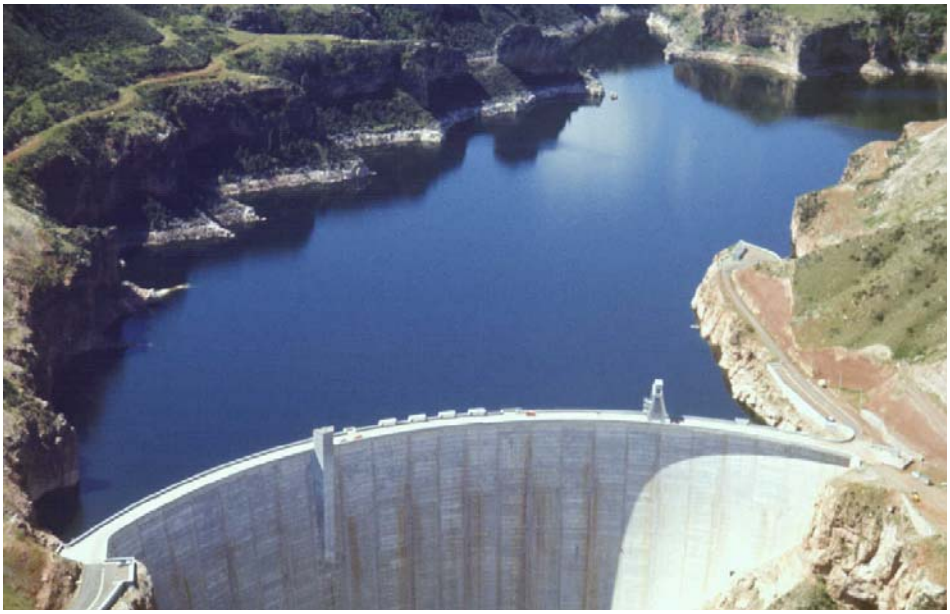
RECLAMATION
Managing Water in the West

October 9, 2009

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans prepared in October. Storage in Bighorn Lake on October 1 was 104 percent of average and 0.74 feet below the top of the joint-use pool. It was also 3.23 feet lower than on September 1. Based on streamflow accretions accompanied by the planned releases out of Boysen and Buffalo Bill Reservoirs, the water supply forecast prepared in October indicates the October inflow to Bighorn Lake to be about 88 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
October 1, 2009

Present Elevations & Storages:

Reservoir	Elevation	Storage	Percent of Normal
Boysen	4720.63	659,577	109
Buffalo Bill	5372.51	480,016	110
Bighorn Lake	3639.26	1,060,795	104

Actual Inflows (1,000 Acre-Feet):

Month	Inflow	Percent of Normal
April	142.6	87
May	268.3	109
June	771.6	187
July	474.1	163
April-July, 2009	*1,656.6*	*149*
WY-2009 Total	*2,729.7*	*116*
August	188.9	118
September	152.3	89

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

Month	Gains	Percent of Normal
April	55.5	120
May	47.7	57
June	177.4	117
July	62.4	***** 1135
April-July, 2009	***343.0***	***119***
WY-2009 Total	***703.2***	***104***
August	34.6	***** 34581
September	29.8	65

