

United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

# Wyoming

## Basin Outlook Report

### June 1, 2005



# 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 is. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making their operational decisions. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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# Wyoming Water Supply Outlook Report

## General

Generally, the snow water equivalent (SWE) across Wyoming is well below average for this time of the year. Early storms covered Wyoming with snow, but low snowfall since late November has lowered it. Snow in March raised the overall SWE slightly, but lack of adequate snow in April lowered it. May precipitation in the form of rain has hastened the melt out of the snowpack. SWE for the State of Wyoming as a whole dropped to 67% of average for this time of the year.

Precipitation for last month in the basins varied from 101% of average to 165% of average for the State. Year-to-date precipitation is also well below average for the year and varies from 74-103% of average per basin. Basin reservoir levels for Wyoming vary from 63-166% of average for an overall average of 95%. Forecast runoff varies from 63-116% of average across Wyoming.

## Snowpack

Snow water equivalent (SWE), across Wyoming is below average for this time of year at 67%. SWE in the NW portion of Wyoming is now about 50% of average (89% of last year). NE Wyoming SWE is currently about 91% of average (269% of last year). The SE portion of Wyoming SWE is currently about 60% of average (191% of last year). The SW portion of Wyoming SWE is about 67% of average (174% of last year).

## Precipitation

Last month's precipitation was above average across all of Wyoming. The Lower North Platte River Basin had the lowest precipitation for the month at 101% of average. The Big Horn and Powder Tongue Basins had the highest precipitation amounts at 165 and 161% of average respectively. The following table displays the major river basins and their departure from average for this month.

Basin	Departure from average	Basin	Departure from average
Snake River	+39%	Upper North Platte River	+13%
Yellowstone & Madison	+05%	Lower North Platte	+01%
Wind River	+41%	Little Snake River	+12%
Big Horn	+65%	Upper Green River	+58%
Shoshone & Clarks Fork	+35%	Lower Green River	+44%
Powder & Tongue River	+61%	Upper Bear River	+40%
Belle Fourche & Cheyenne	+53%		

## Streams

Stream flow yield is expected to be below average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be below average at 85% (varying from 63-116% of average). The Snake River and Upper Yellowstone & Madison River Basins are expected to yield about 64 and 63% of average, respectively -- yield estimates range from 43 to 90% of average for the various forecast points in the basins. Yields from the Wind and Bighorn Rivers are expected to

be about 85 and 87% of average -- varying from 82 to 106% of average in the basins. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 75% of average -- varying from 71-80% of average. Yields from the Powder & Tongue River Basins are expected to be about 80 and 112% of average -- varying from 59-112% of average. Yields for the Belle Fourche & Cheyenne River Basins are expected to be about 96% of average. Yields for the Upper and Lower North Platte River of Wyoming will be about 77 and 75% of average -- varying from 30-113% of average. Yields for the Little Snake, Green River, and Little Bear of Wyoming are expected to be 91,109 and 99% of average respectively -- yield estimates vary from 87 to 135% of average.

## Reservoirs

All reservoirs are now reporting. Reservoirs on the North Platte River are well below average at 63% of average. Most of the reservoirs in the northeast are below average in storage at 71%, except the Tongue River, which is at 166% of average. Reservoirs in the Wind River Basin are above average at 118%. Reservoirs on the Big Horn are above average at 107%. The Buffalo Bill Reservoir on the Shoshone is at 151%. Reservoirs on the Green River are average at 100%. Reservoir storage varies widely across the state for this time of the year; however, reservoir storage is much improved from last year. See following table for further information about reservoir storage.

## Major Reservoirs in Wyoming

### WYOMING AND SURROUNDING STATES

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
ALCOVA	98	96	97	101	103
ANGOSTURA	51	66	96	53	77
BELLE FOURCHE	59	69	85	69	86
BIG SANDY	99	49	77	129	203
BIGHORN LAKE	66	48	64	103	139
BOYSEN	108	66	95	113	163
BUFFALO BILL	93	62	61	151	149
BULL LAKE	91	40	63	145	229
DEERFIELD	88	98	89	98	89
EDEN	93	0	60	155	0
ENNIS LAKE	86	69	86	100	126
FLAMING GORGE	79	69	81	98	114
FONTENELLE	72	56	53	137	129
GLENDO	89	70	99	89	126
GRASSY LAKE	63	64	95	66	97
GUERNSEY	63	63	79	79	100
HEBGEN LAKE	96	87	83	115	110
JACKSON LAKE	54	54	68	80	101
KEYHOLE	52	57	61	84	90
PACTOLA	77	87	88	87	89
PALISADES	83	26	74	112	316
PATHFINDER	21	26	76	27	79
PILOT BUTTE	85	46	77	111	185
SEMINOE	48	33	65	74	147
SHADEHILL	57	80	84	68	72
TONGUE RIVER	101	59	61	166	172
VIVA NAUGHTON RES	100	100	92	109	100
WHEATLAND #2	47	24	60	78	190
WOODRUFF NARROWS	83	54	70	119	154
TOTAL OF 29 RESERVOIRS	72	55	75	95	131
Raw KAF Totals	Current=9540	Last Year=7258	Average=10035	Capacity=13300	

# Basin Summary of Snow Course Data

JUNE 2005

## WYOMING SNOTEL STATIONS

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
BALD MOUNTAIN SNOTEL	9380	6/01/05	32	13.7	12.1	16.7
BASE CAMP SNOTEL	7030	6/01/05	0	.0	.0	.0
BATTLE MTN. SNOTEL	7440	6/01/05	0	.0	.0	.0
BEARTOOTH LK. SNOTEL	9280	6/01/05	31	11.2	16.4	20.1
BEAR TRAP SNOTEL	8200	6/01/05	---	.2	.0	.0
BIG GOOSE SNOTEL	7760	6/01/05	0	.0	.0	2.7
BIG SANDY SNOTEL	9080	6/01/05	0	.0	.0	1.4
BLACKWATER SNOTEL	9780	6/01/05	---	11.3	14.9	24.7
BLIND BULL SNOTEL	8900	6/01/05	---	7.9	10.2	17.8
BLIND PARK SNOTEL	6870	6/01/05	0	.0	.0	.0
BONE SPGS. SNOTEL	9350	6/01/05	26	10.6	3.8	8.2
BROOKLYN LK. SNOTEL	10220	6/01/05	16	3.8	.0	11.6
BURGESS JCT. SNOTEL	7880	6/01/05	0	.0	.0	2.6
BURROUGHS CRK SNOTEL	8750	6/01/05	6	2.0	.6	3.4
CANYON SNOTEL	8090	6/01/05	0	.0	.0	1.3
CASPER MTN. SNOTEL	7850	6/01/05	0	.0	.0	4.2
CHALK CK #1 SNOTEL	9100	6/01/05	20	8.2	.0	12.0
CHALK CK #2 SNOTEL	8200	6/01/05	0	.0	.0	.8
CINNABAR PARK SNOTEL	9690	6/01/05	---	1.1	.0	.2
CLOUD PEAK SNOTEL	9850	6/01/05	30	11.7	.0	7.7
COLE CANYON SNOTEL	5910	6/01/05	0	.0	.0	.6
COLD SPRINGS SNOTEL	9630	6/01/05	0	.0	.0	1.1
COTTONWOOD CR SNOTEL	7700	6/01/05	0	.0	.0	5.1
CROW CREEK SNOTEL	8830	6/01/05	---	.0	.0	.0
DEER PARK SNOTEL	9700	6/01/05	35	16.8	4.7	8.0
DIVIDE PEAK SNOTEL	8860	6/01/05	---	.0	.0	3.7
DOMELAKE SNOTEL	8880	6/01/05	0	.0	.0	3.2
EAST RIM DIV SNOTEL	7930	6/01/05	0	.0	.0	1.5
ELKHART PARK SNOTEL	9400	6/01/05	---	.7	.0	3.3
EVENING STAR SNOTEL	9200	6/01/05	33	11.7	13.4	26.7
GLADE CREEK	7040	5/31/05	0	.0	.0	--
GRANITE CRK SNOTEL	6770	6/01/05	0	.0	.0	.8
GRASSY LAKE SNOTEL	7270	6/01/05	0	.0	1.2	14.0
GRAVE SPRINGS SNOTEL	8550	6/01/05	0	.0	.0	1.8
GROS VENTRE SNOTEL	8750	6/01/05	0	.0	.0	3.7
HANSEN S.M. SNOTEL	8360	6/01/05	0	.0	.0	.2
HAMS FORK SNOTEL	7840	6/01/05	0	.0	.0	.0
HOBBS PARK SNOTEL	10100	6/01/05	26	10.5	1.3	10.1
INDIAN CREEK SNOTEL	9430	6/01/05	---	17.2	11.3	14.7
KELLEY R.S. SNOTEL	8180	6/01/05	0	.0	.0	1.4
KENDALL R.S. SNOTEL	7740	6/01/05	0	.0	.0	.0
KIRWIN SNOTEL	9550	6/01/05	12	3.5	.0	5.5
LA PRELE SNOTEL	8380	6/01/05	0	.0	.0	.8
LEWIS LAKE SNOTEL	7850	6/01/05	0	.0	5.3	17.9
LEWIS LAKE DIVIDE	7850	5/31/05	0	.0	14.2	--
LITTLE WARM SNOTEL	9370	6/01/05	2	.7	.2	1.9
LOOMIS PARK SNOTEL	8240	6/01/05	0	.0	.0	2.3
MARQUETTE SNOTEL	8760	6/01/05	4	1.5	.0	4.2
MIDDLE POWDER SNOTEL	7760	6/01/05	0	.0	.0	2.6
NEW FORK SNOTEL	8340	6/01/05	0	.0	.0	.0
NORTH FRENCH SNOTEL	10130	6/01/05	42	17.3	5.5	23.9
NORTH RAPID CK SNTL	6130	6/01/05	0	.0	.0	.0
OLD BATTLE SNOTEL	9920	6/01/05	61	28.5	21.2	25.6
OWL CREEK SNOTEL	8980	6/01/05	2	.9	.0	.5
PARKERS PEAK SNOTEL	9400	6/01/05	20	8.3	7.5	18.5
PHILLIPS BENCH SNTL	8200	6/01/05	19	8.3	2.9	14.0

