

**February 1, 2008
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. 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 Current Month or reports from the previous 12 months**

BIGHORN RIVER BASIN INFLOW

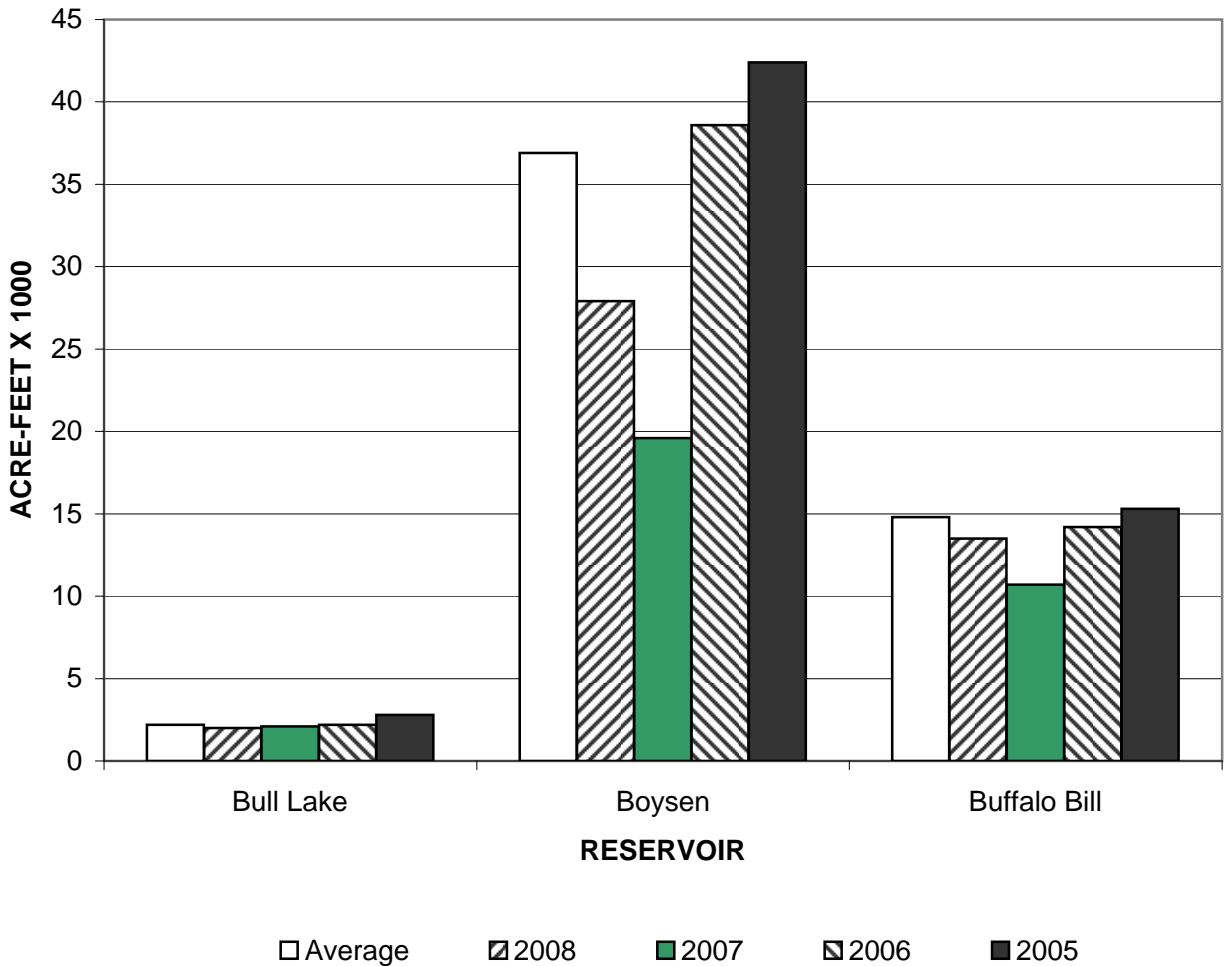
January inflow to Bull Lake, Boysen, and Buffalo Bill Reservoirs was below average.

