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Agriculture

Natural  
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Service

# Wyoming Basin Outlook Report January 1, 2001



# 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. 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 below normal for this time of the year. SWE averages for the State are about 81 percent of normal for this time of the year. Northwest portion of the State is 69 of percent normal. Northeast Wyoming is 79 of percent of normal, and the southeast part of the State is 90 percent of average. Southwestern Wyoming is 87 percent of average for this time of the year.

Precipitation for December was generally below average for the State, with the exception of the Upper Green River and Lower North Platte River drainages. Year-to-date precipitation is below average for all except the Belle Fourche drainage. Reservoir levels vary from about 70 percent of average to 184 percent of average. Generally, the larger capacity reservoirs are above average storage. Forecast runoff varies from 60 to 103 percent of average. The mean of all the forecast points in the State is about 82 percent of average (18 percent below average).

## Snowpack

Although the state received quite a bit of snow early, the snow fall 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 69 percent of average (101 percent of last year). Northeast Wyoming SWE is currently about 79 percent of average (102 percent of last year). The southeast portion is currently about 90 percent of average SWE (139 percent of last year). And the southwest is about 87 percent of average (149 percent of last year).

## Precipitation

December precipitation was below normal over most of the State. Only the Lower North Platte and the Upper Green River drainage had above normal precipitation. The Belle Fourche drainage did receive a great deal of precipitation early in the fall, in the Black Hills region – further west in the drainage basin less precipitation was received. 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	-26%	Upper North Platte River	-04%
Yellowstone & Madison	-23%	Lower North Platte	+34%
Wind River	-28%	Little Snake River	-13%
Big Horn	-25%	Upper Green River	+48%
Shoshone & Clarks Fork	-05%	Lower Green River	-26%
Powder & Tongue River	-09%	Upper Bear River	-19%
Belle Fourche & Cheyenne	-41%		

## Streams

Stream flow yield is expected to be below average across the State. Most probable yield for the State is forecast to be about 83 percent of average (varies from 60 to 103 percent of average). The northwest part of the State is expected to yield about 77 percent of normal -- yield estimates vary from 60 to 90 percent of normal through the northwest region of the State. Yield from the northeast portion of Wyoming will be below average (about 74 percent of average) -- yield estimates vary from 70 to 78 percent of average for the various forecast points – this does not include the Belle Fourche drainage because data was missing and an estimate could not be prepared .

The southeast portion of the state will be about 88 percent of normal -- yield estimates range from 81 to 103 percent of normal. The southwest portion of Wyoming varies from 72 to 100 percent of average -- mean estimated yield for the forecast points in southwest Wyoming is about 89 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 DECEMBER 2000

BASIN AREA RESERVIOR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
ALCOVA	85	85	83	102	100
ANGOSTURA	70	86	79	89	81
BELLE FOURCHE	74	97	51	146	76
BIG SANDY			NO REPORT		
BIGHORN LAKE	65	71	66	99	92
BOYSEN	77	92	103	75	84
BUFFALO BILL	59	71	68	87	83
BULL LAKE	41	63	58	70	65
DEERFIELD	99	97	81	122	101
EDEN			NO REPORT		
FLAMING GORGE			AVERAGE NOT ESTABLISHED		
FONTENELLE	44	61	60	73	72
GLENDO	47	55	55	86	86
GRASSY LAKE	83	80	69	120	103
GUERNSEY	22	23	12	184	96
HEBGEN LAKE	79	91	65	120	86
JACKSON LAKE	75	75	56	136	101
KEYHOLE	82	89	51	162	92
PACTOLA	98	99	83	118	99
PALISADES	41	84	74	56	49
PATHFINDER	69	91	50	139	75
PILOT BUTTE	75	73	49	152	103
SEMINOE	71	83	53	132	85
SHADEHILL	51	68	62	82	75
TONGUE RIVER	51	53	38	134	97
VIVA NAUGHTON RES	76	0	69	110	0
WHEATLAND #2			NO REPORT		
WOODRUFF NARROWS			AVERAGE NOT ESTABLISHED		
<hr/>					
GLENDO PROJECT USERS	75	85	63	117	88
KENDRICK PROJECT	81	83	68	119	98
NORTH PLATTE PROJ	50	85	54	93	59

# Basin Summary of Snow Course Data

## BASIN SUMMARY OF SNOW COURSE DATA

JANUARY 2001

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
-----						
WYOMING Snow Course and SNOTEL Stations						
ALBANY	9400				---	---
ASTER CREEK	7750	12/28/00	30	7.2	8.2	12.8
BALD MOUNTAIN SNOTEL	9380	1/01/01	---	7.4	9.6	10.2
BASE CAMP SNOTEL	7030	1/01/01	---	4.8	6.3	7.9
BATTLE MTN. SNOTEL	7440	1/01/01	---	4.3	3.5	5.0
BEARLODGE DIVIDE	4680				---	---
BEARTOOTH LK. SNOTEL	9280	1/01/01	---	7.0	9.6	11.5
BEAR TRAP SNOTEL	8200	1/01/01	---	2.6	1.8	3.7
BIG GOOSE	7760				---	---
BIG GOOSE SNOTEL	7760	1/01/01	---	3.0	3.0	---
BIG PARK	8620				---	---
BIG SANDY SNOTEL	9080	1/01/01	---	6.0	2.5	6.0
BLACKWATER SNOTEL	9780	1/01/01	---	7.4	5.8	9.9
BLIND BULL SNOTEL	8900	1/01/01	36	9.0	8.0	12.5
BLIND PARK PILLOW	6870	1/01/01	---	4.0	3.2	5.3
BLUE RIDGE	9620				---	---
BONE SPGS. SNOTEL	9350	1/01/01	---	5.3	7.0	7.8
BOXELDER	7280				---	---
BROOKLYN LK. SNOTEL	10220	1/01/01	---	9.4	5.7	12.0
BRYAN FLAT	6420				---	---
BUCK CREEK	7960				---	---
BURGESS JCT. SNOTEL	7880	1/01/01	---	4.0	4.4	5.5
BURROUGHS CRK SNOTEL	8750	1/01/01	---	4.3	4.0	7.1
CANYON SNOTEL	8090	1/01/01	---	4.2	5.0	5.3
CARTER MOUNTAIN	7950				---	---
CASPER MTN. SNOTEL	7850	1/01/01	---	6.4	6.3	7.5
CASTLE CREEK	8400				---	---
CCC CAMP	7000				---	5.1
CHALK CK #1 SNOTEL	9100	1/01/01	---	9.2	5.5	10.3
CHALK CK #2 SNOTEL	8200	1/01/01	---	5.8	4.2	6.7
CLOUD PEAK SNOTEL	9850	1/01/01	---	5.1	7.0	5.6
COLD SPRINGS SNOTEL	9630	1/01/01	---	1.8	1.5	4.4
COTTONWOOD CR SNOTEL	7700	1/01/01	---	9.1	6.2	8.8
DARBY CANYON	8250	1/03/01	37	10.0	7.8	10.0
DEER PARK SNOTEL	9700	1/01/01	---	7.0	3.6	---
DITCH CREEK	6870	12/28/00	13	2.3	.7	---
DIVIDE PEAK SNOTEL	8860	1/01/01	---	6.8	6.6	9.5
DOMELAKE SNOTEL	8880	1/01/01	---	5.3	4.2	6.3
DU NOIR	8760				---	---
EAST RIM DIV SNOTEL	7930	1/01/01	---	4.3	2.8	5.7
ELBO RANCH	7100	1/01/01	17	2.9	3.1	---
ELKHART PARK SNOTEL	9400	1/01/01	---	5.9	3.2	5.8
EVENING STAR SNOTEL	9200	1/01/01	---	7.4	9.7	12.9

