



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

# Wyoming Basin Outlook Report April 1, 2010



# 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

The snow water equivalent (SWE) across Wyoming is below average for April 1<sup>st</sup> at 73%. March precipitation for the basins varied from 46-135% of average. Year-to-date precipitation for Wyoming basins varied from 56-106% of average. Forecasted runoff varies from 31-104% of average across the Wyoming basins for an overall average of 53%. Basin reservoir levels for Wyoming vary from 81-192% of average for an overall average of 112%.

## Snowpack

Snow water equivalent (SWE), across Wyoming is below average for this time of year at 73%. SWE in the NW portion of Wyoming is now about 59% of average (61% of last year). NE Wyoming SWE is currently about 76% of average (68% of last year). The SE Wyoming SWE is currently about 87% of average (85% of last year). The SW Wyoming SWE is about 68% of average (70% of last year).

## Precipitation

Last month's precipitation was below average across Wyoming. The Upper Green River Basin had the lowest precipitation for the month at 46% of average. The Lower North Platte Basin had the highest precipitation amount at 135% of average. 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	-41%	Upper North Platte River	+13%
Yellowstone & Madison	-33%	Lower North Platte	+35%
Wind River	+13%	Little Snake River	-7%
Big Horn	-26%	Upper Green River	-54%
Shoshone & Clarks Fork	-20%	Lower Green River	-45%
Powder & Tongue River	-26%	Upper Bear River	-48%
Belle Fourche & Cheyenne	-43%		

## Streams

Stream flow yield for April to September is expected to be below average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be about 54% (varying from 35-114% of average). The Snake River and Upper Yellowstone & Madison River Basins are expected to yield about 49 and 63% of average, respectively; 35-64% of average for the various forecast points in the basins: Yields from the Wind and Bighorn River Basins are expected to be about 58% and 46% of average, respectively; varying from 46-86% of average in the basins: Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 63% of average; varying from 61-68% of average: Yields from the Powder & Tongue River Basins are expected to be about 49 and 50% of average, respectively; varying from 48-73% of average: Yields for the Belle Fourche & Cheyenne River Basins are expected to be about 106% of average. Yields for the Upper and Lower North Platte River of Wyoming are expected to be about 69 and 61% of average, respectively; varying from 61-114% of average: Yields for the Little Snake, Green River, and Little Bear of Wyoming are expected to be 76, 38, and 52% of average respectively; yield estimates vary from 42-76% of average:

## Reservoirs

Reservoir storage for March varies widely across the state however reservoir storage is at 112% of average for the entire state. Reservoirs on the North Platte River are above average at 108% of average. Reservoirs in the

northeast are nearly average in storage at 99%. Reservoirs in the Wind River Basin are average at 100%. Reservoirs on the Big Horn are above average at 110%. The Buffalo Bill Reservoir on the Shoshone is above average at 109%. Reservoirs on the Green River are above average at 108%. 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	86	86	87	99	100
ANGOSTURA	69	61	90	76	113
BELLE FOURCHE	84	95	73	114	89
BIG SANDY	52	37	54	96	141
BIGHORN LAKE	70	68	60	116	103
BOYSEN	93	93	93	100	101
BUFFALO BILL	66	67	60	109	98
BULL LAKE	53	59	56	94	89
DEERFIELD	94	97	89	106	97
EDEN		NO REPORT			
ENNIS LAKE	73	70	76	96	103
FLAMING GORGE	85	80	78	109	107
FONTENELLE	32	32	41	78	101
GLENDO	72	64	84	85	112
GRASSY LAKE	85	87	81	105	98
GUERNSEY	48	44	45	107	109
HEBGEN LAKE	80	75	69	116	106
JACKSON LAKE	75	77	57	130	97
KEYHOLE	54	51	59	93	107
PACTOLA	98	98	85	115	99
PALISADES	89	79	67	133	113
PATHFINDER	72	40	73	99	182
PILOT BUTTE	83	80	69	120	104
SEMINOE	68	52	49	139	131
SHADEHILL	79	142	78	102	56
TONGUE RIVER	73	79	38	192	93
VIVA NAUGHTON RES	61	0	66	93	0
WHEATLAND #2	82	52	55	150	157
WOODRUFF NARROWS	89	91	57	156	97
TOTAL OF 28 RESV.	77	70	69	112	110

Raw KAF Totals Current=10237 Last Year=9340 Average=9147 Capacity=13288

## BASIN SUMMARY OF SNOW COURSE DATA

MARCH 2010

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
-----						
WYOMING Snow Course and SNOTEL Stations						
ALBANY	9400	3/30/10	45	13.8	12.3	13.7
ASTER CREEK	7750	3/30/10	54	12.4	28.6	30.5
BALD MOUNTAIN SNOTEL	9380	4/01/10	52	13.1	18.9	19.9
BASE CAMP SNOTEL	7030	4/01/10	---	9.4	15.7	18.1
BATTLE MTN. SNOTEL	7440	4/01/10	---	9.5	17.0	11.0
BEARLODGE DIVIDE	4680	3/28/10	0	.0	3.4	1.3
BEARTOOTH LK. SNOTEL	9280	4/01/10	58	13.5	23.3	23.6
BEAR TRAP SNOTEL	8200	4/01/10	30	6.6	9.3	5.2
BIG GOOSE SNOTEL	7760	4/01/10	31	7.5	10.1	10.7
BIG PARK	8620	3/30/10	44	12.7	17.6	19.4
BIG SANDY SNOTEL	9080	4/01/10	35	8.0	12.3	14.7
BLACKWATER SNOTEL	9780	4/01/10	63	15.8	25.0	24.8
BLIND BULL SNOTEL	8900	4/01/10	56	14.5	26.6	28.3
BLIND PARK SNOTEL	6870	4/01/10	14	4.5	7.3	8.7
BLUE RIDGE	9620	3/30/10	38	9.2	6.2	11.7
BONE SPGS. SNOTEL	9350	4/01/10	50	11.1	17.5	16.4
BROOKLYN LK. SNOTEL	10220	4/01/10	68	20.0	23.4	23.9
BURGESS JCT. SNOTEL	7880	4/01/10	38	9.3	12.5	11.7
BURROUGHS CRK SNOTEL	8750	4/01/10	37	8.4	15.7	14.8
CANYON SNOTEL	8090	4/01/10	35	8.0	13.6	13.9
CASPER MTN. SNOTEL	7850	4/01/10	52	14.6	12.2	14.6
CASTLE CREEK	8400	3/31/10	5	1.0	3.6	4.8
CCC CAMP	7000	3/29/10	26	7.6	14.7	12.7
CHALK CK #1 SNOTEL	9100	4/01/10	57	17.4	24.0	24.9
CHALK CK #2 SNOTEL	8200	4/01/10	41	11.5	18.0	16.2
CINNABAR PARK SNOTEL	9690	4/01/10	56	19.4	22.3	17.9
CLOUD PEAK SNOTEL	9850	4/01/10	48	11.2	17.3	13.5
COLE CANYON SNOTEL	5910	4/01/10	18	5.2	7.1	6.9
COLD SPRINGS SNOTEL	9630	4/01/10	31	6.7	7.7	9.0
COTTONWOOD CR SNOTEL	7700	4/01/10	---	15.1	26.9	24.2
CROW CREEK SNOTEL	8830	4/01/10	31	10.4	6.0	9.0
DARBY CANYON	8250	3/31/10	55	14.6	25.6	24.5
DEER PARK SNOTEL	9700	4/01/10	53	13.8	10.9	17.1
DITCH CREEK	6870	3/29/10	7	1.8	4.0	4.1
DIVIDE PEAK SNOTEL	8860	4/01/10	---	20.2	24.0	20.0
DOMELAKE SNOTEL	8880	4/01/10	38	8.0	13.1	12.6
DU NOIR	8760	4/01/10	---	2.8E	6.1	8.3
EAST RIM DIV SNOTEL	7930	4/01/10	---	4.9	10.0	13.3
ELBO RANCH	7100	3/29/10	20	4.8	10.5	11.6
ELKHART PARK SNOTEL	9400	4/01/10	---	7.6	12.7	13.6
EVENING STAR SNOTEL	9200	4/01/10	73	18.6	30.1	30.1
FOUR MILE MEADOWS	7860	4/01/10	35	6.9	12.4	12.8
FOXPARK	9060	3/29/10	34	9.6	6.3	7.6
GEYSER CREEK	8500	3/31/10	13	2.3	4.8	7.1
GLADE CREEK	7040	3/31/10	45	13.2	22.9	24.3
GRAND TARGHEE SNOTEL	9260	4/01/10	105	34.1	42.8	--
GRANITE CRK SNOTEL	6770	4/01/10	---	8.8	16.6	18.6
GRANNIER MEADOWS	8860	3/30/10	36	8.5	8.0	14.1
GRASSY LAKE SNOTEL	7270	4/01/10	71	20.2	31.8	36.1

