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**Natural  
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# Wyoming Basin Outlook Report February 1, 2000



# 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 -- SWE is 10 to 30 percent below average for most of the State. Precipitation for January was average to below average in the northeast and average to above average for the rest of the State. Precipitation for year-to-date is below to much below normal. Most of the reservoir levels are above average. Forecast runoff varies, but is generally from 49 to 91 percent of average. The mean of all the forecast points is 28 percent below average -- for all points in the State. The minimum yield forecast was 49 percent of average in the South Fork above Buffalo Bill and the maximum forecast was 91 percent of average at Pine Creek above Fremont Lake.

## Snowpack

Snow conditions improved across the State in January, but SWE is generally below average across the State. SWE in the northwestern portion of Wyoming improved significantly, but is still about 70-90 percent of average. Northeast Wyoming SWE varies from less than 70 percent of average to about 90 percent of average. The Southeast and Southwest portions of the State generally have 70 to 90 percent of average SWE, but some areas of less than 70 percent of average SWE are included in the area.

## Precipitation

January precipitation was generally good across the state except for the Northeast. The following table displays the major river basins and their departure from normal for January 2000.

Basin	Departure from normal	Basin	Departure from normal
Snake River	+01%	Upper North Platte River	+32%
Yellowstone & Madison	+04%	Lower North Platte	+27%
Wind River	+17%	Little Snake River	+01%
Big Horn	+08%	Upper Green River	+08%
Shoshone & Clarks Fork	+26%	Lower Green River	-04%
Powder & Tongue River	+22%	Upper Bear River	+09%
Belle Fourche & Cheyenne	-25%		

## Streams

Stream flow yield is expected to vary from below to much below average across the State. Yield from the northeast portion of Wyoming will be below average -- yield estimates vary from 50 to 87 percent of average (mean is 68%). In most cases, the southeast portion of the state will be about 70 percent of normal -- yield estimates range from 49 to 89 percent of normal. The southwest portion of Wyoming varies from 56 to 91 percent of average -- mean estimated yield for southeast Wyoming is about 74 percent of average. The northwest part of the State is expected to yield about 75 percent of normal -- yields vary from 49 to 91 percent of normal.

## 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 2000

BASIN AREA RESERVIOR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
ALCOVA	85	84	85	100	100
ANGOSTURA	89	95	80	111	94
BELLE FOURCHE	97	94	57	171	103
BIG SANDY			NO REPORT		
BIGHORN LAKE	69	64	62	112	109
BOYSEN	89	96	97	91	93
BUFFALO BILL	69	69	64	108	101
BULL LAKE	63	64	57	110	97
DEERFIELD	98	95	84	116	103
EDEN			NO REPORT		
FLAMING GORGE			AVERAGE NOT ESTABLISHED		
FONTENELLE	49	52	57	85	93
GLENDO	65	80	65	99	81
GRASSY LAKE	82	85	71	115	96
GUERNSEY	29	38	15	194	76
HEBGEN LAKE	86	82	65	131	105
JACKSON LAKE	76	72	57	134	106
KEYHOLE	89	92	51	175	97
PACTOLA	98	94	83	118	104
PALISADES	88	85	75	118	103
PATHFINDER	92	87	54	169	105
PILOT BUTTE	71	71	52	136	101
SEMINOE	82	72	46	178	113
SHADEHILL	29	68	60	47	42
TONGUE RIVER	54	9	40	135	590
VIVA NAUGHTON RES	84	74	68	124	114
WHEATLAND #2	67	63	41	165	106
WOODRUFF NARROWS			AVERAGE NOT ESTABLISHED		
GLENDO PROJECT USERS	85	85	65	130	99
KENDRICK PROJECT	82	82	68	121	101
NORTH PLATTE PROJ	89	81	57	157	110

# Basin Summary of Snow Course Data

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

FEBRUARY 2000

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
-----						
SNAKE RIVER BASIN						
ASTER CREEK	7750	1/26/00	51	15.4	22.7	20.0
BASE CAMP SNOTEL	7030	2/01/00	---	10.8	15.5	12.5
BASE CAMP	7030	1/27/00	46	12.0	17.2	13.9
BLACK BEAR PILLOW	7950	2/01/00	---	20.6	31.7	24.5
BLIND BULL SNOTEL	8900	2/01/00	---	16.8	18.1	19.0
BRYAN FLAT	6420	1/28/00	20	4.8	6.1	6.3
CCC CAMP	7000	1/26/00	32	7.7	7.8	8.3
COTTONWOOD CR SNOTEL	7700	2/01/00	---	14.1	14.0	14.0
DARBY CANYON	8250	2/02/00	46	13.4	15.4	15.4
EAST RIM DIV SNOTEL	7930	2/01/00	---	6.8	8.5	9.3
ELBO RANCH	7100	1/31/00	29	6.5	7.8	8.1
FOUR MILE MEADOWS	7860	1/27/00	29	6.7	9.0	8.9
GLADE CREEK	7040	1/26/00	47	12.2	18.0	15.6
GRASSY LAKE SNOTEL	7270	2/01/00	---	18.5	27.2	23.0
GREYS BOUNDARY	5720	1/26/00	29	8.0	7.4	7.9
GROS VENTRE SNOTEL	8750	2/01/00	---	5.9	9.4	10.6
GROVER PARK DIVIDE	7000	1/31/00	26	6.3	7.2	7.9
HUCKLEBERRY DIVIDE	7300	1/26/00	46	11.1	15.9	14.4
JACKPINE CREEK	7350	2/02/00	42	12.1	15.5	14.6
LEWIS LAKE SNOTEL	7850	2/01/00	---	14.0	25.6	22.8
LEWIS LAKE DIVIDE	7850				---	27.3
MORAN	6750	1/27/00	32	8.0	10.1	9.3
PHILLIPS BENCH SNOT.	8200	2/01/00	---	13.9	19.6	19.4
POISON MEADOWS	8500				---	19.6
SALT RIVER SNOTEL	7600	2/01/00	---	7.9	8.7	9.0
SNAKE RIVER STATION	6920	1/26/00	43	10.8	15.7	14.0
SNOW KING MTN	7660	1/28/00	29	7.9	9.6	10.1
SPRING CRK. SNOTEL	9000	2/01/00	---	15.3	16.6	18.2
TETON PASS W.S.	7740	2/01/00	46	14.4	20.4	17.3
THUMB DIVIDE	7980	1/26/00	32	7.9	13.1	13.5
TOGWOTEE PASS SNOTEL	9580	2/01/00	48	12.3	19.7	16.9
TURPIN MEADOWS	6900	1/27/00	26	5.8	9.2	7.6
TWO OCEAN SNOTEL	9240	2/01/00	---	14.3	24.0	18.3
WILLOW CREEK SNOTEL	8450	2/01/00	---	16.9	19.6	21.0
UPPER YELLOWSTONE & MADISON RIVER BASINS						
BLACK BEAR PILLOW	7950	2/01/00	---	20.6	31.7	24.5
CANYON SNOTEL	8090	2/01/00	---	8.3	12.2	8.3
FISHER CREEK PILLOW	9100	2/01/00	---	20.6	27.4	24.2
FISHER CREEK	9100				---	---
LAKE CAMP	7780	1/31/00	27	6.8	9.2	6.1
LUPINE CREEK	7380	1/28/00	22	4.5	8.0	6.9
MADISON PLT PILLOW	7750	2/01/00	---	11.0	22.9	16.1

