USDA United States Department of Agriculture

Natural Resources Conservation Service

Wyoming Basin Outlook Report January 1, 2004

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.

Wyoming Water Supply Outlook Report

General

Generally, snow water equivalent (SWE) across the state is above normal for this time of the year. SWE average for the State is about 103 percent of normal for this time of the year. Northwest portion of the State is 105 of percent normal. Northeast Wyoming is 101 of percent of normal, and the southeast part of the State is 101 percent of average. Southwestern Wyoming is 106 percent of average for this time of the year.

Precipitation for December varied from 28 percent above to 16 percent below average for the State. Year-to-date precipitation is also above average for the year. Reservoir levels vary from well above average to well below average. Reservoirs in the North Platte River basin are generally well below average. Reservoirs in the northeast have near average storage. Forecast runoff varies from 39 to 116 percent of average.

Snowpack

Snowpack across the State is near average for this time of year. SWE is generally near average for the entire State. SWE in the northwestern portion of the State is now at 105 percent of average (142 percent of last year). Northeast Wyoming SWE is currently about 101 percent of average (132 percent of last year). The southeast portion is currently about 101 percent of average SWE (133 percent of last year). And the southwest is about 106 percent of average (144 percent of last year).

Precipitation

December precipitation was near normal over the entire State. The Belle Fourche was the lowest in percentage at 84 percent of average. The following table displays the major river basins and their departure from normal for this month.

Basin	Departure from normal	Basin	Departure from normal
Snake River	+18%	Upper North Platte River	-04%
Yellowstone & Madison	+28%	Lower North Platte	+06%
Wind River	+10%	Little Snake River	+11%
Big Horn	+22%	Upper Green River	+05%
Shoshone & Clarks Fork	-01%	Lower Green River	-02%
Powder & Tongue River	+30%	Upper Bear River	-05%
Belle Fourche & Cheyenne	-16%		

Streams

Stream flow yield is expected to be below average across the State. Most probable yield for the State is forecast to be about 84 percent of average (varies from 39 to 111 percent of average). The northwest part of the State is expected to yield about 92 percent of normal -- yield estimates vary from 67 to 108 percent of normal. Yield from the northeast portion of Wyoming will be below average (about 92 percent of average) -- yield estimates vary from 75 to 106 percent of average for the various forecast points. The southeast portion of the state will be about 82 percent of normal -- yield estimates range from 39 to 106 percent of normal. The southwest portion of Wyoming varies from 61 to 111 percent of average -- mean estimated yield for the forecast points in southwest Wyoming is about 68 percent of average.

Reservoirs

Only one reservoir did not report (Eden Reservoir), and Eden Reservoir is below the staff gage. Reservoir storage for those reporting is generally below average for this time of the year. See following table for further information about reservoir storage.

Major Reservoirs in Wyoming

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
WYOMING AND SURROUNDING STATES					
SHADEHILL	38	39	62	60	97
ANGOSTURA	64	61	79	81	104
DEERFIELD	99	95	81	122	104
PACTOLA	86	83	83	103	103
BELLE FOURCHE	47	48	51	93	98
JACKSON LAKE	17	29	57	30	58
GRASSY LAKE	63	81	76	82	77
FONTENELLE	58	62	61	95	93
BIG SANDY	10	9	48	21	115
EDEN			NO REPORT		
PILOT BUTTE	76	77	64	118	98
BULL LAKE	37	29	57	66	131
BOYSEN	55	37	88	63	151
BUFFALO BILL	64	50	65	99	130
KEYHOLE	57	60	52	108	95
SEMINOE	25	20	62	41	127
PATHFINDER	28	30	63	44	93
ALCOVA	85	85	84	101	100
GLENDO	36	29	56	65	124
GUERNSEY	29	21	16	186	143
WHEATLAND #2	20	12	43	46	161
PALISADES	28	32	74	38	90
HEBGEN LAKE	76	79	71	107	96
ENNIS LAKE	71	70	77	93	101
BIGHORN LAKE	56	47	67	83	119
TONGUE RIVER	58	40	28	204	145
FLAMING GORGE	69	70	81	86	99
WOODRUFF NARROWS	10	12	41	25	86

Basin Summary of Snow Course Data

LOST - Data current as of:01/08/04 14:00:06

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

JANUARY 2004

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
WYOMING Snow Course and SNOTEL Stations						
ASTER CREEK	7750	12/29/03	71	15.3	9.7	13.1
BALD MOUNTAIN SNOTEL	9380	1/01/04	42	8.4	7.0	9.7
BASE CAMP SNOTEL	7030	1/01/04	---	11.2	7.0	8.2
BATTLE MTN. SNOTEL	7440	1/01/04	---	8.1	4.8	4.1
BEARTOOTH LK. SNOTEL	9280	1/01/04	48	10.8	8.6	11.5
BEAR TRAP SNOTEL	8200	1/01/04	22	3.8	1.7	2.6
BIG GOOSE SNOTEL	7760	1/01/04	20	4.0	3.6	4.4
BIG SANDY SNOTEL	9080	1/01/04	46	7.3	5.0	6.9
BLACKWATER SNOTEL	9780	1/01/04	---	12.9	8.4	12.0
BLIND BULL SNOTEL	8900	1/01/04	61	12.0	7.7	13.2
BLIND PARK SNOTEL	6870	1/01/04	22	2.9	2.3	3.5
BONE SPGS. SNOTEL	9350	1/01/04	35	7.1	5.7	7.8
BROOKLYN LK. SNOTEL	10220	1/01/04	---	7.9	5.4	10.8
BURGESS JCT. SNOTEL	7880	1/01/04	---	5.1	3.9	5.5
BURROUGHS CRK SNOTEL	8750	1/01/04	34	6.8	6.7	6.7
CANYON SNOTEL	8090	1/01/04	35	6.4	4.6	6.1
CASPER MTN. SNOTEL	7850	1/01/04	---	5.6	4.2	6.9
CHALK CK #1 SNOTEL	9100	1/01/04	47	9.7	7.2	10.1
CHALK CK #2 SNOTEL	8200	1/01/04	30	6.9	5.2	6.7
CINNABAR PARK SNOTEL	9690	1/01/04	---	8.6	--	7.2
CLOUD PEAK SNOTEL	9850	1/01/04	30	6.6	5.1	5.7
COLE CANYON SNOTEL	5910	1/01/04	13	2.5	.8	3.0
COLD SPRINGS SNOTEL	9630	1/01/04	20	3.7	2.9	4.6
COTTONWOOD CR SNOTEL	7700	1/01/04	---	9.9	8.8	9.7
CROW CREEK SNOTEL	8830	1/01/04	---	3.7	--	3.4
DEER PARK SNOTEL	9700	1/01/04	49	8.9	4.5	6.7
DITCH CREEK	6870	12/29/03	14	2.1	.4	--
DIVIDE PEAK SNOTEL	8860	1/01/04	---	10.1	6.6	9.2
DOME LAKE SNOTEL	8880	1/01/04	29	5.6	4.6	6.1
EAST RIM DIV SNOTEL	7930	1/01/04	---	5.7	3.8	5.9
ELBO RANCH	7100	12/30/03	30	5.2	4.1	--
ELKHART PARK SNOTEL	9400	1/01/04	---	6.5	5.0	6.3
EVENING STAR SNOTEL	9200	1/01/04	47	11.0	8.8	13.7
GLADE CREEK	7040	12/31/03	61	14.3	8.8	10.3
GRANITE CRK SNOTEL	6770	1/01/04	---	9.8	6.7	7.6
GRASSY LAKE SNOTEL	7270	1/01/04	86	20.0	11.7	14.7
GRAVE SPRINGS SNOTEL	8550	1/01/04	28	5.4	1.4	4.0
GROS VENTRE SNOTEL	8750	1/01/04	33	6.5	5.1	6.9
HANSEN S.M. SNOTEL	8360	1/01/04	19	3.6	3.6	3.3
HAMS FORK SNOTEL	7840	1/01/04	---	5.5	5.2	5.5
HOBBS PARK SNOTEL	10100	1/01/04	---	5.6	5.3	7.6
HUCKLEBERRY DIVIDE	7300	12/29/03	46	10.5	8.0	9.3
INDIAN CREEK SNOTEL	9430	1/01/04	---	11.5	8.6	12.5

