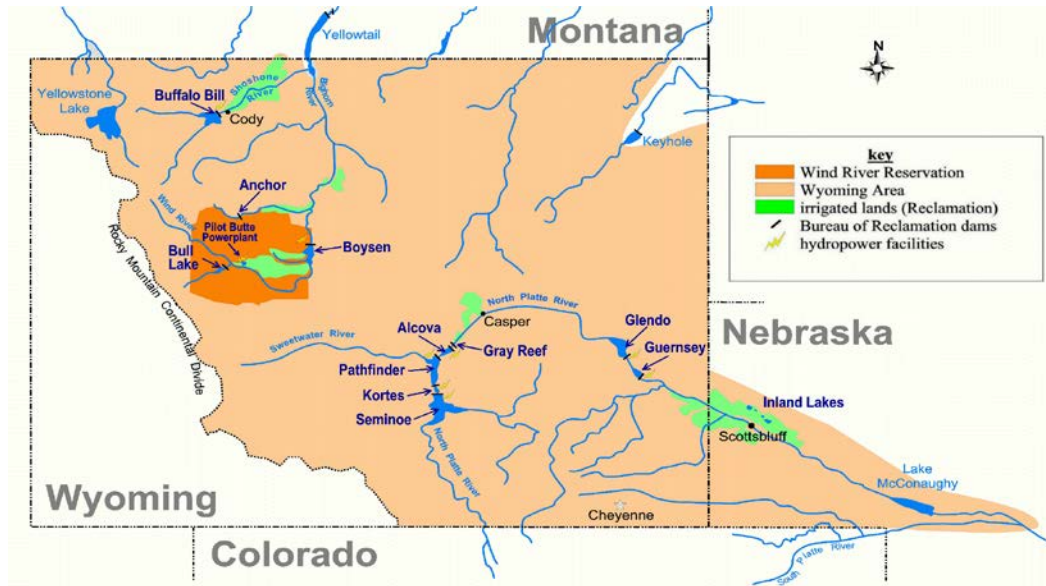


RECLAMATION

Managing Water in the West

Bighorn Basin
Water Supply and Utilization Report
Wyoming Area Office
Report for May 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
Mills, Wyoming 82644-1630

