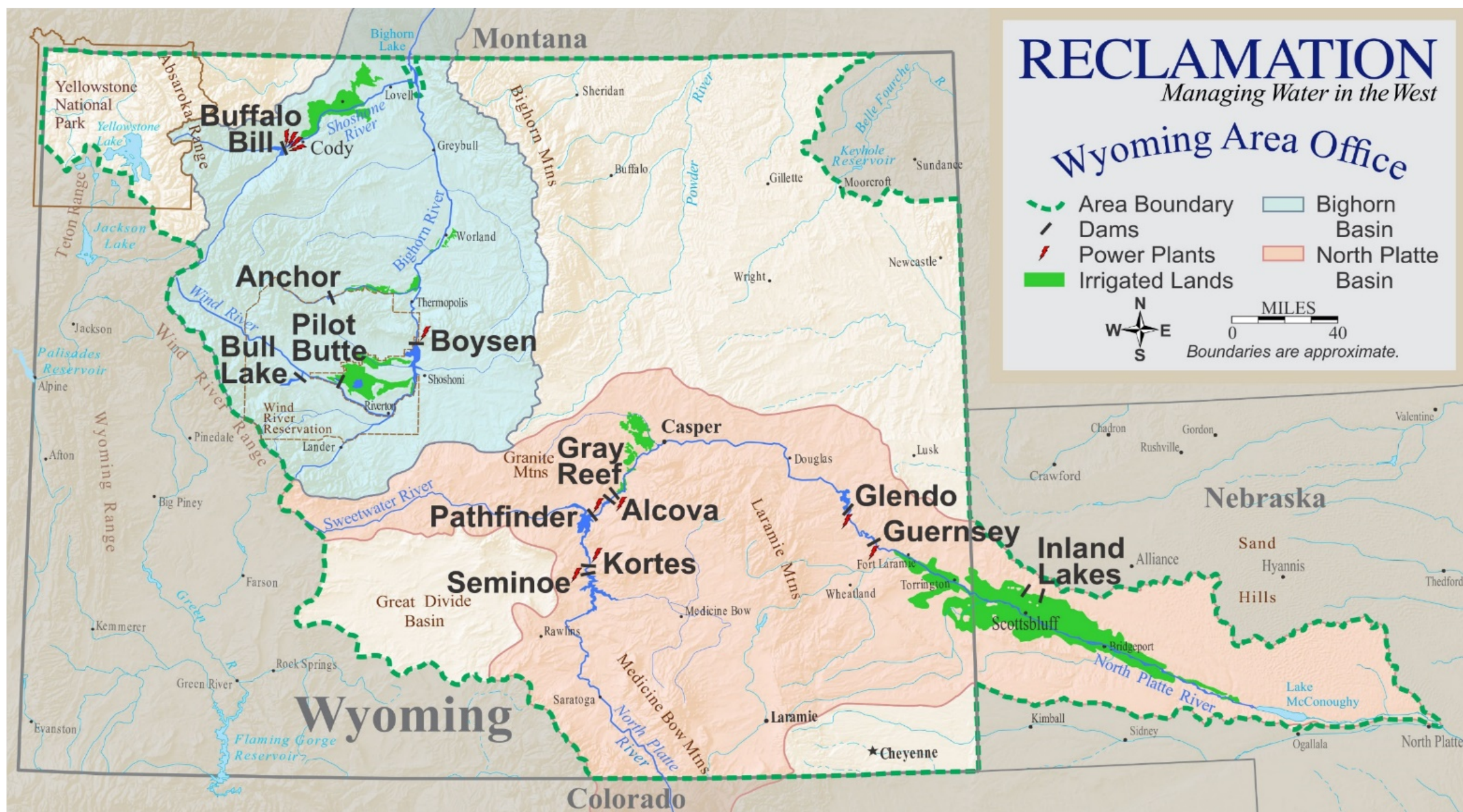




BUREAU OF RECLAMATION

Bighorn Basin Water Supply and Utilization Report Wyoming Area Office Report for April 2022



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
P.O. Box 1630
Mills, Wyoming 82644-1630

**Report for April 2022
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 RESERVOIR INFLOW

End of April Inflow and Historical Inflows, values in 1,000 acre-feet

Reservoir	2022	30 Yr. Avg.	% of Avg.	2021	2020	2019
Bull Lake	2.6	4.2	63	3.1	3.1	6.9
Boysen	37.4	50.6	74	41.7	59.8	65.1
Buffalo Bill	24.0	46.9	51	40.0	47.8	56.2

