

Natural Resources Conservation Service

# Wyoming Basin Outlook Report May 1, 2006



# Basin Outlook Reports And Federal - State - Private Cooperative Snow Surveys

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# **Wyoming Water Supply Outlook Report**

#### 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, base 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.

#### General

The snow water equivalent (SWE) across Wyoming has dropped significantly this last month. SWE for

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the State of Wyoming as a whole is 81% of average for early May. Snowfall during April was below average and temperatures were above normal across the state. Precipitation for last month in the basins varied from 48% of average to 186% of average for Wyoming for an overall average of 74%. Year-to-date precipitation is below average for the year and varies from 81-126% of average in the basins for an overall average of 98%. Basin reservoir levels for Wyoming vary from 39-168% of average for an overall average of 92%. Forecast runoff varies from 55-139% of average across Wyoming for an overall average of 94%.

# **Snowpack**

Snow water equivalent (SWE), across Wyoming is below average for this time of year at 81%. SWE in the NW portion of Wyoming is now about 85% of average (126% of last year). NE Wyoming SWE is currently about 58% of average (79% of last year). The SE portion of Wyoming SWE is currently about 83% of average (110% of last year). The SW portion of Wyoming SWE is about 90% of average (108% of last year). See the picture at the end of the document for the individual basins.

# **Precipitation**

Last month's precipitation was down across all of Wyoming. The Big Horn Basin had the lowest precipitation for the month at 48% of average. The Belle Fourche Basin had the highest precipitation amount at 186% of average. The following table displays the major river basins and their departure from average for last month.

	Departure   n from average   Bas		parture average
Snake River Upper Yellowstone & Madison Wind River Big Horn Shoshone & Clarks Fork Powder & Tongue River Belle Fourche & Cheyenne	-08% +01% -49% -52% -33% -34% +86%	Upper North Platte River Lower North Platte Little Snake River Upper Green River Lower Green River Upper Bear River	-28% -27% -19% -25% -33% -29%

#### **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 about 94%; varying from 55-139%. The Snake River, Upper Yellowstone & Madison River Basins are expected to yield about 105, 102% of average respectively; yield estimates range from 97-106% of average for the various forecast points in these basins. Yields from the Wind and Bighorn River Basins are expected to be about 61 and 62% of average respectively; varying from 61-85% f average in the basins. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 88, 91% of average respectively; varying from 70-91% of average. Yields from the Powder & Tongue River Basins are expected to be about 62, 64% of average respectively; varying from 59-81%. Yields for the Belle Fourche & Cheyenne River Basins are expected to be about 129% of average. Yields for the Upper and Lower North Platte River of Wyoming will be about 87 and 86% of average, respectively; varying from 62-106%. Yields for the Little Snake, Upper Green River, Lower Green River, Big Sandy and Little Bear River Basins of Wyoming are expected to be 100, 93, 92, 90 and 98% of average respectively; varying from 90-117%.

#### Reservoirs

Reservoirs on the Upper North Platte River are below average at 80% of average. Reservoirs on the Lower North Platte River are well below average at 69% of average. Most of the reservoirs in the northeast are below average in storage at 66% except for the Tongue River Reservoir at 168% of normal. Reservoirs in the Wind River Basin are below average at 94%. Reservoirs on the Big Horn are slightly below average at 97%. The Buffalo Bill Reservoir on the Shoshone is above average at 134%. Reservoirs on the Green River are above average at 104%. Reservoir storage varies across the state;

however, reservoir storage is at 92% of average for the entire state. See the following table for further information about reservoir storage.

# **Major Reservoirs in Wyoming**

	•		•	_	
BASIN AREA	CURRENT AS	LAST YR AS	AVERAGE AS	CURRENT AS	CURRENT AS
RESERVOIR	% CAPACITY	% CAPACITY	% CAPACITY	% AVERAGE	% LAST YR
WYOMING AND SURROUNDING	G STATES				
ALCOVA	98	98	97	101	100
ANGOSTURA	47	50	93	50	93
BELLE FOURCHE	59	52	82	72	113
BIG SANDY	86	75	65	133	115
BIGHORN LAKE	57	49	58	97	115
BOYSEN	85	96	88	96	88
BUFFALO BILL	73	75	54	134	98
BULL LAKE	48	69	55	87	70
DEERFIELD	78	86	89	88	91
EDEN	51	15	47	109	333
ENNIS LAKE	80	80	82	97	100
FLAMING GORGE	81	78	79	103	104
FONTENELLE	47	50	42	113	93
GLENDO	83	73	90	91	113
GRASSY LAKE	62	62	84	74	100
GUERNSEY	53	50	73	73	106
HEBGEN LAKE	71	78	67	105	91
JACKSON LAKE	57	24	56	102	240
KEYHOLE	38	50	60	64	78
PACTOLA	70	76	87	81	93
PALISADES	49	61	62	80	81
PATHFINDER	29	22	73	39	128
PILOT BUTTE	69	58	81	84	119
SEMINOE	40	34	50	80	119
SHADEHILL	57	56	80	71	102
TONGUE RIVER	67	61	40	168	111
VIVA NAUGHTON RES	62	95	67	92	66
WHEATLAND #2	57	41	60	95	138
WOODRUFF NARROWS	100	54	67	149	185
TOTAL OF 29 RESERVOIRS	S 63	60	69	92	105

Raw KAF Totals Current=8408 Last Year=8003 Average=9129 Capacity=13300

# **Basin Summary of Snow Course Data**

MAY 2006

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
WYOMING Snow Course	and SNOTEL	Stations				_
ALBANY	9400	4/27/06	22	7.3	4.9	12.3
BALD MOUNTAIN SNOTEI	9380	5/01/06	40	14.9	16.9	23.6
BASE CAMP SNOTEL	7030	5/01/06		10.1	4.8	12.3
BATTLE MTN. SNOTEL	7440	5/01/06	0	.0	. 0	4.6
BEARLODGE DIVIDE	4680	4/28/06	0	. 0	.1	. 4
BEARTOOTH LK. SNOTEI	9280	5/01/06	64	23.6	17.0	25.9
BEAR TRAP SNOTEL	8200	5/01/06	0	.0	1.0	2.5
BIG GOOSE	7760	4/26/06	10	1.2	3.1	7.7
BIG GOOSE SNOTEL	7760	5/01/06	11	4.0	8.5	11.6
BIG PARK	8620	5/01/06	47	20.1	17.9	19.6
BIG SANDY SNOTEL	9080	5/01/06	23	10.8	14.4	13.5
BLACKWATER SNOTEL	9780	5/01/06		24.4	16.9	28.8
BLIND BULL SNOTEL	8900	5/01/06	63	28.7	19.8	27.9
BLIND PARK SNOTEL	6870	5/01/06	6	2.3	.1	4.0
BLUE RIDGE	9620	4/27/06	17	5.3	14.1	12.5
BONE SPGS. SNOTEL	9350	5/01/06	39	13.9	14.6	18.3
BROOKLYN LK. SNOTEL	10220	5/01/06	60	24.3	18.5	28.2
BUCK CREEK	7960	4/28/06	19	7.2	5.9	9.6
BURGESS JCT. SNOTEL	7880	5/01/06	28	9.9	10.8	13.3
BURROUGHS CRK SNOTEI		5/01/06	38	13.5	11.4	13.6
CANYON SNOTEL	8090	5/01/06	27	10.8	7.0	11.3
CASPER MTN. SNOTEL	7850	5/01/06	27	12.0	9.7	17.1
CASTLE CREEK	8400	4/26/06	0	.0	.0	2.4
CCC CAMP	7000	4/28/06	14	5.7	6.0	8.0
CHALK CK #1 SNOTEL	9100	5/01/06	61	27.9	26.3	25.3
CHALK CK #2 SNOTEL	8200	5/01/06	25	12.1	13.2	12.0
CINNABAR PARK SNOTEI		5/01/06	42	19.7	14.2	11.5
CLOUD PEAK SNOTEL	9850	5/01/06	34	12.6	15.2	16.2
COLE CANYON SNOTEL	5910	5/01/06	4	2.0	.1	5.3
COLD SPRINGS SNOTEL	9630	5/01/06	0	.0	3.6	4.8
COTTONWOOD CR SNOTEI		5/01/06		21.9	14.4	19.8
CROW CREEK SNOTEL	8830	5/01/06	0	. 0	1.2	5.4
DARBY CANYON	8250	5/01/06	60	26.0	16.1	24.6
DEER PARK SNOTEL	9700	5/01/06	36	15.7	24.5	18.6
DITCH CREEK	6870	4/27/06	0	. 0		1.5
DIVIDE PEAK SNOTEL	8860	5/01/06	29	13.9	18.2	19.3
DOME LAKE SNOTEL	8880	5/01/06	16	6.4	9.3	13.5
DU NOIR	8760	4/26/06	4	1.1		6.3
EAST RIM DIV SNOTEL	7930	5/01/06		2.9	4.1	13.1
ELKHART PARK SNOTEL	9400	5/01/06		12.6	12.7	12.8
EVENING STAR SNOTEL	9200	5/01/06	64	25.3	18.0	33.3
FOXPARK	9060	4/27/06	2	.7	.0	5.3
GEYSER CREEK	8500	4/26/06	3	.8		5.4
GLADE CREEK	7040	5/01/06	39	18.6	8.8	20.1
GRANITE CRK SNOTEL	6770	5/01/06		13.2	6.9	12.8
GRANNIER MEADOWS	8860	4/27/06	33	9.7	13.4	14.6
GRASSY LAKE SNOTEL	7270	5/01/06	74	35.6	19.1	33.4
GRAVE SPRINGS SNOTEI		5/01/06	18	6.6	5.8	11.1
GREYS BOUNDARY	5720	4/28/06	2	.8	. 0	2.6
GROS VENTRE SNOTEL	8750	5/01/06	28	10.5	10.6	13.3
GROVER PARK DIVIDE	7000	4/28/06	4	1.5	.9	6.4
HAIRPIN TURN	9480	4/27/06	32	13.4	7.5	15.6
HANSEN S.M. SNOTEL	8360	5/01/06	0	. 0	1.9	4.9
HAMS FORK SNOTEL	7840	5/01/06		6.3	6.0	6.0
HASKINS CREEK	8980	4/25/06	82	34.1	29.4	31.6
HOBACK GS	6640	4/27/06	4	1.2	.0	

