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# Wyoming Basin Outlook Report February 1, 2001



# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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

**Dave Taylor**  
**Water Supply Specialist**  
**100 East "B" Street**  
**Casper, WY 82601**  
**(307) 261-6481**

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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. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. 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 either above or below, the predicted 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 their operational decisions. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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# Wyoming Water Supply Outlook Report

## General

Generally, snow water equivalent (SWE) across the state is much below normal for this time of the year. SWE averages for the State are about 67 percent of normal for this time of the year. Northwest portion of the State is 51 of percent normal. Northeast Wyoming is 73 of percent of normal, and the southeast part of the State is 77 percent of average. Southwestern Wyoming is 67 percent of average for this time of the year.

Precipitation for January was generally well below average for the State. Year-to-date precipitation is below average for all except the Belle Fourche drainage – this area is still feeling the effects of the heavy snow last fall. Reservoir levels vary from about 61 percent of average to 188 percent of average. Generally, the larger capacity reservoirs are above average storage. Forecast runoff varies from 42 to 109 percent of average. The mean of all the forecast points in the State is about 67 percent of average (33percent below average).

## Snowpack

Although the state received quite a bit of snow early, snowfall did not carry through the early part of the winter. SWE is generally below average for the entire State. SWE in the northwestern portion of the State is now at 51 percent of average (64 percent of last year). Northeast Wyoming SWE is currently about 73 percent of average (60 percent of last year). The southeast portion is currently about 77 percent of average SWE (95 percent of last year). And the southwest is about 67 percent of average (83 percent of last year).

## Precipitation

January precipitation was well below normal over the entire State. The Belle Fourche and Little Snake basins received 46 percent of normal precipitation for January. These were the bright spots in the state as far as precipitation goes. Most of the basins received less than 20 percent of average precipitation. The following table displays the major river basins and their departure from normal for this month.

Basin	Departure from normal	Basin	Departure from normal
Snake River	-82%	Upper North Platte River	-43%
Yellowstone & Madison	-80%	Lower North Platte	-65%
Wind River	-87%	Little Snake River	-54%
Big Horn	-64%	Upper Green River	-86%
Shoshone & Clarks Fork	-88%	Lower Green River	-84%
Powder & Tongue River	-63%	Upper Bear River	-83%
Belle Fourche & Cheyenne	-54%		

## Streams

Stream flow yield is expected to be below average across the State. Most probable yield for the State is forecast to be about 67 percent of average (varies from 42 to 109 percent of average). The northwest part of the State is expected to yield about 61 percent of normal -- yield estimates vary from 42 to 75 percent of normal through the northwest region of the State. Yield from the northeast portion of Wyoming will be below average (about 75 percent of average) -- yield estimates vary from 49 to 109 percent of average for the various forecast points. The southeast portion of the state will be about 69 percent of normal -- yield estimates range from 62 to 77 percent of

normal. The southwest portion of Wyoming varies from 47 to 85 percent of average -- mean estimated yield for the forecast points in southwest Wyoming is about 75 percent of average.

## Reservoirs

Although several reservoirs did not report, reservoir storage for those reporting is generally above average for this time of the year. See following table for further information about reservoir storage.

### Major Reservoirs in Wyoming

B A S I N     W I D E  
R E S E R V O I R     S U M M A R Y

FOR THE END OF JANUARY    2001

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
ALCOVA	85	85	85	100	100
ANGOSTURA	72	89	80	90	81
BELLE FOURCHE	81	97	57	142	83
BIG SANDY			NO REPORT		
BIGHORN LAKE	64	69	62	103	92
BOYSEN	75	89	97	77	84
BUFFALO BILL	57	69	64	89	82
BULL LAKE	41	63	57	72	66
DEERFIELD	99	98	84	118	101
EDEN			NO REPORT		
FLAMING GORGE			AVERAGE NOT ESTABLISHED		
FONTENELLE	35	49	57	61	72
GLENDO	56	65	65	86	87
GRASSY LAKE	84	82	71	118	102
GUERNSEY	28	29	15	188	97
HEBGEN LAKE	79	86	65	121	92
JACKSON LAKE	75	76	57	132	98
KEYHOLE	82	89	51	161	92
PACTOLA	100	98	83	120	102
PALISADES	46	88	75	61	52
PATHFINDER	72	92	54	132	78
PILOT BUTTE	74	71	52	142	104
SEMINOE	67	82	46	146	82
SHADEHILL	49	29	60	82	173
TONGUE RIVER	50	54	40	125	93
VIVA NAUGHTON RES			NO REPORT		
WHEATLAND #2	34	67	41	85	52
WOODRUFF NARROWS			AVERAGE NOT ESTABLISHED		
GLENDON PROJECT USERS	74	85	65	114	88
KENDRICK PROJECT	81	82	68	119	98
NORTH PLATTE PROJ	55	89	57	97	62

# Basin Summary of Snow Course Data

## BASIN SUMMARY OF SNOW COURSE DATA

FEBRUARY 2001

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
-----						
WYOMING Snow Course and SNOTEL Stations						
ALBANY	9400	1/30/01	28	6.1	8.1	9.9
ASTER CREEK	7750	1/30/01	29	7.8	15.4	20.0
BALD MOUNTAIN SNOTEL	9380	2/01/01	---	9.2	14.1	13.8
BASE CAMP SNOTEL	7030	2/01/01	---	5.5	10.9	12.5
BATTLE MTN. SNOTEL	7440	2/01/01	---	7.2	6.6	7.3
BEARLODGE DIVIDE	4680	1/31/01	15	3.4	1.5	1.9
BEARTOOTH LK. SNOTEL	9280	2/01/01	---	7.4	13.8	16.0
BEAR TRAP SNOTEL	8200	2/01/01	---	3.1	3.2	4.8
BIG GOOSE	7760	1/29/01	12	1.2	3.5	4.3
BIG GOOSE SNOTEL	7760	2/01/01	---	3.8	4.9	---
BIG PARK	8620	1/29/01	32	7.9	9.3	12.6
BIG SANDY SNOTEL	9080	2/01/01	---	6.5	6.1	9.6
BLACKWATER SNOTEL	9780	2/01/01	---	7.7	10.2	14.0
BLIND BULL SNOTEL	8900	2/01/01	39	9.7	16.8	19.0
BLIND PARK PILLOW	6870	2/01/01	---	4.7	4.2	7.2
BLUE RIDGE	9620	1/31/01	17	3.6	4.6	7.9
BONE SPGS. SNOTEL	9350	2/01/01	---	6.5	10.4	10.6
BOXELDER	7280	1/28/01	21	4.5	3.2	4.3
BROOKLYN LK. SNOTEL	10220	2/01/01	---	10.5	11.4	16.0
BRYAN FLAT	6420	1/29/01	20	4.1	4.8	6.3
BUCK CREEK	7960	1/28/01	29	7.2	5.4	5.9
BURGESS JCT. SNOTEL	7880	2/01/01	---	5.1	6.7	7.6
BURROUGHS CRK SNOTEL	8750	2/01/01	---	4.7	7.5	10.4
CANYON SNOTEL	8090	2/01/01	---	5.0	8.3	8.3
CARTER MOUNTAIN	7950	1/30/01	5	.8	1.0	3.1
CASPER MTN. SNOTEL	7850	2/01/01	---	7.9	9.5	9.4
CASTLE CREEK	8400	1/29/01	9	1.1	3.5	3.0
CCC CAMP	7000	1/30/01	30	5.6	7.7	8.3
CHALK CK #1 SNOTEL	9100	2/01/01	---	9.8	11.9	14.1
CHALK CK #2 SNOTEL	8200	2/01/01	---	6.5	8.3	9.1
CLOUD PEAK SNOTEL	9850	2/01/01	---	6.2	9.7	8.0
COLD SPRINGS SNOTEL	9630	2/01/01	---	1.7	3.5	5.8
COTTONWOOD CR SNOTEL	7700	2/01/01	---	10.6	14.1	14.0
DARBY CANYON	8250	2/02/01	46	12.2	13.4	15.4
DEER PARK SNOTEL	9700	2/01/01	---	7.5	8.0	---
DITCH CREEK	6870	1/29/01	12	2.4	1.7	---
DIVIDE PEAK SNOTEL	8860	2/01/01	---	9.3	9.5	13.3
DOME LAKE SNOTEL	8880	2/01/01	---	6.1	66.8	9.0
DU NOIR	8760	1/29/01	11	2.3	2.9	5.7
EAST RIM DIV SNOTEL	7930	2/01/01	---	5.0	6.8	9.3
ELBO RANCH	7100	1/31/01	18	3.6	6.5	8.1
ELKHART PARK SNOTEL	9400	2/01/01	---	6.9	7.0	8.9
EVENING STAR SNOTEL	9200	2/01/01	---	7.8	16.5	17.8

