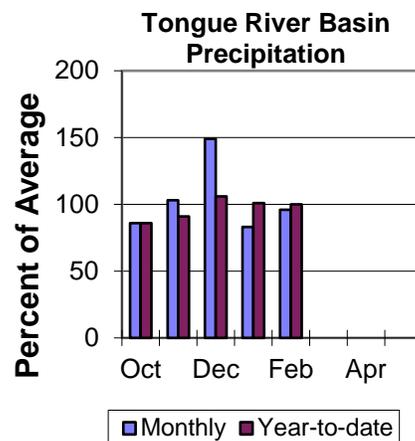
Reservoirs

The Tongue River Reservoir currently is storing 64,700 ac-ft, while last year's storage was 58,300 ac-ft. The Tongue River Reservoir is at 200% of average for this time of year or 82% of capacity. *Detailed reservoir data shown below and in Appendix D.*

**Tongue River Basin
Precipitation**

■ Monthly ■ Year-to-date

Streamflow

The 50% exceedance forecasts for the April through September period are about average for the basin. The yield for Tongue River near Dayton will be around 100,000 ac-ft (102% of average). Big Goose Creek near Sheridan will yield around 60,000 ac-ft (111% of average). Little Goose Creek near Bighorn will yield around 44,000 ac-ft (113% of average). The Tongue River Reservoir Inflow will be around 235,000 ac-ft (109% of average). *See below for detailed runoff volumes.*

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**Tongue River Basin
Streamflow Forecasts - April 1, 2017**

TONGUE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Tongue R nr Dayton								
	APR-JUL	61	77	88	102%	99	115	86
	APR-SEP	70	88	100	102%	112	130	98
Big Goose Ck nr Sheridan								
	APR-JUL	32	44	52	113%	60	72	46
	APR-SEP	40	52	60	111%	68	80	54
Little Goose Ck nr Bighorn								
	APR-JUL	24	31	36	116%	41	48	31
	APR-SEP	31	39	44	113%	50	58	39
Tongue River Reservoir Inflow								
	APR-JUL	115	175	215	111%	255	315	193
	APR-SEP	129	192	235	109%	280	340	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Tongue River Res	64.7	58.3	32.3	79.1
Basin-wide Total	64.7	58.3	32.3	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
GOOSE CREEK	3	126%	77%
TONGUE RIVER BASIN	9	111%	73%

Belle Fourche River Basin

Snow

Belle Fourche River Basin SWE is 0% of median (65% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*


Belle Fourche River Basin Snow Water Equivalent
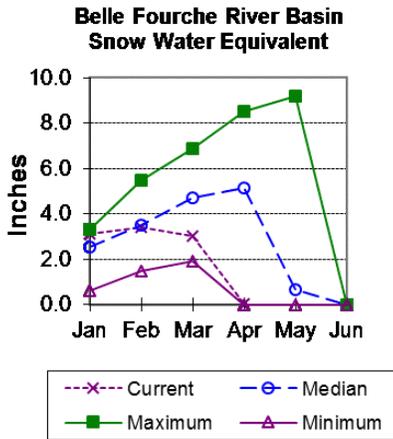
Precipitation

Precipitation for last month was 73% of average (152% last year) in the Black Hills for the 5 reporting stations. Year-to-date precipitation is 77% of average (105% last year).

Reservoirs

Belle Fourche Reservoir is storing 95% of average (126,200 ac-ft), or about 71% of capacity. Keyhole Reservoir is storing 152% of average (147,100 ac-ft), or about 76% of capacity. Shadehill Reservoir is storing 77% of average 45,400 ac-ft), or about 56% of capacity. *Detailed reservoir data shown below and in Appendix D.*
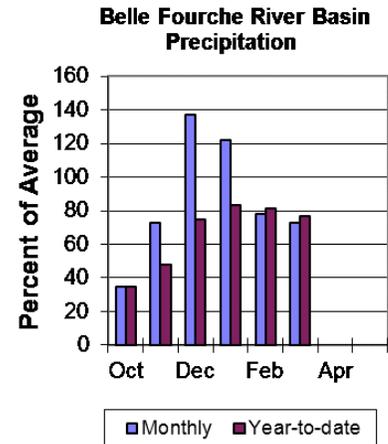
Belle Fourche River Basin Precipitation

Streamflow

There are no streamflow forecast points for the basin.

Data Current as of: 4/6/2017 3:17:26 PM

Belle Fourche River Basin - April 1, 2017

Reservoir Storage End of March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Belle Fourche	126.2	148.7	133.5	178.4
Keyhole	147.1	168.7	96.8	193.8
Shadehill	45.4	51.5	59.0	81.4
Basin-wide Total	318.7	368.9	289.3	453.6
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
BELLE FOURCHE RIVER BASIN	6	0%	65%

Cheyenne River Basin

Snow

Cheyenne River Basin SWE is at 1% of median (52% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Cheyenne River Basin Snow Water Equivalent
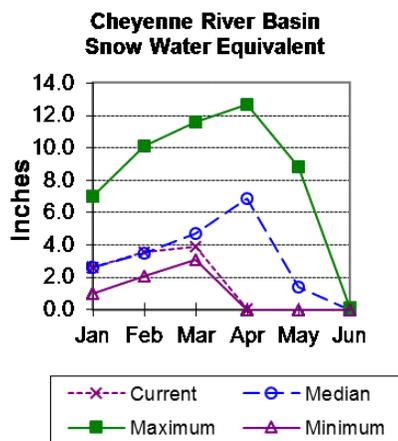
Precipitation

Precipitation for last month was 76% of average (109% last year) in the Black Hills. There were three reporting stations. Year-to-date precipitation is 73% of average (83% last year).

Reservoirs

Angostura is currently storing 109% of average (102,900 ac-ft), or about 84% of capacity. Deerfield reservoir is storing 107% of average (15,100 ac-ft), or about 100% of capacity. Pactola Reservoir is storing 117% of average (54,200 ac-ft), or about 99% of capacity. *Detailed reservoir data shown below and in Appendix D.*
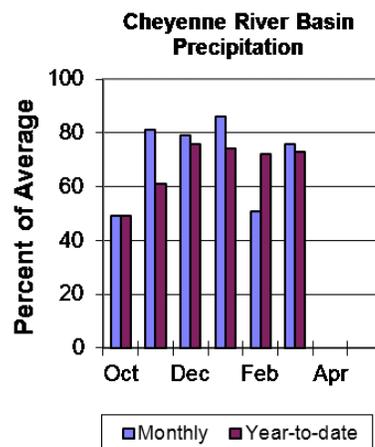
Cheyenne River Basin Precipitation

Streamflow

The following runoff values are the 50% exceedance forecasts for the April through July period. These values are extremely low. The Deerfield Reservoir Inflow should yield around 2,000 ac-ft (38% of average). Pactola Reservoir Inflow yield will be around 3,600 ac-ft (16% of average). *See the following for detailed runoff volumes.*

