

Natural Resources Conservation Service

# Wyoming Basin Outlook Report January 1, 2012



Kendall Ranger Station SNOTEL (north of Cora)

## **Basin Outlook Reports**

#### And

## Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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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 January  $1^{\rm st}$  at 88%. December precipitation for the basins varied from 25-94% of average. Year-to-date precipitation for Wyoming basins varied from 65-131% of average. Forecasted runoff varies from 58-120% of average across the Wyoming basins for an overall average of 81%. Basin reservoir levels for Wyoming vary from 34-170% of average for an overall average of 92%.

#### Snowpack

Snow water equivalent (SWE), across Wyoming is below average for this time of year at 88%. SWE in the NW portion of Wyoming is now about 86% of average (71% of last year). NE Wyoming SWE is currently about 119% of average (129% of last year). The SE Wyoming SWE is currently about 73% of average (50% of last year). The SW Wyoming SWE is about 69% of average (50% of last year).

#### **Precipitation**

Last month's precipitation was well below average across Wyoming. The Powder & Tongue River Basins had the highest precipitation for the month at 94% of average. The Upper Bear River Basin had the lowest precipitation amount at 25% of average. The following table displays the major river basins and their departure from average for this month.

	Departure		Departu	ıre
Basin f	rom average	Basin	from avera	ge
Snake River	-44%	Upper North Platt	e River -5	0%
Yellowstone & Madison	-16%	Lower North Platt	e -1	2%
Wind River	-17%	Little Snake Rive	r -6	2%
Big Horn	-18%	Upper Green River	-5	2%
Shoshone & Clarks Fork	-09%	Lower Green River	-7	2%
Powder & Tongue River	-06%	Upper Bear River	-7	5%
Belle Fourche & Cheyenn	e -15%			

#### **Streams**

Stream flow yield for June to September is expected to be well below average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be about 81% (varying from 58- 120% of average). The Snake River and Upper Yellowstone & Madison River Basins are expected to yield about 80% and 93% of average, respectively; 69-94% of average for the various forecast points in the basins. Yields from the Wind and Bighorn River Basins are expected to be about 75% and 95% of average, respectively; varying from 75-113% of average in the basins. Yields from the Shoshone and Clarks Fork River Basins of Wyoming are expected to yield about 100% and 98% of average, respectively; varying from 98-103% of average. Yields from the Tongue & Powder River Basins are expected to be about 120% and 108% of average, respectively; varying from 91-125% of average. Yields for the Belle Fourche & Cheyenne River Basins are expected to be about 98% and 91% of average, respectively. Yields for the Upper and Lower North Platte River of Wyoming are expected to be about 61% and 58% of average, respectively; varying from 58-113% of average. Yields for the Little Snake, Green River, and Little Bear of Wyoming are expected to be 76%, 64%, and 68% of average respectively; yield estimates vary from 64-82% of average.

#### Reservoirs

Reservoir storage varies widely across the state however reservoir storage is at 92% of average for the entire state. Reservoirs on the North Platte River are average at 100%. Reservoirs in the northeast are above average in storage at 118%. Reservoirs in the Wind River Basin are below average at 74%. Reservoirs on the Big Horn are below average at 96%. The Buffalo Bill Reservoir on the Shoshone is below average at 79%. Reservoirs on the Green River are average at 100%. See the following table for further information about reservoir storage.

## Major Reservoirs in Wyoming Jan. 1, 2012

	URRENT AS	LAST YR AS % CAPACITY	AVERAGE AS % CAPACITY	CURRENT AS % AVERAGE	CURRENT AS % LAST YR
WYOMING AND SU	RROUNDING	STATES			
ALCOVA	85	85	84	101	100
ANGOSTURA	76	77	79	96	98
BELLE FOURCHE	71	75	51	139	94
BIG SANDY	56	47	48	116	118
BIGHORN LAKE	70	66	67	105	107
BOYSEN	107	97	104	103	110
BUFFALO BILL	70	70	65	109	100
BULL LAKE	62	46	57	108	133
DEERFIELD	99	96	81	122	103
ENNIS LAKE	73	70	77	95	105
FLAMING GORGE	91	83	81	112	109
FONTENELLE	60	61	61	99	99
GLENDO	65	69	56	116	94
GRASSY LAKE	78	84	76	102	93
GUERNSEY	24	26	16	150	90
HEBGEN LAKE	86	84	71	121	103
JACKSON LAKE	75	78	57	131	96
KEYHOLE	85	56	52	162	151
PACTOLA	95	96	83	114	99
PALISADES	88	58	74	119	152
PATHFINDER	74	77	63	119	97
PILOT BUTTE	80	79	64	126	102
SEMINOE	86	83	62	139	104
SHADEHILL	46	66	62	75	70
TONGUE RIVER	67	64	28	237	105
VIVA NAUGHTON	RES 68	76	75	92	90
WHEATLAND #2	71	58	43	167	124
WOODRUFF NARRO	WS 75	70	41	182	108
TOTAL 24 RESV	S 83	76	71	117	109