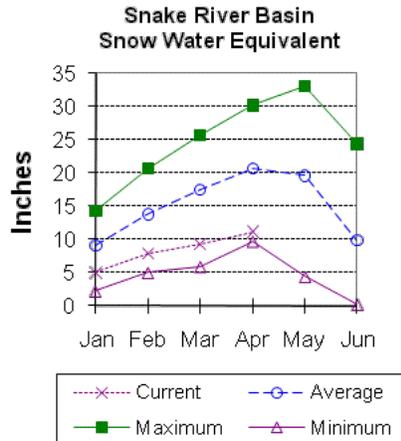
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
GRAVE SPRINGS SNOTEL	8550	4/01/10	35	8.6	9.6	9.4
GROS VENTRE SNOTEL	8750	4/01/10	36	7.5	14.6	14.4
GROVER PARK DIVIDE	7000	3/29/10	20	6.3	12.4	11.2
HAIRPIN TURN	9480	3/31/10	47	13.8	15.8	16.3
HANSEN S.M. SNOTEL	8360	4/01/10	27	5.5	6.7	6.5
HAMS FORK SNOTEL	7840	4/01/10	---	7.3	11.0	12.0
HASKINS CREEK	8980	3/30/10	76	26.2	32.2	30.0
HOBACK GS	6640	3/24/10	13	4.6	7.9	--
HOBBS PARK SNOTEL	10100	4/01/10	68	14.3	12.7	15.1
HUCKLEBERRY DIVIDE	7300	3/29/10	34	10.4	20.7	21.3
INDIAN CREEK SNOTEL	9430	4/01/10	---	17.2	24.6	28.2
JACKPINE CREEK	7350	3/31/10	51	14.8	21.2	22.2
KELLEY R.S. SNOTEL	8180	4/01/10	---	9.8	16.3	17.1
KENDALL R.S. SNOTEL	7740	4/01/10	19	5.4	11.7	14.6
KIRWIN SNOTEL	9550	4/01/10	45	8.7	12.8	11.5
LAKE CAMP	7780	4/01/10	---	6.5E	13.8	10.4
LA PRELE SNOTEL	8380	4/01/10	39	9.5	9.2	11.0
LEWIS LAKE SNOTEL	7850	4/01/10	59	17.1	30.4	35.8
LEWIS LAKE DIVIDE	7850	3/30/10	72	21.4	38.1	42.4
LIBBY LODGE	8750	3/31/10	35	10.1	11.0	10.9
LITTLE BEAR RUN	6240	3/29/10	6	1.6	2.7	2.4
LITTLE WARM SNOTEL	9370	4/01/10	30	6.8	12.1	12.0
LOOMIS PARK SNOTEL	8240	4/01/10	---	7.4	16.3	17.5
LUPINE CREEK	7380	3/31/10	20	4.8	6.0	9.3
MALLO	6420	3/29/10	18	5.8	7.1	6.5
MARQUETTE SNOTEL	8760	4/01/10	28	6.6	6.6	9.0
MEDICINE LODGE LAKES	9340	3/31/10	34	8.9	11.8	11.1
MIDDLE FORK	7420	3/30/10	30	6.9	4.6	6.0
MIDDLE POWDER SNOTEL	7760	4/01/10	36	9.5	11.6	11.8
MORAN	6750	3/29/10	24	6.1	12.8	12.4
MOSS LAKE	9800	3/31/10	67	22.6	19.4	23.6
NEW FORK SNOTEL	8340	4/01/10	18	5.0	11.7	11.3
NORRIS BASIN	7500	3/28/10	20	5.3	10.0	10.8
NORTH BARRETT CREEK	9400	3/31/10	70	24.2	22.6	21.5
NORTH FRENCH SNOTEL	10130	4/01/10	98	33.4	35.0	29.5
NORTH RAPID CK SNTL	6130	4/01/10	21	6.9	10.1	8.3
NORTH TONGUE	8450	3/31/10	34	8.3	12.5	13.0
OLD BATTLE SNOTEL	9920	4/01/10	---	30.1	33.6	32.4
OLD FAITHFUL	7400	4/01/10	---	6.0E	14.1	13.9
ONION GULCH	8780	3/29/10	30	7.0	8.7	8.3
OWL CREEK SNOTEL	8980	4/01/10	22	5.7	5.6	5.6
PARKERS PEAK SNOTEL	9400	4/01/10	64	17.5	26.2	21.9
PHILLIPS BNCH SNOTEL	8200	4/01/10	56	16.3	27.7	29.2
POCKET CREEK SNOTEL	9350	4/01/10	37	6.5	--	--
POLE MOUNTAIN	8700	3/29/10	45	12.1	7.4	8.4
POWDER RVR.PASS SNTL	9480	4/01/10	35	8.7	12.6	10.9
PURGATORY GULCH	8970	3/30/10	45	11.6	12.8	11.8
RANGER CREEK	8120	3/31/10	27	6.3	8.5	8.9
RENO HILL SNOTEL	8500	4/01/10	62	15.9	14.3	14.3
REUTER CANYON	6280	4/01/10	---	6.9E	14.8	8.6
ROWDY CREEK	8300	3/25/10	33	9.0	17.8	21.6
RYAN PARK	8400	3/31/10	36	11.4	12.4	10.8
SAGE CK BASIN SNTL	7850	4/01/10	52	15.3	13.4	11.6
SALT RIVER SNOTEL	7600	4/01/10	---	9.1	14.9	14.6
SAND LAKE SNOTEL	10050	4/01/10	99	29.4	30.5	32.7

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
SANDSTONE RS SNOTEL	8150	4/01/10	47	11.3	18.8	14.8
SAWMILL DIVIDE	9260	3/30/10	40	10.1	14.1	13.0
SHELL CREEK SNOTEL	9580	4/01/10	51	11.1	16.9	14.9
SHERIDAN R.S.	7750	3/26/10	6	1.5	4.8	5.8
SNAKE RIVER STATION	6920	3/29/10	31	10.0	17.8	20.9
SNAKE RV STA SNOTEL	6920	4/01/10	28	8.8	16.9	19.2
SNIDER BASIN SNOTEL	8060	4/01/10	33	8.8	14.4	14.7
SOLDIER PARK	8780	3/29/10	12	3.1	5.1	5.9
SOUR DOUGH	8460	3/29/10	26	6.5	7.2	7.1
SOUTH BRUSH SNOTEL	8440	4/01/10	42	13.2	13.2	13.2
SOUTH PASS SNOTEL	9040	4/01/10	52	12.4	12.0	16.7
SPRING CRK. SNOTEL	9000	4/01/10	60	16.5	27.2	26.9
ST LAWRENCE ALT SNTL	8620	4/01/10	32	7.3	5.7	7.4
SUCKER CREEK SNOTEL	8880	4/01/10	45	10.9	14.6	11.8
SYLVAN LAKE SNOTEL	8420	4/01/10	52	13.2	20.5	22.8
SYLVAN ROAD SNOTEL	7120	4/01/10	27	7.0	14.1	12.9
T CROSS RANCH	7900	3/31/10	8	1.4	6.1	7.2
TETON PASS W.S.	7740	4/01/10	57	14.0	24.2	27.6
THUMB DIVIDE SNOTEL	7980	4/01/10	42	9.2	19.3	19.2
THUMB DIVIDE	7980	3/30/10	38	7.3	18.0	19.1
TIE CREEK SNOTEL	6870	4/01/10	8	2.0	5.9	6.1
TIMBER CREEK SNOTEL	7950	4/01/10	14	4.1	4.8	5.8
TOGWOTEE PASS SNOTEL	9580	4/01/10	66	16.8	27.4	25.2
TOWNSEND CRK SNOTEL	8700	4/01/10	49	10.6	8.4	8.8
TRIPLE PEAK SNOTEL	8500	4/01/10	54	16.3	24.5	25.2
TURPIN MEADOWS	6900	4/01/10	22	4.9	9.8	10.2
TWO OCEAN SNOTEL	9240	4/01/10	72	19.2	38.1	28.4
TYRELL RANGER STA.	8300	3/29/10	17	4.0	8.5	7.6
UPPER SPEARFISH	6500	3/29/10	18	5.5	7.6	6.2
WEBBER SPRING SNOTEL	9250	4/01/10	73	21.6	25.2	26.4
WHISKEY PARK SNOTEL	8950	4/01/10	70	25.4	33.4	30.4
WILLOW CREEK SNOTEL	8450	4/01/10	---	20.1	34.3	30.6
WINDY PEAK SNOTEL	7900	4/01/10	32	8.8	8.7	8.1
WOLVERINE SNOTEL	7650	4/01/10	22	7.0	11.9	11.6
WOOD ROCK G.S.	8440	3/30/10	30	7.1	9.1	10.2
YOUNTS PEAK SNOTEL	8350	4/01/10	44	9.9	18.2	17.3

# Snake River Basin

## Snow

The Snake River Basin snow water equivalent (SWE) is below average at 54%. SWE in the Snake River Basin above Jackson Lake is 51% of average. Pacific Creek Basin SWE is 59% of average. Gros Ventre River Basin SWE is 57% of average. SWE in the Hoback River drainage is 47% of average. SWE in the Greys River drainage is 60% of average. In the Salt River area SWE is 62% of average. SWE in the Snake River Basin above Palisades is 54% of average.



See the "Basin Summary of Snow Course Data" at the beginning of this report for a detailed listing of snow course information.

## Precipitation

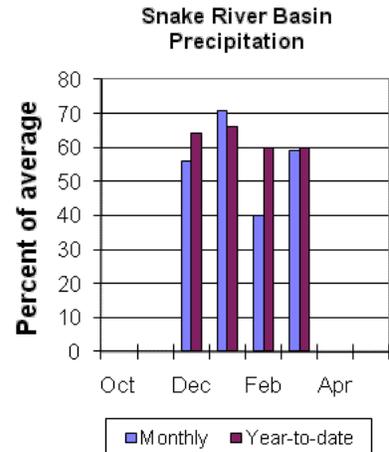
Precipitation across the basin was below average last month. Monthly precipitation for the basin was 59% of average (46% of last year). Last month's percentages range from 19-93% of average for the 16 reporting stations. Water-year-to-date precipitation is 60% of average for the Snake River Basin (60% of last year). Year-to-date percentages range from 48-74% of average.

