



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

# Wyoming Basin Outlook Report January 1, 2006



# 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 above average for this time of the year. December storms have covered Wyoming with snow, especially in the mountains. SWE for the State of Wyoming as a whole is 112% of average for early January. Precipitation for last month in the basins varied from 98% of average to 168% of average for the State. Year-to-date precipitation is also above average for the year and varies from 100-141% of average in the basins. Basin reservoir levels for Wyoming vary from 44-166% of average for an overall average of 89%. Forecast runoff varies from 65-139% of average across Wyoming.

## Snowpack

Snow water equivalent (SWE), across Wyoming is above average for this time of year at 112%. SWE in the NW portion of Wyoming is now about 106% of average (133% of last year). NE Wyoming SWE is currently about 98% of average (112% of last year). The SE portion of Wyoming SWE is currently about 125% of average (136% of last year). The SW portion of Wyoming SWE is about 122% of average (124% 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	+36%	Upper North Platte River	+57%
Yellowstone & Madison	+09%	Lower North Platte	+42%
Wind River	+12%	Little Snake River	+63%
Big Horn	-02%	Upper Green River	+51%
Shoshone & Clarks Fork	+05%	Lower Green River	+52%
Powder & Tongue River	+10%	Upper Bear River	+41%
Belle Fourche & Cheyenne	+68%		

## Streams

Stream flow yield is expected to be at average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be at average at 101% (varying from 76-132% of average). The Snake River and Upper Yellowstone & Madison River Basins are expected to yield about 76 and 109% of average, respectively -- yield estimates range from 72-112% of average for the various forecast points in the basins. Yields from the Wind and Bighorn River Basins are expected to be about 84 and 83% of average -- varying from 76-101% of average in the basins. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 90% of average -- varying from 84-104% of average. Yields from the Powder & Tongue River Basins are expected to be about 98% of average -- varying from 78-99% of average. Yields for the Belle Fourche & Cheyenne River Basins are expected to be about 132% of average. Yields

for the Upper and Lower North Platte River of Wyoming will be about 129 and 132% of average, respectively -- varying from 65-139% of average. Yields for the Little Snake, Green River, and Little Bear of Wyoming are expected to be 122, 107 and 112% of average respectively -- yield estimates vary from 91-126% of average.

## Reservoirs

Three reservoirs are not 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 62%. Reservoirs in the Wind River Basin are below average at 90%. Reservoirs on the Big Horn are below average at 96%. The Buffalo Bill Reservoir on the Shoshone is at 113%. Reservoirs on the Green River are above average at 103%. Reservoir storage varies across the state at this time, however, reservoir storage is at 89% of average for the entire state. See following table for further information about reservoir storage.

## Major Reservoirs in Wyoming

BASIN AREA RESERVOIR	CURRENT AS % CAPACITY	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR		
WYOMING AND SURROUNDING STATES							
ALCOVA	85	85	84	101	100		
ANGOSTURA	39	42	79	49	92		
BELLE FOURCHE	27	34	51	53	80		
BIG SANDY	64	0	48	135	0		
BIGHORN LAKE	67	51	67	100	132		
BOYSEN	93	95	104	89	98		
BUFFALO BILL	73	71	65	113	102		
BULL LAKE	47	67	57	83	70		
DEERFIELD	79	88	81	98	90		
E DEN			NO REPORT				
ENNIS LAKE	72	83	77	94	87		
FLAMING GORGE	82	73	81	102	112		
FONTENELLE	55	65	61	90	84		
GLENDO	45	44	56	81	103		
GRASSY LAKE	50	57	76	66	88		
GUERNSEY	26	35	16	163	74		
HEBGEN LAKE	83	84	71	117	99		
JACKSON LAKE	45	14	57	79	319		
KEYHOLE	37	48	52	71	77		
PACTOLA	64	75	83	77	86		
PALISADES	56	35	74	75	157		
PATHFINDER	27	23	63	44	118		
PILOT BUTTE	79	77	64	124	104		
SEMINOE	41	26	62	65	153		
SHADEHILL	41	62	62	66	67		
TONGUE RIVER			NO REPORT				
VIVA NAUGHTON RES	80	0	75	108	0		
WHEATLAND #2			NO REPORT				
WOODRUFF NARROWS	52	21	41	127	250		
TOTAL OF 26 RESERVOIRS	63	53	71	89	118		
Raw KAF Totals Current=	8235	Last Year=	7000	Average=	9304	Capacity=	13110

# Basin Summary of Snow Course Data

JANUARY 2006

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
WYOMING Snow Course and SNOTEL Stations						
BALD MOUNTAIN SNOTEL	9380	1/01/06	35	8.3	8.7	9.7
BASE CAMP SNOTEL	7030	1/01/06	---	10.0	6.9	8.2
BATTLE MTN. SNOTEL	7440	1/01/06	24	6.8	4.1	4.1
BEARTOOTH LK. SNOTEL	9280	1/01/06	50	12.6	7.6	11.5
BEAR TRAP SNOTEL	8200	1/01/06	13	2.9	1.9	2.6
BIG GOOSE SNOTEL	7760	1/01/06	16	3.2	3.2	4.4
BIG SANDY SNOTEL	9080	1/01/06	41	7.4	8.9	6.9
BLACKWATER SNOTEL	9780	1/01/06	---	11.5	8.1	12.0
BLIND BULL SNOTEL	8900	1/01/06	63	13.3	9.5	13.2
BLIND PARK SNOTEL	6870	1/01/06	21	4.3	2.4	3.5
BONE SPGS. SNOTEL	9350	1/01/06	31	7.2	7.5	7.8
BROOKLYN LK. SNOTEL	10220	1/01/06	---	12.7	7.8	10.8
BURGESS JCT. SNOTEL	7880	1/01/06	23	5.5	3.8	5.5
BURROUGHS CRK SNOTEL	8750	1/01/06	33	7.5	5.0	6.7
CANYON SNOTEL	8090	1/01/06	35	7.3	4.0	6.1
CASPER MTN. SNOTEL	7850	1/01/06	---	6.2	5.5	6.9
CHALK CK #1 SNOTEL	9100	1/01/06	58	13.9	12.9	10.1
CHALK CK #2 SNOTEL	8200	1/01/06	33	6.5	7.3	6.7
CINNABAR PARK SNOTEL	9690	1/01/06	51	12.6	8.1	7.2
CLOUD PEAK SNOTEL	9850	1/01/06	26	6.4	6.8	5.7
COLE CANYON SNOTEL	5910	1/01/06	14	3.0	.9	3.0
COLD SPRINGS SNOTEL	9630	1/01/06	11	2.3	4.6	4.6
COTTONWOOD CR SNOTEL	7700	1/01/06	---	12.0	6.9	9.7
CROW CREEK SNOTEL	8830	1/01/06	14	3.7	4.6	3.4
DEER PARK SNOTEL	9700	1/01/06	38	8.8	13.1	6.7
DITCH CREEK	6870	1/04/06	9	1.4	--	--
DIVIDE PEAK SNOTEL	8860	1/01/06	34	9.1	9.5	9.2
DOMELAKE SNOTEL	8880	1/01/06	20	5.7	5.2	6.1
EAST RIM DIV SNOTEL	7930	1/01/06	---	5.4	3.8	5.9
ELBO RANCH	7100	1/01/06	29	4.6	3.5	--
ELKHART PARK SNOTEL	9400	1/01/06	---	7.1	6.0	6.3
EVENING STAR SNOTEL	9200	1/01/06	51	12.8	9.3	13.7
GRANITE CRK SNOTEL	6770	1/01/06	---	10.3	6.0	7.6
GRASSY LAKE SNOTEL	7270	1/01/06	64	16.8	11.7	14.7
GRAVE SPRINGS SNOTEL	8550	1/01/06	20	4.5	2.9	4.0
GROS VENTRE SNOTEL	8750	1/01/06	36	6.9	6.3	6.9
HANSEN S.M. SNOTEL	8360	1/01/06	8	1.9	2.5	3.3
HAMS FORK SNOTEL	7840	1/01/06	---	6.8	5.6	5.5
HOBBS PARK SNOTEL	10100	1/01/06	24	4.7	8.2	7.6
INDIAN CREEK SNOTEL	9430	1/01/06	---	14.7	13.0	12.5
KELLEY R.S. SNOTEL	8180	1/01/06	---	9.5	8.2	7.6
KENDALL R.S. SNOTEL	7740	1/01/06	---	7.3	5.7	6.7
KIRWIN SNOTEL	9550	1/01/06	24	6.1	3.6	5.9
LAKE CAMP	7780	12/30/05	25	4.8	2.1	4.2
LA PRELE SNOTEL	8380	1/01/06	20	3.6	2.9	5.3
LEWIS LAKE SNOTEL	7850	1/01/06	80	19.2	11.8	14.8
LITTLE BEAR RUN	6240	1/04/06	13	2.7	.7	1.7
LITTLE WARM SNOTEL	9370	1/01/06	20	4.6	4.2	5.3
LOOMIS PARK SNOTEL	8240	1/01/06	---	9.6	6.5	8.0
LUPINE CREEK	7380	12/28/05	15	3.5	--	4.3
MALLO	6420	12/27/05	21	3.9	1.9	2.9
MARQUETTE SNOTEL	8760	1/01/06	4	1.1	1.9	5.0
MIDDLE POWDER SNOTEL	7760	1/01/06	25	6.6	3.5	5.5
NEW FORK SNOTEL	8340	1/01/06	---	5.3	5.2	5.4
NORRIS BASIN	7500	12/31/05	22	4.1	2.1	5.1
NORTH FRENCH SNOTEL	10130	1/01/06	73	18.2	10.7	13.4
NORTH RAPID CK SNTL	6130	1/01/06	18	3.8	1.8	3.3
OLD BATTLE SNOTEL	9920	1/01/06	74	19.6	16.1	14.6
OLD FAITHFUL	7400	1/01/06	29	5.5	5.0	6.0