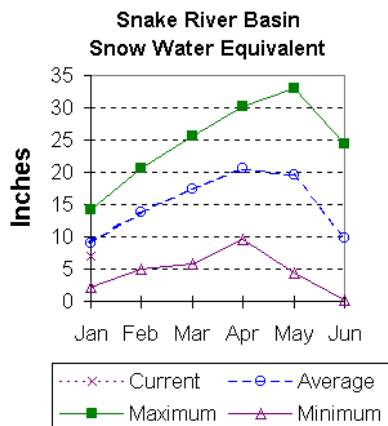
FOUR MILE MEADOWS	7860				---	---
FOXPARK	9060				---	---
GEYSER CREEK	8500				---	---
GLADE CREEK	7040	12/28/00	33	7.8	6.7	9.7
GRANITE CRK SNOTEL	6770	1/01/01	---	5.9	4.4	7.2
GRANNIER MEADOWS	8860				---	---
GRASSY LAKE SNOTEL	7270	1/01/01	---	11.0	9.9	14.3
GRAVE SPRINGS SNOTEL	8550	1/01/01	---	3.2	3.0	4.5
GREYS BOUNDARY	5720				---	4.4
GROS VENTRE SNOTEL	8750	1/01/01	---	5.3	2.4	6.9
GROVER PARK DIVIDE	7000				---	4.8
HAIRPIN TURN	9480				---	---
HANSEN S.M. SNOTEL	8360	1/01/01	---	2.1	2.2	3.3
HAMS FORK SNOTEL	7840	1/01/01	---	5.1	2.6	4.3
HASKINS CREEK	8980				---	---
HOBBS PARK SNOTEL	10100	1/01/01	---	4.1	3.0	7.7
HUCKLEBERRY DIVIDE	7300	12/28/00	30	6.3	6.6	9.3
INDIAN CREEK SNOTEL	9430	1/01/01	---	10.0	5.9	11.6
JACKPINE CREEK	7350	1/03/01	29	7.6	7.6	8.9
KELLEY R.S. SNOTEL	8180	1/01/01	---	6.0	3.0	6.7
KENDALL R.S. SNOTEL	7740	1/01/01	---	4.3	3.9	5.9
KIRWIN SNOTEL	9550	1/01/01	---	3.2	2.4	5.2
LA BONTE	8450				---	---
LAKE CAMP	7780				3.3	3.8
LA PRELE SNOTEL	8380	1/01/01	---	6.2	3.4	4.7
LARSEN CREEK	9020				---	---
LEWIS LAKE SNOTEL	7850	1/01/01	---	8.8	8.6	13.8
LEWIS LAKE DIVIDE	7850	12/28/00	42	10.4	12.5	17.5
LIBBY LODGE	8750				---	---
LITTLE BEAR RUN	6240	12/27/00	16	3.4	1.0	---
LITTLE WARM SNOTEL	9370	1/01/01	---	3.8	2.7	5.1
LOOMIS PARK SNOTEL	8240	1/01/01	---	6.9	5.0	7.0
LUPINE CREEK	7380	12/27/00	14	2.6	4.3	4.3
MALLO	6420	12/26/00	24	5.6	2.5	3.3
MARQUETTE SNOTEL	8760	1/01/01	---	1.3	1.9	3.8
MEDICINE LODGE LAKES	9340				---	---
MIDDLE FORK	7420				---	---
MIDDLE POWDER SNOTEL	7760	1/01/01	---	4.3	4.6	5.7
MORAN	6750	12/29/00	21	4.6	4.0	5.4
MOSS LAKE	9800				---	---
MOUNT TOM	5560	12/27/00	25	6.6	1.2	2.2
NEW FORK SNOTEL	8340	1/01/01	---	5.0	3.0	4.6
NORRIS BASIN	7500	12/31/00	16	2.7	5.4	5.0
NORTH BARRETT CREEK	9400				---	---
NORTH FRENCH SNOTEL	10130	1/01/01	---	12.4	10.3	11.4
NORTH RAPID CK PILL.	6130	1/01/01	---	3.4	2.9	---
NORTH TONGUE	8450				---	---
OLD BATTLE SNOTEL	9920	1/01/01	---	12.5	7.2	14.8
OLD FAITHFUL	7400	12/31/00	16	3.0	3.5	6.4
ONION GULCH	8780				---	---
OWL CREEK SNOTEL	8980	1/01/01	---	1.5	.7	1.9
PARKERS PEAK SNOTEL	9400	1/01/01	---	8.3	7.1	10.6

PHILLIPS BENCH SNOT.	8200	1/01/01	---	10.0	6.7	11.5
POCKET CREEK	9350				---	---
POISON MEADOWS	8500				---	9.7
POLE MOUNTAIN	8700				---	---
POWDER RVR.PASS SNOT	9480	1/01/01	---	3.0	4.3	5.1
PURGATORY GULCH	8970				---	---
RANGER CREEK	8120				---	---
RENO HILL SNOTEL	8500	1/01/01	---	6.9	5.2	6.2
REUTER CANYON	6280				---	---
ROWDY CREEK	8300				---	---
RYAN PARK	8400				---	---
SALT RIVER SNOTEL	7600	1/01/01	---	4.6	3.4	5.1
SAND LAKE SNOTEL	10050	1/01/01	---	13.0	8.7	15.1
SANDSTONE SNOTEL	8150	1/01/01	---	5.0	5.0	6.2
SAWMILL DIVIDE	9260				---	---
SHELL CREEK SNOTEL	9580	1/01/01	---	5.6	7.1	7.5
SHERIDAN R.S.	7750				---	---
SNAKE RIVER STATION	6920	12/28/00	28	6.6	5.0	8.8
SNAKE RV STA SNOTEL	6920	1/01/01	---	5.9	5.6	7.6
SNIDER BASIN SNOTEL	8060	1/01/01	---	4.8	3.2	6.0
SNOW KING MTN	7660				---	6.6
SOLDIER PARK	8780				---	---
SOUR DOUGH	8460				---	---
SOUTH BRUSH SNOTEL	8440	1/01/01	---	5.4	5.3	4.8
SOUTH PASS SNOTEL	9040	1/01/01	---	5.8	3.2	8.3
SPRING CRK. SNOTEL	9000	1/01/01	---	10.4	7.0	11.6
ST LAWRENCE ALT SNOT	8620	1/01/01	---	1.5	.8	3.3
SUCKER CREEK SNOTEL	8880	1/01/01	---	3.8	4.6	5.2
SYLVAN LAKE SNOTEL	8420	1/01/01	---	7.2	7.4	10.8
SYLVAN ROAD SNOTEL	7120	1/01/01	---	3.9	6.0	5.8
T CROSS RANCH	7900				---	---
TETON PASS W.S.	7740				---	---
THUMB DIVIDE SNOTEL	7980	1/01/01	---	3.6	4.2	7.2
THUMB DIVIDE	7980	12/28/00	17	3.4	4.2	8.4
TIE CREEK SNOTEL	6870	1/01/01	---	2.0	2.9	---
TIMBER CREEK SNOTEL	7950	1/01/01	---	1.1	.4	2.4
TOGWOTEE PASS SNOTEL	9580	1/01/01	39	9.1	6.1	11.1
TOWNSEND CRK SNOTEL	8700	1/01/01	---	2.9	1.5	4.5
TRIPLE PEAK SNOTEL	8500	1/01/01	---	9.1	7.3	10.9
TURPIN MEADOWS	6900				---	---
TWO OCEAN SNOTEL	9240	1/01/01	---	10.7	7.8	12.6
TYRELL RANGER STA.	8300				---	---
UPPER SPEARFISH	6500				---	---
WARREN PEAK SNOTEL	6520				4.0	5.3
WEBBER SPRING SNOTEL	9250	1/01/01	---	9.1	6.2	12.2
WHISKEY PARK SNOTEL	8950	1/01/01	---	9.8	8.1	12.8
WILLOW CREEK SNOTEL	8450	1/01/01	---	10.1	7.8	12.8
WINDY PEAK SNOTEL	7900	1/01/01	---	4.8	1.9	3.3
WOLVERINE SNOTEL	7650				5.8	5.2
WOOD ROCK G.S.	8440				---	---
YOUNTS PEAK SNOTEL	8350	1/01/01	---	4.5	5.0	8.9

# Snake River Basin (1)

## Snow

Percentage of average snow water equivalent (SWE) for each drainage in the basin is: Snake above Jackson Lake -- 71 percent (107% of last year at this time), Pacific Creek -- 78 percent (111% of last year at this time), Gros Ventre River -- 80 percent (159% of last year at this time), Hoback River -- 80 percent (139% of last year at this time), Greys River -- 81 percent (128% of last year at this time), Salt River -- 89 percent (137% of last year at this time). Snake River Basin above Palisades is 77 percent of average (123% 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.