## BASIN SUMMARY OF SNOTEL and SNOW COURSE DATA January 2012

SNOW COURSE E	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
BALD MOUNTAIN SNOTEI	9380	1/01/12	43	9.7	10.1	9.7
BASE CAMP SNOTEL	7030	1/01/12		8.6	10.3	8.2
BATTLE MTN. SNOTEL	7440	1/01/12	18	4.4	6.3	4.1
BEARTOOTH LK. SNOTEI	9280	1/01/12	51	11.1	12.4	11.5
BEAR TRAP SNOTEL	8200	1/01/12	19	3.2	3.3	2.6
BIG GOOSE SNOTEL	7760	1/01/12	30	6.0	2.8	4.4
BIG SANDY SNOTEL	9080	1/01/12	22	4.0	8.2	6.9
BLACKWATER SNOTEL	9780	1/01/12	55	13.1	14.1	12.0
BLIND BULL SNOTEL	8900	1/01/12	37	7.8	14.3	13.2
BONE SPGS. SNOTEL	9350	1/01/12	43	10.3	7.9	7.8
BROOKLYN LK. SNOTEL	10220	1/01/12		6.2	14.5	10.8
BURGESS JCT. SNOTEL	7880	1/01/12	32	6.8	3.6	5.5
BURROUGHS CRK SNOTEI	8750	1/01/12	29	5.7	7.9	6.7
CANYON SNOTEL	8090	1/01/12	31	5.5	8.6	6.1
CASPER MTN. SNOTEL	7850	1/01/12	36	9.0	5.9	6.9
CASTLE CREEK SNOTEL	8400	1/01/12	18	3.1	3.5	
CHALK CK #1 SNOTEL	9100	1/01/12	24	5.5	17.2	10.1
CHALK CK #2 SNOTEL	8200	1/01/12	23	3.9	12.0	6.7
CINNABAR PARK SNOTEI	9690	1/01/12		6.7	12.9	9.9
CLOUD PEAK SNOTEL	9850	1/01/12	38	8.2	6.8	5.7
COLE CANYON SNOTEL	5910	1/01/12	12	2.6	2.8	3.3
COLD SPRINGS SNOTEL	9630	1/01/12	21	4.2	4.7	4.6
COTTONWOOD CR SNOTEI		1/01/12		6.0	14.3	9.7
CROW CREEK SNOTEL	8830	1/01/12	14	3.9	6.6	3.4
DARBY CANYON	8250	1/03/12	32	8.7	13.6	10.5
DEER PARK SNOTEL	9700	1/01/12	23	5.1	12.6	6.7
DIVIDE PEAK SNOTEL	8860	1/01/12	27	7.0	11.8	9.2
DOME LAKE SNOTEL	8880	1/01/12	34	6.7	3.6	6.1
EAST RIM DIV SNOTEL	7930	1/01/12	25	4.2	6.6	5.9
ELBO RANCH	7100	1/01/12	21	3.8	7.6	
ELKHART PARK SNOTEL	9400	1/01/12		4.4	6.5	6.3
EVENING STAR SNOTEL	9200	1/01/12	62	12.9	15.9	13.7
GRAND TARGHEE SNOTEI		1/01/12	54	15.3	24.3	
GRANITE CRK SNOTEL	6770	1/01/12		5.4	10.9	7.6
GRASSY LAKE SNOTEL	7270	1/01/12	50	10.8	16.5	14.7
GRAVE SPRINGS SNOTEI		1/01/12	19	3.7	3.6	4.0
GROS VENTRE SNOTEL	8750	1/01/12	23	4.2	8.7	6.9
HANSEN S.M. SNOTEL	8360	1/01/12	18	3.4	3.0	3.3
HAMS FORK SNOTEL	7840	1/01/12	17	3.3	7.7	5.5
HOBBS PARK SNOTEL	10100	1/01/12	33	8.1	8.4	7.6
INDIAN CREEK SNOTEL	9430	1/01/12		7.2	16.6	12.5
KELLEY R.S. SNOTEL	8180	1/01/12	22	4.6	11.1	7.6
KENDALL R.S. SNOTEL	7740	1/01/12	27	5.5	6.6	6.7
KIRWIN SNOTEL	9550	1/01/12	32	7.2	6.7	5.9
LAKE CAMP	7780	12/31/11	28	3.4	6.8	4.2
LA PRELE SNOTEL	8380	1/01/12	27	4.3	5.4	5.3
LARSEN CREEK SNOTEL	9020	1/01/12	12	2.5	7.6	
LEWIS LAKE SNOTEL	7850	1/01/12	49	11.1	18.8	14.8
LITTLE BEAR RUN	6240	12/29/11	8	1.4	2.1	1.7
LITTLE GOOSE SNOTEL	8870	1/01/12	32	6.6	3.4	
LITTLE WARM SNOTEL	9370	1/01/12	22	3.8	6.5	5.3
LOOMIS PARK SNOTEL	8240	1/01/12		5.0	9.6	8.0
LUPINE CREEK	7380	1/01/12	13	2.5	4.2	4.0
MALLO	6420	12/27/11	16	2.1	4.2	2.9
MARQUETTE SNOTEL	8760	1/01/12	20	4.4	1.7	5.0
MIDDLE POWDER SNOTEI		1/01/12	24	4.4	5.0	5.5
NEW FORK SNOTEL	8340	1/01/12	23	4.7	6.1	5.4
1.1m I OWN DINOTELL	0340	<b>1</b> / <b>0</b> 1/ <b>1</b> 2	د ک	<b>4.</b> /	0.1	J. <del>1</del>

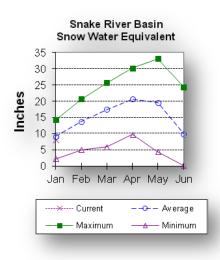
NORRIS BASIN	7500	12/28/11	17	3.5	6.6	5.1
NORTH FRENCH SNOTEL	10130	1/01/12	38	8.0	20.8	13.4
OLD BATTLE SNOTEL	9920	1/01/12	39	10.2	23.3	14.6
OWL CREEK SNOTEL	8980	1/01/12	13	2.7	2.4	2.7
PARKERS PEAK SNOTEL	9400	1/01/12	47	10.7	13.8	10.6
PHILLIPS BNCH SNOTEL	8200	1/01/12	36	7.8	16.5	12.6
POCKET CREEK SNOTEL	9350	1/01/12	23	2.6	6.6	
POWDER RVR.PASS SNTL	9480	1/01/12	23	5.3	6.4	5.3
RENO HILL SNOTEL	8500	1/01/12	35	7.7	7.2	6.6
SAGE CK BASIN SNTL	7850	1/01/12	33	7.0	10.1	5.3
SALT RIVER SNOTEL	7600	1/01/12	19	3.8	8.2	5.4
SAND LAKE SNOTEL	10050	1/01/12	47	10.5	20.5	14.9
SANDSTONE RS SNOTEL	8150	1/01/12	17	3.3	7.3	5.3
SHELL CREEK SNOTEL	9580	1/01/12	38	8.9	7.2	7.3
SNAKE RV STA SNOTEL	6920	1/01/12	32	7.5	9.3	7.9
SNIDER BASIN SNOTEL	8060	1/01/12	23	4.3	10.1	6.9
SOLDIER PARK SNOTEL	8780	1/01/12	23	5.4	2.5	
SOUTH BRUSH SNOTEL	8440	1/01/12	14	2.6	9.2	5.1
SOUTH PASS SNOTEL	9040	1/01/12	29	6.1	10.1	8.2
SPRING CRK. SNOTEL	9000	1/01/12	37	7.6	16.3	12.5
ST LAWRENCE ALT SNTL	8620	1/01/12	17	3.2	3.1	3.8
SUCKER CREEK SNOTEL	8880	1/01/12	40	9.0	5.0	5.2
SYLVAN LAKE SNOTEL	8420	1/01/12	43	8.6	11.7	10.5
SYLVAN ROAD SNOTEL	7120	1/01/12	33	6.7	8.0	6.2
TETON PASS W.S.	7740	1/03/12	31	7.0		
THUMB DIVIDE SNOTEL	7980	1/01/12	35	6.9	11.7	7.6
TIE CREEK SNOTEL	6870	1/01/12	21	4.5	2.0	2.5
TIMBER CREEK SNOTEL	7950	1/01/12	17	3.4	2.1	3.0
TOGWOTEE PASS SNOTEL	9580	1/01/12	42	9.2	14.8	11.7
TOWNSEND CRK SNOTEL	8700	1/01/12	23	4.9	4.8	4.4
TRIPLE PEAK SNOTEL	8500	1/01/12	39	8.3	14.6	11.9
TWO OCEAN SNOTEL	9240	1/01/12	66	15.6	19.0	13.5
WEBBER SPRING SNOTEL	9250	1/01/12	30	7.6	16.1	11.5
WHISKEY PARK SNOTEL	8950	1/01/12	31	6.6	16.6	11.1
WILLOW CREEK SNOTEL	8450	1/01/12	39	8.4	16.7	14.3

NOTE: Missing snow depth entries indicate the site has no snow depth sensor or the sensor is malfunctioning. Missing data under Last Year and Average 71-00 indicates the site is new.

#### Snake River Basin

#### Snow

The Snake River Basin snow water equivalent (SWE) is below average at 75%. SWE in the Snake River Basin above Jackson Lake is 89% of average. Pacific Creek Basin SWE is 112% of average. Gros Ventre River Basin SWE is 74% of average. SWE in the Hoback River drainage is 64% 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 75% 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 56% of average (43% of last year). Last month's percentages range from 23-83% of average for the 16 reporting stations. Water-year-to-date precipitation is 87% of average for the Snake River Basin (69% of last year). Year-to-date percentages range from 59-115% of average.

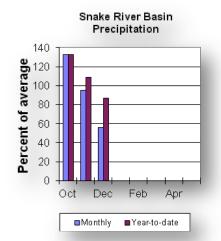
#### Reservoir

Current reservoir storage is 123% of average for the 3 storage reservoirs in the basin. Grassy Lake storage is about 102% of average (11,800 ac-ft compared to 12,700 last year). Jackson Lake storage is 131% of average

(631,100 ac-ft compared to 658,100 ac-ft last year). Palisades Reservoir storage is about 119% of average (1,236,500 ac-ft compared to 811,400 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 785,000 ac-ft (87% of average). Snake River above reservoir near Alpine is 2,310,000 ac-ft (85% of average). The Snake near Irwin is 3,090,000 ac-ft (80% of average). The Snake near Heise is 3,320,000 ac-ft (80% of average). Pacific Creek near Moran is 167,000 ac-ft (94% of



average). Buffalo Fork above Lava near Moran is 325,000 ac-ft (95% of average). Gros Ventre River at Kelly is 230,000 ac-ft (94% of average). Greys River above Palisades Reservoir is 300,000 ac-ft (76% of average). Salt River near Etna is 290,000 ac-ft (69% of average). See the following page for detailed runoff volumes.