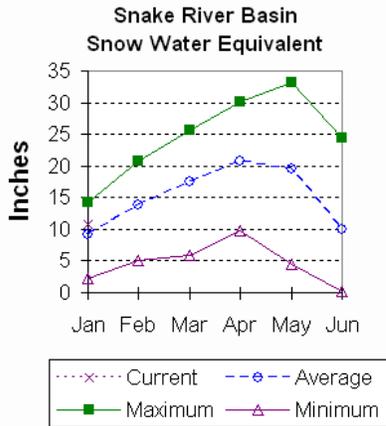
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
OWL CREEK SNOTEL	8980	1/01/06	7	1.2	1.8	2.7
PARKERS PEAK SNOTEL	9400	1/01/06	43	10.5	8.2	10.6
PHILLIPS BENCH SNTL	8200	1/01/06	72	15.7	11.5	12.6
POWDER RVR.PASS SNTL	9480	1/01/06	23	4.9	6.3	5.3
RENO HILL SNOTEL	8500	1/01/06	28	6.7	4.1	6.6
SAGE CK BASIN SNTL	7850	1/01/06	26	5.8	6.8	5.3
SALT RIVER SNOTEL	7600	1/01/06	---	7.6	5.4	5.4
SAND LAKE SNOTEL	10050	1/01/06	62	17.6	10.3	14.9
SANDSTONE RS SNOTEL	8150	1/01/06	---	7.6	4.2	5.3
SHELL CREEK SNOTEL	9580	1/01/06	32	6.8	7.3	7.3
SNAKE RV STA SNOTEL	6920	1/01/06	41	9.5	5.9	7.9
SNIDER BASIN SNOTEL	8060	1/01/06	46	8.8	6.6	6.9
SOUTH BRUSH SNOTEL	8440	1/01/06	31	7.2	3.5	5.1
SOUTH PASS SNOTEL	9040	1/01/06	45	8.2	11.0	8.2
SPRING CRK. SNOTEL	9000	1/01/06	69	14.9	11.3	12.5
ST LAWRENCE ALT SNTL	8620	1/01/06	6	1.1	3.9	3.8
SUCKER CREEK SNOTEL	8880	1/01/06	25	5.7	5.3	5.2
SYLVAN LAKE SNOTEL	8420	1/01/06	39	9.0	7.5	10.5
SYLVAN ROAD SNOTEL	7120	1/01/06	20	5.2	4.3	6.2
THUMB DIVIDE SNOTEL	7980	1/01/06	46	8.9	7.1	7.6
TIE CREEK SNOTEL	6870	1/01/06	11	3.0	.7	2.5
TIMBER CREEK SNOTEL	7950	1/01/06	4	1.0	1.0	3.0
TOGWOTEE PASS SNOTEL	9580	1/01/06	58	13.5	8.9	11.7
TOWNSEND CRK SNOTEL	8700	1/01/06	13	2.8	5.5	4.4
TRIPLE PEAK SNOTEL	8500	1/01/06	---	14.1	8.5	11.9
TWO OCEAN SNOTEL	9240	1/01/06	---	19.3	12.7	13.5
WEBBER SPRING SNOTEL	9250	1/01/06	57	13.8	11.0	11.5
WHISKEY PARK SNOTEL	8950	1/01/06	67	17.1	10.8	11.1
WILLOW CREEK SNOTEL	8450	1/01/06	---	15.4	11.2	14.3
WINDY PEAK SNOTEL	7900	1/01/06	13	2.7	2.4	3.5
WOLVERINE SNOTEL	7650	1/01/06	20	5.1	3.8	5.8
YOUNTS PEAK SNOTEL	8350	1/01/06	40	7.7	5.5	7.9



# Snake River Basin

## Snow

The Snake River Basin snow water equivalent (SWE) is above average. SWE in the Snake River Basin above Jackson Lake is 126% of average (150% of last year at this time). Pacific Creek Basin SWE is 135% of average (149% of last year). Gros Ventre River Basin SWE is 110% of average (134% of last year). SWE in the Hoback River drainage is 109% of average (142% of last year). SWE in the Greys River drainage is 111% of average (142% of last year). In the Salt River area SWE is 119% of average (149% of last year). SWE in the Snake River Basin above Palisades is 119% of average (145% of last year). See the Basin Summary of Snow Courses at the beginning of this report for a detailed listing of snow course information.



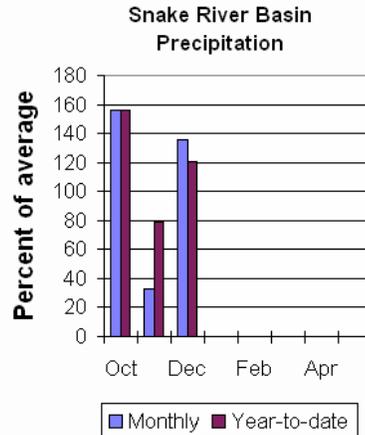
## Precipitation

Precipitation across the basin was above average last month. Monthly precipitation for the basin was 136% of average (161% of last year). Last month's percentages range from 91-228% of average. Water-year-to-date precipitation is 121% of average for the Snake River Basin (149% of last year). Year-to-date percentages range from 101-135% of average.

## Reservoir

Currently, usable reservoir storage

is 76% of average for the three storage reservoirs in the basin. Grassy Lake storage is about 66% of average (7,600 ac-ft compared to 8,600 last year). Jackson Lake storage is 79% of average (381,800 ac-ft compared to 119,600 ac-ft last year). Palisades Reservoir storage is about 75% of average (779,300 ac-ft compared to 1,036,500 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 April through September are below average for the basin. The Snake near Moran is 710,000 ac-ft (79% of average). Snake above reservoir near Alpine is 2,130,000 ac-ft (78% of average). The Snake near Irwin is 2,940,000 ac-ft (76% of average). The Snake near Heise is 3,140,000 ac-ft (76% of average). Pacific Creek at Moran is 140,000 ac-ft (79% of average). Greys River above Palisades Reservoir is 285,000 ac-ft (72% of average). Salt River near Etna is 305,000 ac-ft (73% of average). See the following page for detailed runoff volumes.

SNAKE RIVER BASIN  
Streamflow Forecasts - January 1, 2006

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)						
APR-JUL	435	575	640	79	705	815
APR-SEP	475	635	710	79	785	905
SNAKE ab resv nr Alpine (1,2)						
APR-JUL	1190	1640	1850	78	2060	2370
APR-SEP	1390	1900	2130	78	2360	2730
SNAKE nr Irwin (1,2)						
APR-JUL	1570	2230	2530	76	2830	3330
APR-SEP	1860	2600	2940	76	3280	3870
SNAKE near Heise (2)						
APR-JUL	1880	2360	2680	75	3000	3560
APR-SEP	2230	2770	3140	76	3510	4160
PACIFIC CREEK at Moran						
APR-JUL	87	113	130	76	147	171
APR-SEP	96	122	140	79	158	178
GREYS above Palisades						
APR-JUL	145	205	245	72	285	340
APR-SEP	175	240	285	72	330	395
SALT near Etna						
APR-JUL	128	200	245	72	290	340
APR-SEP	170	250	305	73	360	420

\* 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 as 70% is actually a 75% exceedance level. Forecast in cooperation with Alberta Environment

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

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
GRASSY LAKE	15.2	7.6	8.6	11.6
JACKSON LAKE	847.0	381.8	119.6	481.7
PALISADES	1400.0	779.3	496.2	1036.5

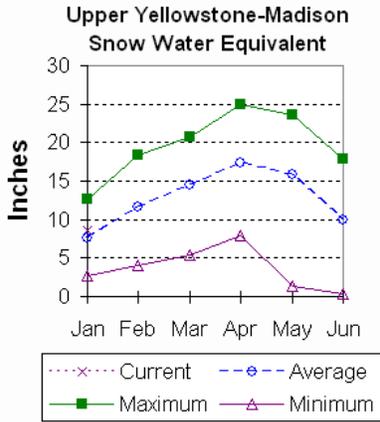
SNAKE RIVER BASIN  
Watershed Snowpack Analysis - January 1, 2006

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
SNAKE above Jackson Lake	5	150	126
PACIFIC CREEK	2	149	135
GROS VENTRE RIVER	2	131	110
HOBACK RIVER	5	142	109
GREYS RIVER	4	143	112
SALT RIVER	3	149	119
SNAKE above Palisades	17	144	119

# Yellowstone and Madison River Basins

## Snow

Snowfall in these basins has been good so far this year and the SWE in both basins is above average for this month. Snow water equivalent (SWE) is about 115% of average (139% of last year) in the Madison drainage. SWE in the Yellowstone drainage is about 113% of average (150% of last year at this time). See the "Snow Course Basin Summary" at the beginning of this document for more details on specific sites.