*** Note: Average Gains for July & August = 5.5 kaf & 0.1 kaf**

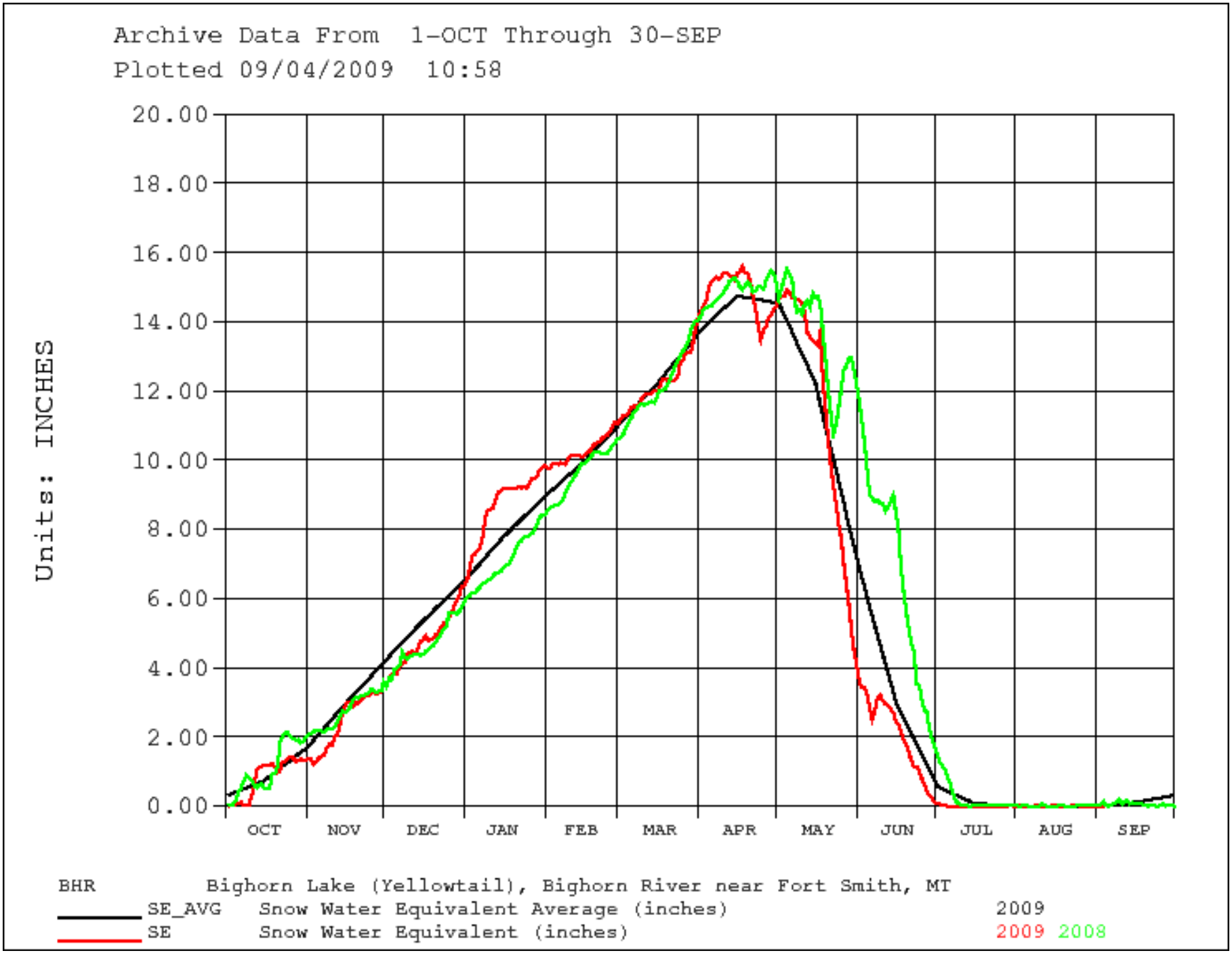
October 1 Runoff Forecast (October Flows - 1,000 Acre-Feet):

Agency	Gains	Percent of Normal
USBR	**59.9**	**84**
	Inflows	
USBR	**160.7**	**88**

Snowpack Conditions:

S N O W - P R E C I P I T A T I O N U P D A T E

Not Available during August through October


Archive Data From 1-OCT Through 30-SEP
Plotted 09/04/2009 10:58
Units: INCHES
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
BHR Bighorn Lake (Yellowtail), Bighorn River near Fort Smith, MT
SE_AVG Snow Water Equivalent Average (inches) 2009
SE Snow Water Equivalent (inches) 2009 2008