7

#### **Snake River Basin**

Streamflow Forecasts - January 1, 2012

=========		=======	=======	=======		=======	
	<=== Dr	ier ===	Future C	onditions	=== Wett	er ===>	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	5	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Snake R nr Mo	oran (1,2)		1	'			
APR-JUL	430	625	710	87	795	990	815
APR-SEP	475	690	785	87	880	1090	905
Snake R nr Al	lpine (1,2	)					
APR-JUL	1110	1730	2010	85	2290	2910	2370
APR-SEP	1290	1990	2310	85	2630	3330	2730
Snake R nr Ii	rwin (1,2)						
APR-JUL	1690	2350	2650	80	2950	3610	3330
APR-SEP	2010	2750	3090	80	3430	4170	3870
Snake R nr He	eise (2)						
APR-JUL	2030	2510	2830	80	3150	3630	3560
APR-SEP	2410	2950	3320	80	3690	4230	4160
Pacific Ck At	. Moran						
APR-JUL	99	135	160	94	185	220	171
APR-SEP	105	142	167	94	192	230	178
Buffalo Fork	ab Lava n	r Moran					
APR-JUL	210	255	285	95	315	360	301
APR-SEP	240	290	325	95	360	410	344
Gros Ventre E	R at Kelly						
APR-JUL	77	143	188	94	235	300	200
APR-SEP	109	181	230	94	280	350	244
Greys R Nr Al	lpine						
APR-JUL	156	215	255	75	295	355	340
APR-SEP	184	255	300	76	345	415	395
Salt R Nr Etr	na						
APR-JUL	79	169	230	68	290	380	340
APR-SEP	114	220	290	69	360	465	420

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

The average is computed for the 1971-2000 base period.

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

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#### SNAKE RIVER BASIN

	Reservoir Storage (100	OAF) End of	December	
	Usable		Usable Storage	
Reservoir	Capacity	This Year	Last Year	Average
GRASSY LAKE	15.2	11.8	12.7	11.6
JACKSON LAKE	847.0	631.1	658.1	481.7
PALISADES	1400.0	1236.5	811.4	1036.5

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#### SNAKE RIVER BASIN

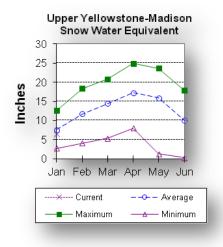
Watershed	Snowpack Analysis	- January 1, 2012	
	Number of	This Year as	Percent of
Watershed	Data Sites	Last Year	Average
SNAKE above Jackson Lake	9	67	89
PACIFIC CREEK	3	80	108
GROS VENTRE RIVER	3	56	74
HOBACK RIVER	5	53	64
GREYS RIVER	4	48	60
SALT RIVER	3	46	62
SNAKE above Palisades	22	59	77

#### **Upper Yellowstone & Madison River Basins**

#### Snow

Snowfall in these basins has been below average so far this year. Snow water equivalent (SWE) is at 76% of average in the Madison drainage. SWE in the Yellowstone drainage is at 93% of average. See the "Basin Summary of Snow

Course Data" at the front of this report for details.



#### Precipitation

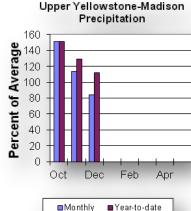
Last month precipitation in the Madison and Yellowstone drainage was about 84% of average (56% of last year). The 5 reporting stations percentages range from 62-111% of average. Water-year-to-date precipitation is about 112% of average (84% of last year's amount). Year to date percentage ranges from 90-148%.

#### Reservoir

Ennis Lake is storing about 29,900 ac-ft of water (73% of

capacity, 95% of average or 105% of last year's volume).

Hebgen Lake is storing about 325,000 ac-ft of water (86% of capacity, 121% of average or 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 April through

September are below average for the basins.

Yellowstone at Lake Outlet is 755,000 ac-ft (94% of average). Yellowstone at Corwin Springs will yield around 1,850,000 ac-ft (94% of average).

Yellowstone near Livingston will yield around 2,110,000 ac-ft (93% of average). Hebgen Reservoir inflow is 420,000 ac-ft (83% of average). See the following page for detailed runoff volumes.

#### **Upper Yellowstone & Madison River Basins**

Streamflow Forecasts - January 1, 2012

	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>		
						İ		
Forecast Pt	======	======	Chance of	Exceeding	* =====	======		
Forecast	90%	70%	50	%	30%	10%	30 Yr Avg	
Period	(1000AF)	(1000AF	)   (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)	
=========			========	=======	=======	=======	========	
Yellowstone H	R at Yello	wstone La	ake					
APR-JUL	435	520	575	98	630	715	590	
APR-SEP	575	680	755	94	830	935	805	
Yellowstone H	R at Corwi	n Spring:	S					
APR-JUL	1240	1440	1580	96	1720	1920	1650	
APR-SEP	1450	1690	1850	94	2010	2250	1970	
Yellowstone H		_						
APR-JUL	1400	1640	1800	95	1960	2200	1900	
APR-SEP	1640	1920	2110	93	2300	2580	2280	
Hebgen Reserv	voir Inflo	w (2)						
APR-JUL	245	295	330	84	365	415	395	
APR-SEP	315	380	420	83	460	525	505	

<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that

The average is computed for the 1971-2000 base period.

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

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

	Usable	******	Usable Storage	*****					
Reservoir	Capacity	This Year	Last Year	Average					
=======================================	=========	========	==========	========					
ENNIS LAKE	41.0	29.9	28.5	31.5					
HEBGEN LAKE	377.5	325.1	315.9	267.6					
=======================================	=========	========	==========	=========					

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#### UPPER YELLOWSTONE & MADISON RIVER BASINS

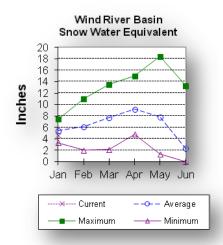
Watershed	Number of Data Sites	This Year as Po	ercent of Average
MADISON RIVER in WY YELLOWSTONE RIVER in WY	8 11	59 71	78 93
	===============	============	=========

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

#### Wind River Basin

#### Snow

The Wind River Basin above Boysen Reservoir has below average snow water equivalent (SWE 86%) for this time of the year. SWE in the Wind River above Dubois is 79% of average. The Little Wind SWE is 99% of average, and the



Popo Agie drainage SWE is about 90% of average. See the "Basin Summary of Snow Course Data" at the front of this report for details.

#### Precipitation

Last month's precipitation in the basin varied from 53-167% of average. Precipitation, for the basin, was about 83% of average from the 8 reporting stations; that is about 63% of last year's amount. Water year-to-date precipitation is 94% of average and about 87% of last year at this time. Year-to-date percentages range from 75-127% of average.

