USDA United States Department of Agriculture

Natural Resources Conservation Service

Wyoming Basin Outlook Report April 1, 2000

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

For more water supply and resource management information, contact:

Dave Taylor
Water Supply Specialist
100 East "B" Street
Casper, WY 82801
(307) 261-6481

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. Stmamflow 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 mote 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.

General

Generally, snow water equivalent (SWE) across the state is slightly below normal. SWE is about 10 percent below average for most of the State -- north portion of the State is 85 percent of normal and south part of the State is 91 percent of average. Precipitation for March was below average for March, but the year-to-date precipitation is average to below average. The Shoshone River drainage year-to-date precipitation is near average and the remaining portion of the state is 10-30 percent below average. Most of the reservoir levels are average to well above average. Forecast runoff varies, but is generally from 45 to 100 percent of average. The mean of all the forecast points in the State is about 25 percent below average. The minimum yield forecast was 46 percent of average in the Middle Fork of the Powder River near Barnum and the maximum forecast was 104 percent of average at North Platte near Northgate.

Snowpack

Snow conditions stayed nearly the same as last month across the State, but SWE is generally just below average. SWE in the northwestern portion of the State remained almost the same as last month at 86 percent of average. Northeast Wyoming SWE is running slightly less at about 84 percent of average. The Southeast portion saw a slight increase to 89 percent of average SWE. And the southwest remained about the same with 88 percent of average.

Precipitation

March precipitation was below normal across the state. The following table displays the major river basins and their departure from normal for March 2000.

Basin	Departure from normal	Basin	Departure from normal
Snake River	-14%	Upper North Platte River	-12%
Yellowstone & Madison	+02%	Lower North Platte	-17%
Wind River	-09%	Little Snake River	-21%
Big Horn	-19%	Upper Green River	-22%
Shoshone & Clarks Fork	-28%	Lower Green River	-27%
Powder & Tongue River	-19%	Upper Bear River	-09%
Belle Fourche & Cheyenne	-35%		

Streams

Stream flow yield is expected to be below average across the State. The northwest part of the State is expected to yield about 75-80 percent of normal -- yield estimates vary from 49 to 91 percent of normal through the northwest region of the State. Yield from the northeast portion of Wyoming will be below average (about 70 percent of average) -- yield estimates vary from 46 to 87 percent of average for the various forecast points. In most cases, the southeast portion of the state will be about 77 percent of normal -- yield estimates range from 55 to 104 percent of normal. The southwest portion of Wyoming varies from 64 to 96 percent of average -- mean estimated yield for the forecast points in southwest Wyoming is about 81 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 MARCH 2000

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
ALCOVA	85	88	88	97	97
ANGOSTURA	99	99	90	109	100
BELLE FOURCHE	101	101	73	138	100
BIG SANDY			NO REPORT		
BIGHORN LAKE	67	58	59	114	117
BOYSEN	88	79	89	99	111
BUFFALO BILL	67	62	56	122	108
BULL LAKE	63	64	55	114	98
DEERFIELD	99	101	89	111	98
EDEN			NO REPORT		
ENNIS LAKE	71	76	81	88	94
FLAMING GORGE		AVERAGE NOT ESTABLISHED			
FONTENELLE	30	36	46	67	86
GLENDO	92	100	83	110	92
GRASSY LAKE	84	87	74	113	96
GUERNSEY	41	66	47	86	62
HEBGEN LAKE	81	68	65	124	118
JACKSON LAKE	78	70	56	139	110
KEYHOLE	90	94	56	162	96
PACTOLA	98	98	85	116	100
PALISADES	85	51	72	117	167
PATHFINDER	98	96	61	161	102
PILOT BUTTE	71	70	68	105	101
SEMINOE	73	66	36	202	110
SHADEHILL	69	94	78	89	73
TONGUE RIVER	54	18	53	102	300
VIVA NAUGHTON RES	79	70	64	123	112
WHEATLAND #2	75	67	49	152	112
WOODRUFF NARROWS		AVERAGE NOT ESTABLISHED			
GLENDO PROJECT USERS	85	92	69	122	92
KENDRICK PROJECT	82	81	68	121	101
NORTH PLATTE PROJ	100	94	64	158	107

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

APRIL 2000

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
WYOMING Snow Course and SNOTEL Stations						
ALBANY	9400	3/30/00	35	11.9	10.5	14.7
ASTER CREEK	7750	3/30/00	69	26.0	36.5	30.7
BALD MOUNTAIN SNOTEL	9380	4/01/00	---	19.6	19.7	20.5
BASE CAMP SNOTEL	7030	4/01/00	---	17.6	23.6	17.8
BATTLE MTN. SNOTEL	7440				10.0	11.3
BEARLODGE DIVIDE	4680	3/29/00	0	.0	.0	2.2
BEARTOOTH LK. SNOTEL	9280	4/01/00	---	21.0	26.3	23.8
BEAR TRAP SNOTEL	8200	4/01/00	---	5.8	4.8	7.2
BIG GOOSE	7760	3/29/00	22	5.4	3.7	7.8
BIG GOOSE SNOTEL	7760	4/01/00	---	8.0	6.6	---
BIG PARK	8620	3/28/00	53	17.7	19.4	20.2
BIG SANDY SNOTEL	9080	4/01/00	---	11.4	16.2	14.7
BLACKWATER SNOTEL	9780	4/01/00	---	17.4	30.8	22.4
BLIND BULL SNOTEL	8900	4/01/00	---	24.9	28.7	29.8
BLIND PARK PILLOW	6870	4/01/00	---	5.9	6.6	11.1
BLUE RIDGE	9620	3/29/00	25	7.0	9.9	12.5
BONE SPGS. SNOTEL	9350	4/01/00	---	15.0	16.1	16.5
BOXELDER	7280	3/29/00	23	6.7	5.4	8.0
BROOKLYN LK. SNOTEL	10220				15.5	26.4
BRYAN FLAT	6420	3/28/00	24	6.6	10.8	9.0
BUCK CREEK	7960	3/29/00	33	9.8	7.4	11.0
BURGESS JCT. SNOTEL	7880	4/01/00	---	11.5	9.0	11.8
BURROUGHS CRK SNOTEL	8750	4/01/00	---	12.5	17.0	15.0
CANYON SNOTEL	8090	4/01/00	---	13.4	18.1	13.1
CARTER MOUNTAIN	7950	3/29/00	10	2.4	.8	5.2
CASPER MTN. SNOTEL	7850				10.3	16.6
CASTLE CREEK	8400				5.7	4.6
CCC CAMP	7000	3/27/00	38	12.2	14.2	12.5
CHALK CK #1 SNOTEL	9100	4/01/00	---	22.5	21.6	23.9
CHALK CK #2 SNOTEL	8200	4/01/00	---	13.6	16.1	15.8
CLOUD PEAK SNOTEL	9850	4/01/00	---	14.5	15.2	14.9
COLD SPRINGS SNOTEL	9630	4/01/00	---	6.6	9.5	8.4
COTTONWOOD CR SNOTEL	7700	4/01/00	---	23.0	25.0	24.5
DARBY CANYON	8250	3/30/00	63	22.2	24.5	24.1
DEER PARK SNOTEL	9700	4/01/00	---	14.1	16.6	---
DITCH CREEK	6870	3/31/00	4	1.0	3.8	---
DIVIDE PEAK SNOTEL	8860				18.0	21.3
DOME LAKE SNOTEL	8880	4/01/00	---	11.2	11.0	13.8
DU NOIR	8760	3/30/00	20	5.2	8.5	8.5
EAST RIM DIV SNOTEL	7930	4/01/00	---	11.7	13.9	14.0
ELBO RANCH	7100	3/30/00	36	10.4	13.4	11.3
ELKHART PARK SNOTEL	9400	4/01/00	---	12.2	14.0	13.9
EVENING STAR SNOTEL	9200	4/01/00	---	24.0	33.3	27.2