Data Current as of: 4/6/2017 3:17:28 PM

Cheyenne River Basin
Streamflow Forecasts - April 1, 2017

		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	0.8	1.3	2	38%	3.2	5	5.2
Pactola Reservoir Inflow	APR-JUL	1	2	3.6	16%	8.7	16.3	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Angostura	102.9	111.2	94.3	122.1
Deerfield	15.1	14.2	14.1	15.2
PactoLa	54.2	54.0	46.4	55.0
Basin-wide Total	172.2	179.4	154.8	192.3
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER BASIN	7	1%	52%

Upper North Platte River Basin

Snow

The Upper North Platte River Basin above Seminoe Reservoir SWE is 98% of median (102% last year). North Platte above Northgate SWE is 103% of median (104% last year). Encampment River SWE is 110% of median (102% last year). Brush Creek SWE is 81% of median (99% last year). Medicine Bow and Rock Creek SWE are 104% of median (95% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Upper North Platte Basin Snow Water Equivalent

(Inches, Jan–Jun)

Legend: Current, Median, Maximum, Minimum
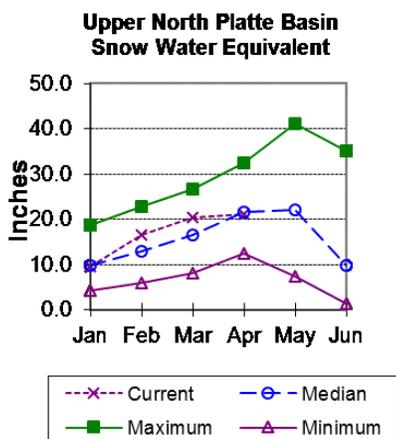
Precipitation

Eighteen reporting stations show last month's precipitation at 57% of average (156% last year). Precipitation varied from 42-69% of average last month. Total water-year-to-date precipitation is 114% of average for the basin (102% last year). Year-to-date percentages range from 79-160% of average.

## Reservoirs

Seminoe Reservoir is storing 770,600 ac-ft or 76% of capacity. Seminoe Reservoir is at 160% of average and was at 147% of average last year. *Detailed reservoir data shown on the following page and in Appendix D.*

Upper North Platte Basin Precipitation

(Percent of Average; Oct, Dec, Feb, Apr)

Legend: Monthly, Year-to-date

Streamflow

The 50% exceedance forecasts for the April through September period are about average for the Upper North Platte River Basin. The yield for the North Platte River near Northgate will be around 255,000 ac-ft (102% of average). The Encampment River near Encampment yield will be around 153,000 ac-ft (111% of average). Rock Creek near Arlington yield will be around 54,000 ac-ft (104% of average). Sweetwater River near Pathfinder will yield a record of about 160,000 ac-ft (250% of average). Seminoe Reservoir inflow should be around 820,000 ac-ft (106% of average). *See the following page for more detailed information on projected runoff.*
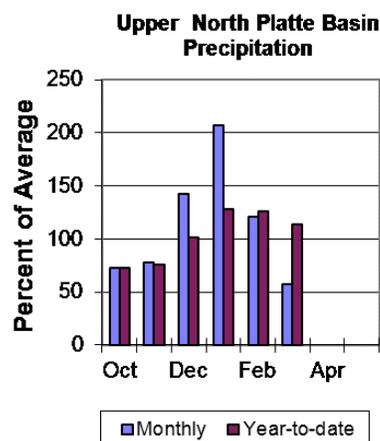
Upper North Platte River Basin
Streamflow Forecasts - April 1, 2017

		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)
North Platte R nr Northgate								
	APR-JUL	113	183	230	102%	275	345	225
	APR-SEP	125	200	255	102%	310	385	250
Encampment R nr Encampment[2]								
	APR-JUL	92	123	144	112%	165	196	129
	APR-SEP	99	131	153	111%	175	205	138
Rock Ck nr Arlington								
	APR-JUL	38	46	51	104%	57	65	49
	APR-SEP	40	48	54	104%	60	69	52
Sweetwater R nr Alcova								
	APR-JUL	118	137	150	254%	163	182	59
	APR-SEP	126	146	160	250%	174	194	64
Seminoe Reservoir Inflow								
	APR-JUL	430	625	755	106%	885	1080	715
	APR-SEP	475	680	820	106%	960	1160	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Seminoe	770.6	707.0	481.2	1016.7
Basin-wide Total	770.6	707.0	481.2	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	11	103%	104%
ENCAMPMENT RIVER	4	110%	102%
BRUSH CREEK	5	81%	99%
MEDICINE BOW & ROCK CREEKS	3	104%	95%
UPPER NORTH PLATTE RIVER BASIN	24	98%	102%

Sweetwater River Basin

Snow

Sweetwater River Basin SWE is 196% of median (103% last year). See *Appendix A at the end of this report for a detailed listing of snow course information.*

Sweetwater River Basin Snow Water Equivalent
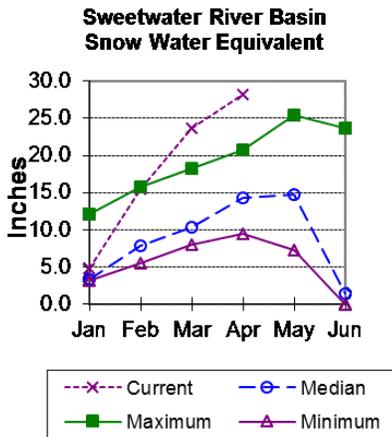
Precipitation

Last month's precipitation was 168% of average (197% last year) for the four reporting stations ranging from 114-200%. The water year-to-date precipitation for the basin is currently 174% of average (87% last year). Year-to-date percentages range from 117-198% of average.

Reservoirs

Reservoir storage is as follows: Pathfinder 967,300 ac-ft (95% of capacity, 160% of average, 143% last year).

Streamflow

The 50% exceedance forecast for the April through September period will be a record high. The Sweetwater River near Pathfinder will yield about 160,000 ac-ft (250% of average). *See below for detailed information on projected runoff.*

Sweetwater River Basin Precipitation
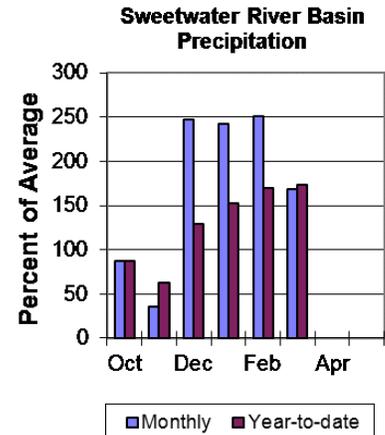
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Sweetwater River Basin
Streamflow Forecasts - April 1, 2017

		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	118	137	150	254%	163	182	59
	APR-SEP	126	146	160	250%	174	194	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Pathfinder	967.3	865.1	604.6	1016.5
Basin-wide Total	967.3	865.1	604.6	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER BASIN	4	196%	103%

Lower North Platte River Basin

Snow

Lower North Platte River Basin SWE is 95% of median (123% last year). Deer and LaPrele Creeks SWE is 100% of median (118% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

**Lower North Platte Basin Snow Water Equivalent**
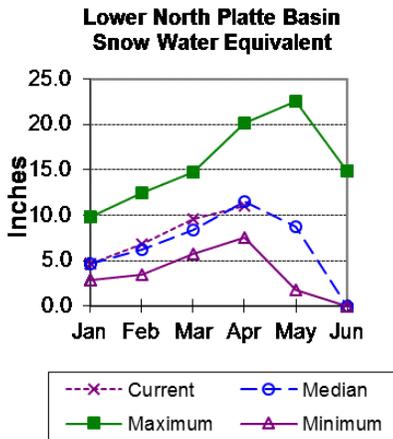
Precipitation

Last month's precipitation was 111% of average (177% last year). The seven reporting station percentages for the month range from 80-223%. The water year-to-date precipitation for the basin is currently 103% of average (115% last year). Year-to-date percentages range from 86-157% of average.