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
HOBBS PARK SNOTEL	10100	5/01/06	27	10.6	17.8	18.0
INDIAN CREEK SNOTE		5/01/06		31.8	32.2	28.3
JACKPINE CREEK	7350	5/01/06	44	20.5	10.0	19.2
KELLEY R.S. SNOTEL	8180	5/01/06		14.2	14.8	14.1
KENDALL R.S. SNOTE		5/01/06		4.1	3.7	10.0
KIRWIN SNOTEL	9550	5/01/06	27	9.3	9.1	13.0
LAKE CAMP	7780	5/02/06	18	6.6	5.6	7.5
LA PRELE SNOTEL	8380	5/01/06	0	.0	.9	7.1
LEWIS LAKE SNOTEL	7850	5/01/06	85	42.6	20.1	34.6
LEWIS LAKE DIVIDE	7850	5/01/06	92	46.4	26.7	42.3
LIBBY LODGE	8750	4/27/06	9	3.8	.5	8.3
LITTLE WARM SNOTEL	9370	5/01/06	11	4.1	7.5	11.1
LOOMIS PARK SNOTEL	8240	5/01/06		12.2	9.9	14.3
LUPINE CREEK	7380	4/27/06	0	.0	.0	5.8
MALLO	6420	4/26/06	12	4.1		
MARQUETTE SNOTEL	8760	5/01/06	0	.0	5.9	11.3
MEDICINE LODGE LAKI	ES 9340	4/26/06	33	7.5	9.3	11.9
MIDDLE FORK	7420	4/27/06	1	.1	1.7	4.7
MIDDLE POWDER SNOT	EL 7760	5/01/06	28	11.5	9.3	14.3
MOSS LAKE	9800	4/26/06	47	19.0	14.8	25.8
NEW FORK SNOTEL	8340	5/01/06		4.1	8.7	8.4
NORRIS BASIN	7500	4/29/06	6	2.6	1.9	6.8
NORTH BARRETT CREEK	K 9400	4/26/06	56	23.3	17.1	22.7
NORTH FRENCH SNOTE	L 10130	5/01/06	79	33.8	27.0	34.5
NORTH RAPID CK SNT	L 6130	5/01/06	6	2.6	. 4	3.8
NORTH TONGUE	8450	4/26/06	31	8.9	9.6	13.3
OLD BATTLE SNOTEL	9920	5/01/06	96	41.5	38.4	36.9
OLD FAITHFUL	7400	5/02/06	14	6.2	7.1	9.3
ONION GULCH	8780	4/30/06	15	4.7	4.7	8.4
OWL CREEK SNOTEL	8980	5/01/06	0	.0	2.3	4.0
PARKERS PEAK SNOTE		5/01/06	56	21.4	17.0	24.5
PHILLIPS BNCH SNOT		5/01/06	68	31.3	21.1	29.4
POCKET CREEK	9350	4/28/06	44	16.3	10.2	13.8
POLE MOUNTAIN	8700	4/28/06	2	.5	2.9	5.0
POWDER RVR.PASS SN		5/01/06	15	5.0	8.2	10.7
PURGATORY GULCH	8970	4/25/06	24	8.0	9.5	11.2
RANGER CREEK	8120	4/26/06	18	3.9	4.7	7.6
RENO HILL SNOTEL	8500	5/01/06	23	11.8	9.1	14.7
REUTER CANYON	6280	4/28/06	16	6.4	.3	3.6
ROWDY CREEK	8300	4/27/06	51	21.7	14.1	21.1
RYAN PARK	8400	4/26/06	5	1.9	2.5	7.2
SAGE CK BASIN SNTL SALT RIVER SNOTEL	7850 7600	5/01/06 5/01/06		.0 9.5	2.9	11.2
SAND LAKE SNOTEL	10050	5/01/06	 73	32.3	10.2 25.3	10.6 37.0
SAND LAKE SNOTED SANDSTONE RS SNOTED		5/01/06	8	32.3	7.0	9.5
SAMMILL DIVIDE	9260	4/26/06	36	9.4	13.7	15.1
SHELL CREEK SNOTEL	9580	5/01/06	46	15.4	15.5	16.8
SHERIDAN R.S.	7750	4/25/06	4	1.1	1.0	3.3
SNAKE RV STA SNOTE		5/01/06	23	9.7	1.2	12.2
SNIDER BASIN SNOTE		5/01/06	34	13.9	11.6	12.6
SOLDIER PARK	8780	4/30/06	0	.0	2.9	6.3
SOUR DOUGH	8460	4/30/06	10	2.5	6.6	7.4
SOUTH PASS SNOTEL	9040	5/01/06	33	13.1	19.6	18.0
SPRING CRK. SNOTEL	9000	5/01/06	74	33.9	25.8	28.6
ST LAWRENCE ALT SN		5/01/06	0	.0	5.9	6.1
SUCKER CREEK SNOTE		5/01/06	22	7.6	11.8	13.1
SOUTH BRUSH SNOTEL	8440	5/01/06	2	1.0	7.4	11.1
SYLVAN LAKE SNOTEL	8420	5/01/06	43	17.5	11.8	23.8
SYLVAN ROAD SNOTEL	7120	5/01/06	4	1.7	3.9	8.1
T CROSS RANCH	7900	4/26/06	2	.7	.0	3.3
TETON PASS W.S.	7740	5/01/06	65	30.8	21.2	27.5
THUMB DIVIDE SNOTE	L 7980	5/01/06	29	12.6	9.3	14.9

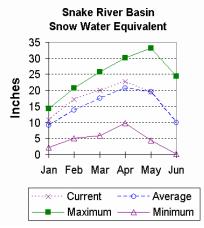
SNOW COURSE	ELEVATION	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	71-00
TIE CREEK SNOTEL	6870	5/01/06	0	.0	.5	3.9
TIMBER CREEK SNOTEL	7950	5/01/06	0	.0	2.3	4.8
TOGWOTEE PASS SNOTE:	L 9580	5/01/06	69	26.0	18.2	27.9
TOWNSEND CRK SNOTEL	8700	5/01/06	0	.0	10.4	9.1
RIPLE PEAK SNOTEL	8500	5/01/06	67	25.2	15.2	23.7
TWO OCEAN SNOTEL	9240	5/01/06		41.0	26.6	31.8
TYRELL RANGER STA.	8300	4/30/06	7	2.1	1.8	6.1
UPPER SPEARFISH	6500	4/26/06	17	5.2		
WEBBER SPRING SNOTE	L 9250	5/01/06	50	22.1	21.2	25.1
WHISKEY PARK SNOTEL	8950	5/01/06		35.7	25.7	30.5
WILLOW CREEK SNOTEL	8450	5/01/06		31.6	22.2	30.6
WINDY PEAK SNOTEL	7900	5/01/06	0	.0	3.4	4.9
WOLVERINE SNOTEL	7650	5/01/06	0	.0	. 4	7.2
WOOD ROCK G.S.	8440	4/26/06	26	5.0	8.4	11.5
YOUNTS PEAK SNOTEL	8350	5/01/06	39	13.7	11.9	18.1

<sup>(</sup>d) denotes discontinued site.