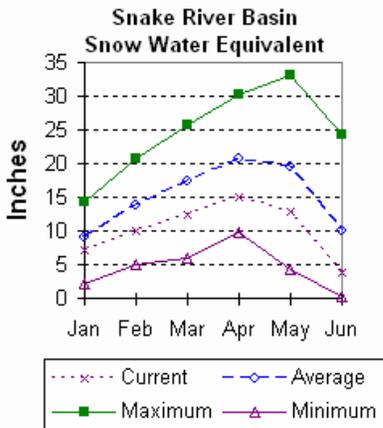
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
POWDER RVR.PASS SNTL	9480	6/01/05	0	.0	.0	2.3
RENO HILL SNOTEL	8500	6/01/05	---	.0	.0	3.4
SAGE CK BASIN SNTL	7850	6/01/05	---	.0	.0	2.1
SALT RIVER SNOTEL	7600	6/01/05	0	.0	.0	.0
SAND LAKE SNOTEL	10050	6/01/05	39	18.7	12.0	25.8
SANDSTONE RS SNOTEL	8150	6/01/05	0	.0	.0	.0
SHELL CREEK SNOTEL	9580	6/01/05	34	12.9	3.5	10.4
SNAKE RV STA SNOTEL	6920	6/01/05	0	.0	.0	.0
SNIDER BASIN SNOTEL	8060	6/01/05	0	.0	.0	.0
SOUTH BRUSH SNOTEL	8440	6/01/05	0	.0	.0	1.7
SOUTH PASS SNOTEL	9040	6/01/05	13	3.8	.0	6.3
SPRING CRK. SNOTEL	9000	6/01/05	30	12.3	10.5	15.0
ST LAWRENCE ALT SNTL	8620	6/01/05	0	.0	.0	.7
SUCKER CREEK SNOTEL	8880	6/01/05	18	6.6	.0	3.6
SYLVAN LAKE SNOTEL	8420	6/01/05	0	.0	.0	11.4
SYLVAN ROAD SNOTEL	7120	6/01/05	0	.0	.0	.0
THUMB DIVIDE SNOTEL	7980	6/01/05	0	.0	.0	1.9
TIE CREEK SNOTEL	6870	6/01/05	0	.0	.0	.0
TIMBER CREEK SNOTEL	7950	6/01/05	2	1.1	.0	.5
TOGWOTEE PASS SNOTEL	9580	6/01/05	32	13.6	16.4	21.9
TOWNSEND CRK SNOTEL	8700	6/01/05	0	.0	.0	1.7
TRIPLE PEAK SNOTEL	8500	6/01/05	0	.0	.0	4.8
TWO OCEAN SNOTEL	9240	6/01/05	---	13.6	20.4	25.2
WEBBER SPRING SNOTEL	9250	6/01/05	---	.9	.0	6.5
WHISKEY PARK SNOTEL	8950	6/01/05	14	6.2	.0	13.6
WILLOW CREEK SNOTEL	8450	6/01/05	---	3.6	.4	14.3
WINDY PEAK SNOTEL	7900	6/01/05	0	.0	.0	.1
WOLVERINE SNOTEL	7650	6/01/05	0	.0	.0	.0
YOUNTS PEAK SNOTEL	8350	6/01/05	0	.0	2.2	7.0

(d) denotes discontinued site.

# Snake River Basin

## Snow

The Snake River Basin snow water equivalent (SWE) is below average. SWE in the Snake River Basin above Jackson Lake is 23% of average (51% of last year at this time). Pacific Creek Basin SWE is 54% of average (67% of last year). Gros Ventre River Basin SWE is 53% of average (83% of last year). SWE in the Hoback River drainage is 30% of average (77% of last year). SWE in the Greys River drainage is 46% of average (113% of last year). In the Salt River area SWE is 19% of average (900% of last year). SWE in the Snake River Basin above Palisades is 38% of average (88% of last year). See the Basin Summary of Snow Courses at the beginning of this report for a detailed listing of snow course information.

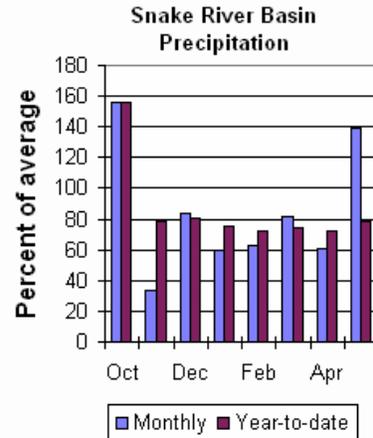


## Precipitation

Precipitation across the basin was below average last month. Monthly precipitation for the basin was 139% of average (101% of last year). Last month's percentages range from 93-198% of average. Water-year-to-date precipitation is 79% of average for the Snake River Basin (94% of last year). Year-to-date percentages range from 65-96% of average.

## Reservoir

Currently, usable reservoir storage, compared to normal for the three storage reservoirs in the basin, is average at 100%. Grassy Lake storage is about 66% of average (9,500 ac-ft compared to 9,800 last year). Jackson Lake storage is 80% of average (460,100 ac-ft compared to 454,900 ac-ft last year). Palisades Reservoir storage is about 112% of average (1,158,700 ac-ft compared to 366,600 ac-ft 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 most probable, a 50% chance, June through September runoff yield forecast is below average for the basin. The Snake near Moran is expected to yield 300,000 ac-ft (52% of average). Snake above reservoir near Alpine is estimated to yield about 1,030,000 ac-ft (56% of average). The Snake near Irwin is expected to yield about 1,580,000 ac-ft (61% of average). The Snake near Heise is expected to yield 1,700,000 ac-ft (64% of average). Pacific Creek at Moran is expected to yield about 50,000 ac-ft (47% of average). Greys River above Palisades Reservoir is estimated to yield 197,000 ac-ft (80% of average). Salt River near Etna is estimated to yield 215,000 ac-ft (90% of average). See the following page for detailed runoff volumes.