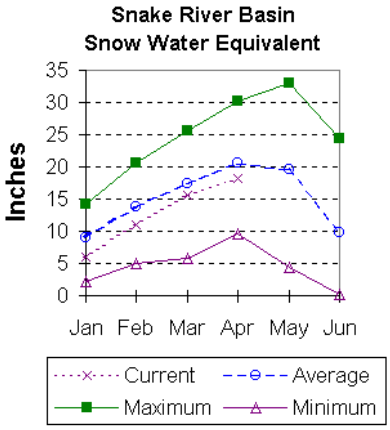
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
FOUR MILE MEADOWS	7860	3/29/00	38	11.9	12.8	13.2
FOXPARK	9060	3/30/00	28	7.9	5.4	7.7
GEYSER CREEK	8500	3/30/00	18	5.0	7.2	7.4
GLADE CREEK	7040	3/30/00	57	21.5	27.9	23.6
GRANITE CRK SNOTEL	6770	4/01/00	---	15.0	21.6	18.8
GRANNIER MEADOWS	8860	3/29/00	33	9.1	11.6	14.7
GRASSY LAKE SNOTEL	7270	4/01/00	---	32.5	43.1	36.3
GRAVE SPRINGS SNOTEL	8550	4/01/00	---	7.8	8.3	9.6
GREYS BOUNDARY	5720	3/27/00	33	11.9	10.2	11.2
GROS VENTRE SNOTEL	8750	4/01/00	---	11.1	16.0	15.8
GROVER PARK DIVIDE	7000	3/27/00	31	10.8	10.5	12.1
HAIRPIN TURN	9480	3/30/00	38	12.3	13.7	17.3
HANSEN S.M. SNOTEL	8360	4/01/00	---	6.4	4.5	7.1
HAMS FORK SNOTEL	7840	4/01/00	---	11.7	13.4	12.3
HASKINS CREEK	8980	3/30/00	78	27.4	27.5	30.4
HOBBS PARK SNOTEL	10100	4/01/00	---	10.9	17.5	15.1
HUCKLEBERRY DIVIDE	7300	3/30/00	57	20.0	24.2	21.7
INDIAN CREEK SNOTEL	9430	4/01/00	---	22.6	29.4	29.0
JACKPINE CREEK	7350	3/30/00	57	20.4	25.9	22.3
KELLEY R.S. SNOTEL	8180	4/01/00	---	14.5	17.1	17.3
KENDALL R.S. SNOTEL	7740	4/01/00	---	14.6	15.2	14.7
KIRWIN SNOTEL	9550	4/01/00	---	8.6	12.6	10.0
LA BONTE	8450	3/30/00	18	4.2	2.3	5.8
LAKE CAMP	7780	3/29/00	37	12.3	13.8	9.9
LA PRELE SNOTEL	8380				7.7	10.6
LARSEN CREEK	9020	3/27/00	37	12.4	14.6	12.4
LEWIS LAKE SNOTEL	7850	4/01/00	---	26.7	40.8	35.7
LEWIS LAKE DIVIDE	7850	3/30/00	98	39.7	49.0	42.1
LIBBY LODGE	8750	3/30/00	28	8.8	9.8	11.5
LITTLE BEAR RUN	6240	3/31/00	4	1.2	1.9	---
LITTLE WARM SNOTEL	9370	4/01/00	---	10.5	14.7	11.6
LOOMIS PARK SNOTEL	8240	4/01/00	---	17.7	18.6	17.6
LUPINE CREEK	7380	3/31/00	28	8.6	12.7	10.2
MALLO	6420	3/28/00	13	3.9	5.1	6.7
MARQUETTE SNOTEL	8760	4/01/00	---	6.4	8.1	8.1
MEDICINE LODGE LAKES	9340	3/30/00	39	11.3	12.4	11.2
MIDDLE FORK	7420	3/29/00	10	1.6	3.8	6.4
MIDDLE POWDER SNOTEL	7760	4/01/00	---	11.2	10.6	12.2
MORAN	6750	3/29/00	36	11.4	14.0	12.7
MOSS LAKE	9800	3/29/00	46	16.0	15.6	25.3
NEW FORK SNOTEL	8340	4/01/00	---	10.9	12.5	11.3
NORRIS BASIN	7500	3/31/00	30	10.1	10.5	11.5
NORTH BARRETT CREEK	9400	3/29/00	58	19.4	21.2	21.5
NORTH FRENCH SNOTEL	10130				28.8	25.6
NORTH RAPID CK PILL.	6130	4/01/00	---	6.2	5.6	---
NORTH TONGUE	8450	3/29/00	37	11.0	9.1	13.6
OLD BATTLE SNOTEL	9920				28.0	32.2
OLD FAITHFUL	7400	3/31/00	38	12.8	22.1	14.8
ONION GULCH	8780	3/27/00	28	7.0	6.0	8.9
OWL CREEK SNOTEL	8980	4/01/00	---	4.4	6.4	4.6
PARKERS PEAK SNOTEL	9400	4/01/00	---	18.1	23.5	21.8
PHILLIPS BENCH SNOT.	8200	4/01/00	---	23.2	32.7	29.4

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
POCKET CREEK	9350	3/27/00	39	11.8	14.3	12.8
POISON MEADOWS	8500				---	29.1
POLE MOUNTAIN	8700	3/30/00	27	7.2	7.2	7.9
POWDER RVR.PASS SNOT	9480	4/01/00	---	9.4	11.9	10.9
PURGATORY GULCH	8970	3/29/00	33	10.8	13.0	11.2
RANGER CREEK	8120	3/30/00	33	8.8	9.7	9.3
RENO HILL SNOTEL	8500				12.7	14.4
REUTER CANYON	6280	3/29/00	15	4.3	3.9	9.2
ROWDY CREEK	8300	3/28/00	55	19.7	25.3	22.1
RYAN PARK	8400	3/29/00	28	9.1	10.0	11.2
SALT RIVER SNOTEL	7600	4/01/00	---	13.4	16.2	14.5
SAND LAKE SNOTEL	10050				33.6	33.1
SANDSTONE SNOTEL	8150				11.2	15.0
SAWMILL DIVIDE	9260	3/29/00	43	11.2	10.5	13.3
SHELL CREEK SNOTEL	9580	4/01/00	---	14.7	16.7	15.0
SHERIDAN R.S.	7750	3/31/00	19	5.0	5.8	6.0
SNAKE RIVER STATION	6920	3/30/00	53	19.6	22.3	21.1
SNAKE RV STA SNOTEL	6920	4/01/00	---	17.3	22.6	18.8
SNIDER BASIN SNOTEL	8060	4/01/00	---	12.3	16.3	14.9
SNOW KING MTN	7660	4/04/00	32	11.4	14.4	15.2
SOLDIER PARK	8780	3/26/00	20	3.6	4.2	6.1
SOUR DOUGH	8460	3/26/00	24	5.5	4.4	7.1
SOUTH BRUSH SNOTEL	8440				11.3	13.4
SOUTH PASS SNOTEL	9040	4/01/00	---	14.5	17.7	16.4
SPRING CRK. SNOTEL	9000	4/01/00	---	22.5	29.6	28.3
ST LAWRENCE ALT SNOT	8620	4/01/00	---	4.6	6.7	7.6
SUCKER CREEK SNOTEL	8880	4/01/00	---	12.2	10.3	12.2
SYLVAN LAKE SNOTEL	8420	4/01/00	---	19.5	26.3	22.3
SYLVAN ROAD SNOTEL	7120	4/01/00	---	13.7	17.3	12.5
T CROSS RANCH	7900	3/30/00	19	4.9	8.5	7.2
TETON PASS W.S.	7740	3/31/00	64	24.7	32.4	26.7
THUMB DIVIDE SNOTEL	7980	4/01/00	---	14.6	23.6	17.2
THUMB DIVIDE	7980	3/30/00	44	14.3	20.9	20.7
TIE CREEK SNOTEL	6870	4/01/00	---	6.4	2.4	---
TIMBER CREEK SNOTEL	7950	4/01/00	---	2.8	5.5	6.3
TOGWOTEE PASS SNOTEL	9580	4/01/00	67	21.4	28.8	25.2
TOWNSEND CRK SNOTEL	8700	4/01/00	---	6.6	9.8	9.9
TRIPLE PEAK SNOTEL	8500	4/01/00	---	22.7	29.3	25.9
TURPIN MEADOWS	6900	3/29/00	31	10.3	12.2	10.3
TWO OCEAN SNOTEL	9240	4/01/00	---	25.4	36.5	26.8
TYRELL RANGER STA.	8300	3/26/00	27	6.4	5.6	8.2
UPPER SPEARFISH	6500	3/30/00	13	4.3	3.6	7.0
WARREN PEAK SNOTEL	6520	4/01/00	---	10.9	10.1	11.1
WEBBER SPRING SNOTEL	9250				18.3	28.3
WHISKEY PARK SNOTEL	8950				25.4	29.0
WILLOW CREEK SNOTEL	8450	4/01/00	---	30.2	33.4	30.5
WINDY PEAK SNOTEL	7900				6.2	8.8
WOLVERINE SNOTEL	7650	4/01/00	---	11.1	12.4	11.7
WOOD ROCK G.S.	8440	3/29/00	37	9.2	8.1	10.7
YOUNTS PEAK SNOTEL	8350	4/01/00	---	15.0	21.6	17.3