# **Snake River Basin**

#### **Snow**

The Snake River Basin snow water equivalent (SWE) is about average. SWE in the Snake River Basin above Jackson Lake is 109% of average (188% of last year at this time). Pacific Creek Basin SWE is 116% of average (163% of last year). Gros Ventre River Basin SWE is 89% of average (127% of last year). SWE in the Hoback River drainage is 83% of average (132% of last year). SWE in the Greys River drainage is 106% of average (145% of last year). In the Salt River area SWE is 93% of average (131% of last year). SWE in the Snake River Basin above Palisades is 100% of average (153% 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 92% of average (151% of last year); last month's percentages range from 63-137% of average for the 16 reporting stations. Water-year-to-date precipitation is 107% of average for the Snake River Basin (148% of last year). Year-to-date percentages range from 93-125% of average.

#### Reservoir

Currently, usable reservoir storage is

88% of average for the three storage reservoirs in the basin. Grassy Lake storage is about 74% of average (9,400 ac-ft compared to 9,400 last year). Jackson Lake storage is 102% of average (482,100 ac-ft compared to 201,000 ac-ft last year). Palisades Reservoir storage is about 80% of average (691,200 ac-ft compared to 849,100 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% exceedance forecasts for May through September are above average for the basin. The Snake near Moran is 890,000 ac-ft (106% of average). Snake above reservoir near Alpine is 2,680,000 ac-ft (106% of average). The Snake near Irwin is 3,730,000 ac-ft (106% of average). The Snake near Heise is 3,950,000 ac-ft (105% of average). Pacific Creek at Moran is 172,000 ac-ft (103% of average). Greys River above Palisades Reservoir is 375,000 ac-ft (106% of average). Salt River near Etna is 350,000 ac-ft (97% of average). See the following page for detailed runoff volumes.

#### SNAKE RIVER BASIN

Streamflow Forecasts - May 1, 2006

=========	=======	=======	=======	=======	=======	=======	========
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	======	======		Exceeding	* =====	======	
Forecast	90%	70%	5	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========		=======	=======	=======	=======	=======	========
SNAKE nr Mora							
MAY-JUL	680	760	795	106	830	910	750
MAY-SEP	765	850	890	106	925	1015	840
SNAKE ab resv	v nr Alpin	e(1,2)					
MAY-JUL	2020	2200	2280	106	2360	2540	2160
MAY-SEP	2370	2580	2680	106	2780	2990	2530
SNAKE nr Irw	in (1,2)						
MAY-JUL	2760	3030	3160	106	3290	3560	2980
MAY-SEP	3270	3590	3730	106	3870	4190	3520
SNAKE near He	eise (2)						
MAY-JUL	2990	3190	3330	105	3470	3670	3170
MAY-SEP	3560	3790	3950	105	4110	4340	3760
PACIFIC CREEK	K at Moran						
MAY-JUL	138	154	165	103	175	190	160
MAY-SEP	144	161	172	103	182	202	167
GREYS above I	Palisades						
MAY-JUL	285	305	320	107	335	355	300
MAY-SEP	335	360	375	106	390	415	355
SALT near Etr	na						
MAY-JUL	215	245	270	96	295	325	280
MAY-SEP	285	325	350	97	375	415	360
=========		=======	=======	=======	=======	========	========

<sup>\* 90%, 70%, 50%, 30%,</sup> 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 April

	:========	========		========
	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================	:========	========		
GRASSY LAKE	15.2	9.4	9.4	12.7
JACKSON LAKE	847.0	482.1	201.0	471.1
PALISADES	1400.0	691.2	849.1	862.6
	========	========		

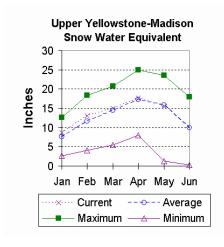
#### SNAKE RIVER BASIN

Watershed	Number of Data Sites	This Year as : Last Year	
SNAKE above Jackson Lake	6	188	109
PACIFIC CREEK	2	163	116
GROS VENTRE RIVER	2	123	89
HOBACK RIVER	5	132	83
GREYS RIVER	5	142	107
SALT RIVER	5	131	93
SNAKE above Palisades	22	152	100
=======================================	============	===========	==========

#### **Yellowstone and Madison River Basins**

#### **Snow**

Snowfall in these basins has been good so far this year and the SWE in both basins is about average for this month. Snow water equivalent (SWE) is about 105% of average (148% of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 91% of average (142% of last year at this time). See the "Snow Course Basin Summary" at the beginning of this document for more details on specific sites.



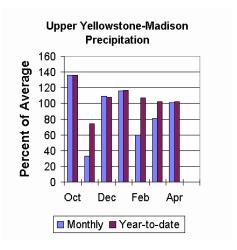
# **Precipitation**

Last month precipitation in the Madison and Yellowstone drainage was about 101% of average (176% of last year) for the 5 reporting stations: percentage range was from 92-119% of average. Water-year-to-date precipitation is about 102% of average (147% of last year's amount); year to date percentage ranges from 97-111%.

#### Reservoir

Ennis Lake is storing about 32,800 ac-ft of water (80% of

capacity, 97% of average or 100% of last year's volume). Hebgen Lake is storing about 268,100 ac-ft of water (71% of capacity, 105% of average or 91% 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**

Water supply is estimated to be slightly above average this year.

All the following yields are the 50% exceedance forecasts from May through September. Yellowstone at Lake Outlet is 775,000 ac-ft (101% of average). Yellowstone at Corwin Springs will yield around 1,910,000 ac-ft (102% of average). Yellowstone near Livingston will yield around 2,200,000 ac-ft (102% of average). Hebgen Reservoir inflow is 460,000 ac-ft (105% of average). See the following page for detailed runoff volumes.

#### UPPER YELLOWSTONE & MADISON RIVER BASINS

Streamflow Forecasts - May 1, 2006

	<=== Dr	rier ===	Future Co	nditions	=== Wett	er ===>		
Forecast Pt Forecast Period	   =======   90%  (1000AF)	70%	Chance of   50   (1000AF)	% ]	30%	10%	30 Yr Avg (1000AF)	
YELLOWSTONE &	at Lake Ou	 .t.let						
MAY-JUL MAY-SEP	490 685	545 740	580 775	105 101	615 810	670 865	555 770	
YELLOWSTONE I	RIVER at C	orwin Spi	rings					
MAY-JUL	1370	1500	1580	102	1660	1790	1550	
MAY-SEP	1670	1810	1910	102	2010	2150	1870	
YELLOWSTONE I	RIVER near	Livingst	ton					
MAY-JUL	1620	1730	1810	102	1890	2000	1770	
MAY-SEP	1970	2110	2200	102	2290	2430	2150	
HEBGEN Reservoir Inflow								
MAY-JUL	290	320	345	105	370	400	330	
MAY-SEP	395	435	460	105	485	525	440	

<sup>\* 90%, 70%, 50%, 30%,</sup> 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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UPPER YELLOWSTONE & MADISON RIVER BASINS Reservoir Storage (1000AF) End of April

Reservoir	Usable Capacity	********** This Year	Usable Storage Last Year	******* Average
	========	========	==========	
ENNIS LAKE	41.0	32.8	32.8	33.8
HEBGEN LAKE	377.5	268.1	294.5	254.6
	========	========	==========	========

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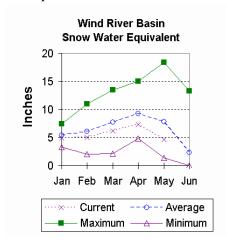
UPPER YELLOWSTONE & MADISON RIVER BASINS Watershed Snowpack Analysis - May 1, 2006

Watershed	Number of	This Year as Per	rcent of
	Data Sites	Last Year	Average
MADISON RIVER in WY	8	149	107
YELLOWSTONE RIVER in WY	11	142	91

#### Wind River Basin

#### **Snow**

The Wind River Basin SWE is way below average for this time of the year at 59% of average (71% of last year). SWE in the Wind River above Dubois is 76% of average (119% of last year at this time). The Little Wind SWE is 44% of average water content (45% of last year), and the Popo Agie drainage SWE is about 57% of average (54% of last year). See the Basin Summary of Snow Course Data at the front of this report for details.



