United States Department of Agriculture

Natural Resources Conservation Service

Wyoming Basin Outlook Report
January 1, 2014

Mallo Snow Course (Wyoming Black Hills)

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% or10% 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 normal for January 1st at 117%. Monthly precipitation for the basins varied from 58-128% of average. Year-to-date precipitation for Wyoming basins varies from 74-170% of average. Forecasted runoff varies from 80-177% of average across the Wyoming basins for an overall average of 97%. Basin reservoir levels for Wyoming vary from 43-189% of average for an overall average of 89%.

Snowpack

Snow water equivalent (SWE), across Wyoming is above normal for this time of year at 117%. SWE in the NW portion of Wyoming is now about 108% of normal (101% of last year). NE Wyoming SWE is currently about 127% of normal (173% of last year). The SE Wyoming SWE is currently about 111% of normal (143% of last year). The SW Wyoming SWE is about 102% of normal (95% of last year).

Precipitation

Last month's precipitation varied considerably across Wyoming. The Shoshone Basin had the highest precipitation for the month at 128% of average. The Sweetwater Basin had the lowest precipitation amount at 58% of average. The following table displays the major river basins and their departure from average for this month.

Basin	Departure from average	Basin	Departure from average
Snake River	**-12%**	**Upper North Platte River**	**-06%**
Madison-Gallatin	**-25%**	**Sweetwater River**	**-42%**
Yellowstone	**+18%**	**Lower North Platte**	**-05%**
Wind River	**-10%**	**Laramie River**	**-01%**
Bighorn	**+04%**	**South Platte**	**-14%**
Shoshone	**+28%**	**Little Snake River**	**-04%**
Powder River	**+07%**	**Upper Green River**	**+03%**
Tongue River	**+15%**	**Lower Green River**	**+05%**
Belle Fourche	**+03%**	**Upper Bear River**	**-16%**
Cheyenne	**-03%**		

Streams

Stream flow yield for April to September is expected to be near average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be about 97% (varying from 80-177% of average). The Snake River and Upper Yellowstone & Madison River Basins are expected to yield about 89% and 100% of average, respectively; 85-100% of average for the various forecast points in the basins. Yields from the Wind and Bighorn River Basins are expected to be about 105% and 117% of average, respectively; varying from 71-121% of average in the basins. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 105% and 106% of average, respectively; varying from 105-110% of average. Yields from the Tongue & Powder River Basins are expected to be about 105% and 130% of average, respectively; varying from 102-147% of average. Yield for the Cheyenne River Basin is expected to be about 177% of average. Yields for the Upper, Lower North Platte, and Laramie Rivers of Wyoming are expected to be about 99%,100%, and 99% of average, respectively; varying from 59-83% of average. Yields for the Little Snake,

Green River, and Little Bear of Wyoming are expected to be 64%, 76%, and 75% of average respectively; yield estimates vary from 64-84% of average.

Reservoirs

Reservoir storage varies widely across the state however reservoir storage is at 89% of average for the entire state. Reservoirs in the Wind River Basin are above average at 107%. Reservoirs on the Big Horn are above average at 107%. The Buffalo Bill Reservoir on the Shoshone is above average at 132%. Reservoirs in the northeast are above average in storage at 135%. Reservoirs on the North Platte River are below average at 81%. Reservoirs on the Green River are below average at 93%. See the following table for further information about reservoir storage.

Major Reservoirs in Wyoming

Jan 1, 2014

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
WYOMING AND SURROUNDING STATES					
ALCOVA	80	85	84	95	94
ANGOSTURA	75	56	79	95	135
BELLE FOURCHE	79	49	51	155	160
BIG SANDY	21	16	43	49	129
BIGHORN LAKE	70	66	64	109	106
BOYSEN	91	80	88	104	113
BUFFALO BILL	73	67	55	132	109
BULL LAKE	65	51	50	132	130
DEERFIELD	97	99	81	120	98
ENNIS LAKE	71	74	73	97	96
FLAMING GORGE	76	80	82	92	94
FONTENELLE	56	57	51	111	99
GLENDO	51	41	50	102	124
Grassy Lake	86	82	76	113	105
GUERNSEY	17	9	20	84	183
HEBGEN LAKE	84	85	75	112	100
Jackson Lake	21	72	50	43	30
KEYHOLE	81	77	45	180	106
PACTOLA	94	87	83	113	109
Palisades	31	35	63	50	89
PATHFINDER	35	41	53	67	87
PILOT BUTTE	80	75	73	109	106
SEMINOE	32	50	54	58	63
SHADEHILL	78	42	62	125	183
TONGUE RIVER	63	56	33	189	112
VIVA NAUGHTON RES	61	60	74	83	102
WHEATLAND #2	41	22	43	95	185
WOODRUFF NARROWS	22	13	48	47	169
TOTAL 27 RESERVOIRS	59	63	66	89	94

Raw KAF Totals Current=7852 Last Year=8374 Average=8780Capacity=13288

B A S I N S U M M A R Y O F
SNOTEL and S N O W C O U R S E D A T A

SNOW SITE	ELEVATION	JANUARY 2014 DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	NORMAL 81-10
WYOMING Snow Course and SNOTEL Stations						
ARAPAHO RIDGE SNTL	10960	1/01/14	42	10.1	8.0	--
ASTER CREEK	7750	1/03/14	34	7.7	15.0	11.4
BALD MOUNTAIN SNOTEL	9380	1/01/14	52	11.4	5.4	8.5
BASE CAMP	7030	1/03/14	35	8.9	9.5	8.1
BASE CAMP SNOTEL	7030	1/01/14	39	8.5	10.0	7.2
BATTLE MTN. SNOTEL	7440	1/01/14	24	5.2	3.1	4.1
BEARTOOTH LK. SNOTEL	9280	1/01/14	46	10.8	8.7	10.0
BEAR RIVER RS SNOTEL	8780	1/01/14	16	2.8	4.1	--
BEAR TRAP SNOTEL	8200	1/01/14	24	4.8	4.1	2.6
BIG GOOSE SNOTEL	7760	1/01/14	21	4.5	2.3	3.7
BIG SANDY SNOTEL	9080	1/01/14	27	4.8	6.2	6.0
BLACK BEAR SNOTEL	7950	1/01/14	62	16.8	20.5	17.8
BLACKS FORK JCT SNT	8870	1/01/14	13	2.3	3.7	--
BLACKHALL MTN SNOTEL	9820	1/01/14	57	14.0	10.0	--
BLACKWATER SNOTEL	9780	1/01/14	44	12.4	12.6	10.5
BLIND BULL SNOTEL	8900	1/01/14	43	10.3	10.1	9.1
BLIND PARK SNOTEL	6870	1/01/14	21	4.6	1.7	3.2
BONE SPGS. SNOTEL	9350	1/01/14	39	8.4	6.0	7.3
BROOKLYN LK. SNOTEL	10220	1/01/14	46	9.5	6.3	7.9
BUCK PASTURE SNOTEL	9700	1/01/14	21	4.1	--	--
BUG LAKE SNOTEL	7950	1/01/14	24	5.8	8.1	6.3
BURGESS JCT. SNOTEL	7880	1/01/14	29	6.0	2.6	4.7
BURTS-MILLER RANCH S	7860	1/01/14	12	2.7	3.2	2.6
CANYON SNOTEL	8090	1/01/14	27	5.3	5.7	5.5
CASPER MTN. SNOTEL	7850	1/01/14	34	8.7	1.5	5.9
CASTLE CREEK SNOTEL	8400	1/01/14	15	3.1	3.6	--
CHALK CK #1 SNOTEL	9100	1/01/14	32	8.2	9.4	9.7
CINNABAR PARK SNOTEL	9690	1/01/14	49	9.4	6.5	9.1
CLOUD PEAK SNOTEL	9850	1/01/14	36	7.8	4.9	6.3
COLE CANYON SNOTEL	5910	1/01/14	18	3.6	1.0	2.2
COLD SPRINGS SNOTEL	9630	1/01/14	23	4.8	4.1	3.2
COLUMBINE SNOTEL	9300	1/01/14	41	9.7	8.0	8.8
COTTONWOOD CR SNOTEL	7700	1/01/14	---	9.1	8.7	8.5
CROW CREEK SNOTEL	8830	1/01/14	8	2.8	1.5	4.5
DEADMAN HILL SNOTEL	10200	1/01/14	39	9.2	6.0	7.2
DEER PARK SNOTEL	9700	1/01/14	25	5.3	7.3	6.6
DIVIDE PEAK SNOTEL	8860	1/01/14	35	8.1	6.3	8.5
DITCH CREEK	6870	1/02/14	9	2.1	.7	2.0
DOME LAKE SNOTEL	8880	1/01/14	27	3.9	3.7	5.4
EF BLACKS FORK GS SN	9360	1/01/14	15	1.9	6.9	--
EAST RIM DIV SNOTEL	7930	1/01/14	26	5.6	4.5	4.3
ELBO RANCH	7100	1/01/14	25	4.2	4.5	3.9
ELKHART PARK SNOTEL	9400	1/01/14	---	5.9	5.5	5.7
ELK RIVER SNOTEL	8600	1/01/14	35	8.3	5.6	6.8
EVENING STAR SNOTEL	9200	1/01/14	64	14.8	13.1	11.5
FISHER CREEK SNOTEL	9100	1/01/14	63	15.9	19.1	14.7
GLADE CREEK	7040	1/03/14	38	9.6	10.8	8.5
GRAND TARGHEE SNOTEL	9260	1/01/14	77	21.5	20.0	17.5
GRANITE CRK SNOTEL	6770	1/01/14	28	6.2	7.6	6.5
GRASSY LAKE	7270	1/03/14	48	13.7	12.2	12.1
GRASSY LAKE SNOTEL	7270	1/01/14	56	12.9	12.3	12.8
GRAVE SPRINGS SNOTEL	8550	1/01/14	25	5.4	2.0	3.4