BHXAOP V1.12 Run: 07-Oct-2009 13:30
Based on Most Probable Inflow Forecast

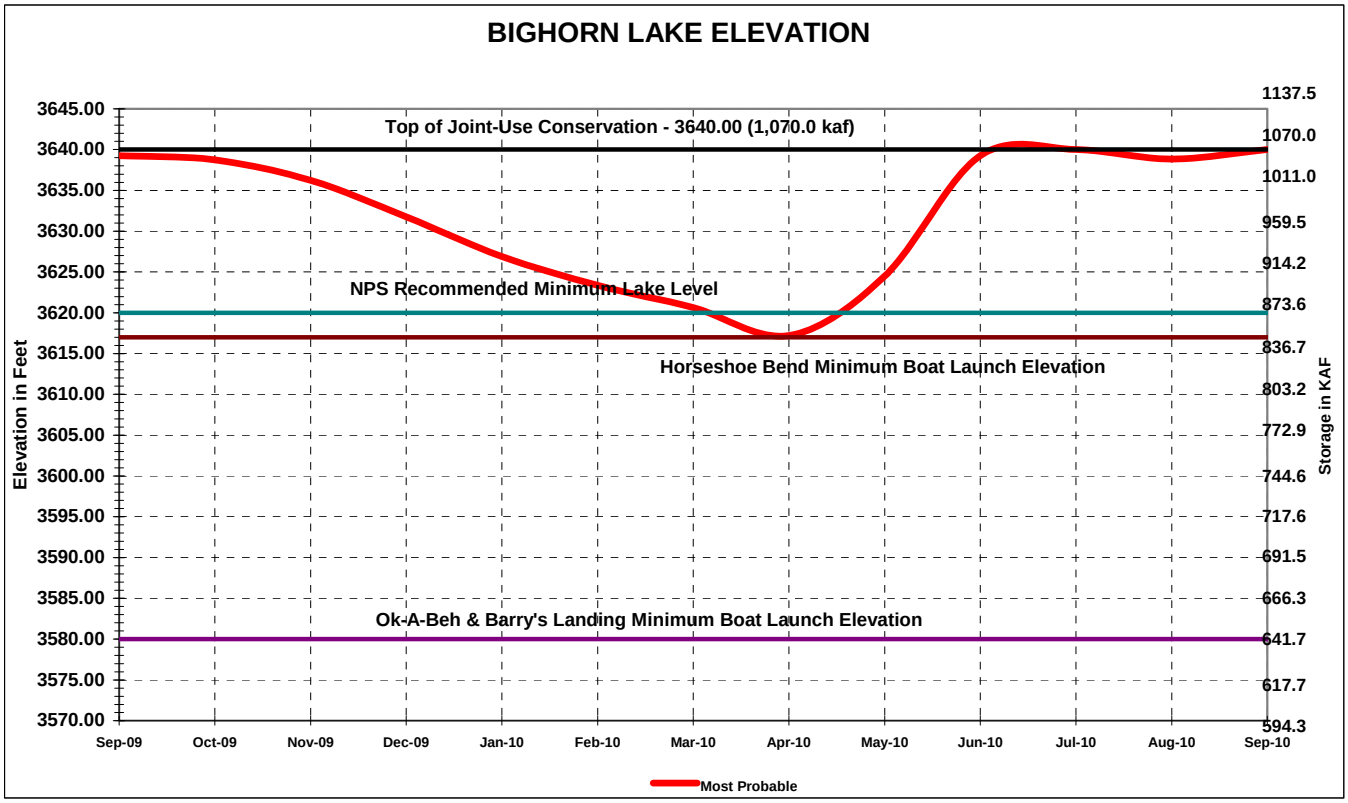
BIGHORN LAKE MONTHLY OPERATIONS