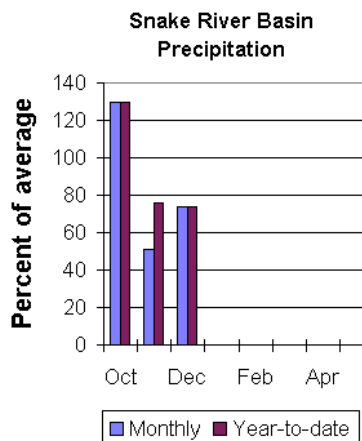
## Precipitation.

Precipitation across the basin was below average for last month. Monthly precipitation, for the basin, was 74 percent of average (101 percent of last year). December percentages range from 4 to 96 percent of average. Water-year-to-date precipitation is 74 percent of normal for the Snake River basin (144 percent of last year at this time) Year-to-date percentages range from 61 to 96 percent of average.

## Reservoir.

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

Grassy Lake —120 percent of average (12,600 acre feet compared to 12,200 last year), Jackson lake — 136 percent of average (637,600 acre feet compared to 632,300 acre feet last year), and Palisades Reservoir —56 percent of average (575,000 acre feet compared to 1,173,000 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 755,000 acre-feet (87 percent of normal). Yield from the Snake River above Palisades Reservoir is estimated to be 2,402,000 acre-feet (90 percent of normal). The 50 percent chance yield near Heise is expected to be 3,530,000 acre-feet (87 percent of normal). Pacific Creek at Moran is expected to yield about 150,000 acre-feet (90 percent of average). Greys River above Palisades Reservoir is estimated to yield 340,000 acre-feet (88 percent of normal). Salt River near Etna is estimated to have a yield of 345,000 acre-feet (87 percent of normal).



SNAKE RIVER BASIN Streamflow Forecasts - January 1, 2001									
Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>							
		Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
SNAKE near Moran (1,2)	APR-SEP	519	681	755	87	829	991	869	
SNAKE above Palisades (2)	APR-SEP	1829	2170	2402	90	2634	2975	2671	
SNAKE near Heise (2)	APR-SEP	2617	3161	3530	87	3899	4443	4049	
PACIFIC CREEK at Moran	APR-SEP	106	132	150	90	168	194	166	
GREYS above Palisades	APR-SEP	230	295	340	88	385	450	388	
SALT near Etna	APR-SEP	211	291	345	87	399	479	399	

SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of December					SNAKE RIVER BASIN Watershed Snowpack Analysis - January 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	12.6	12.2	10.5	SNAKE above Jackson Lake	9	107	71
JACKSON LAKE	847.0	637.6	632.3	470.2	PACIFIC CREEK	3	111	78
PALISADES	1400.0	575.0	1173.0	1036.0	GROS VENTRE RIVER	2	159	80
					HOBACK RIVER	5	139	80
					GREYS RIVER	4	128	81
					SALT RIVER	3	137	89
					SNAKE above Palisades	21	123	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.

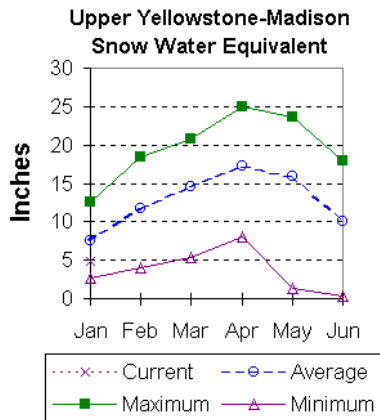
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

## 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 62 percent of average (84 percent of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 67 percent of average (90 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) – 120 percent of average. Hebgen Lake is storing about 86 percent and Ennis Lake is storing about 106 percent of last year's volume.

### Streamflow

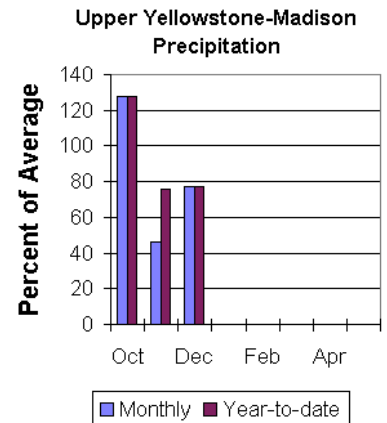
All the following forecasts are the 50 percent chance runoff for the April through September runoff period. Yellowstone at Lake Outlet is expected to yield about 630,000 acre feet (80 percent of normal). Yellowstone at Corwin Springs will yield about 1,550,000 acre-feet (80 percent of normal). Yellowstone near Livingston will yield about 1,790,000 acre feet (80 percent of normal). Hebgen lake inflow is estimated to be 425,000 acre feet (87 percent of normal). See the following page for detailed runoff volumes.

### Precipitation

December precipitation in the Madison and Yellowstone drainage was about 77 percent of average (84 percent of previous year) for the 8 reporting stations -- percentage range was from 49 to 149 percent of average. Water-year-to-date precipitation is about 77 percent of average (118 percent of last year's amount). Year to date percentage ranges from 53 to 101 percent

### Reservoir

Ennis Lake is storing 32,100 acre-feet (75 percent of capacity) – 91 percent of average. Hebgen Lake is storing about 355,500 acre-feet



UPPER YELLOWSTONE & MADISON RIVER BASINS  
Streamflow Forecasts - January 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.)		
YELLOWSTONE at Lake Outlet	APR-SEP	450	557	630	80	703	810	792
YELLOWSTONE RIVER at Corwin Spgs.	APR-SEP	1183	1401	1550	80	1699	1917	1937
YELLOWSTONE RIVER near Livingston	APR-SEP	1316	1598	1790	80	1982	2264	2241
HEBGEN Reservoir Inflow	APR-SEP	325	384	425	87	466	525	486

Reservoir	UPPER YELLOWSTONE & MADISON RIVER BASINS Reservoir Storage (1000 AF) - End of December				UPPER YELLOWSTONE & MADISON RIVER BASINS Watershed Snowpack Analysis - January 1, 2001			
	Usable Capacity	*** Usable Storage This Year	Usable Storage Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
ENNIS LAKE	41.0	30.7	28.9	33.7	MADISON RIVER in WY	9	84	62
HEBGEN LAKE	377.5	297.0	344.8	246.8	YELLOWSTONE RIVER in WY	10	90	67

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

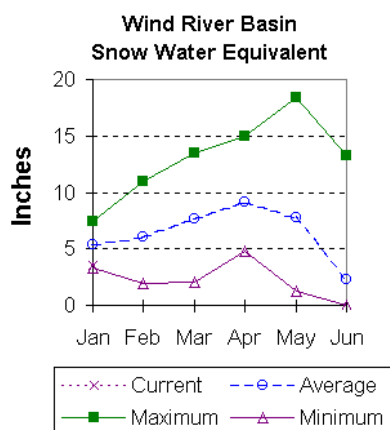
The average is computed for the 1961-1990 base period.

