

United States Department of Agriculture

Natural Resources Conservation Service

# Wyoming Basin Outlook Report June 1, 2013



Grave Springs SNOTEL (Bighorn Mts. in Natrona County)

# **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. 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 above, and a 50% chance that the actual flow will be below, this 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 is among these values, the more uncertain the forecast. 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 operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. 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 normal for June  $1^{\rm st}$  at 67%. Monthly precipitation for the basins varied from 53-174% of average. Year-to-date precipitation for Wyoming mountain basins varies from 63-107% of average for an overall average of 87%. Forecasted runoff varies from 15-104% of average across the Wyoming basins for an overall average of 67%. Basin reservoir levels for Wyoming vary from 23-154% of average for an overall average of 98%.

# Snowpack

Snow water equivalent (SWE), across Wyoming is below normal for this time of year at 78%. SWE in the NW portion of Wyoming is now about 56% of normal (54% of last year). NE Wyoming SWE is currently about 128% of normal (222% of last year). The SE Wyoming SWE is currently about 73% of normal (731% of last year). The SW Wyoming SWE is about 58% of normal (179% of last year).

# **Precipitation**

Last month's precipitation varied widely across Wyoming. The Belle Fourche River Basin had the highest precipitation for the month at 174% of average. The Little Snake River and Madison-Gallatin River Basins tied for the lowest precipitation amount at 53% of average. The following table displays the major river basins and their departure from average for this month.

	Departure	ī		De	parture
Basin	from average	ı	Basin	from	average
		1			
Snake River	-17%	ı	Upper North Platte R	iver	-37%
Madison-Gallatin	-47%	ı	Sweetwater River		-43%
Yellowstone	-03%	ı	Lower North Platte		+04%
Wind River	-25%	ı	Laramie River		-38%
Bighorn	+13%	ı	South Platte		-21%
Shoshone	+06%	ı	Little Snake River		-47%
Powder River	-16%	ı	Upper Green River		-30%
Tongue River	+32%	ı	Lower Green River		-30%
Belle Fourche	+74%	ı	Upper Bear River		-39%
Cheyenne	+42%	ı			

## **Streams**

Stream flow yield for May to September is expected to be below average across Wyoming. Most probable yield for the entire State of Wyoming is forecast to be about 67% (varying from 15-104% of average). The Snake River and Madison River Basins are expected to yield about 69% and 82% of average, respectively; 67-82% of average for the various forecast points in the basins. Yields from the Yellowstone and Clark's Fork are expected to be 89% and 85% respectively. Yields from the Wind and Bighorn River Basins are expected to be about 59% and 61% of average; varying from 50-98% of average in the basins. Yield from the Shoshone River Basin of Wyoming is expected to be about 81%, varying from 73-88% of average. Yields from the Powder & Tongue River Basins are expected to be about 52% and 70% of average, respectively; varying from 52-104% of average. Yield

for the Cheyenne River Basin is expected to be about 80% of average. Yields for the Upper N. Platte, Sweetwater, Lower N. Platte and Laramie Rivers of Wyoming are expected to be about 63%, 15%, 55%, and 67% of average, respectively; varying from 15-75% of average. Yields for the Little Snake, Green River, and Bear of Wyoming are expected to be 33%, 37%, and 56% of average respectively; yield estimates vary from 33-60% of average.

### Reservoirs

Reservoir storage varies widely across the state however reservoir storage is at 97% of average for the entire state. Reservoirs in the Wind River Basin are above average at 105%. Reservoirs on the Big Horn are above average at 105%. The Buffalo Bill Reservoir on the Shoshone is above average at 137%. Reservoirs in the Belle Fourche River Basin are above average in storage at 108%. Reservoirs in the Cheyenne River Basin are below average in storage at 83%. Reservoirs on the North Platte River are below average at 74%. Reservoirs on the Green River are near average at 99%. See the following table for further information about reservoir storage.

# Major Reservoirs in Wyoming June 1, 2013

BASIN AREA CUI	RRENT AS	LAST YR AS	AVERAGE AS	CURRENT AS	CURRENT AS
RESERVOIR % (	CAPACITY	% CAPACITY	% CAPACITY	% AVERAGE	% LAST YR
WYOMING AND SUE	RROUNDING	STATES			
ALCOVA	98	98	98	101	100
ANGOSTURA	65	83	96	68	78
BELLE FOURCHE	84	90	85	99	93
BIG SANDY	58	90	76	76	64
BIGHORN LAKE	67	65	63	107	103
BOYSEN	85	95	84	101	90
BUFFALO BILL	82	78	60	137	105
BULL LAKE	70	74	58	120	94
DEERFIELD	101	100	89	113	101
ENNIS LAKE	89	85	87	103	105
FLAMING GORGE	81	83	82	98	97
FONTENELLE	53	66	48	112	81
GLENDO	84	77	94	90	109
Grassy Lake	101	101	94	107	99
GUERNSEY	18	63	75	24	29
HEBGEN LAKE	88	97	89	99	91
Jackson Lake	94	96	72	132	99
KEYHOLE	79	93	52	152	85
PACTOLA	98	101	88	111	97
Palisades	54	84	73	73	64
PATHFINDER	39	80	62	63	49
PILOT BUTTE	85	61	71	121	140
SEMINOE	57	81	60	95	70
SHADEHILL	55	53	84	65	103
TONGUE RIVER	102	103	66	153	99
VIVA NAUGHTON E	RES 94	104	98	96	90
WHEATLAND #2	31	63	56	55	50
WOODRUFF NARROW	NS 47	90	78	60	52
TOTAL 28 RESERV	JOIRS 71	82	73	97	87

Raw KAF Total Current=9499 Last Year=10897 Average=9750 Capacity=13288

# BASIN SUMMARY OF SNOTEL and SNOW COURSE DATA JUNE 2013

SNOW SITE E	LEVATION	DATE		NOW PTH	WATER CONTENT	LAST YEAR	NORMAL 81-10
WYC	MING Snow	Course	and	SNOT	EL Stations		
ARAPAHO RIDGE SNTL	10960	6/01/1	.3	27	10.6	.0	
BALD MOUNTAIN SNOTEL	9380	6/01/1	.3	45	10.7	16.8	13.7
BASE CAMP SNOTEL	7030	5/31/1	.3		.0e	.0	.0
BATTLE MTN. SNOTEL	7440	5/30/1	.3		.0e	.0	.0
BEARTOOTH LK. SNOTEL	9280	6/01/1	.3	39	14.9	26.4	17.1
BEAR RIVER RS SNOTEL		5/31/1	.3		.0e	.0	
BEAR TRAP SNOTEL	8200	6/01/1	.3	0	.1	.0	.0
BIG GOOSE SNOTEL	7760	6/01/1	.3	1	.3	.0	.0
BIG SANDY SNOTEL	9080	5/30/1	.3		.0e	.0	.0
BLACK BEAR SNOTEL	7950	6/01/1	.3	30	14.0	32.6	24.5
BLACKS FORK JCT SNT	8870	6/01/1	.3	0	.2	.0	
BLACKHALL MTN SNOTEL	9820	6/01/1	.3	26	11.2		
BLACKWATER SNOTEL	9780	6/01/1	.3	42	17.1	21.6	19.6
BLIND BULL SNOTEL	8900	6/01/1	.3	20	7.6	11.6	11.5
BLIND PARK SNOTEL	6870	6/01/1	.3	0	.5	.0	.0
BONE SPGS. SNOTEL	9350	6/01/1	.3	16	5.3	8.3	8.6
BROOKLYN LK. SNOTEL	10220	6/01/1	.3	8	2.2	.0	5.0
BUCK PASTURE SNOTEL	9700	5/30/1	.3		.0e		
BUG LAKE SNOTEL	7950	6/01/1	.3		.3	.0	.0
BURGESS JCT. SNOTEL	7880	6/01/1	.3	2	. 4	.0	.0
BURROUGHS CRK SNOTEL	8750	6/01/1	.3	0	.0	1.4	1.3
BURTS-MILLER RANCH S	7860	6/01/1	.3	0	.1	.0	.0
CANYON SNOTEL	8090	6/01/1	.3	1	. 4	.0	.0
CASPER MTN. SNOTEL	7850	6/01/1	.3	1	.2	.0	.0
CASTLE CREEK SNOTEL	8400	5/31/1	.3		.0e	.0	
CHALK CK #1 SNOTEL	9100	6/01/1	.3	5	1.4	.0	6.0
CINNABAR PARK SNOTEL	9690	6/01/1	.3	6	1.1	.0	1.1
CLOUD PEAK SNOTEL	9850	6/01/1	.3	25	6.8	.0	5.1
COLE CANYON SNOTEL	5910	6/01/1	.3	0	.0	.0	.0
COLD SPRINGS SNOTEL	9630	5/31/1			.0e	.0	.0
CROW CREEK SNOTEL	8830	6/01/1		0	.0	.0	.0
DEADMAN HILL SNOTEL	10200	6/01/1		24	8.0	.0	7.8
DEER PARK SNOTEL	9700	6/01/1			. 4	. 0	3.1
DIVIDE PEAK SNOTEL	8860	5/30/1			.0e	.0	.0
DOME LAKE SNOTEL	8880	6/01/1	-	1	.3	.0	.0
EF BLACKS FORK GS SN	9360	5/31/1			.0e	.0	
EAST RIM DIV SNOTEL	7930	5/31/1			.0e	. 0	. 0
ELKHART PARK SNOTEL	9400	5/30/1			.0e	. 0	. 0
ELK RIVER SNOTEL	8600	5/30/1			.0e	.0	.0
EVENING STAR SNOTEL	9200	6/01/1		17	6.9	22.4	17.8
FISHER CREEK SNOTEL	9100	6/01/1		51	24.5	39.1	28.1
GRAND TARGHEE SNOTEL	9260	6/01/1		72	31.0	31.5	40.0
GRANITE CRK SNOTEL	6770	5/31/1			.0e	.0	.0
GRASSY LAKE SNOTEL	7270	5/30/1			.0e	4.4	4.8
GRAVE SPRINGS SNOTEL	8550	6/01/1		1	. 4	.0	.0
GROS VENTRE SNOTEL	8750	5/30/1			.0e	.0	.0
GUNSIGHT PASS SNOTEL	9820	6/01/1		0	1.5	2.9	2.8
HANSEN S.M. SNOTEL	8360	6/01/1	. 3	0	.1	.0	.0

