

# RECLAMATION

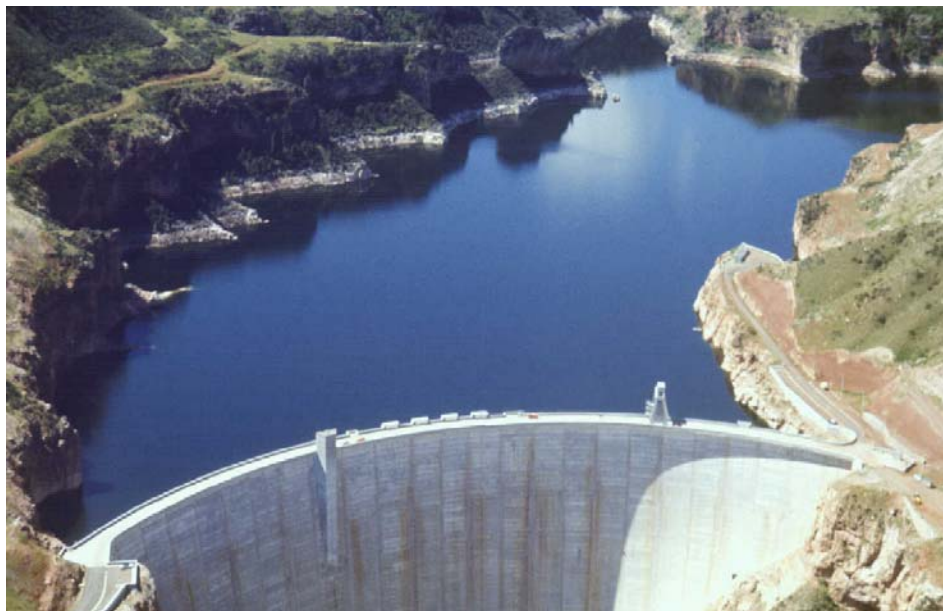
## *Managing Water in the West*

August 1, 2008

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans prepared in August 2008. Storage in Bighorn Lake on August 1 was at 105 percent of average and 2.26 feet higher than on July 1. Based on the little remaining snowmelt and projected releases out of Boysen and Buffalo Bill Reservoirs, the August inflow to Bighorn Lake is forecast at 128,000 acre-feet or 80 percent of average. If you have any questions or concerns, please feel free to call me at (406) 247-7318.

Tim H. Felchle  
Reservoir and River Operations



U. S. Department of the Interior  
Bureau of Reclamation  
Montana Area Office  
River and Reservoir Operations

**YELLOWTAIL RESERVOIR OPERATIONS**  
 Water Supply Forecasts and Reservoir Operations  
 August 1, 2008

**Present Elevations & Storages:**

<u>Reservoir</u>	<u>Elevation</u>	<u>Storage</u>	<u>Percent of Normal</u>
Boysen	4720.80	662,630	113
Buffalo Bill	5391.30	628,771	135
Bighorn Lake	3641.56	1,090,121	105

**Actual Inflows (1,000 Acre-Feet):**

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
<i>April-July, 2007</i>	<i>614.1</i>	<i>51</i>
<i>WY-2007 Total</i>	<i>1,364.2</i>	<i>54</i>
October	138.7	76
November	95.8	63
December	66.3	48
January	66.3	50
February	68.0	50
March	86.1	51
April	80.9	50
May	291.6	118
June	595.1	144
July	330.6	114
<i>April-July, 2008</i>	<i>1,298.3</i>	<i>117</i>

**Actual Gains Between Boysen and Buffalo Bill to Yellowtail (1,000 Acre-Feet):**

<u>Month</u>	<u>Gains</u>	<u>Percent of Normal</u>
<i>April-July, 2007</i>	<i>188.2</i>	<i>60</i>
<i>WY-2007 Total</i>	<i>462.0</i>	<i>64</i>
October	92.9	118
November	63.2	98
December	32.3	71
January	32.2	69
February	36.0	63
March	52.2	68
April	20.7	45
May	120.4	143
June	179.7	118
July	29.4	535
<i>April-July, 2008</i>	<i>350.3</i>	<i>122</i>

