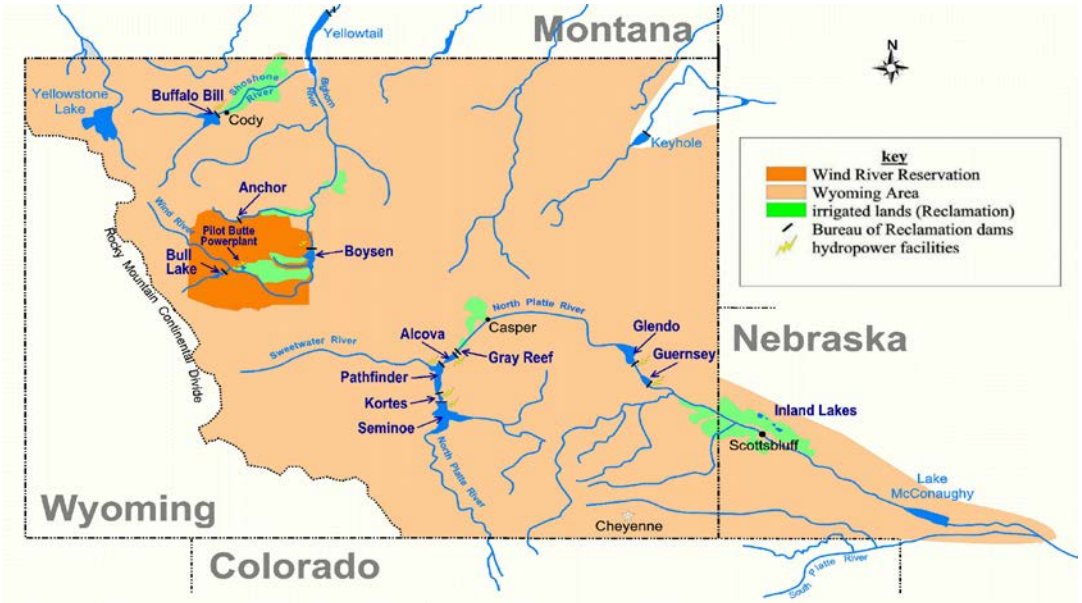
RECLAMATION
Managing Water in the West

Bighorn Basin
Water Supply and Utilization Report
Wyoming Area Office
Report for April 2016



The Wyoming Area Office of the Bureau of Reclamation is responsible for the operation of Reclamation reservoirs in Wyoming east of the Continental Divide except for Keyhole Reservoir. Four off-stream reservoirs in Nebraska commonly referred to as the Inland Lakes also fall within the Wyoming Area. The North Platte River Basin Reservoirs have a combined storage capacity of 2,800,000 acre-feet. The major reservoirs in the Shoshone and Wind/Bighorn Basins have a combined storage capacity of 1,600,000 acre-feet.

United States of America
Department of the Interior
Bureau of Reclamation
Wyoming Area Office
P.O. Box 1630
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Report for April 2016
WATER SUPPLY AND UTILIZATION REPORT
BIGHORN RIVER BASIN
WYOMING AREA OFFICE

This report concerns the operation of Reclamation facilities in the Shoshone and Wind/Bighorn River Basins.

Reclamation defines a water year as the time period of October 1 through September 30. Water year is abbreviated in this report as W. Yr.

Other organizations furnished information for the Water Supply and Utilization Report. Their cooperation is greatly appreciated.

This report is available on the Internet and can be accessed by following these steps:

