

RECLAMATION

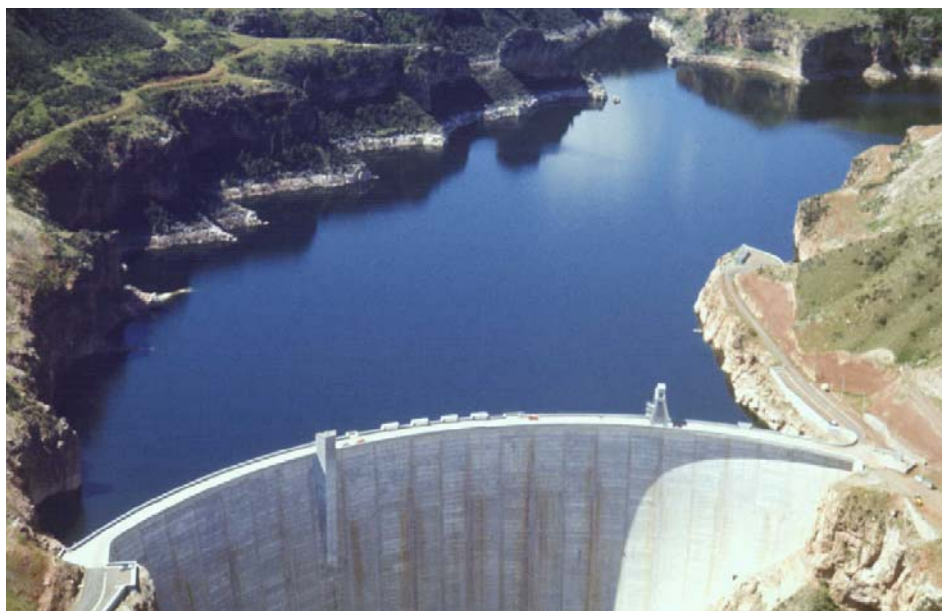
Managing Water in the West

November 6, 2006

Dear Customer:

Attached is the monthly water supply outlook and projected reservoir and river operating plans as prepared on November 6, 2006. Streamflows into Bighorn Lake continue to remain well below normal. Therefore, water users are advised to continue making plans to conserve the limited available water supply. We hope you find the information useful. 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
 November 1, 2006

Present Elevations & Storages:

<u>Reservoir</u>	<u>Storage</u>	<u>Elevation</u>	<u>Percent of Normal</u>
Boysen	469,090	4708.26	---
Buffalo Bill	433,451	5365.08	---
Bighorn Lake	799,574	3609.42	79

Actual Inflows (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
January	107.2	76
February	93.8	65
March	126.9	71
April	106.0	61
May	184.0	71
June	163.6	37
July	74.7	23
April-July, 2006	528.2	44
August	82.2	48
September	127.2	71
WY-2006 Total	1,432.9	57
October	125.6	70

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

<u>Month</u>	<u>Gains</u>	<u>Percent of Normal</u>
January	44.0	93
February	38.1	66
March	58.9	75
April	28.3	60
May	54.4	63
June	-12.6	---
July	-72.5	---
April-July, 2006	-2.5	---
August	-48.5	---
September	33.4	77
WY-2006 Total	280.6	39
October	73.5	97

November Inflow Forecast (1,000 Acre-Feet):

<u>Agency</u>	<u>Inflows</u>	<u>Percent of Normal</u>
USBR	83.5	51

Snowpack Conditions:

