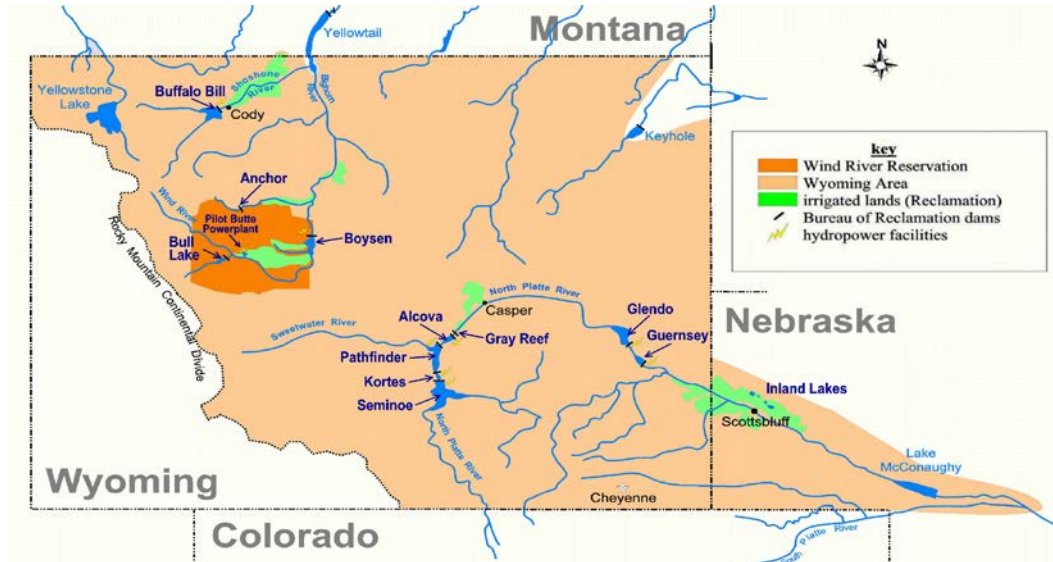


RECLAMATION

Managing Water in the West

Bighorn Basin
Water Supply and Utilization Report
Wyoming Area Office
Report for January 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 January 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

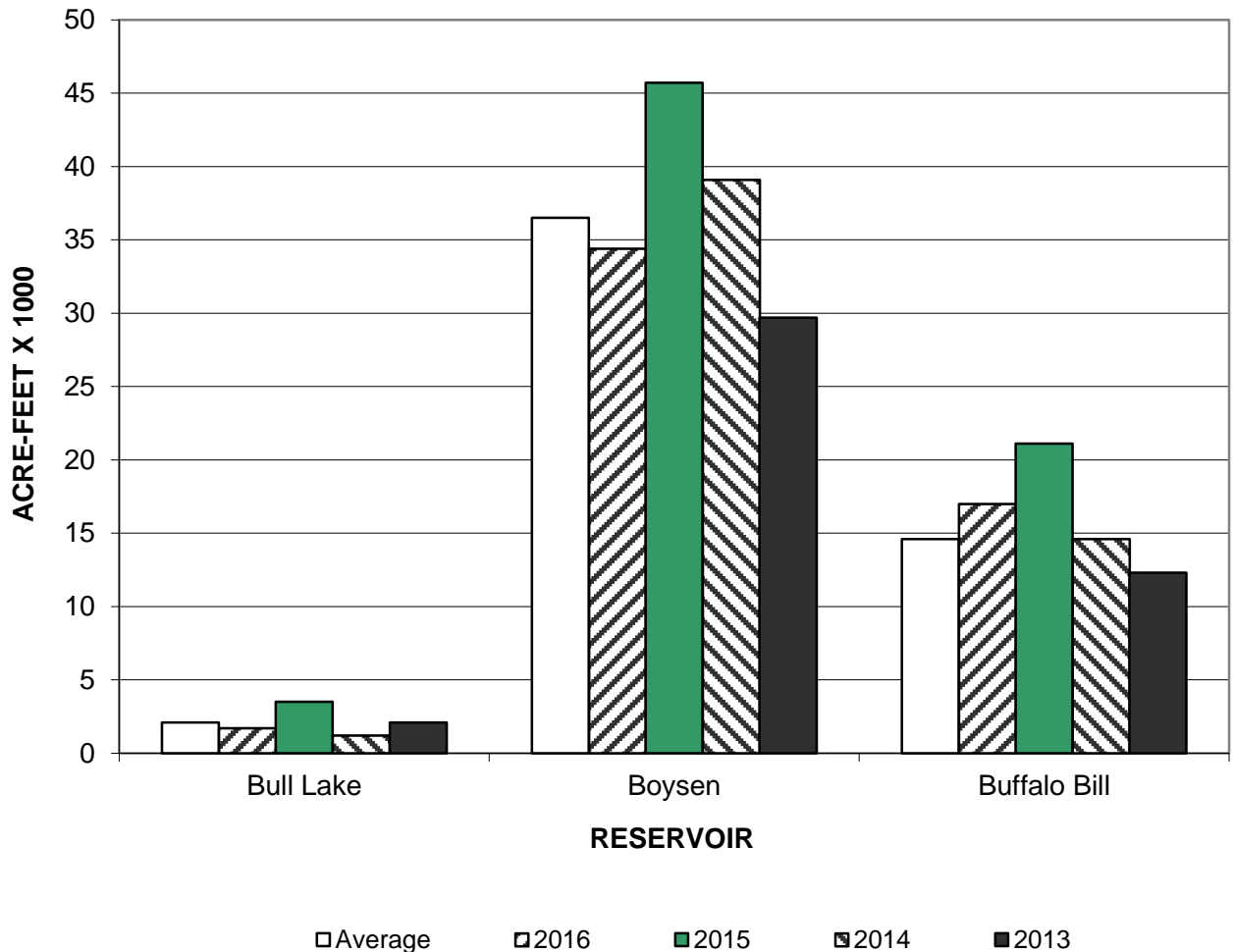
January inflow was above average at Buffalo Bill Reservoir but below average inflow for the rest of the Bighorn Basin.