**August Runoff Forecast (1,000 Acre-Feet):**

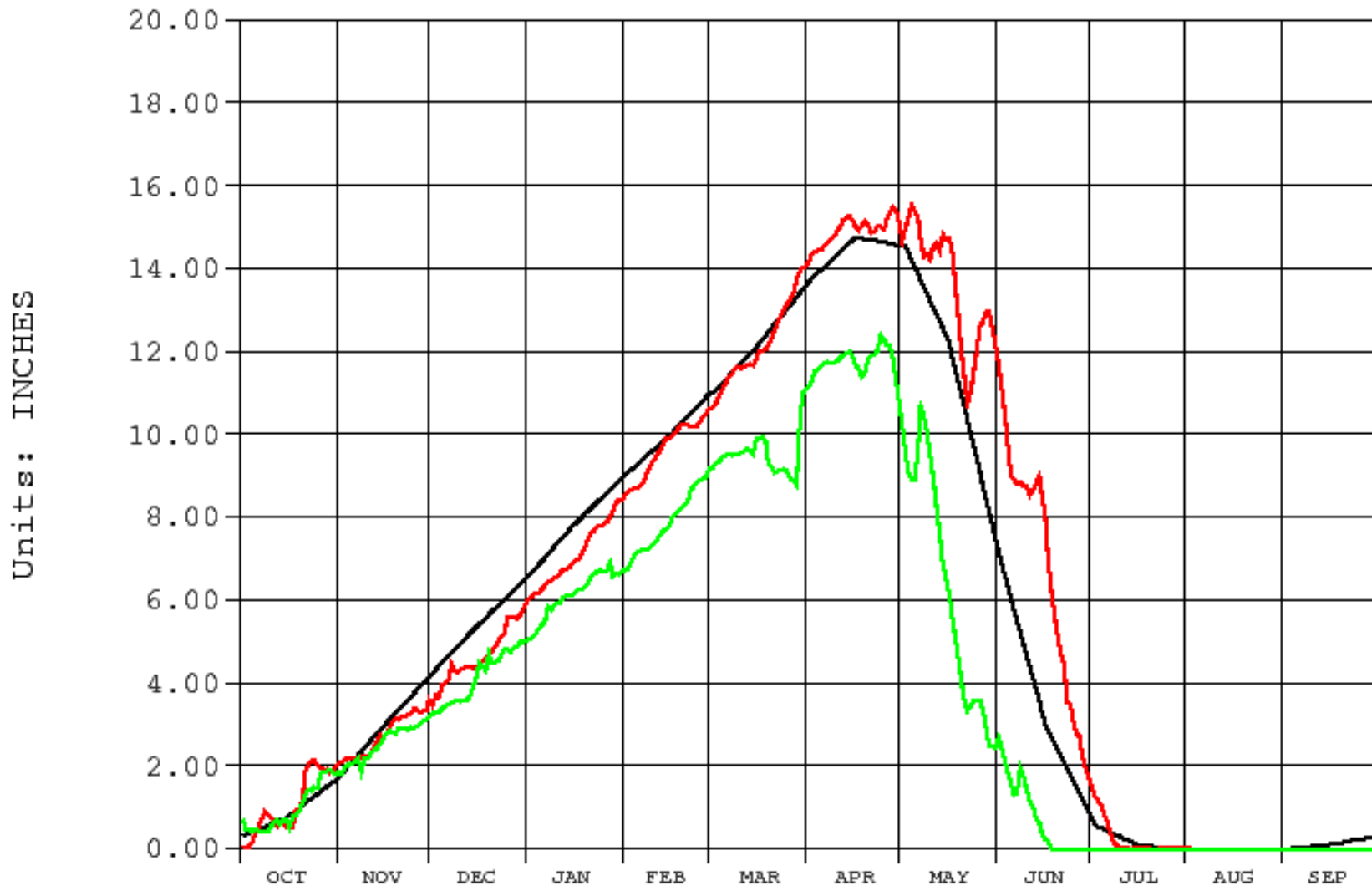
<u>Agency</u>	<u>Gains</u>	<u>Percent of Normal</u>
USBR	-29.5	----
	<u>Inflows</u>	
USBR	128.0	80