#### Reservoirs

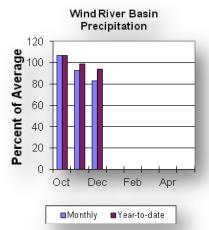
Current storage varies from 103-126% of average. Current storage in Bull Lake is

about 93,500 ac-ft (108% of average) - the reservoir is at 133% of last year. Boysen Reservoir is storing about 103% of average (637,600 ac-ft) - the reservoir is about 110% of last year. Pilot Butte is at 126% of average (25,400 ac-ft) - the reservoir is at 102% 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 88,000 ac-ft (94% of average). The Wind River above Bull Lake Creek is 450,000 ac-ft (84% of average). Bull Lake Creek near Lenore is 178,000 ac-ft (98% of average). Wind River at Riverton will yield around 510,000 ac-ft (80% 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 74,000 ac-ft (88% of average). Little Wind River near Riverton will yield around 240,000 ac-ft (76% of average). Boysen Reservoir inflow will yield around 605,000 ac-ft (75% of average). See the following page for detailed runoff volumes.



#### **Wind River Basin**

Streamflow Forecasts - January 1, 2012

=========	=======	=======	=======	=======	=======	=======	========
	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
Forecast Pt	======	=====	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)응	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
========	=======	=======	=======	=======	=======	========	========
Dinwoody Ck 1							
APR-JUL		57	63	94	69	79	67
APR-SEP		79	88	94	97	109	94
Wind R ab Bul							
APR-JUL	205	300	365	84	430	525	435
APR-SEP	270	375	450	84	525	630	535
Bull Lake Ck	nr Lenore	:					
APR-JUL	113	133	147	99	161	181	148
APR-SEP	135	161	178	98	195	220	182
Wind R at Riv	verton (2)						
APR-JUL	250	365	440	81	515	630	545
APR-SEP	280	420	510	80	600	740	640
Little Popo A	Agie R nr	Lander					
APR-JUL	14.1	27	36	78	45	58	46
APR-SEP	18.6	33	42	79	51	65	53
SF Little Wir	nd R nr Fo	rt Washak	ie				
APR-JUL	41	55	65	89	75	89	73
APR-SEP	47	63	74	88	85	101	84
Little Wind H	R nr River	ton					
APR-JUL	65	154	215	77	275	365	280
APR-SEP	77	174	240	76	305	405	315
Boysen Reserv	voir Inflo	w (2)					
APR-JUL	168	395	550	77	705	930	717
APR-SEP	173	430	605	75	780	1040	809
==========		=======	=======	=======	=======	========	.========

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

The average is computed for the 1971-2000 base period.

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

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#### WIND RIVER BASIN

Reservoir Storage (1000AF) End of December

Reservoir	Usable	********	Usable Storage	*******
	Capacity	This Year	Last Year	Average
BULL LAKE	151.8	93.5	70.3	86.3
BOYSEN	596.0	637.6	578.5	620.4
PILOT BUTTE	31.6	25.4	25.0	20.2
=======================================			===========	========

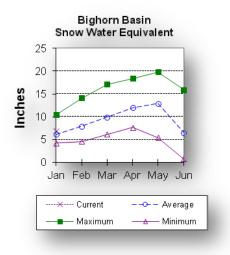
#### WIND RIVER BASIN

Watershed	Number of Data Sites	This Year as Pe Last Year	rcent of Average
	=======================================	=========	========
WIND RIVER above Dubios	4	65	79
LITTLE WIND	2	98	99
POPO AGIE	4	67	90
WIND above Boysen Resv	8	72	86
			========

#### **Bighorn River Basin**

#### Snow

The Bighorn River Basin SWE above Bighorn Reservoir is above average at 112%. The Nowood River is at 94% of average. The Greybull River SWE is at 119% of average. Shell Creek SWE is 117% of average. See the "Basin Summary of Snow Course Data" at the front of this report for details.



#### Precipitation

Last month's precipitation was 82% of average (78% of last year). Sites ranged from 44-150% of average for the month. Year-to-date precipitation is 126% of average; that is 125% of last year at this time. Year-to-date percentages, from the 10 reporting stations, range from 95-203%.

#### Reservoir

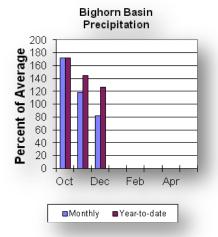
Boysen Reservoir is currently storing 637,600 ac-ft (75% of average). Bighorn Lake is now at 105% of average (953,300 ac-ft). Boysen is

currently storing 110% of last year volume at this time and Big Horn

Lake is storing 107% 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 605,000 ac-ft (75% of average); the Greybull River near Meeteetse should yield around 225,000 ac-ft (113% of average); Shell Creek near Shell should yield around 81,000 ac-



ft (113% of average) and the Bighorn River at Kane should yield around 1,050,000 ac-ft (95% of average). See the following page for detailed runoff volumes.

#### **Bighorn River Basin**

Streamflow Forecasts - January 1, 2012

	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt Forecast Period	90%	70%	Chance of 50 (1000AF)	)%	30%	10%	_
Boysen Reserv	roir Inflo	(2)					
APR-JUL APR-SEP	168	395 430	550 605	77 75	705 780	930 1040	717 809
Greybull R ni	r Meeteets	е					
APR-JUL	131	152	167	113	182	205	148
APR-SEP	179	205	225	113	245	270	200
Shell Ck nr S	Shell						
APR-JUL	53	62	68	113	74	83	60
APR-SEP	65	74	81	113	88	97	72
Bighorn R at	Kane (2)						
APR-JUL	495	770	960	96	1150	1430	1000
APR-SEP	535	840	1050	95	1260	1570	1110

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The average is computed for the 1971-2000 base period.

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

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

	=========	========		
	Usable	*****	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
		========		
BOYSEN	596.0	637.6	578.5	620.4
BIGHORN LAKE	1356.0	953.3	891.1	911.1

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#### BIGHORN RIVER BASIN

	Number of	This Year as	Percent of					
Watershed	Data Sites	Last Year	Average					
=======================================	===========	============						
NOWOOD RIVER	2	89	94					
GREYBULL RIVER	2	120	119					
SHELL CREEK	3	115	117					
BIGHORN (Boysen-Bighorn)	7	109	112					

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

#### Shoshone and Clarks Fork River Basin

#### Snow

Snowpack in these basins is near average for this time of year. Snow Water Equivalent (SWE) is 95% of average in the Shoshone River Basin. The Clarks Fork River Basin SWE is 94% of average. See the "Basin Summary of Snow

Shoshone Basin Snow Water Equivalent

35
30
25
20
15
10
5
0
Jan Feb Mar Apr May Jun

Maximum

Course Data" at the front of this report for details.

#### Precipitation

Precipitation for last month was 91% of average (60% of last year). Monthly percentages range from 52-233% of average. The basin year-to-date precipitation is now 117% of average (97% of last year). Year-to-date percentages range from 95-166% of average for the 8 reporting stations.

#### Reservoir

Current storage in Buffalo Bill Reservoir is about 109% of average (100% of last year's storage) - the reservoir is at about 70% of capacity.

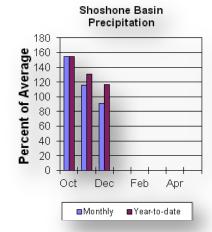
Currently, about

454,500 ac-ft are stored in the reservoir compared to 452,300 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.

Minimum

#### Streamflow

The 50% exceedance forecasts for the April through September period are expected to be near average for the basin. The North Fork Shoshone River at Wapiti is 535,000 ac-ft (103% of average). The South Fork of the Shoshone River near Valley is 260,000 ac-ft (98% of average), and the South Fork above Buffalo Bill Reservoir runoff is 225,000 ac-ft (100% of average). The Buffalo Bill Reservoir inflow is expected to yield around 795,000 ac-ft



(99% of average). The yield for the Clarks Fork of the Yellowstone near Belfry, Montana is expected to be around 580,000 ac-ft (98% of average). See the following page for detailed runoff volumes.