Reservoirs

Reservoir storage is as follows: Alcova 158,100 ac-ft (100% of average) (86% of capacity); Glendo 421,300 ac-ft (108% of average) (83% of capacity); Guernsey 0 ac-ft (0% of average) (0% of capacity); Pathfinder 967,300 ac-ft (160% of average) (95% of capacity) (143% of average last year). *Detailed reservoir data shown on the following page and in Appendix D.*

Lower North Platte Basin Precipitation

Streamflow

The 50% exceedance forecasts for the April through September period will be above average. North Platte - Alcova to Orin Gain will yield - ac-ft. LaPrele Creek above LaPrele Reservoir should yield around 19,500 ac-ft (98% of average). North Platte River below Glendo Reservoir should yield around 1,180,000 ac-ft (139% of average), and below Guernsey Reservoir should yield around 1,190,000 ac-ft (140% of average). *See the following for more detailed information on projected runoff.*
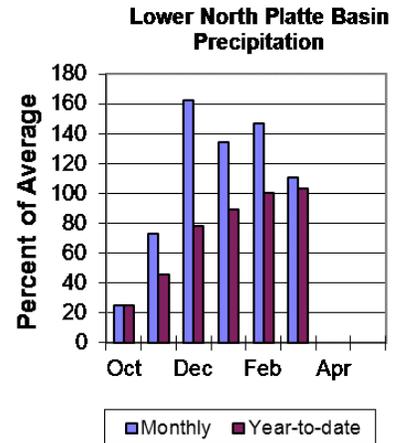
Lower North Platte River Basin
Streamflow Forecasts - April 1, 2017

		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	6.4	13.9	19.1	96%	24	32	19.9
	APR-SEP	6.5	14.2	19.5	98%	25	32	19.9
North Platte R bl Glendo Reservoir								
	APR-JUL	500	770	955	116%	1140	1410	820
	APR-SEP	520	800	990	116%	1180	1460	850
North Platte R bl Guernsey Reservoir								
	APR-JUL	490	770	960	117%	1150	1430	820
	APR-SEP	510	800	995	117%	1190	1480	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Alcova	158.1	157.7	158.5	184.3
Glendo	421.3	376.5	389.4	506.4
Guernsey	0.0	25.6	20.0	45.6
Pathfinder	967.3	865.1	604.6	1016.5
Basin-wide Total	1546.7	1424.9	1172.5	1752.8
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2	100%	118%
LOWER NORTH PLATTE RIVER BASIN	4	95%	123%

Laramie River Basin

Snow

SWE for the entire Laramie River Basin (above mouth entering North Platte) is 93% of median (123% last year). SWE for the Laramie River above Laramie is 84% of median (133% last year). SWE for the Little Laramie River is 101% of median (114% last year). **SWE total for the entire North Platte River Basin above Torrington is 98% of median (102% last year).** *See Appendix A at the end of this report for a detailed listing of snow course information.*

Laramie River Basin Snow Water Equivalent

- - -X- - - Current   — ⊖ — Median
—■— Maximum   —△— Minimum
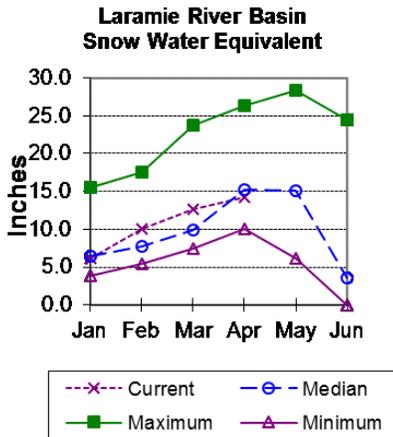
Precipitation

Last month's precipitation was 77% of average (183% last year). For the 12 reporting station percentages for the month range from 58-223%. The water year-to-date precipitation for the basin is currently 110% of average (124% last year). Year-to-date percentages range from 88-157% of average.
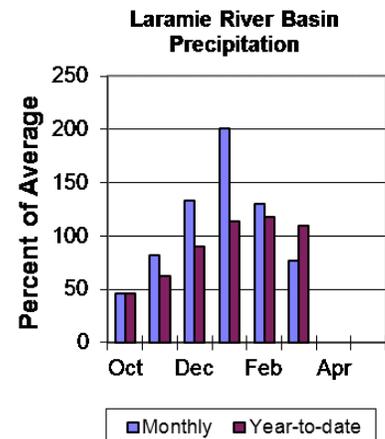
Reservoirs

Reservoir storage is as follows: Wheatland #2 65,500 ac-ft (128% of average) (66% of capacity) was (128% of average last year). *Detailed reservoir data shown on the following page and in Appendix D.*

Laramie River Basin Precipitation

☐ Monthly   ■ Year-to-date

Streamflow

The 50% exceedance forecasts for the April through September period will be above average. Laramie River near Woods Landing should yield around 135,000 ac-ft (107% of average). The Little Laramie near Filmore should produce about 56,000 ac-ft (102% of average). *See below for detailed information on projected runoff.*

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Laramie River Basin
Streamflow Forecasts - April 1, 2017

LARAMIE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment — Chance that actual volume will exceed forecast						
Laramie R nr Woods								
	APR-JUL	72	102	122	106%	142	172	115
	APR-SEP	81	113	135	107%	157	189	126
Little Laramie R nr Filmore								
	APR-JUL	34	44	52	102%	59	69	51
	APR-SEP	36	48	56	102%	63	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 March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wheatland #2	65.5	70.3	51.0	98.9
Basin-wide Total	65.5	70.3	51.0	98.9
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	7	84%	133%
LITTLE LARAMIE RIVER	5	101%	114%
LARAMIE RIVER BASIN	13	93%	123%
NORTH PLATTE TOTAL RIVER BASIN	39	105%	107%

South Platte River Basin (WY)

Snow

South Platte River Basin SWE in WY is 96% of median (114% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

South Platte River Basin Snow Water Equivalent

Data Current as of: 4/6/2017 3:17:37 PM
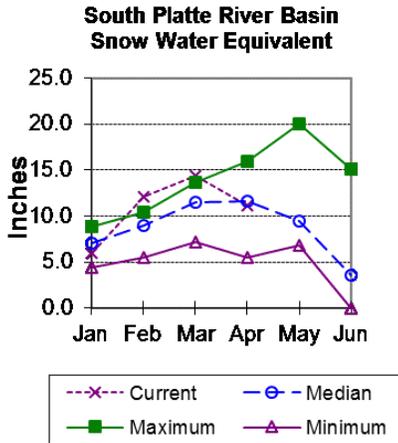
Precipitation

Last month's precipitation was 78% of average (181% last year) for the 6 reporting stations. The water year-to-date precipitation for the basin is currently 116 of average (119% last year). Year-to-date percentages range from 4–180% of average.