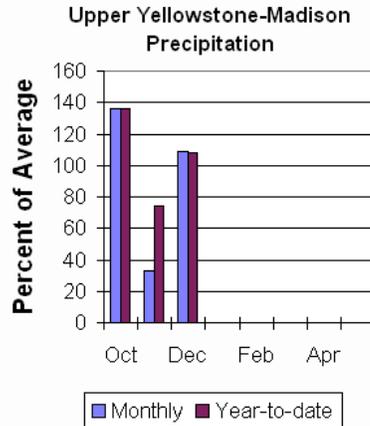
water (72% of capacity, 94% of average or 87% of last year's volume). Hebgen Lake is storing about 312,500 ac-ft of water (83% of capacity, 117% of average or 99% of last year's volume). Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

## Precipitation

Last month precipitation in the Madison and Yellowstone drainage was about 109% of average (128% of last year) for the 5 reporting stations -- percentage range was from 91-151% of average. Water-year-to-date precipitation is about 118% of average (152% of last year's amount). Year to date percentage ranges from 115-126%.

## Reservoir

Ennis Lake is storing about 29,600 ac-ft of



## Streamflow

All the following yields are the 50% exceedance forecasts from April through September. Yellowstone at Lake Outlet is 900,000 ac-ft (112% of average). Yellowstone at Corwin Springs will yield around 2,150,000 ac-ft (109% of average). Yellowstone near Livingston will yield around 2,490,000 ac-ft (109% of average). Hebgen Reservoir inflow is 535,000 ac-ft (107% of average). See the following page for detailed runoff volumes.

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UPPER YELLOWSTONE & MADISON RIVER BASINS
   
Streamflow Forecasts - January 1, 2006
   
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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)	
YELLOWSTONE at Lake Outlet							
APR-JUL	520	605	660	112	715	800	590
APR-SEP	720	825	900	112	975	1075	805
YELLOWSTONE RIVER at Corwin Springs							
APR-JUL	1440	1660	1810	110	1960	2180	1650
APR-SEP	1710	1970	2150	109	2330	2590	1970
YELLOWSTONE RIVER near Livingston							
APR-JUL	1690	1930	2090	110	2250	2490	1900
APR-SEP	2020	2300	2490	109	2680	2960	2280
HEBGEN Reservoir Inflow							
APR-JUL	335	385	420	108	455	505	390
APR-SEP	435	495	535	107	575	635	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 YELLOWSTONE & MADISON RIVER BASINS
   
Reservoir Storage (1000AF) End of December
   
=====

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
ENNIS LAKE	41.0	29.6	34.0	31.5
HEBGEN LAKE	377.5	312.5	315.7	267.6

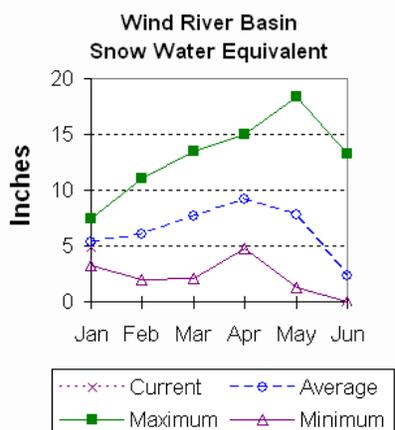
=====
   
UPPER YELLOWSTONE & MADISON RIVER BASINS
   
Watershed Snowpack Analysis - January 1, 2006
   
=====

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
MADISON RIVER in WY	8	141	114
YELLOWSTONE RIVER in WY	11	150	112

# Wind River Basin

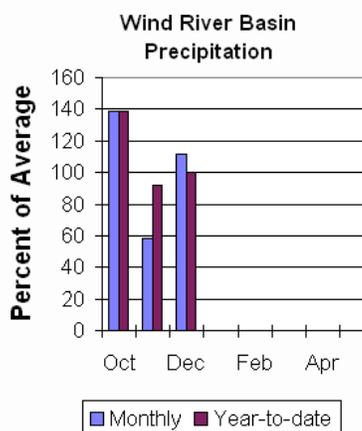
## Snow

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 108% of average (141% of last year at this time). The Little Wind SWE is 51% of average water content (48% of last year), and the Popo Agie drainage SWE is about 91% of average (65% of last year). The Wind River Basin, above Boysen Reservoir SWE is about 90% of average (92% 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 21-174% of average. Precipitation, for the basin, was about 112% of average from the 8 reporting stations; that is about 109% of last year's amount. Water year-to-date precipitation is 100% of average and about 105% of last year at this time. Year-to-date percentages range from 70-118% of average.



## S

Current storage varies from 47-93% of average. Usable storage in Bull Lake is currently about 71,400 ac-ft (47% of capacity) - last year the reservoir was at 67% of capacity at this time. Boysen Reservoir is storing about 93% of capacity (554,500 ac-ft) – last year the reservoir was at 95% of capacity at this time. Pilot Butte is at 79% of capacity (25,100 ac-ft) – last year the reservoir was at 77% 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% exceedance forecasts for the April through September runoff period. Dinwoody Creek near Burris is 89,000 ac-ft (95% of average). The Wind River above Bull Lake Creek is 535,000 ac-ft (100% of average). Bull Lake Creek near Lenore is 140,000 ac-ft (77% of average). Wind River at Riverton will yield around 565,000 ac-ft (88% of average). Little Popo Agie River near Lander is around 44,000 ac-ft (83% of average). South Fork of Little Wind near Fort Washakie will yield around 64,000 ac-ft (76% of average). Little Wind River near Riverton will yield around 270,000 ac-ft (86% of average). Boysen Reservoir inflow will yield around 680,000 ac-ft (84% of average). See the following page for detailed runoff volumes.

WIND RIVER BASIN  
Streamflow Forecasts - January 1, 2006

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							
APR-JUL	42	54	62	93	70	82	67
APR-SEP	65	79	89	95	99	113	94
WIND RIVER abv Bull Lake Cr (2)							
APR-JUL	275	375	440	101	505	605	435
APR-SEP	355	460	535	100	610	715	535
BULL LAKE CR near Lenore (2)							
APR-JUL	68	96	115	78	134	162	148
APR-SEP	81	116	140	77	164	199	182
WIND RIVER at Riverton (2)							
APR-JUL	215	375	485	89	595	755	545
APR-SEP	280	450	565	88	680	850	640
LT POPO AGIE RIVER nr Lander							
APR-JUL	7.4	26	38	83	50	69	46
APR-SEP	11.8	31	44	83	57	76	53
SF LT WIND nr Fort Washakie							
APR-JUL	30	46	57	78	68	84	73
APR-SEP	34	52	64	76	76	94	84
LT WIND RIVER nr Riverton							
APR-JUL	75	176	245	88	315	415	280
APR-SEP	99	200	270	86	340	440	315
BOYSEN RESERVOIR Inflow (2)							
APR-JUL	290	485	615	86	745	940	717
APR-SEP	330	540	680	84	820	1030	809

\* 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 December

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
BULL LAKE	151.8	71.4	102.2	86.3
BOYSEN	596.0	554.5	565.2	620.4
PILOT BUTTE	31.6	25.1	24.2	20.2

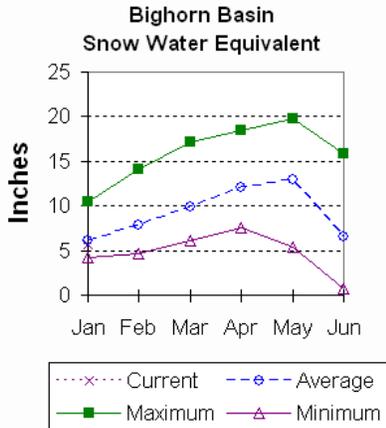
WIND RIVER BASIN  
Watershed Snowpack Analysis - January 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	
			Average
WIND RIVER above Dubios	3	137	108
LITTLE WIND	2	48	51
POPO AGIE	4	65	91
WIND above Boysen Resv	7	95	90

# Bighorn River Basin

## Snow

Snowpack in this basin is below average for this time of year. Nowood River is at 106% of average (117% of last year). Greybull River SWE is at 80% of average. Shell Creek SWE is 90% of average (95% of last year). The Bighorn River Basin SWE, as a whole, is currently 92% of average (108% of last year). For more information see Basin Summary of Snow Courses at beginning of report.