**Snowpack Conditions:**

**No Snow Data Information Available Until November 1**

Archive Data From 1-OCT Through 30-SEP

Plotted 08/01/2008 11:18



BHR Bighorn Lake (Yellowtail), Bighorn River near Fort Smith, MT

SE\_AVG Snow Water Equivalent Average (inches)

SE Snow Water Equivalent (inches)

2008

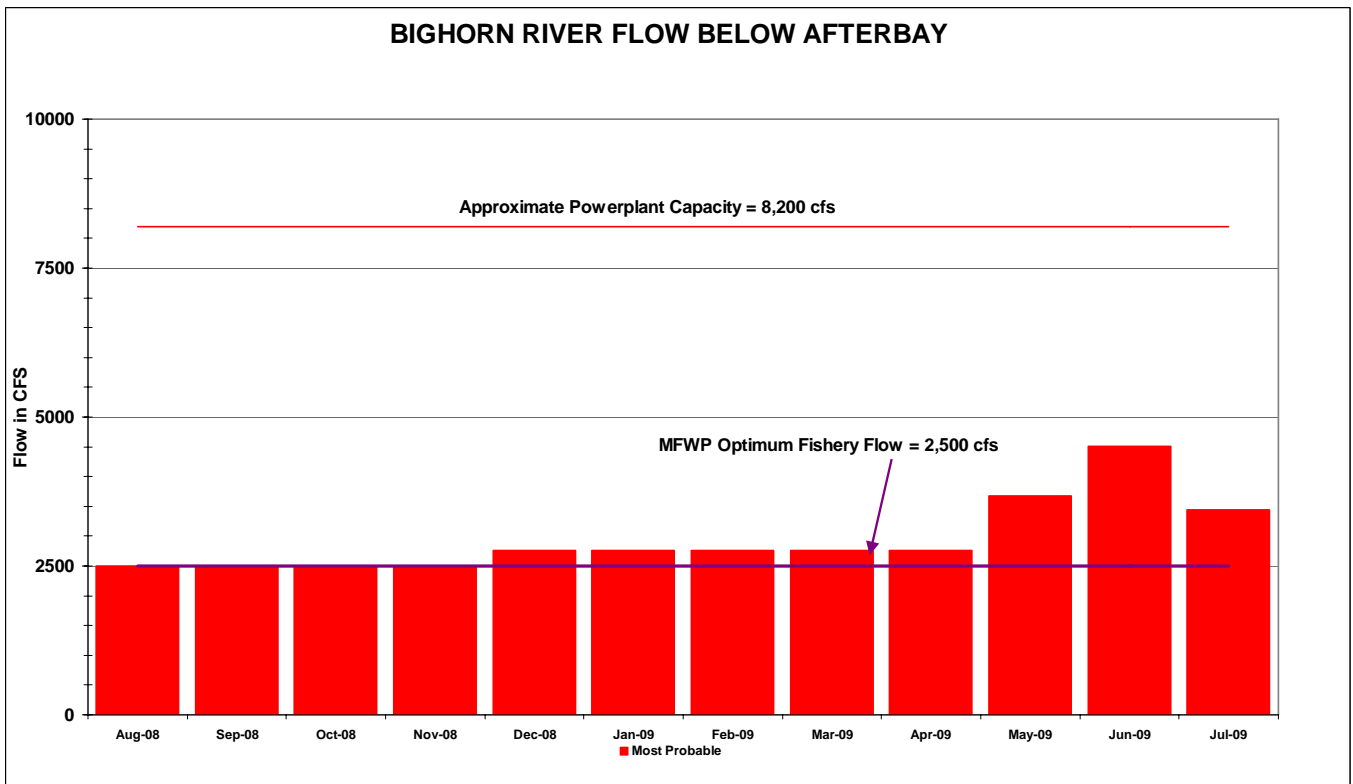
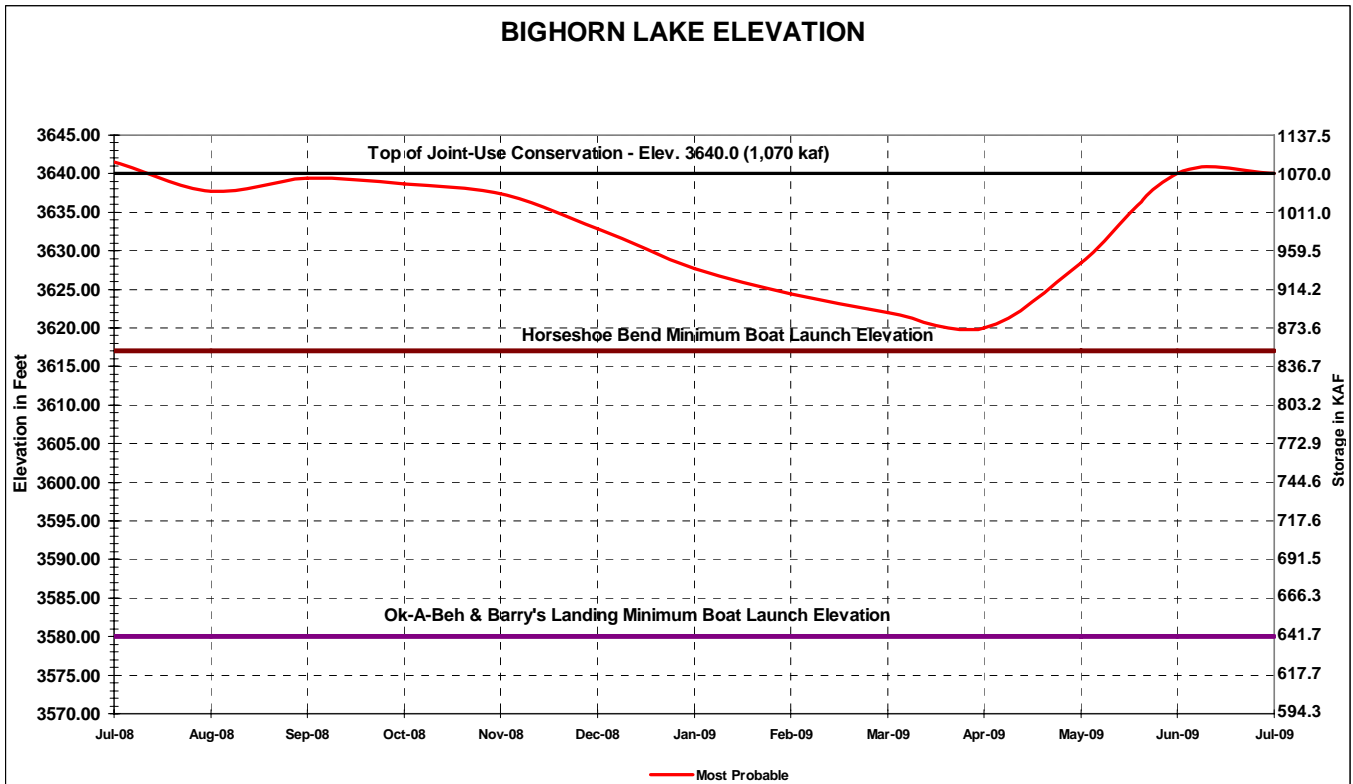
2008 2007

