

**January 1, 2009
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 Current Month or reports from the previous 12 months**

BIGHORN RIVER BASIN INFLOW

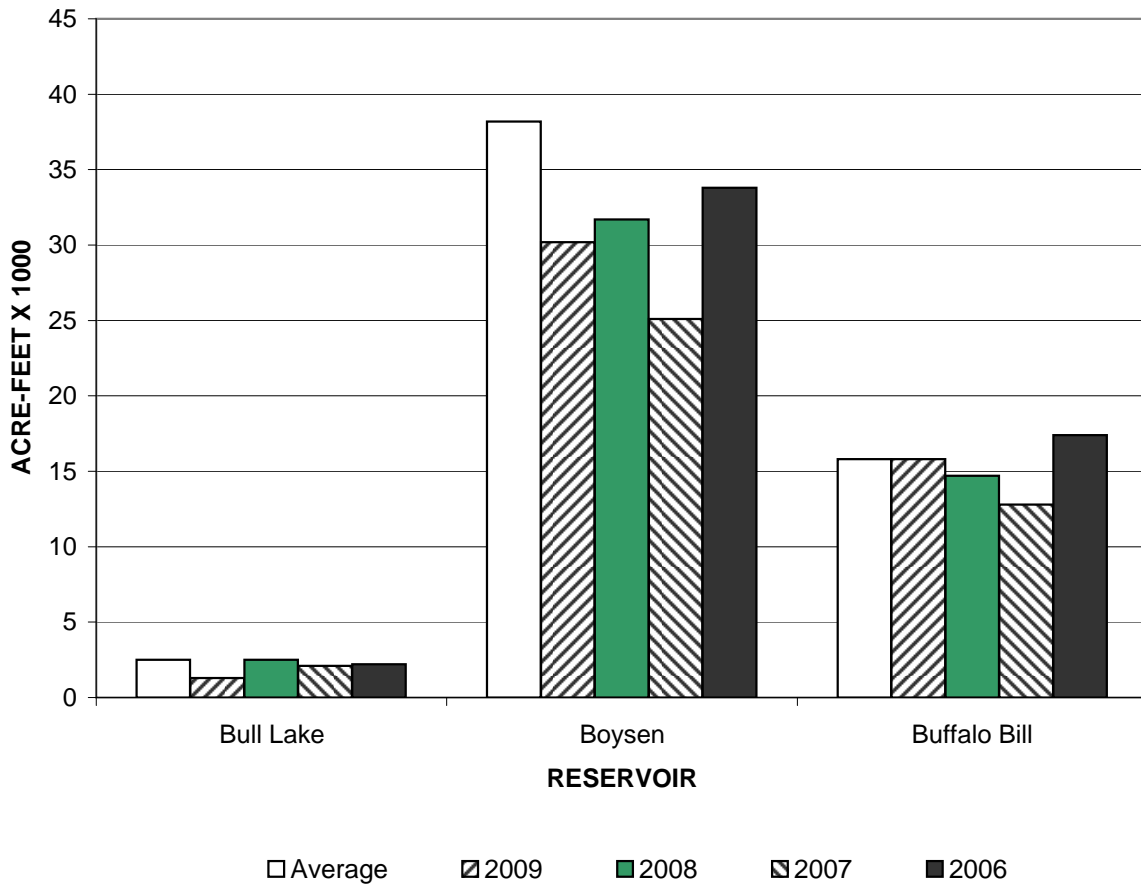
December inflow was below average at Bull Lake and Boysen Reservoirs.

(1000 acre-feet)

Reservoir	December Inflow			December Historical Inflow			Accumulated Inflow (October - December)		
	W. Yr. 2009	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2008	W. Yr. 2007	W. Yr. 2006	W. Yr. 2009	30 Yr. Avg.	% of Avg.
Bull Lake	1.3	2.5	52	2.5	2.1	2.2	9.1	11.0	83
Boysen	30.2	38.2	79	31.7	25.1	33.8	112.8	146.5	77
Buffalo Bill	15.8	15.8	100	14.7	12.8	17.4	63.8	61.9	103

¹ Average is based on the 1979-2008 period.