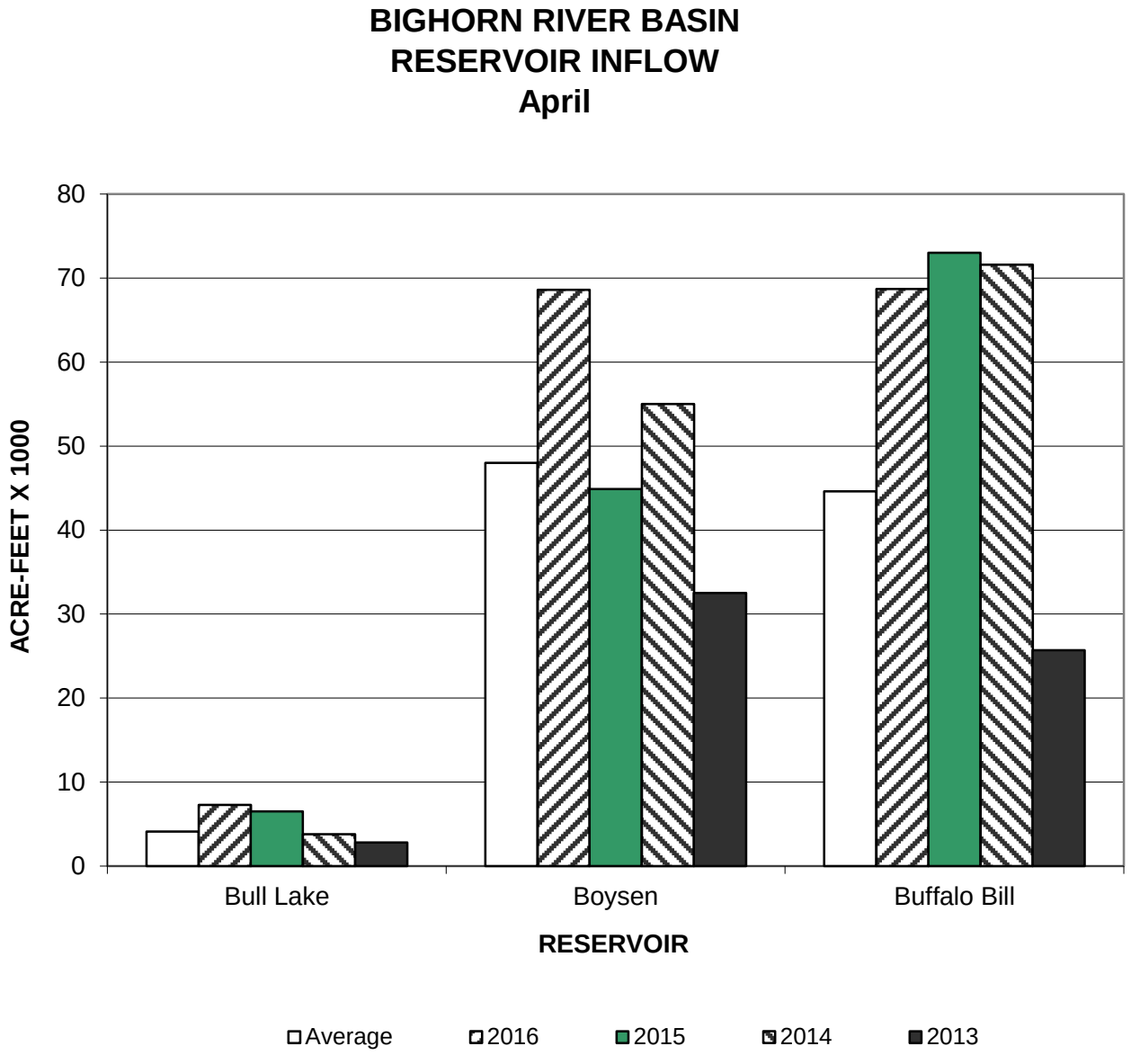
1. **Log on to the Great Plains Home Page at** http://www.usbr.gov/gp
2. **Select Water Operations.**
3. **Select Water Management Information.**
4. **Select Water Supply Report.**
5. **Under Bighorn Basin, select the current report or reports from the previous 12 months**

BIGHORN RIVER BASIN INFLOW

(1000 acre-feet)

Reservoir	April Inflow			April Historical Inflow			Accumulated Inflow (October-April)		
	W. Yr. 2016	30 Yr. Avg. [1]	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2016	30 Yr. Avg.	% of Avg.
Bull Lake	7.3	4.1	178	6.5	3.8	2.8	24.1	20.8	116
Boysen	68.6	48.0	143	44.9	55.0	32.5	315.3	311.6	101
Buffalo Bill	68.7	44.6	154	73.0	71.6	25.7	185.5	154.5	120

[1] Average is based on the 1986-2015 period.