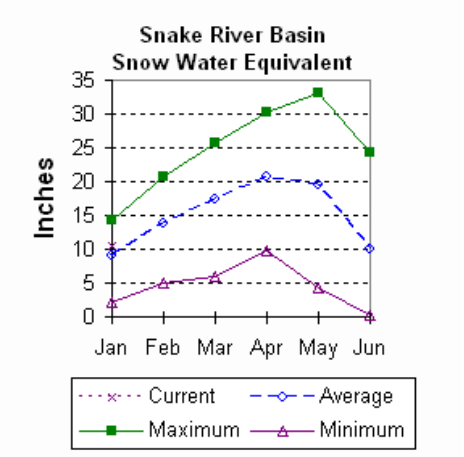
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
KELLEY R.S. SNOTEL	8180	1/01/04	---	7.6	5.3	7.6
KENDALL R.S. SNOTEL	7740	1/01/04	---	7.4	4.6	6.7
KIRWIN SNOTEL	9550	1/01/04	21	3.5	3.8	5.9
LA PRELE SNOTEL	8380	1/01/04	---	5.2	2.6	5.3
LEWIS LAKE SNOTEL	7850	1/01/04	---	18.5	10.9	14.8
LEWIS LAKE DIVIDE	7850	12/30/03	88	20.4	12.8	17.5
LITTLE BEAR RUN	6240	12/29/03	16	2.1	.7	1.7
LITTLE WARM SNOTEL	9370	1/01/04	23	4.3	3.9	5.3
LOOMIS PARK SNOTEL	8240	1/01/04	---	8.8	6.9	8.0
MALLO	6420	12/31/03	26	4.0	1.4	2.9
MARQUETTE SNOTEL	8760	1/01/04	23	4.0	3.5	5.0
MIDDLE POWDER SNOTEL	7760	1/01/04	---	6.3	1.9	5.5
MORAN	6750	1/01/04	34	7.0	4.8	5.7
NEW FORK SNOTEL	8340	1/01/04	---	5.6	4.0	5.4
NORRIS BASIN	7500	12/31/03	24	5.2	2.7	5.1
NORTH FRENCH SNOTEL	10130	1/01/04	---	10.9	10.0	13.4
NORTH RAPID CK SNTL	6130	1/01/04	15	2.9	3.0	3.3
OLD BATTLE SNOTEL	9920	1/01/04	---	16.7	9.5	14.6
OLD FAITHFUL	7400	1/01/04	50	9.1	4.6	6.0
OWL CREEK SNOTEL	8980	1/01/04	13	1.9	3.0	2.7
PARKERS PEAK SNOTEL	9400	1/01/04	42	10.3	9.0	10.6
PHILLIPS BENCH SNTL	8200	1/01/04	67	13.6	9.3	12.6
POWDER RVR.PASS SNTL	9480	1/01/04	27	5.6	3.9	5.3
RENO HILL SNOTEL	8500	1/01/04	---	6.7	4.1	6.6
SAGE CK BASIN SNTL	7850	1/01/04	---	7.6	4.7	5.3
SALT RIVER SNOTEL	7600	1/01/04	---	6.9	4.6	5.4
SAND LAKE SNOTEL	10050	1/01/04	---	11.3	7.2	14.9
SANDSTONE RS SNOTEL	8150	1/01/04	---	6.0	4.3	5.3
SHELL CREEK SNOTEL	9580	1/01/04	38	7.7	5.7	7.3
SNAKE RIVER STATION	6920	12/30/03	57	11.7	7.8	8.9
SNAKE RV STA SNOTEL	6920	1/01/04	---	12.6	6.9	7.9
SNIDER BASIN SNOTEL	8060	1/01/04	39	6.6	4.2	6.9
SOUTH BRUSH SNOTEL	8440	1/01/04	---	4.5	4.8	5.1
SOUTH PASS SNOTEL	9040	1/01/04	57	9.2	4.6	8.2
SPRING CRK. SNOTEL	9000	1/01/04	54	10.6	8.8	12.5
ST LAWRENCE ALT SNTL	8620	1/01/04	---	2.2	2.5	3.8
SUCKER CREEK SNOTEL	8880	1/01/04	28	5.3	4.2	5.2
SYLVAN LAKE SNOTEL	8420	1/01/04	41	8.9	8.4	10.5
SYLVAN ROAD SNOTEL	7120	1/01/04	30	6.6	5.7	6.2
THUMB DIVIDE SNOTEL	7980	1/01/04	---	11.1	6.3	7.6
THUMB DIVIDE	7980	12/29/03	39	8.9	6.0	8.1
TIE CREEK SNOTEL	6870	1/01/04	16	3.2	2.1	2.5
TIMBER CREEK SNOTEL	7950	1/01/04	13	1.9	1.9	3.0
TOGWOTEE PASS SNOTEL	9580	1/01/04	56	11.4	8.6	11.7
TOWNSEND CRK SNOTEL	8700	1/01/04	23	4.3	3.0	4.4
TRIPLE PEAK SNOTEL	8500	1/01/04	---	10.8	8.2	11.9
TWO OCEAN SNOTEL	9240	1/01/04	---	15.6	12.0	13.5
WEBBER SPRING SNOTEL	9250	1/01/04	---	12.7	7.0	11.5
WHISKEY PARK SNOTEL	8950	1/01/04	---	13.4	9.0	11.1
WILLOW CREEK SNOTEL	8450	1/01/04	---	14.2	10.9	14.3
WINDY PEAK SNOTEL	7900	1/01/04	---	2.9	3.0	3.5
WOLVERINE SNOTEL	7650	1/01/04	22	5.2	3.0	5.8
YOUNTS PEAK SNOTEL	8350	1/01/04	30	5.2	5.9	7.9

(d) denotes discontinued site.

Snake River Basin (1)

Snow

The Snake River basin snow water equivalent (SWE) is below normal. Snake above Jackson Lake is 129 percent (158% of last year at this time). Pacific Creek is 123 percent of average (142% of last year at this time). Gros Ventre River is 96 percent of average (131% of last year at this time). Hoback River is 103 percent of average (142% of last year at this time), Greys River is 92 percent of average (134% of last year at this time). Salt River is 105 percent of average (128% of last year at this time). Snake River Basin above Palisades is 115 percent of average (147% 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.

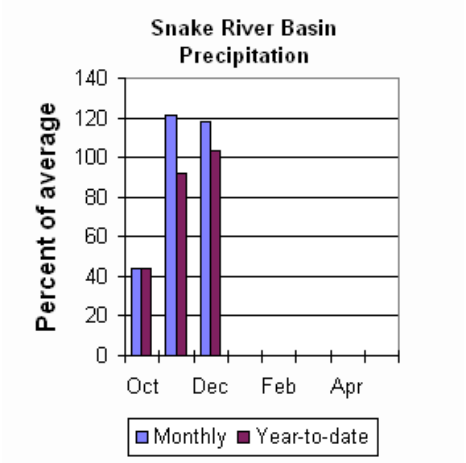


Precipitation.

Precipitation across the basin was above average last month. Monthly precipitation, for the basin, was 118 percent of average (164 percent of last year). Last months percentages range from 75 to 167 percent of average. Water-year-to-date precipitation is 103 percent of normal for the Snake River basin (140 percent of last year at this time) Year-to-date percentages range from 80 to 130 percent of average.

Reservoir.

Current usable reservoir storage compared to average for the three storage reservoirs in the basin is below average, except for Grassy Lake. Grassy Lake storage is about 82 percent of average (9,500 acre feet compared to 12,300 last year). Jackson Lake storage is 30 percent of average (142,900 acre feet compared to 245,700 acre feet last year). Palisades Reservoir storage is about 38 percent of average (398,900 acre feet compared to 443,200 acre feet last year).



Streamflow.

The most probable, 50 percent chance, April through September runoff yield forecast is below average for the basin. The Snake near Moran is expected to yield 910,000 acre-feet (102 percent of normal). Yield from the Snake River above Palisades Reservoir is estimated to be 2,850,000 acre-feet (104 percent of normal). The 50 percent chance yield near Heise is expected to be 3,940,000 acre-feet (101 percent of normal). Pacific Creek at Moran is expected to yield about 188,000 acre-feet (102 percent of average). Greys River above Palisades Reservoir is estimated to yield 365,000 acre-feet (92 percent of normal). Salt River near Etna is estimated to have a yield of 400,000 acre-feet (95 percent of normal).