(1000 acre-feet)

Reservoir	January Inflow			January Historical Inflow			Accumulated Inflow (October-January)		
	W. Yr. 2008	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005	W. Yr. 2008	30 Yr. Avg.	% of Avg.
Bull Lake	2.0	2.2	91	2.1	2.2	2.8	16.4	13.0	126
Boysen	27.9	36.9	76	19.6	38.6	42.4	131.2	184.1	71
Buffalo Bill	13.5	14.8	91	10.7	14.2	15.3	90.8	75.6	120

¹ Average is based on the 1978-2007 period.

BIGHORN RIVER BASIN RESERVOIR INFLOW January



BIGHORN RIVER BASIN OUTFLOW

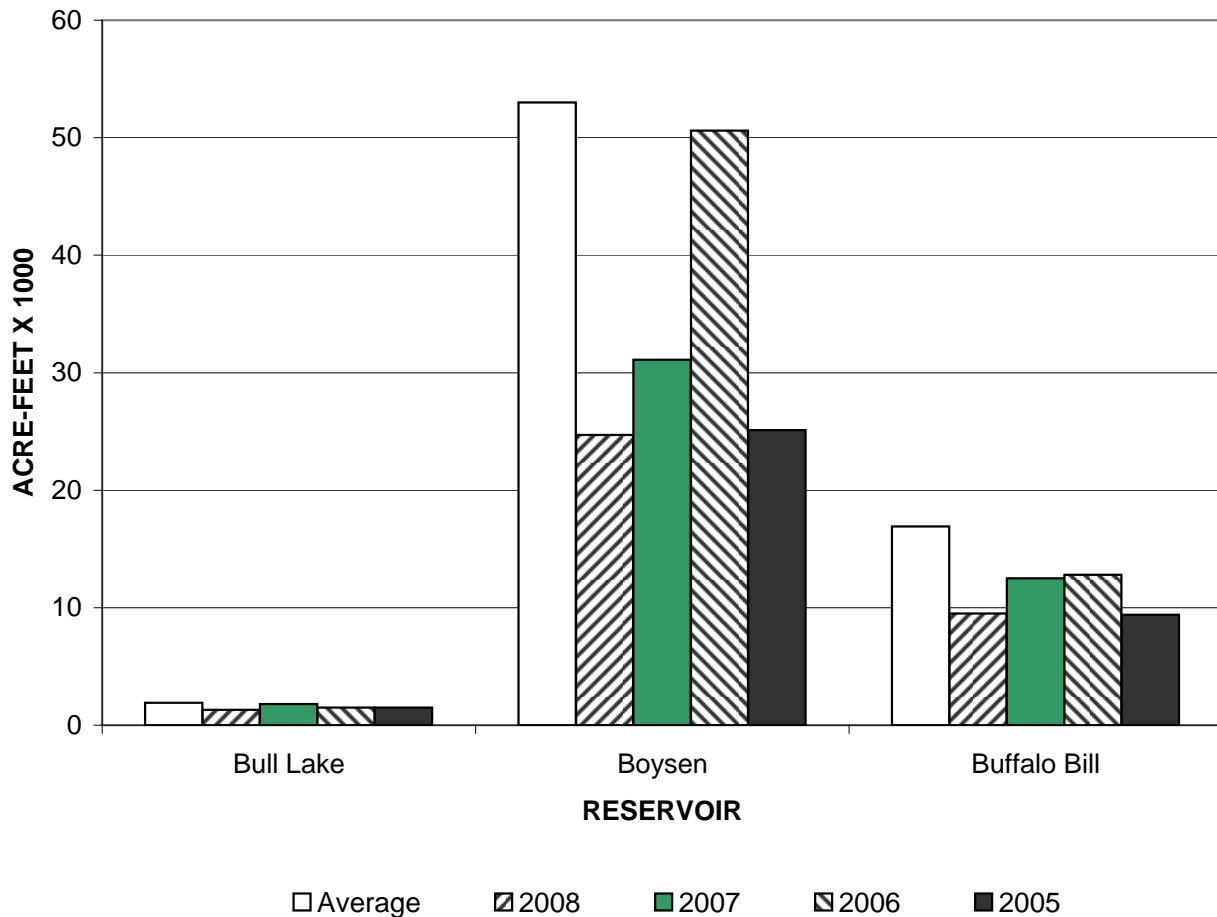
Releases from Bull Lake, Boysen, and Buffalo Bill Reservoirs were below average during January.