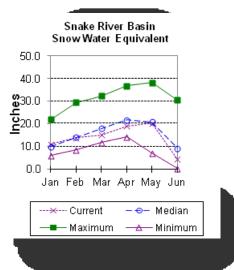
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	MEDIAN 81-10
HAMS FORK SNOTEL	7840	5/30/13		.0e	.0	.0
HOBBS PARK SNOTEL	10100	6/01/13		1.1	.0	6.1
INDIAN CREEK SNOTEL	9430	6/01/13		3.9	.0	10.4
JOE WRIGHT SNOTEL	10000	6/01/13	32	12.9	.0	13.9
KELLEY R.S. SNOTEL	8180	5/30/13		.0e	.0	.0
KENDALL R.S. SNOTEL	7740	5/30/13		.0e	.0	.0
KIRWIN SNOTEL	9550	6/01/13	0	.1	.0	1.7
LA PRELE SNOTEL	8380	6/01/13	1	.1	.0	.0
LARSEN CREEK SNOTEL	9020	5/31/13		.0e	.0	
LEWIS LAKE SNOTEL	7850	5/30/13		.0e	10.4	11.6
LITTLE GOOSE SNOTEL	8870	6/01/13	2	. 6	.0	
LITTLE SNAKE RIVER	8920	6/01/13	0	.0	.0	1.9
LITTLE WARM SNOTEL	9370	6/01/13	1	.1	.0	.0
LOOMIS PARK SNOTEL	8240	6/01/13		.0	.0	.0
MADISON PLT SNOTEL	7750	6/01/13	0	.0	10.9	
MARQUETTE SNOTEL	8760	6/01/13	1	.1	.0	
MIDDLE POWDER SNOTE		6/01/13	0	.1	.0	.0
NEVER SUMMER SNOTEL	10280	6/01/13	37	14.3	.3	
NEW FORK SNOTEL	8340	5/30/13		.0e	.0	.0
N.E. ENTRANCE SNOTE		6/01/13	0	.0	.0	
NORTH FRENCH SNOTEL	10130	6/01/13	36	14.2	.0	20.3
NORTH RAPID CK SNTL	6130	6/01/13	0	.0	.0	.0
OLD BATTLE SNOTEL	9920	6/01/13	43	18.5	5.2	
OWL CREEK SNOTEL	8980	6/01/13	0	.0	.0	
PARKERS PEAK SNOTEL	9400	6/01/13	18	6.6	15.1	
PHILLIPS BNCH SNOTEL POCKET CREEK SNOTEL		6/01/13 5/30/13	5 <b></b>	1.8 .0e	1.1	
POWDER RVR.PASS SNTI	9350 L 9480	6/01/13	11	2.0	.0	.0
RAWAH SNOTEL	9020	5/29/13		2.0 .0e	.0	
RENO HILL SNOTEL	8500	6/01/13	0	.0	.0	.0
ROACH SNOTEL	9400	6/01/13	1	.3	.0	1.8
SAGE CK BASIN SNTL	7850	6/01/13	0	.0	.0	.0
SALT RIVER SNOTEL	7600	5/30/13		.0e	.0	
SAND LAKE SNOTEL	10050	6/01/13	45	18.0	5.9	
SANDSTONE RS SNOTEL	8150	6/01/13	0	.0	.0	
SHELL CREEK SNOTEL	9580	6/01/13	33	8.4	15.8	8.9
SNAKE RV STA SNOTEL	6920	5/30/13		.0e	.0	.0
SNIDER BASIN SNOTEL	8060	5/30/13		.0e	.0	
SOLDIER PARK SNOTEL	8780	6/01/13	0	. 0	.0	
SOUTH BRUSH SNOTEL	8440	5/30/13		.0e	.0	.0
SOUTH PASS SNOTEL	9040	6/01/13	0	.0	.0	.2
SPRING CRK. SNOTEL	9000	6/01/13	25	9.2	9.8	11.5
ST LAWRENCE ALT SNTI	8620	5/31/13		.0e	.0	.0
SUCKER CREEK SNOTEL	8880	6/01/13	10	1.8	.0	.2
SYLVAN LAKE SNOTEL	8420	6/01/13	1	.3	.0	6.6
SYLVAN ROAD SNOTEL	7120	6/01/13	0	.0	.0	.0
THUMB DIVIDE SNOTEL	7980	6/01/13	0	. 0	.0	.0
TIE CREEK SNOTEL	6870	6/01/13	1	.2	.0	.0
TIMBER CREEK SNOTEL	7950	6/01/13	0	.1	.0	.0
TOGWOTEE PASS SNOTE		6/01/13	30	11.5	16.5	
TOWER SNOTEL	10000	6/01/13	59	25.8	7.9	
TOWNSEND CRK SNOTEL	8700	5/31/13		.0e	.0	
TRIPLE PEAK SNOTEL	8500	5/30/13		.0e	.0	.0
TWO OCEAN SNOTEL	9240	6/01/13	34	16.0	27.7	24.9

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST M YEAR	EDIAN 81-10
WEBBER SPRING SNOTE	L 9250	6/01/13	0	.1	.0	.0
WHISKEY PARK SNOTEL	8950	6/01/13	3	1.7	.0	6.3
WHITE MILL SNOTEL	8700	6/01/13	23	9.9	20.5	16.9
WILLOW CREEK SNOTEL	8450	6/01/13	4	1.0	.0	3.8
WINDY PEAK SNOTEL	7900	5/31/13		.0e	.0	.0
WOLVERINE SNOTEL	7650	5/31/13		.0e	.0	.0
YOUNTS PEAK SNOTEL	8350	5/31/13		.0e	.0	3.2
ZIRKEL SNOTEL	9340	5/31/13		.0e	.0	

## Snake River Basin

### Snow

The Snake River Basin snow water equivalent (SWE) is 47% of normal. SWE in the Snake River Basin above Jackson Lake is 39% of normal. Pacific Creek Basin SWE is 64% of normal. SWE in the Buffalo Fork basin is 52% of normal. Gros Ventre River Basin SWE is 60% of normal. SWE in the Hoback River drainage is 66% of normal. SWE in the Greys River drainage



iver area SWE is 26% of normal. See the Basin Summary of Snow Course Data" at the eginning of this report for a detailed isting of snow course information.

# 'recipitation

recipitation across the basin was below verage last month. Monthly precipitation or the basin was 83% of average (89% of ast year). Last month's percentages ange from 45-140% of average for the 26 eporting stations. Water-year-to-date recipitation is 89% of average for the nake River Basin (88% of last year). ear-to-date percentages range from 76-02% of average.

## leservoirs

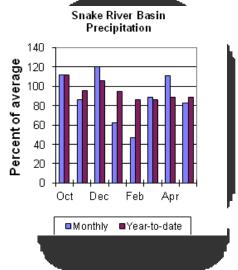
urrent reservoir storage is 95% of average for the 3 storage reservoirs in the basin. Grassy Lake storage is about 107% of average (15,300 ac-ft compared to 15,400 last year). Jackson Lake storage is 132% of average (798,500 ac-ft compared to

809,100 ac-ft last year). Palisades Reservoir average (751,100 ac-ft compared to 1,180,900 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 June through September are below average for the basin. The Snake near Moran is 340,000 ac-ft 67% of average). Snake River above reservoir near Alpine is 1,090,000 ac-ft (68% of average). The Snake near Irwin is 1,520,000 ac-ft (69% of average). The Snake near Heise is 1,630,000 ac-ft (69% of average). Pacific Creek near Moran is 67,000 ac-ft (70% of average). Buffalo Fork above Lava near Moran is 187,000 ac-ft (78% of average). Greys

River above Palisades Reservoir is 163,000 ac-IL (10% OI average). Salu River near Etna is 155,000 ac-ft (74% of average). See the following page for detailed runoff volumes.