#### **Shoshone & Clarks Fork River Basins**

Streamflow Forecasts - January 1, 2012

========	=======							
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>		
Forecast Pt	=======	======	Chance of	Exceeding	* =====	======		
Forecast	90%	70%	50	)왕	30%	10%	30 Yr Avg	
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.) (	1000AF)	(1000AF)	(1000AF)	
========	=======	=======	========		======	=======	========	
NF Shoshone	R at Wapit	i						
APR-JUL	375	435	475	103	515	575	460	
APR-SEP	430	495	535	103	575	640	520	
SF Shoshone		-						
APR-JUL	176	205	225	100	245	275	225	
APR-SEP	205	240	260	98	280	315	265	
SF Shoshone		_						
APR-JUL	143	186	215	100	245	285	215	
APR-SEP	149	194	225	100	255	300	225	
	_							
Buffalo Bil		(	,					
APR-JUL	555	650	715	99	780	875	720	
APR-SEP	625	725	795	99	865	965	805	
al 1 m'	77							
Clarks Fk Y			-					
APR-JUL	420	485	530	98	575	640	540	
APR-SEP	460	530	580	98	630	700	595	

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

The average is computed for the 1971-2000 base period.

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

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#### SHOSHONE & CLARKS FORK RIVER BASINS

Reservoir Storage (1000AF) End of December

	Usable	******	Usable Storage	*****				
Reservoir	Capacity	This Year	Last Year	Average				
=======================================			=========	========				
BUFFALO BILL	646.6	454.5	452.3	418.4				
	========	:=======	==========	========				

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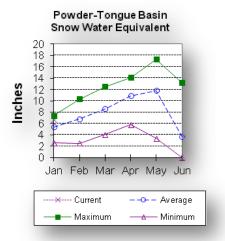
## SHOSHONE & CLARKS FORK RIVER BASINS Watershed Snowpack Analysis - January 1, 2012

Watershed	Number of Data Sites	This Year as Pe	ercent of Average
SHOSHONE RIVER	6	87	95
CLARKS FORK in WY	7	80	94

#### **Powder and Tongue River Basins**

#### Snow

Snow water equivalent (SWE) in the Upper Tongue River drainage is 135% of average. The Goose Creek drainage is 121% of average. SWE in the Clear Creek drainage is 129% of average. Crazy Woman Creek drainage is 100% of



average. Upper Powder River drainage SWE is 100% of average. Powder River Basin SWE in Wyoming is 112% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

#### Precipitation

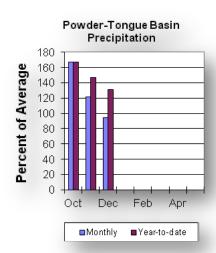
Last month's precipitation was 94% of average for the 9 reporting stations (87% of last year). Monthly percentages range from 65-127% of average. Year-to-date precipitation is 131% of average in the basin; this is 136% of last year at this time. Precipitation for the year ranges from 109-157% of average.

#### Reservoir

The Tongue River Reservoir currently is storing 237% of average (53,300 ac-ft) compared to 105% of average at this time last year.

#### Streamflow

The 50% exceedance forecasts for the April through September period are expected to be above average for the basins. The yield for Tongue River near Dayton is 125,000 ac-ft (115% of average). Big Goose Creek near Sheridan is 63,000 ac-ft (121% of average). Little Goose Creek near Bighorn is 50,000 ac-ft (119% of average). The Tongue River Reservoir Inflow is 300,000 ac-ft (120% of average). The Middle Fork of the Powder River near Barnum is 17,000 ac-ft (91% of average). The North Fork of the Powder River near Hazelton should yield around 9,700 ac-ft (93% of average). Rock Creek near Buffalo will yield about 30,000 ac-ft (125% of average), and Piney Creek at Kearny should yield about 64,000 ac-ft (123% of average). The Powder River at Moorehead is 245,000 ac-ft (107% of average). The Powder River near Locate is 280,000 ac-ft (108% of average). See the following page for detailed runoff volumes.



#### **Powder & Tongue River Basins**

Streamflow Forecasts - January 1, 2012

========	=======	======	========	=======	=======	=======	.=======
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	======	======	Chance of	Exceeding	g * =====	====== j	
Forecast	90%	70%	50	) %	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Tongue R nr			'		•		
APR-JUL	75	95	109	114	123	143	96
APR-SEP	88	110	125	115	140	162	109
Big Goose Ck	nr Sherid	an					
APR-JUL	43	55	63	121	71	83	52
APR-SEP	50	63	71	118	79	92	60
Little Goose	Ck nr Big	horn					
APR-JUL	27	35	40	118	45	53	34
APR-SEP	36	44	50	119	56	64	42
Tongue River	Reservoir	Inflow	(2)				
APR-JUL	153	220	265	121	310	375	220
APR-SEP	182	250	300	120	350	420	250
MF Powder R	nr Barnum						
APR-JUL	9.1	13.3	16.1	90	18.9	23	17.8
APR-SEP	9.8	14.1	17.0	91	19.9	24	18.7
NF Powder R	nr Hazelto	n					
APR-JUL	5.6	7.6	8.9	93	10.2	12.2	9.6
APR-SEP	6.3	8.3	9.7	93	11.1	13.1	10.4
Rock Ck nr B	uffalo						
APR-JUL	18.5	22	25	126	28	32	19.9
APR-SEP	23	27	30	125	33	37	24
Piney Ck at	Kearny						
APR-JUL	36	50	59	120	68	82	49
APR-SEP	40	54	64	123	74	88	52
Powder R at	Moorhead						
APR-JUL	99	168	215	105	260	330	205
APR-SEP	125	196	245	107	295	365	230
Powder R nr	Locate						
APR-JUL	104	188	245	104	300	385	235
APR-SEP	128	220	280	108	340	430	260

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

The average is computed for the 1971-2000 base period.

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

POWDER & TONGUE RIVER BASINS

#### Reservoir Storage (1000AF) End of December

Para constitu	Usable	******		_	
Reservoir	Capacity ==========	This Year	Last ======	rear :======	Average
TONGUE RIVER	79.1	53.3	5	0.9	22.5
=======================================	===========	=========	======	=======	========

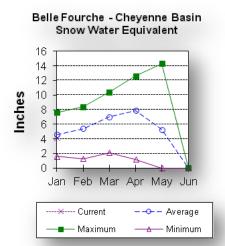
#### POWDER & TONGUE RIVER BASINS

	Watershed Snowpack	Analysis - January	1, 2012
	Numbe	r of This	Year as Percent of
Watershed	Data	Sites Last	Year Average
UPPER TONGUE RIVER		7 16	3 135
GOOSE CREEK		2 19	7 121
CLEAR CREEK		2 13	8 129
CRAZY WOMAN CREEK		1 8	3 100
UPPER POWDER RIVER		3 9	1 100
POWDER RIVER in WY		5 11	3 112

#### **Belle Fourche and Cheyenne River Basins**

#### Snow

The Belle Fourche River Basin SWE is 95% of average at 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 85% of average or 86% of last year in the Black Hills. There were 3 reporting stations. Monthly percentages range from 75-115%. Year-to-date precipitation is 83% of average and 58% of last year's amount. Yearly percentages range from 70-104% of average.

#### Reservoir

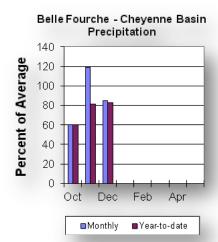
Current reservoir storage is about 123% of average in the basin. Angostura is currently storing 96% of average (92,200 ac-ft), about 76% of capacity. Belle Fourche reservoir is storing 139% of average (126,200 ac-ft), about

71% of capacity. Deerfield reservoir is storing 122% of average (15,000 ac-ft), about 99% of capacity. Keyhole reservoir is storing 162% of average (164,800 ac-ft), about 85% of capacity. Pactola reservoir is storing 114% of

average (52,200 ac-ft), about 95% of capacity. Shadehill reservoir is storing 75% of average (37,800 ac-ft), about 46% 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 Apr through July period. The Deerfield Reservoir Inflow is expected to be 5,000 ac-ft (98% of average). Pactola Reservoir Inflow is expected to yield around 21,000 ac-ft (91% of average). See the following page for detailed runoff volumes.