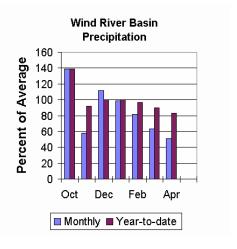
# **Precipitation**

Last months precipitation in the basin varied widely from 28-81% of average. Precipitation for the basin was about 51% of average from the 8 reporting stations; that is about 56% of last year's amount. Water year-to-date precipitation is 83% of average and about 98% of last year at this time. Year-to-date percentages range from 67-100% of average.

#### Reservoirs

Current storage varies from 69-85% of average. Usable

storage in Bull Lake is currently about 72,800 ac-ft (48% of capacity) - last year the reservoir was at 69% of capacity at this time. Boysen Reservoir is storing about 85% of capacity (504,100 ac-ft) – last year the reservoir was at 96% of capacity at this time. Pilot Butte is at 69% of capacity (21,700 ac-ft) – last year the reservoir was at 58% 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 well below average this year. The following values reflect the 50% exceedance forecasts for the May through September runoff period. Dinwoody Creek near Burris is 77,000 ac-ft (83% of average). The Wind River above Bull Lake Creek is 435,000 ac-ft (85% of average). Bull Lake Creek near Lenore is 124,000 ac-ft (70% of average). Wind River at Riverton will yield around 410,000 ac-ft (67% of average). Little Popo Agie River near Lander is around 31,000 ac-ft (63% of average). South Fork of Little Wind near Fort Washakie will yield around 57,000 ac-ft (70% of average). Little Wind River near Riverton will yield around 185,000 ac-ft (64% of average). Boysen Reservoir inflow will yield around 460,000 ac-ft (61% of average). See the following page for detailed runoff volumes.

#### WIND RIVER BASIN

Streamflow Forecasts - May 1, 2006

========			=======		=======	=======	========
	<=== Dr	rier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	I			_			
Forecast	1		1				30 Yr Avg
Period	•		•	(% AVG.)			
			=======		======	=======	
DINWOODY CREI			F.1	П.О.			6.5
MAY-JUL	42	47	51	79	55	60	65
MAY-SEP	64	72	77	83	82	90	93
WIND RIVER al		, ,					
MAY-JUL	255	310	345		380		410
MAY-SEP	335	395	435	85	475	535	510
BULL LAKE CR		- ( )					
MAY-JUL	74	90	101	70	112	128	144
MAY-SEP	92	111	124	70	137	156	178
WIND RIVER at	t Rivertor	n (2)					
MAY-JUL	178	280	350	69	420	520	510
MAY-SEP	230	340	410	67	480	590	610
LT POPO AGIE	RIVER nr	Lander					
MAY-JUL	13.3	21	26	61	31	39	43
MAY-SEP	17.0	25	31	63	37	45	49
SF LT WIND no	r Fort Was	shakie					
MAY-JUL	30	41	49	70	57	68	70
MAY-SEP	37	49	57	70	65	77	81
LT WIND RIVE	R nr River	rton					
MAY-JUL	48	115	160	63	207	272	255
MAY-SEP	67	137	185	64	235	305	290
BOYSEN RESERV	VOIR Inflo	ow (2)					
MAY-JUL	168	310	405	61	500	640	665
MAY-SEP	200	355	460	61	565	720	758
=========	========		========	========		========	

<sup>\* 90%, 70%, 50%, 30%,</sup> 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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#### WIND RIVER BASIN

Reservoir Storage (1000AF) End of April

Reservoir	Usable Capacity	********* This Year	======================================	******* Average
BULL LAKE BOYSEN PILOT BUTTE	151.8	72.8	104.6	83.9
	596.0	504.1	571.4	526.1
	31.6	21.7	18.3	25.7

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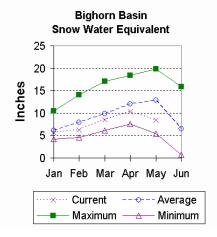
#### WIND RIVER BASIN

=======================================			
	Number of	This Year as Per	cent of
Watershed	Data Sites	Last Year	Average
=======================================		:=========	
WIND RIVER above Dubios	7	118	66
LITTLE WIND	2	45	44
POPO AGIE	7	54	57
WIND above Boysen Resv	14	74	56
=======================================	.==========	.=========	========

# **Bighorn River Basin**

#### **Snow**

The Bighorn River Basin SWE is below average at 65% (91% of last year). Nowood River is at 60% of average (92% of last year). Greybull River SWE is at 52% of average (82% of last year). Shell Creek SWE is 73% of average (93% of last year). For more information see Basin Summary of Snow Courses at beginning of report.



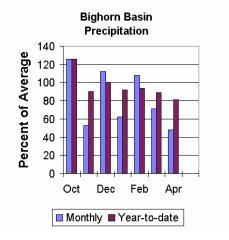
# **Precipitation**

Last month's precipitation was 48% of average (53% of last year). Sites ranged from 37-75% of average for the month. Year-to-date precipitation is 81% of average; that is 97% of last year at this time. Year-to-date percentages, from the 10 reporting stations, range from 61-92%.

#### Reservoir

Boysen reservoir is currently storing 504,100 ac-ft (96% of average). Bighorn

Lake is now at 97% of average (768,100 ac-ft). Boysen is currently storing 88% of last year volume at this time and Big Horn Lake is storing 115% 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% exceedance forecasts for the May through September runoffs are anticipated to be well below average. Boysen Reservoir inflow is 460,000 ac-ft (61% of average); the Greybull River near Meeteetse should yield around 130,000 ac-ft (67% of average); Shell Creek near Shell should yield around 56,000 ac-ft (81% of average) and the Bighorn River at Kane should yield around 635,000 ac-ft (62% of average). See the following page for detailed runoff volumes.

#### BIGHORN RIVER BASIN

Streamflow Forecasts - May 1, 2006

=========							
	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
	90%	70%		š	30%	10%	30 Yr Avg (1000AF)
BOYSEN RESERV	VOIR Inflo	w (2)					
MAY-JUL MAY-SEP	168	310	405 460				665 758
GREYBULL RIV	ER nr Meet	eetse					
MAY-JUL	54	76	91	65	106	128	141
MAY-SEP	81	111	130	67	149	178	194
SHELL CREEK 1	nr Shell						
MAY-JUL	31	39	45	79	51	59	57
MAY-SEP	41	50	56	81	62	72	69
BIGHORN RIVER at Kane (2)							
MAY-JUL	335	480	575	63	670	815	915
MAY-SEP	370	525	635	62	745	900	1020

<sup>\* 90%, 70%, 50%, 30%,</sup> 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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#### BIGHORN RIVER BASIN Reservoir Storage (1000AF) End of April

=======================================	========	========		
	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
	========	========		
BOYSEN	596.0	504.1	571.4	526.1
BIGHORN LAKE	1356.0	768.1	666.4	791.9

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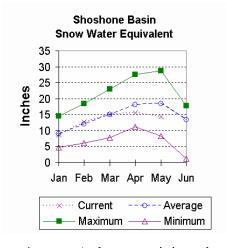
#### BIGHORN RIVER BASIN

	===========	================	=========
	Number of	This Year as Pe	ercent of
Watershed	Data Sites	Last Year	Average
			========
NOWOOD RIVER	5	92	60
GREYBULL RIVER	2	82	52
SHELL CREEK	4	92	72
BIGHORN (Boysen-Bighorn)	11	91	65
=======================================	==========	=======================================	========

#### Shoshone and Clarks Fork River Basin

#### **Snow**

Snow Water Equivalent (SWE) is 67% of average (121% of last year) in the Shoshone River Basin. The Clarks Fork River Basin SWE is 88% of average (147% 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 67% of average (91% of last year). Monthly percentages range from 36-94% of average. The basin year-to-date precipitation is now 90% of average (133% of last year). Year-to-date percentages from the 8 reporting stations range from 63-103% of average.