BIGHORN RIVER BASIN RESERVOIR INFLOW December



BIGHORN RIVER BASIN OUTFLOW

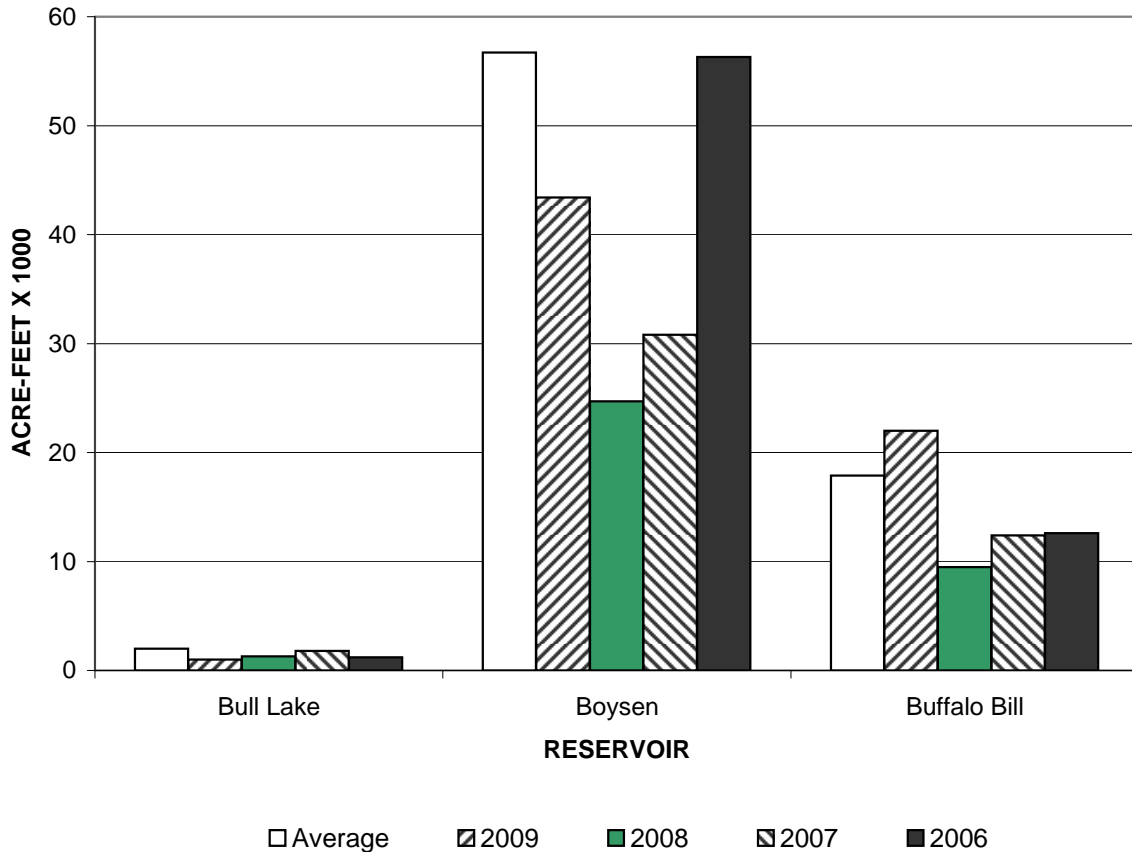
The release from Buffalo Bill Reservoir was above average during December.