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SNAKE RIVER BASIN  
Streamflow Forecasts - June 1, 2005

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Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)	
SNAKE nr Moran (1,2)						
JUN-JUL	170	220	240	49	260	490
JUN-SEP	230	280	300	52	320	580
SNAKE ab resv nr Alpine (1,2)						
JUN-JUL	670	750	785	53	820	1470
JUN-SEP	850	970	1030	56	1090	1840
SNAKE nr Irwin (1,2)						
JUN-JUL	790	1060	1180	61	1300	1950
JUN-SEP	1140	1440	1580	63	1720	2500
SNAKE near Heise (2)						
JUN-JUL	930	1120	1250	61	1380	2050
JUN-SEP	1320	1550	1700	64	1850	2650
PACIFIC CREEK at Moran						
JUN-JUL	30	38	43	43	48	100
JUN-SEP	38	45	50	47	55	106
GREYS above Palisades						
JUN-JUL	115	135	149	79	163	188
JUN-SEP	159	182	197	80	212	245
SALT near Etna						
JUN-JUL	98	122	138	85	154	162
JUN-SEP	169	196	215	90	232	240

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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SNAKE RIVER BASIN  
Reservoir Storage (1000AF) End of May

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Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
GRASSY LAKE	15.2	9.5	9.8	14.4
JACKSON LAKE	847.0	460.1	454.9	572.6
PALISADES	1400.0	1158.7	366.6	1033.6

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SNAKE RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2005

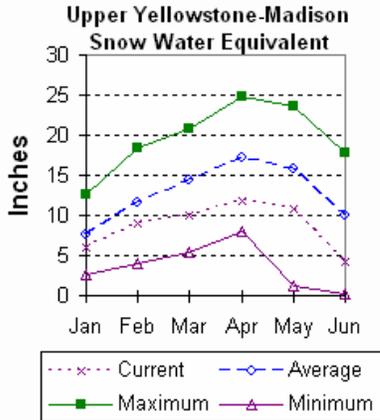
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Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
SNAKE above Jackson Lake	5	51	23
PACIFIC CREEK	2	67	54
GROS VENTRE RIVER	2	102	53
HOBACK RIVER	5	77	30
GREYS RIVER	4	113	46
SALT RIVER	3	900	19
SNAKE above Palisades	17	93	38

# Yellowstone and Madison River Basins

## Snow

Snowfall in these basins has been mixed this year; however SWE in both basins is below average this month. Snow water equivalent (SWE) is about 42% of average (39% of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 44% of average (71% of last year at this time). See the "Snow Course Basin Summary" at the beginning of this document for more details on specific sites.



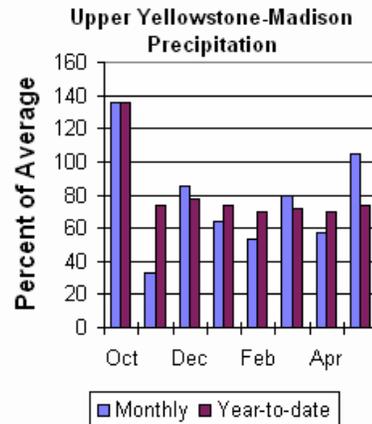
## Precipitation

Last month precipitation in the Madison and Yellowstone drainage was about 105% of average (82% of last year) for the 5 reporting stations -- percentage range was from 84-127% of average. Water-year-to-date precipitation is about 74% of average (86% of last year's amount). Year to date percentage ranges from 68-84%.

## Reservoir

Ennis Lake is storing about 35,400 ac-ft of water (86% of

capacity, 100% of average or 126% of last year's volume). Hebgen Lake is storing about 360,600 ac-ft of water (96% of capacity, 113% of average or 111% of last year's volume. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

All the following forecasts are the 50% chance runoff for the June through September runoff period. Yellowstone at Lake Outlet is expected to yield about 430,000 ac-ft (62% of average). Yellowstone at Corwin Springs will yield about 920,000 ac-ft (63% of average). Yellowstone near Livingston will yield about 1,070,000 ac-ft (63% of average). Hebgen reservoir inflow is estimated to be 245,000 ac-ft (79% of average). See the following page for detailed runoff volumes.

UPPER YELLOWSTONE & MADISON RIVER BASINS  
Streamflow Forecasts - June 1, 2005

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
YELLOWSTONE at Lake Outlet							
JUN-JUL	187	250	295	61	340	405	485
JUN-SEP	310	380	430	62	480	550	695
YELLOWSTONE RIVER at Corwin Springs							
JUN-JUL	455	600	695	61	790	935	1140
JUN-SEP	630	800	920	63	1040	1210	1460
YELLOWSTONE RIVER near Livingston							
JUN-JUL	485	670	795	61	920	1100	1310
JUN-SEP	655	905	1070	63	1240	1480	1700
HEBGEN Reservoir Inflow							
JUN-JUL	111	135	151	76	167	191	200
JUN-SEP	187	220	245	79	270	305	310

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
	ENNIS LAKE	41.0	35.4	28.2
HEBGEN LAKE	377.5	360.6	327.1	314.7

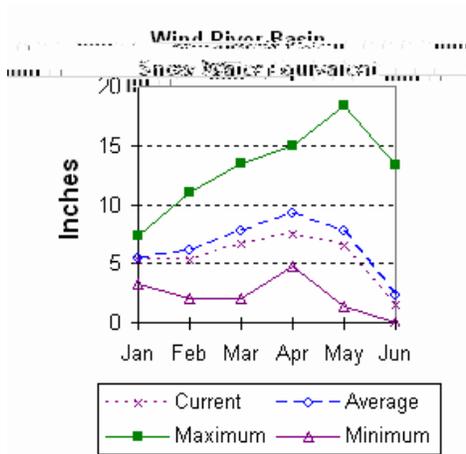
UPPER YELLOWSTONE & MADISON RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2005

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
	MADISON RIVER in WY	5	39
YELLOWSTONE RIVER in WY	8	71	44

# Wind River Basin

## 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 60% of average (95% of last year at this time). The Little Wind SWE is 97% of average water content (134% of last year), and the Popo Agie drainage SWE is about 119% of average (121% of last year). The Wind River Basin, above Boysen Reservoir SWE is about 66% of average (165% of last year). See the Basin Summary of Snow Course Data at the front of this report for details.



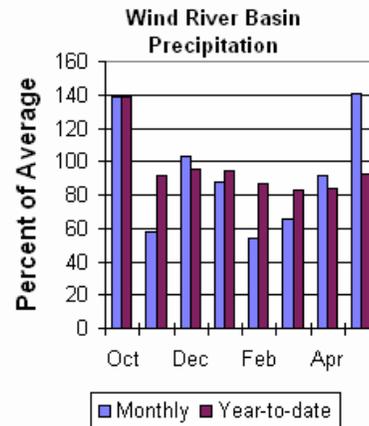
## Precipitation

Last months precipitation in the basin varied from 66-120% of average. Precipitation, for the basin, was about 141% of average from the 8 reporting stations; that is about 166% of last year's amount. Water year-to-date precipitation is 93% of average and about 109% of last year at this time. Year-to-date percentages range from 65-127% of average.

## Reservoirs

Current storage varies from 85-108% of average. Usable

storage in Bull Lake is currently about 138,300 ac-ft (91% of capacity) - last year the reservoir was at 40% of capacity at this time. Boysen Reservoir is storing about 108% of capacity (641,800 ac-ft) – last year the reservoir was at 66% of capacity at this time. Pilot Butte is at 85% of capacity (26,800 ac-ft) – last year the reservoir was at 46% of capacity at this time. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

Water supply is estimated to be below average this year. The following values reflect the 50% chance yields for the June through September runoff period. Dinwoody Creek near Burris is estimated to yield 83,000 ac-ft (103% of average). The Wind River above Bull Lake Creek is expected to yield 350,000 ac-ft (84% of average). Bull Lake Creek near Lenore is expected to yield about 132,000 ac-ft (87% of average). Wind River at Riverton will yield about 410,000 ac-ft (82% of average). Little Popo Agie River near Lander is expected to yield about 34,000 ac-ft (94% of average). South Fork of Little Wind near Fort Washakie will yield about 69,000 ac-ft (106% of average). Little Wind River near Riverton will yield about 240,000 ac-ft (107% of average). Boysen Reservoir inflow will yield about 515,000 ac-ft (85% of average). See the following page for detailed runoff volumes.

=====
   
WIND RIVER BASIN
   
Streamflow Forecasts - June 1, 2005
   
=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
DINWOODY CREEK nr Burris							
JUN-JUL	46	51	55	104	59	64	53
JUN-SEP	68	77	83	103	89	98	80
WIND RIVER abv Bull Lake Cr (2)							
JUN-JUL	139	211	260	83	310	380	315
JUN-SEP	206	290	350	84	410	495	415
BULL LAKE CR near Lenore (2)							
JUN-JUL	79	93	102	86	111	125	118
JUN-SEP	103	120	132	87	144	161	152
WIND RIVER at Riverton (2)							
JUN-JUL	203	275	325	81	375	445	400
JUN-SEP	290	360	410	82	460	530	500
LT POPO AGIE RIVER nr Lander							
JUN-JUL	16.7	23	28	97	33	39	29
JUN-SEP	22	29	34	94	39	46	36
SF LT WIND nr Fort Washakie							
JUN-JUL	48	55	59	109	63	70	54
JUN-SEP	54	63	69	106	75	84	65
LT WIND RIVER nr Riverton							
JUN-JUL	82	152	200	106	250	320	188
JUN-SEP	109	187	240	107	295	370	225
BOYSEN RESERVOIR Inflow (2)							
JUN-JUL	295	380	435	84	490	575	516
JUN-SEP	310	430	515	85	600	720	609