Reservoirs

No reservoir data for the basin.

Streamflow

There are no streamflow forecast points for the basin.

South Platte River Basin Precipitation
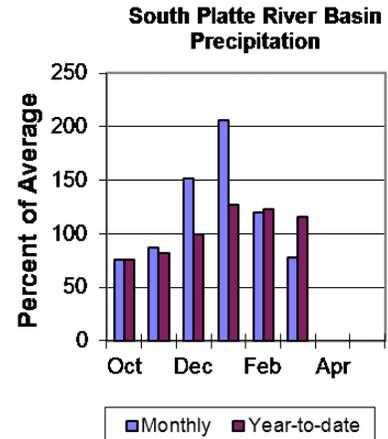
South Platte River Basin - April 1, 2017

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SOUTH PLATTE RIVER BASIN	8	96%	114%

Little Snake River Basin

Snow

Little Snake River drainage SWE is 89% of median (102% last year). See *Appendix A at the end of this report for a detailed listing of snow course information.*

Little Snake River Basin Snow Water Equivalent

Legend:
- ---✕--- Current
- --⊖-- Median
- ■ Maximum
- △ Minimum
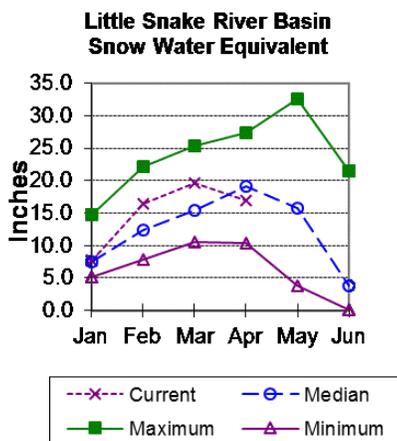
Precipitation

Precipitation across the basin was 58% of average (141% last year) for the eight reporting stations. Last month's precipitation ranged from 27-125% of average. The Little Snake River Basin water-year-to-date precipitation is currently 111% of average (94% last year). Year-to-date percentages range from 89-133% of average.

Reservoirs

High Savery Dam – 15,500 ac-ft (118% of average) (69% of capacity) (89% of average last year). *See below for detailed information on reservoirs and in Appendix D.*

Streamflow
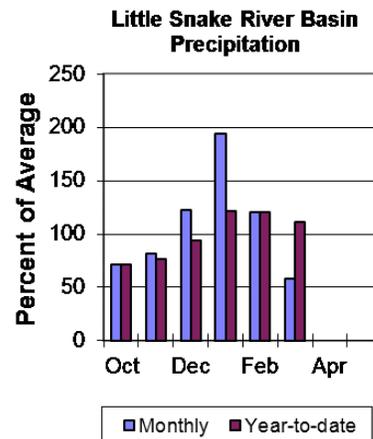
The 50% exceedance forecasts for the April through July period will be below average. The Little Snake River near Slater should yield around 136,000 ac-ft (87% of average). The Little Snake River near Dixon should yield around 280,000 ac-ft (81% of average). *See below for detailed information on projected runoff.*

Data Current as of: 4/6/2017 3:17:39 PM

Little Snake River Basin Precipitation

Legend:
- ☐ Monthly
- ■ Year-to-date

Little Snake River Basin Streamflow Forecasts - April 1, 2017

		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[2]	APR-JUL	98	120	136	87%	153	180	156
Little Snake R nr Dixon[2]	APR-JUL	157	225	280	81%	340	440	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
High Savery Reservoir	15.5	11.6	13.1	22.4
Basin-wide Total	15.5	11.6	13.1	22.4
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER BASIN	10	89%	102%

Upper Green River Basin

Snow

Upper Green River Basin above Fontenelle Reservoir SWE is 168% of median (103% last year). Green River Basin above Warren Bridge SWE is 169% of median (97% last year). West Side of Upper Green River Basin SWE is 173% of median (114% last year). New Fork River SWE is 153% of median (83% last year). Big Sandy-Eden Valley Basin SWE is 156% of median (85% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Upper Green River Basin Snow Water Equivalent

Precipitation

The 16 reporting precipitation sites in the basin were 143% of average last month (139% last year). Last month's precipitation varied from 91-214% of average. Water year-to-date precipitation is 190% of average (98% last year). Year to date percentages of average range from 163-266%.

Reservoir
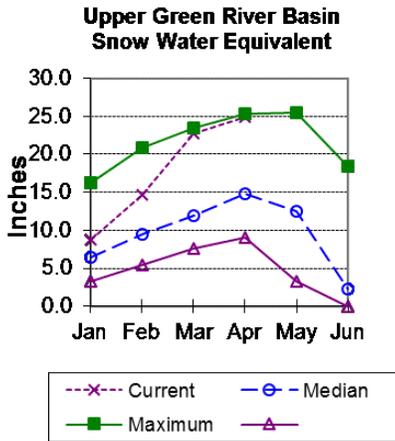
Storage in Big Sandy Reservoir is 29,800 ac-ft or 78% of capacity (150% of average) (106% last year). Fontenelle Reservoir is 206,300 ac-ft (60% of capacity) (170% of average) (114% last year). *Detailed reservoir data shown on the following page and in Appendix D.*

Upper Green River Basin Precipitation

Streamflow

The 50% exceedance forecasts for the April through July period will be way above average. The yield on the Green River at Warren Bridge is about 430,000 ac-ft (176% of average). Pine Creek above Fremont Lake yield will be about 155,000 ac-ft (158% of average). New Fork River near Big Piney yield will be a record high of about 725,000 ac-ft (204% of average). Fontenelle Reservoir Inflow is estimated to be a record around 1,640,000 ac-ft (226% of average), and Big Sandy near Farson yield will be around 91,000 ac-ft (175% of average). *See the following for a more detailed forecast.*

Upper Green River Basin
Streamflow Forecasts - April 1, 2017

		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	385	415	430	176%	450	480	245
Pine Creek ab Fremont Lake	APR-JUL	142	150	155	158%	160	168	98
New Fork R nr Big Piney	APR-JUL	615	680	725	204%	770	840	355
Fontenelle Reservoir Inflow	APR-JUL	1380	1540	1640	226%	1740	1900	725
Big Sandy R nr Farson	APR-JUL	75	84	91	175%	98	107	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, 2017**	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Big Sandy	29.8	21.1	19.9	38.3
Fontenelle	206.3	139.2	121.7	344.8
Basin-wide Total	236.1	160.3	141.6	383.1
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis **April 1, 2017**	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	169%	97%
UPPER GREEN - West Side	5	173%	114%
NEW FORK RIVER	2	153%	83%
BIG SANDY-EDEN VALLEY	2	156%	85%
GREEN above Fontenelle	14	168%	103%