#### Reservoir

Current storage in Buffalo Bill Reservoir is about 134% of average (98% of last

year's storage); the reservoir is at about 73% of capacity. Currently, about 472,600 ac-ft are stored in the reservoir compared to 483,200 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**

Water supply is estimated to be below average this year. The following values are the 50% exceedance forecasts for the May through September period. The North Fork Shoshone River at Wapiti is 425,000 acft (88% of average). The South Fork of the Shoshone River near Valley is 195,000 ac-ft (77% of average), and the South Fork above Buffalo Bill Reservoir runoff is 150,000 ac-ft (70% of average). The Buffalo Bill Reservoir inflow is expected to yield around 595,000 ac-ft (79% of average). The yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be around 520,000 ac-ft (91% of average). See the following page for detailed runoff volumes.

#### SHOSHONE & CLARKS FORK RIVER BASINS

Streamflow Forecasts - May 1, 2006

==								
		<=== Dri	er ===	Future Co	nditions	=== Wett	er ===>	
							į	
Fo:				Chance of				
								30 Yr Avg
	Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.) (	1000AF)	(1000AF)	(1000AF)
==	========				=======		=======	=======
NF.		RIVER at Wa		200	0.0	400	400	405
				380				
	MAY-SEP	375	405	425	88	445	475	485
C F	SHOSHONE I	RIVER nr Va	1127					
DI.	MAY-JUL			167	7.0	170	200	215
				195				
	MAY-SEP	159	181	195	/ /	210	230	455
SF	SHOSHONE I	RIVER abv E	Buffalo E	Bill				
	MAY-JUL	90	121	142	71	163	194	200
	MAY-SEP		127	150	70	173	207	215
BU:	FFALO BILL	DAM Inflow	7 (2)					
	MAY-JUL	400	480	530	79	580	660	675
	MAY-SEP	460	540	595	79	650	730	755
~-			3.6					
CL		RIVER nr Be						
	MAY-JUL			470				
	MAY-SEP	435	485	520	91	555	605	570

<sup>\* 90%, 70%, 50%, 30%,</sup> 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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#### SHOSHONE & CLARKS FORK RIVER BASINS Reservoir Storage (1000AF) End of April

Reservoir	Usable	*********	Usable Storage	*******
	Capacity	This Year	Last Year	Average
BUFFALO BILL	646.6 =========	472.6	483.2	352.2

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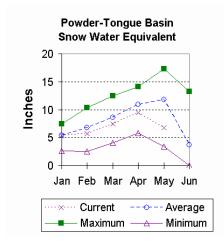
# SHOSHONE & CLARKS FORK RIVER BASINS Watershed Snowpack Analysis - May 1, 2006

=======================================		=======================================	=======
	Number of	This Year as Per	cent of
Watershed	Data Sites	Last Year	Average
			========
SHOSHONE RIVER	6	121	67
CLARKS FORK in WY	7	147	88
	==============	==========	========

# **Powder and Tongue River Basins**

#### **Snow**

SWE in the Powder and Tongue River Basins are way below average this year. Snow water equivalent (SWE) in the Upper Tongue River drainage is 62% of average (78% of last year). The Goose Creek drainage is 49% of average or 63% of last year. SWE in the Clear Creek drainage is 43% of average or 57% of last year. Crazy Woman Creek drainage is 46% of average or 63% of last year. Upper Powder River drainage SWE is 59% of average or 91% of last year. Powder River basin SWE, in Wyoming is 51% of average or 73% of last year. For more information see Basin Summary of Snow Courses at beginning of report.



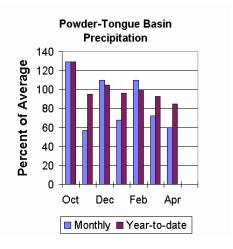
# **Precipitation**

Last month's precipitation was 66% of average for the 10 reporting stations (79% of last year). Monthly percentages range from 32-346% of average. Year-to-date precipitation is 87% of average in the basin; this is 100% of last year. Precipitation for the year ranges from 72-156% of average at the 10 reporting stations.

#### Reservoir

Tongue River Reservoir is at 168% of average (111% of

last year and 67% of capacity). Current storage is 53,300 ac-ft. Last year at this time the reservoir was storing about 48,100 ac-ft (average storage is about 31,700 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**

Water supply is estimated to be below average this year. The

following runoff values are the 50% probability forecasts for the May through September period. The yield for Tongue River near Dayton is 73,000 ac-ft (71% of average). Little Goose Creek near Bighorn is 29,000 ac-ft (73% of average). The Tongue River Inflow is 145,000 ac-ft (64% of average). The Middle Fork of the Powder River near Barnum is 12,200 ac-ft (74% of average). The North Fork of the Powder River near Hazelton should yield around 7,200 ac-ft (74% of average). The estimated yield for Clear Creek near Buffalo is 30,000 ac-ft (81% of average). Rock Creek near Buffalo will yield about 15,400 ac-ft (67% of average), and Piney Creek at Kearny should yield about 29,000 ac-ft (60% of average). May through September values for the Powder River at Moorehead is 118,000 ac-ft (59% of average). The Powder River near Locate is 136,000 ac-ft 62% of average). See the following page for detailed runoff volumes.

#### POWDER & TONGUE RIVER BASINS

Streamflow Forecasts - May 1, 2006

=========			========	=======	=======	=======	
	<=== Dr	rier ===	Future Co	nditions	=== Wett	er ===>	
Forecast Pt							
Forecast	90%	70%	50	)응	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF	50  ) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
========			========	=======	=======	=======	
TONGUE RIVER	nr Daytor	ı (2)					
		53	63	70	73		90
MAY-SEP	46	62	73	71	84	100	103
LITTLE GOOSE							
MAY-JUL	11.6	17.2	21	66	25	30	32
MAY-SEP	18.6	25	29	73	33	39	40
TONGUE RIVER	RESERVOIR	R Inflow	(2)				
MAY-JUL	39	88	121	61	154	205	199
MAY-SEP	57	109	145	64	181	235	225
MIDDLE FORK 1	POWDER nr	Barnum					
MAY-JUL	5.9	9.1	11.3	72	13.5	16.7	15.6
MAY-SEP	6.6	10.0	12.2	74	14.4	17.8	16.6
NORTH FORK PO	OWDER nr H	Hazelton					
MAY-JUL	4.1	5.5	6.4	71		8.7	9.0
MAY-SEP	4.7	6.2	7.2	74	8.2	9.7	9.8
CLEAR CREEK 1	nr Buffalo						
MAY-JUL	19.0	23	25	78	27	31	32
MAY-SEP	23	27	30	81	33	37	37
ROCK CREEK no	r Buffalo						
MAY-JUL	6.8	9.9	12.0	64	14.1	17.2	18.9
MAY-SEP	10.0	13.2	15.4	67	17.6	21	23
PINEY CREEK a	at Kearny						
MAY-JUL	2.3	16.0	26	59	36	50	44
MAY-SEP	4.7	19.0	29	60	39	53	48
POWDER RIVER	at Mooreh	nead					
MAY-JUL	25	69	100	56	130	176	178
MAY-SEP	38	86	118	59	150	198	200
POWDER RIVER	near Loca	ate					
MAY-JUL	68	98	119	61	140	170	195
MAY-SEP	78	113	136	62	159	193	220
=========			========		=======	========	.========

<sup>\* 90%, 70%, 50%, 30%,</sup> 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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POWDER & TONGUE RIVER BASINS Reservoir Storage (1000AF) End of April

	Usable	********	======================================	******
Reservoir		This Year	Last Year	Average
TONGUE RIVER	79.1	53.3	48.1	31.7
		========		

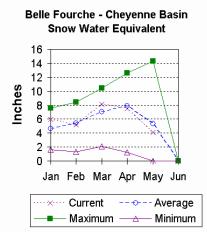
POWDER & TONGUE RIVER BASINS Watershed Snowpack Analysis - May 1, 2006

=======================================		===========	
	Number of	This Year as I	
Watershed	Data Sites	Last Year	Average
=======================================	===============	===========	
UPPER TONGUE RIVER	10	78	62
GOOSE CREEK	3	63	49
CLEAR CREEK	4	57	43
CRAZY WOMAN CREEK	3	63	46
UPPER POWDER RIVER	4	91	59
POWDER RIVER in WY	8	73	51
	===========	=======================================	

# **Belle Fourche and Cheyenne River Basins**

#### **Snow**

The Belle Fourche River Basin is currently at 78% of average and last year at this time the Belle Fourche River Basin was melted out. See the Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



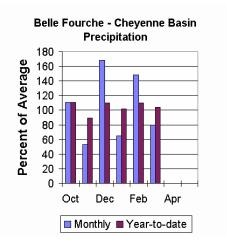
# **Precipitation**

Precipitation for last month was 186% of average or 308% of last year in the Black Hills. There were 2 reporting stations. Monthly percentages range from 179-196%. Year-to-date precipitation is 126% of average and 173% of last year's amount.