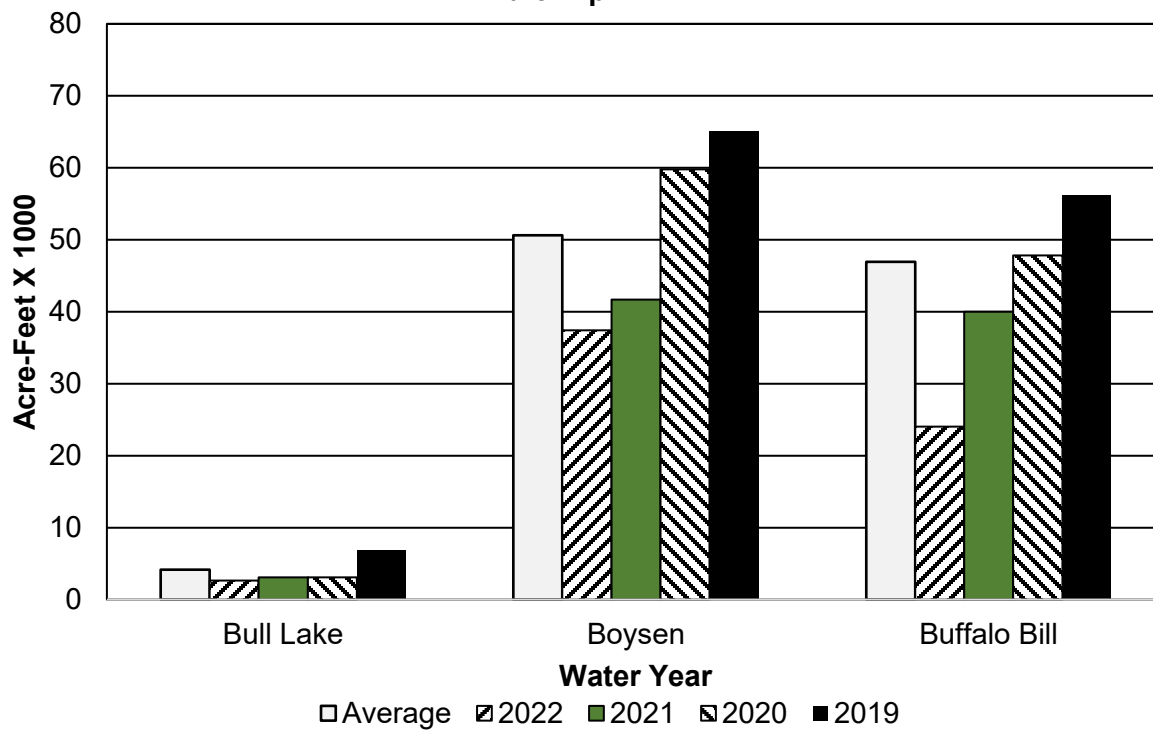
30 year average is based on the 1992- 2021 period.

End of April Accumulated Water Year Inflows

Reservoir	W. Yr. 2022	30 Yr. Avg.	% of Avg.
Bull Lake	25.5	22.0	116
Boysen	284.6	325.4	87
Buffalo Bill	114.7	167.8	68

BIGHORN RIVER BASIN RESERVOIR INFLOW

End of April



BIGHORN RIVER BASIN RESERVOIR OUTFLOW

End of April Outflow and Historical Outflows, values in 1,000 acre-feet

Reservoir	2022	30 Yr. Avg.	% of Avg.	2021	2020	2019
Bull Lake	1.6	3.3	50	1.5	1.2	2.0
Boysen	44.9	72.1	62	37.1	121.0	60.3
Buffalo Bill	38.1	71.6	53	79.0	108.9	90.4