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	MEDIAN 81-10
GROS VENTRE SNOTEL	8750	1/01/14	30	6.3	6.2	6.2
GUNSIGHT PASS SNOTEL	9820	1/01/14	30	7.4	6.7	6.1
HANSEN S.M. SNOTEL	8360	1/01/14	17	4.1	2.8	3.0
HAMS FORK SNOTEL	7840	1/01/14	18	3.2	4.7	4.6
HOBBS PARK SNOTEL	10100	1/01/14	28	6.4	6.0	6.6
HUCKLEBERRY DIVIDE	7300	1/03/14	33	7.5	10.3	8.0
INDIAN CREEK SNOTEL	9430	1/01/14	---	8.0	10.3	10.0
JOE WRIGHT SNOTEL	10000	1/01/14	30	7.2	5.6	9.4
KELLEY R.S. SNOTEL	8180	1/01/14	27	5.3	6.4	6.2
KENDALL R.S. SNOTEL	7740	1/01/14	26	5.8	5.9	4.8
KIRWIN SNOTEL	9550	1/01/14	31	7.1	5.0	4.3
LAKE CAMP	7780	12/31/13	19	3.6	--	4.0
LA PRELE SNOTEL	8380	1/01/14	19	3.1	1.1	4.0
LARSEN CREEK SNOTEL	9020	1/01/14	12	2.1	4.5	--
LEWIS LAKE DIVIDE	7850	1/03/14	50	14.8	21.1	15.6
LEWIS LAKE SNOTEL	7850	1/01/14	45	10.6	16.4	13.3
LITTLE BEAR RUN	6240	1/02/14	10	2.1	.8	1.7
LITTLE SNAKE RIVER	8920	1/01/14	46	10.6	8.3	9.0
LITTLE WARM SNOTEL	9370	1/01/14	28	5.8	5.6	4.5
LOOMIS PARK SNOTEL	8240	1/01/14	---	6.4	6.2	6.6
LUPINE CREEK	7380	12/31/13	12	2.2	5.0	3.4
MADISON PLT SNOTEL	7750	1/01/14	39	9.0	12.5	10.3
MALLO	6420	1/02/14	19	4.2	1.4	2.9
MARQUETTE SNOTEL	8760	1/01/14	18	4.5	2.5	--
MIDDLE POWDER SNOTEL	7760	1/01/14	31	7.4	3.4	5.0
MORAN	6750	1/03/14	28	5.2	4.9	5.1
NEVER SUMMER SNOTEL	10280	1/01/14	39	9.2	6.3	--
NEW FORK SNOTEL	8340	1/01/14	22	4.6	3.9	4.5
NORRIS BASIN	7500	12/31/13	22	4.0	3.7	4.3
N.E. ENTRANCE SNOTEL	7350	1/01/14	22	4.5	3.2	4.1
NORTH FRENCH SNOTEL	10130	1/01/14	57	13.7	8.7	11.7
NORTH RAPID CK SNTL	6130	1/01/14	24	4.8	1.6	3.2
OLD BATTLE SNOTEL	9920	1/01/14	49	13.4	11.7	12.6
OLD FAITHFUL	7400	1/01/14	25	6.4	5.8	5.3
OWL CREEK SNOTEL	8980	1/01/14	17	3.6	2.4	2.6
PARKERS PEAK SNOTEL	9400	1/01/14	56	12.3	10.7	9.9
PHILLIPS BNCH SNOTEL	8200	1/01/14	42	10.0	11.0	11.0
POCKET CREEK SNOTEL	9350	1/01/14	28	4.6	7.1	--
POWDER RVR.PASS SNTL	9480	1/01/14	31	6.3	5.7	4.8
RAWAH SNOTEL	9020	1/01/14	25	5.5	3.9	--
RENO HILL SNOTEL	8500	1/01/14	35	8.8	1.9	5.8
ROACH SNOTEL	9400	1/01/14	34	7.3	5.5	6.9
SAGE CK BASIN SNTL	7850	1/01/14	23	4.8	5.0	5.8
SALT RIVER SNOTEL	7600	1/01/14	25	5.0	5.0	4.9
SAND LAKE SNOTEL	10050	1/01/14	55	12.7	8.6	11.8
SANDSTONE RS SNOTEL	8150	1/01/14	27	5.2	5.3	4.4
SHELL CREEK SNOTEL	9580	1/01/14	37	7.8	7.3	7.2
SNAKE RIVER STATION	6920	1/03/14	32	7.2	7.8	7.4
SNAKE RV STA SNOTEL	6920	1/01/14	36	6.7	7.5	6.4
SNIDER BASIN SNOTEL	8060	1/01/14	27	5.3	4.6	5.2
SOLDIER PARK SNOTEL	8780	1/01/14	14	3.6	1.7	--
SOUTH BRUSH SNOTEL	8440	1/01/14	25	5.7	3.9	4.8
SOUTH PASS SNOTEL	9040	1/01/14	26	5.8	5.7	6.7
SPRING CRK. SNOTEL	9000	1/01/14	42	9.6	10.5	10.2
ST LAWRENCE ALT SNTL	8620	1/01/14	13	2.9	--	3.1
SUCKER CREEK SNOTEL	8880	1/01/14	35	7.6	4.0	5.2
SYLVAN LAKE SNOTEL	8420	1/01/14	44	10.1	9.4	9.2

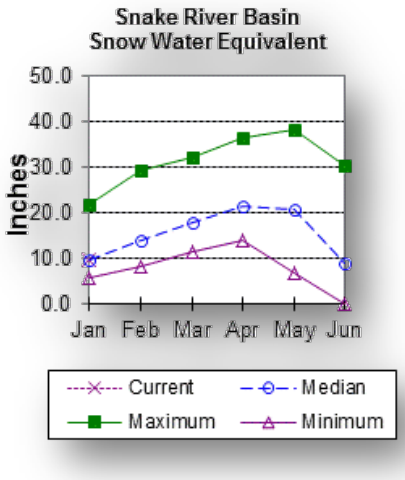
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	MEDIAN 81-10
SYLVAN ROAD SNOTEL	7120	1/01/14	31	6.2	5.2	5.4
TETON PASS W.S.	7740	1/03/14	37	8.9	--	--
THUMB DIVIDE	7980	1/03/14	23	4.9	8.2	6.0
THUMB DIVIDE SNOTEL	7980	1/01/14	26	5.3	8.5	6.2
TIE CREEK SNOTEL	6870	1/01/14	12	2.7	.7	2.1
TIMBER CREEK SNOTEL	7950	1/01/14	10	3.4	.9	2.2
TOGWOTEE PASS	9580	1/03/14	54	13.5	12.3	11.9
TOGWOTEE PASS SNOTEL	9580	1/01/14	50	11.7	11.3	11.1
TOWER SNOTEL	10000	1/01/14	63	17.6	12.7	18.6
TOWNSEND CRK SNOTEL	8700	1/01/14	18	3.3	1.5	4.1
TRIPLE PEAK SNOTEL	8500	1/01/14	45	8.8	8.8	8.3
TWENTY-ONE MILE	7150	1/01/14	26	4.2	8.0	5.9
TWO OCEAN SNOTEL	9240	1/01/14	54	14.1	16.3	12.5
WEBBER SPRING SNOTEL	9250	1/01/14	41	9.2	8.8	9.6
WHISKEY PARK SNOTEL	8950	1/01/14	51	14.2	9.0	9.6
WHITE MILL SNOTEL	8700	1/01/14	50	11.9	11.7	9.9
WILLOW CREEK SNOTEL	8450	1/01/14	46	11.7	11.3	10.8
WINDY PEAK SNOTEL	7900	1/01/14	12	2.8	.8	3.1
WOLVERINE SNOTEL	7650	1/01/14	28	6.2	4.4	4.8
ZIRKEL SNOTEL	9340	1/01/14	42	11.4	8.8	--

NOTE: Missing snow depth entries indicate the site has no snow depth sensor or the sensor is malfunctioning. Missing data under NORMAL 81-10 indicates the site is relatively new.

Snake River Basin

Snow

The Snake River Basin snow water equivalent (SWE) is 101% of normal. SWE in the Snake River Basin above Jackson Lake is 95% of normal. Pacific Creek Basin SWE is 112% of normal. Gros Ventre River Basin SWE is 108% of normal. SWE in the Hoback River drainage is 111% of normal. SWE in the Greys River drainage is 106% of normal. In the Salt River area SWE is 107% of normal. SWE in the Snake River Basin above Palisades is 101% of normal. See the "Basin Summary of Snow Course Data" at the beginning of this report for a detailed listing of snow course information.

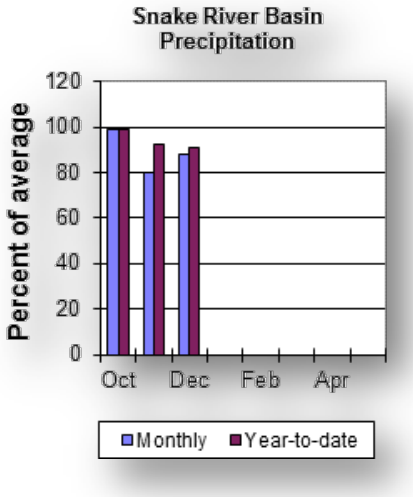


Precipitation

Precipitation across the basin was below average last month. Monthly precipitation for the basin was 88% of average (70% of last year). Last month's percentages range from 50-120% of average for the 27 reporting stations. Water-year-to-date precipitation is 91% of average for the Snake River Basin (83% of last year). Year-to-date percentages range from 60-112% of average.

Reservoirs

Current reservoir storage is 48% of average for the 3 storage reservoirs in the basin. Grassy Lake storage is about 113% of average (13,100 ac-ft compared to 12,500 last year). Jackson Lake storage is 43% of average (181,700 ac-ft compared to 611,500 ac-ft last year). Palisades Reservoir storage is about 50% of average (439,500 ac-ft compared to 492,500 ac-ft last year). Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecasts for April through September are below average for the basin. The Snake near Moran is 765,000 ac-ft (91% of average). Snake River above reservoir near Alpine is 2,280,000 ac-ft (91% of average). The Snake near Irwin is 3,120,000 ac-ft (89% of average). The Snake near Heise is 3,350,000 ac-ft (89% of average). Pacific Creek near Moran is 173,000 ac-ft (100% of average). Buffalo Fork above Lava near Moran is 315,000 ac-ft (98% of average). Greys River above Palisades Reservoir is 335,000 ac-ft (93% of average). Salt River near Etna is 315,000 ac-ft (85% of average). See the following page for detailed runoff volumes.