#### Reservoir

Current reservoir storage is around 66% of average in the basin. Angostura is

currently storing 50% of average (56,800 ac-ft), about 47% of capacity. Belle Fourche reservoir is storing 72% of average (105,300 ac-ft), about 59% of capacity. Deerfield reservoir is storing 88% of average (11,900 ac-ft), about 78% of capacity. Keyhole reservoir is storing 64% of average (74,500 ac-ft), about 38% of capacity. Pactola reservoir is storing 81% of average (38,700 ac-ft), about 70% of capacity. Shadehill reservoir is storing 71% of average (46,400 ac-ft), about 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 the 50% probability forecasts for the May through July period. The Deerfield Reservoir Inflow is 4,800 ac-ft (120% of average). Pactola Reservoir Inflow is expected to yield around 21,000 ac-ft (139% of average). See the following page for detailed runoff volumes.

#### BELLE FOURCHE & CHEYENNE RIVER BASINS

Streamflow Forecasts - May 1, 2006

=========	=======	=======	=======	=======	=======	=======	========
	<=== Dr	ier === 1	Tuture Co	onditions	=== Wett	er ===>	
Forecast Pt	======	====== (	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========		=======			=======	=======	========
DEERFIELD RES	SERVOIR In	flow					
MAY-JUL	1.9	3.6	4.8	120	6.0	7.7	4.0
PACTOLA RESER	RVOIR Infl	OW					
MAY-JUL	6.0	14.9	21	139	27	36	15.1

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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 April

Reservoir	Usable	*********	Usable Storage	******
	Capacity	This Year	Last Year	Average
ANGOSTURA BELLE FOURCHE DEERFIELD KEYHOLE PACTOLA SHADEHILL	122.1	56.8	60.8	113.7
	178.4	105.3	93.0	145.7
	15.2	11.9	13.1	13.6
	193.8	74.5	96.1	115.8
	55.0	38.7	41.6	47.9
	81.4	46.4	45.7	65.2

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#### BELLE FOURCHE & CHEYENNE RIVER BASINS Watershed Snowpack Analysis - May 1, 2006

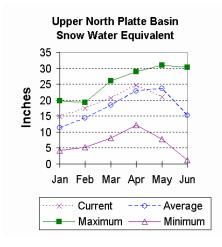
	Number of	This Year as Pe	ercent of			
Watershed	Data Sites	Last Year	Average			
BELLE FOURCHE	5	1256	85			

<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

# **Upper North Platte River Basin**

#### **Snow**

SWE in the Upper North Platte River Basin has dropped below average this year. The snow courses above Seminoe Reservoir have about 89% of average snow water equivalent (SWE) recorded for this time of the year or 113% of last year. SWE in the drainage area above Northgate is about 91% of average or 111% of last year at this time. SWE in the Encampment River drainage is about 103% of average or 113% of last year. Brush Creek SWE for the year is about 78% of average or 115% of last year's SWE. Medicine Bow and Rock Creek drainages SWE are about 83% of average or 129% of last year at this time. For more information see Basin Summary of Snow Courses at the beginning of this report.



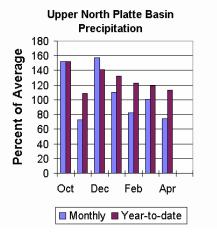
# **Precipitation**

Eight reporting stations indicate last month's precipitation was 72% of average or 83% of last year's amount. Monthly precipitation varied from 49-98% of average. Total water-year-to-date precipitation is about 111% of average for the basin, which is about 122% of last year's amount. Year to date percentage ranges from 96-120% of average.

#### Reservoirs

Seminoe Reservoir is estimated to be storing 409,800 ac-ft or 40%

of capacity. Seminoe Reservoir is also storing about 80% of average for this time of the year and 119% 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**

Water supply is estimated to be above average this year. The following yields are the 50% exceedance forecasts for the May

through September period. Yield for the North Platte River near Northgate will be around 190,000 ac-ft (83% of average). The Encampment River near Encampment is 165,000 ac-ft (106% of average). Rock Creek near Arlington is 47,000 ac-ft (86% of average). Sweetwater River near Alcova runoff is 54,000 ac-ft (82% of average). Seminoe Reservoir inflow should be around 650,000 ac-ft (87% of average). See the following table for more detailed information on projected runoff.

#### UPPER NORTH PLATTE RIVER BASIN

Streamflow Forecasts - May 1, 2006

=========	=======	=======	=======	=======	=======	========	========
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
	İ					į	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	) 응	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========		=======	=======			=======	========
NORTH PLATTE							
MAY-JUL	111	141	165	81	191	230	205
MAY-SEP	127	163	190	83	220	265	230
ENCAMPMENT R		_					
MAY-JUL	117	137	150	102	163	182	147
MAY-SEP	130	151	165	106	180	200	156
DOOK ODEEK	. 77						
ROCK CREEK ni	_		4.4	0.5	4.0	E 4	F.0
MAY-JUL	35	40	44	85	48	54	52
MAY-SEP	38	43	47	86	51	57	55
SWEETWATER RI	TTTED 2020 7.1	aa					
			4.0	0.0	г о	70	C1
MAY-JUL	26	40	49	80	58	72	61
MAY-SEP	29	44	54	82	64	79	66
SEMINOE RESER	RVOTR Infl	OW					
MAY-JUL	415	525	600	87	675	785	690
MAY-SEP	530	600	650	87	700	770	750

\* 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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# UPPER NORTH PLATTE RIVER BASIN Reservoir Storage (1000AF) End of April

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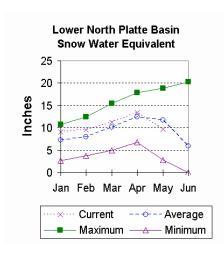
#### UPPER NORTH PLATTE RIVER BASIN

Watershed	Number of	This Year as l	Percent of
	Data Sites	Last Year	Average
N PLATTE above Northgate	7	111	91
ENCAMPMENT RIVER	4	113	103
BRUSH CREEK	5	115	78
MEDICINE BOW & ROCK CREEKS N PLATTE above Seminoe	3	129	83
	19	113	89
	=========	=========	=======

#### **Lower North Platte River Basin**

#### **Snow**

SWE for the Lower North Platte River Basin is below average at 83% (111% of last year). The Sweetwater drainage SWE is currently at 75% of average (67% of last year). Deer and LaPrele Creek SWE are at 61% of average and 119% of last year. SWE for the North Platte above the Laramie River drainage is 86% of average (107% of last year). SWE for the Laramie River above Laramie is 76% of average (103% of last year). SWE for the Little Laramie River is 90% of average and 150% of last year. The Laramie River above mouth, SWE is 77% of average (113% of last year). For more information see Basin Summary of Snow Courses at the beginning of this report.



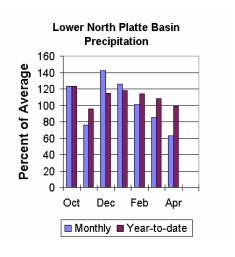
# **Precipitation**

Last month's precipitation was 63% of average and 84% of last year's amount. Of the 8 reporting stations, percentages for the month range from 48-98%. The water year-to-date precipitation for the basin is currently 99% of average (118% of last year). Year-to-date percentages range from 81-157%.