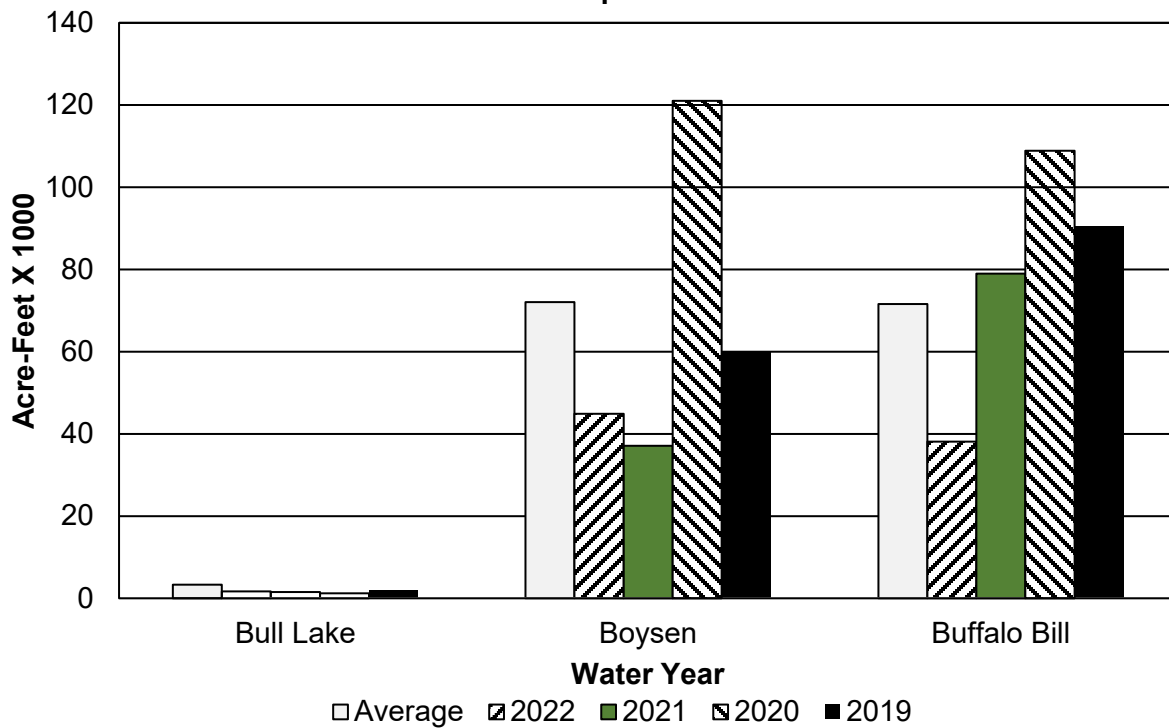
30 year average is based on the 1992- 2021 period.

End of April Accumulated Water Year Inflows

Reservoir	W. Yr. 2022	30 Yr. Avg.	% of Avg.
Bull Lake	11.2	19.8	56
Boysen	304.1	370.0	82
Buffalo Bill	144.1	214.7	67

BIGHORN RIVER BASIN RESERVOIR OUTFLOW

End of April



BIGHORN RIVER BASIN RESERVOIR STORAGE

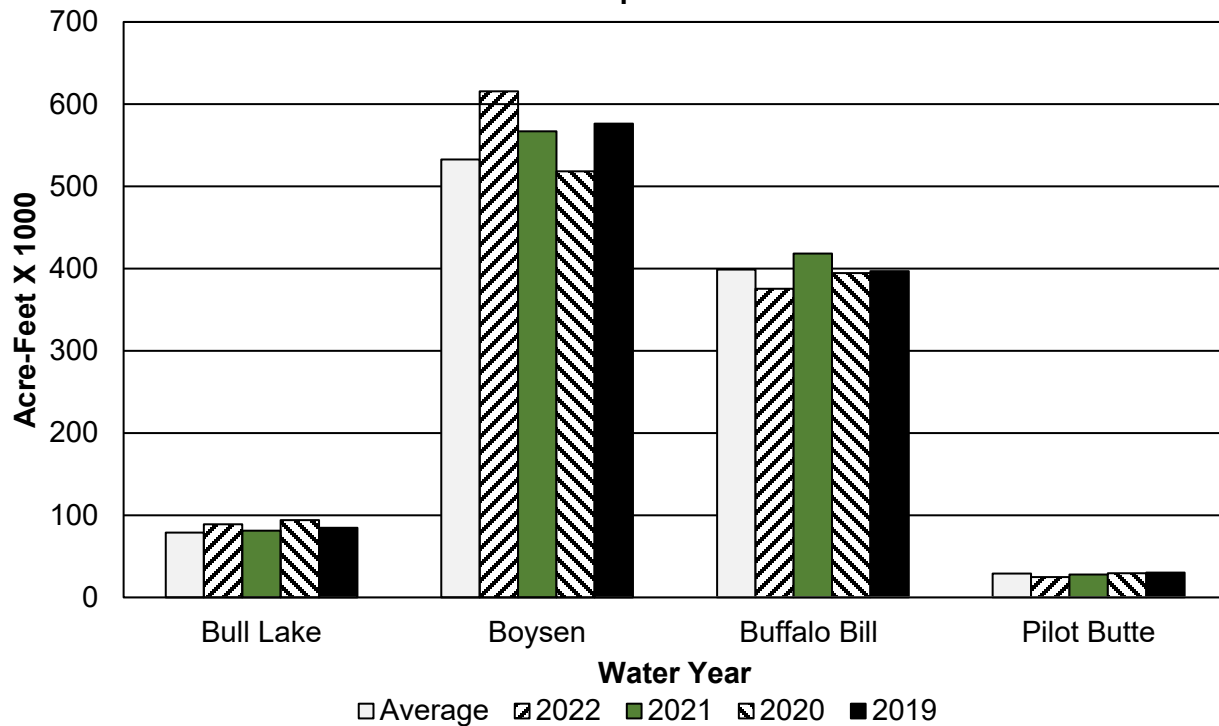
End of April Storage, Historical Storage, and Storage Capacity