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

=====
   
WIND RIVER BASIN
   
Reservoir Storage (1000AF) End of May
   
=====

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
	BULL LAKE	151.8	138.3	60.4
BOYSEN	596.0	641.8	393.6	566.0
PILOT BUTTE	31.6	26.8	14.5	24.2

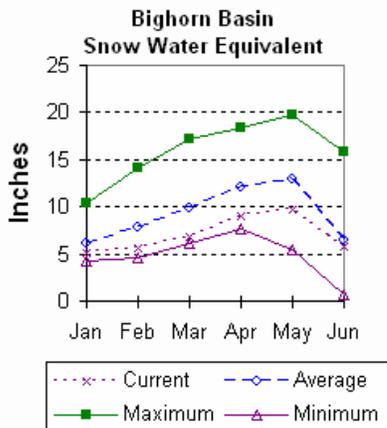
=====
   
WIND RIVER BASIN
   
Watershed Snowpack Analysis - June 1, 2005
   
=====

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
	WIND RIVER above Dubios	3	112
LITTLE WIND	2	808	97
POPO AGIE	4	518	119
WIND above Boysen Resv	7	175	66

# Bighorn River Basin

## Snow

Snowpack in this basin is well below average for this time of year. Nowood drainage is melted out. Greybull River SWE is 77% of average. Shell Creek SWE is 105% of average (192% of last year). The Bighorn River Basin SWE, as a whole, is currently 90% of average (215% of last year). For more information see Basin Summary of Snow Courses at beginning of report.



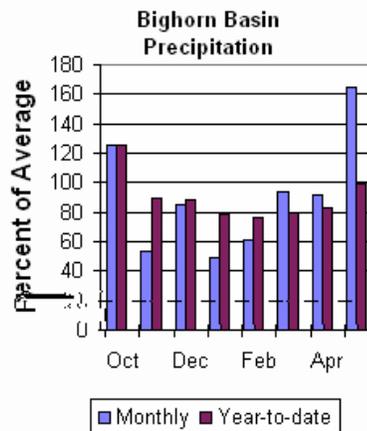
## Precipitation

Last month's precipitation was 165% of average (283% of last year). Sites ranged from 85-214% of average for the month. Year-to-date precipitation is 99% of average; that is 128% of last year at this time. Year-to-date percentages, from the 10 reporting stations, range from 65-127%.

## Reservoir

Boysen Reservoir is

currently storing 641,800 ac-ft (113% of average). Bighorn Lake is now at 103% of average (897,400 ac-ft). Boysen is currently storing 163% of last year volume at this time and Big Horn Lake is storing 139% of last year's volume. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

The 50% chance June through September runoff is anticipated to be well below average. The Boysen Reservoir inflow is forecast to yield 515,000 ac-ft (85% of average); the Greybull River near Meeteetse should yield 154,000 ac-ft (95% of average); Shell Creek near Shell should yield 55,000 ac-ft (106% of average) and the Bighorn River at Kane should yield 685,000 ac-ft (87% of average). See the following page for detailed runoff volumes.

=====
   
 BIGHORN RIVER BASIN
   
 Streamflow Forecasts - June 1, 2005
   
 =====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
BOYSEN RESERVOIR Inflow (2)							
JUN-JUL	295	380	435	84	490	575	516
JUN-SEP	310	430	515	85	600	720	609
GREYBULL RIVER nr Meeteetse							
JUN-JUL	74	91	103	94	115	132	110
JUN-SEP	114	138	154	95	170	194	163
SHELL CREEK nr Shell							
JUN-JUL	34	39	42	105	45	50	40
JUN-SEP	45	51	55	106	59	65	52
BIGHORN RIVER at Kane (2)							
JUN-JUL	295	480	585	87	695	880	675
JUN-SEP	345	555	685	87	810	1020	785

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

=====
   
 BIGHORN RIVER BASIN
   
 Reservoir Storage (1000AF) End of May
   
 =====

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
	BOYSEN	596.0	641.8	393.6
BIGHORN LAKE	1356.0	897.4	646.0	867.1

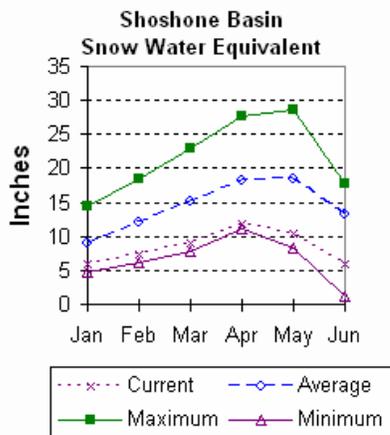
=====
   
 BIGHORN RIVER BASIN
   
 Watershed Snowpack Analysis - June 1, 2005
   
 =====

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
	NOWOOD RIVER	2	0
GREYBULL RIVER	2	0	77
SHELL CREEK	3	192	105
BIGHORN (Boysen-Bighorn)	7	215	90

# Shoshone and Clarks Fork River Basin

## Snow

Snow Water Equivalent (SWE) is 33% of average (80% of last year) in the Shoshone River Basin. The Clarks Fork River Basin SWE is 55% of average (75% of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.



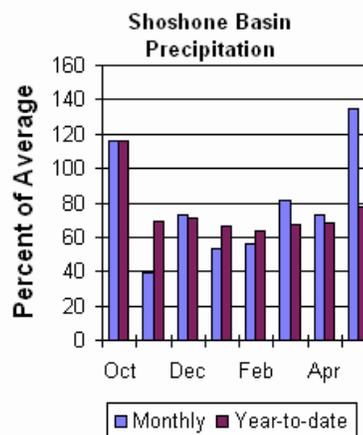
## Precipitation

Precipitation for last month was 135% of average (144% of last year). Monthly percentages range from 100-251% of average. The basin year-to-date precipitation is now 78% of average (97% of last year). Year-to-date percentages range from 64-97% of average.

## Reservoir

Current storage in Buffalo Bill Reservoir is about 151% of

average (149% of last year's storage) – the reservoir is at about 93% of capacity. Currently, about 598,300 ac-ft are stored in the reservoir compared to 400,600 ac-ft 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 50% yield for the June through September period for the North Fork Shoshone River at Wapiti is expected to be 295,000 ac-ft (81% of average). South Fork of the Shoshone River near Valley is estimated to yield about 162,000 ac-ft (77% of average), and South Fork above Buffalo Bill Reservoir is expected to be 120,000 ac-ft (69% of average). The Buffalo Bill Reservoir inflow is expected to be about 445,000 ac-ft (75% of average). The 50% chance yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be about 315,000 ac-ft (71% of average). See the following page for detailed runoff volumes.

SHOSHONE & CLARKS FORK RIVER BASINS  
Streamflow Forecasts - June 1, 2005

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
NF SHOSHONE RIVER at Wapiti							
JUN-JUL	121	195	245	80	295	370	305
JUN-SEP	156	240	295	81	350	435	365
SF SHOSHONE RIVER nr Valley							
JUN-JUL	95	117	132	77	147	169	172
JUN-SEP	114	143	162	77	181	210	210
SF SHOSHONE RIVER abv Buffalo Bill							
JUN-JUL	52	89	115	71	141	178	163
JUN-SEP	47	91	120	69	149	192	174
BUFFALO BILL DAM Inflow (2)							
JUN-JUL	305	350	380	74	410	455	515
JUN-SEP	355	410	445	75	480	535	595
CLARKS FORK RIVER nr Belfry							
JUN-JUL	116	210	275	71	340	435	390
JUN-SEP	129	240	315	71	390	500	445

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

Reservoir	Usable Capacity	***** This Year	***** Usable Storage Last Year	***** Average
	BUFFALO BILL	646.6	598.3	400.6

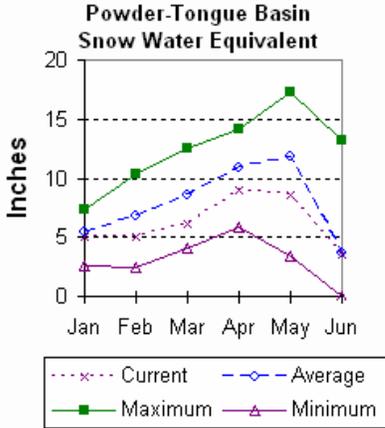
SHOSHONE & CLARKS FORK RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2005

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
	SHOSHONE RIVER	6	80
CLARKS FORK in WY	7	75	55

# Powder and Tongue River Basins

## Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 98% of average (412% of last year). The Goose Creek drainage is melted out. SWE in the Clear Creek drainage is 148% of average. Crazy Woman Creek drainage is melted out. Upper Powder River drainage SWE is 4% of average. Powder River basin SWE, in Wyoming, is about 93%. For more information see Basin Summary of Snow Courses at beginning of report.