SNAKE RIVER BASIN as of January 1, 2004

SNAKE RIVER BASIN
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SNAKE near Moran (1,2)	APR-JUL	610	750	815	101	880	1020	805
	APR-SEP	675	835	910	102	985	1150	895
SNAKE above Palisades (2)	APR-JUL	1960	2260	2470	105	2680	2980	2360
	APR-SEP	2280	2620	2850	104	3080	3420	2740
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	2030	2690	2990	101	3290	3950	2950
	APR-SEP	2860	3600	3940	101	4280	5020	3890
SNAKE near Heise (2)	APR-JUL	2810	3290	3610	101	3930	4410	3560
	APR-SEP	3310	3850	4220	101	4590	5130	4160
PACIFIC CREEK at Moran	APR-JUL	138	164	181	104	198	225	174
	APR-SEP	144	170	188	102	205	230	184
GREYS above Palisades	APR-JUL	210	270	310	91	350	410	340
	APR-SEP	255	320	365	92	410	475	395
SALT near Etna	APR-JUL	210	280	325	96	370	440	340
	APR-SEP	265	345	400	95	455	535	420

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GRASSY LAKE	15.2	9.5	12.3	11.6
JACKSON LAKE	847.0	142.9	245.7	481.7
PALISADES	1400.0	398.9	443.2	1036.5

SNAKE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
SNAKE above Jackson Lake	9	158	129
PACIFIC CREEK	3	142	123
GROS VENTRE RIVER	2	132	96
HOBACK RIVER	5	142	103
GREYS RIVER	4	134	92
SALT RIVER	3	128	105
SNAKE above Palisades	21	146	115

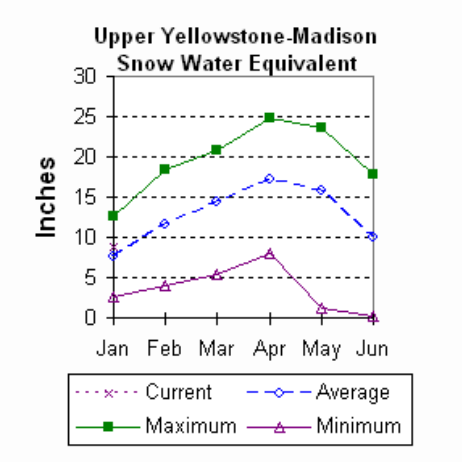
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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

Upper Yellowstone and Madison River Basins (2)

Snow

Snowfall in these basins this year has been above average for this time of the year. Snow water equivalent (SWE) is about 126 percent of average (181 percent of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 104 percent of average (135 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.

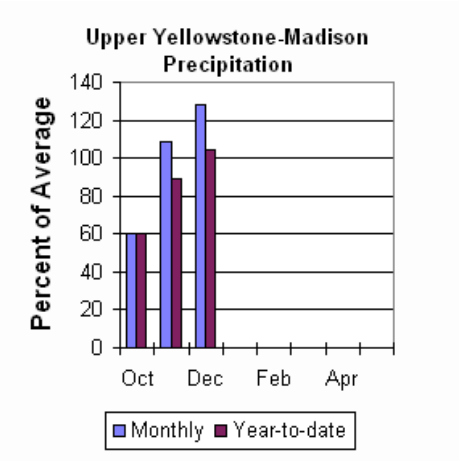


Precipitation

December precipitation in the Madison and Yellowstone drainage was about 128 percent of average (191 percent of previous year) for the 5 reporting stations -- percentage range was from 94 to 361 percent of average. Water-year-to-date precipitation is about 104 percent of average (132 percent of last year's amount). Year to date percentage ranges from 92 to 118 percent

Reservoir

Usable storage in Ennis Lake is estimated to be 29,200 acre-feet (71 percent of capacity) – 93 percent of average. Hebgen Lake is storing about 286,200 acre-feet of water (76 percent of capacity) – 107 percent of average. Hebgen Lake is storing about 101 percent and Ennis Lake is storing about 96 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 770,000 acre feet (96 percent of normal). Yellowstone at Corwin Springs will yield about 2,050,000 acre-feet (104 percent of normal). Yellowstone near Livingston will yield about 2,380,000 acre feet (104 percent of normal). Hebgen lake inflow is estimated to be 540,000 acre feet (108 percent of normal). See the following page for detailed runoff volumes.

UPPER YELLOWSTONE & MADISON RIVER BASINS
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
YELLOWSTONE at Lake Outlet	APR-JUL	445	530	585	99	640	725	590
	APR-SEP	590	695	770	96	845	950	805
YELLOWSTONE RIVER at Corwin Springs	APR-JUL	1340	1560	1710	104	1860	2080	1650
	APR-SEP	1610	1870	2050	104	2230	2490	1970
YELLOWSTONE RIVER near Livingston	APR-JUL	1580	1820	1980	104	2140	2380	1900
	APR-SEP	1910	2190	2380	104	2570	2850	2280
HEBGEN Reservoir Inflow	APR-JUL	335	385	420	108	455	505	390
	APR-SEP	440	500	540	108	580	640	500

UPPER YELLOWSTONE & MADISON RIVER BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ENNIS LAKE	41.0	29.2	28.9	31.5
HEBGEN LAKE	377.5	286.2	299.4	267.6

UPPER YELLOWSTONE & MADISON RIVER BASINS
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of: Last Yr	Average
MADISON RIVER in WY	9	181	126
YELLOWSTONE RIVER in WY	9	135	104

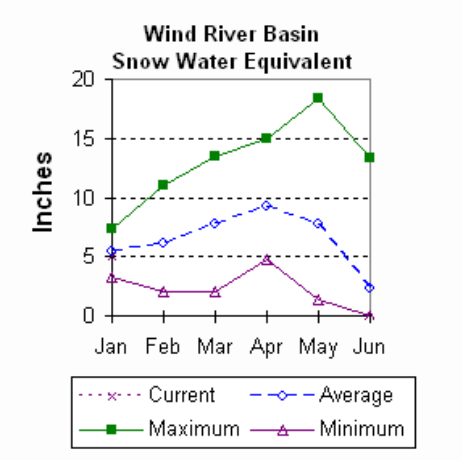
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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

Wind River Basin (3)

Snow

The Wind River basin has below average snow water equivalent (SWE) for this time of the year. SWE in the Wind River above Dubois is 95 percent of average (117 percent of last year). The Little Wind SWE is 68 percent of average water content (100 percent of last year), and the Popo Agie drainage SWE is about 104 percent of average (161 percent of last year). The Wind River basin, above Boysen Reservoir, SWE is about 93 percent of average (about 129 percent of last year). See the Basin Summary of Snow Course Data at the front of this report for details.

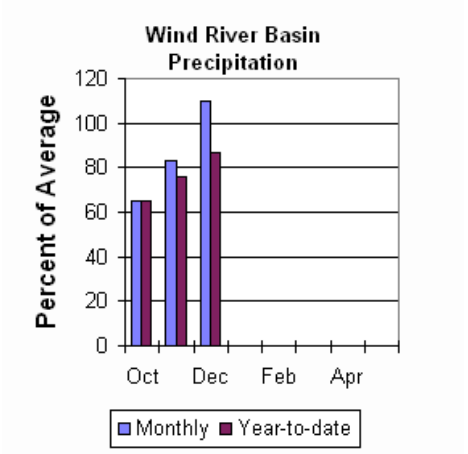


Precipitation

December precipitation in the basin varied from 41 to 316 percent of average. December precipitation for the basin was about 110 percent of average for the 8 reporting stations; that is about 246 percent of last year's amount. Water year-to-date precipitation is 87 percent of normal. The current water-year-to-date average is about 116 percent of last year at this time. Year to date figures range from 59 to 100 percent of average.