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
MADISON PLATEAU	7750				---	---
NORRIS BASIN	7500	1/31/00	19	5.5	8.6	8.0
N.E. ENTRANCE PILLOW	7350	2/01/00	---	7.3	8.6	6.4
NORTHEAST ENTRANCE	7350	1/31/00	28	7.2	8.8	6.5
OLD FAITHFUL	7400	1/27/00	33	7.3	12.8	10.8
PARKERS PEAK SNOTEL	9400	2/01/00	---	11.3	16.5	14.3
SYLVAN LAKE SNOTEL	8420	2/01/00	---	11.8	18.8	14.9
THUMB DIVIDE	7980	1/26/00	32	7.9	13.1	13.5
TWENTY-ONE MILE	7150	1/31/00	34	10.1	14.2	11.7
TWO OCEAN SNOTEL	9240	2/01/00	---	14.3	24.0	18.3
WEST YELL'ST PILLOW	6700	2/01/00	---	5.2	9.7	7.8
WEST YELLOWSTONE	6700	1/30/00	25	5.6	8.2	7.8
WIND RIVER BASIN						
BLUE RIDGE	9620	1/28/00	21	4.6	6.0	7.9
BURROUGHS CRK SNOTEL	8750	2/01/00	---	7.5	11.8	10.4
BURROUGHS CREEK	8750				---	9.7
CASTLE CREEK	8400	1/27/00	16	3.5	5.6	3.0
COLD SPRINGS SNOTEL	9630	2/01/00	---	3.5	6.5	5.8
DU NOIR	8760	1/26/00	15	2.9	5.3	5.7
GEYSER CREEK	8500	1/26/00	14	2.9	4.6	4.8
GRANNIER MEADOWS	8860	1/28/00	30	6.2	7.6	9.4
HOBBS PARK SNOTEL	10100	2/01/00	---	6.1	10.5	10.0
LITTLE WARM SNOTEL	9370	2/01/00	---	6.2	8.8	7.2
MIDDLE FORK	7420	1/28/00	8	1.3	1.9	3.8
SOUTH PASS SNOTEL	9040	2/01/00	---	8.0	11.1	11.3
ST LAWRENCE ALT SNOT	8620	2/01/00	---	1.9	4.7	4.8
T CROSS RANCH	7900	1/27/00	20	4.4	6.6	5.3
TOGWOTEE PASS SNOTEL	9580	2/01/00	48	12.3	19.7	16.9
TOWNSEND CRK SNOTEL	8700	2/01/00	---	3.1	5.8	6.2
YOUNTS PEAK SNOTEL	8350	2/01/00	---	9.6	14.9	12.2
BIG HORN RIVER BASIN						
BALD MOUNTAIN SNOTEL	9380	2/01/00	---	14.1	14.1	13.8
BONE SPGS. SNOTEL	9350	2/01/00	---	10.4	10.9	10.6
KIRWIN SNOTEL	9550	2/01/00	---	4.5	8.3	6.6
MEDICINE LODGE LAKES	9340	1/30/00	33	7.8	8.9	7.7
MIDDLE POWDER SNOTEL	7760	2/01/00	---	5.9	5.0	7.8
MIDDLE POWDER	7760				---	6.6
ONION GULCH	8780	1/30/00	24	3.6	3.1	5.8
OWL CREEK SNOTEL	8980	2/01/00	---	1.5	4.2	2.8
POWDER RVR.PASS SNOT	9480	2/01/00	---	5.9	8.4	7.0
RANGER CREEK	8120	1/30/00	31	7.2	7.0	6.4
SHELL CREEK SNOTEL	9580	2/01/00	---	10.3	12.1	10.2
TIMBER CREEK SNOTEL	7950	2/01/00	---	.6	3.8	3.6
TYRELL RANGER STA.	8300	1/30/00	23	3.6	5.0	5.5
SHOSHONE & CLARKS FORK RIVER BASINS						
BEARTOOTH LK. SNOTEL	9280	2/01/00	---	13.8	18.8	16.0
BLACKWATER SNOTEL	9780	2/01/00	---	10.2	21.0	14.0
CARTER MOUNTAIN	7950	1/29/00	7	1.0	1.0	3.1
FISHER CREEK PILLOW	9100	2/01/00	---	20.6	27.4	24.2

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
FISHER CREEK	9100				---	---
EVENING STAR SNOTEL	9200	2/01/00	---	16.5	23.8	17.8
MARQUETTE SNOTEL	8760	2/01/00	---	3.1	6.2	5.1
PARKERS PEAK SNOTEL	9400	2/01/00	---	11.3	16.5	14.3
N.E. ENTRANCE PILLOW	7350	2/01/00	---	7.3	8.6	6.4
NORTHEAST ENTRANCE	7350	1/31/00	28	7.2	8.8	6.5
PARKERS PEAK SNOTEL	9400	2/01/00	---	11.3	16.5	14.3
SYLVAN ROAD SNOTEL	7120	2/01/00	---	8.7	12.4	8.5
WHITE MILL PILLOW	8700	2/01/00	---	15.8	18.4	16.8
WHITE MILL	8700				---	---
WOLVERINE SNOTEL	7650	2/01/00	---	8.8	11.7	7.9
YOUNTS PEAK SNOTEL	8350	2/01/00	---	9.6	14.9	12.2
POWDER & TONGUE RIVER BASINS						
BEAR TRAP SNOTEL	8200	2/01/00	---	3.2	4.5	4.8
BIG GOOSE	7760	1/30/00	20	3.5	2.1	4.3
BONE SPGS. SNOTEL	9350	2/01/00	---	10.4	10.9	10.6
BURGESS JCT. SNOTEL	7880	2/01/00	---	6.7	5.4	7.6
CLOUD PEAK SNOTEL	9850	2/01/00	---	9.7	9.6	8.0
DOME LAKE SNOTEL	8880	2/01/00	---	6.6	7.7	9.0
HANSEN S.M. SNOTEL	8360	2/01/00	---	3.8	3.8	4.6
MIDDLE POWDER SNOTEL	7760	2/01/00	---	5.9	5.0	7.8
MIDDLE POWDER	7760				---	6.6
NORTH TONGUE	8450	1/30/00	34	8.7	7.2	8.3
ONION GULCH	8780	1/30/00	24	3.6	3.1	5.8
POWDER RVR.PASS SNOT	9480	2/01/00	---	5.9	8.4	7.0
SAWMILL DIVIDE	9260	1/30/00	34	8.0	7.8	9.0
SOLDIER PARK	8780	1/30/00	17	1.6	2.2	3.7
SOUR DOUGH	8460	1/30/00	21	3.0	3.3	4.3
SUCKER CREEK SNOTEL	8880	2/01/00	---	7.7	6.8	7.5
SUCKER CREEK	8880				---	7.6
WOOD ROCK G.S.	8440	1/30/00	29	5.8	5.6	6.6
BELLE FOURCHE & CHEYENNE RIVER BASINS						
BEARLODGE DIVIDE	4680	1/26/00	9	1.5	1.2	1.9
BLIND PARK PILLOW	6870	2/01/00	---	4.2	5.3	7.2
DITCH CREEK	6870				3.3	---
NORTH RAPID CK PILL.	6130	2/01/00	---	3.8	4.1	---
MALLO	6420				5.0	5.2
MOUNT TOM	5560				2.6	3.0
REUTER CANYON	6280	1/25/00	18	4.8	5.6	6.5
UPPER SPEARFISH	6500	1/25/00	14	2.5	3.4	4.5
WARREN PEAK SNOTEL	6520	2/01/00	---	5.5	6.1	7.2
LITTLE BEAR RUN	6240				2.8	---
UPPER NORTH PLATTE BASIN						
DIVIDE PEAK SNOTEL	8860	2/01/00	---	9.5	12.9	13.3
JOE WRIGHT SNOTEL	10000	2/01/00	---	11.9	14.5	14.0
MOSS LAKE	9800	1/27/00	40	10.5	14.7	16.0
NORTH BARRETT CREEK	9400	1/27/00	42	11.1	16.2	13.5
NORTH FRENCH SNOTEL	10130	2/01/00	---	16.1	19.8	16.0
OLD BATTLE SNOTEL	9920	2/01/00	---	14.4	18.3	20.5