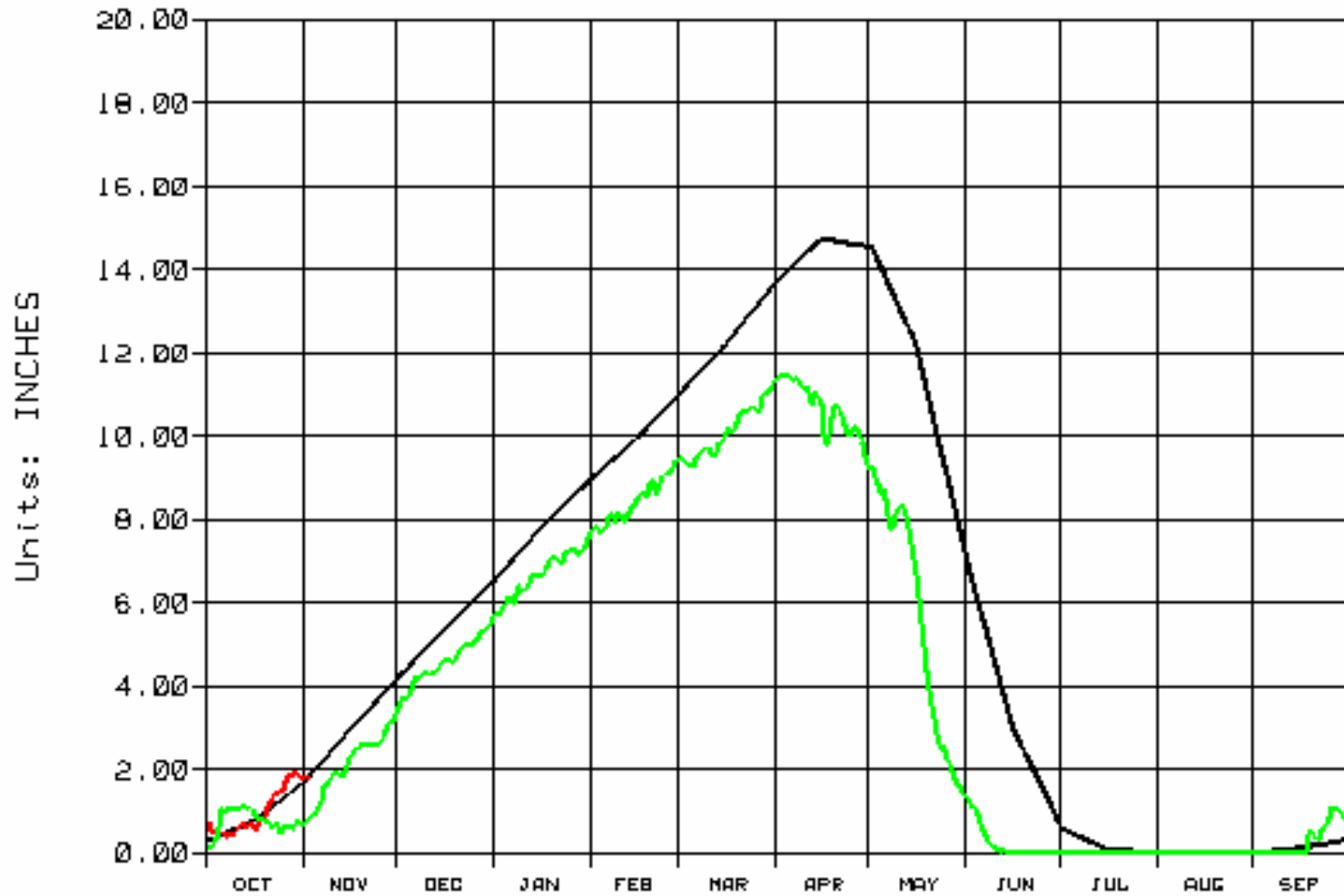
S N O W - P R E C I P I T A T I O N U P D A T E
 Based on Mountain Data from NRCS SNOTEL Sites
 As of WEDNESDAY: NOVEMBER 1 , 2006

BASIN Data Site Name	ELEV. (Ft)	SNOW WATER EQUIVALENT			TOTAL PRECIPITATION		
		Current	Average	Avg %	Current	Average	Avg %