Snake River Basin
Streamflow Forecasts - January 1, 2014

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[1]								
	APR-JUL	410	605	690	90%	775	970	765
	APR-SEP	455	670	765	91%	860	1070	845
Snake R ab Reservoir nr Alpine[1]								
	APR-JUL	1080	1700	1980	91%	2260	2880	2170
	APR-SEP	1260	1960	2280	91%	2600	3300	2500
Snake R nr Irwin [1]								
	APR-JUL	1720	2380	2680	89%	2980	3640	3010
	APR-SEP	2040	2780	3120	89%	3460	4200	3500
Snake R nr Heise								
	APR-JUL	2060	2540	2860	88%	3180	3660	3240
	APR-SEP	2440	2980	3350	89%	3720	4260	3780
Pacific Ck at Moran								
	APR-JUL	103	139	164	100%	189	225	164
	APR-SEP	111	148	173	100%	198	235	173
Buffalo Fk ab Lava Ck nr Moran								
	APR-JUL	200	245	275	98%	305	350	280
	APR-SEP	230	280	315	98%	350	400	320
Greys R ab Reservoir nr Alpine								
	APR-JUL	191	250	290	95%	330	390	305
	APR-SEP	220	290	335	93%	380	450	360
Salt R ab Reservoir nr Etna								
	APR-JUL	99	189	250	83%	310	400	300
	APR-SEP	139	245	315	85%	385	490	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

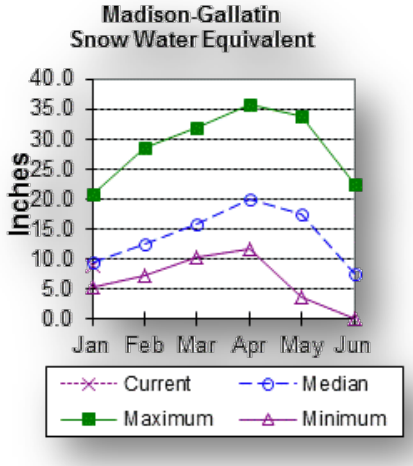
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
GRASSY LAKE	13.1	12.5	11.6	15.2
JACKSON LAKE	181.7	611.5	424.1	847.0
PALISADES RES NR IRWIN	439.5	492.5	882.5	1400.0
Basin-wide Total	634.4	1116.4	1318.2	2262.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
SNAKE above Jackson Lake	9	95%	121%
PACIFIC CREEK	3	112%	126%
BUFFALO FORK	1	105%	102%
GROS VENTRE RIVER	4	108%	105%
HOBACK RIVER	3	111%	112%
GREYS RIVER	5	106%	105%
SALT RIVER	3	107%	103%
SNAKE RIVER BASIN	25	102%	113%

Madison-Gallatin Rivers Basin

Snow

Snow water equivalent (SWE) is at 94% of normal in the Madison-Gallatin drainage. See the "Basin Summary of Snow Course Data" at the front of this report for details.

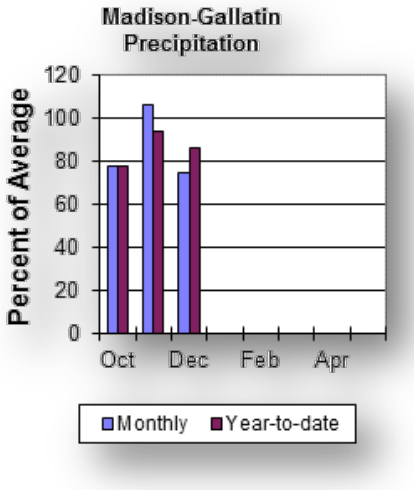


Precipitation

Last month precipitation in the Madison-Gallatin drainage was about 75% of average. The 5 reporting stations percentages range from 66-87% of average. Water-year-to-date precipitation is about 86% of average, or about 77% of last year. Year to date percentage ranges from 82-92%.

Reservoirs

Ennis Lake is storing about 29,200 ac-ft of water (71% of capacity, 97% of average or 96% of last year's volume). Hebgen Lake is storing about 318,100 ac-ft of water (84% of capacity, 112% of average or 100% of last year's volume). Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecast for April through September is below average for the basin. Hebgen Reservoir inflow is 435,000 ac-ft (93% of average). See the following page for detailed runoff volumes.

Madison-Gallatin River Basins
Streamflow Forecasts - January 1, 2014

MADISON-GALLATIN RIVER BASINS	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						
Hebgen Reservoir Inflow								
	APR-JUL	235	300	345	93%	390	455	370
	APR-SEP	305	385	435	93%	490	570	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

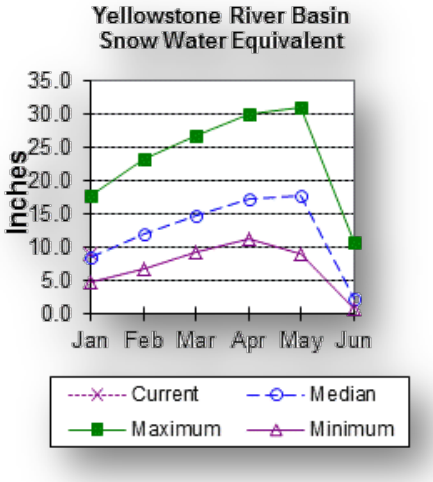
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
ENNIS LAKE - LOWER MADISON RES	29.2	30.3	30.0	41.0
HEBGEN LAKE	318.1	319.3	283.2	377.5
Basin-wide Total	347.4	349.6	313.2	418.5
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
MADISON-GALLATIN RIVER BASINS	8	94%	109%

Yellowstone River Basin

Snow

SWE in the Yellowstone drainage is at 106% of normal. See the "Basin Summary of Snow Course Data" at the front of this report for details.

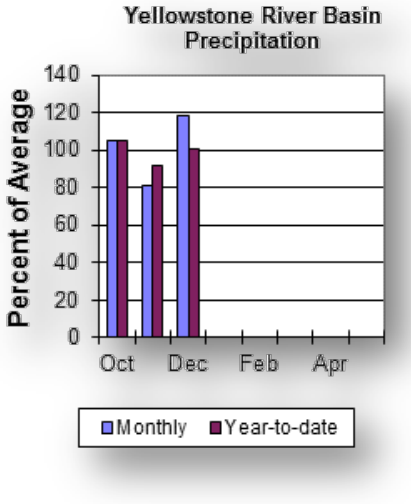


Precipitation

Last month precipitation in the Yellowstone drainage was about 118% of average. The 13 reporting stations percentages range from 50-171% of average. Water-year-to-date precipitation is about 101% of average, which is about 95% of last year. Year to date percentage ranges from 69-143%.

Reservoirs

No reservoir data for the basin.



Streamflow

The 50% exceedance forecasts for April through September are near average for the basin. Yellowstone at Lake Outlet is 725,000 ac-ft (94% of average). Yellowstone at Corwin Springs will yield around 1,870,000 ac-ft (99% of average). Yellowstone near Livingston will yield around 2,140,000 ac-ft (100% of average). Clarks Fork of the Yellowstone near Belfry 585,000 ac-ft (106% of average). See the following page for detailed runoff volumes.

Yellowstone River Basin
Streamflow Forecasts - January 1, 2014

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	410	495	550	96%	605	690	575
	APR-SEP	545	650	725	94%	800	905	770
Yellowstone R at Corwin Springs								
	APR-JUL	1250	1460	1600	101%	1740	1940	1590
	APR-SEP	1460	1700	1870	99%	2030	2270	1880
Yellowstone R at Livingston								
	APR-JUL	1420	1660	1830	102%	1990	2230	1800
	APR-SEP	1670	1950	2140	100%	2330	2600	2140

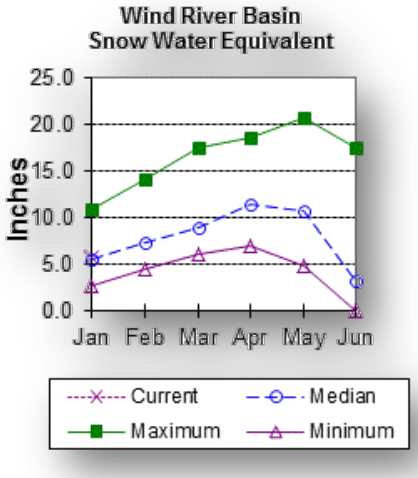
1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
YELLOWSTONE RIVER in WY	8	106%	119%
CLARKS FORK in WY	8	122%	105%

Wind River Basin

Snow

The Wind River Basin above Boysen Reservoir is 103% of normal for snow water equivalent at this time of the year. SWE in the Wind River above Dubois is 112% of normal. The Little Wind SWE is 96% of normal, and the Popo Agie drainage SWE is about 87% of normal. See the "Basin Summary of Snow Course Data" at the front of this report for details.

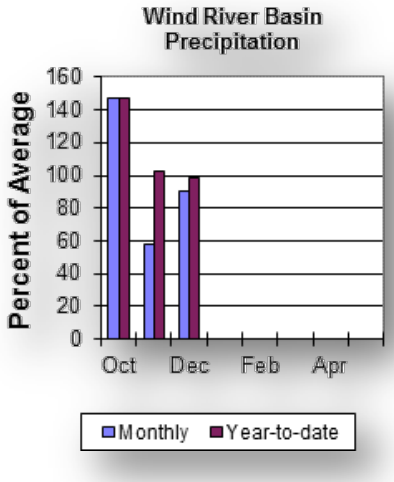


Precipitation

Last month's precipitation in the basin varied from 52-131% of average. Precipitation, for the basin, was about 90% of average from the 12 reporting stations. Water year-to-date precipitation is 98% of average and about 106% of last year at this time. Year-to-date percentages range from 71-130% of average.

Reservoirs

Current storage in Bull Lake is about 99,400 ac-ft (132% of average) - the reservoir is at 130% of last year. Boysen Reservoir is storing about 104% of average (541,100 ac-ft) – the reservoir is about 113% of last year. Pilot Butte is at 107% of average (25,200 ac-ft) – the reservoir is at 115% of last year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecasts for the April through September runoff period varies but is near average overall. Dinwoody Creek near Burris is 100,000 ac-ft (109% of average). The Wind River above Bull Lake Creek is 540,000 ac-ft (110% of average). Bull Lake Creek near Lenore is 178,000 ac-ft (105% of average). Wind River at Riverton will yield around 620,000 ac-ft (113% of average). Little Popo Agie River near Lander is around 35,000 ac-ft (71% of average). South Fork of Little Wind near Fort Washakie will yield around 75,000 ac-ft (91% of average). Little Wind River near Riverton will yield around 220,000 ac-ft (75% of average). Boysen Reservoir inflow will yield around 740,000 ac-ft (111% of average). See the following page for detailed runoff volumes.