Snake River Basin (1)

Snow

Percentage of average snow water equivalent (SWE) for each drainage in the basin is: Snake above Jackson Lake -- 87 percent (73% of last year at this time), Pacific Creek -- 95 percent (73% of last year at this time), Gros Ventre River -- 80 percent (75% of last year at this time), Hoback River -- 83 percent (79% of last year at this time), Greys River -- 89 percent (86% of last year at this time), Salt River -- 95 percent (90% of last year at this time). Snake River Basin above Palisades is 88 percent of average (78% 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.

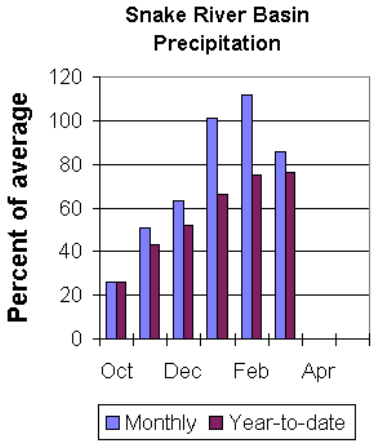


Precipitation.

Precipitation across the basin was below average for last month. Monthly precipitation, for the basin, was 86 percent of average (118 percent of last year). March percentages range from 44 to 118 percent of average. Water-year-to-date precipitation is 76 percent of normal for the Snake River basin (75 percent of last year at this time) Year-to-date percentages range from 60 to 89 percent of average.

Reservoir.

Current storage compared to average for the three storage reservoirs in the basin is as follows: Grassy Lake —113 percent of average (12,700 acre feet compared to 13,200 last year), Jackson lake — 139 percent of average (657,400 acre feet compared to 596,700 acre feet last year), and Palisades Reservoir —117 percent of average (1,188,800 acre feet compared to 713,700 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 745,000 acre-feet (86 percent of normal). Yield from the Snake River above Palisades Reservoir is estimated to be 2,325,000 acre-feet (87 percent of normal). The 50 percent chance yield near Heise is expected to be 3,450,000 acre-feet (85 percent of normal). Pacific Creek at Moran is expected to yield about 136,000 acre-feet (82 percent of average). Greys River above Palisades Reservoir is estimated to yield 310,000 acre-feet (80 percent of normal). Salt River near Etna is estimated to have a yield of 319,000 acre-feet (80 percent of normal).

SNAKE RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
SNAKE near Moran (1,2)	APR-SEP	604	701	745	86	789	886	869
SNAKE above Palisades (2)	APR-SEP	2054	2215	2325	87	2435	2596	2671
SNAKE near Heise (2)	APR-SEP	2980	3260	3450	85	3640	3920	4049
PACIFIC CREEK at Moran	APR-SEP	106	124	136	82	148	166	166
GREYS above Palisades	APR-SEP	256	288	310	80	332	364	388
SALT near Etna	APR-SEP	241	288	319	80	350	397	399

SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GRASSY LAKE	15.2	12.7	13.2	11.2
JACKSON LAKE	847.0	657.4	596.7	473.2
PALISADES	1400.0	1188.8	713.7	1014.0

SNAKE RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SNAKE above Jackson Lake	9	73	87
PACIFIC CREEK	3	73	95
GROS VENTRE RIVER	4	76	80
HOBACK RIVER	6	79	83
GREYS RIVER	5	86	89
SALT RIVER	5	90	95
SNAKE above Palisades	30	78	88

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

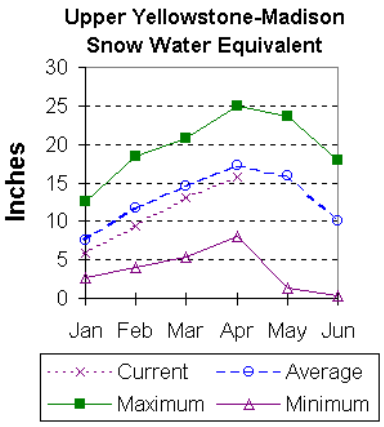
The average is computed for the 1961-1990 base period.

(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.

Upper Yellowstone and Madison River Basins (2)

Snow

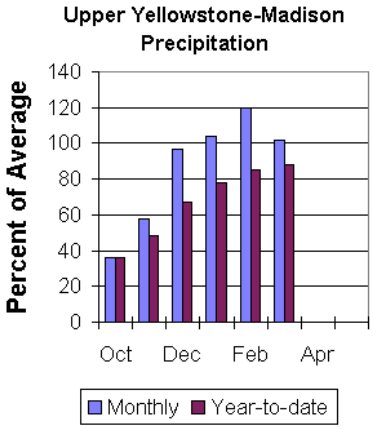
Snowfall in the basin this year has been just below average for the year, and very much below the SWE last year at this time. For this time of the year, snow water equivalent (SWE) is about 89 percent of average (69 percent of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 91 percent of average (74 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.



Precipitation

March precipitation in the Madison and Yellowstone drainage was about 102 percent of average (129 percent of previous year) for the 7 reporting stations -- percentage range was from 50 to 144 percent of average. Water-year-to-date precipitation is about 88 percent of average (72 percent of last year's amount). Year to date percentage ranges from 69 to 113 percent

Reservoir



Ennis Lake is storing 29,200 acre-feet (88 percent of average and 71 percent of capacity). Hebgen Lake is storing about 304,700 acre-feet of water (124 percent of average and 81 percent of capacity). Hebgen Lake is storing about 118 percent and Ennis Lake is storing about 94 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 595,000 acre feet (75 percent of normal). Yellowstone at Corwin Springs will yield about 1,600,000 acre-feet (83 percent of normal). Yellowstone near Livingston will yield about 1,850,000 acre feet (83 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.