#### **Belle Fourche & Cheyenne River Basins**

Streamflow Forecasts - January 1, 2012

=========	=======	=======	=======	=======	======		========
	<=== Dr	rier ===	Future Co	nditions	=== Wett	er ===>	
	İ					İ	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	용	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========	========	.=======	· :========	=======	=======	=======	========
Deerfield Res	servoir In	nflow (2)					
MAR-JUL	2.3	3.9	5.8	95	7.7	10.5	6.1
APR-JUL	2.1	3.7	5.0	98	6.5	9.2	5.1
Pactola Reser	rvoir Infl	ow (2)					
MAR-JUL	9.2	13.7	23	89	32	46	26
APR-JUL	6.2	13.9	21	91	30	45	23

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The average is computed for the 1971-2000 base period.

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

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

Reservoir	Usable Capacity	******** This Year	Usable Storage Last Year	******* Average
ANGOSTURA	122.1	92.2	94.1	96.4
BELLE FOURCHE	178.4	126.2	133.8	90.6
DEERFIELD	15.2	15.0	14.6	12.3
KEYHOLE	193.8	164.8	108.8	101.7
PACTOLA	55.0	52.2	52.8	45.8
SHADEHILL	81.4	37.8	53.9	50.7

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BELLE FOURCHE & CHEYENNE RIVER BASINS

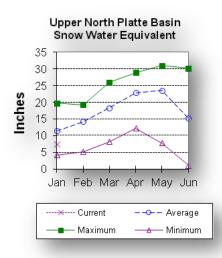
Watershed	Number of Data Sites	This Year as Pe	ercent of Average
BELLE FOURCHE	3	90	95
		==========	=========

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

#### **Upper North Platte River Basin**

#### Snow

The SNOTELS above Seminoe Reservoir are showing about 65% of average (SWE) for this time of the year. SWE in the drainage area above Northgate is 65% of average at this time. SWE in the Encampment River drainage is about 66% of average. Brush Creek SWE for the year is about 57% of average. Medicine



Bow and Rock Creek drainages SWE are about 65% 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 50% of average or 27% of last year's amount. Precipitation varied from 31-124% of average last month. Total water-year-to-date precipitation is about 88% of average for the basin, which is about 55% of last year's amount. Year to date percentage ranges from 72-126% of average.

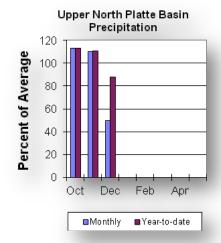
#### Reservoirs

Seminoe Reservoir is estimated to be storing 877,800 ac-ft or 86% of capacity. Seminoe

Reservoir is also storing about 139% of average for this time of the year and 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 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 162,000 ac-ft (60% of average). The Encampment River near Encampment is 117,000 ac-ft (71% of average). Rock Creek near Arlington is 41,000 ac-ft (72% of average). The Sweetwater River near Alcova forecast is for 62,000 ac-ft (78% of average). Seminoe Reservoir inflow should be around 525,000 ac-ft (61% of average). See the following table for more detailed information on projected runoff.



#### **Upper North Platte River Basin**

Streamflow Forecasts - January 1, 2012

=========	=======	======	========		======	=======	========
	<=== Dr:	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	======		Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50		30%		30 Yr Avg
Period	(1000AF)	(1000AF	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
North Platte	D na North	======	=======			=======	========
APR-JUL	60	101	150	61	199	270	245
	65	101	162	60 61		295	245 270
APR-SEP	65	109	162	60	215	295	270
Encampment R	nr Encamp	ment					
APR-JUL	54	88	111	71	134	168	156
APR-SEP	57	93	117	71	141	177	165
Rock Ck nr Ai	rlington						
APR-JUL	22	33	40	76	47	58	53
APR-SEP	22	33	41	72	49	60	57
Sweetwater R	nr Alcova						
APR-JUL	21	42	57	77	72	93	74
APR-SEP	23	46	62	78	78	101	80
AFK-SEF	23	40	02	70	70	101	80
Seminoe Reser	rvoir Infl	ow (2)					
APR-JUL	200	330	500	63	670	915	800
APR-SEP	210	345	525	61	705	970	860

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that

The average is computed for the 1971-2000 base period.

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

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#### UPPER NORTH PLATTE RIVER BASIN

Reservoir Storage (1000AF) End of December

=======================================		:=======	==========	========
	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================	-========	:======	==========	========
SEMINOE	1016.7	877.8	847.9	631.1
=======================================		:=======:	==========	========

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#### UPPER NORTH PLATTE RIVER BASIN

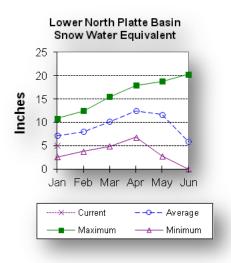
Watershed	Number of	This Year as Pe	ercent of
	Data Sites	Last Year	Average
N PLATTE above Northgate ENCAMPMENT RIVER BRUSH CREEK MEDICINE BOW & ROCK CREEKS	5	44	65
	3	44	66
	2	35	57
	2	48	65
N PLATTE above Seminoe	13	44	65

the actual volume will exceed the volumes in the table.

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

#### Snow

SWE for the North Platte River Basin is at 71% of average. The Sweetwater drainage SWE is currently at 75% of average. Deer and LaPrele Creek SWE are at 101% of average. SWE for the North Platte above the Laramie River drainage is 68% of average. SWE for the Laramie River above Laramie is 88% of average. SWE for the Little Laramie River is 62% of average. The Laramie River above mouth, SWE is 81% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



#### Precipitation

Last month's precipitation was 88% of average or 55% of last year's amount. Of the 8 reporting stations, percentages for the month range from 51-136%. The water year-to-date precipitation for the basin is currently 111% of average (79% of last year). Year-to-date percentages range from 75-157% of average.

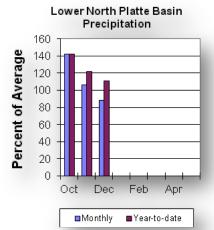
#### Reservoir

The Lower North Platte River basin reservoir storage is average at 126%. Reservoir storage is as follows: Alcova 156,600 ac-ft (101% of average); Glendo 329,100 ac-ft (116% of average); Guernsey 10,800 ac-ft (150% of average); Pathfinder 756,200 ac-ft (119% of average);

Seminoe 877,800 ac-ft (139% of average); and Wheatland #2 70,400 ac-ft (167% of average):

#### Streamflow

The following yields are based on the 50% exceedance forecasts for the April through September period. The Sweetwater River near Alcova is forecast to yield about 62,000 ac-ft (78% of average). Deer Creek at Glenrock is forecast to yield 40,000 ac-ft (108% of average). LaPrele Creek above the reservoir is forecast to yield 22,000 ac-ft (92% of average). North Platte - Alcova to Orin Gain is forecast to yield 182,000 ac-ft (113% of average). North Platte River below Glendo Reservoir is 575,000 ac-ft (58% of average), and below Guernsey Reservoir is anticipated to



yield around 590,000 ac-ft (58% of average). Laramie River near Woods Landing should yield around 105,000 ac-ft (78% of average). The Little Laramie near Filmore should produce about 45,000 ac-ft (70% of average). See the following table for more detailed information on projected runoff.