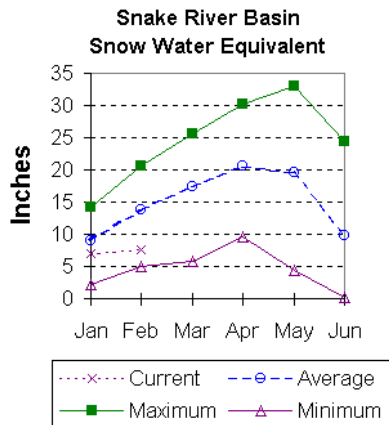
FOUR MILE MEADOWS	7860	1/31/01	22	3.6	6.7	8.9
FOXPAK	9060	1/30/01	22	4.3	5.5	4.8
GEYSER CREEK	8500	1/29/01	8	1.9	2.9	4.8
GLADE CREEK	7040	1/30/01	34	8.6	12.2	15.6
GRANITE CRK SNOTEL	6770	2/01/01	---	7.1	10.2	12.3
GRANNIER MEADOWS	8860	1/31/01	21	4.3	6.2	9.4
GRASSY LAKE SNOTEL	7270	2/01/01	---	13.3	18.5	23.0
GRAVE SPRINGS SNOTEL	8550	2/01/01	---	3.8	4.0	6.1
GREYS BOUNDARY	5720	1/30/01	26	5.9	8.0	7.9
GROS VENTRE SNOTEL	8750	2/01/01	---	5.9	5.9	10.6
GROVER PARK DIVIDE	7000	1/30/01	22	3.7	6.3	7.9
HAIRPIN TURN	9480	1/30/01	31	7.5	9.0	11.2
HANSEN S.M. SNOTEL	8360	2/01/01	---	2.5	3.8	4.6
HAMS FORK SNOTEL	7840	2/01/01	---	6.0	7.4	8.1
HASKINS CREEK	8980	1/26/01	62	16.2	15.7	20.4
HOBBS PARK SNOTEL	10100	2/01/01	---	4.5	6.1	10.0
HUCKLEBERRY DIVIDE	7300	1/30/01	31	7.5	11.1	14.4
INDIAN CREEK SNOTEL	9430	2/01/01	---	10.9	13.1	17.9
JACKPINE CREEK	7350	2/02/01	40	9.7	12.1	14.6
KELLEY R.S. SNOTEL	8180	2/01/01	---	6.6	7.5	10.7
KENDALL R.S. SNOTEL	7740	2/01/01	---	5.0	9.0	9.9
KIRWIN SNOTEL	9550	2/01/01	---	3.4	4.5	6.6
LA BONTE	8450				2.6	3.9
LAKE CAMP	7780	1/30/01	19	3.4	6.8	6.1
LA PRELE SNOTEL	8380	2/01/01	---	7.0	5.2	6.6
LARSEN CREEK	9020	1/26/01	21	5.0	6.4	8.5
LEWIS LAKE SNOTEL	7850	2/01/01	---	9.6	15.3	22.8
LEWIS LAKE DIVIDE	7850				---	27.3
LIBBY LODGE	8750	1/30/01	25	5.7	7.1	7.8
LITTLE BEAR RUN	6240	1/29/01	16	3.6	1.7	---
LITTLE WARM SNOTEL	9370	2/01/01	---	4.1	6.1	7.2
LOOMIS PARK SNOTEL	8240	2/01/01	---	7.6	10.2	11.6
LUPINE CREEK	7380	1/29/01	17	2.9	4.5	6.9
MALLO	6420	1/29/01	26	6.0	3.0	5.2
MARQUETTE SNOTEL	8760	2/01/01	---	1.6	3.1	5.1
MEDICINE LODGE LAKES	9340	1/29/01	21	4.1	7.8	7.7
MIDDLE FORK	7420	1/31/01	13	2.4	1.3	3.8
MIDDLE POWDER SNOTEL	7760	2/01/01	---	5.0	5.9	7.8
MORAN	6750	1/31/01	24	5.2	8.0	9.3
MOSS LAKE	9800	1/26/01	41	9.8	10.5	16.0
MOUNT TOM	5560	1/29/01	25	6.8	2.2	3.0
NEW FORK SNOTEL	8340	2/01/01	---	5.8	6.4	7.9
NORRIS BASIN	7500	1/29/01	18	2.9	5.5	8.0
NORTH BARRETT CREEK	9400	1/29/01	55	12.1	11.1	13.5
NORTH FRENCH SNOTEL	10130	2/01/01	---	16.2	16.1	16.0
NORTH RAPID CK PILL.	6130	2/01/01	---	5.9	3.8	---
NORTH TONGUE	8450	1/29/01	24	5.0	8.7	8.3
OLD BATTLE SNOTEL	9920	2/01/01	---	14.8	14.4	20.5
OLD FAITHFUL	7400	1/28/01	17	3.3	7.3	10.8
ONION GULCH	8780	1/28/01	16	1.6	4.0	5.8
OWL CREEK SNOTEL	8980	2/01/01	---	1.7	1.5	2.8
PARKERS PEAK SNOTEL	9400	2/01/01	---	9.2	11.3	14.3

PHILLIPS BENCH SNOT.	8200	2/01/01	---	11.3	13.9	19.4
POCKET CREEK	9350	1/26/01	29	6.7	6.4	8.3
POISON MEADOWS	8500				---	19.6
POLE MOUNTAIN	8700	1/30/01	30	6.3	3.6	5.3
POWDER RVR.PASS SNOT	9480	2/01/01	---	3.7	5.9	7.0
PURGATORY GULCH	8970	1/26/01	26	7.0	5.9	6.8
RANGER CREEK	8120	1/29/01	16	2.3	7.2	6.4
RENO HILL SNOTEL	8500	2/01/01	---	8.1	7.5	8.3
REUTER CANYON	6280	1/29/01	42	14.4	4.8	6.5
ROWDY CREEK	8300	1/29/01	26	7.8	13.0	15.1
RYAN PARK	8400	1/29/01	37	7.2	6.4	7.4
SALT RIVER SNOTEL	7600	2/01/01	---	5.2	8.0	9.0
SAND LAKE SNOTEL	10050	2/01/01	---	15.0	13.8	21.2
SANDSTONE SNOTEL	8150	2/01/01	---	7.0	9.6	9.3
SAWMILL DIVIDE	9260	1/29/01	24	5.2	8.0	9.0
SHELL CREEK SNOTEL	9580	2/01/01	---	6.6	10.3	10.2
SHERIDAN R.S.	7750	1/30/01	9	1.3	3.6	4.1
SNAKE RIVER STATION	6920	1/30/01	29	7.4	10.8	14.0
SNAKE RV STA SNOTEL	6920	2/01/01	---	6.6	10.0	12.4
SNIDER BASIN SNOTEL	8060	2/01/01	---	5.3	7.9	9.9
SNOW KING MTN	7660				8.0	10.1
SOLDIER PARK	8780	1/28/01	---	1.1E	1.6	3.7
SOUR DOUGH	8460	1/28/01	14	1.2	3.0	4.3
SOUTH BRUSH SNOTEL	8440	2/01/01	---	6.8	6.6	7.1
SOUTH PASS SNOTEL	9040	2/01/01	---	6.1	8.0	11.3
SPRING CRK. SNOTEL	9000	2/01/01	---	11.1	15.3	18.2
ST LAWRENCE ALT SNOT	8620	2/01/01	---	1.7	1.9	4.8
SUCKER CREEK SNOTEL	8880	2/01/01	---	4.9	7.7	7.5
SYLVAN LAKE SNOTEL	8420	2/01/01	---	8.2	11.8	14.9
SYLVAN ROAD SNOTEL	7120	2/01/01	---	4.1	8.7	8.5
T CROSS RANCH	7900	1/30/01	10	2.0	4.4	5.3
TETON PASS W.S.	7740	2/01/01	39	11.0	14.4	17.3
THUMB DIVIDE SNOTEL	7980	2/01/01	---	4.1	8.2	11.4
THUMB DIVIDE	7980	1/30/01	20	4.2	7.9	13.5
TIE CREEK SNOTEL	6870	2/01/01	---	2.7	4.4	---
TIMBER CREEK SNOTEL	7950	2/01/01	---	1.3	.8	3.6
TOGWOTEE PASS SNOTEL	9580	2/01/01	44	10.4	12.3	16.9
TOWNSEND CRK SNOTEL	8700	2/01/01	---	3.2	3.1	6.2
TRIPLE PEAK SNOTEL	8500	2/01/01	---	9.7	15.8	17.4
TURPIN MEADOWS	6900	1/31/01	18	3.1	5.8	7.6
TWO OCEAN SNOTEL	9240	2/01/01	---	11.7	14.3	18.3
TYRELL RANGER STA.	8300	1/28/01	15	1.6	3.6	5.5
UPPER SPEARFISH	6500	1/29/01	24	5.1	2.5	4.5
WARREN PEAK SNOTEL	6520				5.5	7.2
WEBBER SPRING SNOTEL	9250	2/01/01	---	10.5	11.6	17.4
WHISKEY PARK SNOTEL	8950	2/01/01	---	12.5	14.8	18.4
WILLOW CREEK SNOTEL	8450	2/01/01	---	12.0	16.9	21.0
WINDY PEAK SNOTEL	7900	2/01/01	---	5.3	2.8	4.5
WOLVERINE SNOTEL	7650	2/01/01	---	4.3	8.8	7.9
WOOD ROCK G.S.	8440	1/29/01	19	3.6	5.8	6.6
YOUNTS PEAK SNOTEL	8350	2/01/01	---	4.6	9.6	12.2