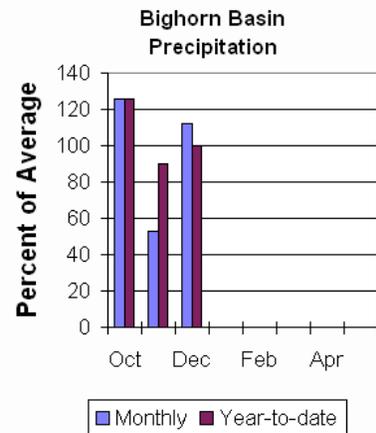
## Precipitation

Last month's precipitation was 98% of average (115% of last year). Sites ranged from 13-147% of average for the month. Year-to-date precipitation is 101% of average; that is 114% of last year at this time. Year-to-date percentages, from the 10 reporting stations, range from 79-128%.

## Reservoir

Boysen Reservoir is currently storing 554,500 ac-ft (89% of average).

Bighorn Lake is now at 100% of average (909,400 ac-ft). Boysen is currently storing 98% of last year volume at this time and Big Horn Lake is storing 132% 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 April through September runoffs are anticipated to be below average. Boysen Reservoir inflow is 680,000 ac-ft (84% of average); the Greybull River near Meeteetse should yield around 166,000 ac-ft (83% of average); Shell Creek near Shell should yield around 65,000 ac-ft (90% of average) and the Bighorn River at Kane should yield around 920,000 ac-ft (83% of average). See the following page for detailed runoff volumes.

=====
   
BIGHORN RIVER BASIN
   
Streamflow Forecasts - January 1, 2006
   
=====

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)							
APR-JUL	290	485	615	86	745	940	717
APR-SEP	330	540	680	84	820	1030	809
GREYBULL RIVER nr Meeteetse							
APR-JUL	93	108	118	80	128	143	148
APR-SEP	134	153	166	83	179	197	200
SHELL CREEK nr Shell							
APR-JUL	43	49	53	88	57	63	60
APR-SEP	54	61	65	90	69	76	72
BIGHORN RIVER at Kane (2)							
APR-JUL	570	725	830	83	935	1090	1000
APR-SEP	630	800	920	83	1035	1215	1110

\* 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 December
   
=====

Reservoir	Usable Capacity	***** Usable Storage *****		Average
		This Year	Last Year	
BOYSEN	596.0	554.5	565.2	620.4
BIGHORN LAKE	1356.0	909.4	688.4	911.1

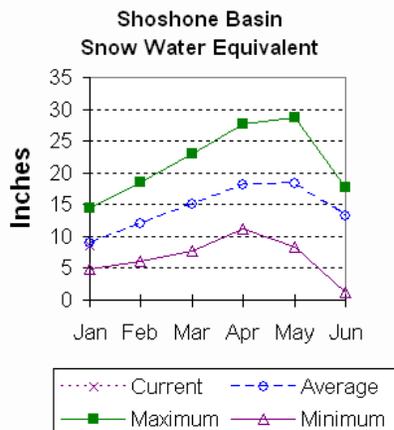
=====
   
BIGHORN RIVER BASIN
   
Watershed Snowpack Analysis - January 1, 2006
   
=====

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
NOWOOD RIVER	2	117	106
GREYBULL RIVER	2	154	80
SHELL CREEK	3	95	90
BIGHORN (Boysen-Bighorn)	7	108	92

# Shoshone and Clarks Fork River Basin

## Snow

Snow Water Equivalent (SWE) is 86% of average (129% of last year) in the Shoshone River Basin. The Clarks Fork River Basin SWE is 109% of average (158% of last year). For more information see the Basin Summary of Snow Course Data at the beginning of this report.



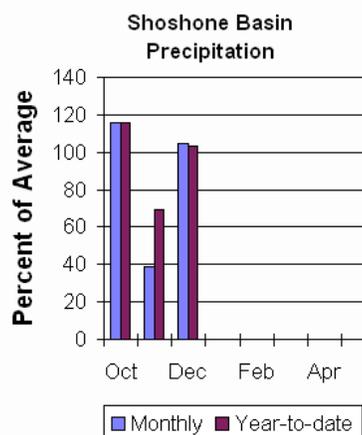
## Precipitation

Precipitation for last month was 105% of average (144% of last year). Monthly percentages range from 22-137% of average. The basin year-to-date precipitation is now 103% of average (146% of last year). Year-to-date percentages range from 69-129% of average.

## Reservoir

Current storage in Buffalo Bill

Reservoir is about 113% of average (71% of last year's storage) – the reservoir is at about 73% of capacity. Currently, about 470,800 ac-ft are stored in the reservoir compared to 461,000 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 following values are the 50% exceedance forecasts for the April through September period. The North Fork Shoshone River at Wapiti is 515,000 ac-ft (99% of average). The South Fork of the Shoshone River near Valley is 235,000 ac-ft (89% of average), and the South Fork above Buffalo Bill Reservoir runoff is 189,000 ac-ft (84% of average). The Buffalo Bill Reservoir inflow is expected to yield around 720,000 ac-ft (89% of average). The yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be around 620,000 ac-ft (104% of average). See the following page for detailed runoff volumes.

```

=====
SHOSHONE & CLARKS FORK RIVER BASINS
Streamflow Forecasts - January 1, 2006
=====
Forecast Pt | <=== Drier === Future Conditions === Wetter ===> |
Forecast | ===== Chance of Exceeding * ===== |
Period | (1000AF) (1000AF) | (1000AF) (50% (% AVG.)) | (1000AF) (1000AF) | 30 Yr Avg |
| | | | | | | | (1000AF) |
=====
NF SHOSHONE RIVER at Wapiti
APR-JUL 390 430 455 99 480 520 460
APR-SEP 445 485 515 99 545 585 520

SF SHOSHONE RIVER nr Valley
APR-JUL 155 185 205 91 225 255 225
APR-SEP 175 210 235 89 260 295 265

SF SHOSHONE RIVER abv Buffalo Bill
APR-JUL 102 149 181 84 215 260 215
APR-SEP 103 154 189 84 225 275 225

BUFFALO BILL DAM Inflow (2)
APR-JUL 450 565 645 90 725 840 720
APR-SEP 505 635 720 89 805 935 805

CLARKS FORK RIVER nr Belfry
APR-JUL 455 515 560 104 605 665 540
APR-SEP 505 575 620 104 665 735 595

```

\* 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 December
=====
Reservoir | Usable Capacity | ***** Usable Storage ***** |
| | | This Year | Last Year | Average |
=====
BUFFALO BILL | 646.6 | 470.8 | 461.0 | 418.4 |
=====