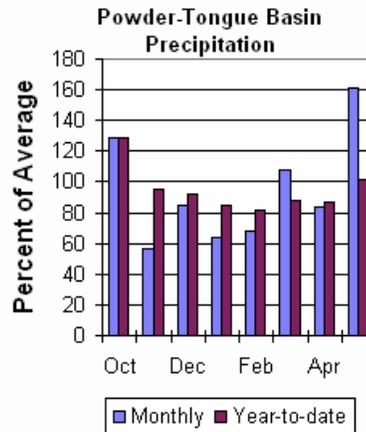
## Precipitation

Last month's precipitation was 161% of average for the 9 reporting stations (344% of last year). Monthly percentages range from 73-256% of average. Year-to-date precipitation is 101% of average in the basin; this is 135% of last year at this time. Precipitation for the year ranges from 65-120% of average at the reporting stations.

## Reservoir

Tongue River Reservoir is currently at

166% of average (172% of last year and 101% of capacity). Current storage is 79,500 ac-ft. Last year at this time the reservoir was storing about 46,300 ac-ft (average storage is about 48,000 ac-ft at this time). 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% probability during the June through September forecast period. The estimated yield for Tongue River near Dayton is 74,000 ac-ft (104% of average). Little Goose Creek near Bighorn is expected to yield about 30,000 ac-ft (103% of average). The Tongue River Inflow is expected to be 172,000 ac-ft (112% of average). Middle Fork of the Powder River near Barnum is estimated to yield 4,400 ac-ft (64% of average). The North Fork of the Powder near Hazelton should yield about 4,900 ac-ft (83% of average). The estimated yield for Clear Creek near Buffalo is 25,000 ac-ft (89% of average). Rock Creek near Buffalo will yield about 13,900 ac-ft (87% of average), and Piney Creek at Kearny should yield about 32,000 ac-ft (100% of average). The Powder River at Moorehead is expected to yield 109,000 ac-ft (85% of average). The Powder River near Locate is expected to yield 117,000 ac-ft (83% of average). See the following page for detailed runoff volumes.

**POWDER & TONGUE RIVER BASINS**  
Streamflow Forecasts - June 1, 2005

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===> Chance of Exceeding *					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
=====							
TONGUE RIVER nr Dayton (2)							
JUN-JUL	43	54	61	105	68	79	58
JUN-SEP	53	66	74	104	82	95	71
LITTLE GOOSE CREEK nr Big Horn							
JUN-JUL	16.3	20	22	105	24	28	21
JUN-SEP	22	27	30	103	33	38	29
TONGUE RIVER RESERVOIR Inflow (2)							
JUN-JUL	98	127	147	117	167	196	126
JUN-SEP	112	148	172	112	196	231	153
MIDDLE FORK POWDER nr Barnum							
JUN-JUL	0.7	1.9	3.5	59	5.1	7.4	5.9
JUN-SEP	0.3	2.8	4.4	64	6.0	8.5	6.9
NORTH FORK POWDER nr Hazelton							
JUN-JUL	1.9	3.2	4.1	80	5.0	6.3	5.1
JUN-SEP	2.4	3.9	4.9	83	5.9	7.4	5.9
CLEAR CREEK nr Buffalo							
JUN-JUL	11.1	16.2	19.7	90	23	28	22
JUN-SEP	14.9	21	25	89	29	35	28
ROCK CREEK nr Buffalo							
JUN-JUL	6.0	8.9	10.9	91	12.9	15.8	12.0
JUN-SEP	8.1	11.6	13.9	87	16.2	19.7	15.9
PINEY CREEK at Kearny							
JUN-JUL	18.3	25	30	103	35	42	29
JUN-SEP	16.8	26	32	100	38	47	32
POWDER RIVER at Moorehead							
JUN-JUL	24	63	89	85	115	154	105
JUN-SEP	42	82	109	85	136	176	128
POWDER RIVER near Locate							
JUN-JUL	66	84	96	83	108	126	116
JUN-SEP	80	102	117	83	132	154	141

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
TONGUE RIVER	79.1	79.5	46.3	48.0

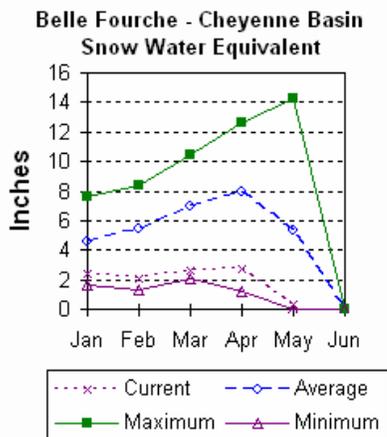
POWDER & TONGUE RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2005

Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
UPPER TONGUE RIVER	7	412	98
GOOSE CREEK	2	0	0
CLEAR CREEK	2	0	148
CRAZY WOMAN CREEK	1	0	0
UPPER POWDER RIVER	3	0	4
POWDER RIVER in WY	5	0	93

## Belle Fourche and Cheyenne River Basins

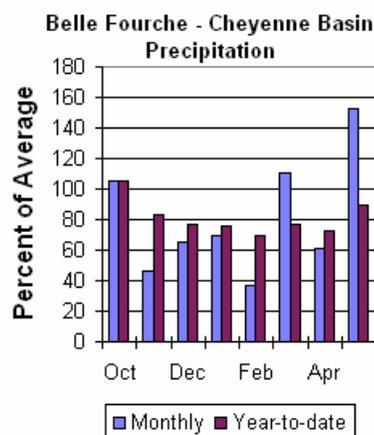
### Snow

The Belle Fourche River Basin is currently at 0% of average. The basin is melted out. See the Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



### Precipitation

Precipitation for last month was 153% of average in the Black Hills. There were 2 reporting stations. Monthly percentages range from 42-200%. Year-to-date precipitation is 90% of average and 121% of last year's amount.



### Reservoir

Current reservoir storage is around 71% of average in the basin. Angostura is currently storing 53% of average (62,300 ac-ft), about 51% of capacity. Belle Fourche reservoir is storing 69% of average (105,600 ac-ft), about 59% of capacity. Deerfield reservoir is storing 98% of average (13,300 ac-ft), about 88% of capacity. Keyhole reservoir is storing 84% of average (100,200 ac-ft), 52% of capacity. Pactola reservoir is storing 87% of average (42,300 ac-ft), 77% of capacity. Shadehill reservoir is storing 68% of average (46,800 ac-ft), 57% 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 following runoff values are for the 50% probability during the June through July forecast period. The estimated yield for Deerfield Reservoir Inflow is 1,850 ac-ft (103% of average). Pactola Reservoir Inflow is expected to yield about 8,600 ac-ft (96% of average). See the following page for detailed runoff volumes.

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BELLE FOURCHE & CHEYENNE RIVER BASINS  
Streamflow Forecasts - June 1, 2005

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Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
DEERFIELD RESERVOIR Inflow							
JUN-JUL	0.5	1.3	1.9	103	2.4	3.2	1.8
PACTOLA RESERVOIR Inflow							
JUN-JUL	0.8	5.1	8.6	96	12.1	17.3	9.0

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

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Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
ANGOSTURA	122.1	62.3	80.6	117.2
BELLE FOURCHE	178.4	105.6	122.6	152.3
DEERFIELD	15.2	13.3	14.9	13.6
KEYHOLE	193.8	100.2	111.1	118.9
PACTOLA	55.0	42.3	47.6	48.6
SHADEHILL	81.4	46.8	65.0	68.7

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BELLE FOURCHE & CHEYENNE RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2005

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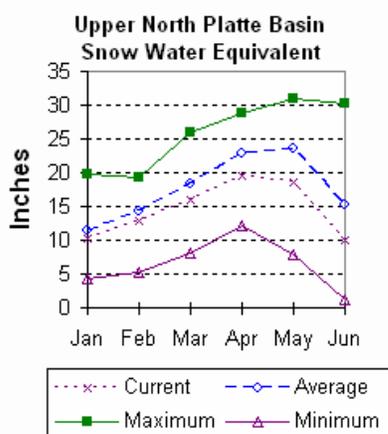
Watershed	Number of Data Sites	This Year as Percent of Last Year	Percent of Average
BELLE FOURCHE	2	0	0

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# Upper North Platte River Basin

## Snow

The snow courses above Seminoe Reservoir have about 66% of average snow water equivalent (SWE) recorded for this time of the year (180% of last year). SWE in the drainage area above Northgate is about 65% of average and 159% of last year at this time. SWE in the Encampment River drainage is about 78% of average and 168% of last year. Brush Creek SWE for the year is about 68% of average and 315% of last year's SWE. Medicine Bow and Rock Creek drainage SWE is about 60% of average and 188% of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



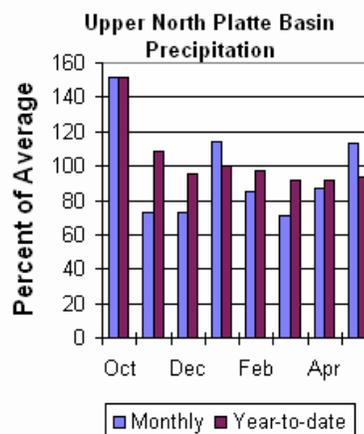
## Precipitation

Eight reporting stations indicate last month's precipitation was 113% of average and 206% of last year's amount. Precipitation varied from 66-173% of average last month. Total water-year-to-date precipitation is about 94% of average for the basin, which is about 119% of last year's amount. Year to date percentage ranges from 74-108% of average.