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
PURGATORY GULCH	8970	1/26/00	23	5.9	9.5	6.8
ROACH SNOTEL	9400	2/01/00	---	8.9	12.4	11.0
RYAN PARK	8400	1/27/00	27	6.4	8.6	7.4
SAND LAKE SNOTEL	10050	2/01/00	---	13.8	21.9	21.2
SOUTH BRUSH SNOTEL	8440	2/01/00	---	6.6	5.3	7.1
WEBBER SPRING SNOTEL	9250	2/01/00	---	11.6	12.8	17.4
WILLOW CK PS SNOTEL	9500	2/01/00	---	7.0	8.0	7.3
LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS						
ALBANY	9400	1/27/00	38	8.1	8.3	9.9
BOXELDER	7280	1/30/00	14	3.2	2.2	4.3
BROOKLYN LK. SNOTEL	10220	2/01/00	---	11.4	13.6	16.0
BUCK CREEK	7960	1/30/00	30	5.4	4.4	5.9
CASPER MTN. SNOTEL	7850	2/01/00	---	9.5	6.9	9.4
DEADMAN HILL SNOTEL	10200	2/01/00	---	6.3	12.7	11.1
DEADMAN HILL	10200				---	---
FOXPARK	9060	1/27/00	27	5.5	4.8	4.8
GRANNIER MEADOWS	8860	1/28/00	30	6.2	7.6	9.4
HAIRPIN TURN	9480	1/27/00	40	9.0	10.5	11.2
JOE WRIGHT SNOTEL	10000	2/01/00	---	11.9	14.5	14.0
LA BONTE	8450	1/31/00	13	2.7	2.0	3.9
LA PRELE SNOTEL	8380	2/01/00	---	5.2	3.1	6.6
LARSEN CREEK	9020	1/25/00	27	6.4	7.4	8.5
LIBBY LODGE	8750	1/27/00	32	7.1	7.5	7.8
POLE MOUNTAIN	8700	1/28/00	24	3.6	6.2	5.3
RENO HILL SNOTEL	8500	2/01/00	---	7.5	8.8	8.3
ROACH SNOTEL	9400	2/01/00	---	8.9	12.4	11.0
SOUTH PASS SNOTEL	9040	2/01/00	---	8.0	11.1	11.3
WINDY PEAK SNOTEL	7900	2/01/00	---	2.8	3.7	4.5
LITTLE SNAKE RIVER BASIN						
BATTLE MTN. SNOTEL	7440	2/01/00	---	6.6	8.1	7.3
BUTTER HILL	7880	1/26/00	31	7.4	9.5	9.7
DIVIDE PEAK SNOTEL	8860	2/01/00	---	9.5	12.9	13.3
ELK RIVER SNOTEL	8600	2/01/00	---	10.5	11.2	12.5
HASKINS CREEK	8980	1/26/00	61	15.7	18.7	20.4
OLD BATTLE SNOTEL	9920	2/01/00	---	14.4	18.3	20.5
SANDSTONE SNOTEL	8150	2/01/00	---	9.6	8.0	9.3
WHISKEY PARK SNOTEL	8950	2/01/00	---	14.8	16.8	18.4
UPPER GREEN RIVER BASIN						
BIG PARK	8620	1/27/00	39	9.3	10.8	12.6
BIG SANDY SNOTEL	9080	2/01/00	---	6.1	10.6	9.6
BLIND BULL SNOTEL	8900	2/01/00	---	16.8	18.1	19.0
EAST RIM DIV SNOTEL	7930	2/01/00	---	6.8	8.5	9.3
ELKHART PARK SNOTEL	9400	2/01/00	---	6.9	8.7	8.9
GROS VENTRE SNOTEL	8750	2/01/00	---	5.9	9.4	10.6
INDIAN CREEK SNOTEL	9430	2/01/00	---	13.1	16.1	17.9
KELLEY R.S. SNOTEL	8180	2/01/00	---	7.5	9.7	10.7
KENDALL R.S. SNOTEL	7740	2/01/00	---	8.9	9.2	9.9
LOOMIS PARK SNOTEL	8240	2/01/00	---	10.2	11.3	11.6
NEW FORK SNOTEL	8340	2/01/00	---	6.4	7.6	7.9

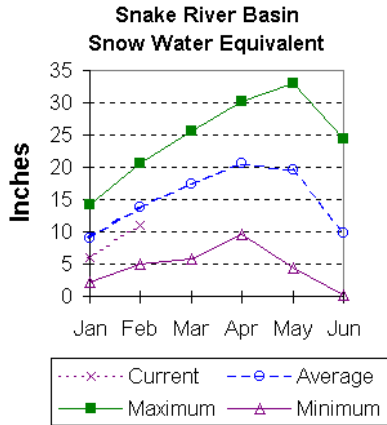


SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
POCKET CREEK	9350	1/25/00	26	6.4	10.0	8.3
POISON MEADOWS	8500				---	19.6
ROWDY CREEK	8300	1/26/00	48	13.0	13.6	15.1
SNIDER BASIN SNOTEL	8060	2/01/00	---	7.9	8.9	9.9
TRIPLE PEAK SNOTEL	8500	2/01/00	---	15.7	16.1	17.4
LOWER GREEN RIVER BASIN						
BIG PARK	8620	1/27/00	39	9.3	10.8	12.6
BLACK'S FORK JUNCTN	8930				---	---
HAMS FORK SNOTEL	7840	2/01/00	---	7.4	7.3	8.1
HENRY'S FORK	10000				---	---
HEWINTA SNOTEL	9500	2/01/00	---	6.6	5.8	6.2
HICKERSON PARK SNOTE	9100	2/01/00	---	3.0	3.9	3.5
HOLE-IN-ROCK SNOTEL	9150	2/01/00	---	3.7	4.3	3.2
INDIAN CREEK SNOTEL	9430	2/01/00	---	13.1	16.1	17.9
KELLEY R.S. SNOTEL	8180	2/01/00	---	7.5	9.7	10.7
SPRING CRK. SNOTEL	9000	2/01/00	---	15.3	16.6	18.2
STEEL CREEK PARK SNO	10100	2/01/00	---	8.2	8.7	9.8
UPPER BEAR RIVER BASIN						
BIG PARK	8620	1/27/00	39	9.3	10.8	12.6
BURT'S-MILLER RANCH	7900				---	---
HAYDEN FORK SNOTEL	9100	2/01/00	---	9.0	8.4	10.2
INDIAN CREEK SNOTEL	9430	2/01/00	---	13.1	16.1	17.9
KELLEY R.S. SNOTEL	8180	2/01/00	---	7.5	9.7	10.7
SALT RIVER SNOTEL	7600	2/01/00	---	7.9	8.7	9.0
STILLWATER CAMP	8550				---	---
TRIAL LAKE SNOTEL	9960	2/01/00	---	12.8	10.7	15.8
TRIAL LAKE	9960				---	15.4

# Snake River Basin (1)

## Snow

Percentage of average snow water equivalent (SWE) for each drainage in the basin is: Snake above Jackson Lake -- 75 percent (65% of last year at this time), Pacific Creek -- 84 percent (68% of last year at this time), Gros Ventre River -- 71 percent (70% of last year at this time), Hoback River -- 79 percent (83% of last year at this time), Greys River -- 87 percent (92% of last year at this time), Salt River -- 88 percent (92% of last year at this time). Snake River Basin above Palisades is 79 percent of average (73% 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.



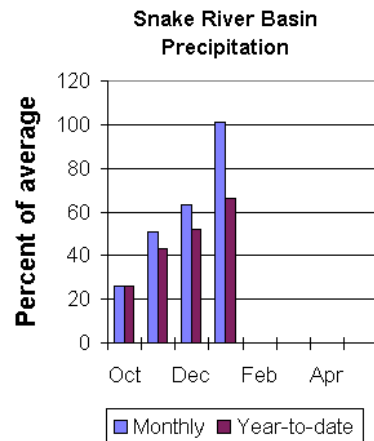
## Precipitation.

Precipitation across the basin was above average for last month. Monthly precipitation, for the basin, was 101 percent of average (98 percent of last year). January percentages range from 75 to 181 percent of average. Water-year-to-date precipitation is 66 percent of normal for the Snake River basin (70 percent of last year at this time) Year-to-date percentages range from 43 to 80 percent of average.

## Reservoir.

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

Grassy Lake —115 percent of average (12,400 acre feet compared to 12,900 last year), Jackson lake — 134 percent of average (645,000 acre feet compared to 606,000 acre feet last year), and Palisades Reservoir —118 percent of average (1,232,200 acre feet compared to 1,196,000 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 710,000 acre-feet (82 percent of normal). Yield from the Snake River above Palisades Reservoir is estimated to be 2,138,000 acre-feet (80 percent of normal). The 50 percent chance yield near Heise is expected to be 3,170,000 acre-feet (78 percent of normal). Pacific Creek at Moran is expected to yield about 130,000 acre-feet (78 percent of average). Greys River above Palisades Reservoir is estimated to yield 295,000 acre-feet (76 percent of normal). Salt River near Etna is estimated to have a yield of 310,000 acre-feet (78 percent of normal).