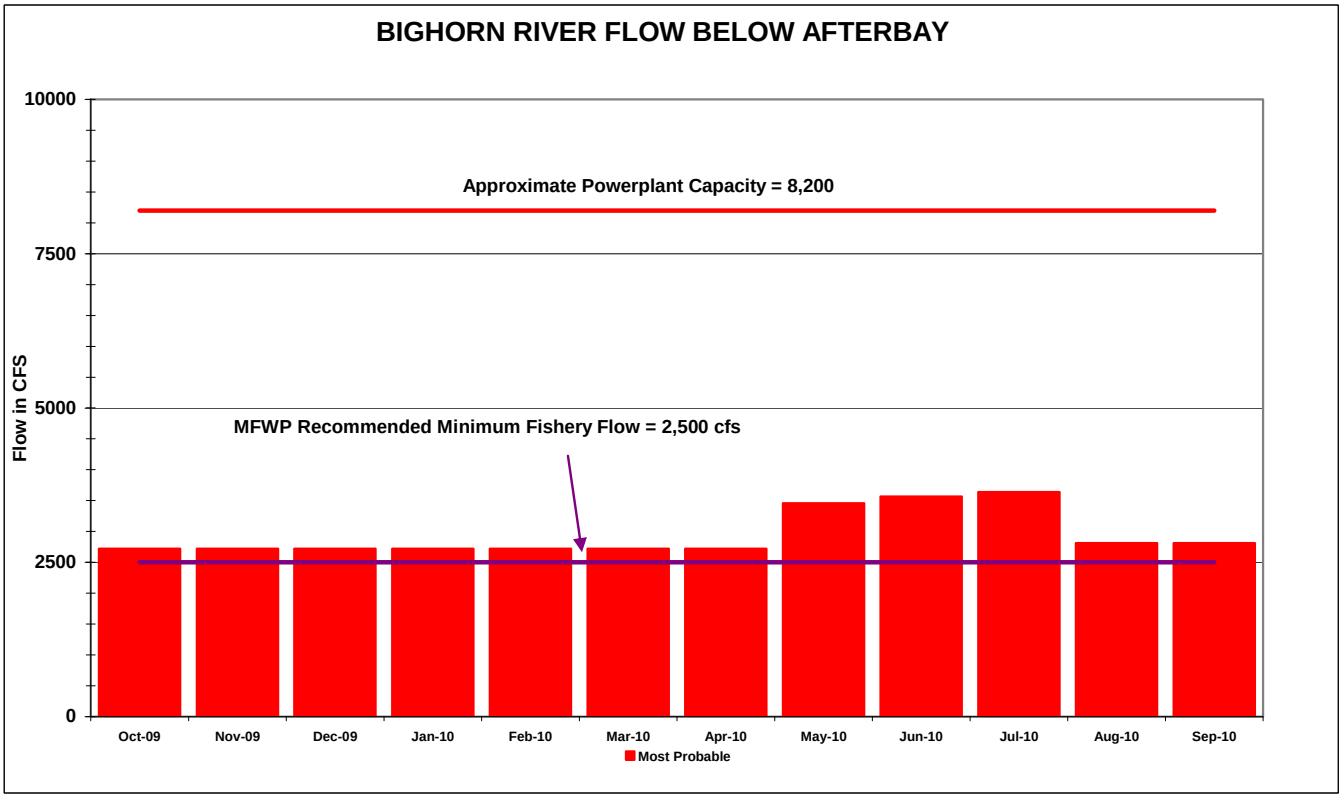
Bighorn Reservoir Initial Cont 1060.8 kaf Maximum Cont 1328.4 kaf Minimum Cont 493.6 kaf
Elev 3639.26 ft Elev 3657.00 ft Elev 3547.00 ft