## Reservoirs

Seminoe Reservoir is estimated to be

storing 487,200 ac-ft or 48% of capacity. Seminoe Reservoir is also storing about 74% of average for this time of the year and 147% of last year. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

All the following yields are based on the 50% chance June through September yield. Yield for the North Platte River near Northgate is expected to be about 105,000 ac-ft (66% of average). Encampment River near Encampment is estimated to yield 106,000 ac-ft (98% of average). Rock Creek near Arlington is estimated to yield 31,000 ac-ft (76% of average). Sweetwater River near Alcova is estimated to yield 44,000 ac-ft (113% of average). Seminoe Reservoir inflow should be about 385,000 ac-ft (77% of average). See the following table for more detailed information on projected runoff.

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UPPER NORTH PLATTE RIVER BASIN  
Streamflow Forecasts - June 1, 2005

=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
=====							
NORTH PLATTE RIVER nr Northgate							
JUN-JUL	64	77	86	65	96	111	133
JUN-SEP	72	92	105	66	118	138	159
ENCAMPMENT RIVER nr Encampment							
JUN-JUL	69	86	97	98	108	125	99
JUN-SEP	75	93	106	98	119	137	108
ROCK CREEK nr Arlington							
JUN-JUL	25	27	28	74	29	32	38
JUN-SEP	28	30	31	76	33	35	41
SWEETWATER RIVER nr Alcova							
JUN-JUL	28	34	38	115	42	48	33
JUN-SEP	36	41	44	113	47	52	39
SEMINOE RESERVOIR Inflow							
JUN-JUL	230	290	335	77	380	440	435
JUN-SEP	310	355	385	77	415	460	500

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

=====

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

=====

Reservoir	Usable	*****	Usable Storage	*****
	Capacity	This Year	Last Year	Average
SEMINOE	1016.7	487.2	331.4	658.3

=====

UPPER NORTH PLATTE RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2005

=====

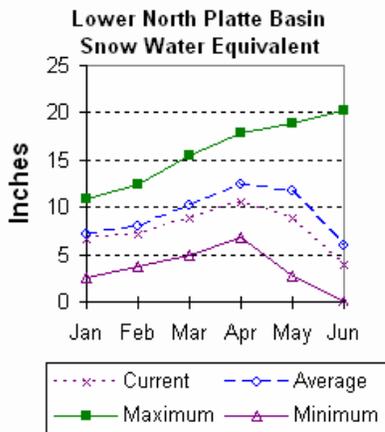
Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
N PLATTE above Northgate	5	159	65
ENCAMPMENT RIVER	3	168	78
BRUSH CREEK	2	315	68
MEDICINE BOW & ROCK CREEKS	2	188	60
N PLATTE above Seminoe	13	180	66

=====

# Lower North Platte River Basin

## Snow

SWE for the North Platte River Basin is at 65% of average (186% of last year). The Sweetwater drainage SWE is currently at 144% of average (438% of last year). Deer and LaPrele Creek SWE is melted out. SWE for the North Platte above the Laramie River drainage is 70% of average (197% of last year). SWE for the Laramie River above Laramie is 65% of average (275% of last year). SWE for the Little Laramie River is 42% of average. The Laramie River above mouth, SWE is 57% of average (322% of last year). For more information see Basin Summary of Snow Courses at beginning of report.



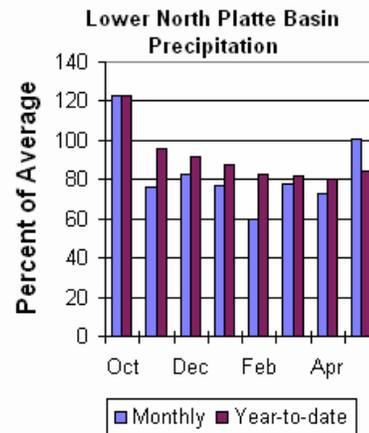
## Precipitation

Last month's precipitation was 101% of average and 237% of last year's amount. Of the 7 reporting stations, percentages for the month range from 52-167%. The water year-to-date precipitation for the basin is currently 84% of average (122% of last year). Year-to-date percentages range from 74-120%.

## Reservoir

The Lower North Platte River basin

reservoir storage is generally below average. Reservoir storage is as follows: Alcova 181,100 ac-ft (101% of average); Glendo 448,600 ac-ft (89% of average); Guernsey 28,600 ac-ft (79% of average); Pathfinder 210,200 ac-ft (27% of average); Seminoe 487,200 ac-ft (74% of average); and Wheatland #2 46,000 ac-ft (78% of average).



## Streamflow

The following yields are based on the 50% chance probability runoff for the June through September forecast period. The Sweetwater near Alcova is forecast to yield about 44,000 ac-ft (113% of average). LaPrele Creek above the reservoir is estimated to yield 3,100 ac-ft (60% of average). North Platte River below Guernsey Reservoir is expected to yield about 400,000 ac-ft (80% of average), and below Glendo Reservoir is anticipated to yield about 365,000 ac-ft (78% of average). Laramie River near Woods Landing should yield about 64,000 ac-ft (72% of average). The Little Laramie near Filmore should produce about 31,000 ac-ft (66% of average). See the following table for more detailed information on projected runoff.

=====

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Streamflow Forecasts - June 1, 2005

=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
SWEETWATER RIVER nr Alcova							
JUN-JUL	28	34	38	115	42	48	33
JUN-SEP	36	41	44	113	47	52	39
LaPRELE CREEK abv Reservoir							
JUN-JUL	0.0	1.1	2.9	59	4.7	7.3	4.9
JUN-SEP	0.0	1.3	3.1	60	4.9	7.6	5.2
NORTH PLATTE - Alcova to Orin Gain							
JUN-JUL	0.0	1.0	7.7	31	16.4	29	25
JUN-SEP	0.0	2.0	9.9	30	19.3	33	33
NORTH PLATTE RIVER blw Glendo Res							
JUN-JUL	235	300	345	78	390	455	440
JUN-SEP	245	315	365	78	415	485	470
NORTH PLATTE RIVER blw Guernsey Res							
JUN-JUL	230	310	365	81	420	500	450
JUN-SEP	255	340	400	80	460	545	500
LARAMIE RIVER nr Woods							
JUN-JUL	20	42	55	71	70	92	77
JUN-SEP	24	48	64	72	80	104	89
LITTLE LARAMIE RIVER nr Filmore							
JUN-JUL	10.5	21	27	64	34	44	42
JUN-SEP	12.7	24	31	66	38	48	47

- =====
- \* 90%, 70%, 50%, 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 1971-2000 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.
  - (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.
- =====

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

=====

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
ALCOVA	184.3	181.1	176.3	178.8
GLENDO	506.4	448.6	355.3	503.4
GUERNSEY	45.6	28.6	28.7	36.2
PATHFINDER	1016.5	210.2	267.2	775.1
SEMINOE	1016.7	487.2	331.4	658.3
WHEATLAND #2	98.9	46.0	24.2	59.0

=====

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2005

=====

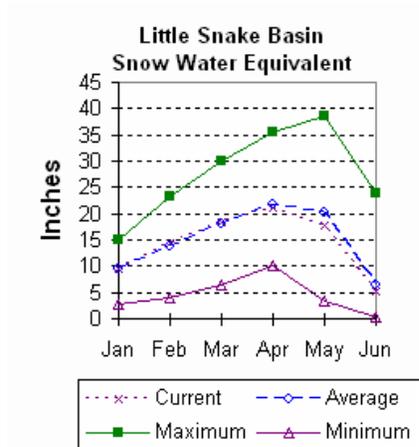
Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
SWEETWATER	2	438	144
DEER & LaPRELE CREEKS	2	0	0
N PLATTE abv Laramie R.	17	197	70
LARAMIE RIVER abv Laramie	5	275	65
LITTLE LARAMIE RIVER	2	0	42
LARAMIE RIVER above mouth	6	322	57
NORTH PLATTE	17	186	65

=====

# Little Snake River Basin

## Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage is 79% of average (164% of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.