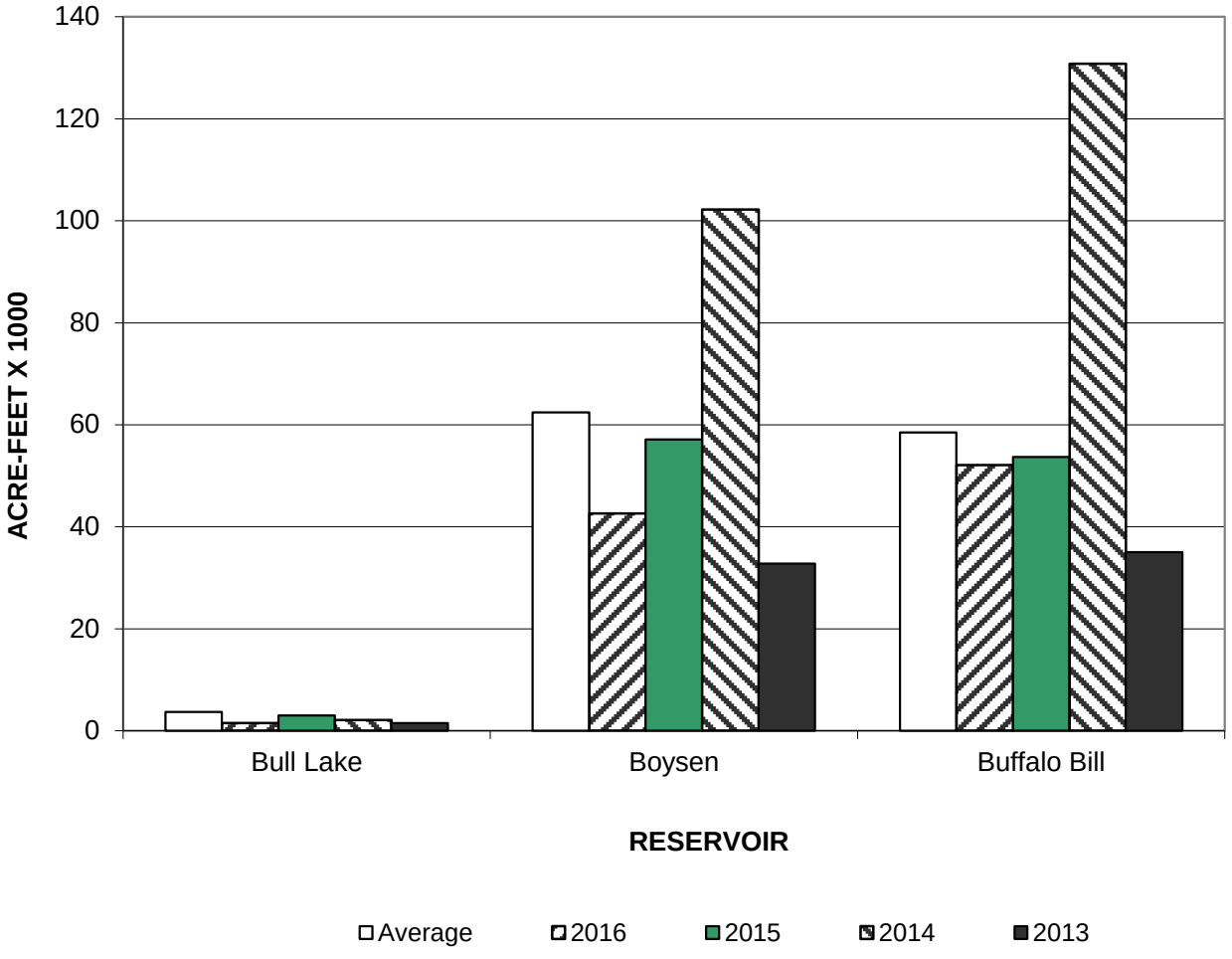
BIGHORN RIVER BASIN OUTFLOW

(1000 acre-feet)

	April Outflow			April Historical Outflow			Accumulated Outflow (October-April)		
Reservoir	W. Yr. 2016	30 Yr. Avg. [1]	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2016	30 Yr. Avg.	% of Avg.
Bull Lake	1.5	3.7	41	3.0	2.1	1.5	10.9	19.2	57
Boysen	42.6	62.4	68	57.1	102.2	32.8	334.2	351.5	95
Buffalo Bill	52.1	58.5	89	53.7	130.8	35.0	164.6	180.0	91

[1] Average is based on the 1986-2015 period.