=====

SNAKE RIVER BASIN  
Streamflow Forecasts - February 1, 2000

=====

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)	
SNAKE near Moran (1,2)	APR-SEP	519	650	710	82	770	901	869
SNAKE above Palisades (2)	APR-SEP	1703	1962	2138	80	2314	2573	2671
SNAKE near Heise (2)	APR-SEP	2419	2866	3170	78	3474	3921	4049
PACIFIC CREEK at Moran	APR-SEP	96	116	130	78	144	164	166
GREYS above Palisades	APR-SEP	209	260	295	76	330	381	388
SALT near Etna	APR-SEP	196	264	310	78	356	424	399

SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of January					SNAKE RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	12.4	12.9	10.8	SNAKE above Jackson Lake	9	65	76
JACKSON LAKE	847.0	645.0	606.9	479.6	PACIFIC CREEK	3	67	83
PALISADES	1400.0	1232.2	1196.0	1044.0	GROS VENTRE RIVER	3	67	69
					HOBACK RIVER	6	83	79
					GREYS RIVER	4	92	86
					SALT RIVER	5	92	88
					SNAKE above Palisades	30	74	80

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

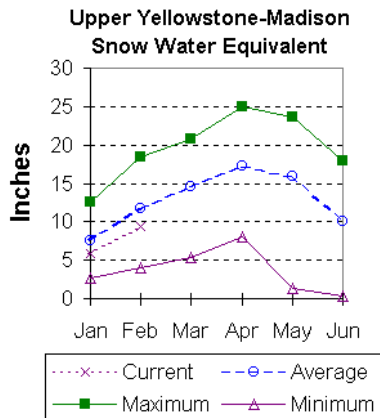
The average is computed for the 1961-1990 base period.

- (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 the basin this year has been well below average. For this time of the year, snow water equivalent (SWE) is about 77 percent of average (60 percent of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 82 percent of average (66 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 (131 percent of average and 86 percent of capacity). Hebgen Lake is storing about 105 percent and Ennis Lake is storing about 99 percent of last year's volume.

### Streamflow

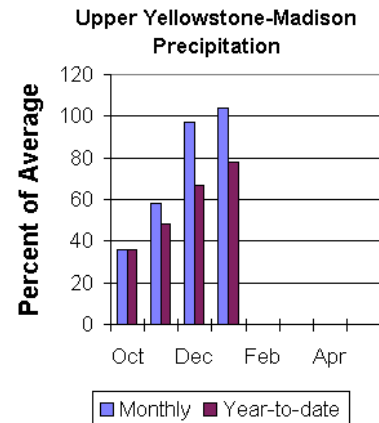
All the following forecasts are the 50 percent chance runoff for the April through September runoff period. Yellowstone at Lake Outlet is expected to yield about 575,000 acre feet (73 percent of normal). Yellowstone at Corwin Springs will yield about 1,475,000 acre-feet (76 percent of normal). Yellowstone near Livingston will yield about 1,700,000 acre feet (76 percent of normal). Hebgen lake inflow is estimated to be 415,000 acre feet (85 percent of normal). See the following page for detailed runoff volumes.

### Precipitation

January precipitation in the Madison and Yellowstone drainage was about 104 percent of average (78 percent of previous year) for the 7 reporting stations -- percentage range was from 75 percent of average at Canyon to 146 percent of average at Lake Yellowstone. Water-year-to-date precipitation is about 78 percent of average (64 percent of last year's amount). Year to date percentage ranges from 56 to 79 percent

### Reservoir

Ennis Lake is storing 28,900 acre-feet (83 percent of average and 69 percent of capacity). Hebgen Lake is storing about 344,800 acre-feet



UPPER YELLOWSTONE & MADISON RIVER BASINS  
Streamflow Forecasts - February 1, 2000

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)	
YELLOWSTONE at Lake Outlet	APR-SEP	420	512	575	73	638	730	792
YELLOWSTONE RIVER at Corwin Spgs.	APR-SEP	1166	1350	1475	76	1600	1784	1937
YELLOWSTONE RIVER near Livingston	APR-SEP	1397	1578	1700	76	1822	2003	2241
HEBGEN Reservoir Inflow	APR-SEP	328	380	415	85	450	502	486

UPPER YELLOWSTONE & MADISON RIVER BASINS Reservoir Storage (1000 AF) - End of January					UPPER YELLOWSTONE & MADISON RIVER BASINS Watershed Snowpack Analysis - February 1, 2000			
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	28.2	28.5	34.0	MADISON RIVER in WY	9	60	77
HEBGEN LAKE	377.5	324.2	307.8	246.8	YELLOWSTONE RIVER in WY	11	66	82

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

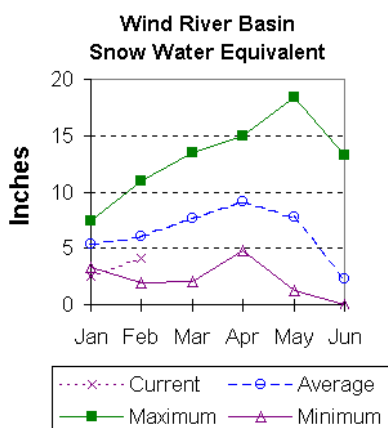
The average is computed for the 1961-1990 base period.

- (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 well below average snow water equivalent (SWE) for this time of the year. The Wind River above Dubois is 74 percent of average (64 percent of last year). The Little Wind is 54 percent of average water content (53 percent of last year), and the Popo Agie drainage is about 60 percent of average (68 percent of last year). The Wind River basin, above Boysen Reservoir, SWE is about 67 percent of average (about 65 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 4 to 164 percent of average. January precipitation for the basin was about 117 percent of average for the 8 reporting stations; that is about 111 percent of last year's amount. Water year-to-date precipitation is 66 percent of normal. The current water-year-to-date average is about 60 percent of last year at this time. Year to date figures range from 15 to 79 percent of average.

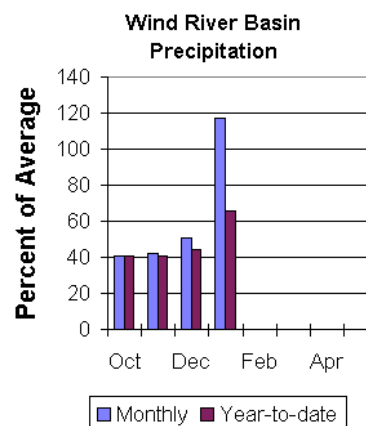
### Reservoirs

Current storage varies from 91 to 136 percent of average. Bull Lake is currently storing about

95,000 acre feet (63 percent of capacity) -- normally the reservoir is at 57 percent of capacity at this time of the year. Boysen Reservoir is storing about 89 percent of capacity (531,300 acre feet) -- normally the reservoir is at 97 percent of capacity at this time of the year. Pilot Butte is storing 71 percent of capacity (22,500 acre feet) -- normally the reservoir is at 52 percent of capacity at this time of the year.

### Streamflow

Water supply is estimated to be 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 450,000 acre feet (84 percent of average). Wind River at Riverton will yield about 510,000 acre feet (79 percent of average). Boysen Reservoir inflow will yield about 555,000 acre feet (59 percent of normal). Bull Lake Creek near Lenore is expected to yield about 148,000 acre feet (81 percent of average). Little Popo Agie River near Lander is expected to yield about 36,000 acre feet (69 percent of average). South Fork of Little Wind near Fort Washakie will yield about 56,000 acre feet (69 percent of average). Little Wind River near Riverton will yield about 180,000 acre feet (56 percent of average).



WIND RIVER BASIN  
Streamflow Forecasts - February 1, 2000

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)	
WIND RIVER abv Bull Lake Cr (2)	APR-SEP	330	401	450	84	499	570	538
WIND RIVER at Riverton (2)	APR-SEP	274	415	510	79	605	746	648
BOYSEN RESERVOIR Inflow (2)	APR-SEP	233	425	555	69	685	877	809
BULL LAKE CR near Lenore (2)	APR-SEP	107	131	148	81	165	189	183
LT POPO AGIE RIVER nr Lander	APR-SEP	5.7	24	36	69	48	66	52
SF LT WIND nr Fort Washakie	APR-SEP	27	44	56	69	67	85	81
LT WIND RIVER nr Riverton	APR-SEP	31	120	180	56	240	329	324

WIND RIVER BASIN Reservoir Storage (1000 AF) - End of January					WIND RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	95.0	97.8	86.6	WIND RIVER above Dubios	7	64	74
BOYSEN	596.0	531.3	569.3	580.7	LITTLE WIND	2	53	54
PILOT BUTTE	31.6	22.5	22.3	16.5	POPO AGIE	6	68	60
					WIND above Boyesen Resv	14	65	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.