### Snake River Basin

Streamflow Forecasts - June 1, 2013

=========							
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)용	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Snake R nr Mo	oran (1,2)						
JUN-JUL	166	235	270	64	305	375	425
JUN-SEP	210	300	340	67	380	470	505
Snake R nr Al	Lpine (1,2	)					
JUN-JUL	575	755	835	65	915	1090	1280
JUN-SEP	745	985	1090	68	1200	1430	1610
Snake R nr I	rwin (1,2)						
JUN-JUL	740	1010	1130	67	1250	1520	1700
JUN-SEP	1080	1380	1520	69	1660	1960	2190
Snake R nr He	eise (2)						
JUN-JUL	865	1060	1190	66	1320	1510	1800
JUN-SEP	1250	1480	1630	69	1780	2010	2350
Pacific Ck at	. Moran						
JUN-JUL	27	46	59	69	72	91	86
JUN-SEP	34	54	67	70	80	100	96
Buffalo Fork	ab Lava n	r Moran					
JUN-JUL	112	138	156	76	174	200	205
JUN-SEP	134	166	187	78	210	240	240
Greys R nr Al	Lpine						
JUN-JUL	98	112	121	74	130	144	164
JUN-SEP	130	150	163	76	176	196	215
Salt R nr Etr	na						
JUN-JUL	40	74	97	68	120	154	143
JUN-SEP	79	124	155	74	186	230	210

- \* 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 1981-2010 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 May

	Usable	*****	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
Grassy Lake	15.2	15.3	15.4	14.3
Jackson Lake	847.0	798.5	809.1	605.7
Palisades	1400.0	751.1	1180.9	1027.0

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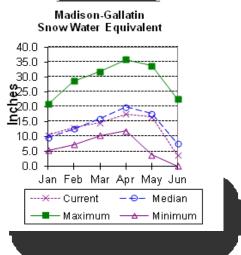
### SNAKE RIVER BASIN

	Number of	This Year as	Percent of
Watershed	Data Sites	Last Year	<u> Median</u>
SNAKE above Jackson Lake	5	38	39
PACIFIC CREEK	2	58	64
BUFFALO FORK	2	70	52
GROS VENTRE RIVER	3	67	60
HOBACK RIVER	3	66	66
GREYS RIVER	5	83	66
SALT RIVER	3	0	26
SNAKE above Palisades	19	58	47

# **Madison-Gallatin River Basins**

### Snow

Snow water equivalent (SWE) is at 47% of normal in the Madison-Gallatin ry of Snow Course Data" at the front of his report for details.



### recipitation

ist month precipitation in the Madison-illatin drainage was about 97% of average 37% of last year). The 6 reporting ations percentages range from 45-75% of verage. Water-year-to-date precipitation about 93% of average (82% of last year's nount). Year to date percentage ranges com 75-88%.

### eservoirs

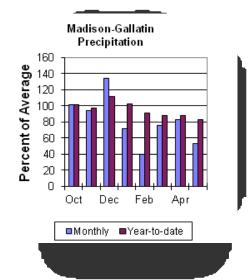
nnis Lake is storing 36,600 ac-ft (89% of apacity, 103% of average or 105% of last

ear's volume)
out 332,000
:-ft of water

(88% of capacity, 99% of average or 91% of last year's volume). Detailed reservoir data is shown on the following page and on the reservoir storage summary at the beginning of this report.

### Streamflow

The 50% exceedance forecast for June through September is below average for the basin. Hebgen Reservoir inflow is 230,000 ac-ft (82% of average). See the following page for detailed runoff volumes.



# **Madison-Gallatin River Basins**

Streamflow Forecasts - June 1, 2013

========		=======					
	<=== Dr	ier === 1	Future C	onditions	=== Wett	er ===>	
	İ					ĺ	
Forecast Pt	======	====== (	Chance of	Exceeding	* =====	=======	
Forecast	90%	70%	5	0% [	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
========		=======				=======	
Hebgen Reser	voir Inflo	w (2)					
JUN-JUL	100	126	143	80	160	186	178
JUN-SEP	178	210	230	82	250	280	280

<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 1981-2010 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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MADISON-GALLATIN RIVER BASINS

Reservoir Storage (1000AF) End of May

Reservoir	Usable Capacity	********** This Year	Usable Storage Last Year	****** Average
ENNIS LAKE	41.0	36.6	34.7	35.6
HEBGEN LAKE	377.5	332.0	366.1	336.2
=======================================		========		=========

\_\_\_\_\_\_

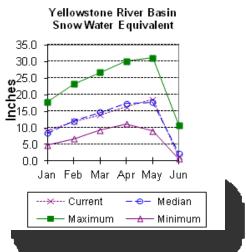
MADISON-GALLATIN RIVER BASINS

Watershed	Number of Data Sites	This Year as Percent Last Year Median	
MADISON RIVER in WY	<b></b> 5	32	46
=======================================			

# Yellowstone River Basin

### Snow

yellowstone Piver Basin ammary of Snow Course Data" at the front of the Yellowstone Piver Basin are port for details.



## recipitation

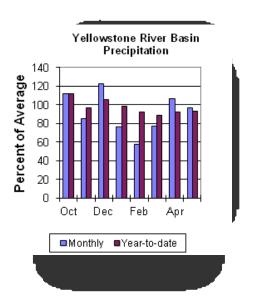
ast month precipitation in the Yellowstone rainage was about 97% of average (87% of ast year). The 15 reporting stations ercentages range from 48-285% of average. ater-year-to-date precipitation is about 3% of average (82% of last year's amount). ear to date percentage ranges from 75-143%.

### eservoirs

o reservoir ata for the asin.

### treamflow

The 50% exceedance forecasts for June through September are below average for the basin. Yellowstone at Lake Outlet is 545,000 ac-ft (83% of average). Yellowstone at Corwin Springs will yield around 1,170,000 ac-ft (88% of average). Yellowstone near Livingston will yield around 1,350,000 ac-ft (89% of average). The Clark's Fork of the Yellowstone River should yield around 335,000 ac-ft (85% of average). See the following page for detailed runoff volumes.



### Yellowstone River Basin

Streamflow Forecasts - June 1, 2013

	<=== Dr	rier ===	Future Co	nditions	=== Wett	er ===>	
						1	
Forecast Pt	======		Chance of	Exceeding	* =====	=======	
Forecast	90%	70%	50	18	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
========						=======	
Yellowstone	R at Yello	wstone La	ake				
JUN-JUL	315	360	390	84	420	465	465
JUN-SEP	435	500	545	83	590	655	655
Yellowstone	R at Corwi	n Springs	3				
JUN-JUL	715	835	920	89	1000	1130	1040
JUN-SEP	895	1060	1170	88	1280	1440	1330
Yellowstone	R at Livir	ngston					
JUN-JUL	810	960	1060	90	1160	1310	1180
JUN-SEP	1020	1220	1350	89	1480	1680	1520
========							

<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 1981-2010 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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# YELLOWSTONE RIVER BASIN Watershed Snowpack Analysis - June 1, 2013

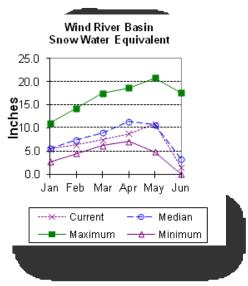
Number of This Year as Percent of
Watershed Data Sites Last Year Median

YELLOWSTONE RIVER in WY 8 58 61
CLARKS FORK in WY 8 52 63

# Wind River Basin

### Snow

The Wind River Basin above Boysen Reservoir is 45% of normal for snow water equivalent at this time of the year. SWE in the Wind River above Dubois is 57% of normal. The Little Wind SWE is 18% of normal, and the Popo Agie drainage SWE is about 16% of normal. See the "Basin Summary of Snow Course Data" at the front of this report for details.



### recipitation

ast month's precipitation in the basin aried from 30-134% of average. recipitation, for the basin, was about 5% of average from the 14 reporting tations; that is about 90% of last ear's amount. Water year-to-date recipitation is 78% of average and about 1% of last year at this time. Year-to-ate percentages range from 55-106% of verage.

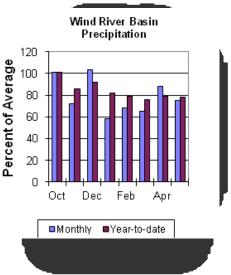
### eservoirs

urrent storage in Bull Lake is about 05,600 ac-ft (120% of average) - the eservoir is at 94% of last year. Boysen eservoir is storing about 101% of verage (505,000 ac-ft) - the reservoir

is about 90% of last year. Pilot Butte is at 121% of average (26,900 acft) - the reservoir is at 140% 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 June through September runoff period are below average. Dinwoody Creek near Burris is 69,000 ac-ft (88% of average). The Wind River above Bull Lake Creek is 280,000 acft (75% of average). Bull Lake Creek near Lenore is 107,000 ac-ft (77% of average). Wind River at Riverton will yield around 295,000 ac-ft (69% of average). Little Popo Agie River near Lander is around 16,500 ac-ft (50% of average). South Fork of Little Wind near Fort Washakie will yield around 47,000 ac-ft (76% of average). Little Wind River near Riverton will yield around 110,000 ac-ft (52% of average). Boysen Reservoir inflow will yield around 285,000 ac-ft (59% of average). detailed runoff volumes.