BIGHORN RIVER BASIN RESERVOIR OUTFLOW April



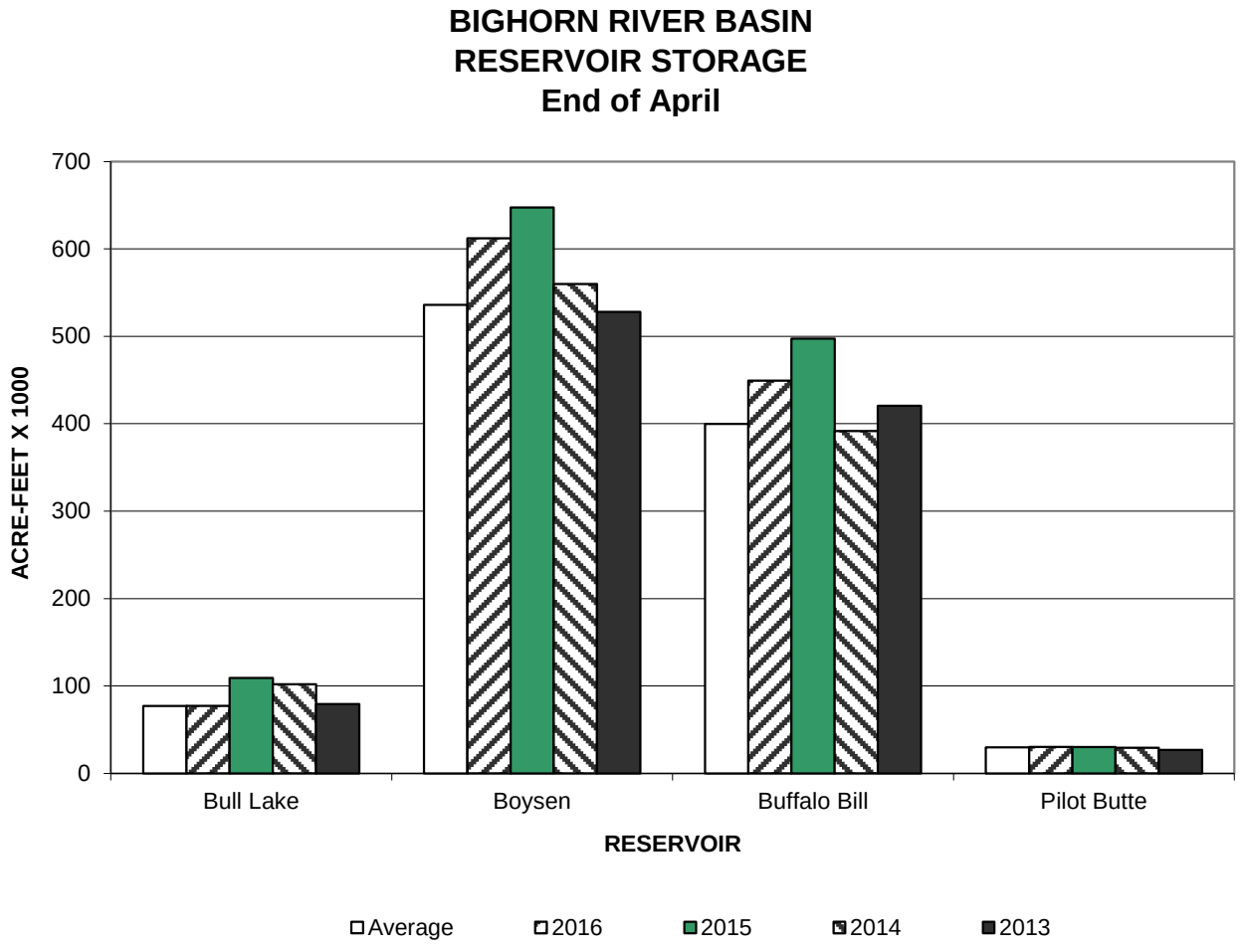
BIGHORN RIVER BASIN STORAGE

(1000 acre-feet)

Reservoir	Total Storage End of April			End of April Historical Storage			Total Conservation Storage Capacity	Percent of Capacity
	W. Yr. 2016	30 Yr. Avg. [1]	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013		
Bull Lake	77.1	77.1	100	109.3	101.9	79.4	152.5	51
Boysen	612.1	535.8	114	647.5	560.0	527.8	741.6	83
Buffalo Bill	449.3	399.9 [2]	112	497.4	391.7	420.5	646.6	69
Pilot Butte	30.3	29.9	101	30.1	29.2	26.7	33.7	90

[1] Average is based on the 1986-2015 period.

[2] This does not reflect a long term average because in 1992 the capacity of the reservoir was increased to approximately 646,565 acre-feet as a result of raising the dam. The average used here reflects data from 1993 through 2015.