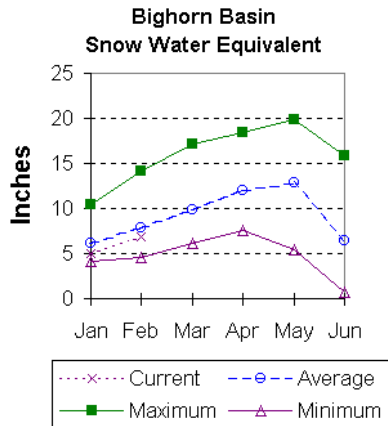
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

BIGHORN RIVER BASIN as of February 1, 2000

# Bighorn River Basin (4)

## Snow

Snowpack in this basin is below average for this time of year. The Nowood drainage is 79 percent of average SWE (88 percent of last year). The Greybull River drainage SWE is 50 percent of average (42 percent of last year). Shell Creek SWE is 102 percent of average (95 percent of last year). The basin SWE, as a whole, is currently 87 percent of average (85 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



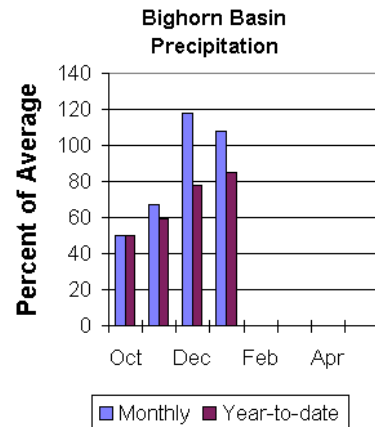
## Precipitation

January precipitation was 108 percent of the monthly average (81 percent of last year). Sites ranged from 0 to 485 percent of average for the month. Year-to-date precipitation is 85 percent of normal; that is 66 percent of last year at this time. Year to date percentages, from the 14 reporting stations, range from 35 to 111.

## Reservoir

Boysen Reservoir is currently storing 531,300-acre feet (91 percent of average). Bighorn

Lake is now at 112 percent of average (941,900-acre feet). Boysen is currently storing 93 percent of last year at this time and Big Horn Lake is storing 109 percent of last year's volume.



## Streamflow

The 50 percent chance April through September runoff is anticipated to be well below normal. The Wind River at Boysen is forecast to yield 555,000 acre feet (69 percent of average); the Greybull River at Meeteese should yield 130,000 acre feet (65 percent of average); Shell Creek near Shell should yield 68,000 acre feet (91 percent of average) and the Bighorn River at Kane should yield 720,000 acre feet (64 percent of average).



BIGHORN RIVER BASIN  
Streamflow Forecasts - February 1, 2000

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)	
BOYSEN RESERVOIR Inflow (2)	APR-SEP	233	425	555	69	685	877	809
GREYBULL RIVER nr Meeteetse	APR-SEP	96	116	130	65	144	164	201
SHELL CREEK nr Shell	APR-SEP	57	63	68	91	73	79	75
BIGHORN RIVER at Kane (2)	APR-SEP	348	525	720	64	915	1090	1124

BIGHORN RIVER BASIN Reservoir Storage (1000 AF) - End of January					BIGHORN RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	531.3	569.3	580.7	NOWOOD RIVER	5	88	79
BIGHORN LAKE	1356.0	941.9	864.1	839.2	GREYBULL RIVER	2	42	50
					SHELL CREEK	4	95	102
					BIGHORN (Boysen-Bighorn)	11	85	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.

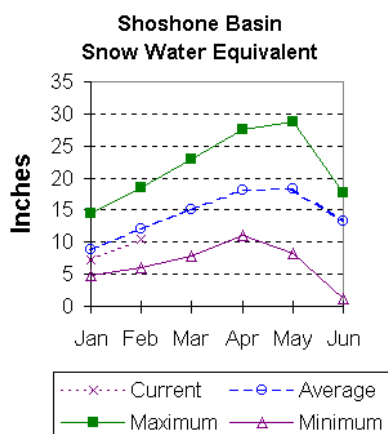
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

SHOSHONE & CLARKS FORK RIVER BASINS as of February 1, 2000

## Shoshone and Clarks Fork River Basin (5)

### Snow

Snow Water Equivalent (SWE) is 81 percent of the February 1 average (62 percent of last year) in the Shoshone River basin. The Clarks Fork River basin SWE is 91 percent of the February 1 average (75 percent of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.



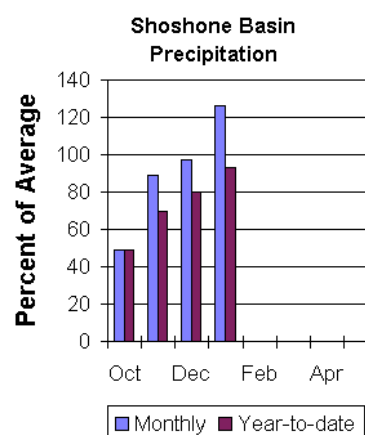
### Precipitation

Precipitation for the month of January was 126 percent of normal (79 percent of last year). Monthly percentages range from 50 to 441 percent of average. The basin year-to-date precipitation is now 93 percent of average (69 percent of last year). Year-to-date percentages range from 36 to 163 percent of average.

### Reservoir

Current storage in Buffalo Bill Reservoir is 108 percent of average (101 percent of last year's storage). Currently, about 449,000 acre-feet are

stored in the reservoir compared to 445,000 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 425,000 acre-feet (82 percent of average). South Fork of the Shoshone River near Valley is estimated to yield of 180,000 acre-feet (67 percent of average), and South Fork above Buffalo Bill Reservoir is expected to be 113,000 acre-feet (49 percent of average). At the Buffalo Bill Reservoir, the fifty percent chance yield for the Shoshone River is expected to be about 600,000 acre-feet (75 percent of average). The fifty-percent chance yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be about 535,000 acre-feet (91 percent of average).

SHOSHONE & CLARKS FORK RIVER BASINS  
Streamflow Forecasts - February 1, 2000

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)
NF SHOSHONE RIVER at Wapiti	APR-SEP	335	389	425	82	461	515	520
SF SHOSHONE RIVER nr Valley	APR-SEP	125	158	180	67	202	235	269
SF SHOSHONE RIVER abv Buffalo Bill	APR-SEP	35	81	113	49	145	191	229
BUFFALO BILL DAM Inflow (2)	APR-SEP	407	522	600	75	678	793	804
CLARKS FORK RIVER nr Belfry	APR-SEP	435	495	535	91	575	635	590

SHOSHONE & CLARKS FORK RIVER BASINS Reservoir Storage (1000 AF) - End of January				SHOSHONE & CLARKS FORK RIVER BASINS Watershed Snowpack Analysis - February 1, 2000				
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	449.0	445.0	416.0	SHOSHONE RIVER	6	62	81
					CLARKS FORK in WY	7	75	91

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

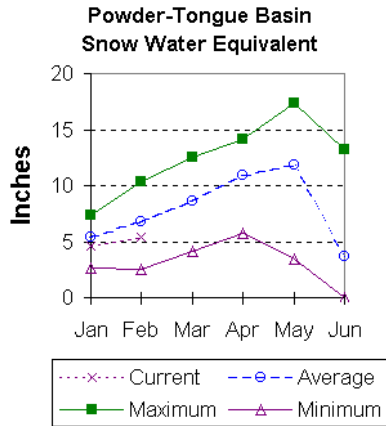
The average is computed for the 1961-1990 base period.

- (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

The Upper Tongue River drainage is 93 percent of normal (103 percent of last year). Goose Creek drainage is 81 percent of average (103 percent of last year). Clear Creek drainage is 88 percent of normal (96 percent of last year). Crazy Woman Drainage is 73 percent of normal (84 percent of last year). The Upper Powder River is 73 percent of normal (89 percent of last year). The Powder River basin snow water equivalent (SWE), in Wyoming, is about 80 percent of average (92 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



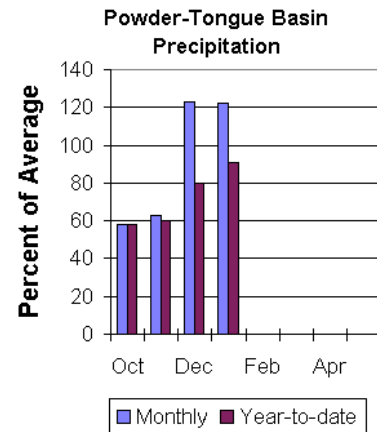
### Precipitation

January precipitation was 122 percent of average for the 11 reporting stations (79 percent of last year). Monthly percentages range from 50 to 441 percent of average. Precipitation for the year ranges from 36 to 163 percent of average. Year-to-date precipitation is about 93 percent of average in the basin; this is 69 percent of last year at this time.

### Reservoir

Tongue River Reservoir is currently at 135 percent of average storage for this time of

year (that is 36,600 acre feet). The total reservoir capacity is about 68,000 acre feet. 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 100,000 acre-feet (87 percent of normal).