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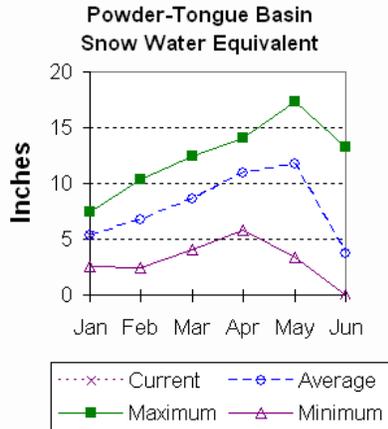
=====
SHOSHONE & CLARKS FORK RIVER BASINS
Watershed Snowpack Analysis - January 1, 2006
=====
Watershed | Number of Data Sites | This Year as Percent of Last Year | Percent of Average |
=====
SHOSHONE RIVER | 6 | 129 | 86 |
CLARKS FORK in WY | 7 | 158 | 109 |
=====

```

# Powder and Tongue River Basins

## Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 96% of average (112% of last year). The Goose Creek drainage is 85% of average and 106% of last year. SWE in the Clear Creek drainage is 92% of average and 89% of last year. Crazy Woman Creek drainage is 92% of average and 78% of last year. Upper Powder River drainage SWE is 107% of average and 123% of last year. Powder River basin SWE, in Wyoming is 101% of average and 108% of last year. For more information see Basin Summary of Snow Courses at beginning of report.



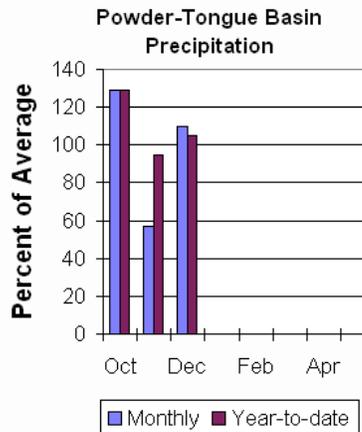
## Precipitation

Last month's precipitation was 110% of average for the 9 reporting stations (130% of last year). Monthly percentages range from 28-261% of average. Year-to-date precipitation is 105% of average in the basin; this is 114% of last year at this time. Precipitation for the year ranges from 88-145% of average at the reporting stations.

## Reservoir

Tongue River Reservoir is currently at

186% of average (114% of last year and 53% of capacity). Current storage is 41,800 ac-ft. Last year at this time the reservoir was storing about 36,600 ac-ft (average storage is about 22,500 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 the 50% probability forecasts for the April through September period. The yield for Tongue River near Dayton is 98,000 ac-ft (90% of average). Little Goose Creek near Bighorn is 37,000 ac-ft (88% of average). The Tongue River Inflow is 210,000 ac-ft (84% of average). The Middle Fork of the Powder River near Barnum is 18,000 ac-ft (96% of average). The North Fork of the Powder River near Hazelton should yield around 10,300 ac-ft (99% of average). The estimated yield for Clear Creek near Buffalo is 34,000 ac-ft (87% of average). Rock Creek near Buffalo will yield about 20,000 ac-ft (83% of average), and Piney Creek at Kearny should yield about 43,000 ac-ft (83% of average). The Powder River at Moorehead is 235,000 ac-ft (89% of average). The Powder River near Locate is 260,000 ac-ft (78% of average). See the following page for detailed runoff volumes.

POWDER & TONGUE RIVER BASINS  
Streamflow Forecasts - January 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)
TONGUE RIVER nr Dayton (2)							
APR-JUL	56	73	85	89	97	114	96
APR-SEP	67	86	98	90	110	129	109
LITTLE GOOSE CREEK nr Big Horn							
APR-JUL	19.0	26	30	88	34	41	34
APR-SEP	25	32	37	88	42	49	42
TONGUE RIVER RESERVOIR Inflow (2)							
APR-JUL	93	148	185	84	221	276	220
APR-SEP	113	171	210	84	250	305	250
MIDDLE FORK POWDER nr Barnum							
APR-JUL	9.5	14.0	17.0	96	20	24	17.8
APR-SEP	10.3	14.9	18.0	96	21	26	18.7
NORTH FORK POWDER nr Hazelton							
APR-JUL	7.0	8.4	9.4	98	10.4	11.8	9.6
APR-SEP	7.7	9.3	10.3	99	11.3	12.9	10.4
CLEAR CREEK nr Buffalo							
APR-JUL	22	27	30	88	33	38	34
APR-SEP	25	30	34	87	38	43	39
ROCK CREEK nr Buffalo							
APR-JUL	10.6	14.1	16.5	83	18.9	23	19.9
APR-SEP	14.1	17.6	20	83	23	26	24
PINEY CREEK at Kearny							
APR-JUL	15.0	30	40	82	50	65	49
APR-SEP	17.0	33	43	83	53	69	52
POWDER RIVER at Moorehead							
MAR-JUL	102	170	215	90	260	330	240
MAR-SEP	121	190	235	89	280	350	265
POWDER RIVER near Locate							
MAR-JUL	214	260	295	95	330	375	310
MAR-SEP	230	285	320	96	355	410	335

\* 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 in cooperation with Alberta Environment

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

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
TONGUE RIVER	79.1	41.8	36.6	22.5

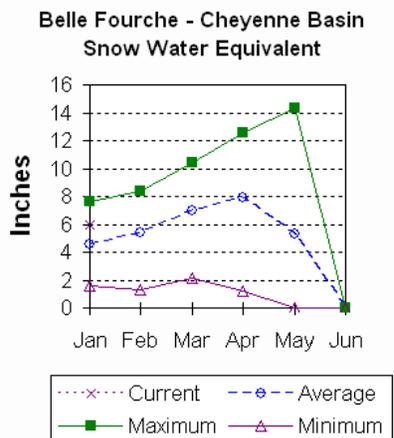
Watershed Snowpack Analysis - January 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
UPPER TONGUE RIVER	7	112	96
GOOSE CREEK	2	106	85
CLEAR CREEK	2	89	92
CRAZY WOMAN CREEK	1	78	92
UPPER POWDER RIVER	3	123	107
POWDER RIVER in WY	5	108	101

## Belle Fourche and Cheyenne River Basins

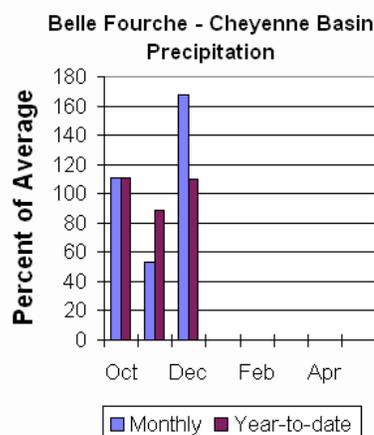
### Snow

The Belle Fourche River Basin is currently at 129% of average or 247% of last year at this time. See the Basin summary of Snow Course Data at the beginning of this report for a detailed listing.



### Precipitation

Precipitation for last month was 168% of average or 260% of last year in the Black Hills. There were 2 reporting stations. Monthly percentages range from 25-194%. Year-to-date precipitation is 110% of average and 142% of last year's amount.



### Reservoir

Current reservoir storage is around 62% of average in the basin. Angostura is currently storing 49% of average (47,100 ac-ft), about 39% of capacity. Belle Fourche reservoir is storing 53% of average (47,600 ac-ft), about 27% of capacity. Deerfield reservoir is storing 98% of average (12,000 ac-ft), about 79% of capacity. Keyhole reservoir is storing 71% of average (72,300 ac-ft), 37% of capacity. Pactola reservoir is storing 77% of average (35,200 ac-ft), 64% of capacity. Shadehill reservoir is storing 66% of average (33,700 ac-ft), 41% 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 April through July period. The Deerfield Reservoir Inflow is 5,900 ac-ft (111% of average). Pactola Reservoir Inflow is expected to yield around 25,000 ac-ft (132% of average). See the following page for detailed runoff volumes.

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BELLE FOURCHE & CHEYENNE RIVER BASINS  
Streamflow Forecasts - January 1, 2006

=====

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							
MAR-JUL	3.0	5.3	6.9	110	8.5	10.8	6.3
APR-JUL	3.0	4.7	5.9	111	7.1	8.8	5.3
PACTOLA RESERVOIR Inflow							
MAR-JUL	8.1	19.4	27	129	35	46	21
APR-JUL	6.7	17.6	25	132	32	43	18.9

\* 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.

=====

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

=====

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
ANGOSTURA	122.1	47.1	51.3	96.4
BELLE FOURCHE	178.4	47.6	59.8	90.6
DEERFIELD	15.2	12.0	13.4	12.3
KEYHOLE	193.8	72.3	93.6	101.7
PACTOLA	55.0	35.2	41.0	45.8
SHADEHILL	81.4	33.7	50.5	50.7

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

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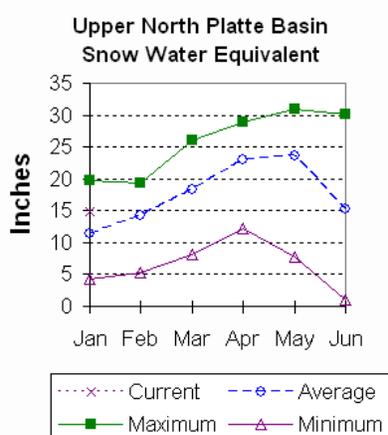
Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
BELLE FOURCHE	4	236	136

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# Upper North Platte River Basin

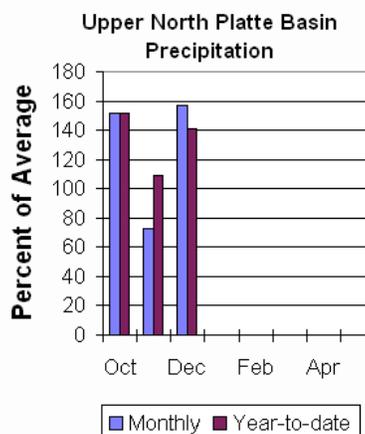
## Snow

The snow courses above Seminoe Reservoir have about 130% of average snow water equivalent (SWE) recorded for this time of the year (143% of last year). SWE in the drainage area above Northgate is about 134% of average and 142% of last year at this time. SWE in the Encampment River drainage is about 136% of average and 133% of last year. Brush Creek SWE for the year is about 137% of average and 179% of last year's SWE. Medicine Bow and Rock Creek drainages SWE are about 118% of average and 167% 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 157% of average and 215% of last year's amount. Precipitation varied from 56-196% of average last month. Total water-year-to-date precipitation is about 141% of average for the basin, which is about 147% of last year's amount. Year to date percentage ranges from 116-157% of average.