Lower Green River Basin

Snow

Lower Green River Basin SWE is 141% of median (111% last year). Hams Fork drainage SWE is 160% of median (101% last year). Blacks Fork drainage SWE is 106% of median (112% last year). Henrys Fork SWE is 122% of median (150% last year). SWE for the entire Green River Basin (above Flaming Gorge) is 159% of median (106% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Lower Green River Basin Snow Water Equivalent
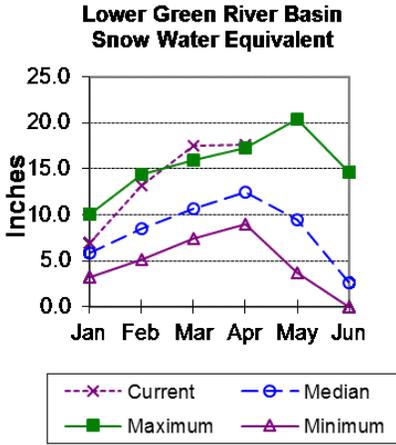
Precipitation

Precipitation for the 12 reporting stations during last month was 183% of average (159% last year). Precipitation ranged from 104-538% of average for the month. The basin year-to-date precipitation is currently 170% of average (103% last year). Year-to-date percentages range from 116-308% of average.

Reservoirs

Fontenelle Reservoir is currently storing 206,300 ac-ft; this is 170% of average (114% last year) (60% of capacity). Flaming Gorge is currently storing 3,165,000 ac-ft; this is 105% of average (105% last year) (84% of capacity). Viva Naughton is currently storing 21,600 ac-ft; this is 79% of average (109% last year) (51% of capacity). *Detailed reservoir data shown on the following page and in Appendix D.*

Lower Green River Basin Precipitation
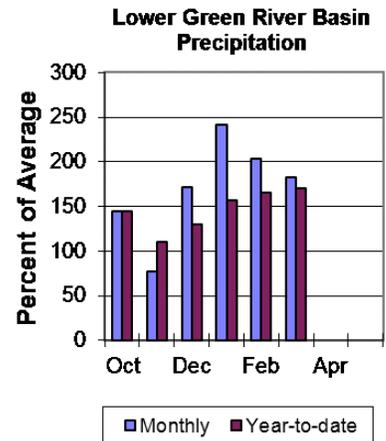
Streamflow

The 50% exceedance forecasts for the April through July period will be above average. The Green River near Green River will yield a record of about 1,690,000 ac-ft (232% of average). The Blacks Fork near Robertson will yield about 122,000 ac-ft (142% of average). East Fork of Smiths Fork near Robertson will yield around 39,000 ac-ft (144% of average). Hams Fork below Pole Creek near Frontier will yield a record of around 123,000 ac-ft (228% of average). The Hams Fork Inflow to Viva Naughton Reservoir will yield a record of about 170,000 ac-ft (230% of average). The Flaming Gorge Reservoir inflow will be a record about 2,200,000 ac-ft (224% of average). *See the following page for more detailed information on projected runoff.*

Lower Green River Basin
Streamflow Forecasts - April 1, 2017

		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 [2]	APR-JUL	1410	1580	1690	232%	1800	1970	730
Blacks Fk nr Robertson	APR-JUL	96	112	122	142%	132	148	86
EF of Smiths Fork nr Robertson [2]	APR-JUL	27	34	39	144%	44	51	27
Hams Fk bl Pole Ck nr Frontier	APR-JUL	104	115	123	228%	131	142	54
Viva Naughton Reservoir Inflow	APR-JUL	139	158	170	230%	182	200	74
Flaming Gorge Reservoir Inflow [2]	APR-JUL	1770	2030	2200	224%	2370	2630	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Fontenelle	206.3	139.2	121.7	344.8
Flaming Gorge Reservoir	3165.0	3166.5	3020.0	3749.0
Viva Naughton Res	21.6	29.7	27.2	42.4
Basin-wide Total	3392.9	3335.4	3168.9	4136.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	4	160%	101%
BLACKS FORK	2	106%	112%
HENRYS FORK	2	122%	150%
LOWER GREEN RIVER BASIN	8	141%	111%
GREEN above FLAMING GORGE	21	159%	106%

Upper Bear River Basin

Snow

Upper Bear River Basin above the UT-WY state line SWE is 134% of median (100% last year). SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is 160% of median (101% last year). Upper Bear River Basin SWE above WY-UT state line is 148% of median (102% last year). *See Appendix A at the end of this report for a detailed listing of snow course information.*

Upper Bear River Basin Snow Water Equivalent
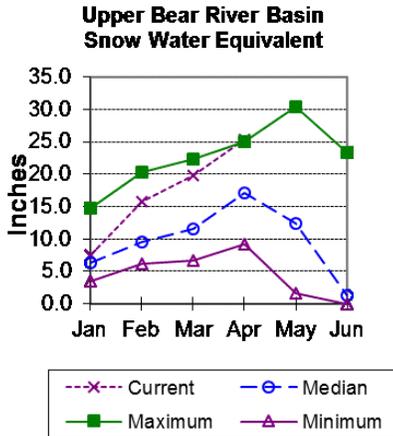
Precipitation

Precipitation for last month was 127% of average for the 9 reporting stations; this was 134% last year. The year-to-date precipitation for the basin is 162% of average; this was 97% last year. Year-to-date percentages range from 121-291% of average.
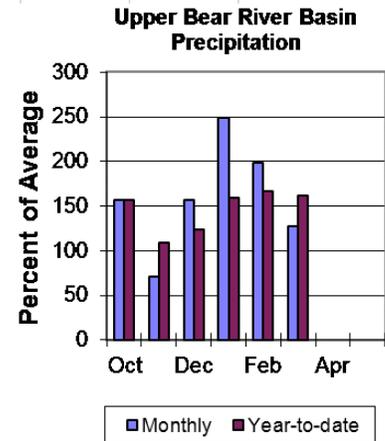
Reservoirs

Storage in Woodruff Narrows Reservoir is 48,700 ac-ft about 85% of capacity (127% of average) (134% 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 extremely high. The Bear River near the Utah-Wyoming State Line should yield about 194,000 ac-ft (158% of average). The Bear River above Reservoir near Woodruff should yield around 235,000 ac-ft (184% of average). The Smiths Fork River near Border Jct. will yield around 195,000 ac-ft (188% of average). *See below for detailed information on projected runoff.*

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Upper Bear River Basin
Streamflow Forecasts - April 1, 2017

