

January 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

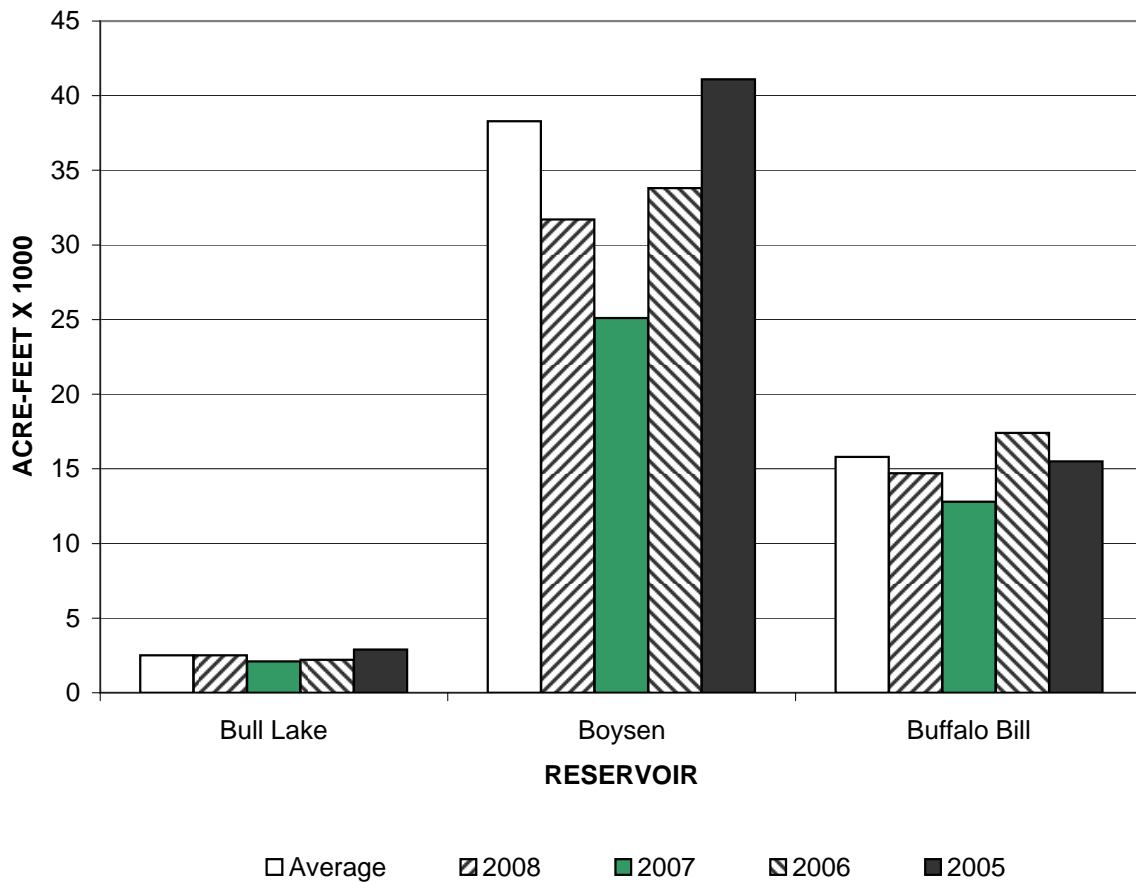
Bull Lake received average inflow during December while inflow to Boysen and Buffalo Bill was below average.

(1000 acre-feet)

Reservoir	December Inflow			December Historical Inflow			Accumulated Inflow (October-December)		
	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	2.5	2.5	100	2.1	2.2	2.9	14.4	10.8	133
Boysen	31.7	38.3	83	25.1	33.8	41.1	103.3	147.2	70
Buffalo Bill	14.7	15.8	93	12.8	17.4	15.5	77.3	60.8	127

¹ Average is based on the 1978-2007 period.