	2009	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Boysen Release	kaf	55.4	53.6	55.3	55.4	50.0	55.3	71.1	119.7	132.3	121.8	100.3	71.4	941.6
Boysen Release	cfs	901	901	899	901	900	899	1195	1947	2223	1981	1631	1200	
Buffalo Bill Release	kaf	45.4	21.1	21.8	21.8	19.7	21.8	31.7	118.5	163.9	174.0	118.6	107.2	865.5
Buffalo Bill Release	cfs	738	355	355	355	355	355	533	1927	2754	2830	1929	1802	
Station Gain	kaf	59.9	53.0	38.2	39.5	47.0	63.9	29.4	52.1	89.5	-39.6	-37.9	17.5	412.5
Monthly Inflow	kaf	160.7	127.7	115.3	116.7	116.7	141.0	132.2	290.3	385.7	256.2	181.0	196.1	2219.6
Monthly Inflow	cfs	2614	2146	1875	1898	2101	2293	2222	4721	6482	4167	2944	3296	
Turbine Release	kaf	167.0	157.6	162.9	162.9	147.1	162.9	158.2	232.9	234.8	247.0	195.3	181.8	2210.4
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	167.0	157.6	162.9	162.9	147.1	162.9	158.2	232.9	234.8	247.0	195.3	181.8	2210.4
Total Release	cfs	2716	2649	2649	2649	2649	2649	2659	3788	3946	4017	3176	3055	
Spring Flow	kaf	4.3	4.2	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	4.3	4.2	50.8
Irrigation Reqmnt	kaf	4.1	0.0	0.0	0.0	0.0	0.0	0.6	24.6	26.8	27.7	26.8	18.8	129.4
Afterbay Rels	kaf	171.3	161.8	167.2	167.2	151.0	167.2	162.4	237.2	239.0	251.3	199.6	186.0	2261.2
Afterbay Rels	cfs	2786	2719	2719	2719	2719	2719	2729	3858	4017	4087	3246	3126	
River Release	kaf	167.2	161.8	167.2	167.2	151.0	167.2	161.8	212.6	212.2	223.6	172.8	167.2	2131.8
River Release	cfs	2719	2719	2719	2719	2719	2719	2719	3458	3566	3637	2810	2810	
Min Release	kaf	167.2	148.8	153.7	153.7	138.8	153.7	148.8	153.7	148.8	153.7	153.7	148.8	1823.4
End-Month Targets	kaf	1061.1						852.5			1070.0		1070.0	
End-Month Content	kaf	1054.5	1024.6	977.0	930.8	900.4	878.5	852.5	909.9	1060.8	1070.0	1055.7	1070.0	
End-Month Elevation	ft	3638.74	3636.21	3631.77	3626.90	3623.36	3620.63	3617.20	3624.50	3639.26	3640.00	3638.84	3640.00	
Net Change Content	kaf	-6.3	-29.9	-47.6	-46.2	-30.4	-21.9	-26.0	57.4	150.9	9.2	-14.3	14.3	9.2

Yellowtail Power	2009	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Turbine Release	kaf	167.0	157.6	162.9	162.9	147.1	162.9	158.2	232.9	234.8	247.0	195.3	181.8	2210.4
Generation	gwh	68.226	64.040	65.412	64.437	57.447	63.043	60.704	89.871	93.825	101.140	79.911	74.387	882.443
End-Month Power Cap	mw	286.2	283.7	279.3	274.7	271.3	268.8	265.6	272.4	286.8	287.5	286.3	287.5	
% Max Gen		32	31	31	30	30	29	29	42	45	47	37	36	
Ave kwh/af		409	406	402	396	391	387	384	386	400	409	409	409	399
Upstream Generation	gwh	15.524	10.276	10.585	10.533	8.837	10.435	13.434	32.840	33.868	34.350	32.411	28.716	241.809
Total Generation	gwh	83.750	74.316	75.997	74.970	66.284	73.478	74.138	122.711	127.693	135.490	112.322	103.103	1124.252

BIGHORN LAKE





WATER YEAR 2010