UPPER YELLOWSTONE & MADISON RIVER BASINS
Streamflow Forecasts - April 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)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	
YELLOWSTONE at Lake Outlet	APR-SEP	472	545	595	75	645	718	792
YELLOWSTONE RIVER at Corwin Spgs.	APR-SEP	1358	1502	1600	83	1698	1842	1937
YELLOWSTONE RIVER near Livingston	APR-SEP	1606	1751	1850	83	1949	2094	2241
HEBGEN Reservoir Inflow	APR-SEP	348	394	425	87	456	502	486

* 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 & MADISON RIVER BASINS
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ENNIS LAKE	41.0	29.2	31.0	33.2
HEBGEN LAKE	377.5	304.7	258.3	246.6

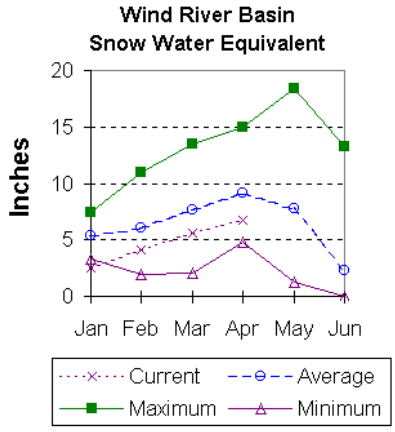
UPPER YELLOWSTONE & MADISON RIVER BASINS
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
MADISON RIVER in WY	9	69	89
YELLOWSTONE RIVER in WY	12	74	91

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 79 percent of average (70 percent of last year). The Little Wind is 68 percent of average water content (64 percent of last year), and the Popo Agie drainage is about 66 percent of average (71 percent of last year). The Wind River basin, above Boysen Reservoir, SWE is about 73 percent of average (about 70 percent of last year). See the Basin Summary of Snow Course Data at the front of this report for details.

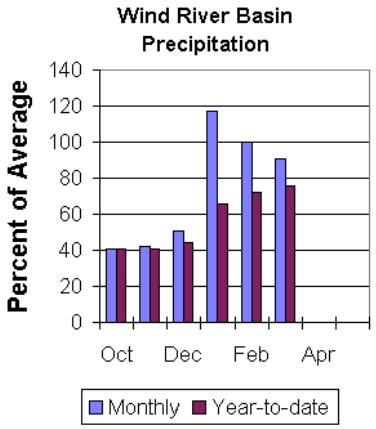


Precipitation

March precipitation in the basin varied from 22 to 177 percent of average. March precipitation for the basin was about 91 percent of average for the 9 reporting stations; that is about 146 percent of last year's amount. Water year-to-date precipitation is 76 percent of normal. The current water-year-to-date average is about 70 percent of last year at this time. Year to date figures range from 57 to 89 percent of average.

Reservoirs

Current storage varies from 99 to 114 percent of average. Bull Lake is currently storing about 95,400 acre feet (63 percent of capacity) -- normally the reservoir is at 55 percent of capacity at this time of the year. Boysen Reservoir is storing about 89 percent of capacity 523,600 acre feet) -- normally the reservoir is at 89 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 68 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 420,000 acre feet (78 percent of average). Wind River at Riverton will yield about 480,000 acre feet (74 percent of average). Boysen Reservoir inflow will yield about 525,000 acre feet (65 percent of normal). Bull Lake Creek near Lenore is expected to yield about 150,000 acre feet (82 percent of average). Little Popo Agie River near Lander is expected to yield about 34,000 acre feet (65 percent of average). South Fork of Little Wind near Fort Washakie will yield about 53,500 acre feet (66 percent of average). Little Wind River near Riverton will yield about 200,000 acre feet (62 percent of average).

WIND RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
WIND RIVER abv Bull Lake Cr (2)	APR-SEP	327	382	420	78	458	513	538
WIND RIVER at Riverton (2)	APR-SEP	276	397	480	74	563	684	648
BOYSEN RESERVOIR Inflow (2)	APR-SEP	229	405	525	65	645	821	809
BULL LAKE CR near Lenore (2)	APR-SEP	112	135	150	82	165	188	183
LT POPO AGIE RIVER nr Lander	APR-SEP	16.8	27	34	65	41	51	52
SF LT WIND nr Fort Washakie	APR-SEP	27	43	54	66	64	80	81
LT WIND RIVER nr Riverton	APR-SEP	52	140	200	62	260	348	324

WIND RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BULL LAKE	151.8	95.4	97.5	83.4
BOYSEN	596.0	523.6	473.8	529.3
PILOT BUTTE	31.6	22.5	22.2	21.5

WIND RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WIND RIVER above Dubios	6	72	79
LITTLE WIND	2	64	68
POPO AGIE	6	73	66
WIND above Boysen Resv	13	71	73

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

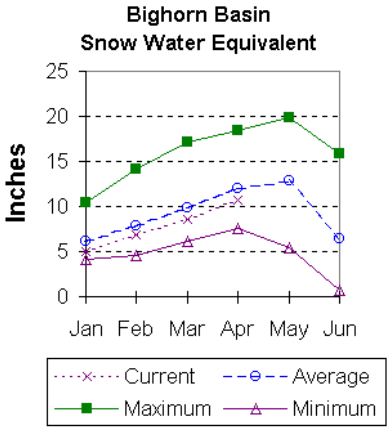
The average is computed for the 1961-1990 base period.

(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.

Bighorn River Basin (4)

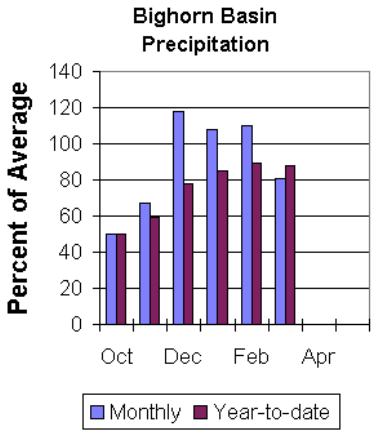
Snow

Snowpack in this basin is just below average for this time of year. The Nowood drainage is 88 percent of average SWE (97 percent of last year). The Greybull River drainage SWE is 70 percent of average (63 percent of last year). Shell Creek SWE is 95 percent of average (93 percent of last year). The basin SWE, as a whole, is currently 89 percent of average (91 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



Precipitation

March precipitation was 81 percent of the monthly average (125 percent of last year). Sites ranged from 3 to 123 percent of average for the month. Year-to-date precipitation is 88 percent of normal; that is 77 percent of last year at this time. Year to date percentages, from the 14 reporting stations, range from 29 to 106.



Reservoir

Boysen Reservoir is currently storing 523,600-acre feet (99 percent of average). Bighorn Lake is now at 114 percent of average (912,000-acre feet). Boysen is currently storing 111 percent of last year at this time and Big Horn Lake is storing 114 percent of last year's volume.

Streamflow

The 50 percent chance April through September runoff is anticipated to be well below normal. The Boysen Reservoir inflow is forecast to yield 525,000 acre feet (65 percent of average); the Greybull River nr 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 690,000 acre feet (61 percent of average).

BIGHORN RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
BOYSEN RESERVOIR Inflow (2)	APR-SEP	229	405	525	65	645	821	809
GREYBULL RIVER nr Meeteetse	APR-SEP	89	114	130	65	146	171	201
SHELL CREEK nr Shell	APR-SEP	57	64	68	91	72	79	75
BIGHORN RIVER at Kane (2)	APR-SEP	272	521	690	61	859	1108	1124

BIGHORN RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BOYSEN	596.0	523.6	473.8	529.3
BIGHORN LAKE	1356.0	912.0	782.6	798.5

BIGHORN RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
NOWOOD RIVER	5	97	88
GREYBULL RIVER	2	63	70
SHELL CREEK	4	93	95
BIGHORN (Boysen-Bighorn)	11	91	89

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

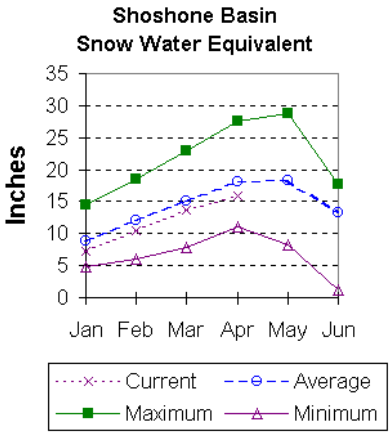
The average is computed for the 1961-1990 base period.