- (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.

## Wind River Basin (3)

### Snow

The Wind River basin has below average snow water equivalent (SWE) for this time of the year. SWE in the Wind River above Dubois is 74 percent of average (146 percent of last year). The Little Wind SWE is 51 percent of average water content (147 percent of last year), and the Popo Agie drainage SWE is about 62 percent of average (175 percent of last year). The Wind River basin, above Boysen Reservoir, SWE is about 66 percent of average (about 151 percent of last year). See the Basin Summary of Snow Course Data at the front of this report for details.

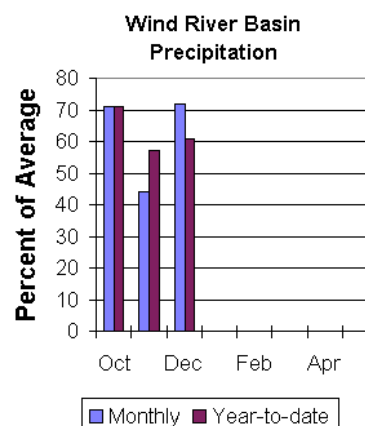


### Precipitation

December precipitation in the basin varied from 88 to 210 percent of average. December precipitation for the basin was about 133 percent of average for the 8 reporting stations; that is about 61 percent of last year's amount. Water year-to-date precipitation is 61 percent of normal. The current water-year-to-date average is about 130 percent of last year at this time. Year to date figures range from 167 to 96 percent of average.

### Reservoirs

Current storage varies from 70 to 152 percent of average. Bull Lake is currently storing about 58 percent of capacity at this time of the year. Boysen Reservoir is storing about 77 percent of capacity 457,100 acre feet) -- normally the reservoir is at 103 percent of capacity at this time of the year. Pilot Butte is storing 75 percent of capacity (23,600 acre feet) -- normally the reservoir is at 49 percent of capacity at this time of the year.



62,500 acre feet (41 percent of capacity) -- normally the reservoir is at 58 percent of capacity at this time of the year. Boysen Reservoir is storing about 77 percent of capacity 457,100 acre feet) -- normally the reservoir is at 103 percent of capacity at this time of the year. Pilot Butte is storing 75 percent of capacity (23,600 acre feet) -- normally the reservoir is at 49 percent of capacity at this time of the year.

### Streamflow

Water supply is estimated to be 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 435,000 acre feet (81 percent of average). Wind River at Riverton will yield about 445,000 acre feet (69 percent of average). Boysen Reservoir inflow will yield about 575,000 acre feet (71 percent of normal). Bull Lake Creek near Lenore is expected to yield about 130,000 acre feet (71 percent of average). Little Popo Agie River near Lander is expected to yield about 33,000 acre feet (64 percent of average). South Fork of Little Wind near Fort Washakie will yield about 60,000 acre feet (74 percent of average). Little Wind River near Riverton will yield about 245,000 acre feet (76 percent of average).

WIND RIVER BASIN								
Streamflow Forecasts - January 1, 2001								
Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	(1000AF)
WIND RIVER abv Bull Lake Cr (2)	APR-SEP	276	371	435	81	499	594	538
WIND RIVER at Riverton (2)	APR-SEP	158	329	445	69	561	732	648
BOYSEN RESERVOIR Inflow (2)	APR-SEP	223	433	575	71	717	927	809
BULL LAKE CR near Lenore (2)	APR-SEP	75	108	130	71	152	185	183
LT POPO AGIE RIVER nr Lander	APR-SEP	7.8	20	33	64	46	65	52
SF LT WIND nr Fort Washakie	APR-SEP	30	48	60	74	72	90	81
LT WIND RIVER nr Riverton	APR-SEP	74	176	245	76	314	416	324

WIND RIVER BASIN Reservoir Storage (1000 AF) - End of December				WIND RIVER BASIN Watershed Snowpack Analysis - January 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	62.5	95.7	88.8	WIND RIVER above Dubios	3	146	74
BOYSEN	596.0	457.1	547.0	613.5	LITTLE WIND	2	147	51
PILOT BUTTE	31.6	23.6	23.0	15.5	POPO AGIE	3	175	62
					WIND above Boyesen Resv	7	151	66

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

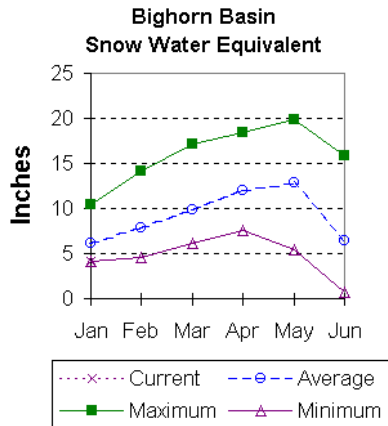
The average is computed for the 1961-1990 base period.

- (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 68 percent of average (82 percent of last year). Greybull River SWE is 57 percent of average (154 percent of last year). Shell Creek SWE is 72 percent of average (77 percent of last year). The basin SWE, as a whole, is currently 68 percent of average (84 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



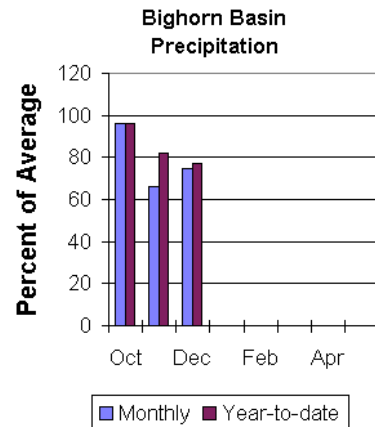
## Precipitation

December precipitation was 75 percent of the monthly average (62 percent of last year). Sites ranged from 0 to 91 percent of average for the month. Year-to-date precipitation is 77 percent of normal; that is 95 percent of last year at this time. Year to date percentages, from the 10 reporting stations, range from 71 to 86.

## Reservoir

Boysen Reservoir is currently storing 457,100-acre feet (75 percent of average). Bighorn

Lake is now at 99 percent of average (881,000-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 575,000 acre feet (71 percent of average); the Greybull River nr Meeteese should yield 120,000 acre feet (60 percent of average); Shell Creek near Shell should yield 62,000 acre feet (83 percent of average) and the Bighorn River at Kane should yield 840,000 acre feet (75 percent of average).

BIGHORN RIVER BASIN  
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BOYSEN RESERVOIR Inflow (2)	APR-SEP	223	433	575	71	717	927	809
GREYBULL RIVER nr Meeteetse	APR-SEP	88	107	120	60	133	152	201
SHELL CREEK nr Shell	APR-SEP	51	58	62	83	66	73	75
BIGHORN RIVER at Kane (2)	APR-SEP	382	634	840	75	1046	1304	1124

BIGHORN RIVER BASIN Reservoir Storage (1000 AF) - End of December					BIGHORN RIVER BASIN Watershed Snowpack Analysis - January 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	457.1	547.0	613.5	NOWOOD RIVER	2	82	68
BIGHORN LAKE	1356.0	881.0	960.3	891.8	GREYBULL RIVER	2	154	57
					SHELL CREEK	3	77	72
					BIGHORN (Boysen-Bighorn)	7	84	68

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

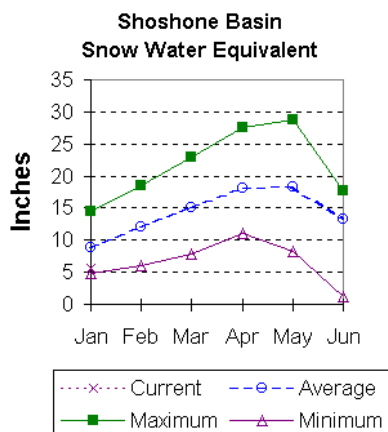
The average is computed for the 1961-1990 base period.