UPPER BEAR RIVER BASIN	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment — Chance that actual volume will exceed forecast						30yr Avg (KAF)
		90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	
Bear R nr UT-WY State Line								
	APR-JUL	145	164	177	158%	190	210	112
	APR-SEP	159	180	194	158%	210	230	123
Bear R ab Resv nr Woodruff								
	APR-JUL	143	188	220	182%	250	295	121
	APR-SEP	156	205	235	184%	270	320	128
Smiths Fk nr Border								
	APR-JUL	145	160	170	191%	180	195	89
	APR-SEP	167	184	195	188%	205	225	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, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Woodruff Narrows Reservoir	48.7	51.6	38.4	57.3
Basin-wide Total	48.7	51.6	38.4	57.3
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	134%	100%
SMITHS & THOMAS FORKS	3	160%	101%
UPPER BEAR RIVER BASIN	8	148%	102%

Appendix A

In Word double click the object below to view entire document

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Basinwide Summary: April 1, 2017
(Averages/Medians based on 1981-2010 reference period)

Snowpack Summary for April 1, 2017

SNAKE above Jackson Lake	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Aster Creek	SC	7750	88	40.2	25.7	156%	23.0	89%
Glade Creek	SC	7040	62	26.4	21.2	125%	22.0	104%
Grassy Lake	SNOTEL	7265	85	35.3	31.6	112%	30.4	96%
Huckleberry Divide	SC	7300	50	21.8	18.5	118%	19.2	104%
Lewis Lake Divide	SNOTEL	7850	101	43.9	29.5	149%	29.8	101%
Moran	SC	6750	31	14.1	10.6	133%	12.0	113%
Snake River Station	SNOTEL	6920	43	18.7	15.5	121%	17.5	113%
Thumb Divide	SNOTEL	7980	56	22.7	14.9	152%	14.3	96%
Two Ocean Plateau	SNOTEL	9240		40.6	25.6	159%	26.3	103%
Basin Index						**137%**		**101%**
# of sites						9		9

PACIFIC CREEK	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Base Camp	SNOTEL	7030	63	23.9	14.8	161%	16.2	109%
Moran	SC	6750	31	14.1	10.6	133%	12.0	113%
Two Ocean Plateau	SNOTEL	9240		40.6	25.6	159%	26.3	103%
Basin Index						**154%**		**107%**
# of sites						3		3

BUFFALO FORK	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Four Mile	SC	6900	20	7.1	7.0	101%	8.4	120%
Togwotee Pass	SNOTEL	9580	87	32.3	21.6	150%	21.3	99%
Turpin Meadows	SC	6900	31	12.2	9.0	136%	11.8	131%
Younts Peak	SNOTEL	8350	59	25.2	14.1	179%	14.1	100%
Basin Index						**149%**		**108%**
# of sites						4		4

GROS VENTRE RIVER	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Elbo Ranch	SC	7100	39	14.2	10.2	139%	12.0	118%
Gros Ventre Summit	SNOTEL	8750	57	19.4	12.9	150%	11.3	88%
Gunsight Pass	SNOTEL	9820	64	21.5	13.4	160%	13.7	102%
Togwotee Pass	SNOTEL	9580	87	32.3	21.6	150%	21.3	99%
Basin Index						**150%**		**100%**
# of sites						4		4

HOBACK RIVER	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Blind Bull Sum	SNOTEL	8650	95	42.2	22.4	188%	25.0	112%
East Rim Divide	SNOTEL	7930	43	16.9	10.0	169%	11.1	111%
Granite Creek	SNOTEL	6770	82	26.7	14.9	179%	14.0	94%
Hoback GS	SC	6664	39	16.9	8.5	199%	7.5	88%
Snow King Mountain	SC	7660	42	17.6	13.0	135%	7.2	55%
Basin Index						**175%**		**94%**
# of sites						5		5

GREYS RIVER	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Blind Bull Sum	SNOTEL	8650	95	42.2	22.4	188%	25.0	112%

Appendix B

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Report Created: 4/6/2017 3:16:27 PM

Basinwide Summary: April 1, 2017
(Averages/Medians based on 1981-2010 reference period)

Monthly Total Precipitation for March 2017 — Water Year to Date Precipitation through March 2017

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	8.1	5.2	156%	6.3	121%	52.6	34.6	152%	34.8	101%
Lewis Lake Divide	SNOTEL	7850	11.2	5.3	211%	5.9	111%	54.1	34.1	159%	31.8	93%
Snake River Station	SNOTEL	6920	3.9	3	130%	4.1	137%	34.5	21.6	160%	22.2	106%
Thumb Divide	SNOTEL	7980	3.2	3.2	100%	3.4	106%	27.1	17.8	152%	15	84%
Two Ocean Plateau	SNOTEL	9240	5.5	4.6	120%	5.1	111%	39.7	26.2	152%	24.6	94%
Basin Index					150%		116%			155%		96%
# of sites					5		5			5		5

PACIFIC CREEK	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	6.4	3	213%	3.5	117%	38.6	20.2	191%	19.8	98%
Two Ocean Plateau	SNOTEL	9240	5.5	4.6	120%	5.1	111%	39.7	26.2	152%	24.6	94%
Basin Index					167%		113%			169%		96%
# of sites					2		2			2		2

BUFFALO FORK	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
Togwotee Pass	SNOTEL	9580	5.4	3.9	138%	4.7	121%	37	23.3	159%	24.1	103%
Younts Peak	SNOTEL	8350	5	2.6	192%	3.1	119%	30.3	15.2	199%	13.2	87%
Basin Index					160%		120%			175%		97%
# of sites					2		2			2		2

GROS VENTRE RIVER	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	2.3	109%	2.6	113%	23.4	12.4	189%	10.8	87%
Gunsight Pass	SNOTEL	9820	3.1	2.3	135%	3.3	143%	23.7	13.2	180%	14.3	108%
Togwotee Pass	SNOTEL	9580	5.4	3.9	138%	4.7	121%	37	23.3	159%	24.1	103%
Basin Index					129%		125%			172%		101%
# of sites					3		3			3		3

HOBACK RIVER	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	6	2.8	214%	3.9	139%	43.5	18.8	231%	18.5	98%
East Rim Divide	SNOTEL	7930	1.9	1.7	112%	2.4	141%	20.7	11.3	183%	10.8	96%
Granite Creek	SNOTEL	6770	4.5	2.6	173%	2.3	88%	35.4	19.1	185%	16.9	88%
Basin Index					175%		121%			202%		90%
# of sites					3		3			3		3

GREYS RIVER	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	6	2.8	214%	3.9	139%	43.5	18.8	231%	18.5	98%
Cottonwood Creek	SNOTEL	7870	5	4.1	122%	5.7	139%	36.5	23.7	154%	25.5	108%
Spring Creek Divide	SNOTEL	9000	5.6	3.6	156%	4.9	136%	39.4	22.9	172%	23.3	102%
Triple Peak	SNOTEL	8500	5.3	4.2	126%	6.2	148%	39.8	24.4	163%	26.9	110%
Willow Creek	SNOTEL	8380	5.6	5.4	104%	6.9	128%	47.2	32.2	147%	31.6	98%
Basin Index					137%		137%			169%		101%
# of sites					5		5			5		5