(1000 acre-feet)

Reservoir	January Inflow			January Historical Inflow			Accumulated Inflow (October-January)		
	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	1.7	2.1	81	3.5	1.2	2.1	13.8	13.2	105
Boysen	34.4	36.5	94	45.7	39.1	29.7	84.4	76.8	110
Buffalo Bill	17.0	14.6	116	21.1	14.6	12.3	154.8	174.9	89

¹ Average is based on the 1986-2015 period.

**BIGHORN RIVER BASIN
RESERVOIR INFLOW
January**



BIGHORN RIVER BASIN OUTFLOW

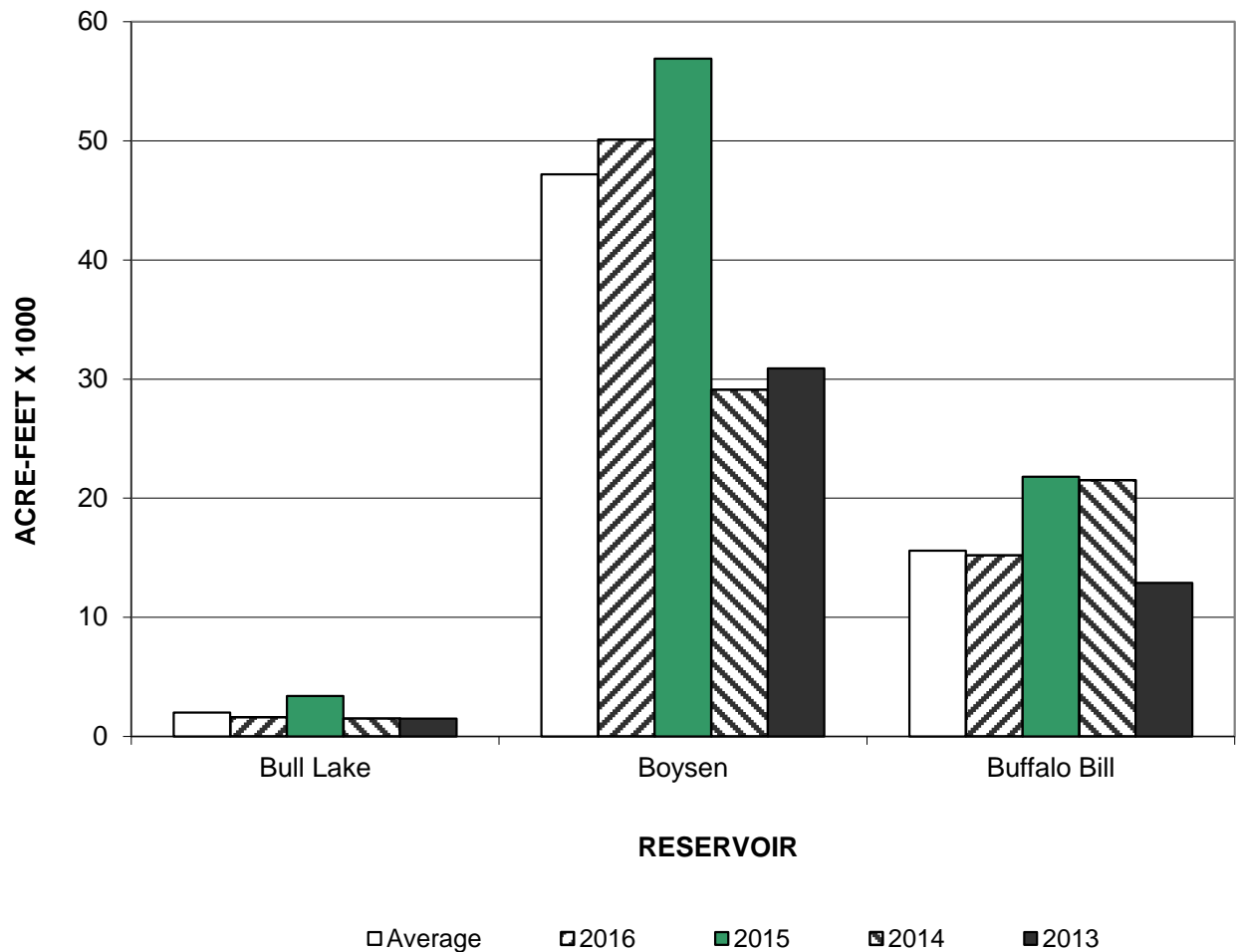
January releases were above or near average at Boysen, and Buffalo Bill Reservoirs. Below average for Bull Lake Reservoir.