#### Reservoir

The Lower North Platte River Basin reservoir storage is below average at 69%. Reservoir storage is as

follows: Alcova 179,800 ac-ft (101% of average); Glendo 417,800 ac-ft (91% of average); Guernsey 24,300 ac-ft (73% of average); Pathfinder 291,900 ac-ft (39% of average); Seminoe 409,800 ac-ft (80% of average); and Wheatland #2 56,600 ac-ft (95% of average).



# **Streamflow**

Water supply is estimated to be below average this year. The following yields are based on the 50% exceedance forecasts for the May through September period. The Sweetwater near Alcova is forecast to yield about 54,000 ac-ft (82% of average). LaPrele Creek above the reservoir is forecast to yield 10,400 ac-ft (55% of average). North Platte Alcova to Orin Gain 76,000 ac-ft (62% of average). North Platte River below Guernsey Reservoir is 695,000 ac-ft (84% of average), and below Glendo Reservoir is anticipated to yield around 740,000 ac-ft (86% of average). Laramie River near Woods Landing should yield around 96,000 ac-ft (76% of average). The Little Laramie River near Filmore should produce about 53,000 ac-ft (87% of average). See the following table for more detailed information on projected runoff.

#### LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS

Streamflow Forecasts - May 1, 2006

=========	=======	=======	========	=======	=======	=======	========
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)왕	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	)   (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========	=======	=======	========	=======	=======	========	========
SWEETWATER RI							
MAY-JUL	26	40	49	80	58	72	61
MAY-SEP	29	44	54	82	64	79	66
Laprele Creek	K abv Rese	rvoir					
MAY-JUL	2.6	7.1	10.2	55	13.3	17.8	18.6
MAY-SEP	2.8	7.3	10.4	55	13.5	18.0	18.9
NORTH PLATTE	- Alcova	to Orin (	Gain				
MAY-JUL	14.0	47	69	61	91	124	113
MAY-SEP	18.0	52	76	62	100	134	122
NORTH PLATTE	RIVER blw	Glendo I	Res				
MAY-JUL	430	575	675	84	775	920	800
MAY-SEP	445	595	695	84	795	945	830
NORTH PLATTE	RIVER blw	Guernsey	y Res				
MAY-JUL	410	585	705	87	825	1000	815
MAY-SEP	435	615	740	86	865	1045	860
LARAMIE RIVE	R nr Woods						
MAY-JUL	46	70	86	75	102	126	115
MAY-SEP	51	78	96	76	114	141	127
LITTLE LARAM	IE RIVER n	r Filmore	9				
MAY-JUL	41	46	49	88	52	57	56
MAY-SEP	43	49	53	87	57	63	61
=========		=======			=======	========	========

<sup>\* 90%, 70%, 50%, 30%,</sup> 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.

LOWED MODEL DIAPTE CHEETWATER CIADAMIE DIVER DACING

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

=======================================	usable	********	======================================	******
Reservoir	Capacity	This Year	Last Year	Average
	=========	========	==========	========
ALCOVA	184.3	179.8	180.3	178.8
GLENDO	506.4	417.8	369.0	458.2
GUERNSEY	45.6	24.3	22.9	33.3
PATHFINDER	1016.5	291.9	228.1	747.1
SEMINOE	1016.7	409.8	344.3	510.4
WHEATLAND #2		NO RE	PORT	

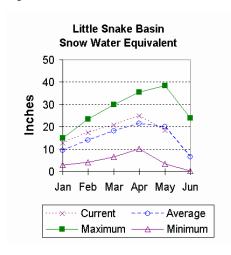
LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS

Watershed	Number of Data Sites	This Year as F Last Year	Percent of Average
SWEETWATER	?	67	-======= 75
DEER & Laprele Creeks	3	120	61
N PLATTE abv Laramie R.	25	107	86
LARAMIE RIVER abv Laramie	11	103	76
LITTLE LARAMIE RIVER	5	150	90
LARAMIE RIVER above mouth	14	113	77
NORTH PLATTE	32	111	83
=======================================	============	=======================================	=========

#### Little Snake River Basin

#### **Snow**

Currently, snow water equivalent (SWE) in the Little Snake River drainage is 91% of average (102% of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.



# **Precipitation**

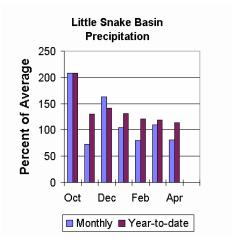
Precipitation across the basin was below average this past month. Last Month's precipitation was 81% of average (86% of last year) for the 5 reporting stations. Last month's precipitation ranged from 42-111% of average. The Little Snake River Basin water-year-to-date precipitation is currently 114% of average (119% of last year). Year-to-date percentages range from 103-125% of average.

#### Reservoir

High Savery Dam -Pending

# **Streamflow**

The 50% exceedance forecast for the Little Snake River drainage is expected to be above average this year. Stream yields are based on the 50% exceedance forecast for the April through July period. The Little Snake River near Slater should yield around 170,000 ac-ft (107% of average). The Little Snake River near Dixon is estimated to yield around 320,000 ac-ft (94% of average). See the following table for more detailed information on projected runoff.



#### LITTLE SNAKE RIVER BASIN

Streamflow Forecasts - May 1, 2006

=========			=======	=======	=======	=======	========
	<=== D1	rier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	=======		Chance of	Exceeding	* =====		
Forecast Period	90% (1000AF)	70% (1000AF)	!	)%   (% AVG.)		10% (1000AF)	30 Yr Avg (1000AF)
=========			=======		=======	=======	========
Little Snake	River nr	Slater					
APR-JUL	137	156	170	107	184	210	159
Little Snake	River nr	Dixon					
APR-JUL	230	280	320	94	360	430	340

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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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#### LITTLE SNAKE RIVER BASIN

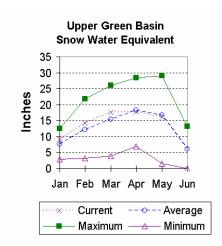
Watershed	Number of Data Sites	This Year as Last Year	Percent of Average
LITTLE SNAKE RIVER	8	102	91

<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

# **Upper Green River Basin**

#### **Snow**

Snow water equivalent (SWE) is about average in the Upper Green River drainage this year. The Green River Basin SWE above Warren Bridge is at 59% or 105% of last year. SWE on the west side of the Upper Green River Basin is about 108% of average (128% of last year). Newfork River Basin SWE is now about 94% of average or 104% of last year. Big Sandy-Eden Valley Basin is at 80% or 75% of last year. SWE in the Green River Basin above Fontenelle Reservoir is about 96% of average (121% of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



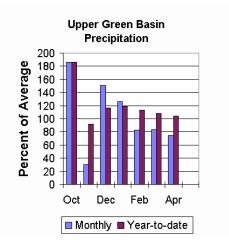
# **Precipitation**

The 11 reporting precipitation sites in the basin were 75% of average last month (90% of last year). Last month's precipitation varied from 57-113% of average. Water year-to-date precipitation is about 104% of average (122% of last year). Year to date percentage of average ranges from 89-117% for the reporting stations.

#### Reservoir

Storage in Big Sandy Reservoir is 33,100 acft or 86% of capacity

and 133% of average. Eden Reservoir is approximately 6,000 ac-ft? Fontenelle Reservoir is 161,900 ac-ft or 47% of capacity and 113% 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% exceedance forecasts for the April through July runoff period in the Upper Green River Basin are forecast to be above a

period in the Upper Green River Basin are forecast to be above average. The yield on the Green River at Warren Bridge is around 245,000 ac-ft (93% of average). Pine Creek above Fremont Lake is 101,000 ac-ft (97% of average). New Fork River near Big Piney is 370,000 ac-ft (94% of average). Fontenelle Reservoir Inflow is estimated to be 800,000 ac-ft (93% of average), and Big Sandy near Farson is expected to be around 52,000 ac-ft (90% of average). See the following table for more detailed information on projected runoff.