# Snake River Basin (1)

## Snow

Percentage of average snow water equivalent (SWE) for each drainage in the basin is: Snake above Jackson Lake -- 51 percent (66% of last year at this time), Pacific Creek -- 56 percent (67% of last year at this time), Gros Ventre River -- 56 percent (81% of last year at this time), Hoback River -- 57 percent (72% of last year at this time), Greys River -- 58 percent (66% of last year at this time), Salt River -- 62 percent (70% of last year at this time). Snake River Basin above Palisades is 55 percent of average (69% of last year at this time). See the Basin Summary of Snow Courses at the beginning of this report for a detailed listing of snow course information.



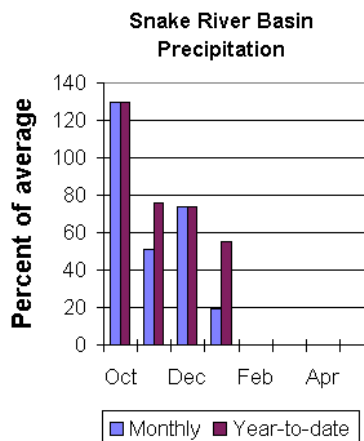
## Precipitation.

Precipitation across the basin was much below average for last month. Monthly precipitation, for the basin, was 18 percent of average (18 percent of last year). January percentages range from 8 to 106 percent of average. Water-year-to-date precipitation is 55 percent of normal for the Snake River basin (83 percent of last year at this time) Year-to-date percentages range from 45 to 78 percent of average.

## Reservoir.

Current storage compared to average for the three storage reservoirs in the basin is as follows:

Grassy Lake —118 percent of average (12,700 acre feet compared to 12,400 last year), Jackson lake — 132 percent of average (635,200 acre feet compared to 645,000 acre feet last year), and Palisades Reservoir —61 percent of average (638,700 acre feet compared to 1,232,200 acre feet last year).



## Streamflow.

The most probable, 50 percent chance April through September runoff yield forecast is below average for the basin. The Snake near Moran is expected to yield 595,000 acre-feet (69 percent of normal). Yield from the Snake River above Palisades Reservoir is estimated to be 1,790,000 acre-feet (67 percent of normal). The 50 percent chance yield near Heise is expected to be 2,610,000 acre-feet (65 percent of normal). Pacific Creek at Moran is expected to yield about 106,000 acre-feet (64 percent of average). Greys River above Palisades Reservoir is estimated to yield 255,000 acre-feet (66 percent of normal). Salt River near Etna is estimated to have a yield of 260,000 acre-feet (65 percent of normal).



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SNAKE RIVER BASIN  
Streamflow Forecasts - February 1, 2001

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Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)			
		<<----- Drier ----->>		----->>		----->>					
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)	
SNAKE near Moran (1,2)	APR-SEP	404	535	595	69	655	786	869			
SNAKE above Palisades (2)	APR-SEP	1355	1614	1790	67	1966	2225	2671			
SNAKE near Heise (2)	APR-SEP	1859	2306	2610	65	2914	3361	4049			
PACIFIC CREEK at Moran	APR-SEP	72	92	106	64	120	140	166			
GREYS above Palisades	APR-SEP	169	220	255	66	290	341	388			
SALT near Etna	APR-SEP	146	214	260	65	306	374	399			

SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of January					SNAKE RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GRASSY LAKE	15.2	12.7	12.4	10.8	SNAKE above Jackson Lake	9	66	51
JACKSON LAKE	847.0	635.2	645.0	479.6	PACIFIC CREEK	3	67	56
PALISADES	1400.0	638.7	1232.2	1044.0	GROS VENTRE RIVER	3	83	56
					HOBACK RIVER	6	72	57
					GREYS RIVER	5	66	58
					SALT RIVER	5	70	62
					SNAKE above Palisades	29	69	55

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

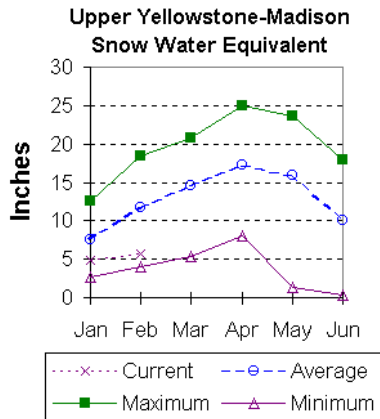
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

## Upper Yellowstone and Madison River Basins (2)

### Snow

Snowfall in these basins this year has been well below average for this time of the year. Snow water equivalent (SWE) is about 46 percent of average (60 percent of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 50 percent of average (61 percent of last year at this time). See the "Snow Course Basin Summary" at the beginning of this document for more details on specific sites.



of water (79 percent of capacity) – 121 percent of average. Ennis Lake is storing about 105 percent and Hebgen Lake is storing about 92 percent of last year's volume.

### Streamflow

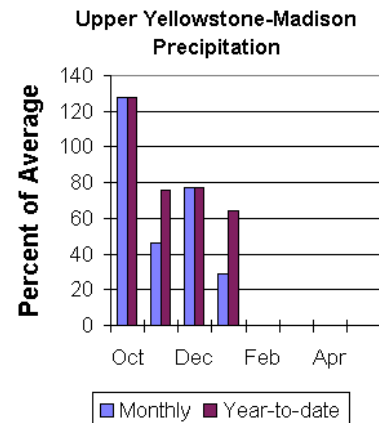
All the following forecasts are the 50 percent chance runoff for the April through September runoff period. Yellowstone at Lake Outlet is expected to yield about 490,000 acre feet (62 percent of normal). Yellowstone at Corwin Springs will yield about 1,250,000 acre-feet (65 percent of normal). Yellowstone near Livingston will yield about 1,435,000 acre feet (64 percent of normal). Hebgen lake inflow is estimated to be 360,000 acre feet (74 percent of normal). See the following page for detailed runoff volumes.