BIGHORN RIVER BASIN GENERATION

(Energy in giga-watt hours)

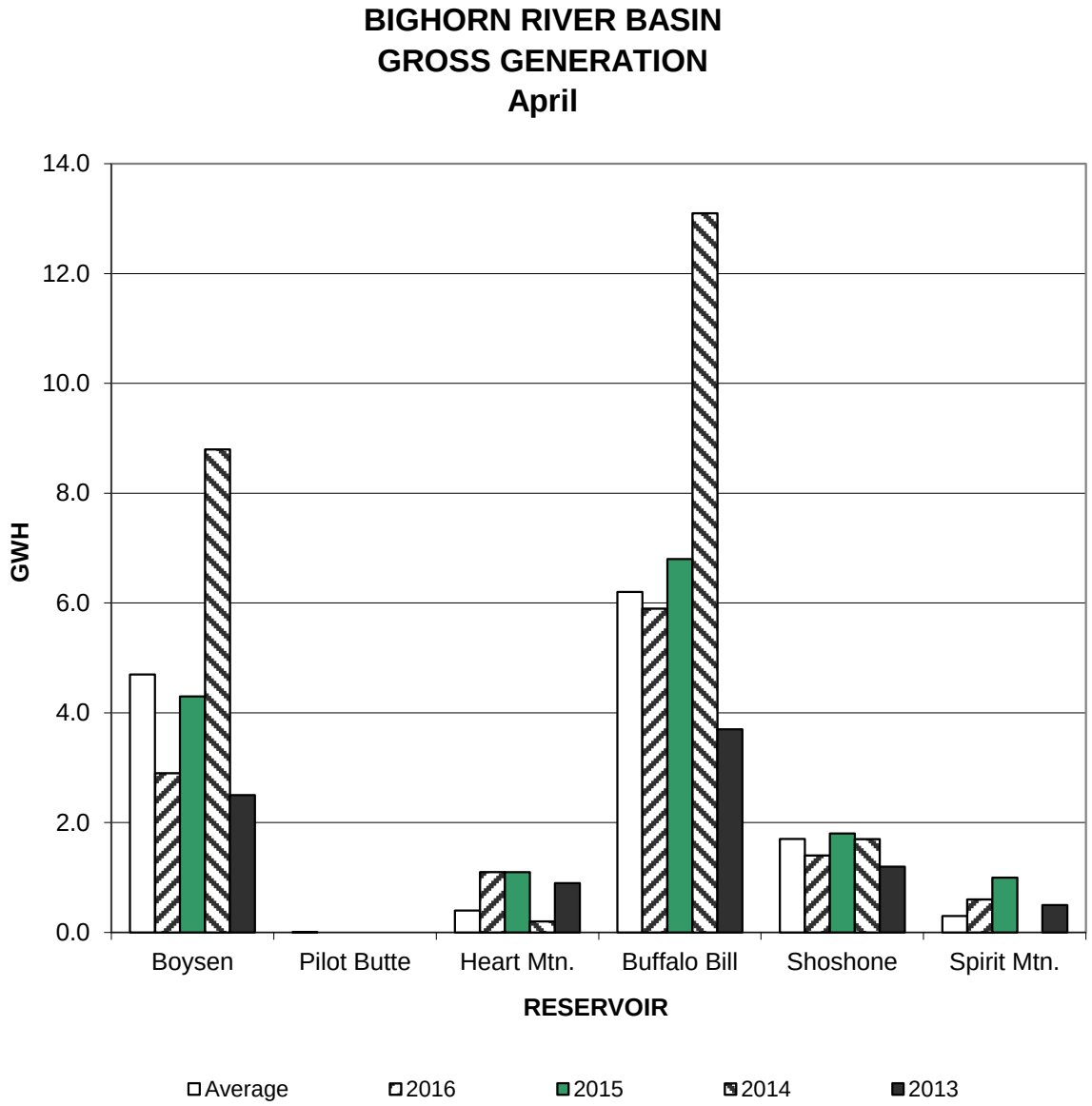
	April Gross Generation			April Historical Generation			Accumulated Gross Gen. (October-April)		
Powerplant	W. Yr. 2016	Avg.	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2016	Avg.	% of Avg.
Boysen [1]	2.9	4.7	62	4.3	8.8	2.5	27.4	26.4	104
Pilot Butte [2]	0.0	0.0	0	0.0	0.0	0.0	0.0	0.2	0
Heart Mtn. [3]	1.1	0.4	275	1.1	0.2	0.9	2.4	1.3	185
Buffalo Bill [3]	5.9	6.2	95	6.8	13.1	3.7	12.3	19.1	64
Shoshone [3]	1.4	1.7	82	1.8	1.7	1.2	8.0	10.4	77
Spirit Mtn. [4]	0.6	0.3	200	1.0	0.0	0.5	2.2	1.3	169

[1] Average is based on the 1986-2015 period.