(1000 acre-feet)

Reservoir	December Outflow			December Historical Outflow			Accumulated Outflow (October - December)		
	W. Yr. 2009	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2008	W. Yr. 2007	W. Yr. 2006	W. Yr. 2009	30 Yr. Avg.	% of Avg.
Bull Lake	1.0	2.0	50	1.3	1.8	1.2	3.6	11.1	32
Boysen	43.4	56.7	77	24.7	30.8	56.3	128.7	175.9	73
Buffalo Bill	22.0	17.9	123	9.5	12.4	12.6	95.4	71.2	134

¹ Average is based on the 1979-2008 period.

BIGHORN RIVER BASIN RESERVOIR OUTFLOW December



BIGHORN RIVER BASIN STORAGE

Storage at the end of December was above average at all Basin Reservoirs.

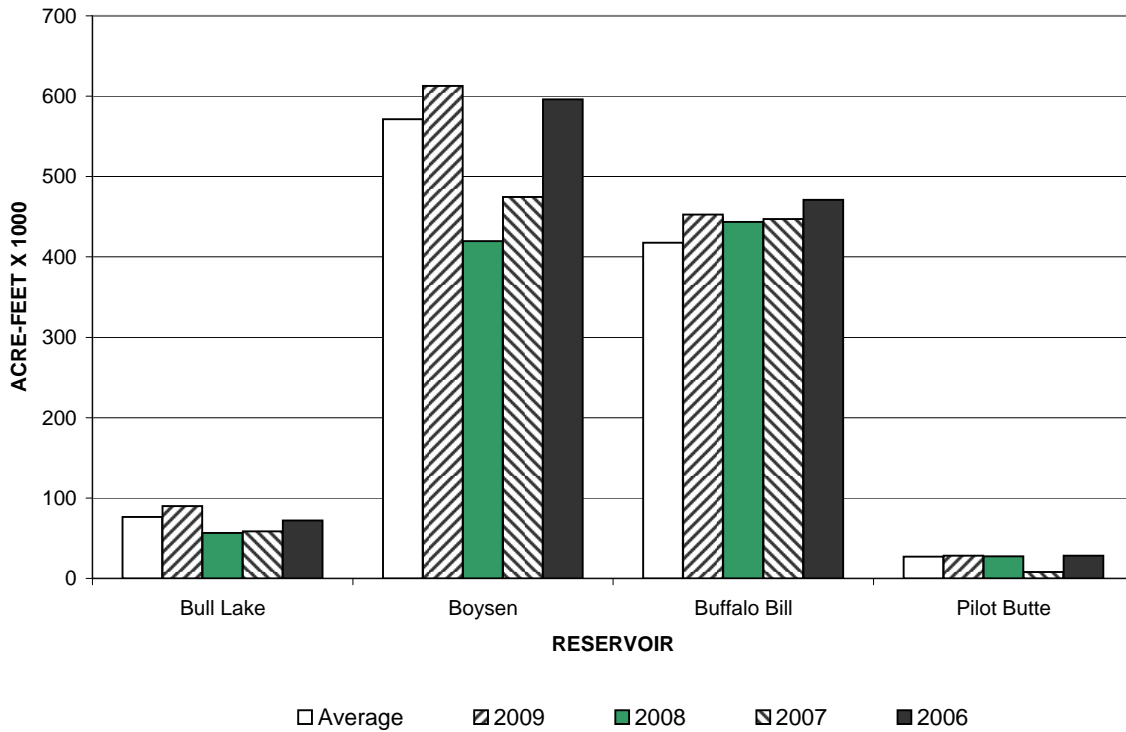
(1000 acre-feet)

Reservoir	Total Storage End of December			End of December Historical Storage			Total Conservation Storage Capacity	Percent of Capacity
	W. Yr. 2009	30 Yr. Avg. ¹	% of Avg.	W. Yr. 2008	W. Yr. 2007	W. Yr. 2006		
Bull Lake	89.9	76.3	118	56.5	58.5	72.1	152.5	59
Boysen	612.9	571.4	107	419.5	474.6	595.9	741.6	83
Buffalo Bill	452.8	417.8 ²	108	443.4	447.2	471.1	646.6	70
Pilot Butte	28.2	27.0	104	27.6	8.1	28.3	33.7	84