Wind River Basin
Streamflow Forecasts - January 1, 2014

WIND 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						
Dinwoody Ck nr Burris								
	APR-JUL	57	67	73	111%	79	89	66
	APR-SEP	79	91	100	109%	109	121	92
Wind R Ab Bull Lake Ck								
	APR-JUL	340	435	500	110%	565	660	455
	APR-SEP	360	465	540	110%	615	720	490
Bull Lake Ck nr Lenore								
	APR-JUL	112	132	146	105%	160	180	139
	APR-SEP	135	161	178	105%	195	220	169
Wind R at Riverton								
	APR-JUL	340	450	530	112%	605	720	475
	APR-SEP	390	525	620	113%	710	845	550
Little Popo Agie R nr Lander								
	APR-JUL	7.5	21	29	69%	38	51	42
	APR-SEP	11.3	25	35	71%	44	58	49
SF Little Wind R nr Fort Washakie								
	APR-JUL	43	57	67	93%	76	90	72
	APR-SEP	48	64	75	91%	86	102	82
Little Wind R nr Riverton								
	APR-JUL	40	129	190	70%	250	340	270
	APR-SEP	60	157	220	75%	290	385	295
Boysen Reservoir Inflow								
	APR-JUL	285	510	665	109%	820	1050	610
	APR-SEP	310	565	740	111%	915	1170	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

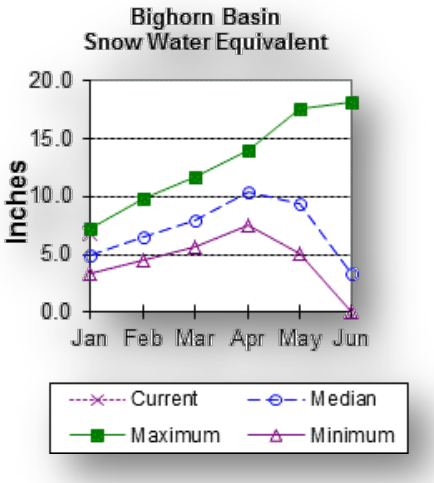
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BULL LAKE	99.4	76.7	75.2	151.8
BOYSEN	541.1	478.6	521.7	596.0
PILOT BUTTE	25.2	23.7	23.1	31.6
Basin-wide Total	665.7	579.0	620.0	779.4
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
LITTLE WIND above Dubois	2	112%	108%
LITTLE WIND	2	112%	108%
POPO AGIE	4	87%	85%
WIND RIVER BASIN	9	103%	95%

Bighorn River Basin

Snow

The Bighorn River Basin SWE above Bighorn Reservoir is at 137% of normal. The Nowood River is at 151% of normal. The Greybull River SWE is at 162% of normal. Shell Creek SWE is 120% of normal. See the "Basin Summary of Snow Course Data" at the front of this report for details.

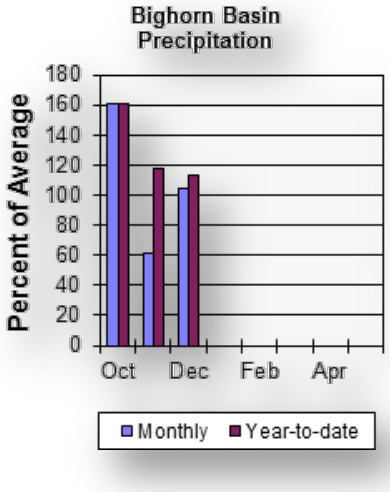


Precipitation

Last month's precipitation was 104% of average. Sites ranged from 69-140% of average for the month. Year-to-date precipitation is 113% of average; that is 128% of last year at this time. Year-to-date percentages, from the 10 reporting stations, range from 93-143%.

Reservoirs

Boysen Reservoir is currently storing 518,649 ac-ft (104% of average). Bighorn Lake is now at 893,900 ac-ft (109% of average). Boysen is currently storing 113% of last year volume at this time and Big Horn Lake is storing 106% of last year's volume. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecasts for the April through September runoffs are anticipated to be above average. Boysen Reservoir inflow should yield 740,000 ac-ft (111% of average); the Greybull River near Meeteetse should yield around 215,000 ac-ft (121% of average); Shell Creek near Shell should yield around 71,000 ac-ft (108% of average) and the Bighorn River at Kane should yield around 1,060,000 ac-ft (117% of average). See the following page for detailed runoff volumes.

Bighorn River Basin
Streamflow Forecasts - January 1, 2014

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	285	510	665	109%	820	1050	610
	APR-SEP	310	565	740	111%	915	1170	665
Greybull R nr Meeteetse								
	APR-JUL	121	143	157	120%	172	193	131
	APR-SEP	167	195	215	121%	230	260	177
Shell Ck nr Shell								
	APR-JUL	44	53	59	107%	65	74	55
	APR-SEP	55	64	71	108%	78	87	66
Bighorn R at Kane								
	APR-JUL	510	785	975	116%	1160	1440	840
	APR-SEP	550	855	1060	117%	1270	1580	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

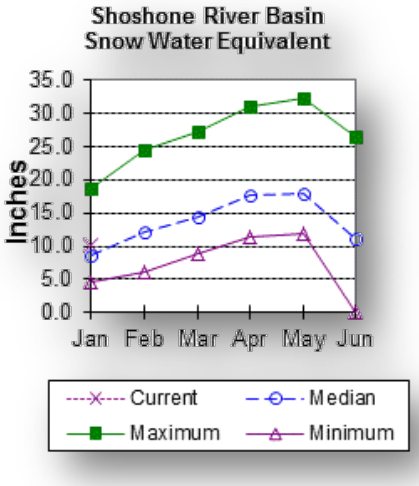
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BOYSEN	541.1	478.6	521.7	596.0
BIGHORN LAKE	951.1	893.9	871.2	1356.0
Basin-wide Total	1492.2	1372.4	1392.9	1952.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
NOWOOD RIVER	4	151%	96%
GREYBULL RIVER	2	162%	91%
SHELL CREEK	3	120%	81%
BIGHORN RIVER BASIN	10	137%	88%

Shoshone River Basin

Snow

Snowpack in this basin is above normal for this time of year. Snow Water Equivalent (SWE) is 119% of normal in the Shoshone River Basin. The Clarks Fork River drainage SWE is 122% of normal. See the "Basin Summary of Snow Course Data" at the front of this report for details.

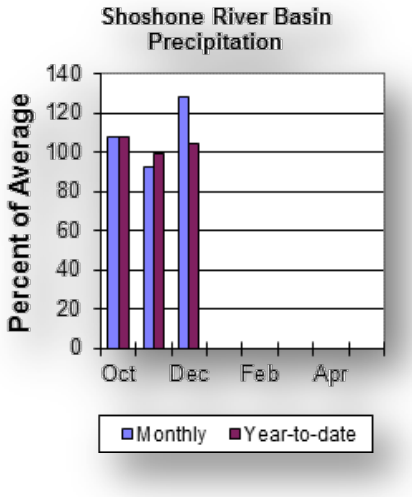


Precipitation

Precipitation for last month was 128% of average (130% of last year). Monthly percentages range from 62-204% of average. The basin year-to-date precipitation is now 104% of average (147% of last year). Year-to-date percentages range from 92-130% of average for the 4 reporting stations.

Reservoirs

Current storage in Buffalo Bill Reservoir is about 132% of average (109% of last year's storage) – the reservoir is at about 73% of capacity. Currently, about 470,900 ac-ft are stored in the reservoir compared to 430,753 ac-ft last year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecasts for the April through September period are expected to be above average for the basin. The North Fork Shoshone River at Wapiti is 545,000 ac-ft (106% of average). The South Fork of the Shoshone River near Valley is 265,000 ac-ft (108% of average), and the South Fork above Buffalo Bill Reservoir runoff is 220,000 ac-ft (110% of average). The Buffalo Bill Reservoir inflow is expected to yield around 785,000 ac-ft (105% of average). See the following page for detailed runoff volumes.

Shoshone River Basin
Streamflow Forecasts - January 1, 2014

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	385	445	485	105%	525	585	460
	APR-SEP	440	500	545	106%	585	645	515
SF Shoshone R nr Valley								
	APR-JUL	181	210	230	107%	250	280	215
	APR-SEP	210	240	265	108%	285	320	245
SF Shoshone R ab Buffalo Bill Reservoir								
	APR-JUL	138	181	210	109%	240	280	193
	APR-SEP	144	189	220	110%	250	295	200
Buffalo Bill Reservoir Inflow[2]								
	APR-JUL	550	645	710	105%	775	870	675
	APR-SEP	620	720	785	105%	855	955	745
Clarks Fk Yellowstone R nr Belfry[2]								
	APR-JUL	420	490	535	105%	580	645	510
	APR-SEP	460	535	585	106%	630	705	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

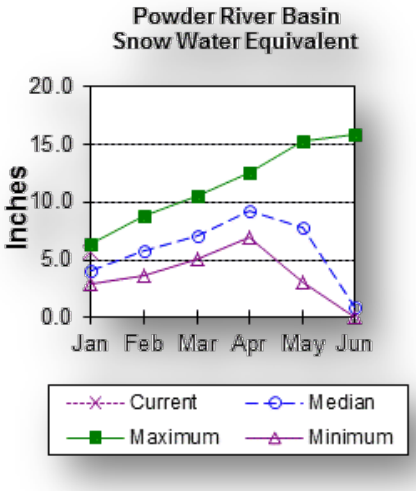
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BUFFALO BILL	470.9	430.8	355.5	646.6
Basin-wide Total	470.9	430.8	355.5	646.6
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
SHOSHONE RIVER BASIN	7	119%	105%

Powder River Basin

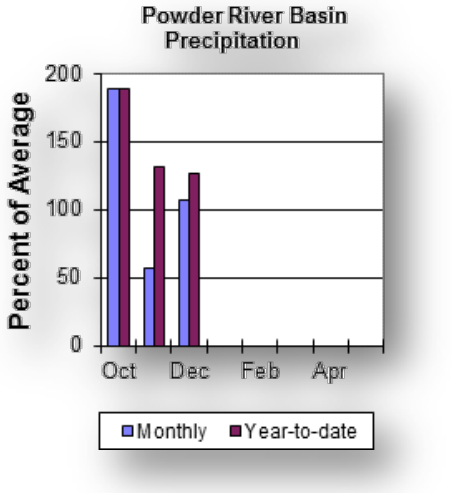
Snow

Snow water equivalent (SWE) in the Powder River drainage is 143% of normal. SWE in the Clear Creek drainage is 128% of normal. Crazy Woman Creek drainage is 131% of normal. Upper Powder River drainage SWE is 106% of normal. Powder River Basin SWE in Wyoming is 151% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

Last month's precipitation was 107% of average for the 6 reporting stations. Monthly percentages range from 69-157% of average. Year-to-date precipitation is 126% of average in the basin; this is 128% of last year at this time. Precipitation for the year ranges from 108-145% of average.