Water users on the Middle Fork near Barnum should have a yield near 9,900 acre-feet (50 percent of normal).

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 29,000 acre-feet (74 percent of average). Rock Creek near Buffalo will yield about 19,200 acre-feet (80 percent of normal), and Piney Creek at Kearny should yield about 42,000 acre-feet (82 percent of average).

POWDER & TONGUE RIVER BASINS  
Streamflow Forecasts - February 1, 2000

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)	
TONGUE RIVER nr Dayton (2)	APR-SEP	70	88	100	87	112	130	115
MIDDLE FORK POWDER nr Barnum	APR-SEP	2.3	6.8	9.9	50	13.0	17.5	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	21	26	29	74	32	37	39
ROCK CREEK nr Buffalo	APR-SEP	13.9	17.1	19.2	80	21	25	24
PINEY CREEK at Kearny	APR-SEP	15.6	31	42	82	53	68	51

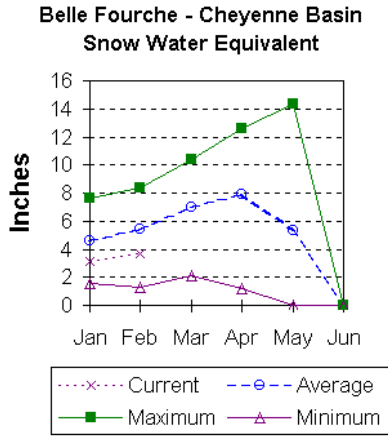
POWDER & TONGUE RIVER BASINS Reservoir Storage (1000 AF) - End of January					POWDER & TONGUE RIVER BASINS Watershed Snowpack Analysis - February 1, 2000			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
TONGUE RIVER	68.0	36.6	6.2	27.1	UPPER TONGUE RIVER	9	103	93
					GOOSE CREEK	3	103	81
					CLEAR CREEK	4	96	88
					CRAZY WOMAN CREEK	3	84	73
					UPPER POWDER RIVER	4	89	73
					POWDER RIVER in WY	8	92	80

\* 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 has 68 percent of normal SWE. The basin SWE is 86 percent of what it was last year. See Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



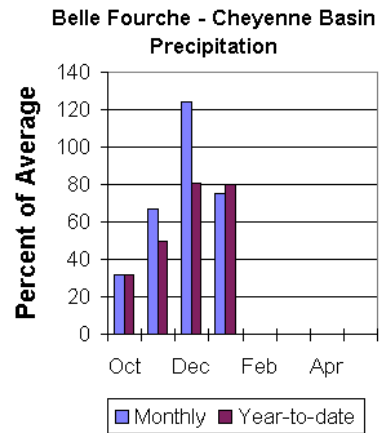
## Precipitation.

Precipitation, for the month of January was 75 percent of average in the Black Hills (44 percent of last January). Monthly percentages range from 65 to 285 percent. Year-to-date precipitation is 80 percent of average and 40 percent of last year's amount. Year to date percentages range from 70 to 92. This is from the 3 reporting stations.

## Reservoir.

Reservoir storage is above average in the basin.

Angostura is currently storing 111 percent of average (108,900-acre feet). Belle Fourche reservoir is storing 171 percent of average (172,900-acre feet). Deerfield reservoir is storing 116 percent of average (14,900-acre feet). Keyhole reservoir is storing 175 percent of average (172,300-acre feet). Pactola reservoir is storing 118 percent of average (54,000-acre feet), and Shadehill reservoir is storing 47 percent of average (23,300-acre feet).



## Streamflow

Streamflow forecast are below average as of February 1. Deerfield Reservoir inflow is forecast at 2850 acre feet (58 percent of average). Pactola is forecast at 10500 acre feet (50 percent of average). This is for the March – July forecast period.

BELLE FOURCHE & CHEYENNE RIVER BASINS  
Streamflow Forecasts - February 1, 2000

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)		
DEERFIELD RESERVOIR Inflow	MAR-JUL	0.25	1.65	2.85	58	4.05	5.83	4.90	
PACTOLA RESERVOIR Inflow	MAR-JUL	1.0	3.3	10.5	50	17.7	28	21	

BELLE FOURCHE & CHEYENNE RIVER BASINS  
Reservoir Storage (1000 AF) - End of January

BELLE FOURCHE & CHEYENNE RIVER BASINS  
Watershed Snowpack Analysis - February 1, 2000

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	108.9	116.1	98.1	BELLE FOURCHE	5	86	68
BELLE FOURCHE	178.4	172.9	167.1	101.4				
DEERFIELD	15.2	14.9	14.5	12.8				
KEYHOLE	193.8	172.3	177.4	98.7				
PACTOLA	55.0	54.0	51.9	45.8				
SHADEHILL	81.4	23.3	55.5	49.1				

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

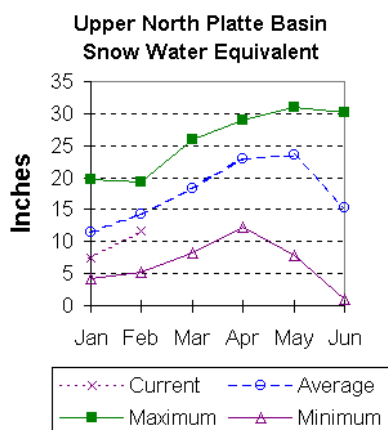
The average is computed for the 1961-1990 base period.

- (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 82 percent of average snow water equivalent (SWE) recorded for this time of the year (83 percent of last year). SWE in the drainage area above Northgate is about 90 percent of average and 92 percent of last year at this time. SWE in the Encampment River drainage is about 74 percent of normal and 81 percent of last year. Brush Creek SWE for the year is about 85 percent of normal and 78 percent of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 67 percent of average and 71 percent of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



### Precipitation

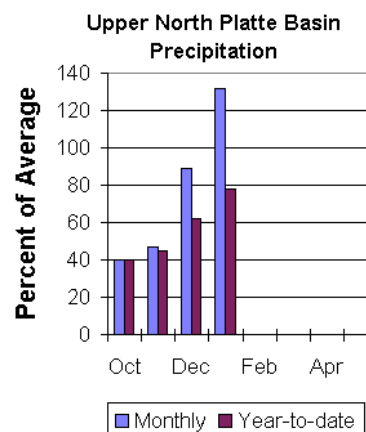
Eight reporting stations indicate January precipitation was 89 percent of average and about 146 percent of last year's amount. January precipitation varied from 25 percent of average at Wamsutter to 176 percent of average at Willow Creek PS SNOTEL. Total water-year-to-date precipitation is about 78 percent of average for the basin, which is about 62 percent of last year's amount. Year to date percentage ranges from 46 to 96 for the 8 reporting stations.

### Reservoirs

Seminoe Reservoir is currently storing about 156 percent of normal for this time of the year. Currently, the reservoir is storing 112 percent of last year's amount. Currently, Seminoe Reservoir storage is estimated to be storing 845,600 acre-feet (83 percent of capacity). Last year, at this time, the reservoir had 756,700 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 156,000 acre-feet (58 percent of average). Encampment River near Encampment is estimated to yield 63,000 acre-feet (40 percent of normal). North Platte River near Sinclair will yield about 358,000 acre-feet (50 percent of normal). Rock Creek near Arlington is estimated to yield 44,000 acre-feet (79 percent of average). Medicine Bow River above Seminoe Reservoir is expected to yield about 57,000 acre-feet (45 percent of normal). Seminoe Reservoir inflow should be about (423,000 acre-feet (50 percent of normal). See the following table for more detailed information on projected runoff.