- (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 89 percent of the December average (61 percent of last year) in the Shoshone River basin. The Clarks Fork River basin SWE is 61 percent of average (65 percent of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.



Currently, about 379,000 acre-feet are stored in the reservoir compared to 457,500 acre feet last year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

### Streamflow

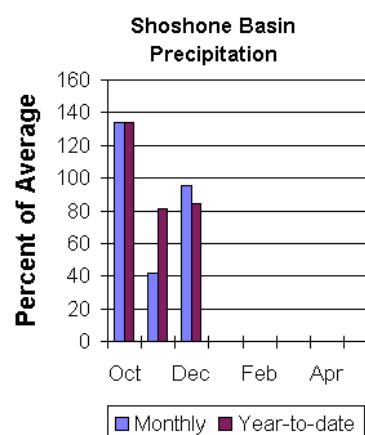
The fifty percent yield (April through September period) for North Fork Shoshone River at Wapiti is expected to be 400,000 acre-feet (77 percent of average). South Fork of the Shoshone River near Valley is estimated to yield of 165,000 acre-feet (61 percent of average), and South Fork above Buffalo Bill Reservoir is expected to be 150,000 acre-feet (66 percent of average). At the Buffalo Bill Reservoir, the fifty percent chance yield for the Shoshone River is expected to be about 590,000 acre-feet (73 percent of average). The fifty-percent chance yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be about 415,000 acre-feet (70 percent of average).

### Precipitation

Precipitation for the month of December was 95 percent of normal (97 percent of last year). Monthly percentages range from 7 to 160 percent of average. The basin year-to-date precipitation is now 84 percent of average (102 percent of last year). Year-to-date percentages range from 62 to 100 percent of average.

### Reservoir

Current storage in Buffalo Bill Reservoir is 87 percent of average (83 percent of last year's storage) – the reservoir is about 59 percent of capacity.





SHOSHONE & CLARKS FORK RIVER BASINS  
Streamflow Forecasts - January 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)		
NF SHOSHONE RIVER at Wapiti	APR-SEP	328	371	400	77	429	472	520	
SF SHOSHONE RIVER nr Valley	APR-SEP	105	141	165	61	189	225	269	
SF SHOSHONE RIVER abv Buffalo Bill	APR-SEP	64	115	150	66	185	236	229	
BUFFALO BILL DAM Inflow (2)	APR-SEP	426	503	590	73	677	699	804	
CLARKS FORK RIVER nr Belfry	APR-SEP	301	369	415	70	461	529	590	

SHOSHONE & CLARKS FORK RIVER BASINS Reservoir Storage (1000 AF) - End of December				SHOSHONE & CLARKS FORK RIVER BASINS Watershed Snowpack Analysis - January 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	379.0	457.5	436.7	SHOSHONE RIVER	6	89	61
					CLARKS FORK in WY	6	76	65

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

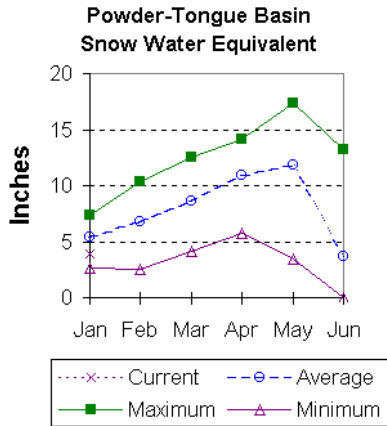
The average is computed for the 1961-1990 base period.

- (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 74 percent of normal (87 percent of last year). The Goose Creek drainage is 84 percent of average (115 percent of last year). Clear Creek drainage is 81 percent of normal SWE (78 percent of last year). Crazy Woman Creek is 59 percent of average (70 percent of last year). The upper Powder River drainage is 68 percent of average (93 percent of last year). The Powder River basin snow water equivalent (SWE), in Wyoming, is about 73 percent of average (86 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.

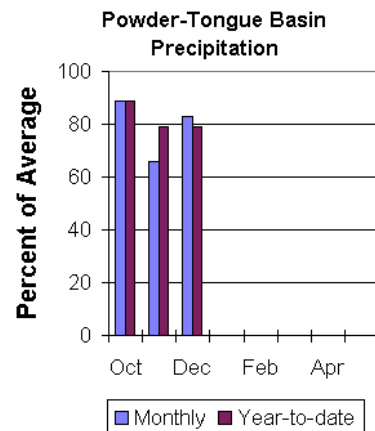


## Precipitation

December precipitation was 83 percent of average for the 9 reporting stations (64 percent of last year). Monthly percentages range from 20 to 152 percent of average. Precipitation for the year ranges from 72 to 86 percent of average at the reporting stations. Year-to-date precipitation is about 79 percent of average in the basin; this is 96 percent of last year at this time.

## Reservoir

Tongue River Reservoir is currently at 134 percent of average storage for this time of year (34,900 acre feet) – the reservoir is about 51 percent of capacity (total capacity is 68,000 acre feet). Last year at this time the reservoir was storing about 35,900 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 90,000-acre feet (78 percent of normal). Middle Fork of the Powder River near Barnum is estimated to yield 14,000-acre feet (71 percent of average). The North Fork of the Powder near Hazelton should yield about 7,100 acre-feet (70 percent of normal). The estimated yield for Clear Creek near Buffalo is 29,000 acre-feet (74 percent of average). Rock Creek near Buffalo will yield about 18,000 acre-feet (75 percent of normal), and Piney Creek at Kearny should yield about 39,000 acre-feet (77 percent of average).

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

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		=====		>>===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
TONGUE RIVER nr Dayton (2)	APR-SEP	59	78	90	78	102	121	115
MIDDLE FORK POWDER nr Barnum	APR-SEP	6.3	10.9	14.0	71	17.1	22	19.7
NORTH FORK POWDER nr Hazelton	APR-SEP	4.5	6.1	7.1	70	8.1	9.7	10.1
CLEAR CREEK nr Buffalo	APR-SEP	20	26	29	74	33	38	39
ROCK CREEK nr Buffalo	APR-SEP	12.1	15.6	18.0	75	20	24	24
PINEY CREEK at Kearny	APR-SEP	13.5	29	39	77	49	65	51

POWDER & TONGUE RIVER BASINS Reservoir Storage (1000 AF) - End of December					POWDER & TONGUE RIVER BASINS Watershed Snowpack Analysis - January 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	34.9	35.9	26.0	UPPER TONGUE RIVER	5	87	74
					GOOSE CREEK	1	115	84
					CLEAR CREEK	2	78	81
					CRAZY WOMAN CREEK	1	70	59
					UPPER POWDER RIVER	3	93	68
					POWDER RIVER in WY	5	86	73

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

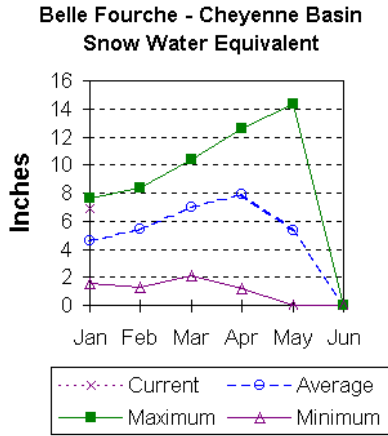
The average is computed for the 1961-1990 base period.

- (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 January 1, is 150 percent of normal. This is 243 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.