### Precipitation

January precipitation in the Madison and Yellowstone drainage was about 20 percent of average (20 percent of previous year) for the 6 reporting stations -- percentage range was from 8 to 38 percent of average. Water-year-to-date precipitation is about 60 percent of average (78 percent of last year's amount). Year to date percentage ranges from 62 to 84 percent

### Reservoir

Ennis Lake is storing 29,600 acre-feet (72 percent of capacity) – 87 percent of average. Hebgen Lake is storing about 298,200 acre-feet



UPPER YELLOWSTONE & MADISON RIVER BASINS  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
YELLOWSTONE at Lake Outlet	APR-SEP	396	451	490	62	553	645	792
YELLOWSTONE RIVER at Corwin Spgs.	APR-SEP	1046	1162	1250	65	1375	1559	1937
YELLOWSTONE RIVER near Livingston	APR-SEP	1233	1367	1435	64	1557	1738	2241
HEBGEN Reservoir Inflow	APR-SEP	273	325	360	74	395	447	486

UPPER YELLOWSTONE & MADISON RIVER BASINS Reservoir Storage (1000 AF) - End of January					UPPER YELLOWSTONE & MADISON RIVER BASINS Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ENNIS LAKE	41.0	29.6	28.2	34.0	MADISON RIVER in WY	9	60	46
HEBGEN LAKE	377.5	298.2	324.2	246.8	YELLOWSTONE RIVER in WY	11	62	50

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

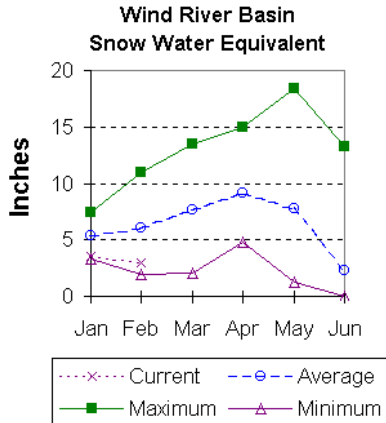
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

## Wind River Basin (3)

### Snow

The Wind River basin has much below average snow water equivalent (SWE) for this time of the year. SWE in the Wind River above Dubois is 50 percent of average (67 percent of last year). The Little Wind SWE is 42 percent of average water content (78 percent of last year), and the Popo Agie drainage SWE is about 50 percent of average (82 percent of last year). The Wind River basin, above Boysen Reservoir, SWE is about 49 percent of average (about 72 percent of last year). See the Basin Summary of Snow Course Data at the front of this report for details.



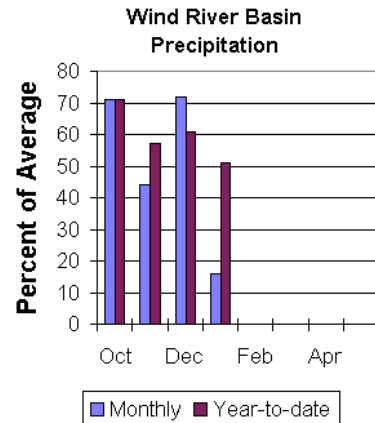
### Precipitation

January precipitation in the basin varied from 3 to 122 percent of average, but most of the basin was less than 30 percent of average. January precipitation for the basin was about 13 percent of average for the 12 reporting stations; that is about 12 percent of last year's amount. Water year-to-date precipitation is 50 percent of normal. The current water-year-to-date average is about 79 percent of last year at this time. Year to date figures range from 33 to 99 percent of average.

### Reservoirs

Current storage varies from 72 to 142 percent of average. Bull

Lake is currently storing about 62,600 acre feet (41 percent of capacity) -- normally the reservoir is at 57 percent of capacity at this time of the year. Boysen Reservoir is storing about 75 percent of capacity (445,500 acre feet) -- normally the reservoir is at 97 percent of capacity at this time of the year. Pilot Butte is storing 74 percent of capacity (23,500 acre feet) -- normally the reservoir is at 52 percent of capacity at this time of the year.



### Streamflow

Water supply is estimated to be much below normal this year. The following values reflect the 50 percent chance yields for the April through September runoff period. The Wind River above Bull Lake Creek is expected to yield 360,000 acre feet (67 percent of average). Wind River at Riverton will yield about 365,000 acre feet (56 percent of average). Boysen Reservoir inflow will yield about 500,000 acre feet (62 percent of normal). Bull Lake Creek near Lenore is expected to yield about 120,000 acre feet (66 percent of average). Little Popo Agie River near Lander is expected to yield about 23,500 acre feet (45 percent of average). South Fork of Little Wind near Fort Washakie will yield about 51,000 acre feet (63 percent of average). Little Wind River near Riverton will yield about 190,000 acre feet (59 percent of average).

WIND RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
WIND RIVER abv Bull Lake Cr (2)	APR-SEP	280	328	360	67	409	480	538
WIND RIVER at Riverton (2)	APR-SEP	233	311	365	56	460	601	648
BOYSEN RESERVOIR Inflow (2)	APR-SEP	299	421	500	62	630	822	809
BULL LAKE CR near Lenore (2)	APR-SEP	93	110	120	66	137	161	183
LT POPO AGIE RIVER nr Lander	APR-SEP	9.9	18.2	24	45	36	54	52
SF LT WIND nr Fort Washakie	APR-SEP	32	44	51	63	63	80	81
LT WIND RIVER nr Riverton	APR-SEP	104	156	190	59	250	339	324

WIND RIVER BASIN Reservoir Storage (1000 AF) - End of January					WIND RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BULL LAKE	151.8	62.6	95.0	86.6	WIND RIVER above Dubios	7	71	50
BOYSEN	596.0	445.5	531.3	580.7	LITTLE WIND	2	77	42
PILOT BUTTE	31.6	23.5	22.5	16.5	POPO AGIE	6	85	50
					WIND above Boysen Resv	14	74	49

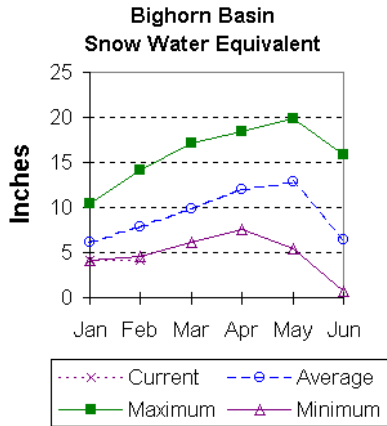
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.  
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Bighorn River Basin (4)

## Snow

Snowpack in this basin is well below average for this time of year. The Nowood drainage SWE is 47 percent of average (59 percent of last year). Greybull River SWE is 46 percent of average (89 percent of last year). Shell Creek SWE is 60 percent of average (59 percent of last year). The basin SWE, as a whole, is currently 53 percent of average (61 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



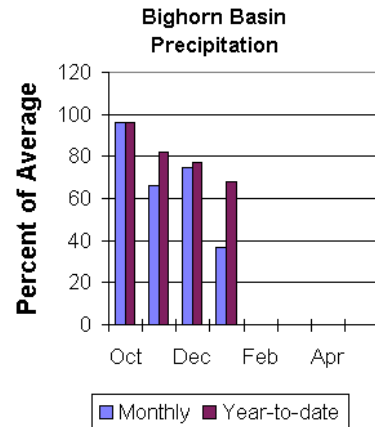
## Precipitation

January precipitation was 36 percent of the monthly average (33 percent of last year). Sites ranged from 11 to 109 percent of average for the month. Year-to-date precipitation is 67 percent of normal; that is 78 percent of last year at this time. Year to date percentages, from the 10 reporting stations, range from 57 to 168.

## Reservoir

Boysen Reservoir is currently storing 445,500-acre feet (77 percent of average). Bighorn

Lake is now at 103 percent of average (865,000-acre feet). Boysen is currently storing 84 percent of last year at this time and Big Horn Lake is storing 92 percent of last year's volume.



## Streamflow

The 50 percent chance April through September runoff is anticipated to be below normal. The Boysen Reservoir inflow is forecast to yield 500,000 acre feet (62 percent of average); the Greybull River nr Meeteese should yield 95,000 acre feet (47 percent of average); Shell Creek near Shell should yield 56,000 acre feet (75 percent of average) and the Bighorn River at Kane should yield 550,000 acre feet (49 percent of average).

BIGHORN RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)				
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * (1000AF) (% AVG.)			30% (1000AF)		10% (1000AF)	
BOYSEN RESERVOIR Inflow (2)	APR-SEP	299	421	500	62	630	822	809				
GREYBULL RIVER nr Meeteetse	APR-SEP	78	88	95	47	109	129	201				
SHELL CREEK nr Shell	APR-SEP	45	51	56	75	61	67	75				
BIGHORN RIVER at Kane (2)	APR-SEP	315	450	550	49	745	1034	1124				

BIGHORN RIVER BASIN Reservoir Storage (1000 AF) - End of January					BIGHORN RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BOYSEN	596.0	445.5	531.3	580.7	NOWOOD RIVER	5	59	47
BIGHORN LAKE	1356.0	865.0	941.9	839.2	GREYBULL RIVER	2	89	46
					SHELL CREEK	4	59	60
					BIGHORN (Boysen-Bighorn)	11	61	53

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

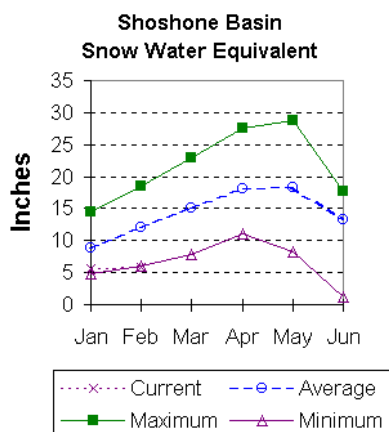
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

## Shoshone and Clarks Fork River Basin (5)

### Snow

Snow Water Equivalent (SWE) is 46 percent of the February average (57 percent of last year) in the Shoshone River basin. The Clarks Fork River basin SWE is 49 percent of average (54 percent of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.