¹ Average is based on the 1979-2008 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 2008

**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. 2009	30 Yr. Avg. ²	% of Avg.	W. Yr. 2008	W. Yr. 2007	W. Yr. 2006
Bull Lake Reservoir	5.90	6.40	92	4.5	4.2	5.5
Boysen Reservoir	7.20	7.07	102	6.8	5.2	6.5
Buffalo Bill Reservoir	8.46	9.57	88	9.1	6.9	8.6

Boysen Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Burroughs Creek (8,750)	7.6	6.7
Hobbs Park (10,100)	6.1	7.6
Kirwin (9,800)	6.4	5.9
Little Warm (9,620)	5.2	5.3
Togwotee Pass (9,580)	12.7	11.7
Townsend Creek (8,700)	3.7	4.4
Younts Peak (8,350)	8.7	7.9
Watershed Average	7.20	7.07

Buffalo Bill Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Blackwater (9,780)	10.6	12.0
Evening Star (9,200)	11.8	13.7
Marquette (8,760)	2.2	5.0
Sylvan Lake (8,420)	8.0	10.5
Sylvan Road (8,120)	5.2	6.2
Togwotee Pass (9,580)	12.7	11.7
Younts Peak (8,350)	8.7	7.9
Watershed Average	8.46	9.57

Bull Lake Reservoir Watershed

SWE in inches ¹

Snotel Stations (Elevation)	Water Content	30 Yr. Avg. ²
Elkhart Park (8,400)	6.4	6.3
Hobbs Park (10,100)	6.1	7.6
Little Warm (9,620)	5.2	5.3
Watershed Average	5.90	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, 2009, water supply forecast indicates below average April - July runoff can be expected at all forecast points.

(1000 acre-feet)

Forecast Points	January 1, 2009 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. 2008	W. Yr. 2007	W. Yr. 2006	W. Yr. 2005
	Bull Lake Reservoir	100	130			160	138.5	94	135
Wind River above Bull Lake Creek	200	350	500	397.2	88	412	199	282	387
Boysen Reservoir	250	500	750	541.6	92	522	211	201	589
Buffalo Bill Reservoir	480	630	780	646.3	97	955	427	546	513

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 1979-2008 period.

(1000 acre-feet)

Forecast Points	January 1, 2009 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	100	118	130	94	142	160	138.5
Wind River above Bull Lake Creek	200	289	350	88	411	500	397.2
Boysen Reservoir	250	398	500	92	602	750	541.6
Buffalo Bill Reservoir	480	569	630	97	691	780	646.3

¹ Average is based on the 1979-2008 period.

BIGHORN RIVER BASIN GENERATION

Generation during December was above average at Buffalo Bill and Shoshone Powerplants.

(Energy in giga-watt hours)

Powerplant	December Gross Generation			December Historical Generation			Accumulated Gross Gen. (October - December)		
	W. Yr. 2009	Avg.	% of Avg.	W. Yr. 2008	W. Yr. 2007	W. Yr. 2006	W. Yr. 2009	Avg.	% of Avg.
Boysen ¹	3.9	4.8	81	1.4	2.3	5.2	11.0	14.5	76
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	0.8	0.8	100
Buffalo Bill ³	2.4	1.6	150	0.0	0.9	0.8	10.6	5.4	196
Shoshone ³	2.0	1.5	133	1.1	1.4	1.3	5.9	4.7	126
Spirit Mtn. ⁴	0.0	0.0	0	0.0	0.0	0.0	0.7	0.9	78

¹ Average is based on the 1979-2008 period.

² Average is based on the 1990-2008 period.

³ Average is based on the 1993-2008 period.

⁴ Average is based on the 1996-2008 period.

BIGHORN RIVER BASIN GROSS GENERATION December