BIGHORN RIVER BASIN RESERVOIR INFLOW December



BIGHORN RIVER BASIN OUTFLOW

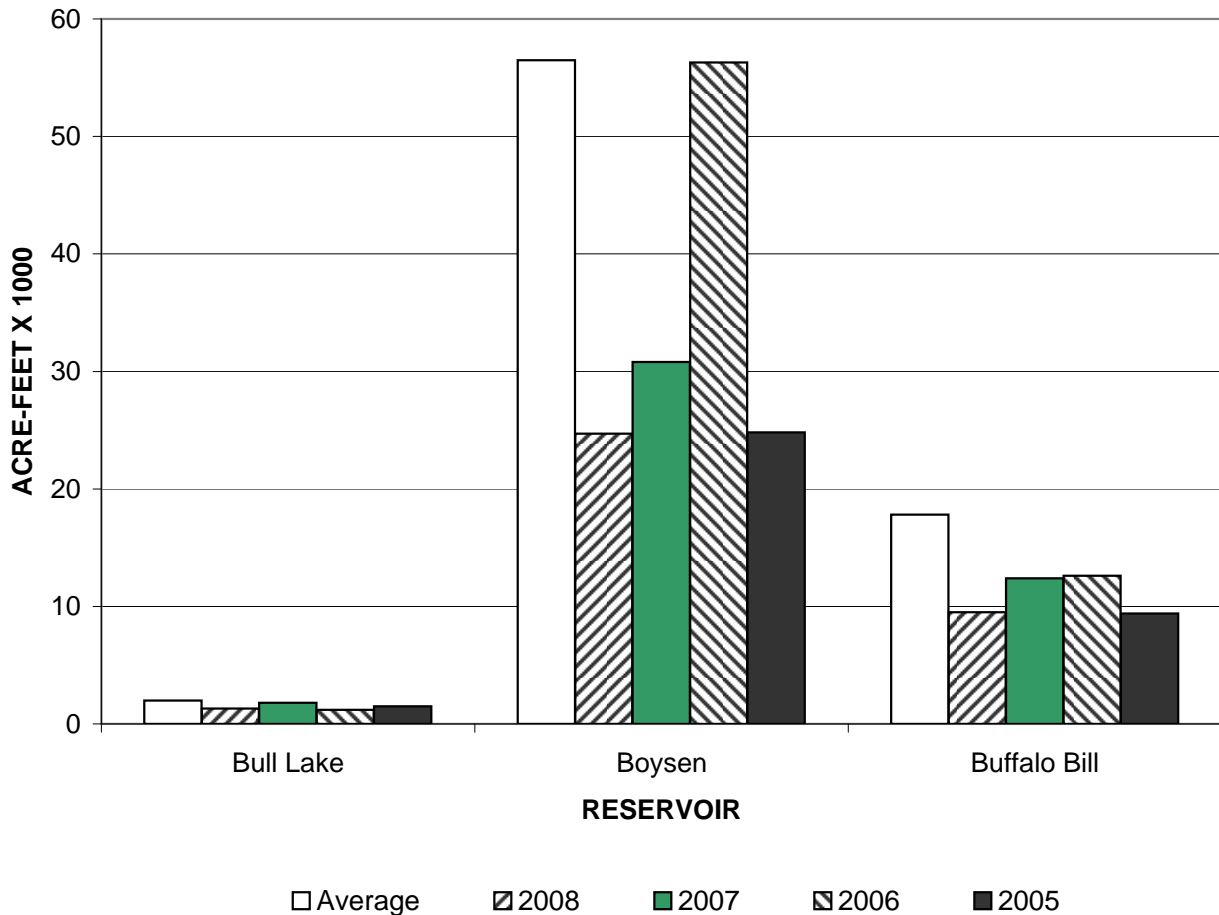
Releases from Bull Lake, Boysen, and Buffalo Bill Reservoirs were below average during December.

(1000 acre-feet)

Reservoir	December Outflow			December Historical Outflow			Accumulated Outflow (October-December)		
	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	2.0	65	1.8	1.2	1.5	5.6	11.0	51
Boysen	24.7	56.5	44	30.8	56.3	24.8	73.4	175.5	42
Buffalo Bill	9.5	17.8	53	12.4	12.6	9.4	51.7	70.5	73

¹ Average is based on the 1978-2007 period.