#### UPPER GREEN RIVER BASIN

Streamflow Forecasts - May 1, 2006

=========	=======	=======	========	=======	=======	========	========
	<=== Dr:	ier ===	Future Con	ditions	=== Wett	er ===>	
Forecast Pt Forecast Period	90%	70%	Chance of E   50% ) (1000AF) (	Ĭ	30%	10%	30 Yr Avg (1000AF)
Green River a	at Warren I	Bridae					
APR-JUL	205	230	245	93	260	290	265
Pine Creek ak	ov Fremont	Lake					
APR-JUL	86	95	101	97	107	118	104
MAY-JUL	82	91	97	95	104	113	102
New Fork Rive	er nr Big I	Piney					
APR-JUL	290	335	370	94	405	460	395
Fontenelle Re	Fontenelle Reservoir Inflow						
APR-JUL	611	721	800	93	895	1010	860
Big Sandy Riv	ver nr Fars	son					
APR-JUL	40	47	52	90	57	67	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 April

Reservoir	Usable	*********	Usable Storage	*******
	Capacity	This Year	Last Year	Average
BIG SANDY EDEN FONTENELLE	344.8	NO REI NO REI 161.9		143.5

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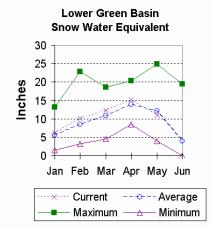
#### UPPER GREEN RIVER BASIN

Watershed	Number of Data Sites	This Year as F Last Year	Percent of Average
GREEN above Warren Bridge	4	107	59
UPPER GREEN (West Side)	7	128	108
NEWFORK RIVER	3	104	94
BIG SANDY/EDEN VALLEY	1	75	80
GREEN above Fontenelle	14	121	96

#### **Lower Green River Basin**

#### **Snow**

SWE in the Lower Green River Basin is slightly below average now for this year. SWE in the Hams Fork Basin is 106% of average (102% of last year). Blacks Fork Basin SWE is currently 82% of average (104% of last year). The Henrys Fork drainage is at 47% of average or 77% of last year. SWE in the Green River Basin above Flaming Gorge is 90% of average (112% of last year). For more information see Basin Summary of Snow Courses at beginning of this report.



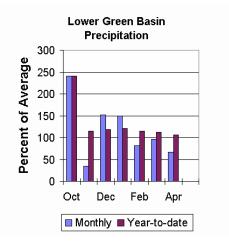
# **Precipitation**

Precipitation was below average for the 3 reporting stations during last month at 67% of average or 59% of last year. Precipitation ranged from 50-73% of average for the month. The basin year-to-date precipitation is currently 106% of average (108% of last year). Year-to-date percentages range from 104-108%.

#### Reservoir

Fontenelle Reservoir is currently storing

161,900 ac-ft; this is 113% of average (93% of last year). Flaming Gorge is currently storing 3,033,000 ac-ft; this is 103% of average (104% of last year). Viva Naughton is storing 26,400 ac-ft or 62% of capacity and 92% of average.



#### **Streamflow**

The following values are the 50% exceedance forecasts for the April through July period. The Green River near Green River is forecast to yield about 810,000 ac-ft (93% of average). The

Blacks Fork near Robertson is forecast to yield 97,000 ac-ft (102% of average). East Fork of Smiths Fork near Robertson is forecast to yield 26,000 ac-ft (90% of average). The yield for Hams Fork near Frontier is 72,000 ac-ft (111% of average). The Hams Fork Inflow to Viva Naughton Reservoir is 97,000 ac-ft (109% of average). The Flaming Gorge Reservoir inflow will be about 1,100,000 ac-ft (92% of average). See the following table for more detailed information on projected runoff.

#### LOWER GREEN RIVER BASIN

Streamflow Forecasts - May 1, 2006

	<=== Dri	er === F	uture Co	nditions	=== Wett	er ===>	
	90% (1000AF)	70%	50 (1000AF)	%   (% AVG.)	30% (1000AF)	10%	30 Yr Avg (1000AF)
Green River n			2)	93		1040	875
Blacks Fork a APR-JUL	nr Robertso 74	on 87	97	102	107	123	95
EF of Smiths APR-JUL	- 0-11 112 110	bertson 23	26	90	30	36	29
Hams Fk blw i APR-JUL	Pole Ck nr 57	Frontier 66	72	111	79	89	65
Hams Fork In: APR-JUL		Naughton Ro 86	es 97	109	109	126	89
Flaming Gorgo APR-JUL		Inflow (	2) 1100	92	1260	1510	1190

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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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#### LOWER GREEN RIVER BASIN

Reservoir Storage (1000AF) End of April

Reservoir	Usable	********	Usable Storage	*******
	Capacity	This Year	Last Year	Average
FONTENELLE FLAMING GORGE VIVA NAUGHTON RES	344.8 3749.0	161.9 3033.0 NO RE	173.4 2913.0 PORT	143.5 2952.0

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#### LOWER GREEN RIVER BASIN

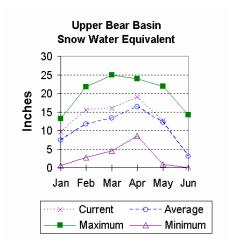
Watershed	Number of Data Sites	This Year as P Last Year	ercent of Average
	============		========
HAMS FORK RIVER	4	102	106
BLACKS FORK	5	104	82
HENRYS FORK	3	77	47
GREEN above Flaming Gorge	25	112	90

<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

# **Upper Bear River Basin**

#### **Snow**

Snow water equivalent (SWE) in the Upper Bear River Basin is good. Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is estimated to be 101% of average; that is about 101% of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 104% of average (101% of last year). Bear River Basin SWE, above the Idaho State line, is



103% of average and 98% of last year. See the Basin Summary of Snow Course Data at the beginning of this report for more detailed information.

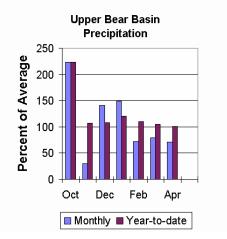
# **Precipitation**

Precipitation for last month was 71% of average for the 2 reporting stations; this is 80% of the precipitation received last year. The year-to-date precipitation for the basin is 101% of average; this is 111% of last year's amount.

#### Reservoir

Storage in Woodruff Narrows reservoir is

about 57,300 ac-ft (149% of average). Current reservoir storage is about 100% of capacity. Reservoir storage last year at this time was 38,500 ac-ft at this time.



#### **Streamflow**

The following 50% exceedance forecasts are for the May through September period. The Bear River near the Utah-Wyoming State Line is 123,000 ac-ft (103% of average). The

Bear River above Woodruff Reservoir is 120,000 ac-ft (98% of average). The Smiths Fork River near Border is 119,000 ac-ft (106% of average). See the following table for more detailed information on projected runoff.

#### UPPER BEAR RIVER BASIN

Streamflow Forecasts - May 1, 2006

	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
						į	
Forecast Pt	======	======	Chance of	Exceeding	វ * =====	======	
Forecast	90%	70%	50	i용	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========	========	=======	· ========	=======	=======	=======	========
Bear River ni	UT-WY St	ate Line					
APR-JUL	104	112	118	104	124	132	113
APR-SEP	114	123	130	104	137	146	125
MAY-JUL	96	104	110	103	116	124	107
MAY-SEP	107	116	123	103	130	139	119
Bear River al	o Reservoi	r nr Wood	ruff				
APR-JUL	97	115	128	94	141	159	136
APR-SEP	103	121	134	94	147	165	142
MAY-JUL	85	102	114	98	126	143	116
MAY-SEP	91	108	120	98	132	149	122
Smiths Fork r	ır Border						
APR-JUL	105	110	113	110	116	121	103
APR-SEP	121	127	131	108	135	141	121
MAY-JUL	93	98	101	106	104	109	95
MAY-SEP	109	115	119	106	123	129	112

\* 00% 70% E0% 20% and 10% changes of expending are the probabilities that

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

Reservoir	Usable	********	Usable Storage	********
	Capacity	This Year	Last Year	Average
WOODRUFF NARROWS	57.3	57.3	31.0	38.5

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#### UPPER BEAR RIVER BASIN

Watershed	Number of Data Sites	This Year as Last Year	Percent of Average		
UPPER BEAR RIVER in Utah	7	101	101		
SMITHS & THOMAS FORKS	4	101	104		
BEAR RIVER abv ID line	9	98	103		
NORTHWEST	68	125	84		
NORTHEST	20	79	57		
SOUTHEAST	35	110	83		
SOUTHWEST	34	108	90		

<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

Issued by

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