## Reservoirs

Seminoe Reservoir is estimated to be storing 411,900 ac-ft or 41% of capacity. Seminoe Reservoir is also storing about 65% of average for this time of the year and 153% 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

The following yields are the 50% exceedance forecasts for the April through September period. Yield for the North Platte River near Northgate will be around 350,000 ac-ft (130% of average). The Encampment River near Encampment is 230,000 ac-ft (139% of average). Rock Creek near Arlington is 72,000 ac-ft (126% of average). Sweetwater River near Alcova runoff is 80,000 ac-ft (100% of average). Seminoe Reservoir inflow should be around 1,110,000 ac-ft (129% of average). See the following table for more detailed information on projected runoff.

UPPER NORTH PLATTE RIVER BASIN  
Streamflow Forecasts - January 1, 2006

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							
APR-JUL	180	259	320	131	388	499	245
APR-SEP	205	290	350	130	410	495	270
ENCAMPMENT RIVER nr Encampment							
APR-JUL	148	190	215	138	240	280	156
APR-SEP	158	200	230	139	260	300	165
ROCK CREEK nr Arlington							
APR-JUL	44	57	67	126	78	95	53
APR-SEP	48	62	72	126	83	101	57
SWEETWATER RIVER nr Alcova							
APR-JUL	33	58	74	100	90	115	74
APR-SEP	38	63	80	100	97	122	80
SEMINOE RESERVOIR Inflow							
APR-JUL	615	865	1030	129	1200	1440	800
APR-SEP	735	960	1110	129	1260	1490	860

\* 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 December

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
SEMINOE	1016.7	411.9	269.4	631.1

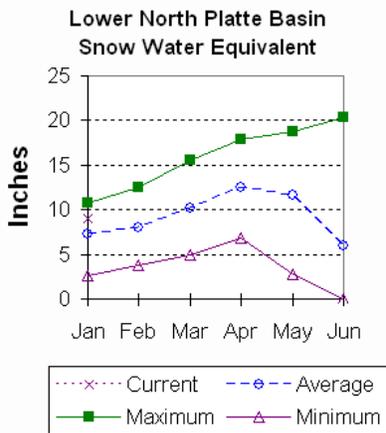
UPPER NORTH PLATTE RIVER BASIN  
Watershed Snowpack Analysis - January 1, 2006

Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
N PLATTE above Northgate	5	142	134
ENCAMPMENT RIVER	3	133	136
BRUSH CREEK	2	179	137
MEDICINE BOW & ROCK CREEKS	2	167	118
N PLATTE above Seminoe	13	143	130

# Lower North Platte River Basin

## Snow

SWE for the North Platte River Basin is at 125% of average (137% of last year). The Sweetwater drainage SWE is currently at 114% of average (71% of last year). Deer and LaPrele Creek SWE is at 87% of average and 147% of last year. 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 132% of average (126% of last year). SWE for the Little Laramie River is 141% of average and 159% of last year. The Laramie River above mouth, SWE is 129% of average (132% of last year). For more information see Basin Summary of Snow Courses at the beginning of this report.



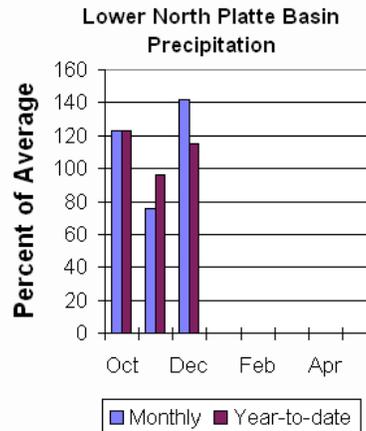
## Precipitation

Last month's precipitation was 110% of average and 130% of last year's amount. Of the 7 reporting stations, percentages for the month range from 28-261%. The water year-to-date precipitation for the basin is currently 105% of average (114% of last year). Year-to-date percentages range from 88-145%.

## Reservoir

The Lower North Platte River basin reservoir storage is below average at 63%. Reservoir storage is as follows: Alcova 156,600 ac-ft (101% of

average); Glendo 227,800 ac-ft (81% of average); Guernsey 11,700 ac-ft (163% of average); Pathfinder 276,900 ac-ft (44% of average); Seminoe 411,900 ac-ft (65% of average); and Wheatland #2 - No Report



## Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period. The Sweetwater near Alcova is forecast to yield about 80,000 ac-ft (100% of average). Deer Creek at Glenrock is forecast to yield 27,000 ac-ft (66% of average). LaPrele Creek above the reservoir is forecast to yield 15,700 ac-ft (65% of average). North Platte River below Guernsey Reservoir is 1,300,000 ac-ft (131% of average), and below Glendo Reservoir is anticipated to yield around 1,340,000 ac-ft (133% of average). Laramie River near Woods Landing should yield around 167,000 ac-ft (124% of average). The Little Laramie near Filmore should produce about 79,000 ac-ft (123% of average). See the following table for more detailed information on projected runoff.

LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS  
Streamflow Forecasts - January 1, 2006

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							
APR-JUL	33	58	74	100	90	115	74
APR-SEP	38	63	80	100	97	122	80
DEER CREEK at Glenrock							
APR-JUL	13.6	21	26	69	31	38	38
APR-SEP	14.3	22	27	66	32	40	41
LaPRELE CREEK abv Reservoir							
APR-JUL	1.2	8.7	15.5	65	22	32	24
APR-SEP	1.2	8.8	15.7	65	23	33	24
NORTH PLATTE - Alcova to Orin Gain							
APR-JUL	11.0	68	107	70	146	203	152
APR-SEP	16.0	74	113	70	152	210	161
NORTH PLATTE RIVER blw Glendo Res							
APR-JUL	975	1130	1240	129	1350	1500	960
APR-SEP	1020	1190	1300	131	1410	1580	990
NORTH PLATTE RIVER blw Guernsey Res							
APR-JUL	950	1150	1280	132	1410	1610	970
APR-SEP	1000	1200	1340	133	1480	1680	1010
LARAMIE RIVER nr Woods							
APR-JUL	88	126	152	124	178	215	123
APR-SEP	97	139	167	124	195	235	135
LITTLE LARAMIE RIVER nr Filmore							
APR-JUL	50	63	72	122	81	94	59
APR-SEP	55	69	79	123	89	103	64

- \* 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 in cooperation with Alberta Environment

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

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
ALCOVA	184.3	156.6	156.0	154.4
GLENDO	506.4	227.8	220.8	282.9
GUERNSEY	45.6	11.7	15.9	7.2
PATHFINDER	1016.5	276.9	234.5	635.7
SEMINOE	1016.7	411.9	269.4	631.1
WHEATLAND #2		NO REPORT		

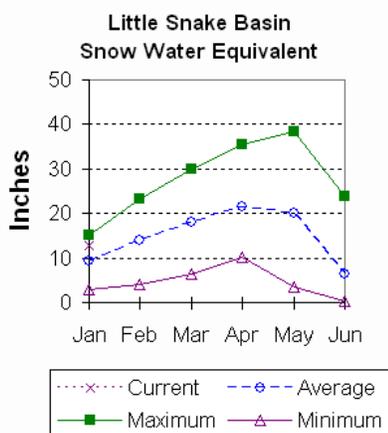
Watershed Snowpack Analysis - January 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SWEETWATER	2	71	114
DEER & LaPRELE CREEKS	2	147	87
N PLATTE abv Laramie R.	17	133	125
LARAMIE RIVER abv Laramie	5	126	132
LITTLE LARAMIE RIVER	2	159	141
LARAMIE RIVER above mouth	6	132	129
NORTH PLATTE	17	137	125

## Little Snake River Basin

### Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage is 135% of average (134% of last year at this time). For more information see Basin Summary of Snow Courses at beginning of this report.

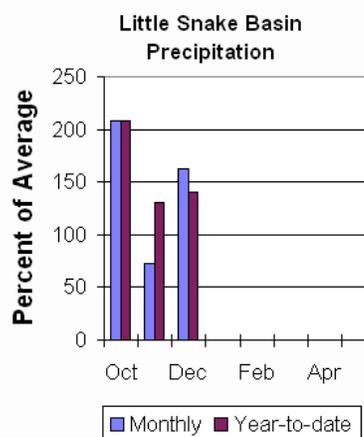


### Precipitation

Precipitation across the basin was above average this past month. Last Month's precipitation was 163% of average (209% of last year) for the 5 reporting stations. Last month's precipitation ranged from 127-198% of average. The Little Snake River basin water-year-to-date precipitation is currently 141% of average (129% of last year). Year-to-date percentages range from 123-150% of average.

### Reservoir

High Savery Dam - Pending



### Streamflow

The 50% exceedance forecast for the Little Snake River drainage is expected to be just below 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 200,000 ac-ft (126% of average). The Little Snake River near Dixon is estimated to yield around 415,000 ac-ft (122% of average). See the following table for more detailed information on projected runoff.