**Report for May 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**

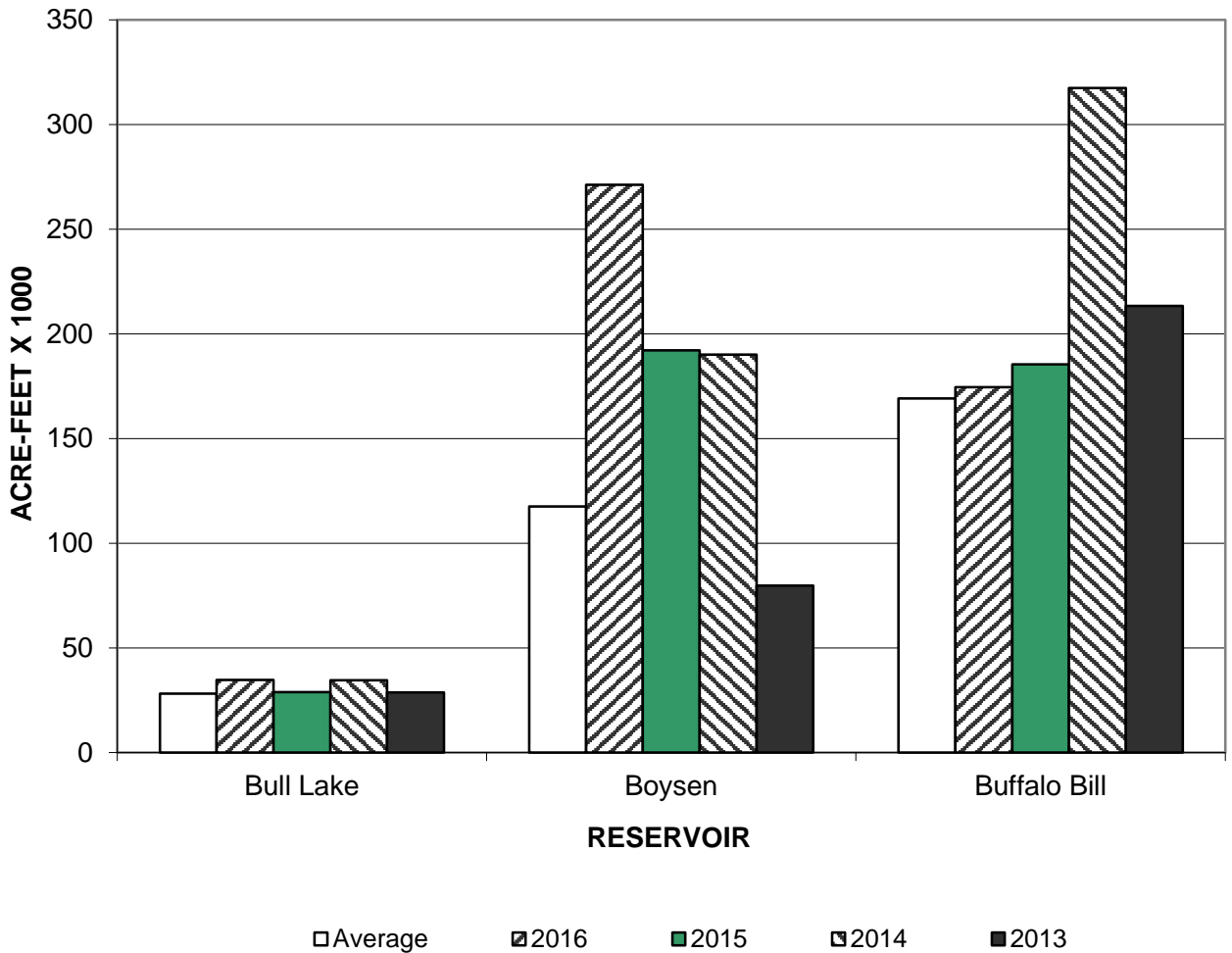
BIGHORN RIVER BASIN INFLOW

(1000 acre-feet)

Reservoir	May Inflow			May Historical Inflow			Accumulated Inflow (October-May)		
	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	34.7	28.2	123	28.9	34.5	28.7	58.9	49.0	120
Boysen	271.2	117.6	231	192.1	190.1	79.8	586.5	429.2	137
Buffalo Bill	174.6	169.1	103	185.5	317.4	213.4	360.1	323.6	111

¹ Average is based on the 1986-2015 period.