Reservoirs

Current storage varies from 37 to 76 percent of average. Usable storage in Bull Lake is currently about 56,900 acre feet (37 percent of capacity) -- normally the reservoir is at 57 percent of capacity at this time of the year. Boysen Reservoir is storing about 55 percent of capacity 330,700 acre feet) -- normally the reservoir is at 88 percent of capacity at this time of the year. Pilot Butte is storing 76 percent of capacity (23,900 acre feet) -- normally the reservoir is at 64 percent of capacity at this time of the year.



Streamflow

Water supply is estimated to be well 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 535,000 acre feet (100 percent of average). Wind River at Riverton will yield about 550,000 acre feet (86 percent of average). Boysen Reservoir inflow will yield about 680,000 acre feet (84 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 46,000 acre feet (87 percent of average). South Fork of Little Wind near Fort Washakie will yield about 69,000 acre feet (82 percent of average). Little Wind River near Riverton will yield about 285,000 acre feet (91 percent of average).

WIND RIVER BASIN
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DINWOODY CREEK nr Burris	APR-JUL	42	54	62	93	70	82	67
	APR-SEP	65	79	89	95	99	113	94
WIND RIVER abv Bull Lake Cr (2)	APR-JUL	275	375	440	101	505	605	435
	APR-SEP	355	460	535	100	610	715	535
BULL LAKE CR near Lenore (2)	APR-JUL	73	101	120	81	139	167	148
	APR-SEP	91	126	150	82	174	209	182
WIND RIVER at Riverton (2)	APR-JUL	200	360	470	86	580	740	545
	APR-SEP	265	435	550	86	665	835	640
LT POPO AGIE RIVER nr Lander	APR-JUL	8.4	27	39	85	51	70	46
	APR-SEP	13.8	33	46	87	59	78	53
SF LT WIND nr Fort Washakie	APR-JUL	33	49	60	82	71	87	73
	APR-SEP	39	57	69	82	81	99	84
LT WIND RIVER nr Riverton	APR-JUL	85	186	255	91	325	425	280
	APR-SEP	114	215	285	91	355	455	315
BOYSEN RESERVOIR Inflow (2)	APR-JUL	285	480	610	85	740	935	717
	APR-SEP	330	540	680	84	820	1035	809

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

(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
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BULL LAKE	151.8	56.9	43.3	86.3
BOYSEN	596.0	330.7	218.8	523.4
PILOT BUTTE	31.6	23.9	24.4	20.2

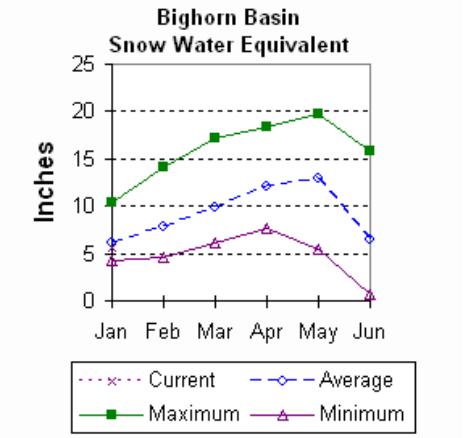
WIND RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
WIND RIVER above Dubios	3	122	95
LITTLE WIND	2	100	68
POPO AGIE	4	161	104
WIND above Boysen Resv	7	131	93

Bighorn River Basin (4)

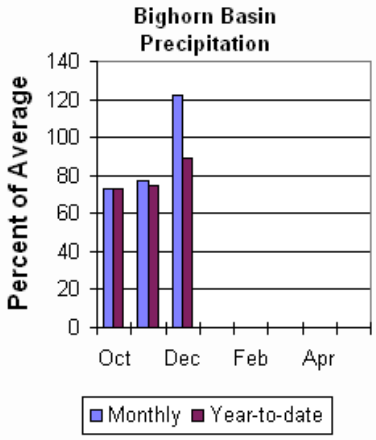
Snow

Snowpack in this basin is just below average for this time of year. The Nowood drainage SWE is 110 percent of average (205 percent of last year). Greybull River SWE is 61 percent of average (95 percent of last year). Shell Creek SWE is 94 percent of average (126 percent of last year). The basin SWE, as a whole, is currently 91 percent of average (135 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.



Precipitation

December precipitation was 122 percent of the monthly average (464 percent of last year). Sites ranged from 83 to 315 percent of average for the month. Year-to-date precipitation is 89 percent of normal; that is 125 percent of last year at this time. Year to date percentages, from the 10 reporting stations, range from 72 to 110.



Reservoir

Boysen Reservoir is currently storing 330,700-acre feet (63 percent of average). Bighorn Lake is now at 83 percent of average (757,600-acre feet). Boysen is currently storing 151 percent of last year at this time and Big Horn Lake is storing 119 percent of last year's volume.

Streamflow

The 50 percent chance April through September runoff is anticipated to be below normal. The Boysen Reservoir inflow is forecast to yield 680,000 acre feet (84 percent of average); the Greybull River nr Meeteese should yield 149,000 acre feet (75 percent of average); Shell Creek near Shell should yield 71,000 acre feet (99 percent of average) and the Bighorn River at Kane should yield 905,000 acre feet (82 percent of average).

BIGHORN RIVER BASIN
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BOYSEN RESERVOIR Inflow (2)	APR-JUL	285	480	610	85	740	935	717
	APR-SEP	330	540	680	84	820	1035	809
GREYBULL RIVER nr Meeteetse	APR-JUL	81	96	106	72	116	131	148
	APR-SEP	117	136	149	75	162	181	200
SHELL CREEK nr Shell	APR-JUL	50	56	60	100	64	70	60
	APR-SEP	60	67	71	99	75	82	72
BIGHORN RIVER at Kane (2)	APR-JUL	580	735	840	84	945	1100	1000
	APR-SEP	615	785	905	82	1020	1200	1110

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BOYSEN	596.0	330.7	218.8	523.4
BIGHORN LAKE	1356.0	757.6	635.6	911.1

BIGHORN RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
NOWOOD RIVER	2	205	110
GREYBULL RIVER	2	95	61
SHELL CREEK	3	126	94
BIGHORN (Boysen-Bighorn)	7	135	91

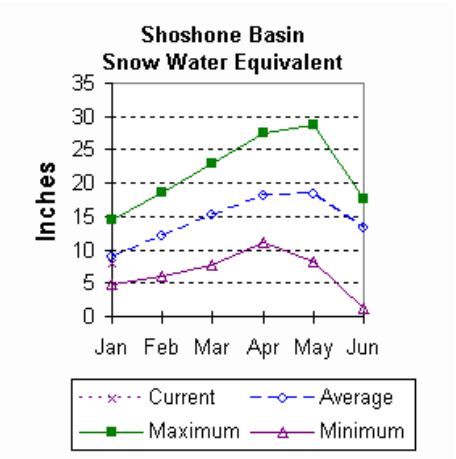
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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 88 percent of the January average (119 percent of last year) in the Shoshone River basin. The Clarks Fork River basin SWE is 91 percent of average (132 percent of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.

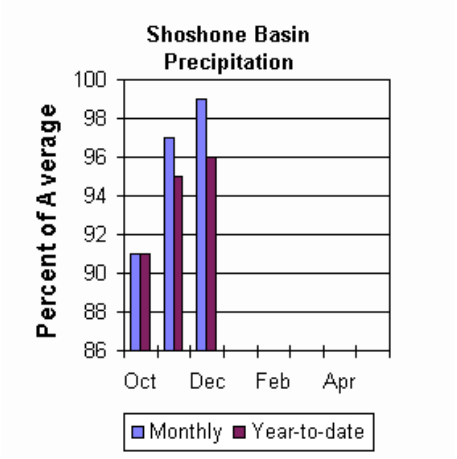


Precipitation

Precipitation for the month of December was 99 percent of normal (141 percent of last year). Monthly percentages range from 63 to 170 percent of average. The basin year-to-date precipitation is now 96 percent of average (125 percent of last year). Year-to-date percentages range from 76 to 109 percent of average.

Reservoir

Current usable storage in Buffalo Bill Reservoir is about 99 percent of average (130 percent of last year's storage) – the reservoir is about 64 percent of capacity. Currently, about 416,200 acre-feet are stored in the reservoir compared to 320,100 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 the North Fork Shoshone River at Wapiti is expected to be 520,000 acre-feet (100 percent of average). South Fork of the Shoshone River near Valley is estimated to yield of 210,000 acre-feet (79 percent of average), and South Fork above Buffalo Bill Reservoir is expected to be 151,000 acre-feet (67 percent of average). At the Buffalo Bill Reservoir, the fifty percent chance yield for the Shoshone River is expected to be about 700,000 acre-feet (87 percent of average). The fifty-percent chance yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be about 560,000 acre-feet (94 percent of average).