Reservoir	2022	30 Yr. Avg.	% of Avg.	2021	2020	2019	Total Conservation Storage Capacity	Percent of Capacity
Bull Lake	89.1	78.7	113	81.1	94.0	84.8	152.5	58.4
Boysen	615.7	532.7	116	567.1	518.5	576.4	741.6	83.0
Buffalo Bill	375.4	398.8	94	418.3	394.6	396.8	646.6	58.1
Pilot Butte	24.6	29.2	84	27.8	29.5	30.0	33.7	73.1

Average is based on the 1992-2021 period, except Buffalo Bill Reservoir. The average for Buffalo Bill is based on the period, 1993 - 2021. In 1992 the capacity of Buffalo Bill Reservoir was increased to approximately 646,565 acre-feet as a result of raising the dam.

BIGHORN RIVER BASIN RESERVOIR STORAGE

End of April



BIGHORN RIVER BASIN RESERVOIR GENERATION

End of April Gross Generation and Historical Generation

Powerplant	2022	30 Yr. Avg.	% of Avg.	2021	2020	2019
Boysen	3.7	4.7	78.3	2.8	9.5	4.8
Pilot Butte	0.0	0.0	n/a	0.0	0.0	0.0
Heart Mtn.	0.1	0.8	14.8	0.4	2.7	3.4
Buffalo Bill	4.2	7.2	57.9	9.1	12.6	12.9
Shoshone	1.3	1.7	80.9	1.7	1.7	1.6
Spirit Mtn.	0.1	0.4	26.7	0.3	0.8	1.5

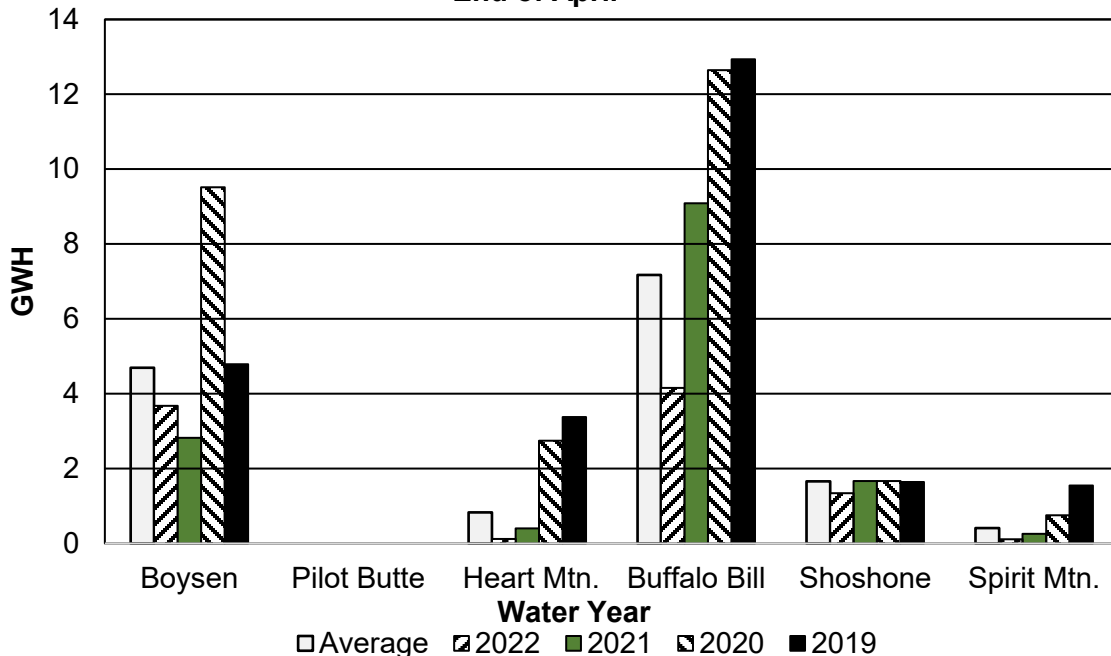
Boysen average based on the 1992 - 2021 period. Pilot Butte average based on the 1992 2021 period. Pilot Butte Powerplant is currently in "mothballed" status and does not generate electricity. Heart Mountain, Buffalo Bill, and Shoshone averages are based on the 1993 - 2021 period. Spirit Mountain average is based on the 1996 - 2021 period.