See the following page for

## Wind River Basin

Streamflow Forecasts - June 1, 2013

	<=== Dr	rier ===	Future Co	onditions	=== Wett	er ===>	
						1	
Forecast Pt				_			
Forecast		70%		·			30 Yr Avg
Period		-				(1000AF)	
Dinwoody Ck					=======		
JUN-JUL		40	4 4	83	48	53	5.3
JUN-SEP	56	64	69	86	74	82	80
Wind R ab Bu		(2)					
JUN-JUL	114	171	210	72	250	305	290
JUN-SEP	171	235	280	75	325	390	375
Bull Lake Ck	nr Lenore	(2)					
JUN-JUL	58	72	82	76	92	106	108
JUN-SEP	75	94	107	77	120	139	139
Wind R at Ri	verton (2)						
JUN-JUL	151	205	245	70	285	340	350
JUN-SEP	180	250	295	69	340	410	430
Little Popo	Agie R nr	Lander					
JUN-JUL	5.5	9.4	12.0	44	14.6	18.5	27
JUN-SEP	9.1	13.5	16.5	50	19.5	24	33
SF Little Wi	nd R nr Fo	ort Washa	kie				
JUN-JUL	22	32	39	74	46	56	53
JUN-SEP	28	39	47	76	55	66	62
Little Wind	R nr River	rton					
JUN-JUL	19.0	52	88	48	124	177	183
JUN-SEP	22	68	110	52	152	215	210
Boysen Reser	voir Inflo	w (2)					
JUN-JUL	71	181	255	60	330		425
JUN-SEP	56	192	285	59	380	515	485

<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 1981-2010 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 May

Reservoir	Usable Capacity	********* This Year	Usable Storage Last Year	******* Average
=======================================				
BULL LAKE	151.8	105.6	112.1	88.3
BOYSEN	596.0	505.0	563.5	498.4
PILOT BUTTE	31.6	26.9	19.2	22.3

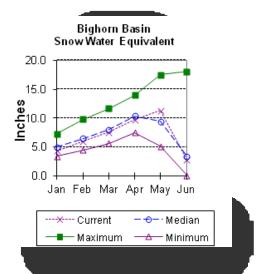
WIND RIVER BASIN

	Number of	This Year as P	======== ercent of
Watershed	Data Sites	Last Year	Median
WIND RIVER above Dubois	3	64	57
LITTLE WIND	2	0	18
POPO AGIE	4	0	12
WIND above Boysen Resv	10	68	43

# **Bighorn River Basin**

### Snow

The Bighorn River Basin SWE above Bighorn Reservoir is at 83% of normal. The Nowood River is at 0% of normal. The Greybull River SWE is at 12% of normal. See the "Basin Summary of



now Course Data" at the front of this eport for details.

## recipitation

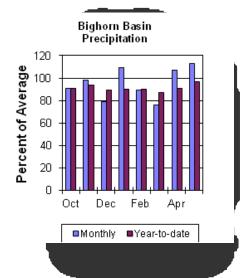
ast month's precipitation was 113% of verage (119% of last year). Sites ranged rom 88-181% of average for the month. ear-to-date precipitation is 97% of verage; that is 93% of last year at this ime. Year-to-date percentages, from the 5 reporting stations, range from 58-130%.

### eservoirs

oysen Reservoir is currently storing

05,000 ac-ft ake is now t 908,200 c-ft (107%

90% of last year volume at this time and Big Horn Lake is storing 103% of last year's volume. Detailed reservoir data is shown or the following page and on the reservoir storage summary at the beginning of this report.



#### Streamflow

The 50% exceedance forecasts for the June through September runoffs are anticipated to be below average. Boysen Reservoir inflow should yield 285,000 ac-ft (59% of average); the Greybull River near Meeteetse should yield around 120,000 ac-ft (85% of average);

Shell Creek near Shell should yield around 45,000 ac-ft (98% of average) and the Bighorn River at Kane should yield around 385,000 ac-ft (61% of average). See the following page for detailed runoff volumes.

# **Bighorn River Basin**

Streamflow Forecasts - June 1, 2013

========					======		========
	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
	I					1	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
========					======	=======	=======
Boysen Reser	voir Inflo	w (2)					
JUN-JUL	71	181	255	60	330	440	425
JUN-SEP	56	192	285	59	380	515	485
Greybull R n	r Meeteets	е					
JUN-JUL	54	69	79	82	89	104	96
JUN-SEP	87	107	120	85	133	153	142
Shell Ck nr	Shell						
JUN-JUL	24	30	34	97	38	44	35
JUN-SEP	34	40	45	98	50	56	46
Bighorn R at	Kane (2)						
JUN-JUL	114	260	355	62	450	595	570
JUN-SEP	83	265	385	61	505	685	630

<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 1981-2010 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 May

Reservoir	Usable Capacity	********* This Year	Usable Storage Last Year	******* Average
BOYSEN BIGHORN LAKE	596.0 1356.0	505.0 908.2	563.5 883.1	498.4 848.0

# BIGHORN RIVER BASIN Watershed Snowpack Analysis - June 1, 2013

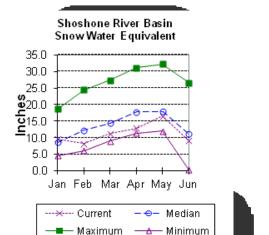
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Watershed	Number of Data Sites	This Year as P Last Year	ercent of Median
			========
NOWOOD RIVER	4	0	0
GREYBULL RIVER	2	0	0
SHELL CREEK	3	60	78
BIGHORN (Boysen-Bighorn)	9	66	81

# **Shoshone River Basin**

### Snow

Snow Water Equivalent (SWE) is 51% of normal in the Shoshone River Basin. The Clarks Fork River drainage SWE is 63% of normal. See the "Basin



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

### recipitation

recipitation for last month was 106% of verage (90% of last year). Monthly ercentages range from 59-177% of average. he basin year-to-date precipitation is ow 97% of average (81% of last year). ear-to-date percentages range from 78-13% of average for the 11 reporting tations.

### eservoirs

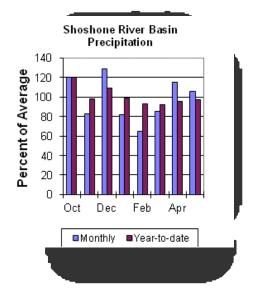
urrent storage in Buffalo Bill Reservoir s about 137% of average (105% of last ear's storage) - the reservoir is at

bout 82% of reservoir

compared to 502,900 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 June through September period are expected to be below average for the basin. The North Fork Shoshone River at Wapiti is 315,000 ac-ft (88% of average). The South Fork of the Shoshone River near Valley is 155,000 ac-ft (82% of average), and the South Fork above Buffalo Bill Reservoir runoff is 111,000 ac-ft (73% of average). The Buffalo Bill Reservoir inflow is expected to yield around 435,000 ac-ft (81% of average). See the following page for detailed runoff volumes.



## **Shoshone River Basin**

Streamflow Forecasts - June 1, 2013

		========		========	-, 2013 		
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
Forecast Pt Forecast		====== 70%	Chance of	_		=======   10%	20 Vm Arra
	(1000AF)			-			_
========	· · · · · · · · · · · · · · · · · · ·				· ========		
NF Shoshone	R at Wapit	i					
JUN-JUL	225	260	285	93	310	345	305
JUN-SEP	260	300	330	92	360	400	360
SF Shoshone	R nr Valle	У					
JUN-JUL	102	118	128	82	138	154	157
JUN-SEP	121	141	155	82	169	189	189
SF Shoshone	R ab Buffa	lo Bill F	Res				
JUN-JUL	63	89	106	73	123	149	145
JUN-SEP	61	91	111	73	131	161	153
Buffalo Bill	Reservoir	Inflow	(2)				
JUN-JUL	265	330	370	80	410	475	465
JUN-SEP	305	380	435	81	490	565	535
Clarks Fk Ye	llowstone	R nr Belf	Ēry				
JUN-JUL	235	275	300	86	325	365	350
JUN-SEP	250	300	335	85	370	420	395
=========		=======					

<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 1981-2010 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 RIVER BASIN

Reservoir Storage (1000AF) End of May

	Usable	*****	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================				
BUFFALO BILL	646.6	528.2	502.9	385.4
=======================================				

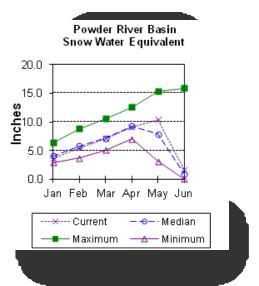
### SHOSHONE RIVER BASIN

Watershed	Number of Data Sites	This Year as Po	ercent of Median
SHOSHONE RIVER	<b>5</b>	55	51

# **Powder River Basin**

### Snow

Snow water equivalent (SWE) in the Upper Powder River drainage is 0% of



ormal. SWE in the Clear Creek drainage is 35% of normal. Crazy Woman Creek rainage is 0% of normal. Powder River asin SWE in Wyoming is 186% of normal. or more information see "Basin Summary of now Course Data" at the beginning of this eport.

## recipitation

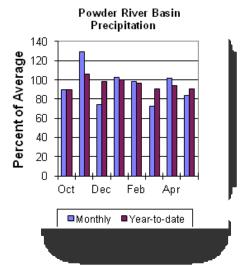
ast month's precipitation was 84% of verage for the 11 reporting stations (75% f last year). Monthly percentages range rom 48-147% of average. Year-to-date recipitation is 91% of average in the asin; this is 87% of last year at this ime. Precipitation for the year ranges rom 63-119% of average.