SHOSHONE & CLARKS FORK RIVER BASINS
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
NF SHOSHONE RIVER at Wapiti	APR-JUL	403	445	470	102	495	535	460
	APR-SEP	450	490	520	100	550	590	520
SF SHOSHONE RIVER nr Valley	APR-JUL	131	161	181	80	200	230	225
	APR-SEP	150	186	210	79	235	270	265
SF SHOSHONE RIVER abv Buffalo Bill	APR-JUL	67	114	146	68	178	225	215
	APR-SEP	65	116	151	67	186	235	225
BUFFALO BILL DAM Inflow (2)	APR-JUL	435	550	630	88	710	825	720
	APR-SEP	485	615	700	87	785	915	805
CLARKS FORK RIVER nr Belfry	APR-JUL	410	470	515	95	560	620	540
	APR-SEP	445	515	560	94	605	675	595

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BUFFALO BILL	646.6	416.2	320.1	418.4

SHOSHONE & CLARKS FORK RIVER BASINS
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
SHOSHONE RIVER	6	119	88
CLARKS FORK in WY	7	132	91

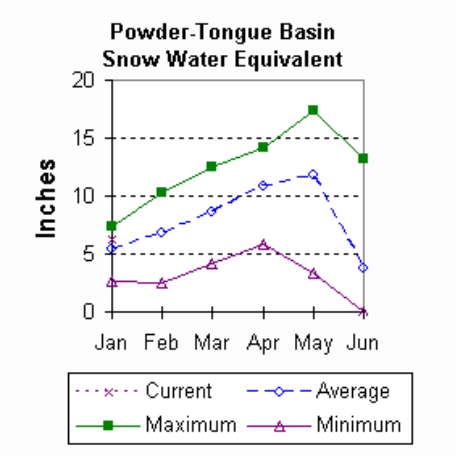
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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 98 percent of normal (128 percent of last year). The Goose Creek drainage is 91 percent of average (117 percent of last year). Clear Creek drainage is 113 percent of normal SWE (117 percent of last year). Crazy Woman Creek is 106 percent of average (144 percent of last year). The Upper Powder River drainage is 117 percent of average (209 percent of last year). The Powder River basin snow water equivalent (SWE), in Wyoming, is about 116 percent of average (160 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.

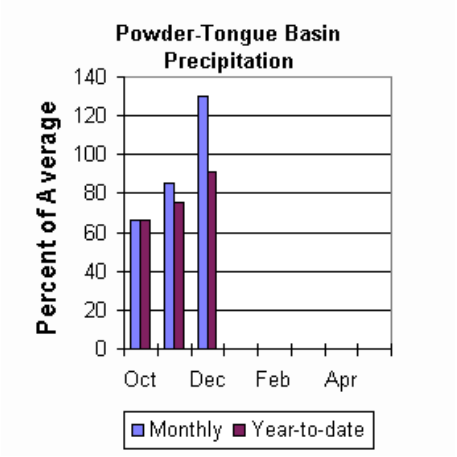


Precipitation

December precipitation was 130 percent of average for the 10 reporting stations (396 percent of last year). Monthly percentages range from 43 to 268 percent of average. Precipitation for the year ranges from 72 to 111 percent of average at the reporting stations. Year-to-date precipitation is about 91 percent of average in the basin; this is 131 percent of last year at this time.

Reservoir

Tongue River Reservoir is currently at 204 percent of average storage for this time of year (45,800 acre feet) – the reservoir is about 58 percent of capacity (total capacity is 79,100 acre feet). Last year at this time the reservoir was storing about 31,500 acre feet – average storage is about 22,500 acre feet for this time of the year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



Streamflow

The following runoff values are for the 50 percent probability during the April through September forecast period. The estimated yield for Tongue River near Dayton is 88,000-acre feet (81 percent of normal). Middle Fork of the Powder River near Barnum is estimated to yield 15,000-acre feet (80 percent of average). The North Fork of the Powder near Hazelton should yield about 11,000 acre-feet (106 percent of normal). The estimated yield for Clear Creek near Buffalo is 40,000 acre-feet (103 percent of average). Rock Creek near Buffalo will yield about 22,000 acre-feet (92 percent of normal), and Piney Creek at Kearny should yield about 46,000 acre-feet (89 percent of average).

POWDER & TONGUE RIVER BASINS
Streamflow Forecasts - January 1, 2004

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-JUL	48	65	77	80	89	106	96
	APR-SEP	57	76	88	81	100	119	109
BIG GOOSE CREEK nr Sheridan	APR-JUL	19.5	32	41	79	50	63	52
	APR-SEP	26	39	48	80	57	70	60
LITTLE GOOSE CREEK nr Big Horn	APR-JUL	16.0	23	27	79	31	38	34
	APR-SEP	23	30	35	83	40	47	42
TONGUE RIVER RESERVOIR Inflow (2)	APR-JUL	74	129	166	76	205	260	220
	APR-SEP	90	148	187	75	225	285	250
MIDDLE FORK POWDER nr Barnum	APR-JUL	6.6	11.1	14.1	79	17.1	22	17.8
	APR-SEP	7.3	11.9	15.0	80	18.1	23	18.7
NORTH FORK POWDER nr Hazelton	APR-JUL	7.70	9.10	10.10	105	11.10	12.50	9.60
	APR-SEP	8.4	10.0	11.0	106	12.0	13.6	10.4
CLEAR CREEK nr Buffalo	APR-JUL	28	33	36	106	39	44	34
	APR-SEP	31	36	40	103	44	49	39
ROCK CREEK nr Buffalo	APR-JUL	12.7	16.2	18.6	94	21	25	19.9
	APR-SEP	16.1	19.6	22	92	24	28	24
PINEY CREEK at Kearny	APR-JUL	18.0	33	43	88	53	68	49
	APR-SEP	20	36	46	89	56	72	52
POWDER RIVER at Moorehead	MAR-JUL	127	194	240	100	285	355	240
	MAR-SEP	146	215	260	98	305	375	265
POWDER RIVER near Locate	MAR-JUL	184	230	265	86	300	345	310
	MAR-SEP	197	250	285	85	320	375	335

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

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
TONGUE RIVER	79.1	45.8	31.5	22.5

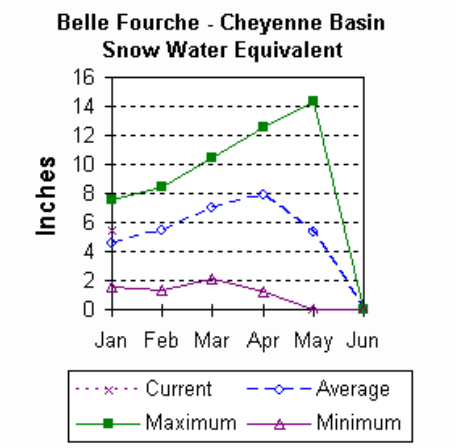
POWDER & TONGUE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER TONGUE RIVER	7	128	98
GOOSE CREEK	2	117	91
CLEAR CREEK	2	117	113
CRAZY WOMAN CREEK	1	144	106
UPPER POWDER RIVER	3	209	117
POWDER RIVER in WY	5	160	116

Belle Fourche and Cheyenne River Basins (7)

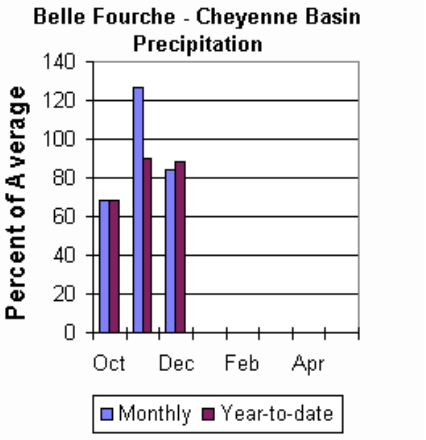
Snow.