Reservoirs

No reservoir data for the basin.

Streamflow

The 50% exceedance forecasts for the April through September period are expected to be above average for the basin. The Middle Fork of the Powder River near Barnum is 25,000 ac-ft (147% of average). The North Fork of the Powder River near Hazelton should yield around 12,800 ac-ft (129% of average). Rock Creek near Buffalo will yield about 23,000 ac-ft (105% of average), and Piney Creek at Kearny should yield about 47,000 ac-ft (100% of average). The Powder River at Moorhead is 250,000 ac-ft (128% of average). The Powder River near Locate is 285,000 ac-ft (130% of average). See the following page for detailed runoff volumes.

Powder River Basin
Streamflow Forecasts - January 1, 2014

POWDER 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						
MF Powder R nr Barnum								
	APR-JUL	17.3	21	24	149%	27	31	16.1
	APR-SEP	18.2	23	25	147%	28	33	17
NF Powder R nr Hazelton								
	APR-JUL	8.5	10.5	11.8	130%	13.1	15.1	9.1
	APR-SEP	9.4	11.5	12.8	129%	14.2	16.2	9.9
Rock Ck nr Buffalo								
	APR-JUL	13	16.9	19.5	105%	22	26	18.6
	APR-SEP	16.2	20	23	105%	26	30	22
Piney Ck at Kearny								
	APR-JUL	20	34	43	98%	53	67	44
	APR-SEP	23	37	47	100%	56	71	47
Powder R at Moorehead								
	APR-JUL	110	179	225	127%	270	340	177
	APR-SEP	129	200	250	128%	300	370	196
Powder R nr Locate								
	APR-JUL	115	199	255	128%	315	395	199
	APR-SEP	133	225	285	130%	345	435	220

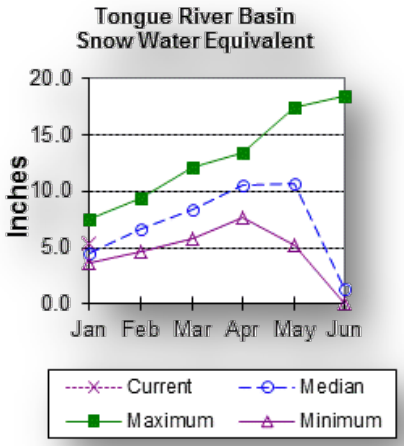
1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
UPPER POWDER RIVER	4	151%	96%
CLEAR CREEK	2	128%	83%
CRAZY WOMAN CREEK	1	131%	119%
POWDER RIVER BASIN	6	143%	91%

Tongue River Basin

Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 117% of normal. The Goose Creek drainage is 92% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

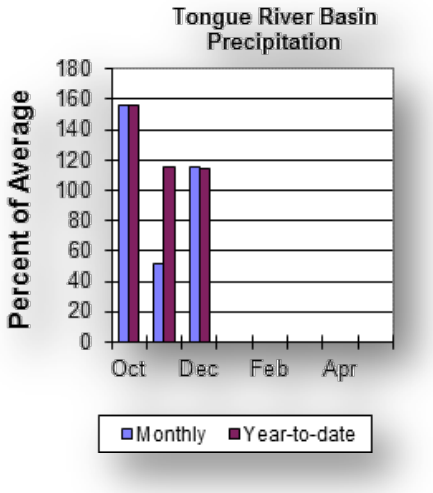
Last month's precipitation was 115% of average for the 6 reporting stations. Monthly percentages range from 78-154% of average. Year-to-date precipitation is 114% of average in the basin; this is 163% of last year at this time. Precipitation for the year ranges from 81-132% of average.

Reservoirs

The Tongue River Reservoir currently is 189% of average for this time of year.

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 103,000 ac-ft (105% of average). Big Goose Creek near Sheridan is 55,000 ac-ft (102% of average). Little Goose Creek near Bighorn is 40,000 ac-ft (103% of average). The Tongue River Reservoir Inflow is 225,000 ac-ft (105% of average). See the following page for detailed runoff volumes.



Tongue River Basin
Streamflow Forecasts - January 1, 2014

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	56	76	90	105%	104	124	86
	APR-SEP	67	88	103	105%	118	140	98
Big Goose Ck nr Sheridan								
	APR-JUL	27	39	47	102%	55	67	46
	APR-SEP	34	47	55	102%	63	75	54
Little Goose Ck nr Bighorn								
	APR-JUL	18.7	26	32	103%	37	45	31
	APR-SEP	26	34	40	103%	45	54	39
Tongue River Reservoir Inflow								
	APR-JUL	89	156	200	104%	245	315	193
	APR-SEP	108	178	225	105%	275	345	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

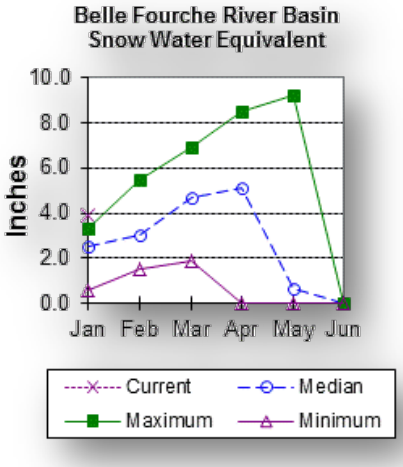
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
TONGUE RIVER RES	49.9	44.6	26.4	79.1
Basin-wide Total	49.9	44.7	26.4	79.1
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
GOOSE CREEK	2	92%	66%
TONGUE RIVER BASIN	6	117%	68%

Belle Fourche River Basin

Snow

The Belle Fourche River Basin SWE is 153% of normal at this time of year. For more information see “Basin Summary of Snow Course Data” at the beginning of this report.

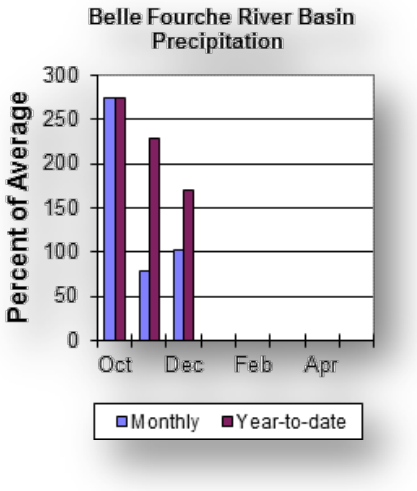


Precipitation

Precipitation for last month was 103% of average or 157% of last year in the Black Hills. There were 5 reporting stations. Year-to-date precipitation is 170% of average and 301% of last year’s amount.

Reservoirs

Belle Fourche reservoir is storing 155% of average (140,200 ac-ft), about 79% of capacity. Keyhole reservoir is storing 180% of average (157,000 ac-ft), about 81% of capacity. Shadehill reservoir is storing 125% of average (63,300 ac-ft), about 78% of capacity. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

There are no streamflow forecast points for the basin.

Belle Fourche River Basin

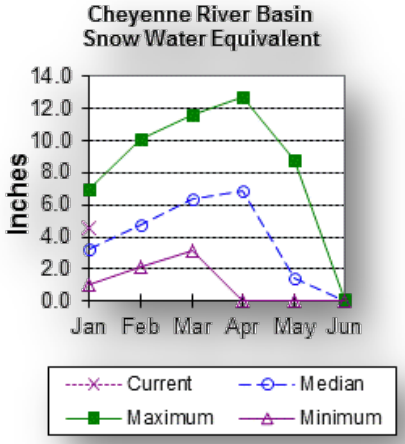
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BELLE FOURCHE	140.2	87.6	101.2	178.4
KEYHOLE	157.0	148.4	87.4	193.8
SHADEHILL	63.3	34.5	44.1	81.4
Basin-wide Total	360.5	270.5	232.7	453.6
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
BELLE FOURCHE RIVER BASIN	2	153%	47%

Cheyenne River Basin

Snow

The Cheyenne River Basin SWE is 137% of normal at this time of year. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

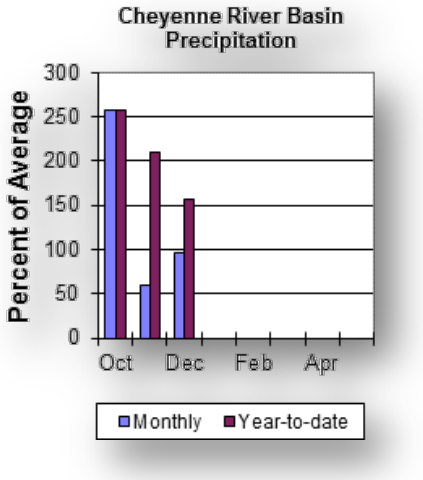
Precipitation for last month was 97% of average or 159% of last year in the Black Hills. There were 3 reporting stations. Year-to-date precipitation is 157% of average and 235% of last year's amount.

Reservoirs

Angostura is currently storing 95% of average (91,400 ac-ft), about 75% of capacity. Deerfield reservoir is storing 120% of average (14,800 ac-ft), about 97% of capacity. Pactola reservoir is storing 113% of average (51,800 ac-ft), about 94% of capacity. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

Streamflow

The following runoff values are the 50% exceedance forecasts for the Apr through July period. The Deerfield Reservoir Inflow is expected to be 9,000 ac-ft (173% of average). Pactola Reservoir Inflow is expected to yield around 39,000 ac-ft (177% of average). See the following page for detailed runoff volumes.