BIGHORN RIVER BASIN RESERVOIR OUTFLOW December



BIGHORN RIVER BASIN STORAGE

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

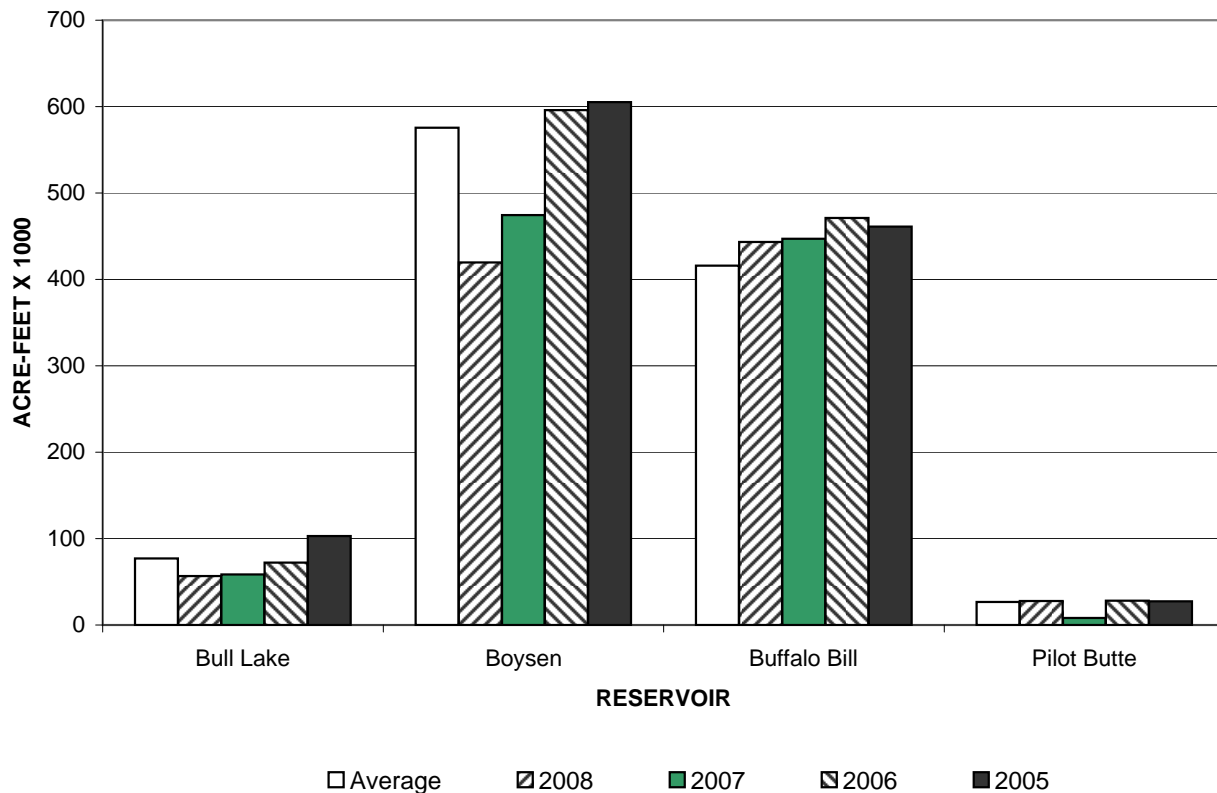
(1000 acre-feet)

Reservoir	Total Storage End of December			End of December 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	56.5	77.0	73	58.5	72.1	103.0	152.5	37
Boysen	419.5	575.4	73	474.6	595.9	605.2	741.6	57
Buffalo Bill	443.4	416.0 ²	107	447.2	471.1	461.0	646.6	69
Pilot Butte	27.6	26.5	104	8.1	28.3	27.4	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 December



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	January 1 snow-water content			Comparative January 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	4.47	6.40	70	4.2	5.5	6.1
Boysen Reservoir	6.84	7.07	97	5.2	6.5	5.8
Buffalo Bill Reservoir	9.06	9.57	95	6.9	8.6	6.5

Boysen Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Burroughs Creek (8,750)	8.3	6.7
Hobbs Park (10,100)	4.8	7.6
Kirwin (9,800)	6.8	5.9
Little Warm (9,620)	4.3	5.3
Togwotee Pass (9,580)	13.2	11.7
Townsend Creek (8,700)	2.5	4.4
Younts Peak (8,350)	8.0	7.9
Watershed Average	6.84	7.07

Buffalo Bill Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Blackwater (9,780)	12.5	12.0
Evening Star (9,200)	14.1	13.7
Marquette (8,760)	1.6	5.0
Sylvan Lake (8,420)	9.4	10.5
Sylvan Road (8,120)	4.6	6.2
Togwotee Pass (9,580)	13.2	11.7
Younts Peak (8,350)	8.0	7.9
Watershed Average	9.06	9.57

Bull Lake Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Elkhart Park (8,400)	4.3	6.3
Hobbs Park (10,100)	4.8	7.6
Little Warm (9,620)	4.3	5.3
Watershed Average	4.47	6.40

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 January 1, 2008, water supply forecast indicates below average April - July runoff can be expected as shown below. The water supply forecasts are based on the snowpack at the Snotel stations displayed on page five of this report, along with precipitation and soil moisture data.

(1000 acre-feet)

Forecast Points	January 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	85	115	145	139.7	82	103	121	155	117
Wind River above Bull Lake Creek	200	300	400	401.3	75	194	282	387	294
Boysen Reservoir	200	350	600	552.2	63	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	January 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	85	103	115	82	127	145	139.7
Wind River above Bull Lake Creek	200	259	300	75	341	400	401.3
Boysen Reservoir	200	289	350	63	452	600	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 December. Generation at Boysen and Shoshone Powerplants was below average.

(Energy in giga-watt hours)

Powerplant	December Gross Generation			December Historical Generation			Accumulated Gross Gen. (October-December)		
	W. Yr. 2008	Avg.	% of Avg.	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005	W. Yr. 2008	Avg.	% of Avg.
Boysen ¹	1.4	4.7	30	2.3	5.2	1.8	4.3	14.4	30
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	1.8	0	0.9	0.8	0.0	1.1	5.8	19
Shoshone ³	1.1	1.5	73	1.4	1.3	1.9	4.4	4.7	94
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 December