#### Lower North Platte, Sweetwater & Laramie River Basins

Streamflow Forecasts - January 1, 2012

=========			=======			=======	.=======
	<=== Dr	ier ===	Future C	onditions	=== Wett	er ===>	
Forecast Pt	======	====== (	Chance of	Exceeding	g * =====	======	
Forecast	90%	70%	5	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Sweetwater R	nr Alcova	L					_
APR-JUL	21	42	57	77	72	93	74
APR-SEP	23	46	62	78	78	101	80
Deer Ck at G	lenrock						
APR-JUL	15.6	24	39	105	59	89	37
APR-SEP	16.0	24	40	108	60	90	37
La Prele Ck a	ab La Prel	e Reservo	ir				
APR-JUL	8.8	14.5	22	92	29	40	24
APR-SEP	8.8	14.5	22	92	30	41	24
North Platte	R-Alcova	to Orin G	ain				
APR-JUL	55	123	169	111	215	285	152
APR-SEP	66	135	182	113	230	300	161
North Platte	R bl Glen	do Res (2	)				
APR-JUL	295	455	560	58	665	825	960
APR-SEP	295	465	575	58	685	855	990
North Platte	R bl Guer	nsey Res	(2)				
APR-JUL	230	425	560	58	695	890	970
APR-SEP	250	450	590	58	730	930	1010
Laramie R nr	Woods						
APR-JUL	58	80	95	77	110	132	123
APR-SEP	65	89	105	78	121	145	135
Little Laram:	ie R nr Fi	lmore					
APR-JUL	21	34	42	71	50	63	59
APR-SEP	22	36	45	70	54	68	64

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

The average is computed for the 1971-2000 base period.

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

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

	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================	=============	========	==========	========
ALCOVA	184.3	156.6	156.7	154.4
GLENDO	506.4	329.1	349.0	282.9
GUERNSEY	45.6	10.8	12.0	7.2
PATHFINDER	1016.5	756.2	778.6	635.7
SEMINOE	1016.7	877.8	847.9	631.1
WHEATLAND #2	98.9	70.4	57.0	42.2

## LOWER NORTH PLATTE, SWEETWATER & LARAMIE RIVER BASINS Watershed Snowpack Analysis - January 1 2012

Watershed	SHOWPACK AHALYSIS	- Danuary I, ZUIZ	l .
	Number of	This Year as	Percent of
Watershed	Data Sites	Last Year	Average
SWEETWATER	2	45	75
DEER & Laprele Creeks	2	95	101
N PLATTE abv Laramie R.	17	47	68
LARAMIE RIVER abv Laramie	5	59	88
LITTLE LARAMIE RIVER	2	47	62
LARAMIE RIVER above mouth	6	56	81
NORTH PLATTE	17	49	71

#### Little Snake River Basin

#### Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage is



71% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

#### Precipitation

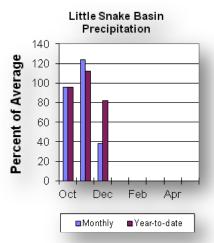
Precipitation across the basin was 38% of average (20% of last year) for the 5 reporting stations. Last month's precipitation ranged from 26-60% of average. The Little Snake River basin water-year-to-date precipitation is currently 82% of average (53% of last year). Year-to-date percentages range from 62-104% of average.

#### Reservoir

High Savery Dam - 12,345 ac-ft

#### 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 118,000 acft (74% of average). The Little Snake River at Savery Dam 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 - January 1, 2012

=========		======	=======			=======	
	<=== Drie 	r ===	Future Co	onditions	=== Wett	er ===>   	
Forecast Pt	=======	=====	Chance of	Exceeding	* =====	====== i	
Forecast Period	90%  (1000AF) (	70% 1000AF)	50  (1000AF)	!	30% (1000AF)		30 Yr Avg (1000AF)
=========	========	======	=======		======	=======	=======
Little Snake	R nr Slater	(2)					
APR-JUL	68	96	118	74	142	181	159
Little Snake	R nr Savery	(2)					
APR-JUL	147	205	250	76	300	380	330
APR-JUL	68 R nr Savery	96	110	, -		101	

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The average is computed for the 1971-2000 base period.

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

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#### LITTLE SNAKE RIVER BASIN

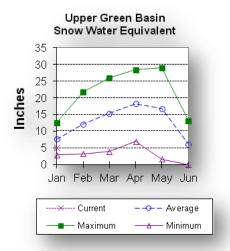
	Number of	This Year as Pe	ercent of			
Watershed	Data Sites	Last Year	Average			
=======================================	============	==========	========			
LITTLE SNAKE RIVER	6	48	71			

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

#### **Upper Green River Basin**

#### Snow

SWE in the Green River Basin above Warren Bridge is about 71% of average.



SWE for the West Side of Upper Green River Basin is about 62% of average. Newfork River Basin SWE is now about 78% of average. Big Sandy-Eden Valley Basin is 58% of average. SWE in the Green River Basin above Fontenelle Reservoir is about 66% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

#### Precipitation

The 13 reporting precipitation sites in the basin were 48% of average last month (34% of last year). Last month's precipitation varied from 31-76% of average. Water year-to-date precipitation is about 82% of average (66% of last year). Year to date percentage of average ranges from 65-105% for the reporting stations.

#### Reservoir

Storage in Big Sandy Reservoir is 27,900 ac-ft or 56% of capacity. This is 116% of average. Fontenelle Reservoir is 119,400 ac-ft or 60% of capacity; 99% of average. This is 100% 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 200,000 ac-ft (76% of average). Pine Creek above Fremont Lake is 85,000 ac-ft (82% of average). New Fork River near Big Piney is 290,000 ac-ft (73% of average). Fontenelle Reservoir Inflow is estimated to be 550,000 ac-ft (64% of average), and Big Sandy near Farson

Percent of Average 40 20 ■Monthly ■Year-to-date

140

120

100

80

60

Upper Green Basin

Precipitation

is expected to be around 40,000 ac-ft (69% of average). See the following table for more detailed information on projected runoff.

#### **Upper Green River Basin**

Streamflow Forecasts - January 1, 2012

Stituminow Forecasts Sandary 1, 2012							
========		:	======== =		T-7	======================================	
	<=== Dri	ler === .	Future Con	altions	=== Wett	er ===>	
			~1 C =				
Forecast Pt	=======		Chance of E	~		:	
Forecast	90%	70%	50%	!	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF) (	% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========		=======	========	======	=======	=======	========
Green R at Wa	arren Bridg	ge					
APR-JUL	133	171	200	76	230	280	265
Pine Ck ab Fi	remont Lake	2					
APR-JUL	64	76	85	82	94	109	104
New Fork R ni	r Big Piney	7					
APR-JUL	173	240	290	73	345	435	395
Fontenelle Re	eservoir In	nflow (2)					
APR-JUL	265	425	550	64	695	935	860
Big Sandy R 1	nr Farson						
APR-JUL	25	33	40	69	47	60	58
11111 001	23	23	10	0,5	<b>-</b> ,	0.0	30

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The average is computed for the 1971-2000 base period.

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

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

	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
		=======	=========	
BIG SANDY	38.3	21.3	18.0	18.3
FONTENELLE	344.8	206.8	209.4	209.7

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#### UPPER GREEN RIVER BASIN

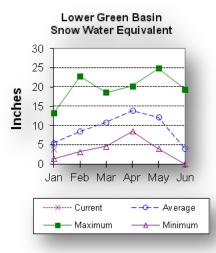
Watershed	Number of Data Sites	This Year as P Last Year	ercent of Average
CDEEN -1 Manager Deviation			71
GREEN above Warren Bridge	5	59	71
UPPER GREEN (West Side)	5	49	62
NEWFORK RIVER	2	61	78
BIG SANDY/EDEN VALLEY	1	49	58
GREEN above Fontenelle	11	54	66
=======================================	=============		=========

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

#### Lower Green River Basin

#### Snow

SWE in the Green River Basin above Flaming Gorge is 69% of average. SWE in the Hams Fork Basin is 59% of average. Blacks Fork Basin SWE is currently 79% of average. In the Henrys Fork drainage SWE is 152%. For more



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

#### Precipitation

Precipitation for the 3 reporting stations during last month was at 28% of average or 20% of last year. Precipitation ranged from 27-31% of average for the month. The basin year-to-date precipitation is currently 70% of average (51% of last year). Year-to-date percentages range from 62-86% of average.