## Reservoir

Current reservoir storage is 131% of average for the 3 storage reservoirs in the basin. Grassy Lake storage is about 105% of average (12,900 ac-ft compared to 13,200 last year). Jackson Lake storage is 130% of average (631,100 ac-ft compared to 649,900 ac-ft last year). Palisades Reservoir storage is about 133% of average 1,248,700 ac-ft compared to 1,108,700 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 470,000 ac-ft (52% of average). Snake above reservoir near Alpine is 1,110,000 ac-ft (41% of average). The Snake near Irwin is 1,900,000 ac-ft (49% of average). The Snake near Heise is 2,030,000 ac-ft (49% of average). Pacific Creek near Moran is 87,000 ac-ft (49% of average). Buffalo Fork above Lave near Moran is 200,000 ac-ft (58% of average). Gros Ventre River at Kelly is 85,000 ac-ft (35% of average). Greys River above Palisades Reservoir is 205,000 ac-ft (52% of average). Salt River near Etna is 183,000 ac-ft (44% of average). See the following page for detailed runoff volumes.



**SNAKE RIVER BASIN**

Streamflow Forecasts - April 1, 2010

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=====
Forecast Pt | <=== Drier === Future Conditions === Wetter ===> |
Forecast | ===== Chance of Exceeding * ===== |
Period | (1000AF) (1000AF) | (1000AF) (% AVG.) | (1000AF) (1000AF) | (1000AF)
=====
SNAKE nr Moran (1,2)
  APR-JUL      285      380      425      52      470      565      815
  APR-SEP      305      420      470      52      520      635      905
SNAKE abv Resv nr Alpine (1,2)
  APR-JUL      620      845      945      40     1050     1270     2370
  APR-SEP      705      985     1110     41     1240     1520     2730
SNAKE nr Irwin (1,2)
  APR-JUL     1060     1380     1530     46     1680     2000     3330
  APR-SEP     1360     1730     1900     49     2070     2440     3870
SNAKE near Heise (2)
  APR-JUL     1260     1500     1660     47     1820     2060     3560
  APR-SEP     1560     1840     2030     49     2220     2500     4160
Pacific Ck At Moran
  APR-JUL       40       64       81      47       98      122      171
  APR-SEP       45       70       87      49      104      129      178
Buffalo Fork ab Lava nr Moran, WY
  APR-JUL      125      155      175      58      195      225      301
  APR-SEP      142      177      200      58      225      260      344
Gros Ventre R at Kelly, WY
  APR-JUL       4.0       43       70      35       97      136      200
  APR-SEP      15.0       57       85      35      113      155      244
Greys R Nr Alpine
  APR-JUL      126      154      174      51      194      220      340
  APR-SEP      146      181      205      52      230      265      395
Salt R Nr Etna
  APR-JUL       38       99      140      41      181      240      340
  APR-SEP       53      130      183      44      235      315      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.

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

```

=====
Reservoir          Usable      ***** Usable Storage *****
                   Capacity    This Year   Last Year   Average
=====
GRASSY LAKE          15.2         12.9        13.2        12.3
JACKSON LAKE        847.0        631.1        649.9        486.6
PALISADES           1400.0       1248.7       1108.7       941.5
=====

```

SNAKE RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2010

```

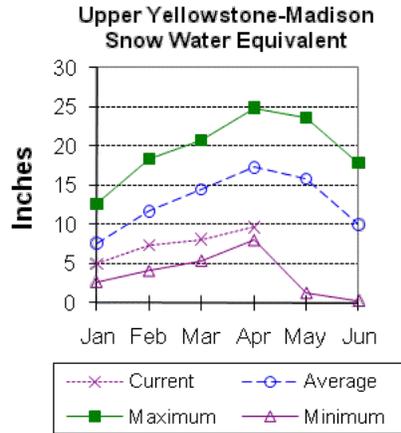
=====
Watershed          Number of      This Year as Percent of
                   Data Sites    Last Year      Average
=====
SNAKE above Jackson Lake      9           53           51
PACIFIC CREEK                 3           52           58
GROS VENTRE RIVER             3           54           57
HOBACK RIVER                  5           51           47
GREYS RIVER                   4           58           60
SALT RIVER                    5           56           62
SNAKE above Palisades        27          54           53
=====

```

# Upper Yellowstone & Madison River Basins

## Snow

Snowfall in these basins has been below average so far this year. Snow water equivalent (SWE) is at 53% of average in the Madison drainage. SWE in the Yellowstone drainage is at 60% of average. See the "Basin Summary of Snow Course Data" at the front of this report for details.



## Precipitation

Last month precipitation in the Madison and Yellowstone drainage was about 67% of average (40% of last year). The 5 reporting stations percentages range from 38-91% of average. Water-year-to-date precipitation is about 65% of average (62% of last year's amount). Year to date percentage ranges from 57-75%.

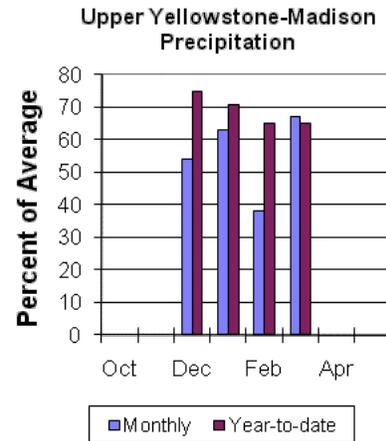
## Reservoir

Ennis Lake is storing about 29,900

ac-ft of water (73% of capacity, 96% of average or 103% of last year's volume). Hebgen Lake is storing about 301,600 ac-ft of water (80% of capacity, 116% of average or 106% 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 April through September are below average for the basins. Yellowstone at Lake Outlet is 440,000 ac-ft (55% of average). Yellowstone at Corwin Springs will yield around 1,230,000 ac-ft (62% of average). Yellowstone near Livingston will yield around 1,410,000 ac-ft (62% of average). Hebgen Reservoir inflow is 325,000 ac-ft (64% of average). See the following page for detailed runoff volumes.



**UPPER YELLOWSTONE & MADISON RIVER BASINS**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
YELLOWSTONE at Lake Outlet
APR-JUL     240   295   335   57   375   430   590
APR-SEP     315   390   440   55   490   565   805

YELLOWSTONE RIVER at Corwin Springs
APR-JUL     765   935  1050   64   1160  1330  1650
APR-SEP     880  1090  1230   62   1370  1580  1970

YELLOWSTONE RIVER near Livingston
APR-JUL     840  1050  1200   63   1350  1560  1900
APR-SEP     980  1240  1410   62   1580  1840  2280

HEBGEN Reservoir Inflow
APR-JUL     199   230   250   63   270   300   395
APR-SEP     265   300   325   64   350   385   505
=====

```

\* 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.

```

=====
UPPER YELLOWSTONE & MADISON RIVER BASINS
Reservoir Storage (1000AF) End of March
=====
Reservoir      Usable Capacity ***** Usable Storage *****
                This Year      Last Year      Average
=====
ENNIS LAKE      41.0          29.9          28.9          31.2
HEBGEN LAKE     377.5         301.6         284.4         259.6
=====

```