(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 86 percent of the April 1 average (71 percent of last year) in the Shoshone River basin. The Clarks Fork River basin SWE is 91 percent of the April 1 average (81 percent of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.

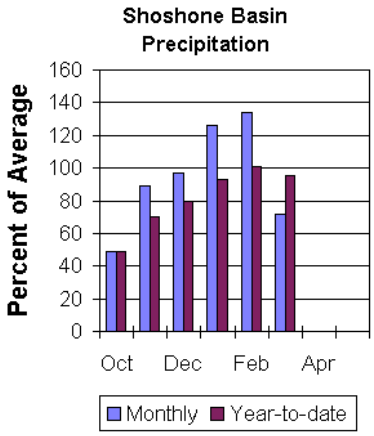


Precipitation

Precipitation for the month of March was 72 percent of normal (128 percent of last year). Monthly percentages range from 14 to 117 percent of average. The basin year-to-date precipitation is now 95 percent of average (78 percent of last year). Year-to-date percentages range from 38 to 164 percent of average.

Reservoir

Current storage in Buffalo Bill Reservoir is 122 percent of average (108 percent of last year's storage). Currently, about 436,200 acre-feet are stored in the reservoir compared to 402,700 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 440,000 acre-feet (85 percent of average). South Fork of the Shoshone River near Valley is estimated to yield of 175,000 acre-feet (65 percent of average), and South Fork above Buffalo Bill Reservoir is expected to be 112,000 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 555,000 acre-feet (69 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 - April 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)	
NF SHOSHONE RIVER at Wapiti	APR-SEP	373	413	440	85	467	507	520
SF SHOSHONE RIVER nr Valley	APR-SEP	129	156	175	65	194	221	269
SF SHOSHONE RIVER abv Buffalo Bill	APR-SEP	35	81	112	49	143	189	229
BUFFALO BILL DAM Inflow (2)	APR-SEP	403	493	555	69	617	707	804
CLARKS FORK RIVER nr Belfry	APR-SEP	446	499	535	91	571	624	590

SHOSHONE & CLARKS FORK RIVER BASINS
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BUFFALO BILL	646.6	436.2	402.7	359.0

SHOSHONE & CLARKS FORK RIVER BASINS
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of	
		Last Yr	Average
SHOSHONE RIVER	7	71	86
CLARKS FORK in WY	7	81	91

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

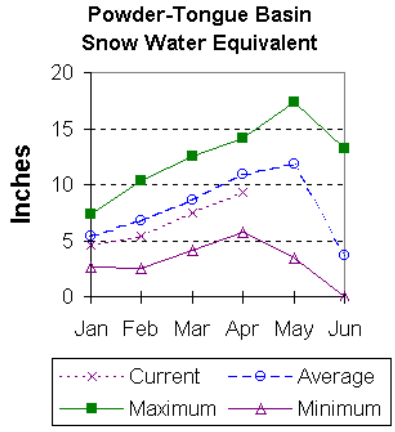
The average is computed for the 1961-1990 base period.

(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

Snow water equivalent (SWE) in the Upper Tongue River drainage is 90 percent of normal (106 percent of last year). Goose Creek drainage SWE is 83 percent of average (104 percent of last year). Clear Creek drainage is 85 percent of normal SWE (106 percent of last year). Crazy Woman Drainage is 81 percent of normal (98 percent of last year). The Upper Powder River is 85 percent of normal (100 percent of last year). The Powder River basin snow water equivalent (SWE), in Wyoming, is about 85 percent of average (103 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.

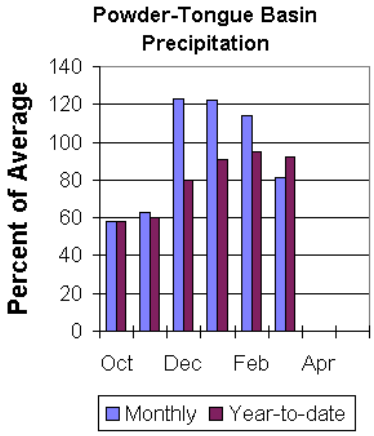


Precipitation

March precipitation was 81 percent of average for the 10 reporting stations (107 percent of last year). Monthly percentages range from 42 to 123 percent of average. Precipitation for the year ranges from 68 to 108 percent of average. Year-to-date precipitation is about 92 percent of average in the basin; this is 85 percent of last year at this time.

Reservoir

Tongue River Reservoir is currently at 102 percent of average storage for this time of year (that is 36,900 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 9,000 acre-feet (46 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 27,000 acre-feet (69 percent of average). Rock Creek near Buffalo will yield about 29,500 acre-feet (81 percent of normal), and Piney Creek at Kearny should yield about 42,500 acre-feet (83 percent of average).

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

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)
TONGUE RIVER nr Dayton (2)	APR-SEP	72	89	100	87	111	128	115
MIDDLE FORK POWDER nr Barnum	APR-SEP	1.9	6.1	9.0	46	11.9	16.1	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	18.3	24	27	69	31	36	39
ROCK CREEK nr Buffalo	APR-SEP	12.7	16.7	19.5	81	22	26	24
PINEY CREEK at Kearny	APR-SEP	16.8	32	43	83	53	68	51

POWDER & TONGUE RIVER BASINS
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
TONGUE RIVER	68.0	36.9	12.3	36.1

POWDER & TONGUE RIVER BASINS
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER TONGUE RIVER	8	111	90
GOOSE CREEK	2	109	83
CLEAR CREEK	4	106	85
CRAZY WOMAN CREEK	3	98	81
UPPER POWDER RIVER	4	100	85
POWDER RIVER in WY	8	103	85

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

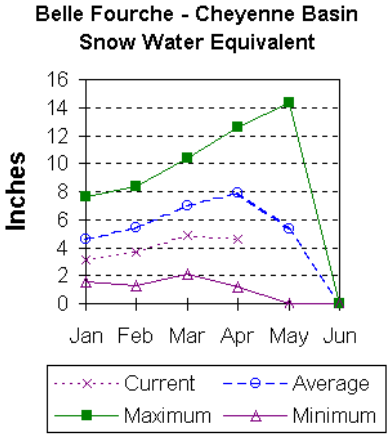
The average is computed for the 1961-1990 base period.

(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.

Belle Fourche and Cheyenne River Basins (7)

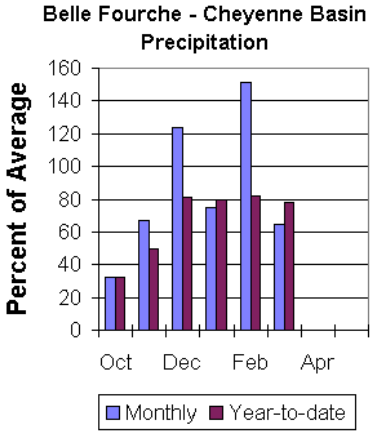
Snow.

The Belle Fourche River basin has 58 percent of normal SWE. The basin SWE is 103 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 March was 65 percent of average in the Black Hills (93 percent of last March). Monthly percentages range from 50 to 153 percent. Year-to-date precipitation is 78 percent of average and 52 percent of last year's amount. Year to date percentages range from 49 to 124. This is from the 4 reporting stations.