```

=====
                        LITTLE SNAKE RIVER BASIN
                        Streamflow Forecasts - January 1, 2006
=====
Forecast Pt | <=== Drier === Future Conditions === Wetter ===> |
Forecast | ===== Chance of Exceeding * ===== |
Period | (1000AF) (1000AF) | (1000AF) (% AVG.) | (1000AF) (1000AF) | (1000AF)
=====
Little Snake River nr Slater
APR-JUL      133      171          200      126      231      280      159

Little Snake River nr Dixon
APR-JUL      278      356          415      122      478      580      340
=====

```

\* 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.

```

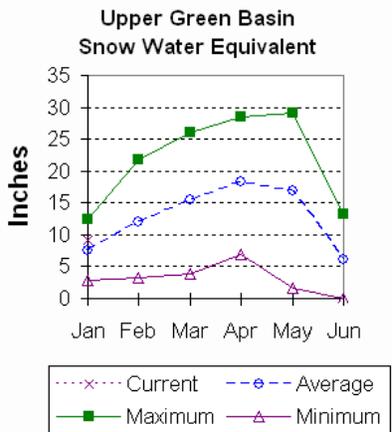
=====
                        LITTLE SNAKE RIVER BASIN
                        Watershed Snowpack Analysis - January 1, 2006
=====
Watershed | Number of | This Year as Percent of |
           | Data Sites | Last Year | Average |
=====
LITTLE SNAKE RIVER | 6 | 134 | 135 |
=====

```

# Upper Green River Basin

## Snow

Snow water equivalent (SWE) is above average in the Upper Green River drainage this year. The Green River Basin SWE above Warren Bridge is at 106% and 131% of last year. SWE on the west side of the Upper Green River Basin is about 115% of average (135% of last year). Newfork River Basin SWE is now about 106% of average and 111% of last year. Big Sandy-Eden Valley Basin is at 107% or 83% of last year. SWE in the Green River Basin above Fontenelle Reservoir is about 112% of average (130% of last year). For more information see the Basin Summary of Snow Courses at the beginning of this report.



## Precipitation

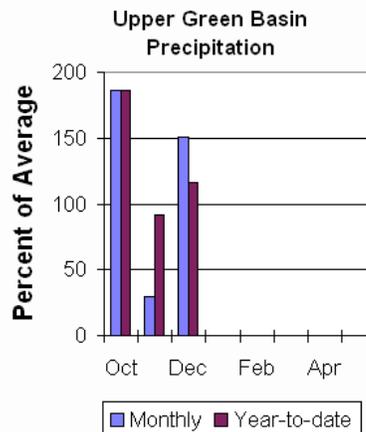
The 11 reporting precipitation sites in the basin were 151% of average last month (159% of last year). Last month's precipitation varied from 135-219% of average. Water year-to-date precipitation is about 116% of average (125% of last year). Year to date percentage of average ranges from 96-136% for the reporting stations.

## Reservoir

Storage in Big Sandy Reservoir is 24,600 ac-ft or 64% of capacity. This is 135% of average. Eden Reservoir - No Report. Fontenelle Reservoir is 189,100 ac-ft or 55% of capacity and . This is 90% 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 above average. The yield on the Green River at Warren Bridge is around 280,000 ac-ft (106% of average). Pine Creek above Fremont Lake is 110,000 ac-ft (106% of average). New Fork River near Big Piney is 420,000 ac-ft (106% of average). Fontenelle Reservoir Inflow is estimated to be 910,000 ac-ft (106% of average), and Big Sandy near Farson is expected to be around 60,000 ac-ft (103% of average). See the following table for more detailed information on projected runoff.



=====
   
UPPER GREEN RIVER BASIN
   
Streamflow Forecasts - January 1, 2006
   
=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Green River at Warren Bridge							
APR-JUL	199	246	280	106	317	375	265
Pine Creek abv Fremont Lake							
APR-JUL	86	100	110	106	120	137	104
New Fork River nr Big Piney							
APR-JUL	276	358	420	106	487	594	395
Fontenelle Reservoir Inflow							
APR-JUL	541	749	910	106	1086	1374	860
Big Sandy River nr Farson							
APR-JUL	40	51	60	103	70	86	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 December
   
=====

Reservoir	Usable Capacity	***** Usable Storage *****		***** Average
		This Year	Last Year	
BIG SANDY	38.3	24.6	----	18.3
EDEN		NO REPORT		
FONTENELLE	344.8	189.1	225.8	209.7

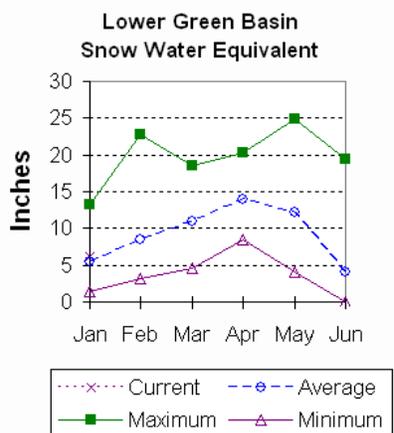
=====
   
UPPER GREEN RIVER BASIN
   
Watershed Snowpack Analysis - January 1, 2006
   
=====

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
GREEN above Warren Bridge	4	129	106
UPPER GREEN (West Side)	5	135	115
NEWFORK RIVER	2	111	106
BIG SANDY/EDEN VALLEY	1	83	107
GREEN above Fontenelle	11	130	112

# Lower Green River Basin

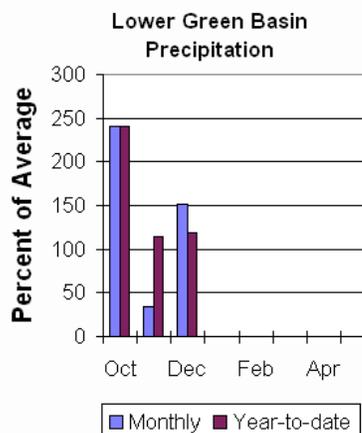
## Snow

SWE in the Hams Fork Basin is 121% of average (116% of last year). Blacks Fork Basin SWE is currently 118% of average (112% of last year). The Henrys Fork drainage is at 91% of average and 61% of last year. SWE in the Green River Basin above Flaming Gorge is 112% of average (119% 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 at 152% of average or 182% of last year. Precipitation ranged from 21-177% of average for the month. The basin year-to-date precipitation is currently 110% of average (108% of last year). Year-to-date percentages range from 107-119%.