```

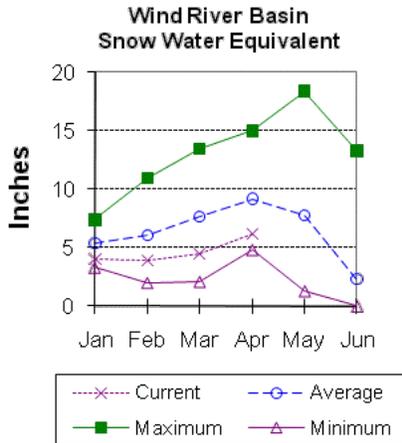
=====
UPPER YELLOWSTONE & MADISON RIVER BASINS
Watershed Snowpack Analysis - April 1, 2010
=====
Watershed      Number of Data Sites      This Year as Percent of
                Last Year      Average
=====
MADISON RIVER in WY      8          57          53
YELLOWSTONE RIVER in WY  12         56          60
=====

```

# Wind River Basin

## Snow

The Wind River Basin above Boysen Reservoir has below average snow water equivalent (SWE 67%) for this time of the year. SWE in the Wind River above Dubois is 50% of average. The Little Wind SWE is 96% of average, and the Popo Agie drainage SWE is about 85% of average. 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 52-179% of average. Precipitation, for the basin, was about 113% of average from the 8 reporting stations; that is about 86% of last year's amount. Water year-to-date precipitation is 74% of average and about 74% of last year at this time. Year-to-date percentages range from 39-105% of average.

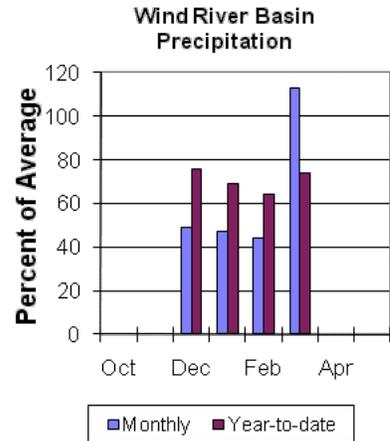
## Reservoirs

Current storage varies from 94-120% of average.

Usable storage in Bull Lake is currently about 80,500 ac-ft (94% of average) - the reservoir is about 89% of last year. Boysen Reservoir is storing about 100% of average (554,700 ac-ft) - the reservoir is about 101% of last year. Pilot Butte is at 120% of average (26,300 ac-ft) - the reservoir is about 104% 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 50% exceedance forecasts for the April through September runoff period for the basin are below average. Dinwoody Creek near Burris is 67,000 ac-ft (71% of average). The Wind River above Bull Lake Creek is 275,000 ac-ft (51% of average). Bull Lake Creek near Lenore is 150,000 ac-ft (82% of average). Wind River at Riverton will yield around 400,000 ac-ft (63% of average). Little Popo Agie River near Lander is around 42,000 ac-ft (79% of average). South Fork of Little Wind near Fort Washakie will yield around 72,000 ac-ft (86% of average). Little Wind River near Riverton will yield around 240,000 ac-ft (76% of average). Boysen Reservoir inflow will yield around 470,000 ac-ft (58% of average). See the following page for detailed runoff volumes.



## WIND RIVER BASIN

Streamflow Forecasts - April 1, 2010

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>					30 Yr Avg (1000AF)	
	Chance of Exceeding * =====						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
=====							
DINWOODY CREEK nr Burris							
APR-JUL	38	44	48	72	52	58	67
APR-SEP	54	62	67	71	72	80	94
WIND RIVER abv Bull Lake Cr (2)							
APR-JUL	125	182	220	51	260	315	435
APR-SEP	162	230	275	51	320	390	535
BULL LAKE CR near Lenore							
APR-JUL	89	110	125	85	140	161	148
APR-SEP	104	131	150	82	169	196	182
WIND RIVER at Riverton (2)							
APR-JUL	235	315	365	67	415	495	545
APR-SEP	240	335	400	63	465	560	640
LT POPO AGIE RIVER nr Lander							
APR-JUL	22	30	36	78	42	50	46
APR-SEP	26	36	42	79	48	58	53
SF LT WIND nr Fort Washakie							
APR-JUL	46	57	65	89	73	84	73
APR-SEP	49	63	72	86	81	95	84
LT WIND RIVER nr Riverton							
APR-JUL	85	162	215	77	270	345	280
APR-SEP	95	181	240	76	300	385	315
BOYSEN RESERVOIR Inflow (2)							
APR-JUL	89	290	425	59	560	760	717
APR-SEP	99	320	470	58	620	840	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.

WIND RIVER BASIN				
Reservoir Storage (1000AF) End of March				
Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
BULL LAKE	151.8	80.5	90.1	85.3
BOYSEN	596.0	554.7	551.3	552.8
PILOT BUTTE	31.6	26.3	25.2	21.9

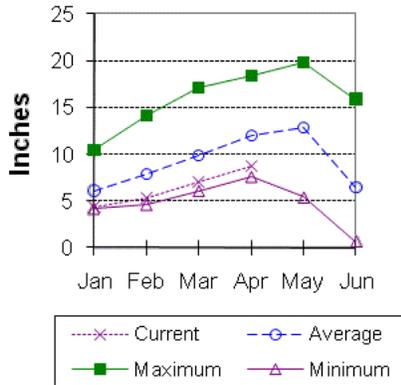
WIND RIVER BASIN			
Watershed Snowpack Analysis - April 1, 2010			
Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
WIND RIVER above Dubios	7	51	50
LITTLE WIND	2	117	96
POPO AGIE	7	121	85
WIND above Boysen Resv	14	77	67

# Bighorn River Basin

## Snow

The Bighorn River Basin SWE above Bighorn Reservoir is below average at 73%.

**Bighorn Basin  
Snow Water Equivalent**



The Nowood River is at 77% of average. The Greybull River SWE is at 74% of average. Shell Creek SWE is 69% of average. See the "Basin Summary of Snow Course Data" at the front of this report for details.

## Precipitation

Last month's precipitation was 74% of average (87% of last year). Sites ranged from 35-152% of average for the month. Year-to-date precipitation is 71% of average; that is 68% of last year at this time. Year-to-date percentages, from the 9 reporting stations, range from 58-88%.

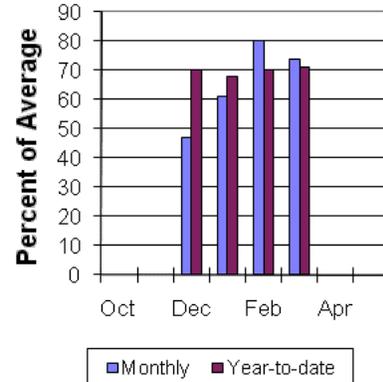
## Reservoir

Boysen Reservoir is currently storing 554,700 ac-ft (100% of average). Bighorn Lake is now at 116% of average (943,400 ac-ft). Boysen is currently storing 101% of last year volume at this time and Big Horn Lake is storing 103% 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 should yield 470,000 ac-ft (58% of average); the Greybull River near Meeteetse should yield around 117,000 ac-ft (59% of average); Shell Creek near Shell should yield around 53,000 ac-ft (74% of average) and the Bighorn River at Kane should yield around 510,000 ac-ft (46% of average). See the following page for detailed runoff volumes.

**Bighorn Basin  
Precipitation**



**BIGHORN RIVER BASIN**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
BOYSEN RESERVOIR Inflow (2)
APR-JUL      89   290   425   59   560   760   717
APR-SEP      99   320   470   58   620   840   809

GREYBULL RIVER nr Meeteetse
APR-JUL      43   69    87   59   105   131   148
APR-SEP      63   95   117   59   139   171   200

SHELL CREEK nr Shell
APR-JUL      30   38   44   73   50   58   60
APR-SEP      37   46   53   74   60   69   72

BIGHORN RIVER at Kane (2)
APR-JUL      200  290  500  50  710  1020  1000
APR-SEP      205  280  510  46  740  1080  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.

```

=====
BIGHORN RIVER BASIN
Reservoir Storage (1000AF) End of March
=====
Reservoir      Usable Capacity ***** Usable Storage *****
                This Year      Last Year      Average
=====
BOYSEN          596.0          554.7          551.3          552.8
BIGHORN LAKE    1356.0          943.4          917.0          809.9
=====

```

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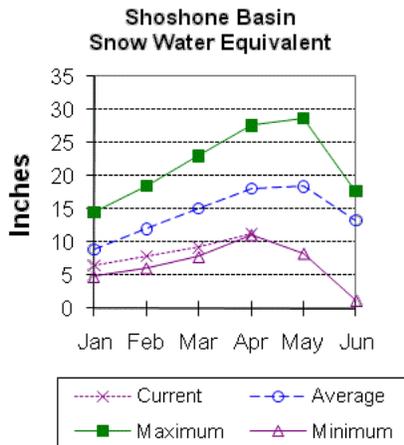
=====
BIGHORN RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010
=====
Watershed      Number of Data Sites      This Year as Percent of
                Last Year      Average
=====
NOWOOD RIVER    5                72                77
GREYBULL RIVER  2                73                74
SHELL CREEK    4                67                69
BIGHORN (Boysen-Bighorn)  11              70                73
=====

```

# Shoshone and Clarks Fork River Basin

## Snow

Snowpack in these basins is below average for this time of year. Snow Water Equivalent (SWE) is 61% of average in the Shoshone River Basin. The Clarks Fork River Basin SWE is 63% of average. See the "Basin Summary of Snow Course Data" at the front of this report for details.



425,900 ac-ft are stored in the reservoir compared to 432,900 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

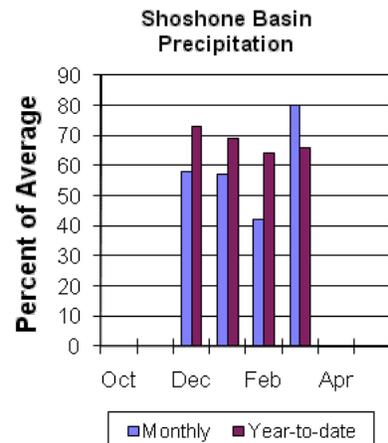
The 50% exceedance forecasts for the April through September period are expected to be below average for the basin. The North Fork Shoshone River at Wapiti is 355,000 ac-ft (68% of average). The South Fork of the Shoshone River near Valley is 164,000 ac-ft (62% of average), and the South Fork above Buffalo Bill Reservoir runoff is 142,000 ac-ft (63% of average). The Buffalo Bill Reservoir inflow is expected to yield around 520,000 ac-ft (65% of average). The yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be around 360,000 ac-ft (61% of average). See the following page for detailed runoff volumes.

## Precipitation

Precipitation for last month was 80% of average (54% of last year). Monthly percentages range from 56-100% of average. The basin year-to-date precipitation is now 66% of average (62% of last year). Year-to-date percentages range from 51-78% of average for the 8 reporting stations.