UPPER NORTH PLATTE RIVER BASIN  
Streamflow Forecasts - February 1, 2000

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)	
North Platte River nr Northgate	APR-SEP	88	155	200	74	245	312	271
Encampment River nr Encampment	APR-SEP	70	95	112	72	129	154	156
North Platte River nr Sinclair	APR-SEP	241	404	515	72	626	789	719
Rock Creek nr Arlington	APR-SEP	34	43	50	89	57	69	56
Medicine Bow River ab Seminoe Reserv	APR-SEP	26	52	75	59	102	151	127
Seminoe Reservoir inflow	APR-JUL	230	421	550	70	679	870	788
	APR-SEP	254	460	600	71	740	946	851

UPPER NORTH PLATTE RIVER BASIN  
Reservoir Storage (1000 AF) - End of January

UPPER NORTH PLATTE RIVER BASIN  
Watershed Snowpack Analysis - February 1, 2000

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	830.1	735.2	467.0	N PLATTE above Northgate	8	92	90
					ENCAMPMENT RIVER	4	81	74
					BRUSH CREEK	5	78	85
					MEDICINE BOW & ROCK CREEK	3	71	67
					N PLATTE above Seminoe	20	83	82

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

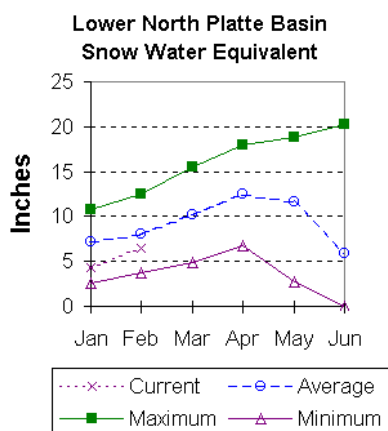
The average is computed for the 1961-1990 base period.

- (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 81 percent of normal (85 % of last year). The Sweetwater drainage is currently 71 percent of average (79 % of last year). Deer and LaPrele Creeks are currently 85 percent of normal (115 percent of last year). SWE for the North Platte above the Laramie River drainage is 81 percent of average (85 % of last year). SWE for the Laramie River above the mouth is 80 percent of average (82 % of last year). SWE for the Laramie River above Laramie is 81 percent of average (80 % of last year). And SWE in the Little Laramie River is 79 percent of normal (89 % of last year). For more information see Basin Summary of Snow Courses at beginning of report.



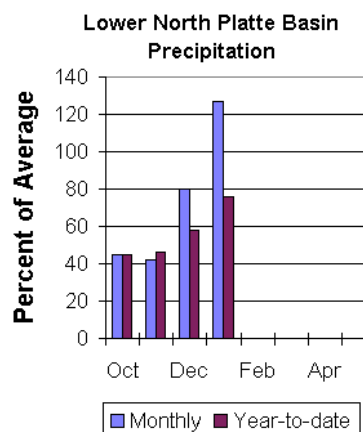
### Precipitation

Of the 10 reporting stations, percentages for the month range from 5 to 304. January precipitation for the basin was 127 percent of average (90 percent of last year). The water year-to-date precipitation for the basin is currently 76 percent of average (57 percent of last year). Year to date percentages range from 31 to 95.

### Reservoir

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

Alcova 156,000 acre feet (100 percent of average); Glendo 327,200 acre feet (99 percent of average); Guernsey 13,200 acre feet (194 percent of average); Pathfinder 935,900 acre feet (169 percent of average); Seminoe 830,100 acre feet (178 percent of average); and Wheatland No.2 66,000 acre feet (165 percent of average). Water allocated to project use is also above average with North Platte Project users at 157 percent of average, Kendrick Project users at 121 percent of average, and Glendo Project users at 130 percent of average.



### Streamflow

Yields from 49 to 84 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 44,000 acre-feet (60 percent of average). Deer Creek at Glenrock is expected to yield about 49 percent of average (19,000 acre-feet). LaPrele Creek above the reservoir is estimated to yield 54 percent of average (13,600 acre-feet). North Platte River below Guernsey Reservoir is expected to yield about 64 percent of normal (636,000 acre-feet), and below Glendo Reservoir is anticipated to yield about 63 percent of average (611,000 acre-feet). Laramie River near Woods should yield about 64 percent of average (87,000 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 - February 1, 2000

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	15.9	23	41	59	59	87	69
	APR-SEP	17.0	25	44	60	63	91	74
Deer Creek at Glenrock	APR-SEP	5.0	12.3	19.0	49	27	42	39
La Prele Creek ab La Prele Reservoir	APR-SEP	2.1	7.3	13.6	54	23	43	25
North Platte River blw Glendo	APR-SEP	327		611	63		1011	963
North Platte River blw Guernsey	APR-SEP	346		636	64		989	989
Laramie River nr Woods	APR-SEP	21	60	87	64	114	153	135
Little Laramie River nr Filmore	APR-SEP	33	46	54	84	62	75	64

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

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Watershed Snowpack Analysis - February 1, 2000

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	156.0	155.7	156.1	SWEETWATER	3	79	71
GLENDO	506.4	327.2	404.0	330.8	DEER & LAPRELE CREEKS	4	115	85
GUERNSEY	45.6	13.2	17.3	6.8	N PLATTE abv Laramie R.	27	85	81
PATHFINDER	1016.5	935.9	889.0	553.0	LARAMIE RIVER abv Laramie	8	80	81
SEMINOE	1016.7	830.1	735.2	467.0	LITTLE LARAMIE RIVER	4	89	79
WHEATLAND #2	98.9	66.0	62.0	40.1	LARAMIE RIVER above mouth	11	82	80
NORTH PLATTE PROJ	1062.1	945.9	863.7	601.0	NORTH PLATTE	34	85	81
KENDRICK PROJECT	1201.7	991.4	980.9	819.1				
GLENDO PROJECT USERS	183.2	155.2	156.4	119.8				

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

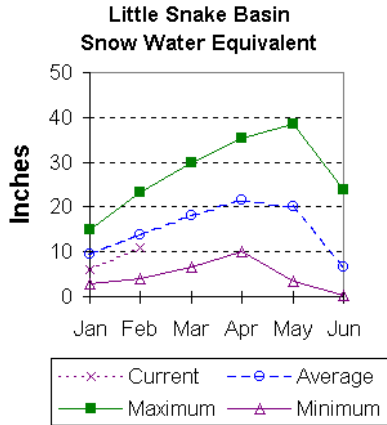
The average is computed for the 1961-1990 base period.

- (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 well below average across the basin this year. Currently, snow water equivalent (SWE) in the Little Snake River drainage is 79 percent of average (86 percent of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.



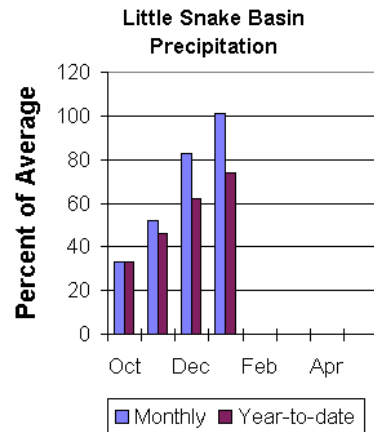
## Precipitation

Precipitation across the basin was near average this past month. January precipitation was 101 percent of average (90 percent of last year) for the 5 reporting stations. The Little Snake River basin water-year-to-date precipitation is currently 74 percent of average (65 percent of last year). Year-to-date percentages range from 58 to 85 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 115,000 acre-feet (74 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, 2000

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	76	98	115	74	133	162	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, 2000				
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of Last Yr	Average
		This Year	Last Year	Avg				
					LITTLE SNAKE RIVER	8	86	79

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

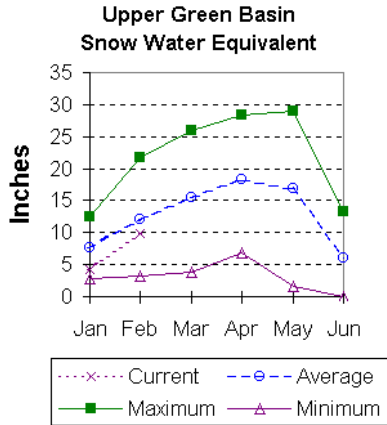
The average is computed for the 1961-1990 base period.

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- (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 81 percent of average (86 percent of last year). The Green River basin SWE above Warren Bridge is 77 percent of normal (83 percent of last year). SWE on the west side of the Upper Green River basin is about 83 percent of normal, 91 percent of this time last year. Newfork River SWE is now 78 percent of normal (75 percent of last year). Big Sandy-Eden Valley SWE is about 69 percent of average (69 percent of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



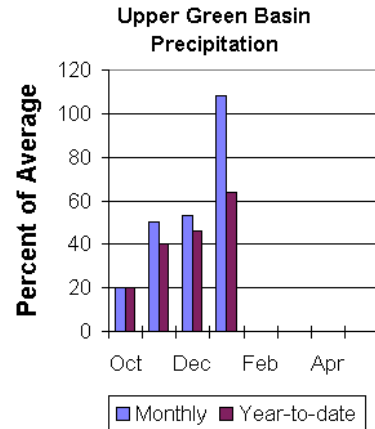
## Precipitation

The 11 reporting precipitation sites in the basin were 108 percent of the January average (128 percent of last year at this time). January precipitation varied from 84 to 204 percent of average. Water year-to-date precipitation is about 64 percent of average (76 percent of last year). Year to date percentage of average ranges from 43 to 75 for the reporting stations.