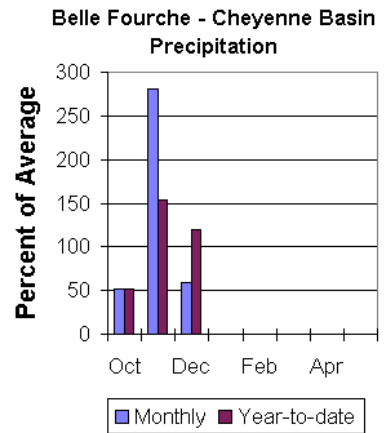
## Precipitation.

Precipitation, for the month of December was 59 percent of average in the Black Hills (71 percent of last December). Monthly percentages range from 4 to 123 percent. Year-to-date precipitation is 120 percent of average and 220 percent of last year's amount. Year to date percentages range from 98 to 138. This is from the 3 reporting stations.

## Reservoir.

Reservoir storage is generally above average in the basin.

Angostura is currently storing 89 percent of average (85,400-acre feet). Belle Fourche reservoir is storing 146 percent of average (132,400-acre feet). Deerfield reservoir is storing 122 percent of average (15,000-acre feet). Keyhole reservoir is storing 162 percent of average (158,700-acre feet). Pactola reservoir is storing 118 percent of average (54,000-acre feet), and Shadehill reservoir is storing 82 percent of average (41,500-acre feet).



## Streamflow

There was no data available to prepare streamflow forecast in this basin.

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

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>					
		Chance Of Exceeding *					
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BELLE FOURCHE & CHEYENNE RIVER BASINS							

BELLE FOURCHE & CHEYENNE RIVER BASINS Reservoir Storage (1000 AF) - End of December					BELLE FOURCHE & CHEYENNE RIVER BASINS Watershed Snowpack Analysis - January 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	85.4	105.5	96.4	BELLE FOURCHE	3	243	150
BELLE FOURCHE	178.4	132.4	173.1	90.6				
DEERFIELD	15.2	15.0	14.8	12.3				
KEYHOLE	193.8	158.7	171.9	98.2				
PACTOLA	55.0	54.0	54.6	45.8				
SHADEHILL	81.4	41.5	55.7	50.7				

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

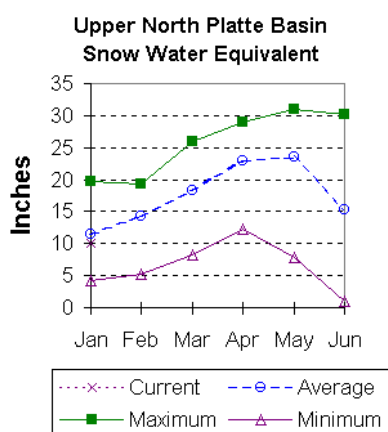
The average is computed for the 1961-1990 base period.

- (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 88 percent of average snow water equivalent (SWE) recorded for this time of the year (136 percent of last year). SWE in the drainage area above Northgate is about 94 percent of average and 137 percent of last year at this time. SWE in the Encampment River drainage is about 79 percent of normal and 146 percent of last year. Brush Creek SWE for the year is about 110 percent of normal and 114 percent of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 83 percent of average and 156 percent of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



### Precipitation

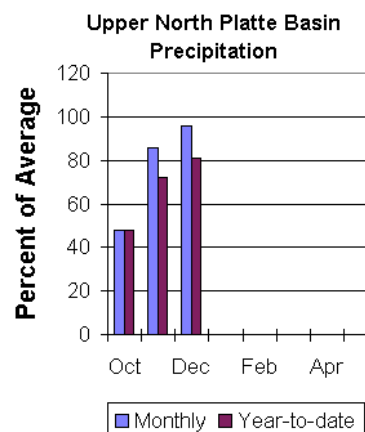
Eight reporting stations indicate December precipitation was 96 percent of average and about 108 percent of last year's amount. December precipitation varied from 34 to 173 percent of average. Total water-year-to-date precipitation is about 81 percent of average for the basin, which is about 149 percent of last year's amount. Year to date percentage ranges from 86 to 152 percent of average for the 8 reporting stations.

### Reservoirs

Seminoe Reservoir is currently storing about 132 percent of normal for this time of the year. Currently, the reservoir is storing 85 percent of last year's amount. Seminoe Reservoir is estimated to be storing 717,900 acre-feet (71 percent of capacity). Last year, at this time, the reservoir had 845,600 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 245,000 acre-feet (90 percent of average). Encampment River near Encampment is estimated to yield 130,000 acre-feet (83 percent of normal). Rock Creek near Arlington is estimated to yield 53,000 acre-feet (95 percent of average). Seminoe Reservoir inflow should be about (760,000 acre-feet (89 percent of normal). See the following table for more detailed information on projected runoff.



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

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
North Platte River nr Northgate	APR-SEP	99	186	245	90	304	391	271
Encampment River nr Encampment	APR-SEP	58	101	130	83	159	202	156
Rock Creek nr Arlington	APR-SEP	33	44	53	95	63	78	56
Seminoe Reservoir inflow	APR-JUL	297	543	710	90	877	1123	788
	APR-SEP	384	608	760	89	912	1136	851

UPPER NORTH PLATTE RIVER BASIN Reservoir Storage (1000 AF) - End of December					UPPER NORTH PLATTE RIVER BASIN Watershed Snowpack Analysis - January 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	717.9	845.6	542.0	N PLATTE above Northgate	5	137	94
					ENCAMPMENT RIVER	3	146	79
					BRUSH CREEK	2	114	110
					MEDICINE BOW & ROCK CREEK	2	156	83
					N PLATTE above Seminoe	13	136	88

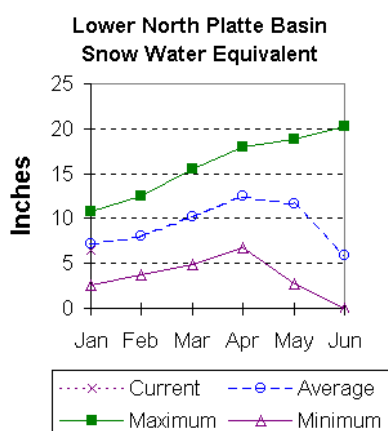
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.  
The average is computed for the 1961-1990 base period.

- (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 89 percent of normal (140 % of last year). The Sweetwater drainage SWE is currently 70 percent (188 percent of last year). Deer and LaPrele Creek SWE is 120 percent of average (152 percent of last year). SWE for the North Platte above the Laramie River drainage is 89 percent of average (140 % of last year). SWE for the Laramie River above the mouth is 82 percent of average (148 % of last year). SWE for the Laramie River above Laramie is 83 percent of average (141 % of last year). SWE for the Little Laramie River is 78 percent of average (165 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



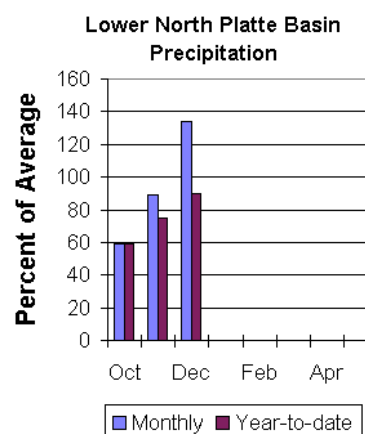
### Precipitation

Of the 6 reporting stations, percentages for the month range from 0 to 200. December precipitation for the basin was 134 percent of average (148 percent of last year). The water year-to-date precipitation for the basin is currently 90 percent of average (141 percent of last year). Year to date percentages range from 68 to 138.