## Reservoir

Current storage in Buffalo Bill Reservoir is about 109% of average (98% of last year's storage) - the reservoir is at about 66% of capacity. Currently, about



SHOSHONE & CLARKS FORK RIVER BASINS  
Streamflow Forecasts - April 1, 2010

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)
NF SHOSHONE RIVER at Wapiti							
APR-JUL	240	285	315	69	345	390	460
APR-SEP	265	320	355	68	390	445	520
SF SHOSHONE RIVER nr Valley							
APR-JUL	106	128	143	64	158	180	225
APR-SEP	120	146	164	62	182	210	265
SF SHOSHONE RIVER abv Buffalo Bill							
APR-JUL	75	113	138	64	163	200	215
APR-SEP	74	114	142	63	170	210	225
BUFFALO BILL DAM Inflow (2)							
APR-JUL	340	420	475	66	530	610	720
APR-SEP	360	455	520	65	585	680	805
CLARKS FORK RIVER nr Belfry							
APR-JUL	255	305	340	63	375	425	540
APR-SEP	265	320	360	61	400	455	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.

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

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
BUFFALO BILL	646.6	425.9	432.9	390.9

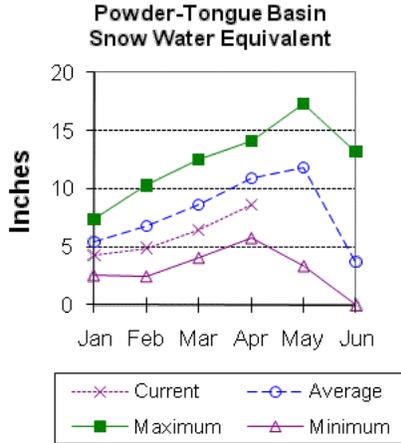
SHOSHONE & CLARKS FORK RIVER BASINS  
Watershed Snowpack Analysis - April 1, 2010

Watershed	Number of	This Year as Percent of	
	Data Sites	Last Year	Average
SHOSHONE RIVER	6	62	61
CLARKS FORK in WY	7	61	63

# Powder and Tongue River Basins

## Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 71% of average. The Goose Creek drainage is 71% of average. SWE in the Clear Creek drainage is 80% of average. Crazy Woman Creek drainage is 84% of average. Upper Powder River drainage SWE is 88% of average. Powder River Basin SWE in Wyoming is 84% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## Precipitation

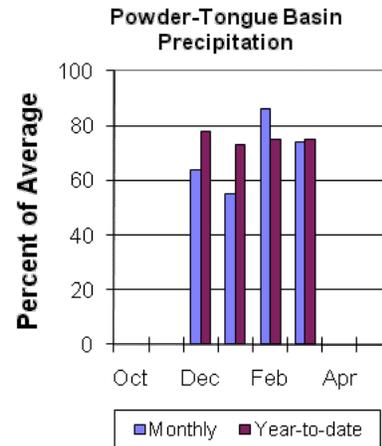
Last month's precipitation was 74% of average for the 9 reporting stations (84% of last year). Monthly percentages range from 46-147% of average. Year-to-date precipitation is 75% of average in the basin; this is 67% of last year at this time. Precipitation for the year ranges from 61-88% of average.

## Reservoir

The Tongue River Reservoir is at 73% of capacity; 192% of average; and 93% of last year at 57,700 ac-ft.

## Streamflow

The 50% exceedance forecasts for the April through September period are expected to be below average for the basins. The yield for Tongue River near Dayton is 72,000 ac-ft (66% of average). Big Goose Creek near Sheridan is 34,000 ac-ft (57% of average). Little Goose Creek near Bighorn is 26,000 ac-ft (62% of average). The Tongue River Reservoir Inflow is 123,000 ac-ft (49% of average). The Middle Fork of the Powder River near Barnum is 13,200 ac-ft (71% of average). The North Fork of the Powder River near Hazelton should yield around 7,600 ac-ft (73% of average). Rock Creek near Buffalo will yield about 14,400 ac-ft (60% of average), and Piney Creek at Kearny should yield about 29,000 ac-ft (56% of average). The Powder River at Moorehead is 114,000 ac-ft (50% of average). The Powder River near Locate is 124,000 ac-ft (48 of average). See the following page for detailed runoff volumes.



**POWDER & TONGUE RIVER BASINS**  
Streamflow Forecasts - April 1, 2010

Forecast Pt Forecast Period	Future Conditions					30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)	
TONGUE RIVER nr Dayton (2)						
APR-JUL	36	52	63	66	74	96
APR-SEP	42	60	72	66	84	109
BIG GOOSE CREEK nr Sheridan						
APR-JUL	14.1	24	30	58	36	52
APR-SEP	17.7	27	34	57	41	60
LITTLE GOOSE CREEK nr Big Horn						
APR-JUL	11.1	17.0	21	62	25	34
APR-SEP	15.2	22	26	62	30	42
TONGUE RIVER RESERVOIR Inflow (2)						
APR-JUL	46	75	115	52	155	220
APR-SEP	49	81	123	49	165	250
MIDDLE FORK POWDER nr Barnum						
APR-JUL	7.1	10.5	12.8	72	15.1	17.8
APR-SEP	7.4	10.8	13.2	71	15.6	18.7
NORTH FORK POWDER nr Hazelton						
APR-JUL	4.6	6.0	7.0	73	8.0	9.6
APR-SEP	5.0	6.5	7.6	73	8.7	10.4
ROCK CREEK nr Buffalo						
APR-JUL	4.8	9.1	12.0	60	14.9	19.9
APR-SEP	6.8	11.3	14.4	60	17.5	24
PINEY CREEK at Kearny						
APR-JUL	8.1	20	28	57	36	49
APR-SEP	8.4	21	29	56	37	52
POWDER RIVER at Moorehead						
APR-JUL	41	59	102	50	149	205
APR-SEP	46	67	114	50	162	230
POWDER RIVER nr Locate						
APR-JUL	46	68	114	49	170	235
APR-SEP	50	73	124	48	184	260

\* 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.

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

Reservoir	Usable Capacity	Usable Storage *****		
		This Year	Last Year	Average
TONGUE RIVER	79.1	57.7	62.1	30.1

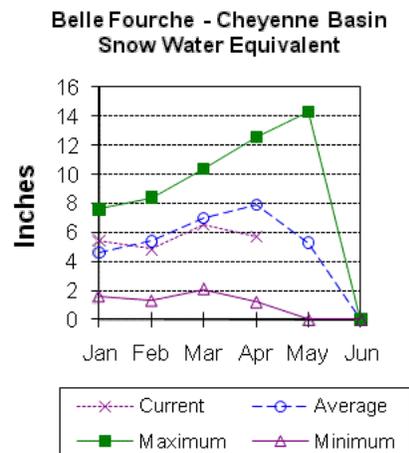
POWDER & TONGUE RIVER BASINS  
Watershed Snowpack Analysis - April 1, 2010

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
UPPER TONGUE RIVER	10	68	71
GOOSE CREEK	3	69	71
CLEAR CREEK	4	72	80
CRAZY WOMAN CREEK	3	78	84
UPPER POWDER RIVER	4	75	88
POWDER RIVER in WY	8	74	84

# Belle Fourche and Cheyenne River Basins

## Snow

The Belle Fourche River Basin SWE is 72% of average for this time of year. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## Precipitation

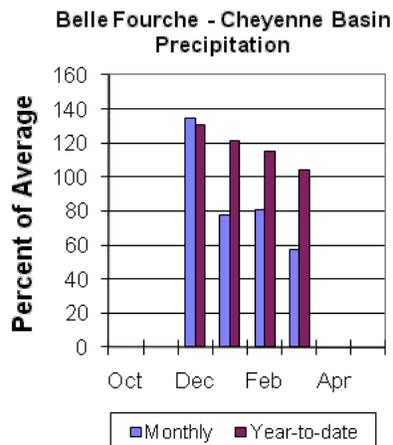
Precipitation for last month was 57% of average or 39% of last year in the Black Hills. There were 2 reporting stations. Monthly percentages range from 50-73%. Year-to-date precipitation is 104% of average and 73% of last year's amount. Yearly percentages range from 100-108% of average.

## Reservoir

Current reservoir storage is around 99% of average in the basin. Angostura is currently storing 76% of average (83,900 ac-ft), about 69% of capacity. Belle Fourche reservoir is storing 114% of average (149,700 ac-ft), about 84% of capacity. Deerfield reservoir is storing 106% of average (14,300 ac-ft), about 94% of capacity. Keyhole reservoir is storing 93% of average (105,200 ac-ft), about 54% of capacity. Pactola reservoir is storing 115% of average (53,700 ac-ft), about 98% of capacity. Shadehill reservoir is storing 102% of average (64,600 ac-ft), about 79% 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% exceedance forecasts for the April through July period. The Deerfield Reservoir Inflow is 5,500 ac-ft (108% of average). Pactola Reservoir Inflow is expected to yield around 24,000 ac-ft (104% of average). See the following page for detailed runoff volumes.