**BIGHORN RIVER BASIN
RESERVOIR INFLOW
May**



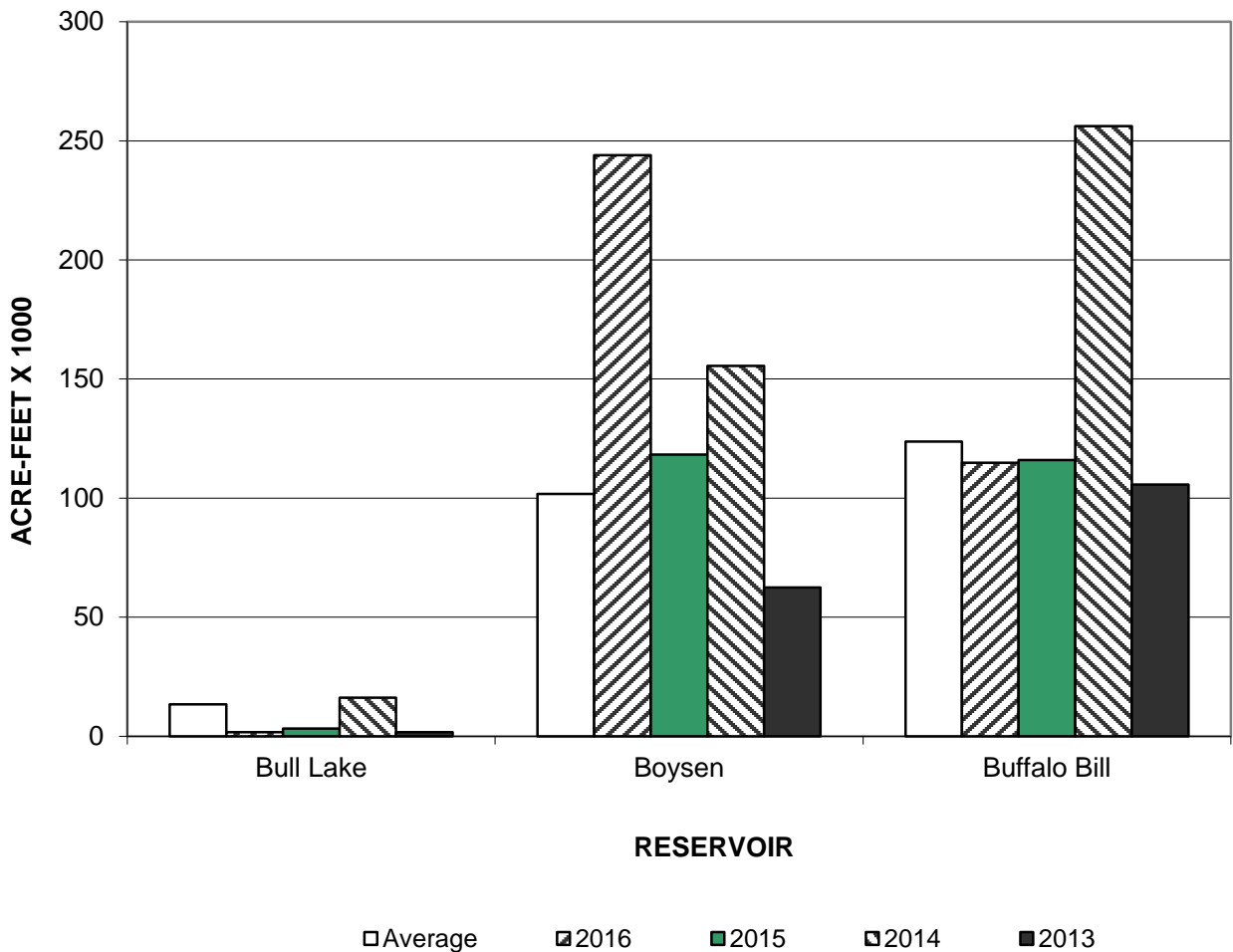
BIGHORN RIVER BASIN OUTFLOW

(1000 acre-feet)

Reservoir	May Outflow			May Historical Outflow			Accumulated Outflow (October-May)		
	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	1.8	13.4	13	3.3	16.2	1.8	12.5	32.6	38
Boysen	244.0	101.7	240	118.3	155.5	62.5	578.1	453.2	128
Buffalo Bill	114.9	123.7	93	116.0	256.2	105.7	279.5	303.7	92

¹ Average is based on the 1986-205 period.

**BIGHORN RIVER BASIN
RESERVOIR OUTFLOW
May**



BIGHORN RIVER BASIN STORAGE

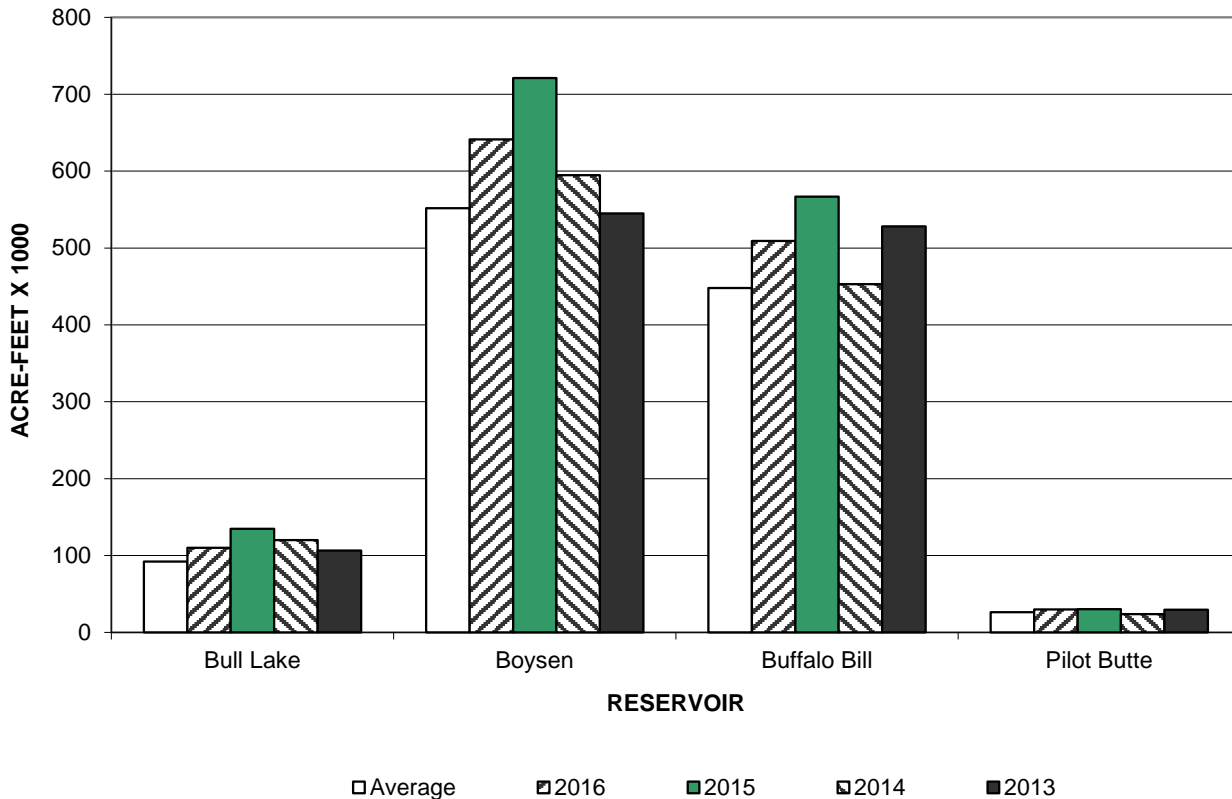
(1000 acre-feet)