### Reservoirs

No reservoir data for the basin.

### Streamflow

The 50% exceedance forecasts for the June through September period are expected to be above average for the basin. The Middle Fork of the Powder River near Barnum is 5,100 ac-ft (90% of average). The North Fork of the Powder River near Hazelton should yield around 5,400 ac-ft (104% of average). Rock Creek near Buffalo will yield about 11,300 ac-ft (75% of average), and Piney Creek at Kearny should yield about 22,000 ac-ft (79% of average). The Powder



River at Moorhead is 60,000 ac-ft (55% of average). The Powder Kiver near Locate is 63,000 ac-ft (52% of average). See the following page for detailed runoff volumes.

# **Powder River Basin**

Streamflow Forecasts - June 1, 2013

=========		======				=======	=======
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
	[					[	
Forecast Pt	======	======	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
MF Powder R	======= nr Barnum	=======	=======	=======	=======	=======	=======
JUN-JUL	0.0	2.6	4.3	90	6.0	8.6	4.8
JUN-SEP	0.7	3.3	5.1	90	6.9	9.5	5.7
NF Powder R	nr Hazelto	n					
JUN-JUL	2.5	3.8	4.7	104	5.6	6.9	4.5
JUN-SEP	3.0	4.4	5.4	104	6.4	7.8	5.2
Rock Ck nr B	uffalo						
JUN-JUL	3.8	6.4	8.1	72	9.8	12.4	11.3
JUN-SEP	6.2	9.2	11.3	75	13.4	16.4	15.0
Piney Ck at 1	Kearny						
JUN-JUL	7.8	14.6	19.2	77	24	31	25
JUN-SEP	8.6	16.6	22	79	27	35	28
Powder R at I	Moorhead						
JUN-JUL	7.2	29	51	55	73	105	92
JUN-SEP	10.0	33	60	55	87	126	110
Powder R nr :	Locate						
JUN-JUL	10.0	27	56	55	85	128	101
JUN-SEP	10.0	26	63	52	100	154	122
=========							

<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 1981-2010 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.

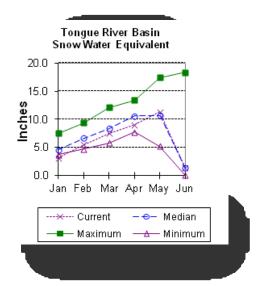
# POWDER RIVER BASIN

	Number of	This Year as	Percent of
Watershed	Data Sites	Last Year	Median
UPPER POWDER RIVER	4	0	0
CLEAR CREEK	2	0	133
CRAZY WOMAN CREEK	1	0	0
POWDER RIVER in WY	6	0	180

# **Tongue River Basin**

### Snow

Snow water equivalent (SWE) in the Tongue River drainage is 94% of



e is 0% of normal. For more information ee "Basin Summary of Snow Course Data" at he beginning of this report.

# recipitation

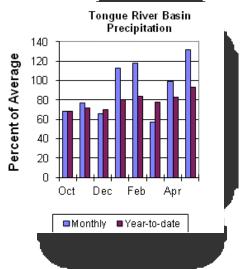
ast month's precipitation was 132% of verage for the 9 reporting stations (136% f last year). Monthly percentages range rom 100-164% of average. Year-to-date recipitation is 93% of average in the asin; this is 86% of last year at this ime. Precipitation for the year ranges rom 81-113% of average.

### eservoirs

he Tongue River Reservoir currently is toring 153% of average (80.600 ac-ft) ompared to

### Streamflow

The 50% exceedance forecasts for the June through September period are expected to be below average for the basin. The yield for Tongue River near Dayton is 52,000 acft (84% of average). Big Goose Creek near Sheridan is 31,000 ac-ft (80% of average). Little Goose Creek near Bighorn is 23,000 ac-ft (85% of average). The Tongue River Reservoir Inflow is 94,000 ac-ft (70% of average). See the following page for detailed runoff volumes.



# **Tongue River Basin**

Streamflow Forecasts - June 1, 2013

	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
						1	
Forecast Pt	======		Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Tonque R nr l	======= Davton (2)	======	========		=======	=======	=======
JUN-JUL	24	34	40	82	46	56	49
JUN-SEP	33	44	52	84	60	71	62
Big Goose Ck	nr Sherid	an					
JUN-JUL	14.8	20	24	77	28	33	31
JUN-SEP	21	27	31	80	35	41	39
Little Goose	Ck nr Big	horn					
JUN-JUL	10.4	13.2	15.1	79	17.0	19.8	19.1
JUN-SEP	16.5	20	23	85	26	29	27
Tongue River	Reservoir	Inflow	(2)				
JUN-JUL	29	56	74	67	92	119	110
JUN-SEP	38	72	94	70	116	150	134

<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 1981-2010 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.

TONGUE RIVER BASIN

Reservoir Storage (1000AF) End of May

	Usable	*****	Usable Storage	*****			
Reservoir	Capacity	This Year	Last Year	Average			
=======================================							
TONGUE RIVER	79.1	80.6	81.2	52.6			

TONGUE RIVER BASIN

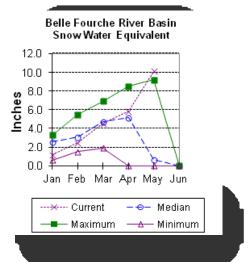
Watershed	Number of Data Sites	This Year as Last Year	Percent of Median
GOOSE CREEK	 2	0	0
TONGUE RIVER BASIN	6	105	92

# **Belle Fourche River Basin**

### Snow

The Belle Fourche River Basin SWE is melted out at this time of year.

1 Summary of Snow Course Data" at the



## recipitation

eginning of this report.

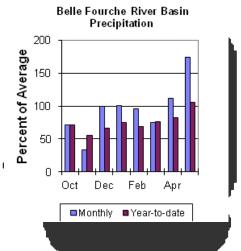
recipitation for last month was 174% of verage or 305% of last year in the Black ills. There were 4 reporting stations

ear-to-date recipitation is 06% of average nd 128% of last ear's amount.

## eservoirs

elle Fourche eservoir is toring 99% of verage (150,500 c-ft), about

84% of capacity. Keyhole reservoir is storing 152% of average (153,800 ac-ft), about 79% of capacity. Shadehill reservoir is storing 65% of average (44,400 ac-ft), about 55% of capacity. Detailed reservoir data is shown or the following page and on the reservoir storage summary at the beginning of this report.



### Streamflow

There are no streamflow forecast points for the basin.

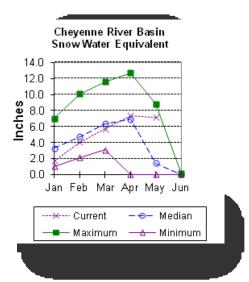
Belle Fourche River Basin
Reservoir Storage (1000AF) End of May

=======================================			==========	
	Usable	*****	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================			==========	
BELLE FOURCHE	178.4	150.5	161.4	152.3
KEYHOLE	193.8	153.8	180.8	100.9
SHADEHILL	81.4	44.4	43.0	68.7

# **Cheyenne River Basin**

### Snow

The Cheyenne River Basin SWE is melted out at this time of year. For more information see "Basin Summary of Snow Course Data" at the beginning of this report.



## recipitation

recipitation for last month was 142% of verage or 96% of last year in the Black ills. There were 4 reporting stations. onthly percentages range from 51-202%. ear-to-date precipitation is 107% of verage and 81% of last year's amount. early percentages range from 82-121% of verage.

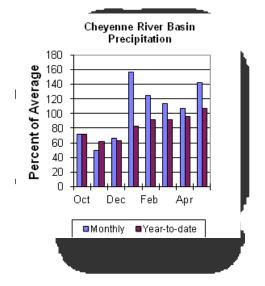
### eservoirs

ngostura is currently storing 68% of verage (79,700 ac-ft), about 65% of apacity. Deerfield reservoir is storing 13% of average (15,400 ac-ft), about 101% f capacity. Pactola reservoir is storing 11% of  $\epsilon$ 

or capacity. Decaried Teservoir 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 June through July period. The Deerfield Reservoir Inflow is expected to be 2,200 ac-ft (96% of average). Pactola Reservoir Inflow is expected to yield around 6,800 ac-ft (65% of average). See the following page for detailed runoff volumes.



# **Cheyenne River Basin**

Streamflow Forecasts - June 1, 2013

=========							========
	<=== Dr	ier === 1	Tuture Co	onditions	=== Wett	er ===>	
	I					i	
Forecast Pt	'   =======	====== (	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========							
Deerfield Re	servoir In	flow (2)					
JUN-JUL	0.5	0.7	2.0	87	3.3	5.2	2.3
Pactola Rese	rvoir Infl	ow (2)					
JUN-JUL	1.6	2.7	6.8	65	13.4	23	10.5
==========							========

<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 1981-2010 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.