(1000 acre-feet)

Reservoir	January Outflow			January Historical Outflow			Accumulated Outflow (October-January)		
	W. Yr. 2008	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005	W. Yr. 2008	30 Yr. Avg.	% of Avg.
Bull Lake	1.3	1.9	68	1.8	1.5	1.5	6.9	12.9	53
Boysen	24.7	53.0	47	31.1	50.6	25.1	98.1	228.5	43
Buffalo Bill	9.5	16.9	56	12.5	12.8	9.4	61.2	87.4	70

¹ Average is based on the 1978-2007 period.

**BIGHORN RIVER BASIN
RESERVOIR OUTFLOW
January**



BIGHORN RIVER BASIN STORAGE

Storage at the end of January was above average at Buffalo Bill and Pilot Butte Reservoirs.

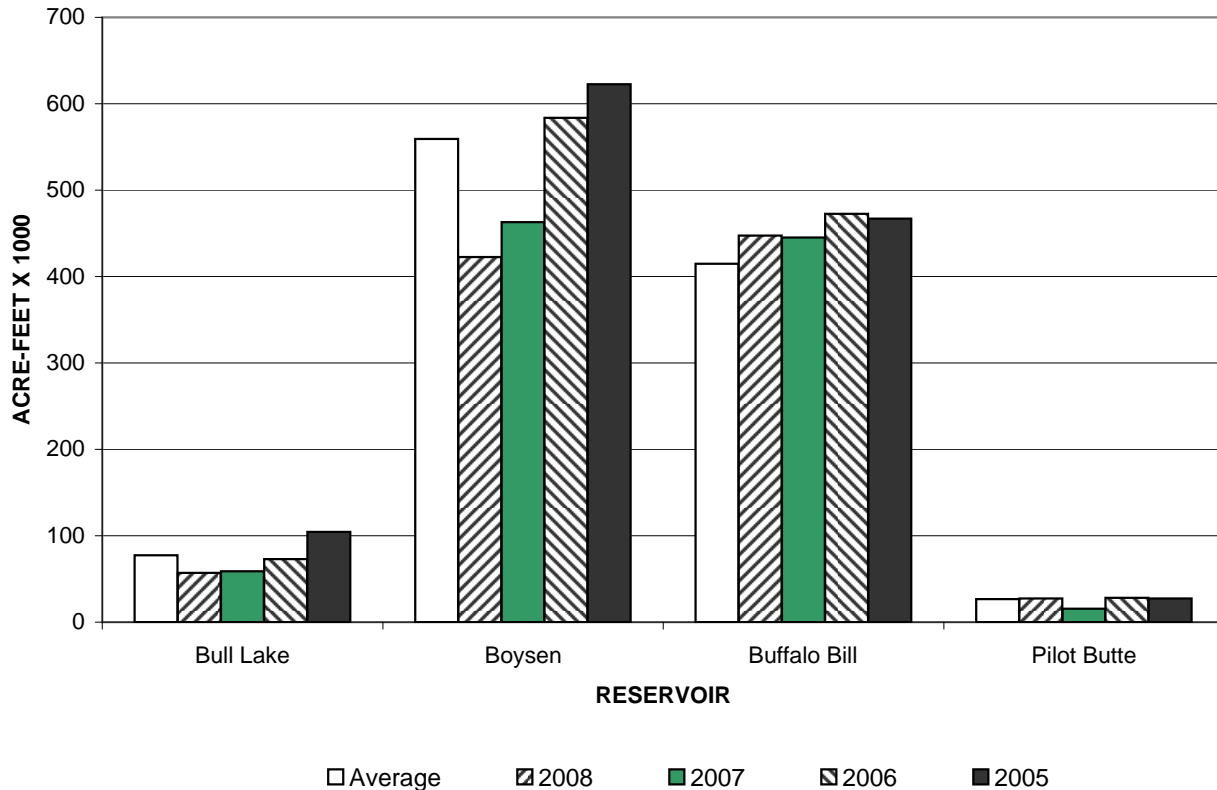
(1000 acre-feet)

Reservoir	Total Storage End of January			End of January Historical Storage			Total Conservation Storage Capacity	Percent of Capacity
	W. Yr. 2008	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005		
Bull Lake	57.1	77.3	74	58.8	72.9	104.3	152.5	37
Boysen	422.7	559.3	76	463.1	583.8	622.5	741.6	57
Buffalo Bill	447.3	415.0 ²	108	445.3	472.5	466.9	646.6	69
Pilot Butte	27.5	26.6	103	15.5	28.2	27.3	33.7	82

¹ Average is based on the 1978-2007 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 2007.