Reservoir	Total Storage End of May			End of May 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	110.0	92.0	120	134.9	120.1	106.3	152.5	72
Boysen	641.3	551.7	116	721.2	594.6	545.1	741.6	86
Buffalo Bill	509.1	448.1 ²	114	566.9	452.9	528.2	646.6	79
Pilot Butte	30.0	26.2	115	30.3	23.7	29.6	33.7	89

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
RESERVOIR STORAGE
End of May**



BIGHORN RIVER BASIN GENERATION

(Energy in giga-watt hours)

Powerplant	May Gross Generation			May Historical Generation			Accumulated Gross Gen. (October-May)		
	W. Yr. 2016	Avg.	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2016	Avg.	% of Avg.
Boysen ¹	10.1	7.1	143	6.7	10.6	4.7	37.1	34.0	109
Pilot Butte ²	0.0	0.1	0	0.0	0.0	0.0	0.0	0.3	0
Heart Mtn. ³	3.3	2.5	132	3.3	3.5	3.3	4.4	3.8	116
Buffalo Bill ³	10.4	10.3	101	9.6	13.0	9.5	22.7	29.2	78
Shoshone ³	1.7	2.0	87	1.9	1.6	1.8	9.8	12.3	80
Spirit Mtn. ⁴	2.8	2.2	129	3.2	2.1	2.7	5.1	3.4	149

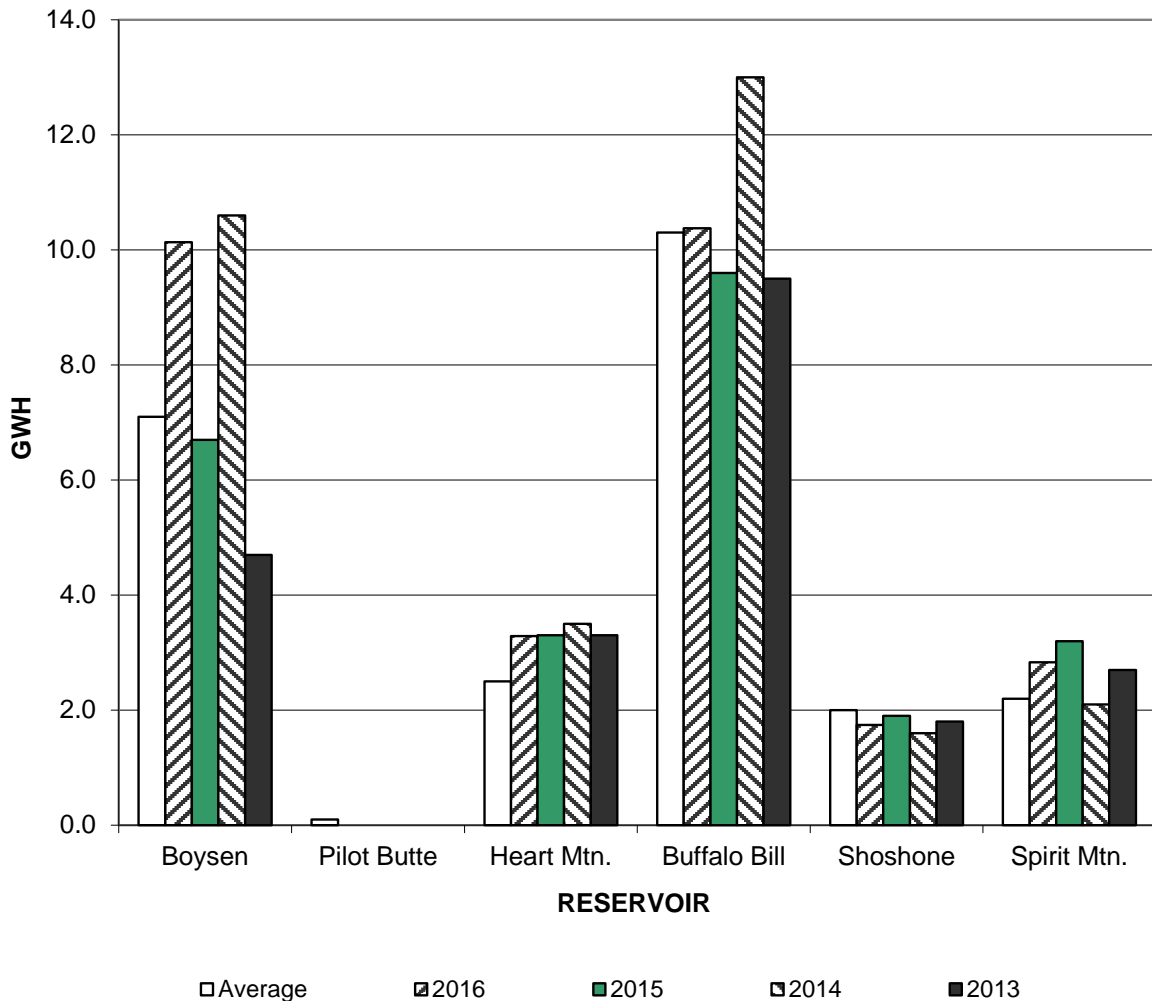
¹ Average is based on the 1986-2015 period.