Cheyenne River Basin
Streamflow Forecasts - January 1, 2014

CHEYENNE 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)
Deerfield Reservoir Inflow								
	MAR-JUL	5.7	8.5	10.4	168%	12.3	15.1	6.2
	APR-JUL	4.9	7.2	9	173%	11	14.4	5.2
Pactola Reservoir Inflow								
	MAR-JUL	20	34	43	172%	52	66	25
	APR-JUL	17.2	29	39	177%	50	70	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

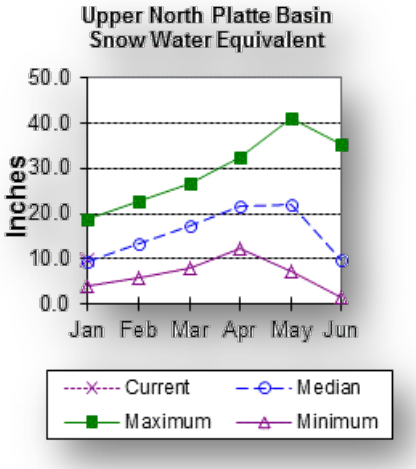
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
ANGOSTURA	91.4	67.8	81.1	0.0
DEERFIELD	14.8	15.1	13.5	0.0
PACTOLA	51.8	47.7	45.6	0.0
Basin-wide Total	158.0	130.6	140.2	0.0
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
CHEYENNE RIVER BASIN	5	137%	48%

Upper North Platte River Basin

Snow

The sites above Seminoe Reservoir are showing about 106% of normal (SWE) for this time of the year. SWE in the drainage area above Northgate is 98% of normal at this time. SWE in the Encampment River drainage is about 116% of normal. Brush Creek SWE for the year is about 118% of normal. Medicine Bow and Rock Creek drainages SWE are about 108% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

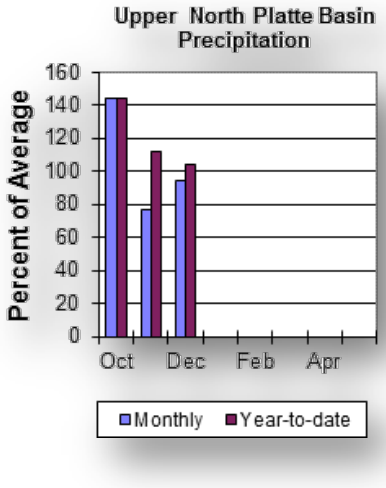


Precipitation

Fifteen reporting stations show last month's precipitation at 94% of average. Precipitation varied from 63-130% of average last month. Total water-year-to-date precipitation is about 104% of average for the basin, which is about 131% of last year's amount. Year to date percentage ranges from 87-126% of average.

Reservoirs

Seminoe Reservoir is estimated to be storing 323,600 ac-ft or 32% of capacity. Seminoe Reservoir is also storing about 58% of average for this time of the year and 63% of last year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The following yields are the 50% exceedance forecasts for the April through September period and are expected to be near average for the Upper North Platte River Basin. Yield for the North Platte River near Northgate will be around 255,000 ac-ft (102% of average). The Encampment River near Encampment is 139,000 ac-ft (101% of average). Rock Creek near Arlington is 59,000 ac-ft (113% of average). Seminoe Reservoir inflow should be around 765,000 ac-ft (99% of average). See the following table for more detailed information on projected runoff.

Upper North Platte River Basin
Streamflow Forecasts - January 1, 2014

		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	110	181	230	102%	280	350	225
	APR-SEP	123	200	255	102%	310	385	250
Encampment R nr Encampment[2]								
	APR-JUL	73	107	130	101%	153	187	129
	APR-SEP	79	115	139	101%	163	199	138
Rock Ck nr Arlington								
	APR-JUL	38	49	56	114%	63	74	49
	APR-SEP	40	51	59	113%	67	78	52
Sweetwater R nr Alcova								
	APR-JUL	7.5	18.3	33	56%	48	69	59
	APR-SEP	7.8	21	37	58%	53	76	64
Seminoe Reservoir Inflow								
	APR-JUL	295	540	710	99%	880	1130	715
	APR-SEP	320	585	765	99%	945	1210	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

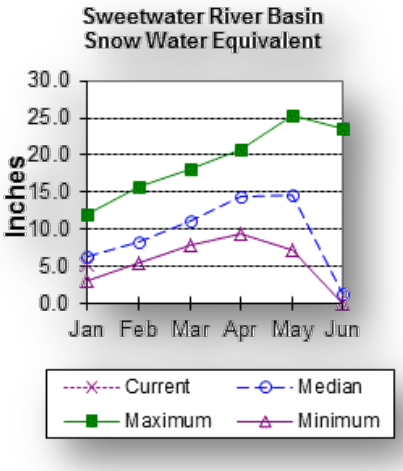
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
SEMINOE	323.6	513.0	553.7	1016.7
Basin-wide Total	323.6	513.0	553.7	1016.7
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
N PLATTE above Northgate	9	103%	79%
ENCAMPMENT RIVER	3	116%	93%
BRUSH CREEK	2	118%	76%
MEDICINE BOW & ROCK CREEKS	1	108%	73%
UPPER NORTH PLATTE RIVER BASIN	18	106%	80%

Sweetwater River Basin

Snow

SWE for the Sweetwater River Basin is at 83% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

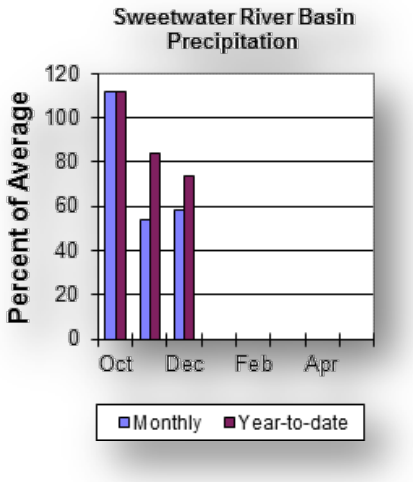


Precipitation

Last month's precipitation was 58% of average. The water year-to-date precipitation for the basin is currently 74% of average (86% of last year). Year-to-date percentages range from 71-77% of average.

Reservoirs

Reservoir storage is as follows: Pathfinder 360,400 ac-ft (67% of average).



Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period. The Sweetwater River near Pathfinder is forecast to yield about 37,000 ac-ft (58% of average). See the following table for more detailed information on projected runoff.

Sweetwater River Basin
Streamflow Forecasts - January 1, 2014

SWEETWATER 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)
Sweetwater R nr Alcova								
	APR-JUL	7.5	18.3	33	56%	48	69	59
	APR-SEP	7.8	21	37	58%	53	76	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

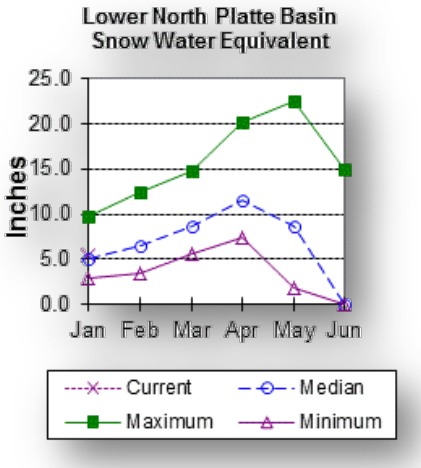
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
PATHFINDER	360.4	415.3	536.1	1016.5
Basin-wide Total	360.4	415.3	536.1	1016.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
SWEETWATER RIVER BASIN	2	83%	98%

Lower North Platte River Basin

Snow

SWE total for the entire North Platte River Basin is at 107% of normal. Deer and LaPrele Creek SWE are at 121% of normal. SWE for the Laramie Range Mts. is at 127% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

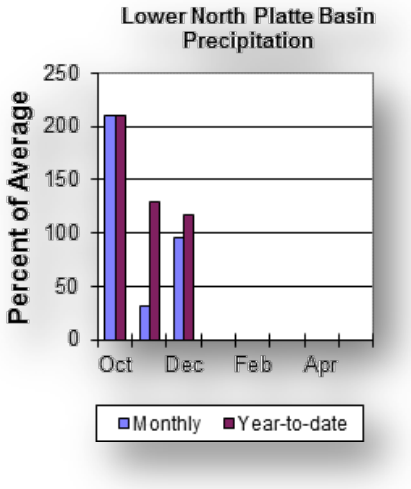
Last month's precipitation was 95% of average. Of the 4 reporting stations, percentages for the month range from 74-114%. The water year-to-date precipitation for the basin is currently 117% of average (250% of last year). Year-to-date percentages range from 87-150% of average.

Reservoirs

Reservoir storage is as follows: Alcova 147,300 ac-ft (95% of average); Glendo 260,000 ac-ft (102% of average); Guernsey 7,700 ac-ft (84% of average); Pathfinder 360,400 ac-ft (67% of average).

Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period. North Platte - Alcova to Orin Gain is forecast to yield 20,000 ac-ft. La Prele Creek above La Prele Reservoir 19,500 ac-ft (98% of average). North Platte River below Glendo Reservoir is 820,000 ac-ft (96% of average), and below Guernsey Reservoir is anticipated to yield around 850,000 ac-ft (100% of average). See the following table for more detailed information on projected runoff.



Lower North Platte River Basin
Streamflow Forecasts - January 1, 2014

LOWER NORTH PLATTE 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						
North Platte R - Alcova to Orin Gain								
	APR-JUL	-78	2.5	57	112%	112	192	51
	APR-SEP	-118	-36	20	100%	76	158	20
North Platte R bl Glendo Reservoir								
	APR-JUL	535	695	800	98%	905	1060	820
	APR-SEP	545	710	820	96%	935	1100	850
North Platte R bl Guernsey Reservoir								
	APR-JUL	485	680	815	99%	950	1140	820
	APR-SEP	510	710	850	100%	990	1190	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

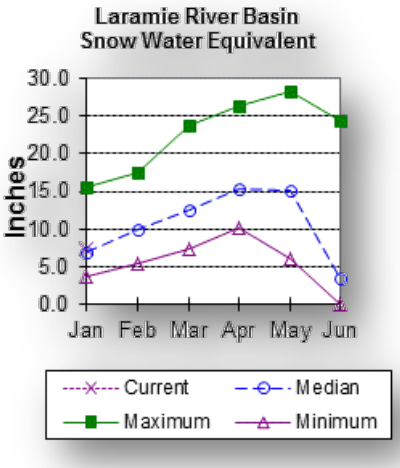
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
ALCOVA	147.3	157.3	154.9	184.3
GLENDO	260.0	209.2	254.7	506.4
GUERNSEY	7.7	4.2	9.2	45.6
PATHFINDER	360.4	415.3	536.1	1016.5
Basin-wide Total	775.4	786.0	954.9	1752.8
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
DEER & LaPRELE CREEKS	2	121%	31%
LOWER NORTH PLATTE RIVER BASIN	4	124%	28%

Laramie River Basin

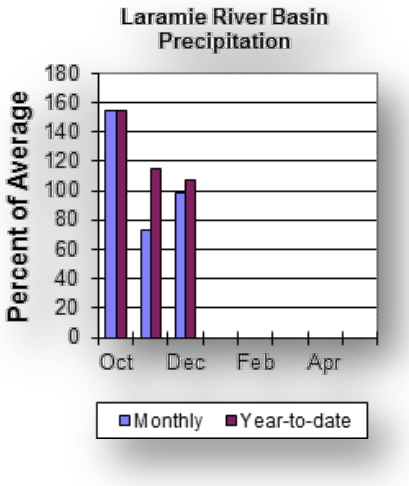
Snow

SWE for the Laramie River above Laramie is 104% of normal. SWE for the Little Laramie River is 111% of normal. The SWE total for the entire Laramie River Basin (above mouth entering North Platte) is 106% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

Last month's precipitation was 99% of average or 161% of last year's amount. For the 6 reporting stations, percentages for the month range from 63-120%. The water year-to-date precipitation for the basin is currently 107% of average (146% of last year). Year-to-date percentages range from 95-121% of average.