The Belle Fourche River Basin snow water equivalent (SWE) is a little above average. SWE is currently 119 percent of average snow pack; 268 percent of last years amount at this time. See Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



Precipitation.

Precipitation, for the month of December was 84 percent of average in the Black Hills. Monthly percentages range from 64 to 131 percent. Year-to-date precipitation is 88 percent of average and 129 percent of last year's amount.



Reservoir.

Usable reservoir storage is generally above average in the basin. Angostura is currently storing 81 percent of average (77,800-acre feet), about 64 percent of capacity. Belle Fourche reservoir is storing 93 percent of average (84,700-acre feet), about 47 percent of capacity. Deerfield reservoir is storing 122 percent of average (15,000-acre feet), about 99 percent of capacity. Keyhole reservoir is storing 108 percent of average (110,300-acre feet), 57 percent of capacity. Pactola reservoir is storing 103 percent of average (47,200-acre feet), 86 percent of capacity. Shadehill reservoir is storing 60 percent of average (30,600-acre feet), 38 percent of capacity.

Streamflow

Water supply is estimated to be near normal this year. The following values reflect the 50 percent chance yields for the March through July runoff period. Deerfield Reservoir inflow is forecast at 6,300 acre feet (100 percent of average). Pactola is forecast at 20,000 acre feet (95 percent of average).

BELLE FOURCHE & CHEYENNE RIVER BASINS
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DEERFIELD RESERVOIR Inflow	MAR-JUL	2.40	4.70	6.30	100	7.90	10.20	6.30
	APR-JUL			5.30	100			5.32
PACTOLA RESERVOIR Inflow	MAR-JUL	1.1	12.4	20	95	28	39	21
	APR-JUL	0.9	10.6	18.0	95	25	36	18.9

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ANGOSTURA	122.1	77.8	74.7	96.4
BELLE FOURCHE	178.4	84.7	86.4	90.6
DEERFIELD	15.2	15.0	14.4	12.3
KEYHOLE	193.8	110.3	115.6	101.7
PACTOLA	55.0	47.2	45.8	45.8
SHADEHILL	81.4	30.6	31.7	50.7

BELLE FOURCHE & CHEYENNE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
BELLE FOURCHE	3	283	131

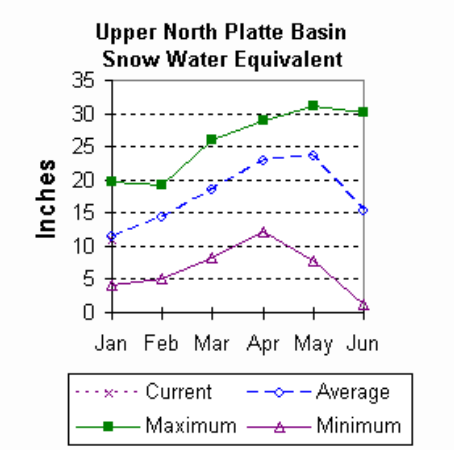
*** 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.**

(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)

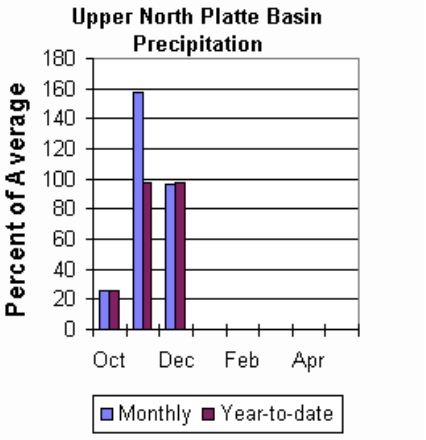
Snow

The snow courses above Seminoe Reservoir have about 97 percent of average snow water equivalent (SWE) recorded for this time of the year (130 percent of last year). SWE in the drainage area above Northgate is about 98 percent of average and 109 percent of last year at this time. SWE in the Encampment River drainage is about 115 percent of normal and 168 percent of last year. Brush Creek SWE for the year is about 83 percent of normal and 104 percent of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 75 percent of average and 152 percent of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



Precipitation

Eight reporting stations indicate December precipitation was 96 percent of average and about 150 percent of last year's amount. December precipitation varied from 61 to 153 percent of average. Total water-year-to-date precipitation is about 97 percent of average for the basin, which is about 123 percent of last year's amount. Year to date percentage ranges from 69 to 113 percent of average.



Reservoirs

Seminoe Reservoir is currently storing about 41 percent of normal for this time of the year. Currently, the reservoir is storing 127 percent of last year's amount. Seminoe Reservoir is estimated to be storing 257,600 acre-feet (25 percent of capacity). Last year, at this time, the reservoir had 202,600 acre-feet in storage.

Streamflow

All the following yields are based on the fifty percent chance April through September yield. Yield for the North Platte River near Northgate is expected to be about 245,000 acre-feet (90 percent of average). Encampment River near Encampment is estimated to yield 191,000 acre-feet (116 percent of normal). Rock Creek near Arlington is estimated to yield 50,000 acre-feet (88 percent of average). Seminoe Reservoir inflow should be about (850,000 acre-feet (99 percent of normal). See the following table for more detailed information on projected runoff.

UPPER NORTH PLATTE RIVER BASIN
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
NORTH PLATTE RIVER nr Northgate	APR-JUL	108	170	220	90	277	372	245
	APR-SEP	99	186	245	91	305	390	270
ENCAMPMENT RIVER nr Encampment	APR-JUL	114	154	181	116	210	250	156
	APR-SEP	119	162	191	116	220	265	165
ROCK CREEK nr Arlington	APR-JUL	28	39	47	89	56	71	53
	APR-SEP	30	42	50	88	59	75	57
SWEETWATER RIVER nr Alcova	APR-JUL	16.3	41	57	77	73	98	74
	APR-SEP	19.9	45	62	78	79	104	80
SEMINOE RESERVOIR Inflow	APR-JUL	375	625	790	99	955	1200	800
	APR-SEP	475	700	850	99	1000	1230	860

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

(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
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SEMINOE	1016.7	257.6	202.6	631.1

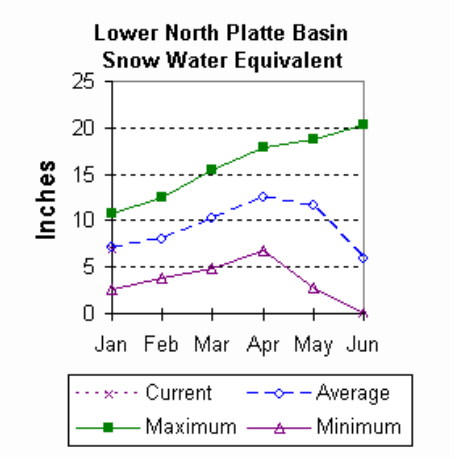
UPPER NORTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
N PLATTE above Northgate	5	109	98
ENCAMPMENT RIVER	3	168	115
BRUSH CREEK	2	104	83
MEDICINE BOW & ROCK CREEK	2	152	75
N PLATTE above Seminoe	13	130	97

Lower North Platte River Basin (9)

Snow

SWE for the North Platte River basin in Wyoming averages 97 percent of normal (136 % of last year). The Sweetwater drainage SWE is currently 121 percent (199 percent of last year). Deer and LaPrele Creek SWE is 100 percent of average (178 percent of last year. SWE for the North Platte above the Laramie River drainage is 99 percent of average (138 % of last year). SWE for the Laramie River above the mouth is 81 percent of average (124 % of last year). SWE for the Laramie River above Laramie is 84 percent of average (117 % of last year). SWE for the Little Laramie River is 73 percent of average (146 percent of last year). For more information see Basin Summary of Snow Courses at beginning of report.

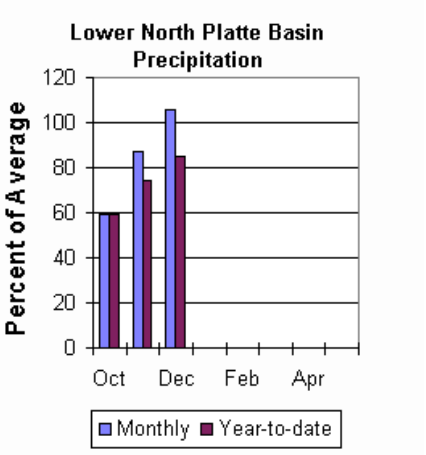


Precipitation

Of the 12 reporting stations, percentages for the month range from 46 to 214. December precipitation for the basin was 106 percent of average (223 percent of last year). The water year-to-date precipitation for the basin is currently 85 percent of average (127 percent of last year). Year to date percentages range from 71 to 120.