Reservoir.

Reservoir storage is above average in the basin. Angostura is currently storing 109 percent of average (120,500-acre feet). Belle Fourche reservoir is storing 138 percent of average (180,200-acre feet). Deerfield reservoir is storing 111 percent of average (15,000-acre feet). Keyhole reservoir is storing 162 percent of average (174,700-acre feet). Pactola reservoir is storing 116 percent of average (54,100-acre feet), and Shadehill reservoir is storing 89 percent of average (56,300-acre feet).

Streamflow

Streamflow forecast are below average as of April 1. Deerfield Reservoir inflow is forecast at 3000 acre feet (71 percent of average). Pactola is forecast at 10800 acre feet (57 percent of average). This is for the April – July forecast period.

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

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)
DEERFIELD RESERVOIR Inflow	APR-JUL	0.30	1.91	3.00	71	4.09	5.70	4.20
PACTOLA RESERVOIR Inflow	APR-JUL	1.9	3.8	10.8	57	17.8	28	18.9

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ANGOSTURA	122.1	120.5	120.6	110.1
BELLE FOURCHE	178.4	180.2	179.6	130.9
DEERFIELD	15.2	15.0	15.3	13.5
KEYHOLE	193.8	174.7	182.2	107.6
PACTOLA	55.0	54.1	54.0	46.8
SHADEHILL	81.4	56.3	76.9	63.1

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BELLE FOURCHE	7	94	58

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

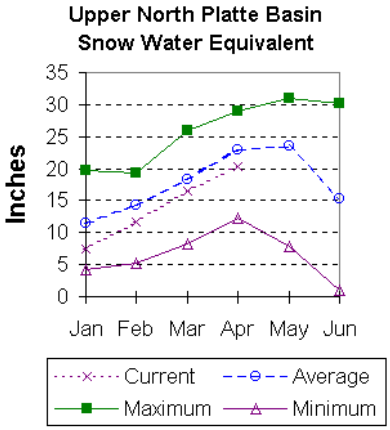
The average is computed for the 1961-1990 base period.

(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 89 percent of average snow water equivalent (SWE) recorded for this time of the year (104 percent of last year). SWE in the drainage area above Northgate is about 105 percent of average and 121 percent of last year at this time. SWE in the Encampment River drainage is about 80 percent of normal and 95 percent of last year. Brush Creek SWE for the year is about 83 percent of normal and 92 percent of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 68 percent of average and 89 percent of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.

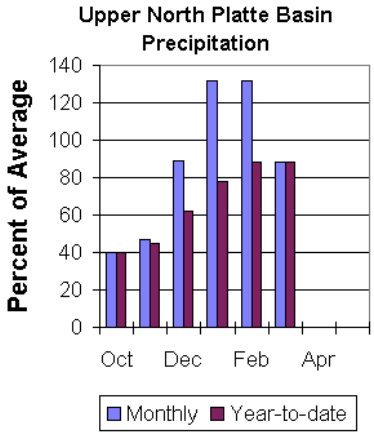


Precipitation

Eight reporting stations indicate March precipitation was 88 percent of average and about 162 percent of last year's amount. March precipitation varied from 60 percent of average at Reno Hill SNOTEL to 161 percent of average at Wamsutter. Total water-year-to-date precipitation is about 88 percent of average for the basin, which is about 80 percent of last year's amount. Year to date percentage ranges from 64 to 117 percent of average for the 8 reporting stations.

Reservoirs

Seminoe Reservoir is currently storing about 202 percent of normal for this time of the year. Currently, the reservoir is storing 110 percent of last year's amount. Currently, Seminoe Reservoir storage is estimated to be storing 743,000 acre-feet (73 percent of capacity). Last year, at this time, the reservoir had 673,800 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 282,000 acre-feet (104 percent of average). Encampment River near Encampment is estimated to yield 117,000 acre-feet (75 percent of normal). North Platte River near Sinclair will yield about 656,000 acre-feet (91 percent of normal). Rock Creek near Arlington is estimated to yield 38,000 acre-feet (68 percent of average). Medicine Bow River above Seminoe Reservoir is expected to yield about 70,000 acre-feet (55 percent of normal). Seminoe Reservoir inflow should be about (731,000 acre-feet (86 percent of normal). See the following table for more detailed information on projected runoff.

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

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)
North Platte River nr Northgate	APR-SEP	184	242	282	104	322	380	271
Encampment River nr Encampment	APR-SEP	79	102	117	75	132	155	156
North Platte River nr Sinclair	APR-SEP	420	561	656	91	751	892	719
Rock Creek nr Arlington	APR-SEP	27	33	38	68	43	51	56
Medicine Bow River ab Seminoe Reserv	APR-SEP	25	49	70	55	94	137	127
Seminoe Reservoir inflow	APR-JUL	415	569	673	85	777	931	788
	APR-SEP	452	618	731	86	844	1010	851

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SEMINOE	1016.7	743.0	673.8	368.0

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
N PLATTE above Northgate	8	121	105
ENCAMPMENT RIVER	1	83	96
BRUSH CREEK	3	95	77
MEDICINE BOW & ROCK CREEK	1	103	63
N PLATTE above Seminoe	12	113	98

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

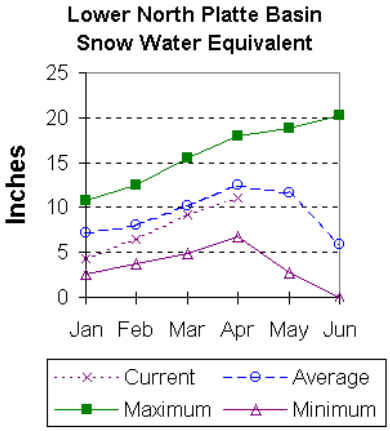
The average is computed for the 1961-1990 base period.

(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 88 percent of normal (103 % of last year). The Sweetwater drainage is currently 83 percent of average (82 % of last year). Deer and LaPrele Creeks are currently 90 percent of normal (119 percent of last year). SWE for the North Platte above the Laramie River drainage is 89 percent of average (103 % of last year). SWE for the Laramie River above the mouth is 86 percent of average (112 % of last year). SWE for the Laramie River above Laramie is 93 percent of average (116 % of last year). And SWE in the Little Laramie River is 73 percent of normal (103 % of last year). For more information see Basin Summary of Snow Courses at beginning of report.

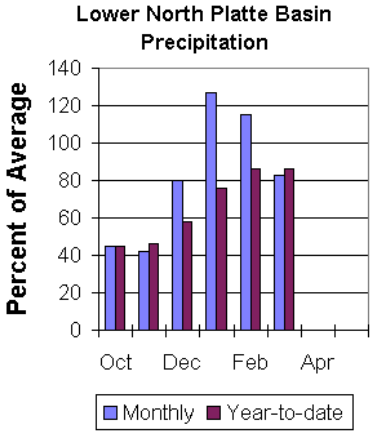


Precipitation

Of the 6 reporting stations, percentages for the month range from 40 to 156. March precipitation for the basin was 83 percent of average (174 percent of last year). The water year-to-date precipitation for the basin is currently 86 percent of average (77 percent of last year). Year to date percentages range from 54 to 107.

Reservoir

The Lower North Platte River basin reservoir storage is average to well above average. Reservoir storage is as follows: Alcova 156,800 acre feet (97 percent of average); Glendo 463,600 acre feet (110 percent of average); Guernsey 18,600 acre feet (86 percent of average); Pathfinder 994,900 acre feet (161 percent of average); Seminoe 743,000 acre feet (202 percent of average); and Wheatland No.2 74,000 acre feet (152 percent of average). Water allocated to project use is also above average with North Platte Project users at 158 percent of average, Kendrick Project users at 121 percent of average, and Glendo Project users at 122 percent of average.