Reservoirs

Reservoir storage is as follows: Wheatland #2 40,100 ac-ft (95% of average).

Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period. Laramie River near Woods Landing should yield around 125,000 ac-ft (99% of average). The Little Laramie near Filmore should produce about 60,000 ac-ft (109% of average). See the following table for more detailed information on projected runoff.

Laramie River Basin
Streamflow Forecasts - January 1, 2014

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	76	98	113	98%	128	150	115
	APR-SEP	84	108	125	99%	141	165	126
Little Laramie R nr Filmore								
	APR-JUL	35	48	56	110%	64	77	51
	APR-SEP	37	51	60	109%	69	83	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

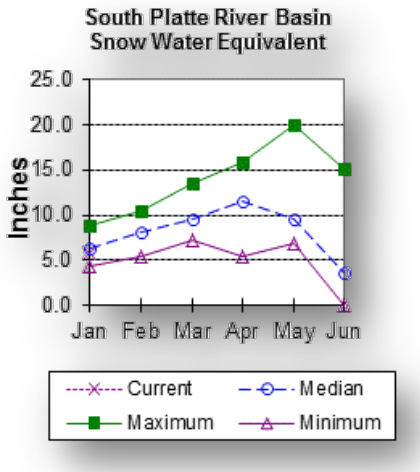
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
WHEATLAND #2	40.1	21.7	42.4	98.9
Basin-wide Total	40.1	21.7	42.4	98.9
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
LARAMIE RIVER abv Laramie	4	108%	73%
LITTLE LARAMIE RIVER	2	111%	75%
LARAMIE RIVER BASIN	7	108%	71%
NORTH PLATTE TOTAL RIVER BASIN	25	107%	76%

South Platte River Basin

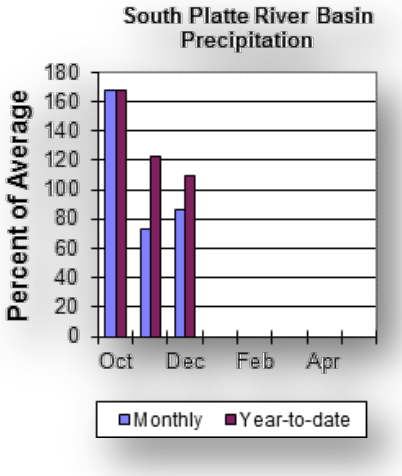
Snow

SWE for the South Platte River Basin is at 92% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

Last month's precipitation was 86% of average or 126%. The water year-to-date precipitation for the basin is currently 110% of average (151% of last year). Year-to-date percentages range from 95-121% of average.



Reservoirs

No reservoir data for the basin.

Streamflow

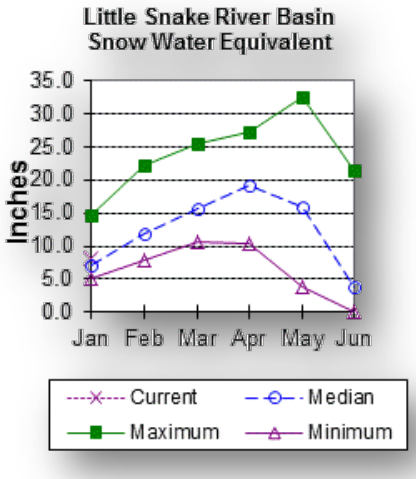
There are no streamflow forecast points for the basin.

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
SOUTH PLATTE RIVER BASIN	4	92%	71%

Little Snake River Basin

Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage is 115% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

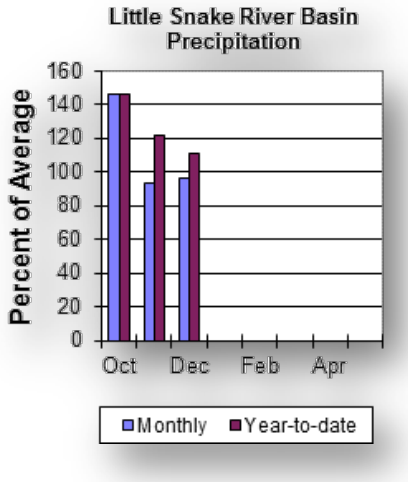
Precipitation across the basin was 96% of average for the 8 reporting stations. Last month's precipitation ranged from 63-125% of average. The Little Snake River basin water-year-to-date precipitation is currently 111% of average (143% of last year). Year-to-date percentages range from 88-136% of average.

Reservoirs

High Savery Dam - 6,900 ac-ft(54% of average).

Streamflow

The 50% exceedance forecast for the April through July time frame on the Little Snake River drainage is expected to be above average this year. The Little Snake River near Slater should yield around 159,000 ac-ft (102% of average). The Little Snake River at Savery is estimated to yield around 350,000 ac-ft (101% of average). See the following table for more detailed information on projected runoff.



Little Snake River Basin
Streamflow Forecasts - January 1, 2014

LITTLE SNAKE 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						
Little Snake R nr Slater	APR-JUL	94	130	159	102%	190	240	156
Little Snake R nr Dixon	APR-JUL	160	270	350	101%	470	655	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

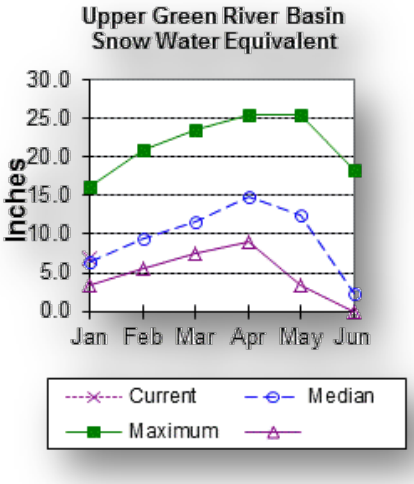
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
HIGH SAVERY RESERVOIR	6.9	6.8	11.7	0.0
Basin-wide Total	6.9	6.8	11.7	0.0
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
LITTLE SNAKE RIVER BASIN	8	115%	89%

Upper Green River Basin

Snow

SWE in the Green River Basin above Warren Bridge is about 112% of normal. SWE for the West Side of Upper Green River Basin is about 104% of normal. Newfork River Basin SWE is now about 101% of normal. Big Sandy-Eden Valley Basin is 80% of normal. SWE in the Green River Basin above Fontenelle Reservoir is about 107% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

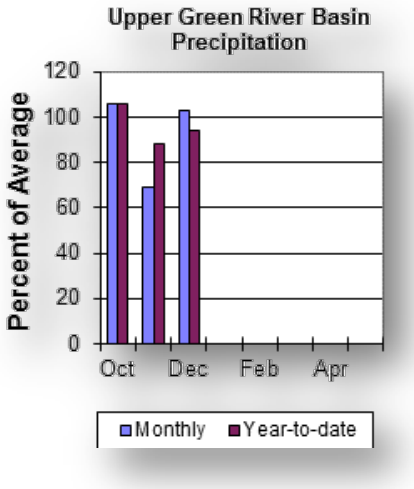


Precipitation

The 13 reporting precipitation sites in the basin were 103% of average last month (90% of last year). Last month's precipitation varied from 52-131% of average. Water year-to-date precipitation is about 94% of average (96% of last year). Year to date percentage of average ranges from 75-111% for the reporting stations.

Reservoir

Storage in Big Sandy Reservoir is 8,000 ac-ft or 21% of capacity. This is 49% of average. Fontenelle Reservoir is 194,600 ac-ft or 56% of capacity; 111% of average. This is 106% of average for the Upper Green River basin. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The 50% exceedance forecasts for the April through July runoff period in the Upper Green River Basin are forecast to be below average. The yield on the Green River at Warren Bridge is 225,000 ac-ft (92% of average). Pine Creek above Fremont Lake is 94,000 ac-ft (96% of average). New Fork River near Big Piney is 315,000 ac-ft (89% of average). Fontenelle Reservoir Inflow is estimated to be 635,000 ac-ft (88% of average), and Big Sandy near Farson is expected to be around 42,000 ac-ft (81% of average). See the following table for more detailed information on projected runoff.