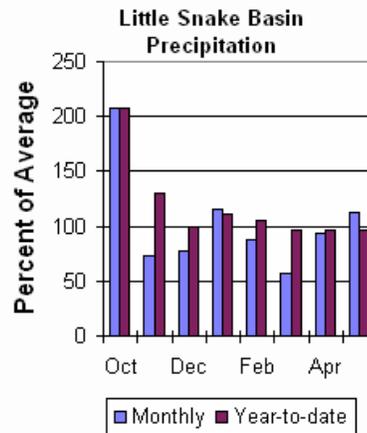
River drainage is expected to be just below average this year. Stream yield is based on the 50% probability for the April through July forecast period. The Little Snake River near Slater should yield about 146,000 ac-ft (92% of average). Little Snake River near Dixon is estimated to yield 300,000 ac-ft (91% of average). See the following table for more detailed information on projected runoff.

## Precipitation

Precipitation across the basin was above average this past month. Last Month's precipitation was 112% of average (141% of last year) for the 5 reporting stations. Last month's precipitation ranged from 98-145% of average. The Little Snake River basin water-year-to-date precipitation is currently 97% of average (113% of last year). Year-to-date percentages range from 86-108% of average.

## Streamflow

Runoff yield in the Little Snake



=====
   
LITTLE SNAKE RIVER BASIN
   
Streamflow Forecasts - June 1, 2005
   
=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)	
Little Snake River nr Slater						
APR-JUL	122	137	146	92	157	176
LITTLE SNAKE R nr Dixon						
APR-JUL	245	275	300	91	330	380

=====
   
\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

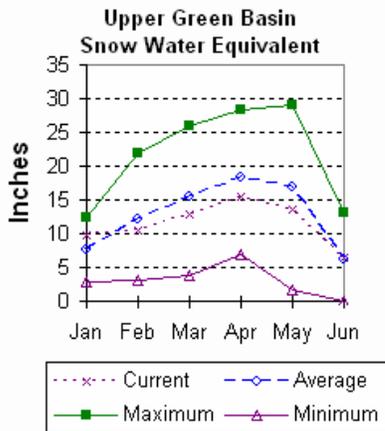
=====
   
LITTLE SNAKE RIVER BASIN
   
Watershed Snowpack Analysis - June 1, 2005
   
=====

Watershed	Number of Data Sites	This Year as Percent of Last Year	Percent of Average
LITTLE SNAKE RIVER	6	164	79

# Upper Green River Basin

## Snow

Snow water equivalent (SWE) is below average in the Upper Green River drainage this year. The Green River Basin SWE above Warren Bridge is melted out. SWE on the west side of the Upper Green River Basin is about 72% of average (117% of last year). Newfork River Basin SWE is now about 21% of average. Big Sandy-Eden Valley Basin is melted out. SWE in the Green River Basin above Fontenelle Reservoir is about 60% of average (119% of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



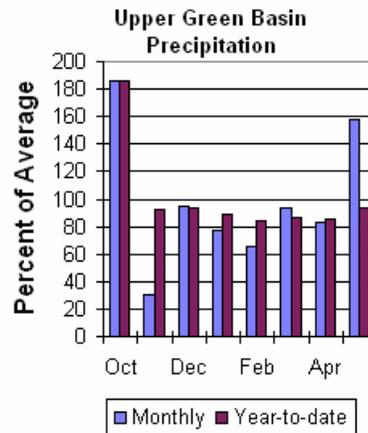
## Precipitation

The 11 reporting precipitation sites in the basin were 158% of average last month (134% of last year). Last month's precipitation varied from 102-284% of average. Water year-to-date precipitation is about 94% of average (113% of last year). Year to date percentage of average ranges from 78-114% for the reporting stations.

## Reservoir

Storage in Big Sandy Reservoir is 38,000 ac-ft

or 99% of capacity. This is 129% of average. Eden Reservoir is currently storing 11,000 ac-ft or 93% of capacity. This is 155% of average. Fontenelle Reservoir is 248,300 ac-ft or 72% of capacity and . This is 137% of average. Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.



## Streamflow

The 50% chance April through July runoff in the Upper Green River basin is forecast slightly below average. Green River at Warren Bridge is expected to yield about 265,000 ac-ft (100% of average). Pine Creek above Fremont Lake is expected to yield 109,000 ac-ft (105% of average). New Fork River near Big Piney is expected to yield about 450,000 ac-ft (114% of average). Fontenelle Reservoir Inflow is estimated to be 1,000,000 ac-ft (116% of average), and Big Sandy near Farson is expected to be about 64,000 ac-ft (110% of average). See the following table for more detailed information on projected runoff.

UPPER GREEN RIVER BASIN  
Streamflow Forecasts - June 1, 2005

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
Green River at Warren Bridge							
APR-JUL	225	250	265	100	280	310	265
Pine Creek abv Fremont Lake							
APR-JUL	92	102	109	105	116	128	104
JUN-JUL	62	76	87	106	98	116	82
New Fork River nr Big Piney							
APR-JUL	385	425	450	114	475	515	395
Fontenelle Reservoir Inflow							
APR-JUL	833	929	1000	116	1071	1192	860
Big Sandy River nr Farson							
APR-JUL	51	58	64	110	70	80	58

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
BIG SANDY	38.3	38.0	18.7	29.4
EDEN	11.8	11.0	----	7.1
FONTENELLE	344.8	248.3	193.2	181.9

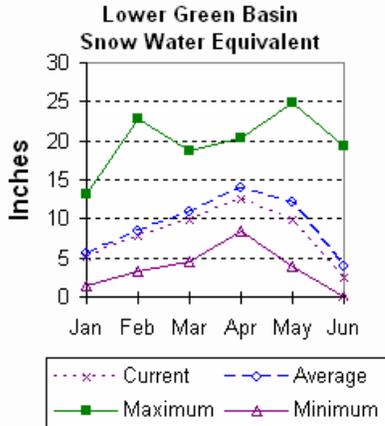
UPPER GREEN RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2005

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
GREEN above Warren Bridge	4	263	0
UPPER GREEN (West Side)	5	117	72
NEWFORK RIVER	2	0	21
BIG SANDY/EDEN VALLEY	1	0	0
GREEN above Fontenelle	11	119	60

# Lower Green River Basin

## Snow

SWE in the Hams Fork Basin is 107% of average (152% of last year). Blacks Fork Basin SWE is currently 77% of average (176% of last year). The Henrys Fork drainage is melted out. SWE in the Green River Basin above Flaming Gorge is 61% of average (127% of last year). For more information see Basin Summary of Snow Courses at beginning of this report.



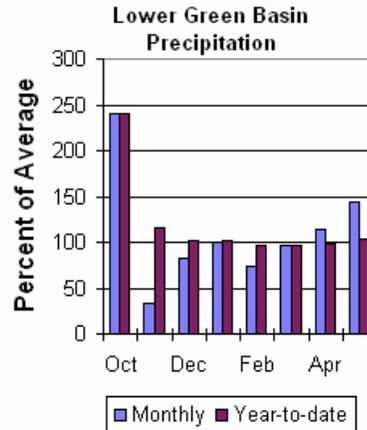
## Precipitation

Precipitation was above average for the 3 reporting stations during last month (144% of average). Precipitation ranged from 82-150% of average for the month. The basin year-to-date precipitation is currently 103% of average (134% of last year). Year-to-date percentages range from 99-116%.

## Reservoir

Fontenelle Reservoir is

currently storing 248,300 ac-ft; this is 137% of average (129% of last year). Flaming Gorge is currently storing 2,974,000 ac-ft; this is 98% of average (114% of last year). Viva Naughton is storing 42,400 ac-ft or 100% of capacity: this is 109% of average (100% of last year).



## Streamflow

Expected yields vary from 87-117% of average across the basin. The following forecast values are based on a 50% chance probability for the April through July forecast period. The Green River near Green River is forecast to yield about 1,020,000 ac-ft (117% of average). The Blacks Fork near Robertson is forecast to yield 103,000 ac-ft (108% of average). East Fork of Smiths Fork near Robertson is estimated to yield 27,000 ac-ft (87% of average). The estimated yield for Hams Fork near Frontier is 73,000 ac-ft (112% of average). The Hams Fork Inflow to Viva Naughton Reservoir is estimated to yield 102,000 ac-ft (115% of average). The Flaming Gorge Reservoir inflow will be about 1,300,000 ac-ft (109% of average). See the following table for more detailed information on projected runoff.