Streamflow

Yields from 62 to 81 percent are expected in the basin during the forecast period. The following yields are based on the fifty percent chance probability runoff for the April through September forecast period. The Sweetwater near Alcova is forecast to yield about 46,000 acre-feet (62 percent of average). Deer Creek at Glenrock is expected to yield about 67 percent of average (26,000 acre-feet). LaPrele Creek above the reservoir is estimated to yield 80 percent of average (20,000 acre-feet). North Platte River below Guernsey Reservoir is expected to yield about 80 percent of normal (771,000 acre-feet), and below Glendo Reservoir is anticipated to yield about 81 percent of average (803,000 acre-feet). Laramie River near Woods should yield about 77 percent of average (104,000 acre-feet). The Little Laramie near Filmore should produce about 40,000 acre-feet (63 percent of average).

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS
Streamflow Forecasts - April 1, 2000

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)
Sweetwater River nr Alcova	APR-JUL	17.3	27	43	62	59	83	69
	APR-SEP	18.5	30	46	62	63	87	74
Deer Creek at Glenrock	APR-SEP	12.9	20	26	67	33	44	39
La Prele Creek ab La Prele Reservoir	APR-SEP	8.0	12.7	20	80	30	49	25
North Platte River blw Glendo	APR-SEP	453		771	80		1107	963
North Platte River blw Guernsey	APR-SEP	475		803	81		1147	989
Laramie River nr Woods	APR-SEP	41	78	104	77	130	167	135
Little Laramie River nr Filmore	APR-SEP	23	33	40	63	47	57	64

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ALCOVA	184.3	156.8	162.3	162.0
GLENDO	506.4	463.6	505.5	420.3
GUERNSEY	45.6	18.6	29.9	21.6
PATHFINDER	1016.5	994.9	973.5	619.0
SEMINOE	1016.7	743.0	673.8	368.0
WHEATLAND #2	98.9	74.0	66.0	48.7
NORTH PLATTE PROJ	1062.1	1065.2	999.0	676.0
KENDRICK PROJECT	1201.7	987.0	973.0	812.7
GLENDO PROJECT USERS	183.2	155.0	169.3	127.2

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SWEETWATER	3	83	83
DEER & LaPRELE CREEKS	2	129	87
N PLATTE abv Laramie R.	17	108	95
LARAMIE RIVER abv Laramie	9	116	93
LITTLE LARAMIE RIVER	3	97	76
LARAMIE RIVER above mouth	11	111	89
NORTH PLATTE	25	109	93

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

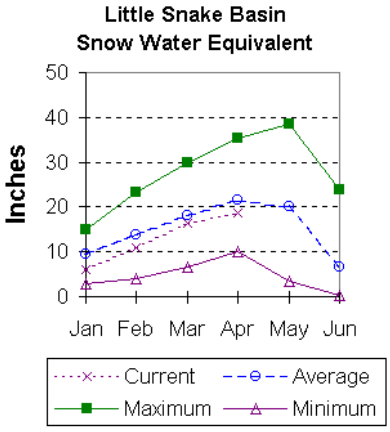
The average is computed for the 1961-1990 base period.

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

Little Snake River Basin (10)

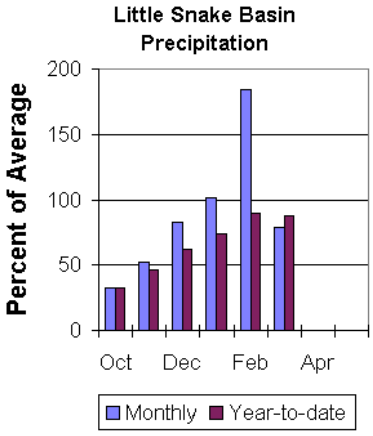
Snow

Snowfall has been below average across the basin this year. Currently, snow water equivalent (SWE) in the Little Snake River drainage is 87 percent of average (103 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. March precipitation was 79 percent of average (143 percent of last year) for the 5 reporting stations. The Little Snake River basin water-year-to-date precipitation is currently 88 percent of average (82 percent of last year). Year-to-date percentages range from 76 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 128,000 acre-feet (83 percent of normal). Little Snake River near Dixon is estimated to yield 265,000 acre-feet (81 percent of normal).

LITTLE SNAKE RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
Little Snake River nr Slater	APR-JUL	87	110	128	83	147	177	155
LITTLE SNAKE R nr Dixon	APR-JUL	155	221	265	81	309	375	329

LITTLE SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

LITTLE SNAKE RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LITTLE SNAKE RIVER	2	109	92

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

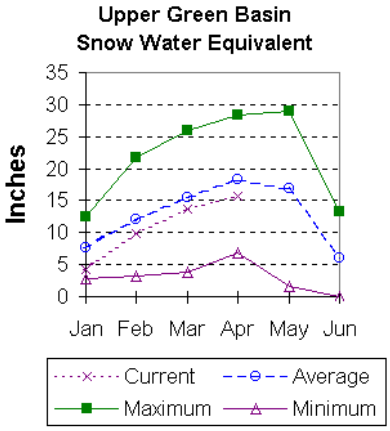
The average is computed for the 1961-1990 base period.

(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 86 percent of average (82 percent of last year). The Green River basin SWE above Warren Bridge is 89 percent of normal (86 percent of last year). SWE on the west side of the Upper Green River basin is about 84 percent of normal, 80 percent of this time last year. Newfork River SWE is now 92 percent of normal (86 percent of last year). Big Sandy-Eden Valley SWE is about 88 percent of average (77 percent of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.

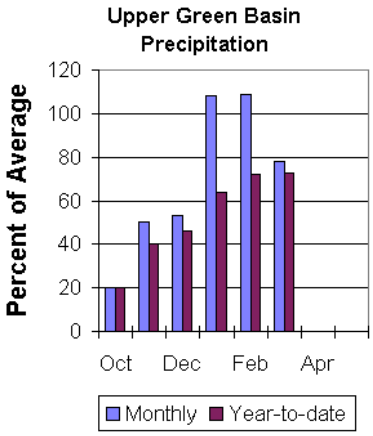


Precipitation

The 11 reporting precipitation sites in the basin were 78 percent of the March average (101 percent of last year at this time). March precipitation varied from 52 to 102 percent of average. Water year-to-date precipitation is about 73 percent of average (77 percent of last year). Year to date percentage of average ranges from 60 to 88 for the reporting stations.

Reservoir

Data for Big Sandy Reservoir and Eden Reservoir were not reported this month. Fontenelle Reservoir is storing 130,800 acre-feet (67 percent of average and 30 percent of the total capacity). Flaming Gorge reservoir is currently storing 3,199,000 acre feet (85 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 just below average. Green River at Warren Bridge is expected to yield about 250,000 acre-feet (94 percent of normal). Pine Creek above Fremont Lake is expected to yield 100,000 acre-feet (96 percent of normal). New Fork River near Big Piney is expected to yield about 360,000 acre-feet (94 percent of normal). Fontenelle Reservoir Inflow is estimated to be 725,000 acre-feet (85 percent of average), and Big Sandy near Farson is expected to be about 46,000 acre-feet (81 percent of normal).