BHXAOP V1.12 Run: 11-Aug-2008 13:32  
 Based on Most Probable Inflow Forecast

BIGHORN LAKE MONTHLY OPERATIONS

Bighorn Reservoir		Initial Cont 1090.1 kaf Elev 3641.56 ft					Maximum Cont 1328.4 kaf Elev 3657.00 ft				Minimum Cont 493.6 kaf Elev 3547.00 ft				Total
	2008	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
Boysen Release	kaf	66.4	59.5	46.1	41.7	43.0	43.1	38.9	43.0	69.4	140.5	131.9	128.6	852.1	
Boysen Release	cfs	1080	1000	750	701	699	701	700	699	1166	2285	2217	2091		
Buffalo Bill Riv Flo	kaf	91.1	82.8	35.4	20.8	21.5	21.5	19.4	21.5	24.4	93.2	146.6	104.9	683.1	
Buffalo Bill Riv Flo	cfs	1482	1392	576	350	350	350	349	350	410	1516	2464	1706		
Station Gain	kaf	-29.5	42.0	62.5	67.4	51.1	50.4	62.0	81.7	50.8	84.2	136.9	1.9	661.4	
Monthly Inflow	kaf	128.0	184.3	144.0	129.9	115.6	115.0	120.3	146.2	144.6	317.9	415.4	235.4	2196.6	
Monthly Inflow	cfs	2082	3097	2342	2183	1880	1870	2166	2378	2430	5170	6981	3828		
Turbine Release	kaf	176.2	163.4	153.5	144.6	165.5	165.5	149.5	165.5	160.7	246.2	290.7	235.4	2216.7	
Bypass/Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Release	kaf	176.2	163.4	153.5	144.6	165.5	165.5	149.5	165.5	160.7	246.2	290.7	235.4	2216.7	
Total Release	cfs	2866	2746	2496	2430	2692	2692	2692	2692	2701	4004	4885	3828		
Spring Flow	kaf	4.3	4.2	4.3	4.2	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	50.8	
Irrigation Reqmnt	kaf	26.8	18.8	4.1	0.0	0.0	0.0	0.0	0.0	0.6	24.6	26.8	27.7	129.4	
Afterbay Rels	kaf	180.5	167.6	157.8	148.8	169.8	169.8	153.4	169.8	164.9	250.5	294.9	239.7	2267.5	
Afterbay Rels	cfs	2936	2817	2566	2501	2762	2762	2762	2762	2771	4074	4956	3898		
River Release	kaf	153.7	148.8	153.7	148.8	169.8	169.8	153.4	169.8	164.3	225.9	268.1	212.0	2138.1	
River Release	cfs	2500	2501	2500	2501	2762	2762	2762	2762	2761	3674	4506	3448		
Min Release	kaf	153.7	148.8	153.7	148.8	153.7	153.7	138.8	153.7	148.8	153.7	148.8	153.7	1809.9	
End-Month Targets	kaf									873.6		1070.0	1070.0		
End-Month Content	kaf	1041.9	1062.8	1053.3	1038.6	988.7	938.2	909.0	889.7	873.6	945.3	1070.0	1070.0		
End-Month Elevation	ft	3637.70	3639.42	3638.65	3637.42	3632.91	3627.72	3624.39	3622.05	3620.00	3628.49	3640.00	3640.00		
Net Change Content	kaf	-48.2	20.9	-9.5	-14.7	-49.9	-50.5	-29.2	-19.3	-16.1	71.7	124.7	0.0	-20.1	
Yellowtail Power	2008	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Total	
Turbine Release	kaf	176.2	163.4	153.5	144.6	165.5	165.5	149.5	165.5	160.7	246.2	290.7	235.4	2216.7	
Generation	gwh	72.162	66.651	62.719	58.870	66.721	65.670	58.543	64.271	62.021	95.946	116.978	96.520	887.072	
End-Month Power Cap	mw	285.2	286.9	286.2	284.9	280.5	275.5	272.3	270.1	268.2	276.2	287.5	287.5		
% Max Gen		34	32	29	28	31	31	30	30	30	45	56	45		
Ave kwh/af		410	408	409	407	403	397	392	388	386	390	402	410	400	
Upstream Generation	gwh	29.176	27.635	14.979	9.180	9.483	9.467	8.522	9.432	13.364	34.550	34.058	34.907	234.753	
Total Generation	gwh	101.338	94.286	77.698	68.050	76.204	75.137	67.065	73.703	75.385	130.496	151.036	131.427	1121.825	

# BIGHORN LAKE



WATER YEAR 2008