End of April Accumulated Gross Generation Water Year

Powerplant	W. Yr. 2022	30 Yr. Avg.	% of Avg.
Boysen	23.4	26.0	89.8
Pilot Butte	0	0.2	n/a
Heart Mtn.	1.3	1.9	66.4
Buffalo Bill	7.8	21.5	36.4
Shoshone	9.3	10.3	89.8
Spirit Mtn.	1.3	1.6	80.5

BIGHORN RIVER BASIN GROSS GENERATION

End of April



BIGHORN SNOWPACK WATER CONTENT

May 1st Snow Water Equivalent

SWE in inches

WATERSHED	W. Yr. 2022	30 Yr. Median	% of Median	W. Yr. 2021	W. Yr. 2020	W. Yr. 2019
Bull Lake Reservoir	12.8	12.4	103	10.8	11.7	13.4
Boysen Reservoir	14.3	14.1	101	12.2	14.2	13.2
Buffalo Bill Reservoir	16.3	18.0	91	13.3	18.0	17.8

Boysen Reservoir Watershed

SWE in inches

Snotel Stations (Elevation)	Water Content	30 Yr. Median
Burroughs Creek (8,750)	9.5	12.9
Hobbs Park (10,100)	16.7	16.8
Kirwin (9,800)	14.8	11.6
Little Warm (9,620)	12.2	9
Togwotee Pass (9,580)	22.8	25.4
Townsend Creek (8,700)	9	9
Younts Peak (8,350)	14.8	14.1
Watershed Average	14.3	14.1

Buffalo Bill Reservoir Watershed

SWE in inches

Snotel Stations (Elevation)	Water Content	30 Yr. Median
Blackwater (9,780)	24.2	25.7
Evening Star (9,200)	28.2	27.5
Marquette (8,760)	7.7	8
Sylvan Lake (8,420)	16.6	20.2
Sylvan Road (8,120)	0.1	5
Togwotee Pass (9,580)	22.8	25.4
Younts Peak (8,350)	14.8	14.1
Watershed Average	16.3	18.0

Bull Lake Reservoir Watershed

SWE in inches

Snotel Stations (Elevation)	Water Content	30 Yr. Median
Elkhart Park (8,400)	9.5	11.4
Hobbs Park (10,100)	16.7	16.8
Little Warm (9,620)	12.2	9
Watershed Average	12.8	12.4

**SWE (Snow Water Content is the amount of water in the snowpack expressed in inches).
Median for the 1991-2020 period.**

May 1 BIGHORN WATER SUPPLY FORECAST

April through July Forecast and Historical Runoff Volumes

Forecast Points	Forecast Reasonable Minimum	Forecast Expected	Forecast Reasonable Maximum	30 Yr. April - July Avg.	Expected % of Avg.	Actual April - July Runoff W. Yr. 2021	Actual April - July Runoff W. Yr. 2020	Actual April - July Runoff W. Yr. 2019	Actual April - July Runoff W. Yr. 2018
Bull Lake Reservoir	110	140	170	142	99	126	123	160	175
Wind River above Bull Lake Creek	320	420	520	434	97	347	424	476	818
Boysen Reservoir	250	500	800	604	83	380	439	823	1007
Buffalo Bill Reservoir	430	600	800	740	81	548	791	901	1300

The probability is estimated to be 9 chances in 10 that the actual volume will fall between the reasonable minimum and reasonable maximum. Average is based on the 1992-2021 period.

Forecast Points	90%	70%	50%	% of Avg	30%	10%	30 Yr. April - July Runoff Avg.
Bull Lake Reservoir	110	128	140	99	152	170	142
Wind River above Bull Lake Creek	320	379	420	97	461	520	434
Boysen Reservoir	250	398	500	83	623	800	604
Buffalo Bill Reservoir	430	530	600	81	682	800	740

Average is based on the 1992-2021 period.