UPPER GREEN RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
Green River at Warren Bridge	APR-JUL	205	233	250	94	267	295	266
Pine Creek abv Fremont Lake	APR-JUL	84	94	100	96	106	116	104
New Fork River nr Big Piney	APR-JUL	246	317	360	94	403	474	385
Fontenelle Reservoir Inflow	APR-JUL	475	663	725	85	790	976	849
Big Sandy River nr Farson	APR-JUL	30	39	46	81	53	63	57

UPPER GREEN RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BIG SANDY		NO REPORT		
EDEN		NO REPORT		
FLAMING GORGE	3749.0	3199.0	3190.6	---
FONTENELLE	344.8	105.1	122.9	157.9

UPPER GREEN RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
GREEN above Warren Bridge	4	85	89
UPPER GREEN (West Side)	7	80	84
NEWFORK RIVER	3	86	92
BIG SANDY/EDEN VALLEY	2	77	88
GREEN above Fontenelle	14	82	86

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

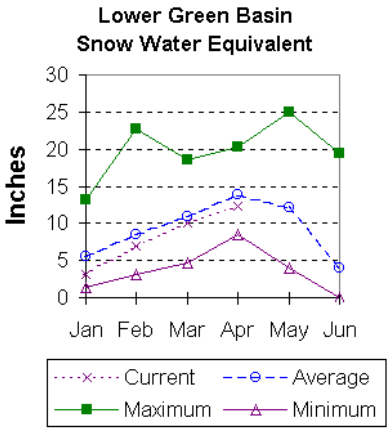
The average is computed for the 1961-1990 base period.

(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)

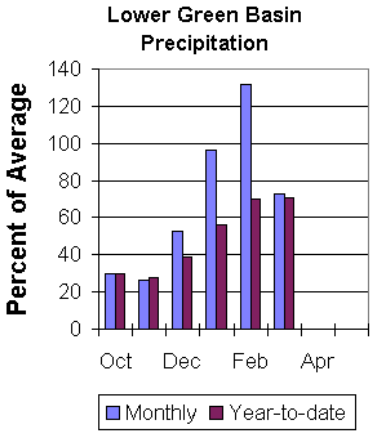
Snow

The Blacks Fork drainage snow water equivalent (SWE) is 91 percent of average (102 % of last year). SWE in the Hams Fork, as of April 1, is 84 percent of average (84% of last year). The Henry's Fork SWE for the basin is 95 percent of average (121 % of last year). The basin, as a whole, is 88 percent of average (87 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 March. Precipitation ranged from 57 to 126 percent of average for the month. The entire basin received 73 percent of average for the month (91 percent of last year). The basin year-to-date precipitation is currently 71 percent of average (78 percent of last year). Year to date percentages range from 64 to 76.



Reservoir

Fontenelle Reservoir is currently storing 105,100 acre feet; this is 67 percent of average (86 % of last year). Flaming Gorge does not have an average established. Flaming Gorge is currently storing 3,199,000 acre feet. Last year at this time there was 3,190,600 acre feet in storage at Flaming Gorge. Viva Naughton is currently storing 33,400 acre feet; this is 123 percent of average (112 % of last year).

Streamflow

Expected yields vary from 73 to 84 percent of average across the basin. The following forecast values are based on a 50 percent chance probability for the April through July forecast period. Green River near Green River is forecast to yield about 740,000-acre feet (82 percent of average). Blacks Fork near Robertson is forecast to yield 75,000-acre feet (79 percent of average). East Fork of Smiths Fork near Robertson is estimated to yield 22,000 acre-feet (73 percent of average). The estimated yield for Hams Fork near Frontier is 50,000-acre feet (76 percent of average). Viva Naughton Reservoir inflow will be about 65,000-acre feet (73 percent of average). Flaming Gorge Reservoir inflow will be about 1,000,000-acre feet (84 percent of average).

LOWER GREEN RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
Green River nr Green River, WY	APR-JUL	566	653	740	82	827	908	899
Blacks Fork nr Robertson	APR-JUL	52	66	75	79	84	98	95
EF of Smiths Fork nr Robertson	APR-JUL	17.4	20	22	73	24	28	30
Hams Fk blw Pole Ck nr Frontier	APR-JUL	34	43	50	76	57	69	66
Hams Fk Inflow to Viva Naughton Res	APR-JUL	39	54	65	73	76	91	89
Flaming Gorge Reservoir Inflow	APR-JUL	658	878	1000	84	1122	1340	1196

LOWER GREEN RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
FONTENELLE	344.8	105.1	122.9	157.9
FLAMING GORGE	3749.0	3199.0	3190.6	---
VIVA NAUGHTON RES	42.4	33.4	29.7	27.1

LOWER GREEN RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
HAMS FORK RIVER	4	84	84
BLACKS FORK	5	102	91
HENRYS FORK	3	121	95
GREEN above Flaming Gorge	26	87	88

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

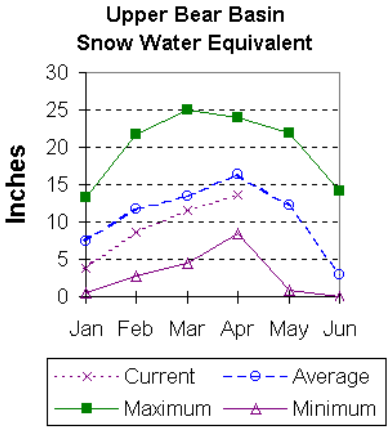
The average is computed for the 1961-1990 base period.

(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.

Upper Bear River Basin (13)

Snow

Snow water equivalent (SWE), at snow courses in the Bear River above the Idaho State line, is 83 percent of average (87 percent of last year). SWE for the Bear River in Utah is estimated to be 87 percent of average; that is about 98 percent of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 84 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.

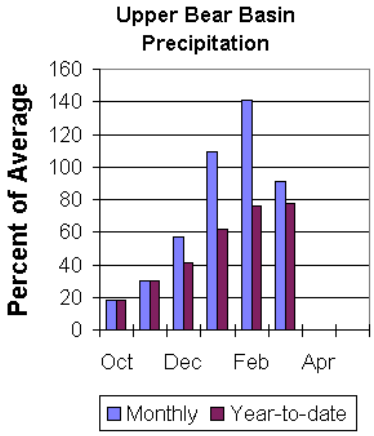


Precipitation

Precipitation for the month of March was 91 percent of average for the 2 reporting stations; this is 100 percent of the previous March. The monthly percentages range from 19 to 95 percent of average. The year-to-date precipitation, for the basin, is 78 percent of average; this is 77 percent of last year's amount.

Reservoir

Woodruff Narrows reservoir is currently storing 57,300 acre feet of water. Current storage is 100 percent of the 57,300 acre feet capacity. Last year the reservoir was storing 57,300 acre feet (100 percent of last year at this time).



Streamflow

The following 50 percent chance stream flow yields are for the April through September period. Smiths Fork near Border is estimated to yield 94,000 acre-feet (80 percent of normal), and Thomas Fork drainage near the Idaho-Wyoming state line is estimated to yield 23,000 acre-feet or 64 percent of normal. Bear River near the Utah-Wyoming State Line is expected to yield about 104,000 acre feet; that is 83 percent of average, while Bear River near Woodruff is expected to yield about 120,000 acre-feet, about 78 percent of normal.

UPPER BEAR RIVER BASIN
Streamflow Forecasts - April 1, 2000

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)
SMITHS FK nr Border, WY	APR-SEP	70	84	94	80	106	126	118
THOMAS FK nr WY-ID State Line (Disc.	APR-SEP	14.3	19.0	23	64	28	37	36
Bear R nr UT-WY State Line	APR-SEP	81	94	104	83	115	133	126
BEAR R nr Woodruff, UT	APR-SEP	71	97	120	78	148	202	154

UPPER BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
WOODRUFF NARROWS	57.3	57.3	57.3	---

UPPER BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 2000

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER BEAR RIVER in Utah	7	98	87
SMITHS & THOMAS FORKS	4	83	84
BEAR RIVER abv ID line	9	87	83
NORTHWEST	77	77	86
NORTHEST	20	104	84
SOUTHEAST	24	110	93
SOUTHWEST	29	90	89

* 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.

Wyoming
Basin Outlook Report

Natural Resources Conservation Service
Casper, WY