Currently, about 370,200 acre-feet are stored in the reservoir compared to 449,000 acre feet last year – normally the reservoir stores about 416,000 acre feet at this time of the year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

### Streamflow

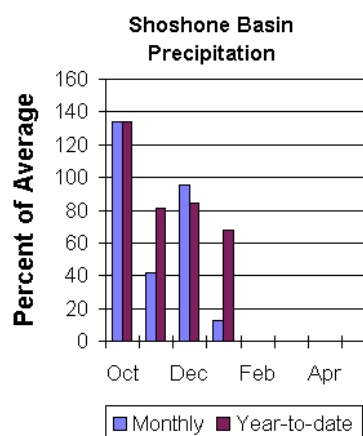
The fifty percent yield (April through September period) for North Fork Shoshone River at Wapiti is expected to be 325,000 acre-feet (63 percent of average). South Fork of the Shoshone River near Valley is estimated to yield of 130,000 acre-feet (48 percent of average), and South Fork above Buffalo Bill Reservoir is expected to be 95,000 acre-feet (42 percent of average). At the Buffalo Bill Reservoir, the fifty percent chance yield for the Shoshone River is expected to be about 470,000 acre-feet (59 percent of average). The fifty-percent chance yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be about 350,000 acre-feet (59 percent of average).

### Precipitation

Precipitation for the month of January was 12 percent of normal (10 percent of last year). Monthly percentages range from 3 to 52 percent of average. The basin year-to-date precipitation is now 67 percent of average (73 percent of last year). Year-to-date percentages range from 55 to 197 percent of average.

### Reservoir

Current storage in Buffalo Bill Reservoir is 89 percent of average (82 percent of last year's storage) – the reservoir is about 57 percent of capacity.





SHOSHONE & CLARKS FORK RIVER BASINS  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
NF SHOSHONE RIVER at Wapiti	APR-SEP	270	302	325	63	361	415	520
SF SHOSHONE RIVER nr Valley	APR-SEP	102	118	130	48	152	185	269
SF SHOSHONE RIVER abv Buffalo Bill	APR-SEP	62	82	95	42	127	173	229
BUFFALO BILL DAM Inflow (2)	APR-SEP	354	426	470	59	548	663	804
CLARKS FORK RIVER nr Belfry	APR-SEP	289	325	350	59	390	450	590

SHOSHONE & CLARKS FORK RIVER BASINS Reservoir Storage (1000 AF) - End of January					SHOSHONE & CLARKS FORK RIVER BASINS Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BUFFALO BILL	646.6	370.2	449.0	416.0	SHOSHONE RIVER	7	57	46
					CLARKS FORK in WY	7	54	49

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

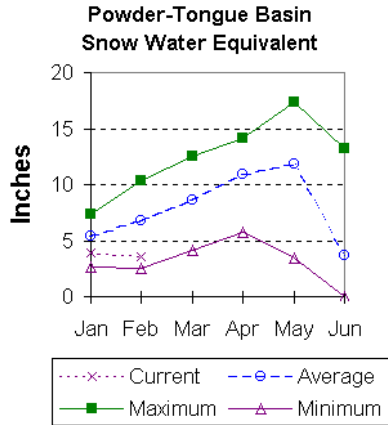
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Powder and Tongue River Basins (6)

## Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 62 percent of normal (35 percent of last year). The Goose Creek drainage is 63 percent of average (15 percent of last year). Clear Creek drainage is 53 percent of normal SWE (61 percent of last year). Crazy Woman Creek is 38 percent of average (50 percent of last year). The upper Powder River drainage is 53 percent of average (71 percent of last year). The Powder River basin snow water equivalent (SWE), in Wyoming, is about 53 percent of average (66 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.

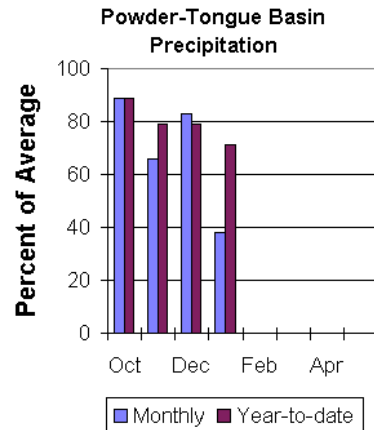


## Precipitation

January precipitation was 37 percent of average for the 10 reporting stations (30 percent of last year). Monthly percentages range from 14 to 105 percent of average. Precipitation for the year ranges from 50 to 101 percent of average at the reporting stations. Year-to-date precipitation is about 71 percent of average in the basin; this is 77 percent of last year at this time.

## Reservoir

Tongue River Reservoir is currently at 125 percent of average storage for this time of year (34,000 acre feet) – the reservoir is about 50 percent of capacity (total capacity is 68,000 acre feet). Last year at this time the reservoir was storing about 36,600 acre feet – average storage is about 26,000 acre feet for this time of the 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 runoff values are for the 50 percent probability during the April through September forecast period. The estimated yield for Tongue River near Dayton is 79,000-acre feet (69 percent of normal). Middle Fork of the Powder River near Barnum is estimated to yield 9,600-acre feet (49 percent of average). The North Fork of the Powder near Hazelton should yield about 6,900 acre-feet (68 percent of normal). The estimated yield for Clear Creek near Buffalo is 27,000 acre-feet (69 percent of average). Rock Creek near Buffalo will yield about 15,000 acre-feet (63 percent of normal), and Piney Creek at Kearny should yield about 31,000 acre-feet (61 percent of average).

POWDER & TONGUE RIVER BASINS  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		Chance Of Exceeding *		===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
TONGUE RIVER nr Dayton (2)	APR-SEP	59	70	79	69	91	109	115
MIDDLE FORK POWDER nr Barnum	APR-SEP	5.9	8.1	9.6	49	12.7	17.2	19.7
NORTH FORK POWDER nr Hazelton	APR-SEP	4.3	5.8	6.9	68	8.0	9.5	10.1
CLEAR CREEK nr Buffalo	APR-SEP	19.1	24	27	69	30	35	39
ROCK CREEK nr Buffalo	APR-SEP	9.7	12.9	15.0	63	17.1	20	24
PINEY CREEK at Kearny	APR-SEP	14.8	25	31	61	42	57	51

POWDER & TONGUE RIVER BASINS Reservoir Storage (1000 AF) - End of January				POWDER & TONGUE RIVER BASINS Watershed Snowpack Analysis - February 1, 2001				
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
TONGUE RIVER	68.0	34.0	36.6	27.1	UPPER TONGUE RIVER	8	37	62
					GOOSE CREEK	2	19	63
					CLEAR CREEK	4	61	53
					CRAZY WOMAN CREEK	3	50	38
					UPPER POWDER RIVER	4	71	53
					POWDER RIVER in WY	8	66	53

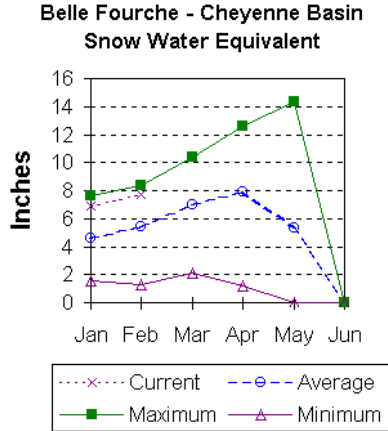
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.  
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Belle Fourche and Cheyenne River Basins (7)

## Snow.

The Belle Fourche River basin, as of February 1, is 143 percent of normal. This is 222 percent of what it was last year at this time. See Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



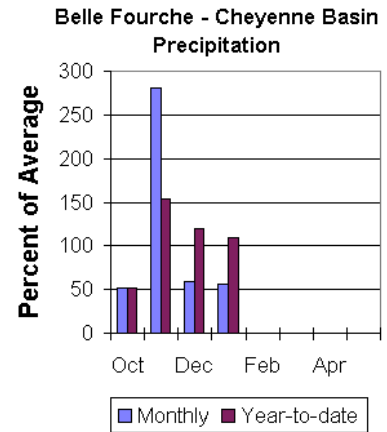
## Precipitation.