## Reservoir

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

Fontenelle Reservoir is storing 167,600 acre-feet (85 percent of average and 49 percent of the total capacity). Flaming Gorge reservoir is currently storing 3,226,000 acre feet (86% percent of capacity). Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

The 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 220,000 acre-feet (83 percent of normal). Pine Creek above Fremont Lake is expected to yield 95,000 acre-feet (91 percent of normal). New Fork River near Big Piney is expected to yield about 325,000 acre-feet (84 percent of normal). Fontenelle Reservoir Inflow is estimated to be 650,000 acre-feet (77 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, 2000

Forecast Point	Forecast Period	Future Conditions				Wetter		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)		
Green River at Warren Bridge	APR-JUL	165	195	220	83	245	277	266
Pine Creek abv Fremont Lake	APR-JUL	74	88	95	91	102	116	104
New Fork River nr Big Piney	APR-JUL	181	275	325	84	375	470	385
Fontenelle Reservoir Inflow	APR-JUL	340	573	650	77	732	959	849
Big Sandy River nr Farson	APR-JUL	26	38	45	79	52	64	57

UPPER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER GREEN RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	83	77
EDEN		NO REPORT			UPPER GREEN (West Side)	7	91	83
FLAMING GORGE	3749.0	3226.0	3341.0	---	NEWFORK RIVER	3	75	78
FONTENELLE	344.8	167.6	180.9	196.2	BIG SANDY/EDEN VALLEY	2	69	69
					GREEN above Fontenelle	14	86	81

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

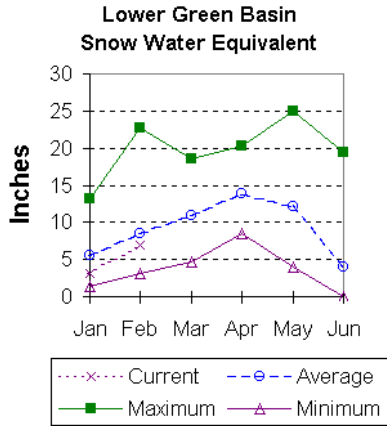
The average is computed for the 1961-1990 base period.

- (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 drainage snow water equivalent (SWE) is 92 percent of average (102 % of last year). SWE in the Hams Fork, as of February 1, is 76 percent of average (85% of last year). The Henry's Fork SWE for the basin 100 percent of average (82 % of last year). The basin, as a whole, is 81 percent of average (86 percent of last year). For more information see Basin Summary of Snow Courses at beginning of this report.



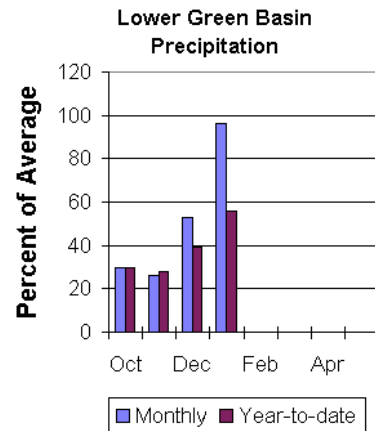
## Precipitation

Precipitation was above average for the 3 reporting stations during January. Precipitation ranged from 6 to 99 percent of average for the month. The entire basin received 96 percent of average for the month (115 percent of last year). The basin year-to-date precipitation is currently 56 percent of average (73 percent of last year). Year to date percentages range from 50 to 60.

## Reservoir

Fontenelle Reservoir is currently storing 167,600 acre

feet; this is 85 percent of average (93 % of last year). Flaming Gorge does not have an average established. Viva Naughton is currently storing 35,700 acre feet; this is 124 percent of average (114 % of last year).



## Streamflow

Expected yields vary from 62 to 80 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 665,000-acre feet (74 percent of average). East Fork of Smiths Fork near Robertson is estimated to yield 23,000 acre-feet (77 percent of average). The estimated yield for Hams Fork near Frontier is 45,000-acre feet (68 percent of average). Viva Naughton Reservoir inflow will be about 55,000-acre feet (62 percent of average).



LOWER GREEN RIVER BASIN  
Streamflow Forecasts - February 1, 2000

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)	
Green River nr Green River, WY	APR-JUL	378	559	665	74	771	953	899
Blacks Fork nr Robertson	APR-JUL	46	64	76	80	88	106	95
EF of Smiths Fork nr Robertson	APR-JUL	17.2	20	23	77	26	31	30
Hams Fk blw Pole Ck nr Frontier	APR-JUL	25	36	45	68	55	70	66
Hams Fk Inflow to Viva Naughton Res	APR-JUL	17.6	40	55	62	70	92	89
Flaming Gorge Reservoir Inflow	APR-JUL	454	752	900	75	1048	1351	1196

LOWER GREEN RIVER BASIN Reservoir Storage (1000 AF) - End of January					LOWER GREEN RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	167.6	180.9	196.2	HAMS FORK RIVER	4	85	76
FLAMING GORGE	3749.0	3226.0	3341.0	---	BLACKS FORK	2	102	92
VIVA NAUGHTON RES	42.4	35.7	31.4	28.7	HENRYS FORK	2	82	100
					GREEN above Flaming Gorge	22	86	81

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

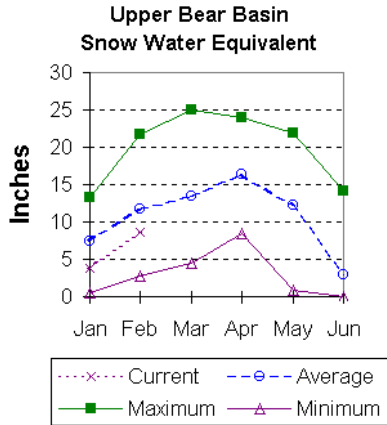
The average is computed for the 1961-1990 base period.

- (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 74 percent of average (85 percent of last year). SWE for the Bear River in Utah is estimated to be 83 percent of average; that is about 104 percent of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 75 percent of average (83 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.



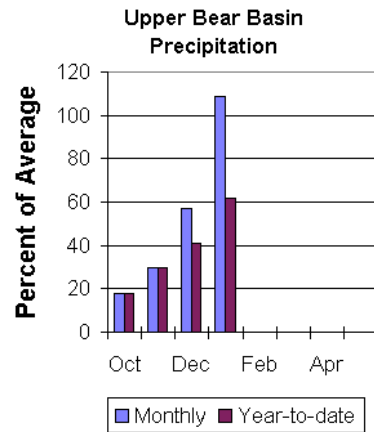
## Precipitation

Precipitation for the month of January was 120 percent of average for the 3 reporting stations; this is 117 percent of the previous January. The monthly percentages range from 99 to 150 percent of average. The year-to-date precipitation, for the basin, is 62 percent of average; this is 72 percent of last year's amount.

## Reservoir

Woodruff Narrows reservoir is currently storing 40,000 acre feet of water. Current storage is 70 percent of the 57,300 acre

feet capacity. Last year the reservoir was storing 45,000 acre feet (89 percent of last year at this time of the year).



## Streamflow

The following 50 percent chance stream flow yields are for the April through September period. Smiths Fork near Border is estimated to yield 82,000 acre-feet (70 percent of normal), and Thomas Fork drainage near the Idaho-Wyoming state line is estimated to yield 20,000 acre-feet or 56 percent of normal. Bear River near the Utah-Wyoming State Line is expected to yield about 81,000 acre feet; that is 64 percent of average, while Bear River near Woodruff is expected to yield about 92,000 acre-feet, about 60 percent of normal.

UPPER BEAR RIVER BASIN  
Streamflow Forecasts - February 1, 2000

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	56	70	82	70	96	121	118
THOMAS FK nr WY-ID State Line (Disc.	APR-SEP	10.8	15.6	20	56	26	37	36
Bear R nr UT-WY State Line	APR-SEP	58	71	81	64	93	113	126
BEAR R nr Woodruff, UT	APR-SEP	49	72	92	60	118	172	154

UPPER BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER BEAR RIVER BASIN Watershed Snowpack Analysis - February 1, 2000			
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	40.0	45.0	---	UPPER BEAR RIVER in Utah	3	104	83
					SMITHS & THOMAS FORKS	4	83	75
					BEAR RIVER abv ID line	7	85	74

\* 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.