**BIGHORN RIVER BASIN
RESERVOIR STORAGE
End of January**



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. 2008	30 Yr. Avg. ²	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005
Bull Lake Reservoir	7.33	8.80	83	5.8	7.7	8.2
Boysen Reservoir	9.86	9.99	99	7.2	9.1	7.7
Buffalo Bill Reservoir	12.83	13.59	94	9.1	12.3	8.2

Boysen Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Burroughs Creek (8,750)	10.9	10.1
Hobbs Park (10,100)	8.4	9.8
Kirwin (9,800)	8.6	7.7
Little Warm (9,620)	6.6	7.8
Togwotee Pass (9,580)	18.4	16.9
Townsend Creek (8,700)	4.6	5.6
Younts Peak (8,350)	11.5	12.0
Watershed Average	9.86	9.99

Buffalo Bill Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Blackwater (9,780)	16.7	16.6
Evening Star (9,200)	19.4	19.7
Marquette (8,760)	2.2	5.9
Sylvan Lake (8,420)	14.3	15.2
Sylvan Road (8,120)	7.3	8.8
Togwotee Pass (9,580)	18.4	16.9
Younts Peak (8,350)	11.5	12.0
Watershed Average	12.83	13.59

Bull Lake Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Elkhart Park (8,400)	7.0	8.8
Hobbs Park (10,100)	8.4	9.8
Little Warm (9,620)	6.6	7.8
Watershed Average	7.33	8.80

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

² Average is based on the 1971-2000 period

BIGHORN WATER SUPPLY FORECAST

The February 1, 2008, water supply forecast indicates below average April - July runoff can be expected as shown below.

(1000 acre-feet)

Forecast Points	February 1, 2008 Forecast of April-July Runoff			30 Yr. April-July Runoff Avg. ²	Most Probable % of Avg.	Comparative Actual April - July Runoff			
	Reasonable Minimum ¹	Most Probable	Reasonable Maximum ¹			W. Yr. 2007	W. Yr. 2006	W. Yr. 2005	W. Yr. 2004
Bull Lake Reservoir	90	120	150	139.7	86	103	121	155	117
Wind River above Bull Lake Creek	220	320	420	401.3	80	194	282	387	294
Boysen Reservoir	200	400	700	552.2	72	211	201	589	321
Buffalo Bill Reservoir	500	600	700	644.0	93	427	546	513	387

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 1978-2007 period.

(1000 acre-feet)

Forecast Points	February 1, 2008 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	108	120	86	132	150	139.7
Wind River above Bull Lake Creek	220	279	320	80	361	420	401.3
Boysen Reservoir	200	318	400	72	523	700	552.2
Buffalo Bill Reservoir	500	559	600	93	641	700	644.0

¹ Average is based on the 1978-2007 period.

BIGHORN RIVER BASIN GENERATION

Boysen and Shoshone Powerplants were the only Powerplants that generated electricity during January. Generation at Boysen and Shoshone Powerplants was below average.

(Energy in giga-watt hours)

Powerplant	January Gross Generation			January Historical Generation			Accumulated Gross Gen. (October-January)		
	W. Yr. 2008	Avg.	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005	W. Yr. 2008	Avg.	% of Avg.
Boysen ¹	1.6	4.4	36	2.4	4.6	1.7	5.9	18.8	31
Pilot Butte ²	0.0	0.0	0	0.0	0.0	0.0	0.7	0.2	350
Heart Mtn. ³	0.0	0.0	0	0.0	0.0	0.0	0.9	0.8	113
Buffalo Bill ³	0.0	1.6	0	1.0	1.0	0.0	1.1	7.4	15
Shoshone ³	1.2	1.5	80	1.5	1.3	1.7	5.6	6.2	90
Spirit Mtn. ⁴	0.0	0.0	0	0.0	0.0	0.0	1.0	0.9	111

¹ Average is based on the 1978-2007 period.

² Average is based on the 1990-2007 period.

³ Average is based on the 1993-2007 period.

⁴ Average is based on the 1995-2007 period.

**BIGHORN RIVER BASIN
GROSS GENERATION
January**