CHEYENNE RIVER BASIN

Reservoir Storage (1000AF) End of May

Usable \*\*\*\*\*\*\*\*\* Usable Storage \*\*\*\*\*\*\*\*

Reservoir Capacity This Year Last Year Average

ANGOSTURA 122.1 79.7 101.9 117.2

ANGOSTURA 122.1 79.7 101.9 117.2
DEERFIELD 15.2 15.4 15.2 13.6
PACTOLA 55.0 53.8 55.5 48.6

CHEYENNE RIVER BASIN

Watershed Snowpack Analysis - June 1, 2013

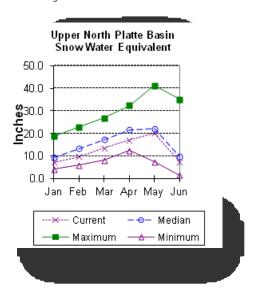
Number of This Year as Percent of Watershed Data Sites Last Year Median

CHEYENNE BASIN 2 0 0

# **Upper North Platte River Basin**

### Snow

The stations above Seminoe Reservoir are showing about 75% of normal (SWE) for this time of the year. SWE in the drainage area above Northqate is 77% of normal at this time. SWE in the Encampment River



Brush Creek SWE for the year is about 0% of normal. Medicine Bow and Rock Creek rainages SWE are about 88% of normal. For ore information see "Basin Summary of Snow ourse Data" at the beginning of this eport.

# recipitation

ourteen reporting stations show last onth's precipitation at 63% of average or 18% of last year's amount. Precipitation aried from 13-90% of average last month. otal water-year-to-date precipitation is bout 84% of average for the basin, which s about 112% of last year's amount. Year o date percentage ranges from 38-112% of verage.

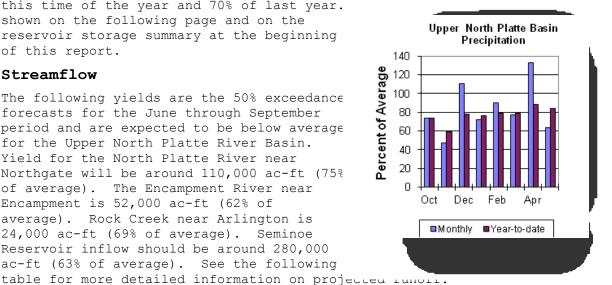
### leservoirs

Seminoe Reservoir is estimated to be storing 578,100 ac-ft or 57% of capacity. Seminoe Reservoir is also storing about 95% of average for

this time of the year and 70% of last year. 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 June 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 110,000 ac-ft (75% of average). The Encampment River near Encampment is 52,000 ac-ft (62% of average). Rock Creek near Arlington is 24,000 ac-ft (69% of average). Seminoe Reservoir inflow should be around 280,000 ac-ft (63% of average). See the following



# **Upper North Platte River Basin**

Streamflow Forecasts - June 1, 2013

	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
	l						
Forecast Pt	======	======	Chance of	Exceeding	* =====	=======	
Forecast	90%	70%	50	)응 [	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========			========			=======	========
North Platte	R nr Nort	hgate					
JUN-JUL	49	75	93	76	111	137	123
JUN-SEP	56	88	110	75	132	164	146
Encampment R	nr Encamp	ment					
JUN-JUL	21	36	46	61	56	71	75
JUN-SEP	25	41	52	62	63	79	84
Rock Ck nr A:	rlington						
JUN-JUL	15.2	19.5	22	69	25	30	32
JUN-SEP	16.1	21	24	69	27	32	35
Sweetwater R	nr Alcova						
JUN-JUL	1.0	1.3	2.8	11	7.6	14.6	26
JUN-SEP	1.5	1.8	4.5	15	10.3	18.8	31
Seminoe Rese	rvoir Infl	ow (2)					
JUN-JUL	100	187	245	63	305	390	390
JUN-SEP	104	210	280	63	350	455	445
=========							

<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 1981-2010 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 May

Usable \*\*\*\*\*\*\*\*\* Usable Storage \*\*\*\*\*\*\*\*

Reservoir Capacity This Year Last Year Average

SEMINOE 1016.7 578.1 824.8 607.1

\_\_\_\_\_\_

# UPPER NORTH PLATTE RIVER BASIN

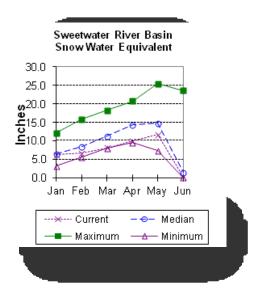
Watershed	Number of Data Sites	This Year as F Last Year	Percent of Median
N PLATTE above Northgate	5	794	77
ENCAMPMENT RIVER	3	388	67
BRUSH CREEK	2	0	70
MEDICINE BOW & ROCK CREEKS	1	305	88
N PLATTE above Seminoe	12	609	75

# **Sweetwater River Basin**

### Snow

SWE for the Sweetwater River Basin is at 12% of normal. For more

of Snow Course Data" at the beginning of his report.

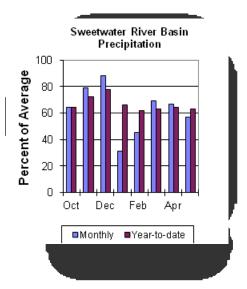


## recipitation

ast month's precipitation was 57% of verage or 115% of last year's amount. The ater year-to-date precipitation for the asin is currently 63% of average (84% of ast year).

### eservoirs

eservoir stora 97,600 ac-ft 63% of verage). Last ear at this ime the eservoir was 15,200 ac-ft.



### Streamflow

The following yields are based on the 50% exceedance forecasts for the May through September period. The Sweetwater River near Pathfinder is forecast to yield about 4,500 ac-ft (15% of average). See the following table for more detailed information on projected runoff.

# **Sweetwater River Basin**

Streamflow Forecasts - June 1, 2013

I	<=== Dr:	ier ===	Future Co	onditions	=== Wett	er ===>	
i						i	
Forecast Pt	=======		Chance of	Exceeding	g * =====		
Forecast	90%	70%	1 50	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========							
Sweetwater R	nr Alcova						
JUN-JUL	1.0	1.3	2.8	11	7.6	14.6	26
JUN-SEP	1.5	1.8	4.5	15	10.3	18.8	31
+ 000 700		=======	========	=======			1 / 1 / 2 2 2 2 2 2

<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 1981-2010 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.

\_\_\_\_\_\_\_

### SWEETWATER RIVER BASIN

Reservoir Storage (1000AF) End of May

	Usable	*****	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
=======================================				
PATHFINDER	1016.5	397.6	815.2	633.8

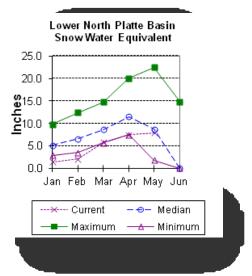
# SWEETWATER RIVER BASIN

Watershed	Number of Data Sites	This Year as Percer Last Year Medi				
=======================================						
SWEETWATER	2	0	0			

# **Lower North Platte River Basin**

### Snow

SWE for the Lower North Platte River Basin (Laramie Range Mts.) is at 0% of normal. Deer and LaPrele Creek SWE are at 0% of normal. SWE for the



orth Platte (includes Upper North Platte, weetwater and Laramie River Basins) is 75% f normal. For more information see "Basin ummary of Snow Course Data" at the eginning of this report.

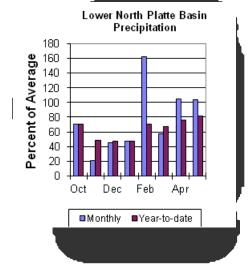
## recipitation

ast month's precipitation was 104% of verage or 206% of last year's amount. Of he 5 reporting stations, percentages for he month range from 87-124%. The water ear-to-date precipitation for the basin is urrently 81% of average (88% of last ear). Year-t

4-98% of verage.

### eservoirs

Reservoir Storage is as Torrows. Alcova 180,700 ac-ft (101% of average); Glendo 425,700 ac-ft (90% of average); Guernsey 8,400 ac-ft (24% of average); Pathfinder 397,600 ac-ft (63% of average). The combined storage of these 4 reservoirs plus Seminoe is 82% of average, 57% of capacity, and 71% of last year at this time.



### Streamflow

The following yields are based on the 50% exceedance forecasts for the June through September period. North Platte River below Glendo Reservoir is 191,000 ac-ft (47% of

average). The North Platte River below Guernsey Reservoir is 220,000 acft (55% of average. See the following table for more detailed information on projected runoff.

## **Lower North Platte River Basin**

Streamflow Forecasts - June 1, 2013

=========							
	<=== Dr	ier === 1	Tuture Co	nditions	=== Wett	er ===>	
I						1	
Forecast Pt	======	====== (	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	)%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========						=======	
North Platte	R bl Glen	do Res (2)	)				
JUN-JUL	81	148	193	52	240	305	375
JUN-SEP	73	143	191	47	240	310	405
North Platte	R bl Guer	nsey Res	(2)				
JUN-JUL	76	156	210	57	265	345	370
JUN-SEP	73	161	220	55	280	365	400

<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 1981-2010 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 RIVER BASIN

Reservoir Storage (1000AF) End of May

	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
ALCOVA	184.3	180.7	180.5	179.7
GLENDO	506.4	425.7	391.1	475.0
GUERNSEY	45.6	8.4	28.8	34.3
PATHFINDER	1016.5	397.6	815.2	633.8

# LOWER NORTH PLATTE RIVER BASIN Watershed Snowpack Analysis - June 1, 2013

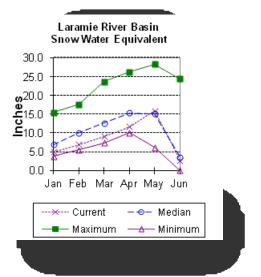
Number of This Year as Percent of Watershed Data Sites Last Year Median

DEER & LaPRELE CREEKS	2	0	0
N PLATTE Laramie Range Mts.	4	0	0

# Laramie River Basin

### Snow

SWE for the Laramie River Basin above mouth is at 74% of normal. SWE for



is 86% of normal. SWE for the Little aramie River is 54% of normal. For more nformation see "Basin Summary of Snow ourse Data" at the beginning of this eport.