**BELLE FOURCHE & CHEYENNE RIVER BASINS**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
DEERFIELD RESERVOIR Inflow
  APR-JUL    2.5   4.3   5.5   108   6.7   8.5   5.1
PACTOLA RESERVOIR Inflow
  APR-JUL    7.1  17.2  24   104   31   41   23
=====

```

\* 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.

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

```

=====
Reservoir          Usable Capacity   ***** Usable Storage *****
                  This Year      Last Year      Average
=====
ANGOSTURA          122.1            83.9          74.1          110.1
BELLE FOURCHE      178.4            149.7         169.1         130.9
DEERFIELD          15.2             14.3          14.8           13.5
KEYHOLE            193.8            105.2         98.1          113.5
PACTOLA            55.0             53.7          54.1           46.8
SHADEHILL          81.4             64.6          115.9          63.1
=====

```

BELLE FOURCHE & CHEYENNE RIVER BASINS  
Watershed Snowpack Analysis - April 1, 2010

```

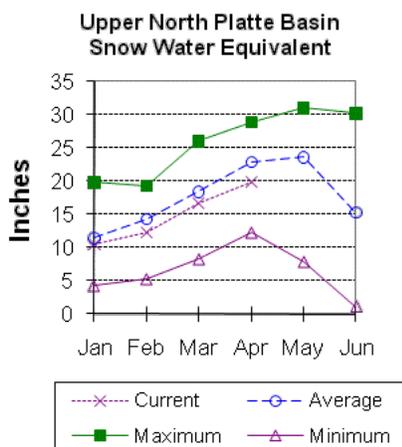
=====
Watershed          Number of Data Sites   This Year as Percent of
                  Last Year      Average
=====
BELLE FOURCHE      8              60              72
=====

```

# Upper North Platte River Basin

## Snow

The SNOTELS and snow courses above Seminoe Reservoir are showing about 87% of average (SWE) for this time of the year. SWE in the drainage area above Northgate is 73% of average at this time. SWE in the Encampment River drainage is about 88% of average. Brush Creek SWE for the year is about 106% of average. Medicine Bow and Rock Creek drainages SWE are about 90% of



average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

## Precipitation

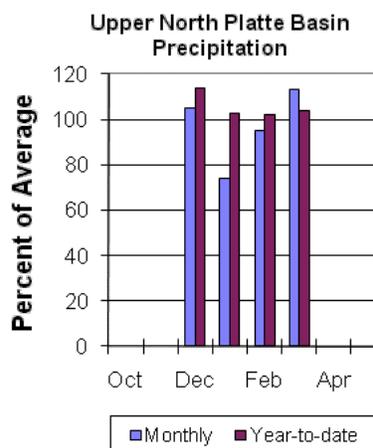
Eight reporting stations show last month's precipitation at 113% of average or 97% of last year's amount. Precipitation varied from 56-174% of average last month. Total water-year-to-date precipitation is about 104% of average for the basin, which is about 93% of last year's amount. Year to date percentage ranges from 73-128% of average.

## Reservoirs

Seminoe Reservoir is estimated to be storing 689,200 ac-ft or 68% of capacity. Seminoe Reservoir is also storing about 139% of average for this time of the year and 131% 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 and are expected to be below average for the Upper North Platte River Basin. Yield for the North Platte River near Northgate will be around 148,000 ac-ft (55% of average). The Encampment River near Encampment is 137,000 ac-ft (83% of average). Rock Creek near Arlington is 55,000 ac-ft (97% of average). The Sweetwater River near Alcova forecast is for 45,000 ac-ft (56% of average). Seminoe Reservoir inflow should be around 590,000 ac-ft (69% of average). See the following table for more detailed information on projected runoff.



**UPPER NORTH PLATTE RIVER BASIN**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
NORTH PLATTE RIVER nr Northgate
  APR-JUL    40    95    133    54    171    225    245
  APR-SEP    42    105   148    55    191    255    270

ENCAMPMENT RIVER nr Encampment
  APR-JUL    94    115    129    83    143    164    156
  APR-SEP    99    122    137    83    152    175    165

ROCK CREEK nr Arlington
  APR-JUL    39    47    52    98    57    65    53
  APR-SEP    41    49    55    97    61    69    57

SWEETWATER RIVER nr Alcova
  APR-JUL    12.9   30    41    55    52    69    74
  APR-SEP    14.5   33    45    56    57    76    80

SEMINOE RESERVOIR Inflow
  APR-JUL    188   405   550    69   695   910   800
  APR-SEP    192   430   590    69   750   990   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.

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

```

=====
Usable ***** Usable Storage *****
Capacity This Year Last Year Average
=====
Reservoir
SEMINOE          1016.7      689.2      528.1      495.9
=====

```

UPPER NORTH PLATTE RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2010

```

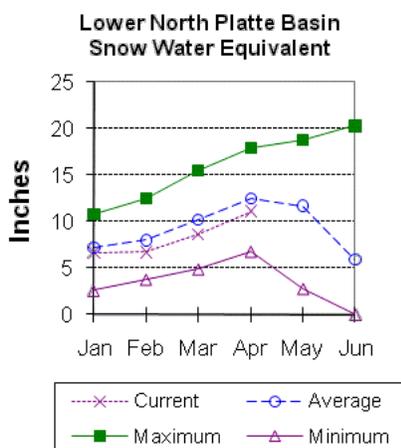
=====
Number of This Year as Percent of
Data Sites Last Year Average
=====
Watershed
N PLATTE above Northgate      7      72      73
ENCAMPMENT RIVER              4      84      88
BRUSH CREEK                   5     102     106
MEDICINE BOW & ROCK CREEKS    3      98      90
N PLATTE above Seminoe       19      85      87
=====

```

## Lower North Platte River Basin

### Snow

SWE for the North Platte River Basin is at 89% of average. The Sweetwater drainage SWE is currently at 72% of average. Deer and LaPrele Creek SWE are at 100% of average. SWE for the North Platte above the Laramie River drainage is 86% of average. SWE for the Laramie River above Laramie is 95% of average. SWE for the Little Laramie River is 93% of average. The Laramie River above mouth, SWE is 93% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



### Precipitation

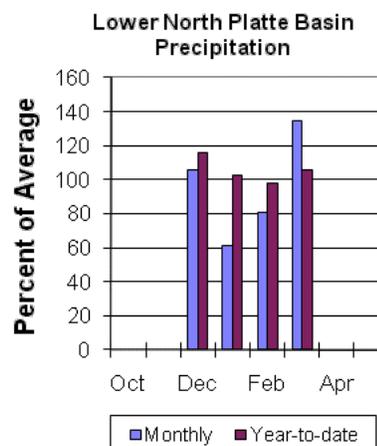
Last month's precipitation was 135% of average or 125% of last year's amount. Of the 8 reporting stations, percentages for the month range from 84-174%. The water year-to-date precipitation for the basin is currently 106% of average (108% of last year). Year-to-date percentages range from 95-162% of average.

### Reservoir

The Lower North Platte River basin reservoir storage is above average at 108%. Reservoir storage is as follows: Alcova 157,700 ac-ft (99% of average); Glendo 362,600 ac-ft (85% of average); Guernsey 22,000 ac-ft (107% of average); Pathfinder 736,400 ac-ft (99% of average); Seminoe 689,200 ac-ft (139% of average); and Wheatland #2 81,400 ac-ft (150% of average):

### 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 45,000 ac-ft (56% of average). Deer Creek at Glenrock is forecast to yield 42,000 ac-ft (114% of average). LaPrele Creek above the reservoir is forecast to yield 23,000 ac-ft (96% of average). North Platte - Alcova to Orin Gain is forecast to yield 146,000 ac-ft (91% of average). North Platte River below Glendo Reservoir is 605,000 ac-ft (61% of average), and below Guernsey Reservoir is anticipated to yield around 620,000 ac-ft (61% of average). Laramie River near Woods Landing should yield around 127,000 ac-ft (94% of average). The Little Laramie near Filmore should produce about 64,000 ac-ft (100% of average). See the following table for more detailed information on projected runoff.



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

Streamflow Forecasts - April 1, 2010

Forecast Pt Forecast Period	==== Drier ==== Future Conditions ==== Wetter ====					30 Yr Avg (1000AF)	
	Chance of Exceeding * =====						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
=====							
SWEETWATER RIVER nr Alcova							
APR-JUL	12.9	30	41	55	52	69	74
APR-SEP	14.5	33	45	56	57	76	80
DEER CREEK at Glenrock							
APR-JUL	15.3	31	41	111	51	67	37
APR-SEP	16.4	32	42	114	52	68	37
LaPRELE CREEK abv Reservoir							
APR-JUL	9.2	16.8	22	92	27	35	24
APR-SEP	10.1	17.8	23	96	28	36	24
NORTH PLATTE - Alcova to Orin Gain							
APR-JUL	48	100	136	90	172	225	152
APR-SEP	58	110	146	91	182	235	161
NORTH PLATTE RIVER blw Glendo Res (2)							
APR-JUL	335	495	600	63	705	865	960
APR-SEP	325	495	605	61	715	885	990
NORTH PLATTE RIVER blw Guernsey Res (2)							
APR-JUL	275	470	605	62	740	935	970
APR-SEP	280	480	620	61	760	960	1010
LARAMIE RIVER nr Woods							
APR-JUL	76	99	115	94	131	154	123
APR-SEP	83	109	127	94	145	171	135
LITTLE LARAMIE RIVER nr Filmore							
APR-JUL	43	52	59	100	66	75	59
APR-SEP	45	56	64	100	72	83	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.

=====

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

Reservoir Storage (1000AF) End of March

Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
ALCOVA	184.3	157.7	158.4	160.1
GLENDO	506.4	362.6	323.5	427.8
GUERNSEY	45.6	22.0	20.1	20.6
PATHFINDER	1016.5	736.4	404.8	743.7
SEMINOE	1016.7	689.2	528.1	495.9
WHEATLAND #2	98.9	81.4	51.7	54.3

=====

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

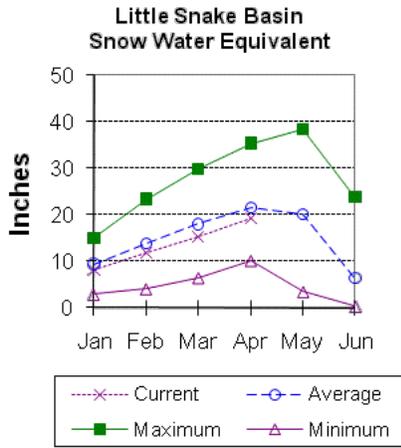
Watershed Snowpack Analysis - April 1, 2010

Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
SWEETWATER	3	112	72
DEER & LaPRELE CREEKS	2	108	100
N PLATTE abv Laramie R.	24	88	86
LARAMIE RIVER abv Laramie	11	98	95
LITTLE LARAMIE RIVER	5	91	93
LARAMIE RIVER above mouth	14	95	93
NORTH PLATTE	31	90	89

# Little Snake River Basin

## Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage is 89% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## Precipitation

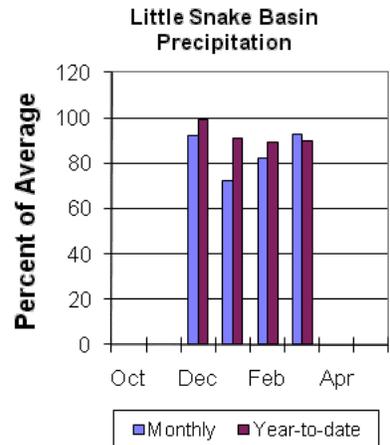
Precipitation across the basin was 93% of average (86% of last year) for the 5 reporting stations. Last month's precipitation ranged from 59-129% of average. The Little Snake River basin water-year-to-date precipitation is currently 90% of average (79% of last year). Year-to-date percentages range from 77-103% of average.

## Reservoir

High Savery Dam - Pending

## Streamflow

The 50% exceedance forecast for the April through July time frame on the Little Snake River drainage is expected to be below average this year. The Little Snake River near Slater should yield around 120,000 ac-ft (76% of average). The Little Snake River near Dixon is estimated to yield around 250,000 ac-ft (76% of average). See the following table for more detailed information on projected runoff.



**LITTLE SNAKE RIVER BASIN**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt | ===== Chance of Exceeding * ===== |
Forecast    | 90%    70%    | 50%    | 30%    10%    | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
Little Snake River nr Slater
APR-JUL      85     105     120     76     136     161     159

Little Snake River nr Dixon
APR-JUL      150    205     250     76     300     375     330
    
```