SALT RIVER	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	4.1	122%	5.7	139%	36.5	23.7	154%	25.5	108%
Salt River Summit	SNOTEL	7760	3.6	2.6	138%	4.2	162%	28.2	16	176%	15.3	96%
Willow Creek	SNOTEL	8380	5.6	5.4	104%	6.9	128%	47.2	32.2	147%	31.6	98%
Basin Index					117%		139%			156%		101%
# of sites					3		3			3		3

SNAKE RIVER BASIN	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	1.38	1.4	97%	2.11	151%	14.17	8.25	172%	7.49	91%
Alta 1 NW	COOP	6430	2.26	1.91	118%	3.05	160%	17.59	12.74	138%	13.55	106%
Base Camp	SNOTEL	7030	6.4	3	213%	3.5	117%	38.6	20.2	191%	19.8	98%
Bedford 3 SE	COOP	6430	2.36	1.88	140%	4	238%	22.66	11.19	203%	14.74	132%
Black Bear	SNOTEL	8170	7.7	5.8	133%	7.2	124%	51.9	36.6	142%	33.7	92%
Blind Bull Sum	SNOTEL	8650	6	2.8	214%	3.9	139%	43.5	18.8	231%	18.5	98%
Bondurant	COOP	6820	1.82	1.41	129%	2.11	150%	22.45	10.67	210%	9.98	94%
Cottonwood Creek	SNOTEL	7870	5	4.1	122%	5.7	139%	36.5	23.7	154%	25.5	108%
Darwin Ranch	COOP	8160	1.14	1.22	93%	1.38	113%	15.81	6.91	229%	6.39	92%
East Rim Divide	SNOTEL	7930	1.9	1.7	112%	2.4	141%	20.7	11.3	183%	10.8	96%
Grand Targhee	SNOTEL	9260	5.2	4.6	113%	6.1	133%	38.9	29.4	132%	29.9	102%
Granite Creek	SNOTEL	6770	4.5	2.6	173%	2.3	88%	35.4	19.1	185%	16.9	88%
Grassy Lake	SNOTEL	7265	8.1	5.2	156%	6.3	121%	52.6	34.6	152%	34.8	101%
Gros Ventre Summit	SNOTEL	8750	2.5	2.3	109%	2.6	113%	23.4	12.4	189%	10.8	87%
Gunsight Pass	SNOTEL	9820	3.1	2.3	135%	3.3	143%	23.7	13.2	180%	14.3	108%
Jackson	COOP	6230	1.09	1.24	88%	2.23	180%	16.88	7.88	240%	8.1	103%
Lewis Lake Divide	SNOTEL	7850	11.2	5.3	211%	5.9	111%	54.1	34.1	159%	31.8	93%
Loomis Park	SNOTEL	8240	3.7	2.7	137%	3.1	115%	31.6	16.7	189%	16.2	97%
Moose	COOP	6470	2.03	1.62	125%	2.28	141%	23.56	12.8	184%	14.11	110%
Moran 5 WNW	COOP	6790	3.84	2.12	181%	2.34	110%	27.21	14.67	185%	13.5	92%

Appendix C
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Streamflow Forecast Summary: April 1, 2017
(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[1]								
	APR-JUL	975	1050	1110	145%	1160	1240	765
	APR-SEP	1070	1160	1220	144%	1280	1370	845
Snake R ab Reservoir nr Alpine[2]								
	APR-JUL	3590	3780	3900	180%	4030	4210	2170
	APR-SEP	4080	4300	4450	178%	4600	4820	2500
Snake R nr Irwin[2]								
	APR-JUL	4490	4820	5050	168%	5270	5600	3010
	APR-SEP	5190	5560	5810	166%	6060	6430	3500
Snake R nr Heise[2]								
	APR-JUL	4830	5180	5420	167%	5660	6010	3240
	APR-SEP	5600	5990	6260	166%	6530	6920	3780
Pacific Ck at Moran								
	APR-JUL	240	265	280	171%	300	325	164
	APR-SEP	250	275	295	171%	310	340	173
Buffalo Fk ab Lava Ck nr Moran								
	APR-JUL	385	420	440	157%	465	495	280
	APR-SEP	435	475	500	156%	530	570	320
Greys R ab Reservoir nr Alpine								
	APR-JUL	470	505	525	172%	545	580	305
	APR-SEP	545	580	610	169%	635	670	360
Salt R ab Reservoir nr Etna								
	APR-JUL	420	475	515	172%	555	610	300
	APR-SEP	505	570	615	166%	660	730	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	330	370	400	108%	430	470	370
	APR-SEP	420	470	505	107%	540	590	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	710	775	820	143%	865	930	575
	APR-SEP	935	1020	1080	140%	1150	1240	770
Yellowstone R at Corwin Springs								
	APR-JUL	1870	2040	2150	135%	2260	2430	1590
	APR-SEP	2200	2400	2530	135%	2660	2860	1880
Yellowstone R at Livingston								
	APR-JUL	2110	2320	2470	137%	2620	2830	1800
	APR-SEP	2480	2730	2900	136%	3070	3330	2140

Appendix D
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Basinwide Summary: April 1, 2017
(averages based on 1981-2010 reference period)

Reservoir Storage Summary for the end of March 2017

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	13.5	13.5	12.3	15.2	89%	89%	81%	110%	110%
Jackson Lake	536.6	570.9	430.7	847.0	63%	67%	51%	125%	133%
Palisades Reservoir	461.9	979.1	902.8	1400.0	33%	70%	64%	51%	108%
Basin-wide Total	1012.0	1563.5	1345.8	2262.2	45%	69%	59%	75%	116%
# 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	34.7	30.7	29.5	41.0	85%	75%	72%	118%	104%
Hebgen Lake	294.0	291.5	270.4	378.8	78%	77%	71%	109%	108%
Basin-wide Total	328.7	322.1	299.9	419.8	78%	77%	71%	110%	107%
# 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	51.7	70.6	75.4	151.8	34%	47%	50%	69%	94%
Boysen	578.2	546.0	489.0	596.0	97%	92%	82%	118%	112%
Pilot Butte	26.9	23.6	24.8	31.6	85%	75%	78%	108%	95%
Basin-wide Total	656.8	640.2	589.2	779.4	84%	82%	76%	111%	109%
# 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	578.2	546.0	489.0	596.0	97%	92%	82%	118%	112%
Bighorn Lake	751.5	813.4	787.5	1356.0	55%	60%	58%	95%	103%
Basin-wide Total	1329.7	1359.4	1276.5	1952.0	68%	70%	65%	104%	106%
# of reservoirs	2	2	2	2	2	2	2	2	2