# recipitation

ast month's precipitation was 62% of verage or 133% of last year's amount. Of he 8 reporting stations, percentages for he month range from 24-100%. The water ear-to-date precipitation for the basin is urrently 81% of average (104% of last ear). Year-to-date precipitation for the basin is

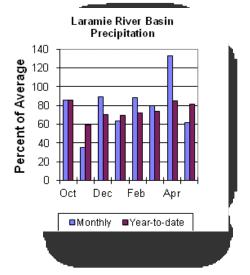
0-94% of verage.

### eservoirs

#2 30,900 ac-ft (last year it was at 62,200 ac-ft).

### Streamflow

The following yields are based on the 50% exceedance forecasts for the June through September period. Laramie River near Woods Landing should yield around 54,000 ac-ft (66% of average). The Little Laramie near Filmore should produce about 26,000 ac-ft (67% of average). See the following table for more detailed information on projected runoff.



# **Laramie River Basin**

Streamflow Forecasts - June 1, 2013

	<=== Dr	ier === I	Tuture Co	nditions	=== Wett	er ===>	
	l					1	
Forecast Pt	======	:===== (	Chance of	Exceeding	* =====	======	
Forecast	90%	70%	50	%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========				=======			
Laramie R nr Woods							
JUN-JUL	24	37	46	65	55	68	71
JUN-SEP	29	44	54	66	64	79	82
Little Laramie R nr Filmore							
JUN-JUL	13.9	19.3	23	66	27	32	35
JUN-SEP	15.3	22	26	67	30	37	39

<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 1981-2010 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.

LARAMIE RIVER BASIN

Reservoir Storage (1000AF) End of May

=======================================				
	Usable	******	Usable Storage	******
Reservoir	Capacity	This Year	Last Year	Average
=======================================		========		
WHEATLAND #2	98.9	30.9	62.2	55.7

\_\_\_\_\_\_

LARAMIE RIVER BASIN
Watershed Snowpack Analysis - June 1, 2013

-	_======================================						
		Number of	This Year as F	ercent of			
V	Natershed	Data Sites	Last Year	Median			
=							
1	LARAMIE RIVER abv Laramie	3	0	86			
1	LITTLE LARAMIE RIVER	2	0	54			
]	LARAMIE RIVER above mouth	6	0	74			
1	NORTH PLATTE TOTAL RIVER BAS	22	667	74			
_							

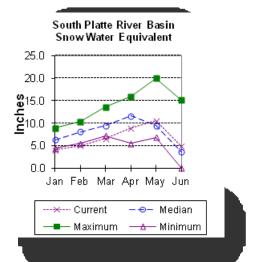
# **South Platte River Basin**

### Snow

SWE for the South Platte River Basin is at 134% of normal. For more

of Snow Course Data" at the beginning of

his report.



## recipitation

ast month's precipitation was 79% of verage or 159% of last year's amount. he water year-to-date precipitation for the asin is curre

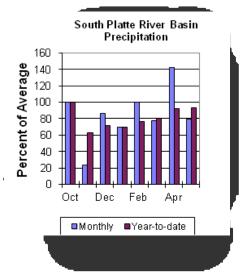
ast year).

### Reservoirs

o reservoir ata for the asin.

treamflow

There are no streamflow forecast points for the basin.



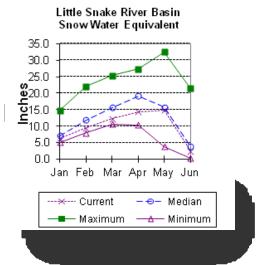
South Platte River Basin
Watershed Snowpack Analysis - June 1, 2013

	Number of	This Year as	Percent of			
Watershed	Data Sites	Last Year	Median			
SOUTH PLATTE RIVER	4	0	105			

#### Little Snake River Basin

#### Snow

Currently, snow water equivalent (SWE) in the Little Snake River drainage ation see "Basin Summary of Snow Course ata" at the beginning of this report.



#### recipitation

recipitation across the basin was 53% f average (135% of last year) for the 8 eporting stations. Last month's recipitation ranged from 36-75% of verage. The Little Snake River basin ater-year-to-date precipitation is urrently 81% of average (111% of last ear). Year-to-date percentages range rom 66-98% of average.

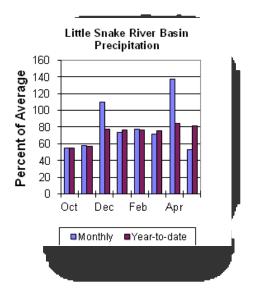
#### eservoirs

igh Savery
am is
urrently
olding

12,400 ac-11. IHIS IS 3/6 OF average and 31% of capacity.

#### Streamflow

The 50% exceedance forecast for the June 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 30,000 ac-ft (46% of average). The Little Snake River at Dixon is estimated to yield around 45,000 ac-ft (33% of average). See the following table for more detailed information on projected runoff.



#### Little Snake River Basin

Streamflow Forecasts - June 1, 2013

	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
						Ĺ	
Forecast Pt	=======	======	Chance of	Exceeding	* =====	====== i	
Forecast	1 90%	70%	50	)% [	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========							
Little Snake	R nr Slat	er (2)					
APR-JUL	86	94	100	64	107	118	156
JUN-JUL	16.2	24	30	46	37	48	66
Little Snake	R nr Dixo	n (2)					
APR-JUL	121	137	150	44	166	194	345
JUN-JUL	16.0	32	45	33	61	89	135
=========							

<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 1981-2010 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

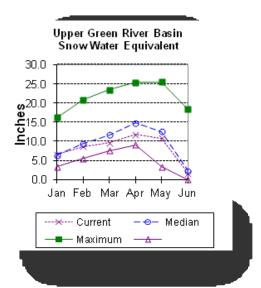
Reservoir Storage (1000AF) End of May

Usable \*\*\*\*\*\*\*\*\* Usable Storage \*\*\*\*\*\*\*\*
Reservoir Capacity This Year Last Year Average
HIGH SAVERY 22.4 12.4 ---- 21.7

### **Upper Green River Basin**

#### Snow

SWE in the Green River Basin above Warren Bridge is about 54% of normal. SWE for the West Side of Upper Green River Basin is about 73% of normal.



about 0% of normal. Big Sandy-Eden Valley asin is 0% of normal. SWE in the Green iver Basin above Fontenelle Reservoir is bout 71% of normal. For more information se "Basin Summary of Snow Course Data" at he beginning of this report.

#### recipitation

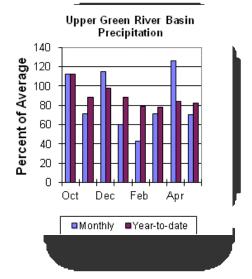
he 12 reporting precipitation sites in the asin were 70% of average last month (80% f last year). Last month's precipitation aried from 42-115% of average. Water ear-to-date precipitation is about 84% of verage (86% of last year). Year to date ercentage of average ranges from 63-93% or the reporting stations.

#### eservoir

torage in Big Sandy Reservoir is 22,100 ac-ft or 58% of capacity, and 76% of average. Fontenelle Reservoir is 184,000 ac-ft or 53% of capacity, and 112% of average. This is 107% 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 June 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 100,000 ac-ft (60% of average). Pine Creeł above Fremont Lake is 40,000 ac-ft (53% of



average). New Fork River near Big Piney is 100,000 ac-ft (39% of average). Fontenelle Reservoir Inflow is estimated to be 180,000 ac-ft (38% of average), and Big Sandy near Farson is expected to be around 12,000 ac-ft (35% of average). See the following table for more detailed information on projected runoff.