Upper Green River Basin
Streamflow Forecasts - January 1, 2014

UPPER GREEN 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						
Green R at Warren Bridge	APR-JUL	150	193	225	92%	260	315	245
Pine Creek ab Fremont Lake	APR-JUL	74	86	94	96%	103	116	98
New Fork R nr Big Piney	APR-JUL	169	250	315	89%	385	505	355
Fontenelle Reservoir Inflow[2]	APR-JUL	325	500	635	88%	790	1040	725
Big Sandy R nr Farson	APR-JUL	25	34	42	81%	50	64	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

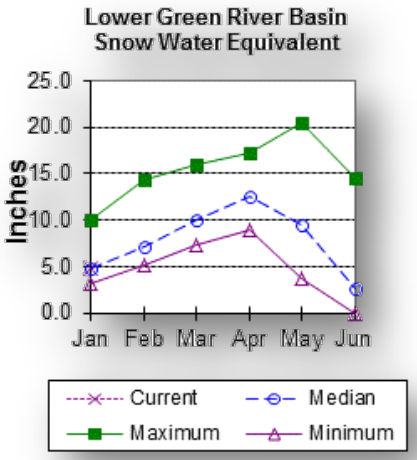
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BIG SANDY	8.0	6.2	16.3	38.3
FONTENELLE	194.6	195.6	175.3	344.8
Basin-wide Total	202.6	201.8	191.6	383.1
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
GREEN above Warren Bridge	5	113%	105%
UPPER GREEN (West Side)	5	113%	105%
NEWFORK RIVER	2	103%	92%
BIG SANDY-EDEN VALLEY	1	80%	103%
GREEN above Fontenelle	12	105%	103%

Lower Green River Basin

Snow

SWE in the Green River Basin above Flaming Gorge is 99% of normal. SWE in the Hams Fork Basin is 79% of normal. Blacks Fork Basin SWE is currently 81% of normal. In the Henrys Fork drainage SWE is 113%. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



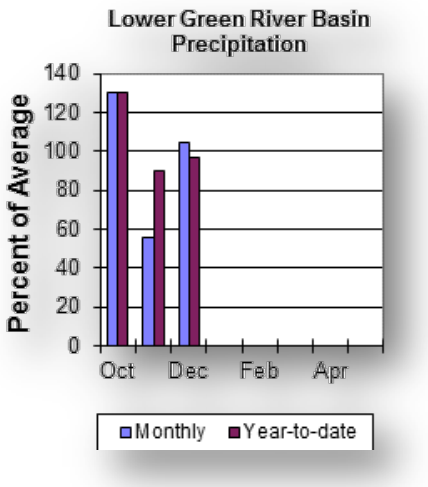
Precipitation

Precipitation for the 9 reporting stations during last month was at 105% of average or 94% of last year. Precipitation ranged from 72-263% of average for the month. The basin year-to-date precipitation is currently 97% of average (107% of last year). Year-to-date percentages range from 80-262% of average.

Reservoirs

Fontenelle Reservoir is currently storing 194,600 ac-ft; this is 111% of average (99% of last year). Flaming Gorge is currently storing 2,834,300 ac-ft; this is 92% of average (94% of last year). Viva Naughton is currently storing 26,000 ac-ft, 83% of average or 61% of capacity. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

Streamflow



The 50% exceedance forecasts for the April through July runoff period in the Lower Green River Basin are forecast to be below average. The Green River near Green River is forecast to yield about 630,000 ac-ft (86% of average). The Blacks Fork near Robertson is forecast to yield 76,000 ac-ft (85% of average). East Fork of Smiths Fork near Robertson is forecast to yield 24,000 ac-ft (89% of average). Hams Fork below Pole Creek near Frontier is forecast to be 41,000 ac-ft (76% of average). The Hams Fork Inflow to Viva Naughton Reservoir is forecast to be 53,000 ac-ft (72% of average). The Flaming Gorge Reservoir inflow will be about 785,000 ac-ft (80% of average). See the following table for more detailed information on projected runoff.

Lower Green River Basin
Streamflow Forecasts - January 1, 2014

LOWER GREEN 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						
Green R nr Green River, WY	APR-JUL	300	480	630	86%	800	1080	730
Blacks Fk nr Robertson	APR-JUL	46	63	76	85%	90	113	89
EF of Smiths Fork nr Robertson [2]	APR-JUL	14.7	20	24	89%	28	36	27
Hams Fk bl Pole Ck nr Frontier	APR-JUL	20	32	41	76%	51	69	54
Viva Naughton Reservoir Inflow	APR-JUL	22	39	53	72%	70	98	74
Flaming Gorge Reservoir Inflow [2]	APR-JUL	380	605	785	80%	990	1330	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

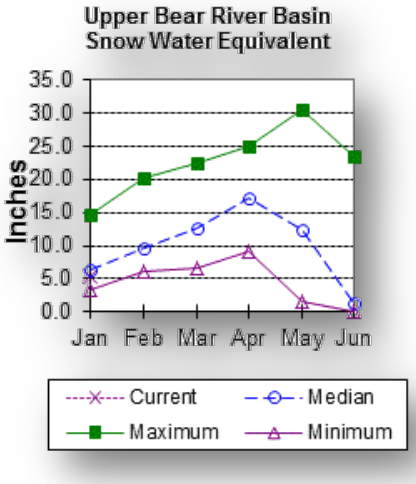
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
FONTENELLE	194.6	195.6	175.3	344.8
FLAMING GORGE RESERVOIR	2834.3	3003.3	3091.0	3749.0
VIVA NAUGHTON RES	26.0	25.5	31.4	42.4
Basin-wide Total	3054.8	3224.4	3297.7	4136.2
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
HAMS FORK RIVER	3	79%	103%
BLACKS FORK	2	81%	96%
HENRYS FORK	2	114%	126%
GREEN above FLAMING GORGE	19	99%	103%

Upper Bear River Basin

Snow

Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is estimated to be 84% of normal. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is at 93% of normal. Bear River Basin SWE, above the Idaho State line, is 86% of normal. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



Precipitation

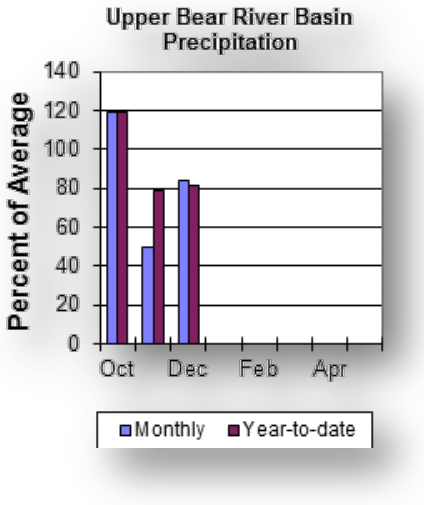
Precipitation for last month was 84% of average for the 7 reporting stations; this is 71% of the precipitation received last year. The year-to-date precipitation, for the basin, is 81% of average; this is 82% of last year's amount.

Reservoirs

Storage in Woodruff Narrows reservoir is 12,700 ac-ft (47% of average). Current reservoir storage is about 22% of capacity. Reservoir storage last year at this time was 7,500 ac-ft.

Streamflow

The following 50% exceedance forecasts are for the April through September period. The Bear River near the Utah-Wyoming State Line is 106,000 ac-ft (86% of average). The Bear River above Reservoir near Woodruff is 109,000 ac-ft (85% of average). The Smiths Fork River near Border Jct. is 83,000 ac-ft (80% of average). See the following table for more detailed information on projected runoff.



Upper Bear River Basin
Streamflow Forecasts - January 1, 2014

UPPER BEAR 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						
Bear R nr UT-WY State Line								
	APR-JUL	59	85	96	86%	121	147	112
	APR-SEP	62	90	106	86%	130	158	123
Bear R ab Resv nr Woodruff								
	APR-JUL	45	82	103	85%	132	169	121
	APR-SEP	46	84	109	85%	134	172	128
Smiths Fk nr Border								
	APR-JUL	33	55	70	79%	85	107	89
	APR-SEP	41	66	83	80%	100	124	104

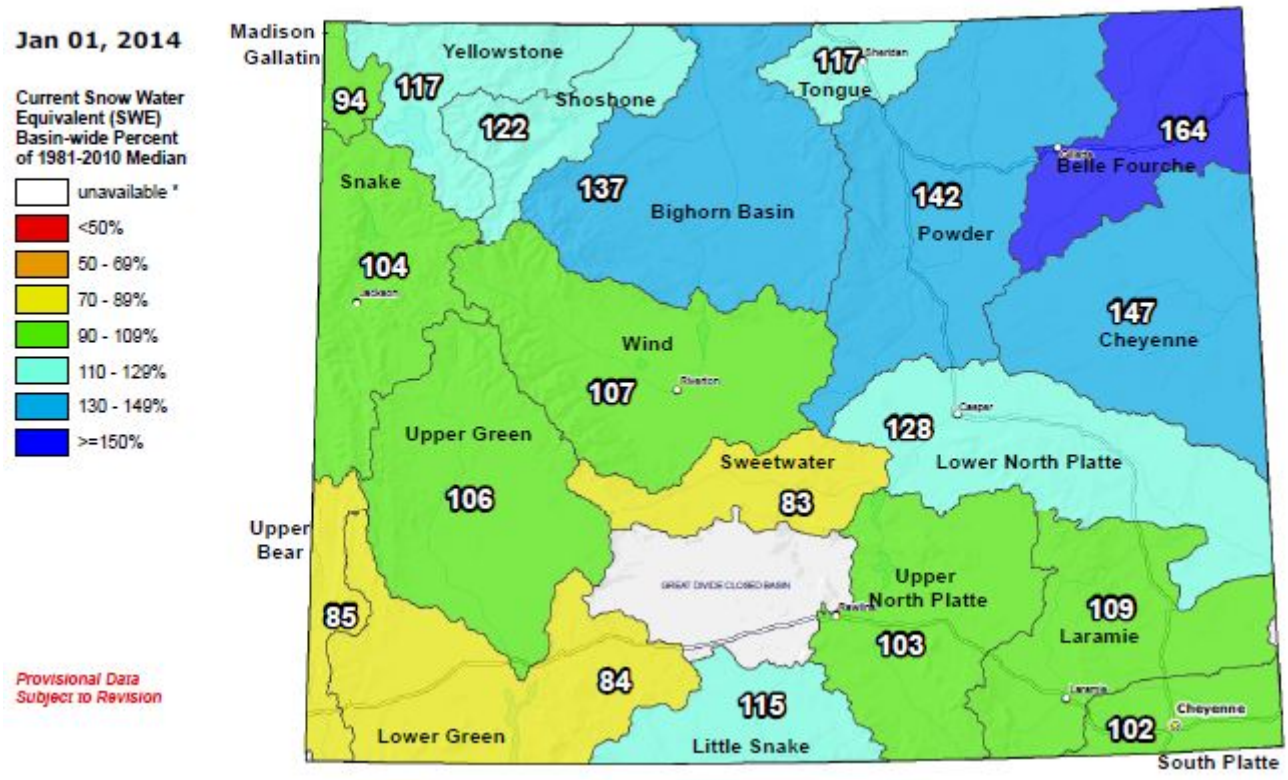
1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
WOODRUFF NARROWS RESERVOIR	12.7	7.5	27.3	57.3
Basin-wide Total	12.7	7.5	27.3	57.3
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
UPPER BEAR RIVER in Utah	3	82%	96%
SMITHS & THOMAS FORKS	2	93%	103%
UPPER BEAR RIVER BASIN	7	85%	102%

Issued by	Released by
Jason Weller (Acting Chief) U.S.D.A. Natural Resources Conservation Service Washington D.C.	Astrid Martinez State Con. N R C S Casper, Wyoming

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



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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