SHOSHONE 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	457.1	432.7	348.9	646.5	71%	67%	54%	131%	124%
Basin-wide Total	457.1	432.7	348.9	646.5	71%	67%	54%	131%	124%
# 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	64.7	58.3	32.3	79.1	82%	74%	41%	200%	180%
Basin-wide Total	64.7	58.3	32.3	79.1	82%	74%	41%	200%	180%
# 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	126.2	148.7	133.5	178.4	71%	83%	75%	95%	111%
Keyhole	147.1	168.7	96.8	193.8	76%	87%	50%	152%	174%
Shadehill	45.4	51.5	59.0	81.4	56%	63%	72%	77%	87%
Basin-wide Total	318.7	368.9	289.3	453.6	70%	81%	64%	110%	128%
# 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	102.9	111.2	94.3	122.1	84%	91%	77%	109%	118%
Deerfield	15.1	14.2	14.1	15.2	100%	93%	93%	107%	100%
PactoLa	54.2	54.0	46.4	55.0	99%	98%	84%	117%	116%
Basin-wide Total	172.2	179.4	154.8	192.3	90%	93%	80%	111%	116%
# 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
Seminoe	770.6	707.0	481.2	1016.7	76%	70%	47%	160%	147%
Basin-wide Total	770.6	707.0	481.2	1016.7	76%	70%	47%	160%	147%
# 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	967.3	865.1	604.6	1016.5	95%	85%	59%	160%	143%
Basin-wide Total	967.3	865.1	604.6	1016.5	95%	85%	59%	160%	143%
# of reservoirs	1	1	1	1	1	1	1	1	1

Leonard Jordan (Chief)   Astrid Martinez
U.S.D.A.   State Con.
Natural Resources Conservation Service   N R C S
Washington D.C.   Casper, Wyoming

Apr. 1st, 2017 Statewide SWE @ 112% of median

Wyoming SNOTEL Current Snow Water Equivalent (SWE) % of Median
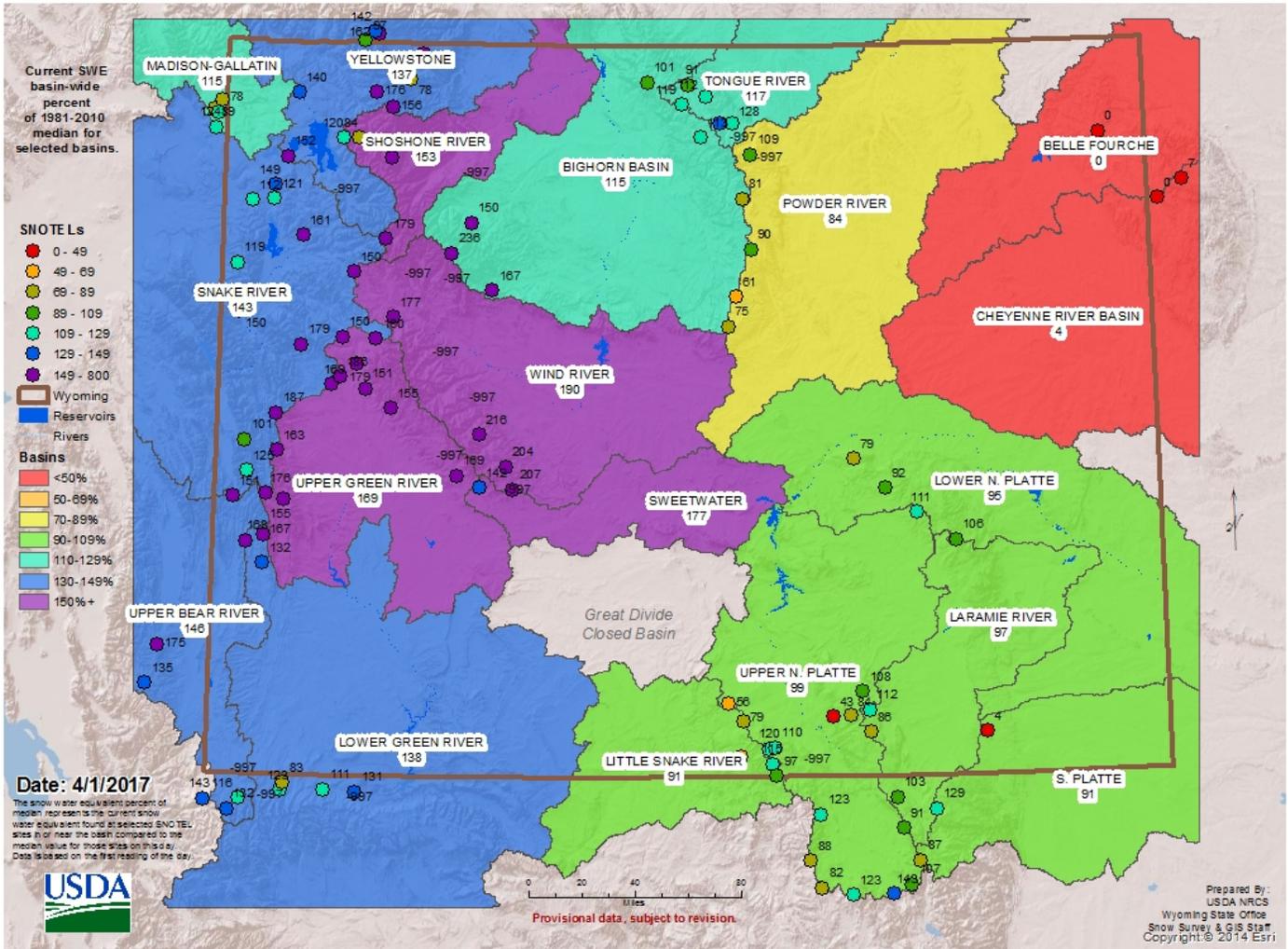
The above map is only for SNOTELS and does not include snow courses.   The Outlook Report includes the snow courses.

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
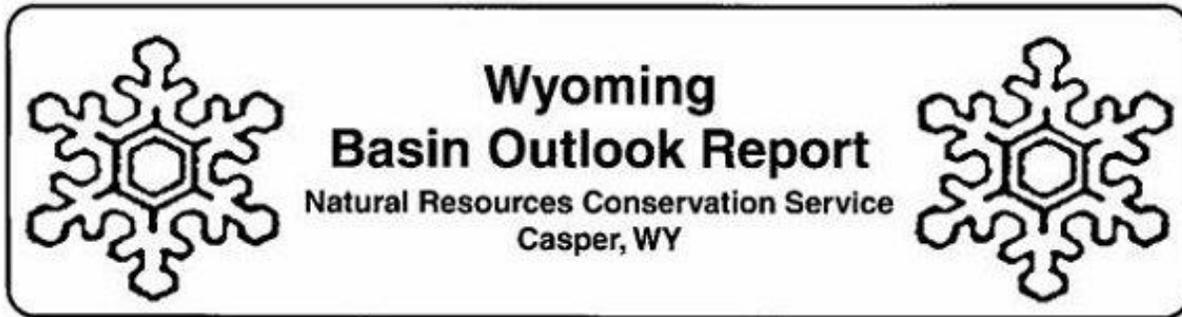
Wyoming
Basin Outlook Report
Natural Resources Conservation Service
Casper, WY

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