(1000 acre-feet)

Reservoir	January Outflow			January Historical Outflow			Accumulated Outflow (October-January)		
	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	1.6	2.0	80	3.4	1.5	1.5	6.3	12.1	52
Boysen	50.1	47.2	106	56.9	29.1	30.9	200.0	192.5	104
Buffalo Bill	15.2	15.6	97	21.8	21.5	12.9	88.4	86.2	103

¹ Average is based on the 1986-2015 period.

BIGHORN RIVER BASIN RESERVOIR OUTFLOW January



BIGHORN RIVER BASIN STORAGE

Storage at the end of January was at or above average for Boysen and Buffalo Bill Reservoirs.

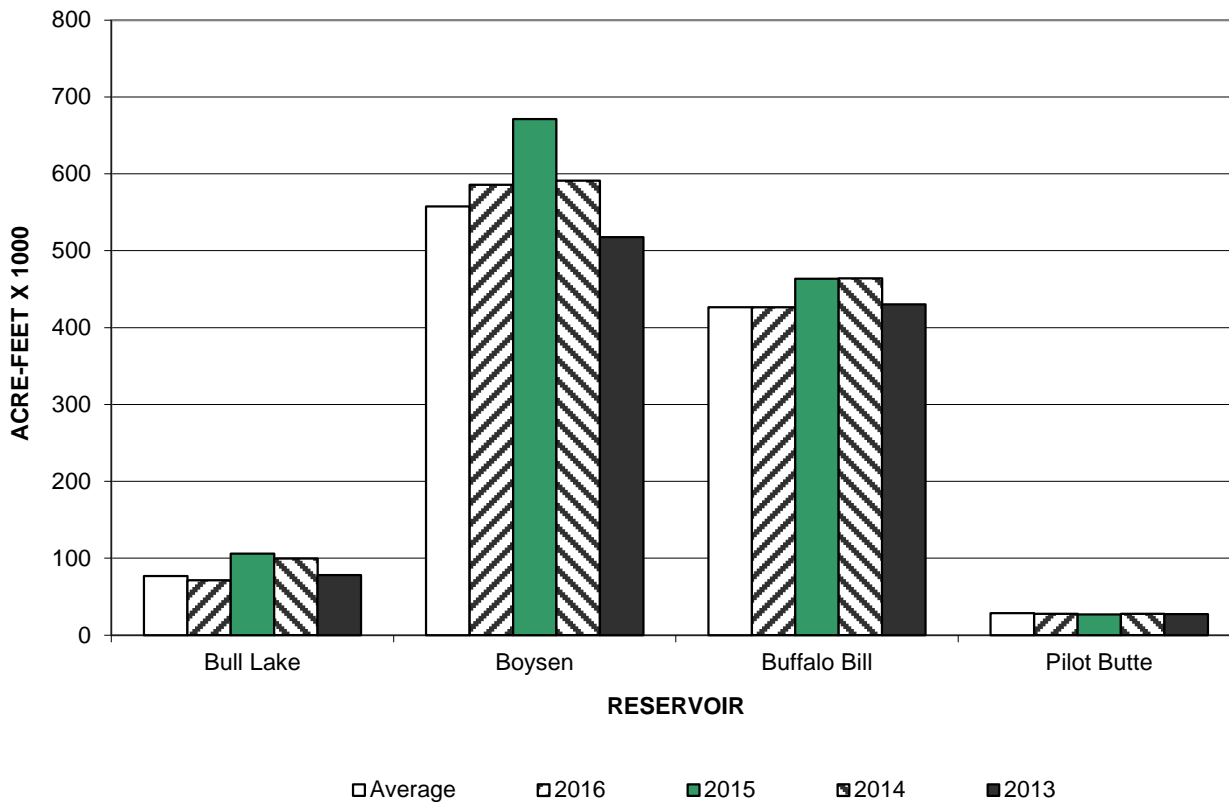
(1000 acre-feet)