Precipitation, for the month of January was 46 percent of average in the Black Hills (68 percent of last January). Monthly percentages range from 18 to 171 percent. Year-to-date precipitation is 108 percent of average and 180 percent of last year's amount. Year to date percentages range from 85 to 156. This is from the 4 reporting stations.

## Reservoir.

Reservoir storage is generally above average in the basin.

Angostura is currently storing 90 percent of average (87,900-acre feet). Belle Fourche reservoir is storing 142 percent of average (144,000-acre feet). Deerfield reservoir is storing 118 percent of average (15,100-acre feet). Keyhole reservoir is storing 161 percent of average (159,100-acre feet). Pactola reservoir is storing 120 percent of average (55,000-acre feet), and Shadehill reservoir is storing 82 percent of average (40,200-acre feet).



## Streamflow

Streamflow forecasts for the Black Hills are near average for this time of year. This is for the forecast period March through July. Deerfield Reservoir inflow is forecast to flow 5240 acre feet (107 percent of average). Pactola Reservoir inflow should flow about 22800 acre feet (109 percent of average).

BELLE FOURCHE & CHEYENNE RIVER BASINS  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		Chance Of Exceeding *		----- Wetter ----->>		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
DEERFIELD RESERVOIR Inflow	MAR-JUL	2.26	4.04	5.24	107	6.44	8.22	4.90
PACTOLA RESERVOIR Inflow	MAR-JUL	9.0	15.6	23	109	30	41	21

BELLE FOURCHE & CHEYENNE RIVER BASINS Reservoir Storage (1000 AF) - End of January					BELLE FOURCHE & CHEYENNE RIVER BASINS Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ANGOSTURA	122.1	87.9	108.9	98.1	BELLE FOURCHE	6	215	143
BELLE FOURCHE	178.4	144.0	172.9	101.4				
DEERFIELD	15.2	15.1	14.9	12.8				
KEYHOLE	193.8	159.1	172.3	98.7				
PACTOLA	55.0	55.0	54.0	45.8				
SHADEHILL	81.4	40.2	23.3	49.1				

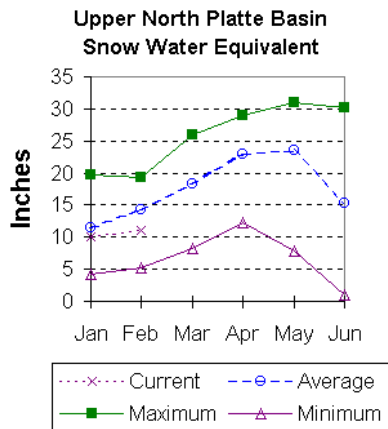
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.  
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Upper North Platte River Basin (8)

## Snow

The snow courses above Seminoe Reservoir have about 77 percent of average snow water equivalent (SWE) recorded for this time of the year (95 percent of last year). SWE in the drainage area above Northgate is about 78 percent of average and 88 percent of last year at this time. SWE in the Encampment River drainage is about 71 percent of normal and 96 percent of last year. Brush Creek SWE for the year is about 87 percent of normal and 103 percent of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 66 percent of average and 99 percent of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



## Precipitation

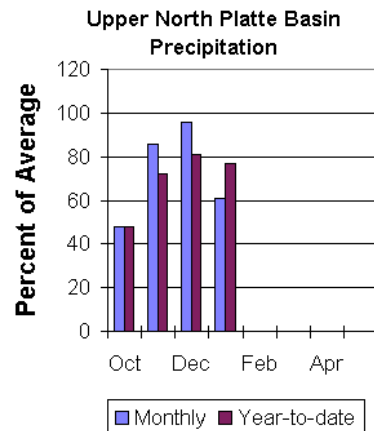
Nine reporting stations indicate January precipitation was 57 percent of average and about 44 percent of last year's amount. January precipitation varied from 2 to 400 percent of average. Total water-year-to-date precipitation is about 76 percent of average for the basin, which is about 99 percent of last year's amount. Year to date percentage ranges from 38 to 100 percent of average for the 9 reporting stations.

## Reservoirs

Seminoe Reservoir is currently storing about 146 percent of normal for this time of the year. The reservoir is storing 82 percent of last year's amount. Seminoe Reservoir is estimated to be storing 680,900 acre-feet (67 percent of capacity). Last year, at this time, the reservoir had 830,100 acre-feet in storage.

## Streamflow

All the following yields are based on the fifty percent chance April through September yield. Yield for the North Platte River near Northgate is expected to be about 190,000 acre-feet (70 percent of average). Encampment River near Encampment is estimated to yield 110,000 acre-feet (71 percent of normal). Rock Creek near Arlington is estimated to yield 39,000 acre-feet (70 percent of average). Seminoe Reservoir inflow should be about (585,000 acre-feet (69 percent of normal). See the following table for more detailed information on projected runoff.



UPPER NORTH PLATTE RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>				30-Yr Avg. (1000AF)		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
North Platte River nr Northgate	APR-SEP	78	145	190	70	235	302	271
Encampment River nr Encampment	APR-SEP	68	93	110	71	127	152	156
Rock Creek nr Arlington	APR-SEP	25	33	39	70	45	56	56
Seminoe Reservoir inflow	APR-JUL	323	449	540	69	669	860	788
	APR-SEP	349	485	585	69	702	875	851

UPPER NORTH PLATTE RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER NORTH PLATTE RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
SEMINOE	1016.7	680.9	830.1	467.0	N PLATTE above Northgate	7	88	78
					ENCAMPMENT RIVER	4	96	71
					BRUSH CREEK	5	103	87
					MEDICINE BOW & ROCK CREEK	3	99	66
					N PLATTE above Seminoe	19	95	77

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

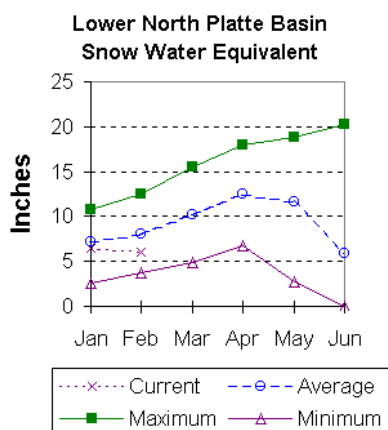
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

## Lower North Platte River Basin (9)

### Snow

SWE for the North Platte River basin in Wyoming averages 76 percent of normal (95 % of last year). The Sweetwater drainage SWE is currently 53 percent (75 percent of last year). Deer and LaPrele Creek SWE is 107 percent of average (126 percent of last year). SWE for the North Platte above the Laramie River drainage is 77 percent of average (96 % of last year). SWE for the Laramie River above the mouth is 73 percent of average (91 % of last year). SWE for the Laramie River above Laramie is 73 percent of average (91 % of last year). SWE for the Little Laramie River is 66 percent of average (84 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



Alcova 156,600 acre feet (100 percent of average); Glendo 283,500 acre feet (86 percent of average); Guernsey 12,800 acre feet (188 percent of average); Pathfinder 728,100 acre feet (132 percent of average); Seminoe 680,900 acre feet (146 percent of average). Wheatland No.2 34,000 acre feet (85 percent of average).. Water allocated to project use is near average with North Platte Project users at 97 percent of average, Kendrick Project users at 119 percent of average, and Glendo Project users at 114 percent of average.

### Streamflow

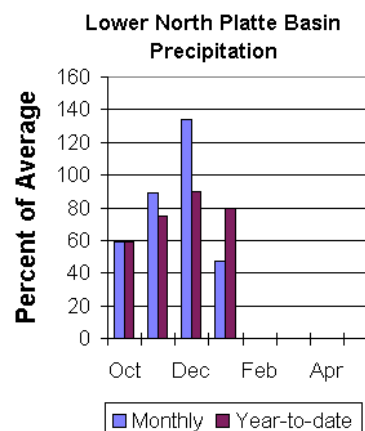
Yields from 62 to 77 percent are expected in the basin during the forecast period. The following yields are based on the fifty percent chance probability runoff for the April through September forecast period. The Sweetwater near Alcova is forecast to yield about 46,000 acre-feet (62 percent of average). Deer Creek at Glenrock is expected to yield about 77 percent of average (30,000 acre-feet). LaPrele Creek above the reservoir is estimated to yield 72 percent of average (18,000 acre-feet). North Platte River below Guernsey Reservoir is expected to yield about 62 percent of normal (615,000 acre-feet), and below Glendo Reservoir is anticipated to yield about 63 percent of average (605,000 acre-feet). Laramie River near Woods should yield about 76 percent of average (102,000 acre-feet). The Little Laramie near Filmore should produce about 44,000 acre-feet (69 percent of average).