[2] Average is based on the 1990-2015 period. Pilot Butte Powerplant is currently in "mothballed" status and does not generate electricity.

[3] Average is based on the 1993-2015 period.

[4] Average is based on the 1996-2015 period.



BIGHORN WATER SUPPLY FORECAST

(1000 acre-feet)

Forecast Points	May 1, 2016 Forecast of April-July Runoff			30 Yr. April-July Runoff Avg. [2]	Expected % of Avg.	Comparative Actual April - July Runoff			
	Reasonable Minimum[1]	Expected	Reasonable Maximum[1]			W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2012
Bull Lake Reservoir	115	140	165	138.2	101	138	148	106	118
Wind River above Bull Lake Creek	280	380	480	409.5	93	529	580	283	314
Boysen Reservoir	500	700	900	548.3	128	750	695	216	219
Buffalo Bill Reservoir	420	620	820	686.3	90	696	1062	577	592

[1] The probability is estimated to be 9 chances in 10 that the actual volume will fall between the reasonable minimum and reasonable maximum.
[2] Average is based on the 1986-2015 period.
[3] Actual inflows are as follows:

	April (kaf)
Bull Lake	7.3
Wind River above Bull Lake Creek	28.1
Boysen	68.6
Buffalo Bill	68.7

(1000 acre-feet)

Forecast Points	May 1, 2016 Forecast of April-July Runoff Chance of Exceeding						30 Yr. April-July Runoff Avg. [1]
	95%	75%	50%	% of Avg	25%	5%	
Bull Lake Reservoir	115	130	140	101	150	165	138.2
Wind River above Bull Lake Creek	280	339	380	93	421	480	409.5
Boysen Reservoir	500	618	700	128	782	900	548.3
Buffalo Bill Reservoir	420	538	620	90	702	820	686.3

[1] Average is based on the 1986-2015 period.

BIGHORN SNOWPACK WATER CONTENT

The tables shown below display the Snotel stations used in the development of the April - July snowmelt runoff forecasts displayed on page six of this report.

SWE in inches [1]

WATERSHED	May 1 snow-water content			Comparative May 1 snow-water content		
	W. Yr. 2016	30 Yr. Median [2]	% of Median	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013
Bull Lake Reservoir	12.67	12.00	106	7.20	16.0	10.8
Boysen Reservoir	12.74	13.67	93	9.08	17.9	12.8
Buffalo Bill Reservoir	14.01	17.71	79	12.07	27.1	16.8

Boysen Reservoir Watershed

SWE in inches [1]

Snotel Stations (Elevation)	Water Content	30 Yr. Median [2]
Burroughs Creek (8,750)	7.0	12.9
Hobbs Park (10,100)	20.8	16.0
Kirwin (9,800)	13.0	10.4
Little Warm (9,620)	8.0	8.7
Togwotee Pass (9,580)	22.3	24.7
Townsend Creek (8,700)	13.0	7.5
Younts Peak (8,350)	5.1	15.5
Watershed Average	12.74	13.67

Buffalo Bill Reservoir Watershed

SWE in inches [1]

Snotel Stations (Elevation)	Water Content	30 Yr. Median [2]
Blackwater (9,780)	24.2	25.3
Evening Star (9,200)	24.9	24.9
Marquette (8,760)	8.5	8.0
Sylvan Lake (8,420)	13.1	19.8
Sylvan Road (8,120)	0.0	5.8
Togwotee Pass (9,580)	22.3	24.7
Younts Peak (8,350)	5.1	15.5
Watershed Average	14.01	17.71

Bull Lake Reservoir Watershed

SWE in inches [1]

Snotel Stations (Elevation)	Water Content	30 Yr. Median [2]
Elkhart Park (8,400)	9.2	11.3
Hobbs Park (10,100)	20.8	16.0
Little Warm (9,620)	8.0	8.7
Watershed Average	12.67	12.00

[1] SWE (Snow Water Content is the amount of water in the snowpack expressed in inches)
[2] Median for the 1981-2010 period