## r

Fontenelle Reservoir is currently storing 189,100 ac-ft; this is 90% of average (65% of last year). Flaming Gorge is currently storing 3,082,000 ac-ft; this is 102% of average (112% of last year). Viva Naughton is storing 34,100 ac-ft or 80% of capacity; this is 108% of average.

## Reservoir

## Streamflow

Expected yields vary from 105-111% of average across the basin. 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 915,000 ac-ft (105% of average). The Blacks Fork near Robertson is forecast to yield 104,000 ac-ft (110% of average). East Fork of Smiths Fork near Robertson is forecast to yield 32,000 ac-ft (110% of average). The 50% chance 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 1,280,000 ac-ft (108% of average). See the following table for more detailed information on projected runoff.

=====
   
LOWER GREEN RIVER BASIN
   
Streamflow Forecasts - January 1, 2006
   
=====

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 (2)							
APR-JUL	558	760	915	105	1084	1360	875
Blacks Fork nr Robertson							
APR-JUL	70	90	104	110	120	144	95
EF of Smiths Fork nr Robertson							
APR-JUL	21	27	32	110	37	45	29
Hams Fk blw Pole Ck nr Frontier							
APR-JUL	41	58	72	111	87	112	65
Hams Fork Inf to Viva Naughton Res							
APR-JUL	55	79	97	109	118	151	89
Flaming Gorge Reservoir Inflow (2)							
APR-JUL	774	1060	1280	108	1520	1912	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 December
   
=====

Reservoir	Usable Capacity	***** This Year	***** Usable Storage Last Year	***** Average
FONTENELLE	344.8	189.1	225.8	209.7
FLAMING GORGE	3749.0	3082.0	2741.0	3027.0
VIVA NAUGHTON RES	42.4	34.1	----	31.6

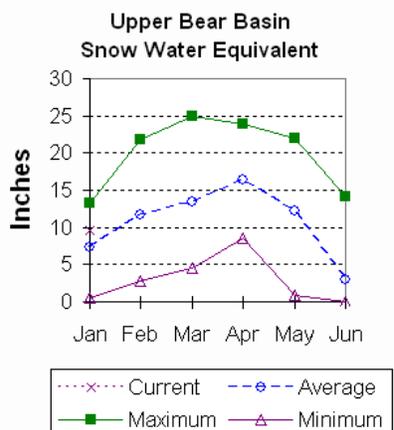
=====
   
LOWER GREEN RIVER BASIN
   
Watershed Snowpack Analysis - January 1, 2006
   
=====

Watershed	Number of Data Sites	This Year as Percent of Last Year	Percent of Average
HAMS FORK RIVER	3	116	121
BLACKS FORK	2	112	118
HENRYS FORK	2	61	91
GREEN above Flaming Gorge	18	119	112

## Upper Bear River Basin

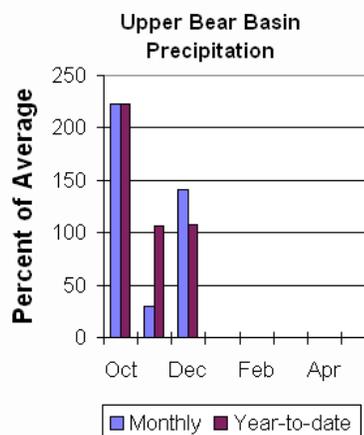
### Snow

Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is estimated to be 134% of average; that is about 108% of last year at this time. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 125% of average (120% of last year). Bear River Basin SWE, above the Idaho State line, is 130% of average and 117% 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 141% of average for the 2 reporting stations; this is 182% of the precipitation received last year. The year-to-date precipitation, for the basin, is 108% of average; this is 115% of last year's amount.



### Reservoir

Storage, in

Woodruff Narrows reservoir, is about 30,000 ac-ft (127% of average). Current reservoir storage is about 52% of capacity. Reservoir storage last year at this time was 12,000 ac-ft at this time.

### Streamflow

The following 50% exceedance forecasts are for the April through September period. The Bear River above the Utah-Wyoming State Line is 140,000 ac-ft (112% of average). The Bear River above Reservoir near Woodruff is 135,000 ac-ft (95% of average). The Smiths Fork River near Border is 110,000 ac-ft (91% of average). See the following table for more detailed information on projected runoff.

=====
   
UPPER BEAR RIVER BASIN
   
Streamflow Forecasts - January 1, 2006
   
=====

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * 50% (% AVG.)		30% (1000AF)	10% (1000AF)	
Bear River nr UT-WY State Line							
APR-JUL	86	109	125	111	141	164	113
APR-SEP	96	122	140	112	158	184	125
Bear River ab Reservoir nr Woodruff							
APR-JUL	63	100	125	92	150	189	136
APR-SEP	72	110	135	95	160	199	142
Smiths Fork nr Border							
APR-JUL	58	80	95	92	110	132	103
APR-SEP	68	93	110	91	127	152	121

\* 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 December
   
=====

Reservoir	Usable	***** Usable Storage *****		Average
	Capacity	This Year	Last Year	
WOODRUFF NARROWS	57.3	30.0	12.0	23.6

=====
   
UPPER BEAR RIVER BASIN
   
Watershed Snowpack Analysis - January 1, 2006
   
=====

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
UPPER BEAR RIVER in Utah	5	108	134
SMITHS & THOMAS FORKS	3	120	125
BEAR RIVER abv ID line	6	117	130
NORTHWEST	52	133	106
NORTHEAST	13	112	98
SOUTHEAST	20	136	125
SOUTHWEST	25	123	122

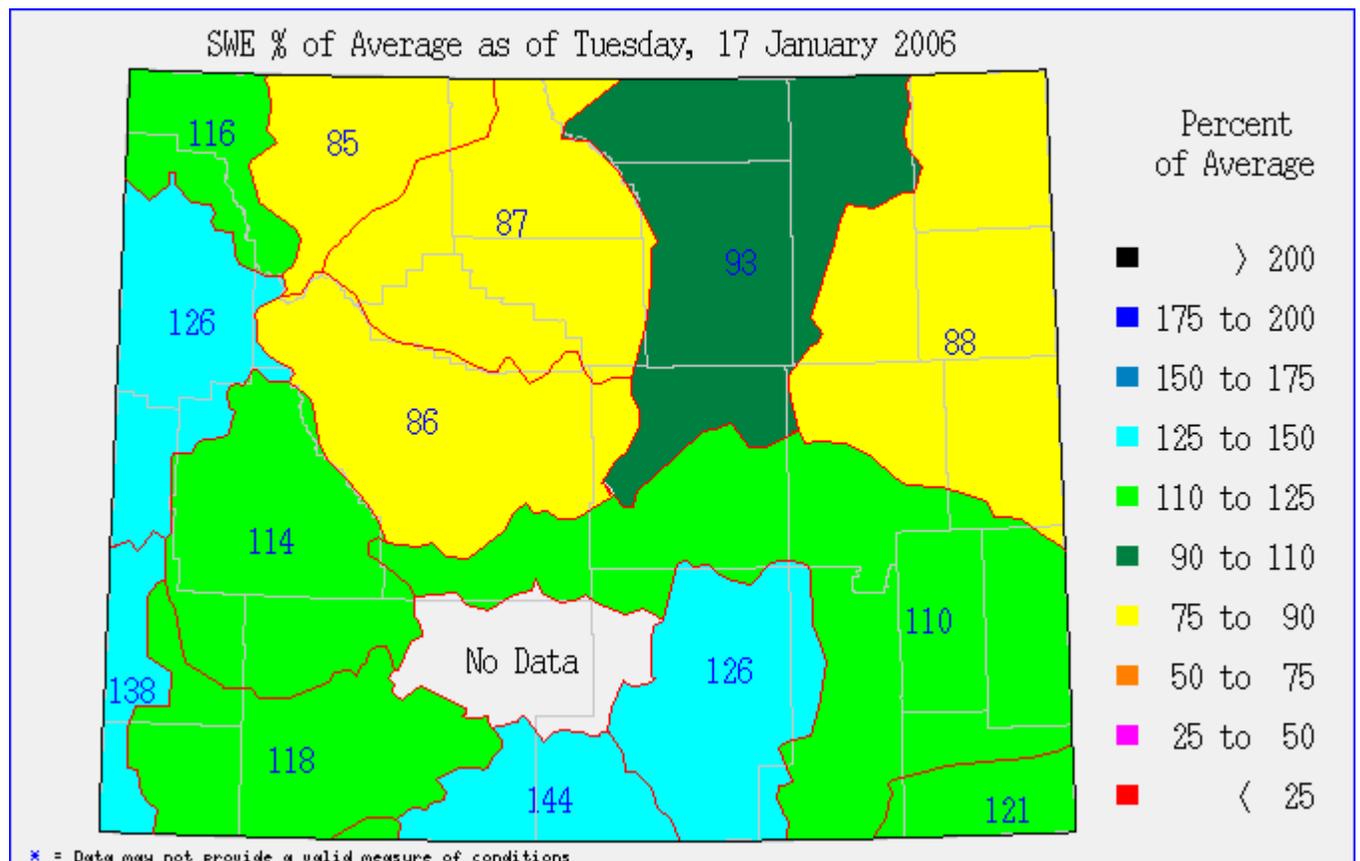


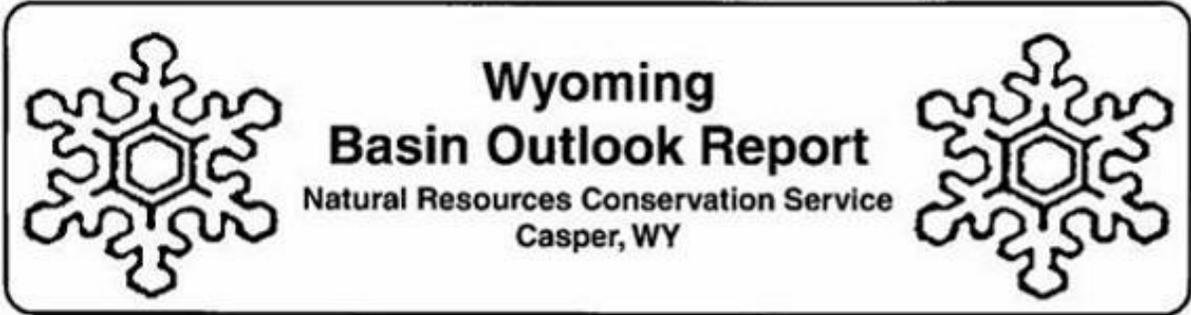
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