=====

LOWER GREEN RIVER BASIN  
Streamflow Forecasts - June 1, 2005

=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====							
Green River nr Green River, WY							
APR-JUL	840	950	1020	117	1100	1230	875
Blacks Fork nr Robertson							
APR-JUL	79	93	103	108	114	132	95
EF of Smiths Fork nr Robertson							
APR-JUL	18.3	23	27	87	32	39	31
Hams Fk blw Pole Ck nr Frontier							
APR-JUL	62	68	73	112	78	86	65
Hams Fk Inflow to Viva Naughton Res							
APR-JUL	75	87	102	115	105	121	89
Flaming Gorge Reservoir Inflow							
APR-JUL	1020	1190	1300	109	1420	1640	1190

=====

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

=====

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

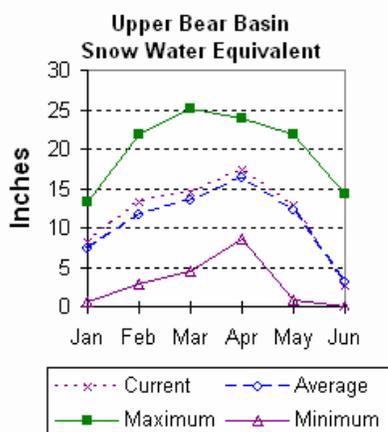
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Usable \*\*\*\*\* Usable Storage =====wsable Storage =====wsab

## Upper Bear River Basin

### Snow

Snow water equivalent (SWE) in the upper Bear River Basin in Utah is estimated to be 90% of average; that is about 275% of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 107% of average (152% of last year). Bear River Basin SWE, above the Idaho State line, is 73% of average. See the Basin Summary of Snow Course Data at the beginning of this report for more detailed information.



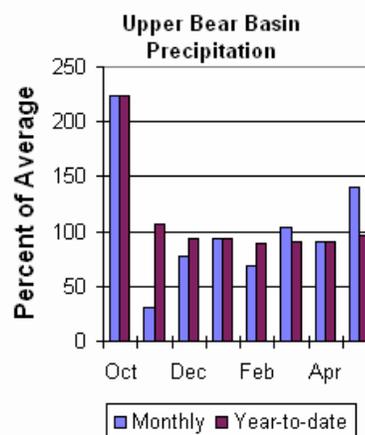
### Precipitation

Precipitation for last month was 140% of average for the 2 reporting stations; this is 118% of the precipitation received last year. The year-to-date precipitation, for the basin, is 96% of average; this is 127% of last year's amount.

### Reservoir

Storage, in Woodruff Narrows reservoir, is

about 47,800 ac-ft (119% of average). Current reservoir storage is about 83% of capacity. Reservoir storage last year at this time was 31,000 ac-ft at this time.



### Streamflow

The following 50% chance stream flow yields are for the June through September period. The Bear River above the Utah-Wyoming State Line is expected to yield about 85,000 ac-ft (104% of average). The Bear River above Reservoir near Woodruff is estimated to yield 96,000 ac-ft (135% of average). The Smiths Fork River near Border is estimated to yield 65,000 ac-ft (84% of average). See the following table for more detailed information on projected runoff.

UPPER BEAR RIVER BASIN  
Streamflow Forecasts - June 1, 2005

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
Bear River nr UT-WY State Line							
APR-JUL	116	124	130	115	136	144	113
APR-SEP	126	135	142	114	149	158	125
JUN-JUL	59	67	73	104	79	87	70
JUN-SEP	69	78	85	104	92	101	82
Bear River ab Reservoir nr Woodruff							
APR-JUL	131	149	162	119	175	193	136
APR-SEP	139	157	170	120	183	201	142
JUN-JUL	67	80	88	138	96	109	64
JUN-SEP	74	87	96	135	105	118	71
Smiths Fork nr Border							
APR-JUL	99	103	105	102	107	111	103
APR-SEP	112	117	120	99	123	128	121
JUN-JUL	44	48	50	82	52	56	61
JUN-SEP	57	62	65	84	68	73	77

\* 90%, 70%, 50%, 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 1971-2000 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.
- (3) - Median value used in place of average. The value listed under 30% is actually a 25% exceedance level. The value listed under 70% is actually a 75% exceedance level. Forecast issued in cooperation with Alberta Environment.

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

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
WOODRUFF NARROWS	57.3	47.8	31.0	40.3

UPPER BEAR RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2005

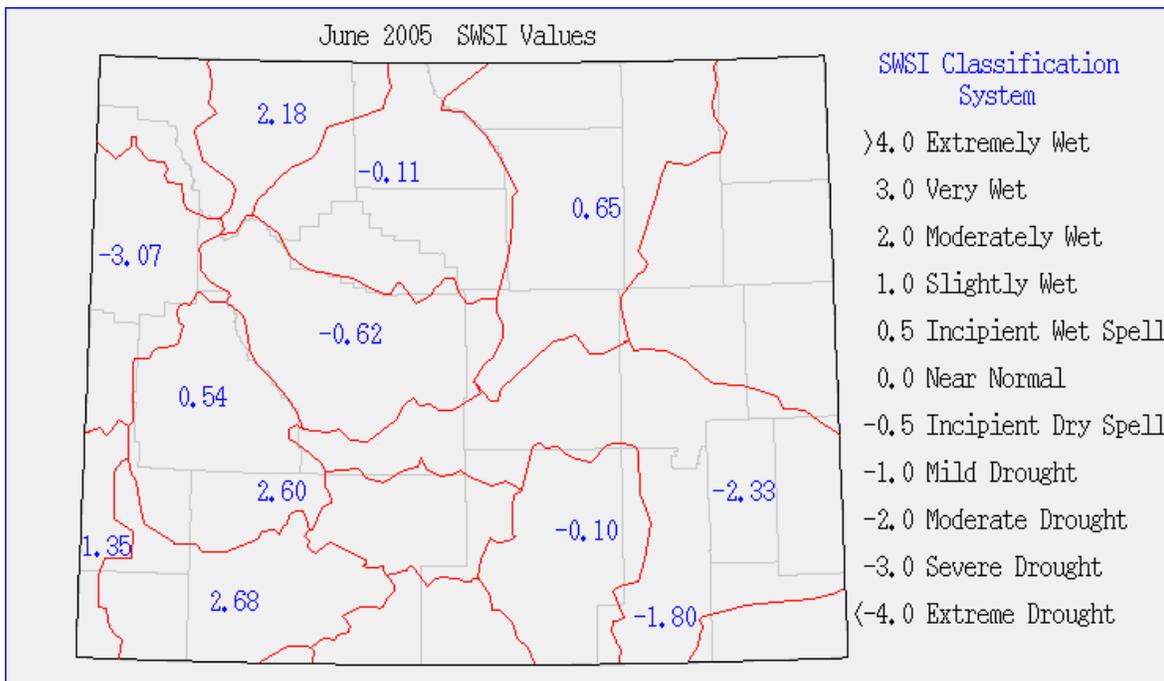
Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
UPPER BEAR RIVER in Utah	5	0	73
SMITHS & THOMAS FORKS	3	152	107
BEAR RIVER abv ID line	6	275	90
NORTHWEST	47	91	50
NORTHEAST	11	269	91
SOUTHEAST	20	191	60
SOUTHWEST	25	178	67

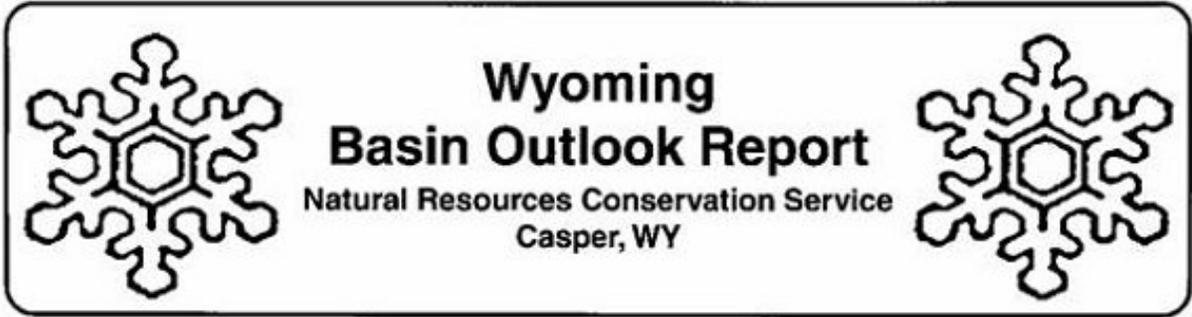
*Issued by*

**Bruce Knight**  
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**U.S. Department of Agriculture**

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