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

Streamflow Forecasts - June 1, 2013

	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
						1	
Forecast Pt	======	======	Chance of	Exceeding	* =====	=======	
Forecast	90%	70%	1 50	)% [	30%	10% I	30 Yr Ava
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========							
Green R at Wa	arren Brid	ge					
APR-JUL	119	140	156	64	174	200	245
JUN-JUL	63	84	100	60	118	146	168
Pine Ck ab Fr	remont Lak	е					
APR-JUL	48	57	63	64	70	81	98
JUN-JUL	25	34	40	53	47	58	76
New Fork R ni	Big Pine	У					
APR-JUL	119	141	158	45	176	205	355
JUN-JUL	61	83	100	39	118	148	255
Fontenelle Re	eservoir I	nflow (2)					
APR-JUL	250	300	340	47	385	460	725
JUN-JUL	91	140	180	38	225	300	475
Big Sandy R r	nr Farson						
APR-JUL	18.0	22	26	50	30	38	52
JUN-JUL	4.0	8.3	12.0	35	16.4	24	34

<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 1981-2010 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 May

	Usable	*****	Usable Storage	*****	
Reservoir	Capacity	This Year	Last Year	Average	
=======================================			==========		
BIG SANDY	38.3	22.1	34.4	29.1	
FONTENELLE	344.8	184.0	227.3	164.0	

#### UPPER GREEN RIVER BASIN

Watershed Snowpack Analysis - June 1, 2013

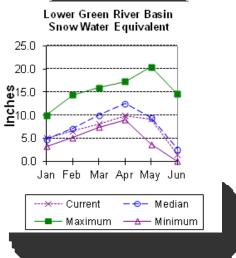
Watershed	Number of Data Sites	This Year as E Last Year	Percent of Median
GREEN above Warren Bridge	5	52	54
UPPER GREEN (West Side)	4	79	73
NEWFORK RIVER	2	0	0
BIG SANDY/EDEN VALLEY	1 11	U 7.E	71
GREEN above Fontenelle	11	75	/ 1

#### Lower Green River Basin

#### Snow

SWE in the Green River Basin above Flaming Gorge is 56% of normal. SWE in the Hams Fork Basin is 38% of normal. Blacks Fork Basin SWE is

The Henrys Fork drainage SWE is 0%. For ore information see "Basin Summary of Snow ourse Data" at the beginning of this eport.



#### recipitation

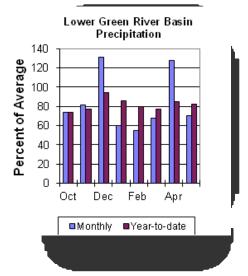
recipitation for the 12 reporting stations uring last month was at 70% of average or 87% of last year. Precipitation ranged rom 21-115% of average for the month. The asin year-to-date precipitation is urrently 82% of average (101% of last ear). Year-to-date percentages range from 1-120% of average.

#### eservoirs

ontenelle Reservoir is currently storing 84,000 ac-ft

f last

3,019,000 ac-ft; compared to 3,110,600 at this time last year. Viva Naughton is currently storing 39,900 ac-ft, 96% of average or 94% 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 June 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 166,000 ac-ft (35% of average). The Blacks Fork near Robertson is forecast to yield 35,000 ac-ft

(59% of average). East Fork of Smiths Fork near Robertson is forecast to yield 10,000 ac-ft (57% of average). Hams Fork below Pole Creek near Frontier is forecast to be 10,000 ac-ft (39% of average). The Hams Fork Inflow to Viva Naughton Reservoir is forecast to be 11,000 ac-ft (36% of average). The Flaming Gorge Reservoir inflow will be about 220,000 ac-ft (37% of average). See the following table for more detailed information on projected runoff.

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

Streamflow Forecasts - June 1, 2013

=========		=======			=======	=======	
	<=== Dr	ier ===	Future Co	onditions	=== Wett	er ===>	
						1	
Forecast Pt			Chance of	Exceeding	* =====	=======	
Forecast	90%	70%	1 50	0%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
		========			======		
Green R nr Gr				4.4	265	4.4.5	720
						445	
JUN-JUL			166	35	210	290	480
Blacks Fk nr							
APR-JUL		63		76		83	89
JUN-JUL	23	30	35	59	41	50	59
EF of Smiths	Fork nr R	obertson	(2)				
APR-JUL	15.0	17.6	19.7	76	22	26	26
JUN-JUL	5.3	7.9	10.0	57	12.3	16.2	17.7
Hams Fk bl Pc	ole Ck nr	Frontier					
APR-JUL	22	25	27	50	29	33	54
JUN-JUL	5.3	7.9	10.0	39	12.3	16.2	26
Viva Naughtor	n Reservoi	r Inflow	(2)				
APR-JUL	28	32	35	47	39	46	74
JUN-JUL	3.9	7.7	11.0	36	14.9	22	31
Flaming Gorge	e Reservoi	r Inflow	(2)				
APR-JUL	305	370	425	43	485	590	980
JUN-JUL			220	37	280	385	600
			========				

<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 1981-2010 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 May

	Usable	******	Usable Storage	*****
Reservoir	Capacity	This Year	Last Year	Average
===========			=========	
FONTENELLE	344.8	184.0	227.3	164.0
FLAMING GORGE	3749.0	3019.0	3110.6	3070.0
VIVA NAUGHTON RE	S 42.4	39.9	44.3	41.5

VIVA NAUGHTON RES 42.4 39.9 44.3 41.5

#### LOWER GREEN RIVER BASIN

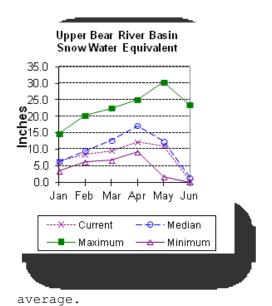
Watershed Snowpack Analysis - June 1, 2013

Watershed	Number of Data Sites	This Year as Pe Last Year	rcent of Median
=======================================			
HAMS FORK RIVER	3	0	38
BLACKS FORK	2	0	48
HENRYS FORK	3	0	0
GREEN above Flaming Gorge	20	110	56

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

#### Snow

Snow water equivalent (SWE) in the Upper Bear River Basin in Utah is estimated to be 27% of normal. SWE in the Wyoming portion of the Bear



s Forks) is at 0% of normal. Bear River asin SWE, above the Idaho State line, is 0% of normal. For more information see Basin Summary of Snow Course Data" at the eginning of this report.

#### recipitation

recipitation for last month was 61% of verage for the 8 reporting stations; this s 109% of the precipitation received last ear. Precipitation ranged from 35-80% of verage for the month. The year-to-date recipitation, for the basin, is 79% of verage; this is 100% of last wear's

mount.

ear-to-date ercentages ange from 7-85% of

#### Reservoirs

Storage in Woodruff Narrows reservoir is 26,900 ac-ft. Reservoir storage last year at this time was 51,600 ac-ft.

#### Streamflow

The following 50% exceedance forecasts are for the June through September period. Bear River near the Utah-Wyoming State Line is 46,000 ac-ft (59% of average). The Bear River above Reservoir near Woodruff is

Upper Bear River Basin Precipitation 140 Percent of Average 120 100 80 60 40 20 Dec Oct Feb Apr ■Monthly ■Year-to-date

21,000 ac-ft (33% of average). The Smiths Fork River near Border Jct. is 36,100 ac-ft (56% of average). See the following table for more detailed information on projected runoff.

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

Streamflow Forecasts - June 1, 2013

=========							
	<=== Dr	ier ===	Future Co	nditions	=== Wett	er ===>	
						i	
Forecast Pt	=======	======	Chance of	Exceeding	* =====		
Forecast	90%	70%	50	%	30%	10%	30 Yr Avg
Period	(1000AF)	(1000AF)	) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=========							========
Bear R nr UT-	-WY State	Line					
APR-JUL	59	71	79	71	87	99	112
APR-SEP	61	75	85	69	95	109	123
JUN-JUL	23	33	40	61	46	56	66
JUN-SEP	27	38	46	59	54	65	78
Bear R ab Res	s nr Woodr	uff					
APR-JUL	19.0	37	50	41	63	81	121
APR-SEP	22	40	53	41	66	84	128
JUN-JUL	1.7	9.5	18.0	32	26	39	57
JUN-SEP	0.6	12.0	21	33	30	43	64
Smiths Fk nr	Border						
APR-JUL	43	51	57	64	63	71	89
APR-SEP	46	56	63	61	70	80	104
JUN-JUL	16.1	24	30	60	36	44	50
JUN-SEP	19.1	29	36	56	43	53	65

<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 1981-2010 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 May

Reservoir	Usable Capacity		Usable Storage Last Year	******* Average
WOODRUFF NARROWS	57.3	26.9	51.6	44.8 

#### UPPER BEAR RIVER BASIN

Watershed Snowpack Analysis - June 1, 2013

	Number of	This Year as P	ercent of			
Watershed	Data Sites	Last Year	Median			
		=========				
UPPER BEAR RIVER in Utah	4	0	23			
SMITHS & THOMAS FORKS	2	0	0			
BEAR RIVER abv ID line	8	0	14			

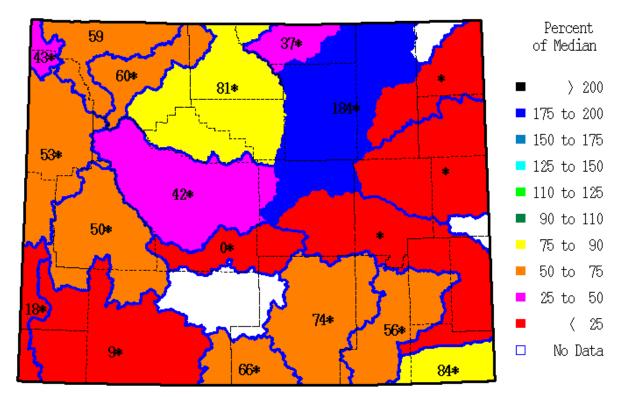
NORTHWEST	45	54	56
NORTHEAST	12	211	122
SOUTHEAST	20	728	72
SOUTHWEST	29	176	57

#### Issued by Released by

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Washington D.C.

Astrid Martinez State Conservationist N R C S Casper, Wyoming

SWE % of Median as of Wednesday, 05 June 2013



\* = Data may not provide a valid measure of conditions

## 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





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