Reservoir

The Lower North Platte River basin reservoir storage is well below to well above average. Reservoir storage is as follows: Alcova 156,400 acre feet (101 percent of average); Glendo 182,500 acre feet (65 percent of average); Guernsey 13,400 acre feet (186 percent of average); Pathfinder 282,100 acre feet (44 percent of average); Seminoe 257,600 acre feet (41 percent of average). Wheatland No.2 19,600 acre feet (46 percent of average).



Streamflow

Yields from 39 to 96 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 62,000 acre-feet (78 percent of average). Deer Creek at Glenrock is expected to yield about 47 percent of average (19,300 acre-feet). LaPrele Creek above the reservoir is estimated to yield 44 percent of average (10,600 acre-feet). North Platte River below Guernsey Reservoir is expected to yield about 96 percent of normal (950,000 acre-feet), and below Glendo Reservoir is anticipated to yield about 98 percent of average (985,000 acre-feet). Laramie River near Woods should yield about 79 percent of average (107,000 acre-feet). The Little Laramie near Filmore should produce about 56,000 acre-feet (88 percent of average).

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS
Streamflow Forecasts - January 1, 2004

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	16.3	41	57	77	73	98	74
	APR-SEP	19.9	45	62	78	79	104	80
DEER CREEK at Glenrock	APR-JUL	6.7	14.1	19.1	51	24	32	38
	APR-SEP	6.6	14.2	19.3	47	24	32	41
LaPRELE CREEK abv Reservoir	APR-JUL	3.2	7.5	10.4	43	17.2	27	24
	APR-SEP	3.0	7.5	10.6	44	17.5	28	24
NORTH PLATTE - Alcova to Orin Gain	APR-JUL	23	45	61	40	100	157	152
	APR-SEP	25	48	63	39	102	160	161
NORTH PLATTE RIVER blw Glendo Res	APR-JUL	655	815	920	96	1030	1180	960
	APR-SEP	670	840	950	96	1060	1230	990
NORTH PLATTE RIVER blw Guernsey Res	APR-JUL	610	805	940	97	1070	1270	970
	APR-SEP	645	845	985	98	1120	1320	1010
LARAMIE RIVER nr Woods	APR-JUL	33	71	97	79	123	161	123
	APR-SEP	37	79	107	79	135	177	135
LITTLE LARAMIE RIVER nr Filmore	APR-JUL	29	42	51	86	60	73	59
	APR-SEP	32	46	56	88	66	80	64

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ALCOVA	184.3	156.4	156.9	154.4
GLENDO	506.4	182.5	147.1	282.9
GUERNSEY	45.6	13.4	9.4	7.2
PATHFINDER	1016.5	282.1	303.8	635.7
SEMINOE	1016.7	257.6	202.6	631.1
WHEATLAND #2	98.9	19.6	12.2	42.2

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SWEETWATER	2	199	121
DEER & LaPRELE CREEKS	2	178	100
N PLATTE abv Laramie R.	17	138	99
LARAMIE RIVER abv Laramie	5	117	93
LITTLE LARAMIE RIVER	2	146	92
LARAMIE RIVER above mouth	6	124	89
NORTH PLATTE	17	136	97

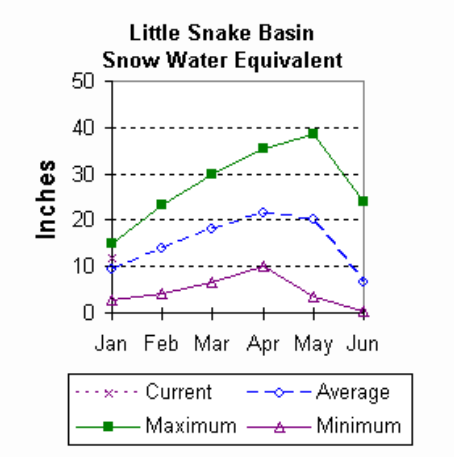
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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 above average across the basin this year. Currently, snow water equivalent (SWE) in the Little Snake River drainage is 124 percent of average (159 percent of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.

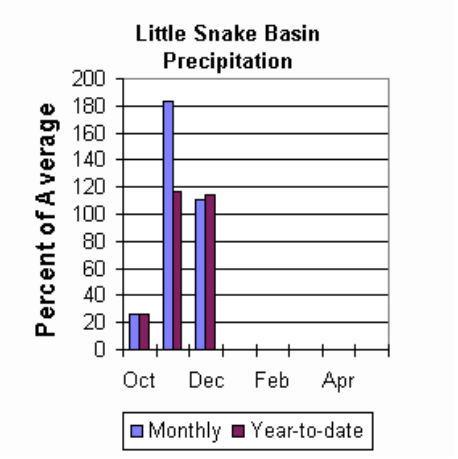


Precipitation

Precipitation across the basin was above average this past month. December precipitation was 111 percent of average (135 percent of last year) for the 5 reporting stations. December precipitation ranged from 70 to 135 percent of average. The Little Snake River basin water-year-to-date precipitation is currently 114 percent of average (130 percent of last year). Year-to-date percentages range from 108 to 125 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 172,000 acre-feet (108 percent of normal). Little Snake River near Dixon is estimated to yield 365,000 acre-feet (111 percent of normal).



LITTLE SNAKE RIVER BASIN
Streamflow Forecasts - January 1, 2004

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	98	140	172	108	208	266	159
LITTLE SNAKE R nr Dixon	APR-JUL	250	320	365	111	410	480	330

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

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

LITTLE SNAKE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of	
		Last Yr	Average
LITTLE SNAKE RIVER	6	159	124

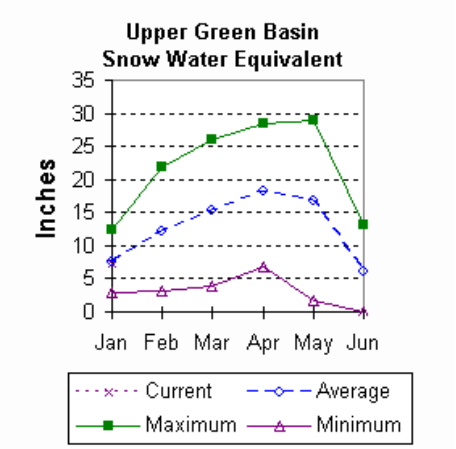
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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

Snow water equivalent (SWE) is well below normal in the upper Green River drainage this year. The Green River basin SWE above Warren Bridge is 103 percent of normal (139 percent of last year). SWE on the west side of the Upper Green River basin is about 90 percent of normal, 137 percent of this time last year. Newfork River SWE is now 103 percent of normal (134 percent of last year). Big Sandy-Eden Valley SWE is about 106 percent of average (146 percent of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.

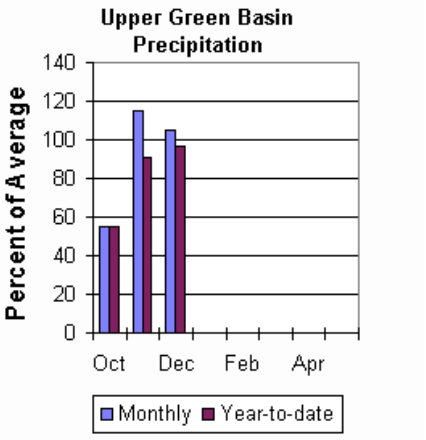


Precipitation

The 11 reporting precipitation sites in the basin were 105 percent of the December average (159 percent of last year at this time). December precipitation varied from 75 to 190 percent of average. Water year-to-date precipitation is about 104 percent of average (116 percent of last year). Year to date percentage of average ranges from 80 to 112 percent for the reporting stations.