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 RIVER BASIN GROSS GENERATION May



BIGHORN WATER SUPPLY FORECAST

(1000 acre-feet)

Forecast Points	June 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	140	160			180	137.3	117	138
Wind River above Bull Lake Creek	280	380	480	402.0	95	529	580	283	314
Boysen Reservoir	650	750	850	533.8	141	750	695	216	219
Buffalo Bill Reservoir	550	650	750	677.8	96	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)	May (kaf)
Bull Lake	7.3	34.7
Wind River above Bull Lake Creek	28.1	94.6
Boysen	68.6	271.2
Buffalo Bill	68.7	174.6

(1000 acre-feet)

Forecast Points	June 1, 2016 Forecast of April-July Runoff						30 Yr. April-July Runoff Avg. ¹
	Chance of Exceeding						
	95%	75%	50%	% of Avg	25%	5%	
Bull Lake Reservoir	140	152	160	117	168	180	137.3
Wind River above Bull Lake Creek	280	339	380	95	421	480	402.0
Boysen Reservoir	650	709	750	141	791	850	533.8
Buffalo Bill Reservoir	550	609	650	96	691	750	677.8

¹ Average is based on the 1985-2014 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	June 1 snow-water content			Comparative June 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	5.60	2.03	275	3.53	1.6	0.4
Boysen Reservoir	4.56	5.47	83	4.17	6.1	1.8
Buffalo Bill Reservoir	7.87	10.46	75	5.98	13.8	5.1

Boysen Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Burroughs Creek (8,750)	0.0	1.3
Hobbs Park (10,100)	16.8	6.1
Kirwin (9,800)	0.0	1.7
Little Warm (9,620)	0.0	0.0
Togwotee Pass (9,580)	15.1	19.0
Townsend Creek (8,700)	0.0	0.0
Younts Peak (8,350)	0.0	10.2
Watershed Average	4.56	5.47

Buffalo Bill Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Blackwater (9,780)	18.4	19.6
Evening Star (9,200)	13.7	17.8
Marquette (8,760)	0.0	0.0
Sylvan Lake (8,420)	0.0	6.6
Sylvan Road (8,120)	0.0	0.0
Togwotee Pass (9,580)	15.1	19.0
Younts Peak (8,350)	0.0	10.2
Watershed Average	7.87	10.46

Bull Lake Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Elkhart Park (8,400)	0.0	0.0
Hobbs Park (10,100)	16.8	6.1
Little Warm (9,620)	0.0	0.0
Watershed Average	5.60	2.03

¹ SWE (Snow Water Content is the amount of water in the snowpack expressed in inches)

² Median for the 1981-2010 period