Reservoir	Total Storage End of January			End of January 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	71.3	76.9	93	106.0	99.8	78.0	152.5	47
Boysen	585.7	557.4	105	671.1	591.2	517.5	741.6	79
Buffalo Bill	426.6	426.5 ²	100	463.5	464.0	430.2	646.6	66
Pilot Butte	27.6	28.5	97	26.9	27.8	27.5	33.7	82

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 January**



BIGHORN RIVER BASIN GENERATION

Generation was above average at Boysen Powerplant and below average for the rest of the Bighorn Basin Powerplants.

(Energy in giga-watt hours)

Powerplant	January Gross Generation			January Historical Generation			Accumulated Gross Gen. (October-January)		
	W. Yr. 2016	Avg.	% of Avg.	W. Yr. 2015	W. Yr. 2014	W. Yr. 2013	W. Yr. 2016	Avg.	% of Avg.
Boysen ¹	4.5	3.7	122	5.2	0.0	2.2	17.4	14.7	118
Pilot Butte ²	0.0	0.0	0	0.0	0.0	0.0	0.0	0.2	0
Heart Mtn. ³	0.0	0.0	0	0.0	0.0	0.0	1.3	0.9	144
Buffalo Bill ³	1.0	1.6	63	0.0	2.7	0.6	4.5	8.2	55
Shoshone ³	1.2	1.5	80	1.7	1.7	1.3	5.1	6.3	81
Spirit Mtn. ⁴	0.0	0.0	0	0.0	0.0	0.0	1.6	1.0	160