### Reservoir

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

Alcova 156,400 acre feet (102 percent of average); Glendo 236,800 acre feet (86 percent of average); Guernsey 10,100 acre feet (184 percent of average); Pathfinder 700,500 acre feet (139 percent of average); Seminoe 717,900 acre feet (132 percent of average). Wheatland No.2 did not report. Water allocated to project use is near average with North Platte Project users at 93 percent of average, Kendrick Project users at 119 percent of average, and Glendo Project users at 117 percent of average.



### Streamflow

Yields from 80 to 103 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 60,000 acre-feet (81 percent of average). Deer Creek at Glenrock is expected to yield about 103 percent of average (40,000 acre-feet). LaPrele Creek above the reservoir is estimated to yield 88 percent of average (22,000 acre-feet). North Platte River below Guernsey Reservoir is expected to yield about 87 percent of normal (860,000 acre-feet), and below Glendo Reservoir is anticipated to yield about 88 percent of average (840,000 acre-feet). Laramie River near Woods should yield about 82 percent of average (110,000 acre-feet). The Little Laramie near Filmore should produce about 54,000 acre-feet (84 percent of average).



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

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Sweetwater River nr Alcova	APR-JUL	14.3	39	55	80	72	96	69
	APR-SEP	16.3	42	60	81	78	104	74
Deer Creek at Glenrock	APR-SEP	16.8	29	40	103	52	73	39
La Prele Creek ab La Prele Reservoir	APR-SEP	4.1	12.4	22	88	36	65	25
North Platte River blw Glendo Reserv	APR-JUL	557	713	820	89	927	1083	925
	APR-SEP	562	728	840	88	952	1118	958
North Platte River blw Guernsey Resv	APR-JUL	502	697	830	89	963	1158	938
	APR-SEP	520	722	860	87	998	1200	985
Laramie River nr Woods	APR-SEP	40	82	110	82	138	180	135
Little Laramie River nr Filmore	APR-SEP	30	44	54	84	64	78	64

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

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Watershed Snowpack Analysis - January 1, 2001

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	156.4	156.8	153.1	SWEETWATER	1	188	70
GLENDO	506.4	236.8	276.4	276.4	DEER & LAPRELE CREEKS	2	152	120
GUERNSEY	45.6	10.1	10.5	5.5	N PLATTE abv Laramie R.	16	140	89
PATHFINDER	1016.5	700.5	928.9	505.0	LARAMIE RIVER abv Laramie	3	141	83
SEMINOE	1016.7	717.9	845.6	542.0	LITTLE LARAMIE RIVER	1	165	78
WHEATLAND #2		NO REPORT			LARAMIE RIVER above mouth	4	148	82
NORTH PLATTE PROJ	1062.1	526.8	899.1	568.4	NORTH PLATTE	17	140	89
KENDRICK PROJECT	1201.7	972.0	993.6	819.8				
GLENDO PROJECT USERS	183.2	136.5	155.6	116.2				

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

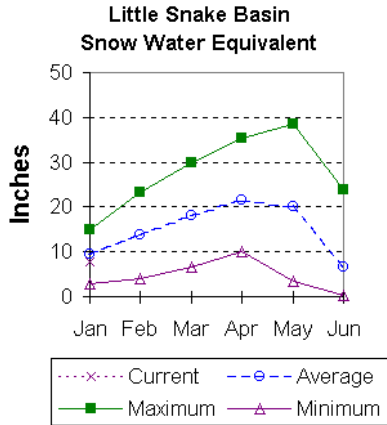
The average is computed for the 1961-1990 base period.

- (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, but there is more snow than last year at this time.. Currently, snow water equivalent (SWE) in the Little Snake River drainage is 83 percent of average (131 percent of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.

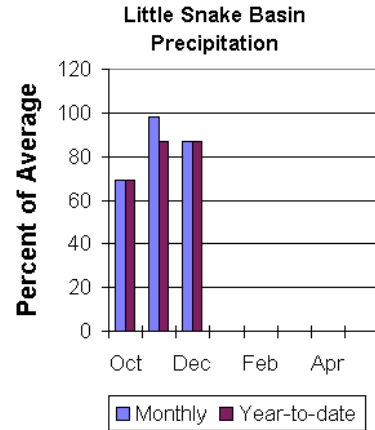


## Precipitation

Precipitation across the basin was just below average this past month. December precipitation was 87 percent of average (105 percent of last year) for the 5 reporting stations. December precipitation ranged from 58 to 135 percent of average. The Little Snake River basin water-year-to-date precipitation is currently 87 percent of average (142 percent of last year). Year-to-date percentages range from 74 to 98 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 135,000 acre-feet (87 percent of normal). Little Snake River near Dixon is estimated to yield 280,000 acre-feet (85 percent of normal).



LITTLE SNAKE RIVER BASIN  
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>							
		Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Little Snake River nr Slater	APR-JUL	71	107	135	87	167	220	155	
LITTLE SNAKE R nr Dixon	APR-JUL	163	233	280	85	327	397	329	

LITTLE SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of December				LITTLE SNAKE RIVER BASIN Watershed Snowpack Analysis - January 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	6	131	83

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

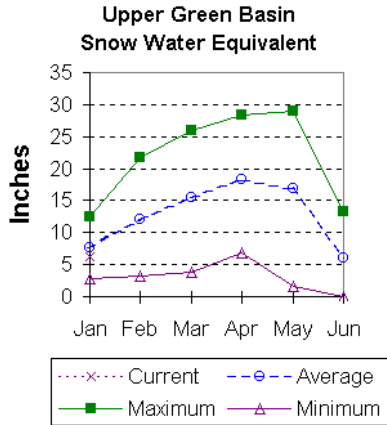
The average is computed for the 1961-1990 base period.

- (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 85 percent of average (145 percent of last year). The Green River basin SWE above Warren Bridge is 82 percent of normal (156 percent of last year). SWE on the west side of the Upper Green River basin is about 82 percent of normal, 138 percent of this time last year. Newfork River SWE is now 105 percent of normal (176 percent of last year). Big Sandy-Eden Valley SWE is about 100 percent of average (240 percent of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



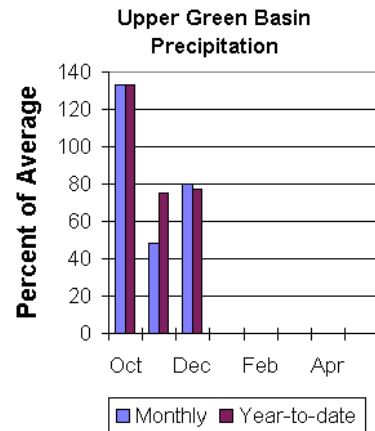
## Precipitation

The 11 reporting precipitation sites in the basin were 80 percent of the December average (148 percent of last year at this time). December precipitation varied from 2 to 90 percent of average. Water year-to-date precipitation is about 77 percent of average (162 percent of last year). Year to date percentage of average ranges from 59 to 77 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 (73 percent of average and 44 percent of the total capacity). Flaming Gorge Reservoir is currently storing 3,006,000 acre feet -- 92 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 near average to below average. Green River at Warren Bridge is expected to yield about 225,000 acre-feet (85 percent of normal). Pine Creek above Fremont Lake is expected to yield 102,000 acre-feet (98 percent of normal). New Fork River near Big Piney is expected to yield about 365,000 acre-feet (95 percent of normal). Fontenelle Reservoir Inflow is estimated to be 735,000 acre-feet (87 percent of average), and Big Sandy near Farson is expected to be about 53,000 acre-feet (93 percent of normal).