#### Reservoirs

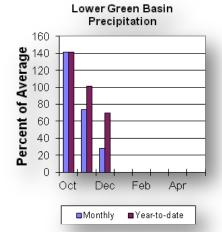
Fontenelle Reservoir is currently storing 206,800 ac-ft; this is 99% of average (99% of last year). Flaming Gorge is currently storing 3,404,000 ac-

ft; this is

112% of average (109% of last year). Viva Naughton is currently storing 29,000 ac-ft, 92% of average or 90% 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 565,000 ac-ft (65% of average). The Blacks Fork near Robertson is forecast to yield 75,000 ac-ft (79% of average). East Fork of Smiths Fork near



Robertson is forecast to yield 22,000 ac-ft (76% of average). Hams Fork below Pole Creek near Frontier is forecast to be 37,000 ac-ft (57% of average). The Hams Fork Inflow to Viva Naughton Reservoir is forecast to be 48,000 ac-ft (54% of average). The Flaming Gorge Reservoir inflow will be about 760,000 ac-ft (64% of average). See the following table for more detailed information on projected runoff.

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

Streamflow Forecasts - January 1, 2012

Screaminow Forecasts - Dantaly 1, 2012							
	<=== Dri 	er === Fu	ture Co	nditions	=== Wett	er ===>	
Forecast Pt Forecast Period	90%	===== Ch 70%   (1000AF) (	50	%	30%	10%	30 Yr Avg (1000AF)
	======================================	======================================	======	=======	======	=======	========
Green R nr G APR-JUL	245	435	565	65	695	885	875
Blacks Fk nr APR-JUL	Robertson 47	63	75	79	88	110	95
EF of Smiths	Fork nr Ro	bertson (2	)				
APR-JUL	13.2	18.2	22	76	26	33	29
Hams Fk bl Pole Ck nr Frontier							
APR-JUL	16.0	27	37	57	48	67	65
Viva Naughto: APR-JUL	n Reservoir 27	Inflow (2 29	48	54	67	95	89
Flaming Gorg	e Reservoir 375	Inflow (2 590	760	64	955	1280	1190

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The average is computed for the 1971-2000 base period.

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

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#### LOWER GREEN RIVER BASIN

Reservoir Storage (1000AF) End of December

Reservoir	Usable Capacity	********* This Year	Usable Storage Last Year	******* Average
		========		
FONTENELLE	344.8	206.8	209.4	209.7
FLAMING GORGE	3749.0	3404.0	3110.0	3027.0
VIVA NAUGHTON RES	42.4	29.0	32.2	31.6

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#### LOWER GREEN RIVER BASIN

Watershed	Number of	This Year as P	ercent of
	Data Sites	Last Year	Average
HAMS FORK RIVER	3	43	60
BLACKS FORK	2	59	79
HENRYS FORK	2	129	152
GREEN above Flaming Gorge	18	55	70

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

#### **Upper Bear River Basin**

#### Snow

Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is



estimated to be 55% of average. SWE in the Wyoming portion of the Bear River drainage (Smiths and Thomas Forks) is at 61% of average. Bear River Basin SWE, above the Idaho State line, is 58% of average. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.

#### Precipitation

Precipitation for last month was 25% of average for the 2 reporting stations; this is 20% of the precipitation received last year. The year-to-date precipitation, for the basin, is 65% of average;

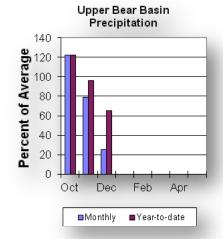
this is 48% of last year's amount.

#### Reservoir

Storage in Woodruff Narrows reservoir is 43,000 ac-ft (182% of average). Current reservoir storage is about 75% of capacity. Reservoir storage last year at this time was 40,000 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 95,000 ac-ft (76% of average). The Bear River above Reservoir near Woodruff is 95,000 ac-ft (67% of average). The Smiths Fork River near Border is



 $82,000\ \text{ac-ft}\ (68\%\ \text{of average})\,.$  See the following table for more detailed information on projected runoff.

#### **Upper Bear River Basin**

Streamflow Forecasts - January 1, 2012

=========		:======:			=======	=======	=======
	<=== Dri	er === I	Future Cor	nditions	=== Wett	er ===>	
Forecast Pt Forecast Period	=======   90%  (1000AF)	70%	Chance of E   50%  (1000AF) (	s Į	30%	10%	30 Yr Avg (1000AF)
Door D III	W Chaha I	:======	=======	======	=======	=======	:=======
Bear R nr UT-							
APR-JUL	43	69	87	77	105	131	113
APR-SEP	47	75	95	76	115	143	125
Bear R ab Res nr Woodruff							
APR-JUL	30	67	92	68	117	154	136
APR-SEP	32	70	95	67	120	158	142
Smiths Fk nr Border							
APR-JUL	33	55	70	68	85	108	103
APR-SEP	41	65	82	68	99	123	121

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The average is computed for the 1971-2000 base period.

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

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#### UPPER BEAR RIVER BASIN

Reservoir Storage (1000AF) End of December

	Usable	******	Usable Storage	*****		
Reservoir	Capacity	This Year	Last Year	Average		
	========					
WOODRUFF NARROWS	57.3	43.0	40.0	23.6		

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#### UPPER BEAR RIVER BASIN

	Number of	This Year as l	Percent of
Watershed	Data Sites	Last Year	Average
UPPER BEAR RIVER in Utah	5	30	55
SMITHS & THOMAS FORKS	3	44	62
BEAR RIVER abv ID line	6	35	58
NORTHWEST	58	71	86
NORTHEST	13	129	119
SOUTHEAST	20	50	73
SOUTHWEST	26	50	69

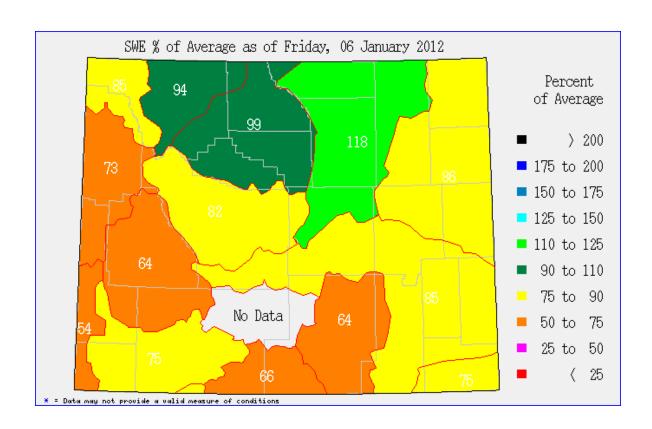
<sup>\* 90%, 70%, 50%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

Issued by

Dave White (Chief)
U.S. Department of Agriculture
Natural Resources Conservation Service
Washington D.C.

Released by

J Xavier Montoya State Conservationist N R C S Casper, Wyoming



# 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



# Wyoming Basin Outlook Report Natural Resources Conservation Service Casper, WY





Natural Resources Conservation Service 100 East B Street Box 33124 Casper, WY 82601

«Name» «Title» «Address1» «Address2» «City», «State» «PostalCode»