\* 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.

```

=====
LITTLE SNAKE RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010
=====
    
```

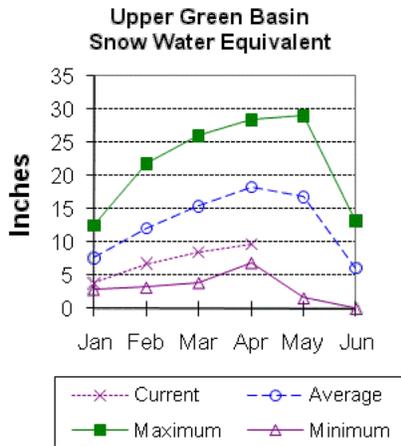
```

=====
Watershed          Number of          This Year as Percent of
                   Data Sites        Last Year          Average
=====
LITTLE SNAKE RIVER          8              77              89
=====
    
```

# Upper Green River Basin

## Snow

SWE in the Green River Basin above Warren Bridge is about 42% of average. SWE for the West Side of Upper Green River Basin is about 58% of average.



Newfork River Basin SWE is now about 51% of average. Big Sandy-Eden Valley Basin is 54% of average. SWE in the Green River Basin above Fontenelle Reservoir is about 53% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

## Precipitation

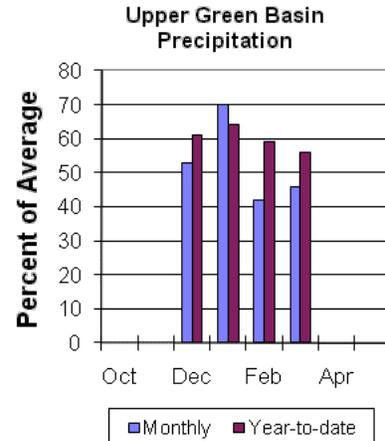
The 11 reporting precipitation sites in the basin were 46% of average last month (47% of last year). Last month's precipitation varied from 32-61% of average. Water year-to-date precipitation is about 56% of average (57% of last year). Year to date percentage of average ranges from 48-69% for the reporting stations.

## Reservoir

Storage in Big Sandy Reservoir is 19,900 ac-ft or 52% of capacity. This is 96% of average. Eden Reservoir - No Report. Fontenelle Reservoir is 111,900 ac-ft or 32% of capacity; 78% of average. This is 81% of average for the Upper Green River basin. 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 below average. The yield on the Green River at Warren Bridge is 130,000 ac-ft (49% of average). Pine Creek above Fremont Lake is 66,000 ac-ft (64% of average). New Fork River near Big Piney is 200,000 ac-ft (51% of average). Fontenelle Reservoir Inflow is estimated to be 360,000 ac-ft (42% of average), and Big Sandy near Farson is expected to be around 30,000 ac-ft (52% of average). See the following table for more detailed information on projected runoff.



**UPPER GREEN RIVER BASIN**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)|(1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
Green River at Warren Bridge
  APR-JUL    100   117   130   49   143   164   265

Pine Creek abv Fremont Lake
  APR-JUL    54    61    66   64   71    79   104

New Fork River nr Big Piney
  APR-JUL    130   170   200   51   235   285   395

Fontenelle Reservoir Inflow
  APR-JUL    205   290   360   42   435   560   860

Big Sandy River nr Farson
  APR-JUL    20    26    30   52   35    43   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.

```

=====
UPPER GREEN RIVER BASIN
Reservoir Storage (1000AF) End of March
=====
Usable ***** Usable Storage *****
Capacity This Year Last Year Average
=====
BIG SANDY          38.3          19.9          14.1          20.7
EDEN                NO REPORT
FONTENELLE        344.8         111.9         110.6         143.0
=====

```

```

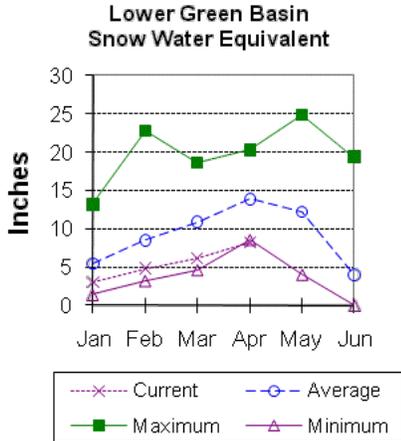
=====
UPPER GREEN RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010
=====
Number of          This Year as Percent of
Data Sites         Last Year          Average
=====
GREEN above Warren Bridge      4          48          42
UPPER GREEN (West Side)        7          62          58
NEWFORK RIVER                   2          52          51
BIG SANDY/EDEN VALLEY          1          65          54
GREEN above Fontenelle        13         58          53
=====

```

# Lower Green River Basin

## Snow

SWE in the Green River Basin above Flaming Gorge is 59% of average. SWE in the Hams Fork Basin is 61% of average. Blacks Fork Basin SWE is currently 69% of average. In the Henrys Fork drainage SWE is 93%. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## Precipitation

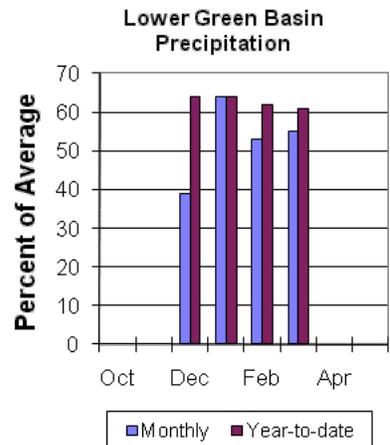
Precipitation was below average for the 3 reporting stations during last month at 55% of average or 52% of last year. Precipitation ranged from 52-61% of average for the month. The basin year-to-date precipitation is currently 61% of average (70% of last year). Year-to-date percentages range from 58-70% of average.

## Reservoirs

Fontenelle Reservoir is currently storing 111,900 ac-ft; this is 78% of average (101% of last year). Flaming Gorge is currently storing 3,195,000 ac-ft; this is 109% of average (107% of last year). Viva Naughton is currently storing 25,900 ac-ft, 93% of average and 61% 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 50% exceedance forecasts for the April through July runoff period in the Lower Green River Basin are forecast to be below average. The Green River near Green River is forecast to yield about 380,000 ac-ft (43% of average). The Blacks Fork near Robertson is forecast to yield 63,000 ac-ft (66% of average). East Fork of Smiths Fork near Robertson is forecast to yield 19,000 ac-ft (66% of average). Hams Fork below Pole Creek near Frontier is forecast to be 30,000 ac-ft (46% of average). The Hams Fork Inflow to Viva Naughton Reservoir is forecast to be 37,000 ac-ft (42% of average). The Flaming Gorge Reservoir inflow will be about 450,000 ac-ft (38% of average). See the following table for more detailed information on projected runoff.