Reservoir

Usable storage in Big Sandy Reservoir is currently about 3,900 acre feet (21 percent of average) -- 115 percent of last year and 10 percent of capacity. Eden Reservoir is too low to measure. Fontenelle Reservoir is storing 198,700 acre-feet (95 percent of average and 58 percent of the total capacity). Flaming Gorge Reservoir is currently storing 2,605,000 acre feet (86 percent of average) -- 99 percent of last year and 69 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 245,000 acre-feet (93 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 350,000 acre-feet (89 percent of normal). Fontenelle Reservoir Inflow is estimated to be 680,000 acre-feet (79 percent of average), and Big Sandy near Farson is expected to be about 52,000 acre-feet (90 percent of normal).

UPPER GREEN RIVER BASIN
Streamflow Forecasts - January 1, 2004

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	162	210	245	93	280	330	265
Pine Creek abv Fremont Lake	APR-JUL	70	85	95	91	105	120	104
New Fork River nr Big Piney	APR-JUL	205	290	350	89	410	495	395
Fontenelle Reservoir Inflow	APR-JUL	459	585	680	79	782	945	860
Big Sandy River nr Farson	APR-JUL	30	43	52	90	61	74	58

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BIG SANDY	38.3	3.9	3.4	18.3
EDEN		NO REPORT		
FONTENELLE	344.8	198.7	213.3	209.7

UPPER GREEN RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
GREEN above Warren Bridge	4	139	103
UPPER GREEN (West Side)	5	137	90
NEWFORK RIVER	2	134	103
BIG SANDY/EDEN VALLEY	1	146	106
GREEN above Fontenelle	11	138	96

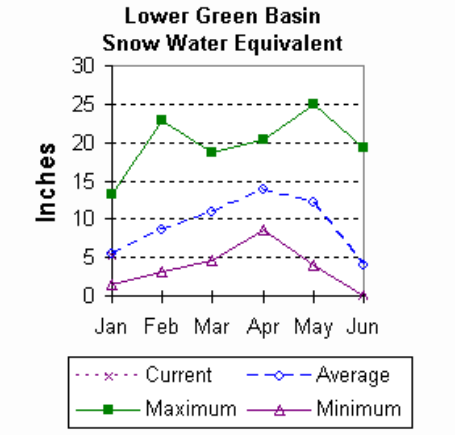
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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)

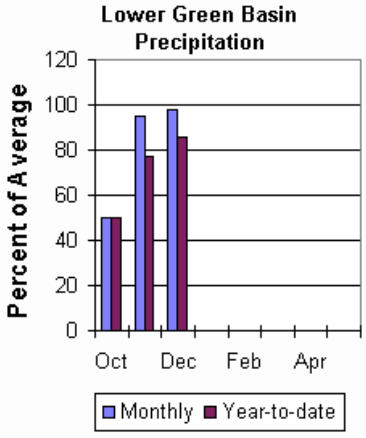
Snow

The Henrys Fork drainage, as of January 1, is 107 percent of average (176% of last year). SWE in the Hams Fork, as of January 1, is 96 percent of average (129% of last year). Blacks Fork SWE is currently 91 percent of average (124 percent of last year). The basin, as a whole, is 97 percent of average (137 percent of last year). For more information see Basin Summary of Snow Courses at beginning of this report.



Precipitation

Precipitation was below average for the 3 reporting stations during December (98 percent of average). Precipitation ranged from 34 to 106 percent of average for the month. The basin year-to-date precipitation is currently 86 percent of average (122 percent of last year). Year to date percentages range from 84 to 91.



Reservoir

Fontenelle Reservoir is currently storing 198,700 acre feet; this is 95 percent of average (93 percent of last year). Flaming Gorge is currently storing 2,605,000 acre feet, this is 86 percent of average (99 percent of last year). Viva Naughton did not report this month..

Streamflow

Expected yields vary from 76 to 87 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 700,000-acre feet (80 percent of average). Blacks Fork near Robertson is forecast to yield 83,000-acre feet (87 percent of average). East Fork of Smiths Fork near Robertson is estimated to yield 26,000 acre-feet (84 percent of average). The estimated yield for Hams Fork near Frontier is 55,000-acre feet (85 percent of average). Flaming Gorge Reservoir inflow will be about 930,000-acre feet (78 percent of average).

LOWER GREEN RIVER BASIN
Streamflow Forecasts - January 1, 2004

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	390	575	700	80	825	1005	875
Blacks Fork nr Robertson	APR-JUL	52	70	83	87	96	114	95
EF of Smiths Fork nr Robertson	APR-JUL	19.2	23	26	84	29	35	31
Hams Fk blw Pole Ck nr Frontier	APR-JUL	33	45	55	85	66	83	65
Hams Fk Inflow to Viva Naughton Res	APR-JUL	25	51	68	76	85	111	89
Flaming Gorge Reservoir Inflow	APR-JUL	505	760	930	78	1100	1360	1190

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
FONTENELLE	344.8	198.7	213.3	209.7
VIVA NAUGHTON RES		NO REPORT		

LOWER GREEN RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
HAMS FORK RIVER	3	129	96
BLACKS FORK	2	124	91
HENRYS FORK	2	176	107
GREEN above Flaming Gorge	18	137	97

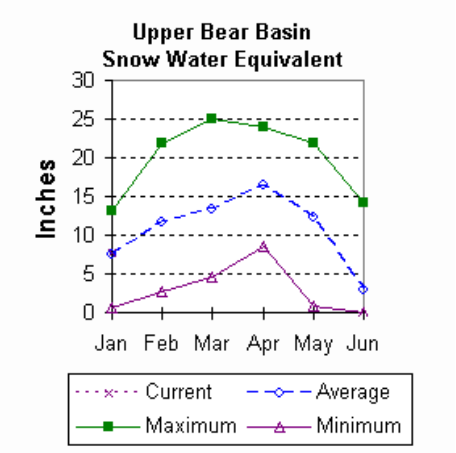
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

(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 103 percent of average (142 percent of last year). SWE for the Bear River in Utah is estimated to be 99 percent of average; that is about 129 percent of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 102 percent of average (141 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.

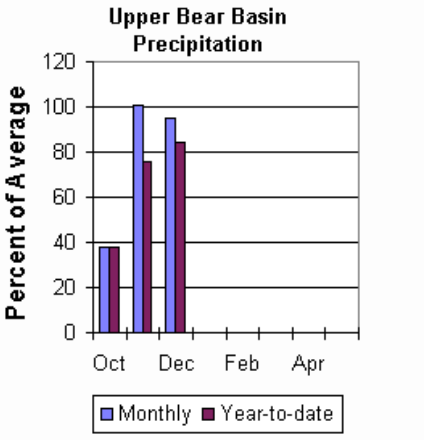


Precipitation

Precipitation for the month of December was 95 percent of average for the 2 reporting stations; this is 163 percent of the previous December. The year-to-date precipitation, for the basin, is 84 percent of average; this is 131 percent of last year's amount.

Reservoir

Usable storage in Woodruff Narrows reservoir is about 6,000 acre feet (25 percent of average). Reservoir storage is about 10 percent of capacity.



Streamflow

The following 50 percent chance stream flow yields are for the April through September period. Smiths Fork near Border is estimated to yield 104,000 acre-feet (86 percent of normal. Bear River above the Utah-Wyoming State Line is expected to yield about 114,000 acre feet (91 percent of average), The Bear River near Woodruff is expected to yield about 88,000 acre-feet (about 62 percent of normal).

UPPER BEAR RIVER BASIN
Streamflow Forecasts - January 1, 2004

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Smiths Fork nr Border	APR-JUL	52	74	89	86	104	126	103
	APR-SEP	62	87	104	86	121	146	121
Bear River nr UT-WY State Line	APR-JUL	64	87	103	91	119	142	113
	APR-SEP	70	96	114	91	132	158	125
Bear River ab Reservoir nr Woodruff	APR-JUL	21	58	83	61	108	145	136
	APR-SEP	25	63	88	62	113	151	142

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

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

UPPER BEAR RIVER BASIN
Watershed Snowpack Analysis - January 1, 2004

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
UPPER BEAR RIVER in Utah	5	129	99
SMITHS & THOMAS FORKS	3	141	102
BEAR RIVER abv ID line	6	142	103
NORTHWEST	55	142	105
NORTHEST	13	136	101
SOUTHEAST	20	133	101
SOUTHWEST	25	144	106

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

(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.