### Precipitation

Of the 11 reporting stations, percentages for the month range from 4 to 273. January precipitation for the basin was 35 percent of average (30 percent of last year). The water year-to-date precipitation for the basin is currently 77 percent of average (107 percent of last year). Year to date percentages range from 40 to 149.

### Reservoir

The Lower North Platte River basin reservoir storage is average to well above average. Reservoir storage is as follows:





LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Chance Of Exceeding *		Wetter		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Sweetwater River nr Alcova	APR-JUL	16.6	23	41	59	59	87	69
	APR-SEP	18.5	27	46	62	65	93	74
Deer Creek at Glenrock	APR-SEP	11.3	21	30	77	40	58	39
La Prele Creek ab La Prele Reservoir	APR-SEP	7.3	10.2	18.0	72	29	52	25
North Platte River blw Glendo Reserv	APR-JUL	322	478	585	63	692	848	925
	APR-SEP	327	493	605	63	717	883	958
North Platte River blw Guernsey Resv	APR-JUL	262	457	590	63	723	918	938
	APR-SEP	275	477	615	62	753	955	985
Laramie River nr Woods	APR-SEP	36	75	102	76	129	168	135
Little Laramie River nr Filmore	APR-SEP	23	36	44	69	52	65	64

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ALCOVA	184.3	156.6	156.0	156.1	SWEETWATER	3	80	53
GLENDO	506.4	283.5	327.2	330.8	DEER & LAPRELE CREEKS	4	126	107
GUERNSEY	45.6	12.8	13.2	6.8	N PLATTE abv Laramie R.	26	96	77
PATHFINDER	1016.5	728.1	935.9	553.0	LARAMIE RIVER abv Laramie	8	91	73
SEMINOE	1016.7	680.9	830.1	467.0	LITTLE LARAMIE RIVER	4	84	66
WHEATLAND #2	98.9	34.0	66.0	40.1	LARAMIE RIVER above mouth	11	89	72
NORTH PLATTE PROJ	1062.1	584.9	945.9	601.0	NORTH PLATTE	33	95	76
KENDRICK PROJECT	1201.7	971.2	991.4	819.1				
GLENDO PROJECT USERS	183.2	136.3	155.2	119.8				

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

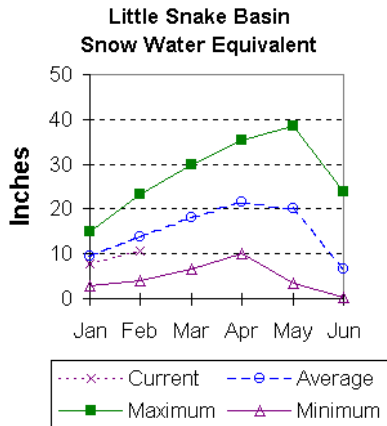
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Little Snake River Basin (10)

## Snow

Snowfall has been below average across the basin this year. Currently, snow water equivalent (SWE) in the Little Snake River drainage is 76 percent of average (95 percent of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.



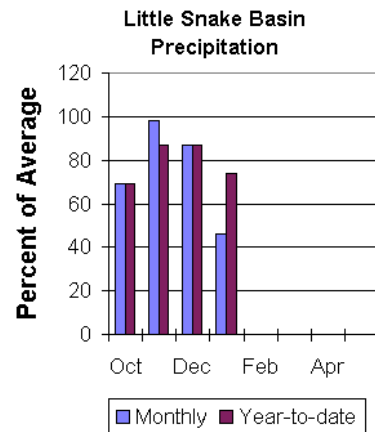
## Precipitation

Precipitation across the basin was below average this past month. January precipitation was 46 percent of average (45 percent of last year) for the 5 reporting stations. January precipitation ranged from 27 to 83 percent of average. The Little Snake River basin water-year-to-date precipitation is currently 74 percent of average (100 percent of last year). Year-to-date percentages range from 64 to 84 percent of average.

## Streamflow

Runoff yield in the Little Snake River drainage is

expected to be below normal this year. Stream yield is based on the 50 percent probability for the April through July forecast period. The Little Snake River near Slater should yield about 112,000 acre-feet (72 percent of normal). Little Snake River near Dixon is estimated to yield 240,000 acre-feet (73 percent of normal).



LITTLE SNAKE RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg.	
		<<===== Drier =====>>		Chance Of Exceeding *		===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	(1000AF)
Little Snake River nr Slater	APR-JUL	74	95	112	72	130	159	155
LITTLE SNAKE R nr Dixon	APR-JUL	119	191	240	73	289	361	329

LITTLE SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of January				LITTLE SNAKE RIVER BASIN Watershed Snowpack Analysis - February 1, 2001				
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					LITTLE SNAKE RIVER	8	95	76

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

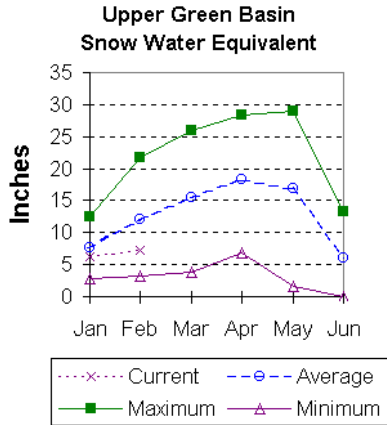
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Upper Green River Basin (11)

## Snow

The Upper Green River Basin snow water equivalent (SWE), above Fontenelle Reservoir, is about 60 percent of average (74 percent of last year). The Green River basin SWE above Warren Bridge is 57 percent of normal (74 percent of last year). SWE on the west side of the Upper Green River basin is about 57 percent of normal, 68 percent of this time last year. Newfork River SWE is now about 77 percent of normal (98 percent of last year). Big Sandy-Eden Valley SWE is about 64 percent of average (92 percent of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



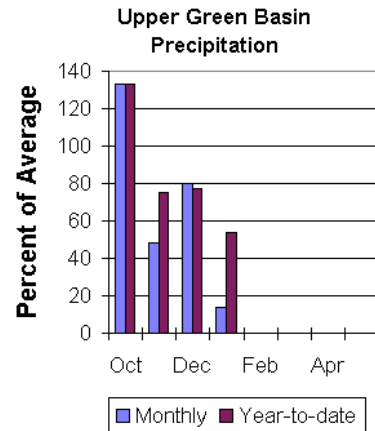
## Precipitation

The 11 reporting precipitation sites in the basin were 14 percent of the January average (13 percent of last year at this time). January precipitation varied from 5 to 61 percent of average. Water year-to-date precipitation is about 54 percent of average (83 percent of last year). Year to date percentage of average ranges from 45 to 73 percent for the reporting stations.

## Reservoir

Data for Big Sandy Reservoir and Eden Reservoir were not reported this month.

Fontenelle Reservoir is storing 151,900 acre-feet (61 percent of average and 35 percent of the total capacity). Flaming Gorge Reservoir is currently storing 2,992,000 acre feet -- 93 percent of last year and 80 percent of capacity. There is no average established for Flaming Gorge. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

The fifty-percent chance April through July runoff in the Upper Green River basin is forecast below average. Green River at Warren Bridge is expected to yield about 205,000 acre-feet (77 percent of normal). Pine Creek above Fremont Lake is expected to yield 88,000 acre-feet (85 percent of normal). New Fork River near Big Piney is expected to yield about 310,000 acre-feet (81 percent of normal). Fontenelle Reservoir Inflow is estimated to be 625,000 acre-feet (74 percent of average), and Big Sandy near Farson is expected to be about 45,000 acre-feet (79 percent of normal).