UPPER GREEN RIVER BASIN  
Streamflow Forecasts - January 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)	
Green River at Warren Bridge	APR-JUL	142	191	225	85	259	308	266
Pine Creek abv Fremont Lake	APR-JUL	77	92	102	98	112	127	104
New Fork River nr Big Piney	APR-JUL	220	306	365	95	424	510	385
Fontenelle Reservoir Inflow	APR-JUL	504	636	735	87	841	1009	849
Big Sandy River nr Farson	APR-JUL	31	44	53	93	62	75	57

UPPER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of December					UPPER GREEN RIVER BASIN Watershed Snowpack Analysis - January 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	156	82
EDEN		NO REPORT			UPPER GREEN (West Side)	5	138	82
FLAMING GORGE	3749.0	3006.0	3269.0	---	NEWFORK RIVER	2	176	105
FONTENELLE	344.8	151.9	210.4	208.3	BIG SANDY/EDEN VALLEY	1	240	100
					GREEN above Fontenelle	11	145	85

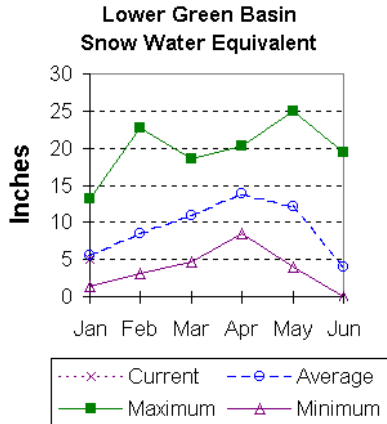
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.  
The average is computed for the 1961-1990 base period.

- (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 Blacks Fork and Henrys Fork drainage's, as of January 1, are just below average. SWE in the Hams Fork, as of January 1, is 93 percent of average (183% of last year). Blacks Fork SWE is currently 97 percent of average (150 percent of last year). The basin, as a whole, is 85 percent of average (145 percent of last year). For more information see Basin Summary of Snow Courses at beginning of this report.



feet; this is 73 percent of average (72 % of last year). Flaming Gorge is currently storing 3,006,000 acre feet. There is no average established for Flaming Gorge. Viva Naughton is currently storing 32,200 acre feet; this is 110 percent of average.

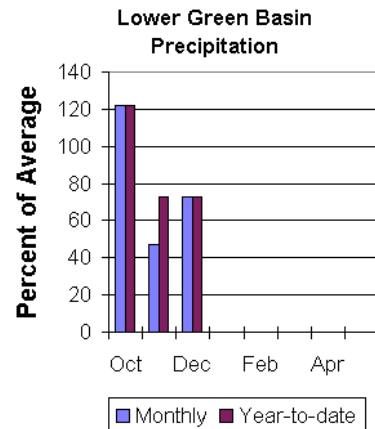
### Streamflow

Expected yields vary from 85 to 100 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 765,000-acre feet (85 percent of average). Blacks Fork near Robertson is forecast to yield 94,000-acre feet (99 percent of average). East Fork of Smiths Fork near Robertson is estimated to yield 30,000 acre-feet (100 percent of average). The estimated yield for Hams Fork near Frontier is 60,000-acre feet (91 percent of average). Viva Naughton Reservoir inflow will be about 80,000-acre feet (90 percent of average). Flaming Gorge Reservoir inflow will be about 1,060,000-acre feet (89 percent of average).

### Precipitation

Precipitation was below average for the 3 reporting stations during December. Precipitation ranged from 48 to 100 percent of average for the month. The entire basin received 73 percent of average for the month (139 percent of last year). The basin year-to-date precipitation is currently 73 percent of average (191 percent of last year). Year to date percentages range from 67 to 83.

### Reservoir



Fontenelle Reservoir is currently storing 151,900 acre

LOWER GREEN RIVER BASIN  
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>							
		Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Green River nr Green River, WY	APR-JUL	457	640	765	85	890	1073	899	
Blacks Fork nr Robertson	APR-JUL	63	81	94	99	107	125	95	
EF of Smiths Fork nr Robertson	APR-JUL	22	27	30	100	34	41	30	
Hams Fk blw Pole Ck nr Frontier	APR-JUL	37	50	60	91	71	89	66	
Hams Fk Inflow to Viva Naughton Res	APR-JUL	37	63	80	90	97	123	89	
Flaming Gorge Reservoir Inflow	APR-JUL	634	888	1060	89	1232	1486	1196	

LOWER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of December					LOWER GREEN RIVER BASIN Watershed Snowpack Analysis - January 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	151.9	210.4	208.3	HAMS FORK RIVER	3	183	93
FLAMING GORGE	3749.0	3006.0	3269.0	---	BLACKS FORK	2	150	97
VIVA NAUGHTON RES	42.4	32.2	---	29.3	HENRYS FORK	2	152	131
					GREEN above Flaming Gorge	18	154	90

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

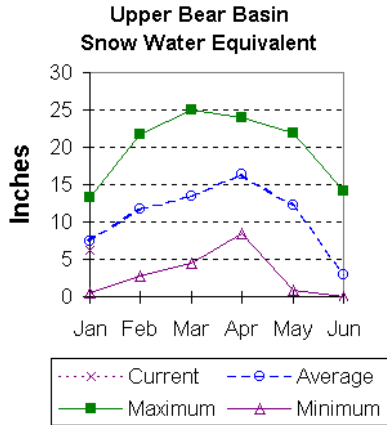
The average is computed for the 1961-1990 base period.

- (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 84 percent of average (183 percent of last year). SWE for the Bear River in Utah is estimated to be 78 percent of average; that is about 165 percent of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 88 percent of average (167 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.



December of last year. Current storage is about 10 percent of the reservoir capacity.

## Streamflow

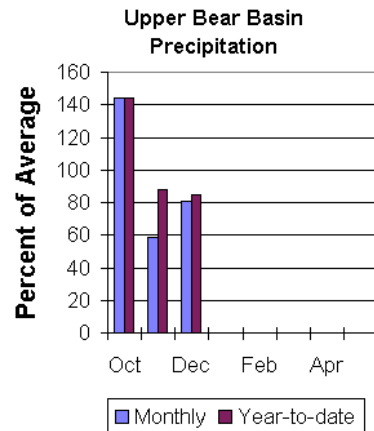
The following 50 percent chance stream flow yields are for the April through September period. Smiths Fork near Border is estimated to yield 97,000 acre-feet (82 percent of normal), and Thomas Fork drainage near the Idaho-Wyoming state line is estimated to yield 26,000 acre-feet or 72 percent of normal. Bear River near the Utah-Wyoming State Line is expected to yield about 104,000 acre feet ( 83 percent of average), The Bear River near Woodruff is expected to yield about 129,000 acre-feet (about 84 percent of normal).

## Precipitation

Precipitation for the month of December was 81 percent of average for the 1 reporting stations; this is 142 percent of the previous December. The year-to-date precipitation, for the basin, is 85 percent of average; this is 210 percent of last year's amount.

## Reservoir

Woodruff Narrows reservoir is currently storing about 6,000 acre feet. Currently, the reservoir is storing about 16 percent of the volume stored





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UPPER BEAR RIVER BASIN  
Streamflow Forecasts - January 1, 2001

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Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SMITHS FK nr Border, WY	APR-SEP	58	79	97	82	119	162	118
THOMAS FK nr WY-ID State Line (Disc.	APR-SEP	12.4	19.3	26	72	35	54	36
Bear R nr UT-WY State Line	APR-SEP	72	90	104	83	120	150	126
BEAR R nr Woodruff, UT	APR-SEP	63	97	129	84	172	262	154

UPPER BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of December					UPPER BEAR RIVER BASIN Watershed Snowpack Analysis - January 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	6.0	37.5	---	UPPER BEAR RIVER in Utah	5	165	87
					SMITHS & THOMAS FORKS	3	167	88
					BEAR RIVER abv ID line	6	183	84
					NORTHWEST	55	101	69
					NORTHEAST	10	102	79
					SOUTHEAST	20	139	90
					SOUTHWEST	25	149	87

\* 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.

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