**LOWER GREEN RIVER BASIN**

Streamflow Forecasts - April 1, 2010

```

=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)|(1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
Green River nr Green River, WY (2)
  APR-JUL    220   310   380   43   455   575   875

Blacks Fork nr Robertson
  APR-JUL    42    54    63   66   73    88   95

EF of Smiths Fork nr Robertson (2)
  APR-JUL   11.1  15.6  19.0  66   23   29   29

Hams Fk blw Pole Ck nr Frontier
  APR-JUL   18.0   25    30   46   36   45   65

Hams Fork Inf to Viva Naughton Res
  APR-JUL    21    30    37   42   45   58   89

Flaming Gorge Reservoir Inflow
  APR-JUL   230   335   450   38   580   800  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.

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

```

=====
Usable ***** Usable Storage *****
Capacity This Year Last Year Average
=====
Reservoir
=====
FONTENELLE          344.8      111.9      110.6      143.0
FLAMING GORGE      3749.0     3195.0     2986.0     2920.0
VIVA NAUGHTON RES   42.4        25.9        ----        27.8
=====

```

LOWER GREEN RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2010

```

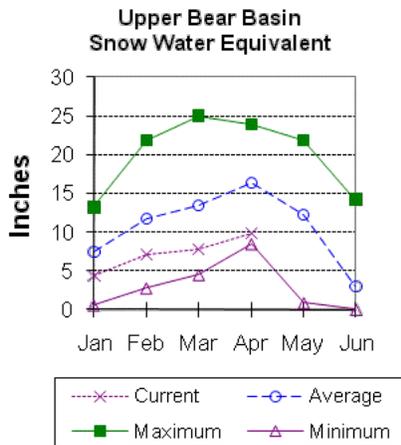
=====
Number of This Year as Percent of
Data Sites Last Year Average
=====
Watershed
=====
HAMS FORK RIVER          4          68          61
BLACKS FORK             5          92          69
HENRYS FORK             3         156          93
GREEN above Flaming Gorge 24          68          59
=====

```

# Upper Bear River Basin

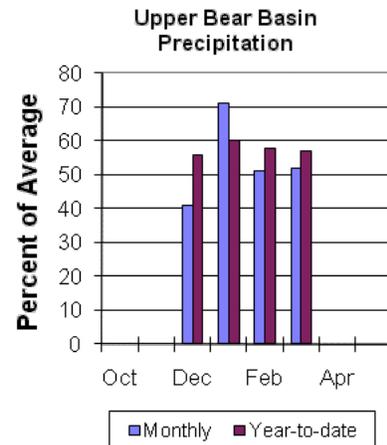
## Snow

Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is estimated to be 66% of average. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is estimated at 62% of average. Bear River Basin SWE, above the Idaho State line, is 60% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## Precipitation

Precipitation for last month was 52% of average for the 2 reporting stations; this is 47% of the precipitation received last year. The year-to-date precipitation, for the basin, is 57% of average; this is 67% of last year's amount.



## Reservoir

Storage, in Woodruff Narrows reservoir, is about 51,000 ac-ft (156% of average). Current reservoir storage is about 89% of capacity. Reservoir storage last year at this time was 52,400 ac-ft.

## Streamflow

The following 50% exceedance forecasts are for the April through September period. The Bear River near the Utah-Wyoming State Line is 68,000 ac-ft (54% of average). The Bear River above Reservoir near Woodruff is 62,000 ac-ft (44% of average). The Smiths Fork River near Border is 52,000 ac-ft (43% of average). See the following table for more detailed information on projected runoff.

**UPPER BEAR RIVER BASIN**

Streamflow Forecasts - April 1, 2010

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=====
<=== Drier === Future Conditions === Wetter ===>
Forecast Pt |===== Chance of Exceeding * =====|
Forecast    | 90%   70%   | 50%   | 30%   10%   | 30 Yr Avg
Period      |(1000AF) (1000AF)| (1000AF) (% AVG.)|(1000AF) (1000AF)| (1000AF)
=====
Bear River nr UT-WY State Line
APR-JUL     36    53    65    58    77    94    113
APR-SEP     36    55    68    54    81   100   125

Bear River ab Reservoir nr Woodruff
APR-JUL     18.0  43    60    44    77   102   136
APR-SEP     19.0  45    62    44    79   105   142

Smiths Fork nr Border
APR-JUL     21    37    48    47    59    75   103
APR-SEP     21    40    52    43    64    83   121
=====

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\* 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.

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UPPER BEAR RIVER BASIN
Reservoir Storage (1000AF) End of March
=====
Reservoir          Usable      ***** Usable Storage *****
                   Capacity    This Year  Last Year  Average
=====
WOODRUFF NARROWS          57.3      51.0      52.4      32.7
=====

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=====
UPPER BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 2010
=====
Watershed          Number of          This Year          Last Year
                   Data Sites        as Percent of Average
=====
UPPER BEAR RIVER in Utah          7          71          66
SMITHS & THOMAS FORKS             4          66          62
BEAR RIVER abv ID line            9          66          60
=====

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The Entire State of Wyoming

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=====
NORTHWEST WYOMING          74          61          59
NORTHEAST WYOMING         23          68          76
SOUTHEAST WYOMING         34          85          87
SOUTHWEST WYOMING         33          70          68
=====

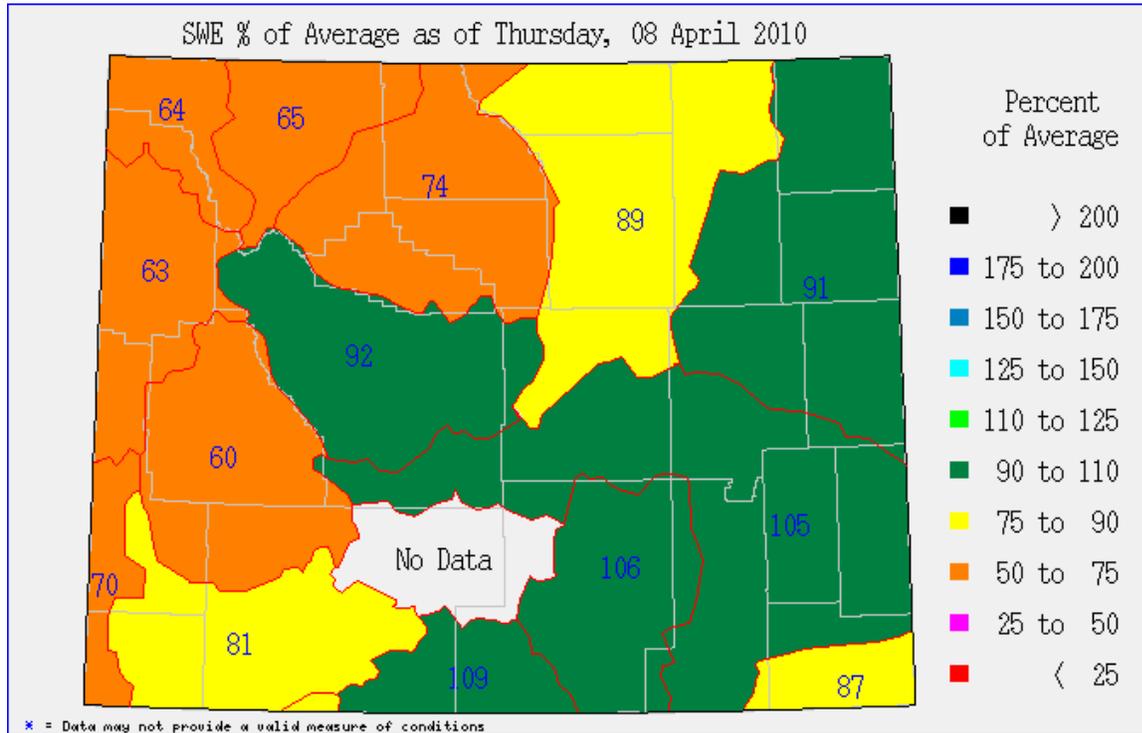
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## **The Following Agencies and Organizations Cooperate with the Natural Resources Conservation Service on the Snow Survey Work.**

### **FEDERAL:**

United States Department of the Interior (National Park Service)

United States Department of Agriculture (Forest Service)

United States Department of the Interior (Bureau of Reclamation)

United States Department of Commerce NOAA (National Weather Service)

### **State:**

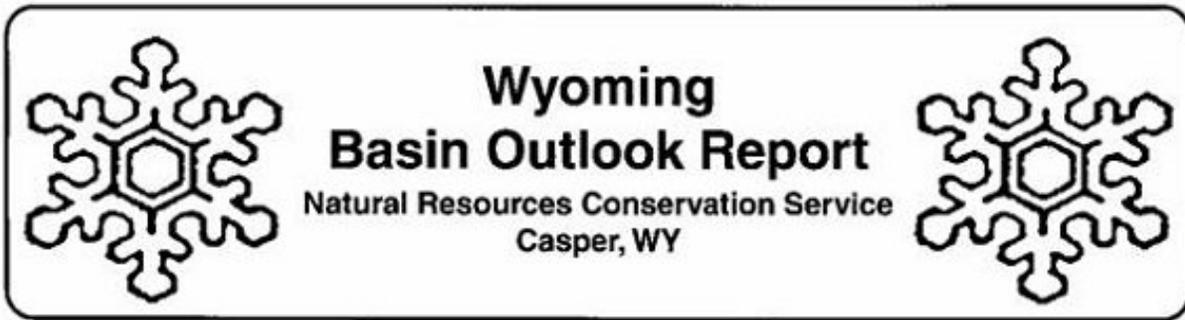
The Wyoming State Engineer's Office

The University of Wyoming

### **Local:**

The City of Cheyenne

The City of Rawlins



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