UPPER GREEN RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions				Wetter		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Green River at Warren Bridge	APR-JUL	144	180	205	77	230	266	266
Pine Creek abv Fremont Lake	APR-JUL	70	81	88	85	95	106	104
New Fork River nr Big Piney	APR-JUL	186	260	310	81	360	434	385
Fontenelle Reservoir Inflow	APR-JUL	447	550	625	74	705	832	849
Big Sandy River nr Farson	APR-JUL	27	38	45	79	52	63	57

UPPER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER GREEN RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BIG SANDY		NO REPORT			GREEN above Warren Bridge	4	77	57
EDEN		NO REPORT			UPPER GREEN (West Side)	7	68	57
FLAMING GORGE	3749.0	2992.0	3226.0	---	NEWFORK RIVER	3	98	77
FONTENELLE	344.8	120.4	167.6	196.2	BIG SANDY/EDEN VALLEY	2	92	64
					GREEN above Fontenelle	14	74	60

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

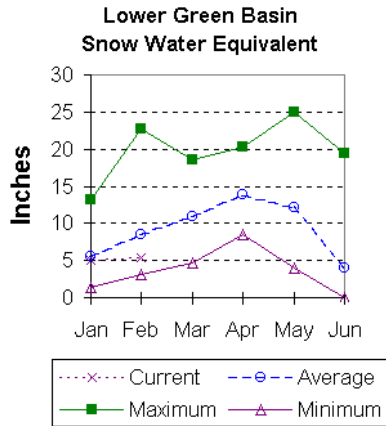
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

## Lower Green River Basin (12)

### Snow

The Lower Green, as of February 1, is below average. SWE in the Hams Fork, as of February 1, is 64 percent of average (84% of last year). Blacks Fork SWE is currently 79 percent of average (86 percent of last year). The Henry's fork SWE is currently 125 percent of average (125 percent of last year). The basin, as a whole, is 60 percent of average (74 percent of last year). For more information see Basin Summary of Snow Courses at beginning of this report.

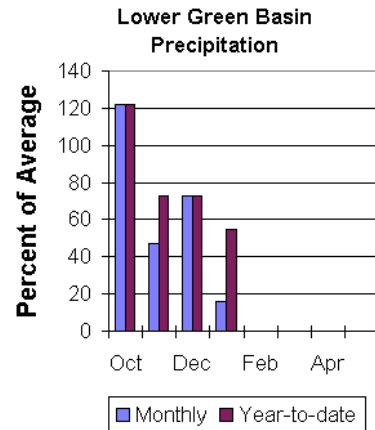


### Precipitation

Precipitation was below average for the 3 reporting stations during January. Precipitation ranged from 14 to 20 percent of average for the month. The entire basin received 16 percent of average for the month (17 percent of last year). The basin year-to-date precipitation is currently 55 percent of average (98 percent of last year). Year to date percentages range from 52 to 62.

### Reservoir

Fontenelle Reservoir is currently storing 120,400 acre feet; this is 61 percent of average (72 % of last year). Flaming Gorge is currently storing 2,992,000 acre feet. There is no average established for Flaming Gorge. Viva Naughton did not report this month.



### Streamflow

Expected yields vary from 54 to 84 percent of average across the basin. The following forecast values are based on a 50 percent chance probability for the April through July forecast period. Green River near Green River is forecast to yield about 630,000-acre feet (70 percent of average). Blacks Fork near Robertson is forecast to yield 80,000-acre feet (84 percent of average). East Fork of Smiths Fork near Robertson is estimated to yield 24,000 acre-feet (80 percent of average). The estimated yield for Hams Fork near Frontier is 38,000-acre feet (58 percent of average). Viva Naughton Reservoir inflow will be about 48,000-acre feet (54 percent of average). Flaming Gorge Reservoir inflow will be about 875,000-acre feet (73 percent of average).

LOWER GREEN RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<----- Drier ----->>		----->>		----->>		
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Green River nr Green River, WY	APR-JUL	368	524	630	70	736	892	899
Blacks Fork nr Robertson	APR-JUL	50	68	80	84	92	110	95
EF of Smiths Fork nr Robertson	APR-JUL	17.9	21	24	80	27	32	30
Hams Fk blw Pole Ck nr Frontier	APR-JUL	20	30	38	58	47	62	66
Hams Fk Inflow to Viva Naughton Res	APR-JUL	19.6	33	48	54	63	85	89
Flaming Gorge Reservoir Inflow	APR-JUL	508	727	875	73	1023	1242	1196

LOWER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of January				LOWER GREEN RIVER BASIN Watershed Snowpack Analysis - February 1, 2001				
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FONTENELLE	344.8	120.4	167.6	196.2	HAMS FORK RIVER	4	84	64
FLAMING GORGE	3749.0	2992.0	3226.0	---	BLACKS FORK	2	86	79
VIVA NAUGHTON RES		NO REPORT			HENRYS FORK	2	125	125
					GREEN above Flaming Gorge	22	78	64

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

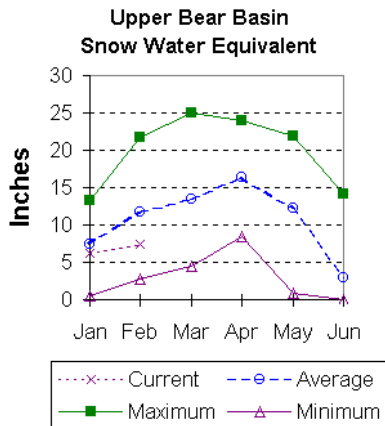
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

# Upper Bear River Basin (13)

## Snow

Snow water equivalent (SWE), at snow courses in the Bear River above the Idaho State line, is 64 percent of average (86 percent of last year). SWE for the Bear River in Utah is estimated to be 70 percent of average; that is about 83 percent of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 61 percent of average (81 percent of last year at this time.). See the Basin Summary of Snow Course Data at the beginning of this report for more detailed information.



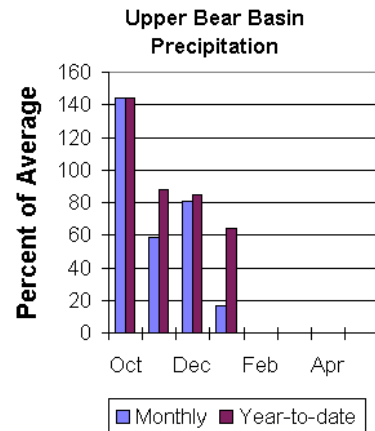
January of last year. Current storage is about 14 percent of the reservoir capacity.

## Precipitation

Precipitation for the month of January was 17 percent of average for the 2 reporting stations; this is 16 percent of the previous January. The year-to-date precipitation, for the basin, is 64 percent of average; this is 103 percent of last year's amount.

## Reservoir

Woodruff Narrows reservoir is currently storing about 8,000 acre feet. Currently, the reservoir is storing about 20 percent of the volume stored



## Streamflow

The following 50 percent chance stream flow yields are for the April through September period. Smiths Fork near Border is estimated to yield 75,000 acre-feet (64 percent of normal), and Thomas Fork drainage near the Idaho-Wyoming state line is estimated to yield 17,000 acre-feet or 47 percent of normal. Bear River near the Utah-Wyoming State Line is expected to yield about 93,000 acre feet ( 74 percent of average), The Bear River near Woodruff is expected to yield about 108,000 acre-feet (about 70 percent of normal).



UPPER BEAR RIVER BASIN  
Streamflow Forecasts - February 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SMITHS FK nr Border, WY	APR-SEP	51	64	75	64	88	111	118
THOMAS FK nr WY-ID State Line (Disc.	APR-SEP	9.2	13.3	17.0	47	22	31	36
Bear R nr UT-WY State Line	APR-SEP	67	81	93	74	106	129	126
BEAR R nr Woodruff, UT	APR-SEP	58	84	108	70	139	202	154

UPPER BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER BEAR RIVER BASIN Watershed Snowpack Analysis - February 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
WOODRUFF NARROWS	57.3	8.0	40.0	---	UPPER BEAR RIVER in Utah	5	83	70
					SMITHS & THOMAS FORKS	4	81	61
					BEAR RIVER abv ID line	7	86	64
					NORTHWEST	77	64	51
					NORTHEAST	19	60	73
					SOUTHEAST	36	95	77
					SOUTHWEST	31	83	67

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

*Issued by*

**Pearlie S. Reed  
Chief  
Natural Resources Conservation Service  
U.S. Department of Agriculture**

*Released by*

**Lincoln "Ed" Burton  
State Conservationist  
Natural Resources Conservation Service  
Casper, Wyoming**



**Wyoming**  
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