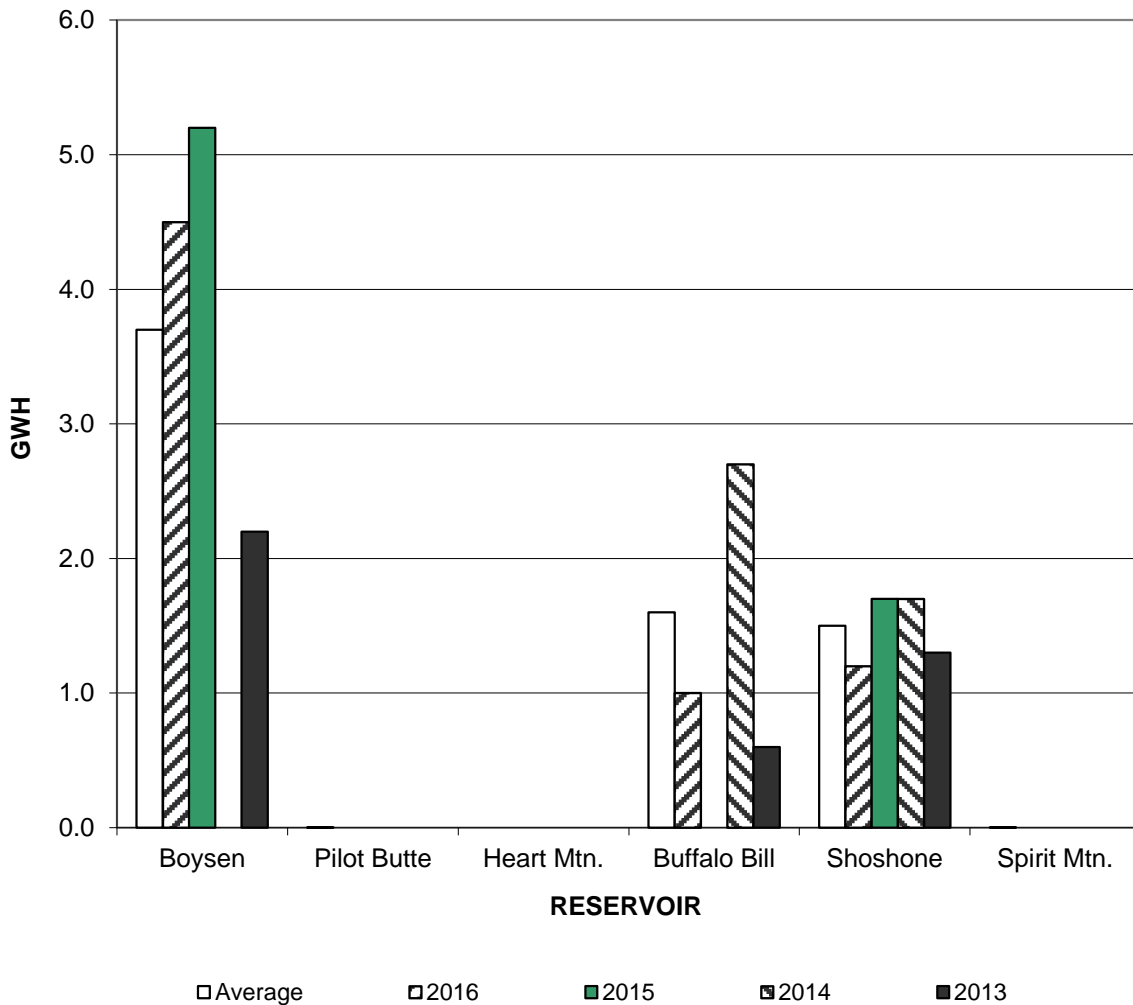
¹ Average is based on the 1986-2015 period.

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 January



BIGHORN WATER SUPPLY FORECAST

The February 1, 2016, water supply forecast indicates below average April - July runoff can be expected For the Bighorn Basin.

(1000 acre-feet)

Forecast Points	February 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	90	110			140	138.2	80	138
Wind River above Bull Lake Creek	200	300	400	409.5	73	529	580	283	314
Boysen Reservoir	200	350	600	548.3	64	750	695	216	219
Buffalo Bill Reservoir	420	570	770	686.3	83	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:

(1000 acre-feet)

Forecast Points	February 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	90	102	110	80	122	140	138.2
Wind River above Bull Lake Creek	200	259	300	73	341	400	409.5
Boysen Reservoir	200	289	350	64	452	600	548.3
Buffalo Bill Reservoir	420	509	570	83	652	770	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	February 1 snow-water content			Comparative February 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	5.43	6.57	83	6.63	7.9	6.8
Boysen Reservoir	6.63	7.62	87	8.05	8.8	7.5
Buffalo Bill Reservoir	10.32	11.62	89	12.20	13.5	10.8

Boysen Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Burroughs Creek (8,750)	7.2	6.3
Hobbs Park (10,100)	5.7	7.9
Kirwin (9,800)	5.1	5.7
Little Warm (9,620)	5.1	6.1
Togwotee Pass (9,580)	13.3	14.7
Townsend Creek (8,700)	3.4	5.0
Watershed Average	6.63	7.62

Buffalo Bill Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Blackwater (9,780)	13.1	14.4
Evening Star (9,200)	15.7	15.8
Marquette (8,760)	2.5	4.4
Sylvan Lake (8,420)	11.0	12.7
Sylvan Road (7,120)	6.3	7.7
Togwotee Pass (9,580)	13.3	14.7
Watershed Average	10.32	11.62

Bull Lake Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Median ²
Elkhart Park (9,400)	5.5	5.7
Hobbs Park (10,100)	5.7	7.9
Little Warm (9,620)	5.1	6.1
Watershed Average	5.43	6.57

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

² Median for the 1981-2010 period