UPPER YELLOWSTONE RIVER BASIN							
BEARTOOTH LAKE	9275	2.0	2.7	74	2.6	2.2	118
BOX CANYON	6700	1.1	.4	275*	4.5	1.7	265

BRACKETT CREEK	7320	2.5	1.2	208*	6.3	2.9	217
BURNT MTN	5880	.1	-M	*	4.5	-M	*
CANYON	8090	.9	.7	129*	2.9	1.9	153
COLE CREEK	7850	3.1	2.9	107	4.3	3.4	126
EVENING STAR	9200	2.4	2.8	86*	4.0	2.9	138
FISHER CREEK	9100	3.1	2.8	111*	5.1	3.4	150
MONUMENT PEAK	8850	2.7	2.2	123*	4.5	2.6	173
NORTHEAST ENTRANCE	7350	.0	.3	0*	3.4	1.6	212
PARKER PEAK	9400	1.9	2.6	73	3.1	2.4	129
PLACER BASIN	8830	3.6	2.5	144	5.8	3.1	187
PORCUPINE	6500	1.2	.2	600*	4.6	2.0	230
SACAJAWEA	6550	1.6	.4	400*	6.4	-M	*
SHOWER FALLS	8100	4.3	2.7	159	6.0	3.7	162
S FORK SHIELDS	8100	3.6	1.7	212*	5.8	2.9	200
SYLVAN LAKE	8420	1.3	2.0	65*	4.3	2.7	159
SYLVAN ROAD	7120	.1	.5	20*	3.0	2.2	136
THUMB DIVIDE	7980	.0	.9	0*	2.2	2.1	105
TWO OCEAN PLATEAU	9240	2.2	3.2	69	3.3	3.2	103
WHITE MILL	8700	2.4	2.1	114*	3.9	2.8	139
WOLVERINE	7650	.0	.5	0*	1.9	1.9	100
YOUNTS PEAK	8350	1.1	1.4	79*	3.2	1.9	168
Basin wide percent of average				112*			158
WIND RIVER BASIN (WYOMING)							
BURROUGHS CREEK	8750	2.0	1.0	200*	2.7	1.7	159
COLD SPRINGS	9630	.6	1.1	55	1.6	2.0	80
DEER PARK	9700	1.6	2.7	59	2.9	2.6	112
HOBBS PARK	10100	1.7	2.3	74	2.2	2.2	100
KIRWIN	9550	1.7	1.9	89	2.4	1.9	126
LITTLE WARM	9370	1.5	1.1	136*	1.8	1.8	100
OWL CREEK	8975	1.7	.9	189	2.2	1.2	183
SOUTH PASS	9040	1.5	1.6	94*	3.1	2.2	141
ST. LAWRENCE ALT	8620	1.1	.9	122	1.9	1.8	106
TOGWOTEE PASS	9580	2.7	2.7	100*	3.4	2.9	117
TOWNSEND CREEK	8700	1.9	1.1	173	3.3	2.2	150
YOUNTS PEAK	8350	1.1	1.4	79*	3.2	1.9	168
Basin wide percent of average				102			126
SHOSHONE RIVER BASIN (WYOMING)							
BLACKWATER	9780	2.3	3.2	72	2.7	2.8	96
EVENING STAR	9200	2.4	2.8	86*	4.0	2.9	138
MARQUETTE	8760	1.0	2.0	50	2.1	2.4	88
SYLVAN LAKE	8420	1.3	2.0	65*	4.3	2.7	159
SYLVAN ROAD	7120	.1	.5	20*	3.0	2.2	136
YOUNTS PEAK	8350	1.1	1.4	79*	3.2	1.9	168
Basin wide percent of average				69*			130
BIGHORN RIVER BASIN (WYOMING)							
BALD MTN.	9380	5.1	2.8	182	3.9	2.5	156
BEAR TRAP MEADOW	8200	.7	.6	117	1.5	1.8	83
BLACKWATER	9780	2.3	3.2	72	2.7	2.8	96
BONE SPRINGS DIV	9350	4.3	2.7	159	3.3	2.6	127
EVENING STAR	9200	2.4	2.8	86*	4.0	2.9	138
GRAVE SPRINGS	8550	1.0	1.2	83	1.6	2.2	73
KIRWIN	9550	1.7	1.9	89	2.4	1.9	126
MARQUETTE	8760	1.0	2.0	50	2.1	2.4	88
MIDDLE POWDER	7760	1.3	1.3	100*	1.8	2.7	67
OWL CREEK	8975	1.7	.9	189	2.2	1.2	183
POWDER RIVER PASS	9480	1.6	1.3	123	2.1	2.0	105
SHELL CREEK	9580	4.5	2.7	167	2.7	2.1	129
SYLVAN LAKE	8420	1.3	2.0	65*	4.3	2.7	159
SYLVAN ROAD	7120	.1	.5	20*	3.0	2.2	136
TIMBER CREEK	7950	1.0	1.1	91	2.4	1.7	141
YOUNTS PEAK	8350	1.1	1.4	79*	3.2	1.9	168
Basin wide percent of average				110			121

Data From 1-OCT Through 30-SEP
Plotted 11/02/2006 09:10



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

—SEavg Snow Water Equivalent Average (Inches)
—SE Snow Water Equivalent (Inches)

2007

2006 2006

BIGHORN LAKE MONTHLY OPERATIONS

Bighorn Reservoir		Initial Cont Elev 3609.42 ft				Maximum Cont Elev 3657.00 ft				Minimum Cont Elev 3547.00 ft				Total
	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Boysen Release	kaf	29.8	30.8	30.8	27.8	30.8	50.6	67.6	120.3	124.4	94.6	68.4	70.7	746.6
Boysen Release	cfs	501	501	501	501	501	850	1099	2022	2023	1539	1150	1150	
Buffalo Bill Riv Flo	kaf	11.9	12.3	12.3	11.1	12.3	47.7	84.9	99.3	102.7	78.0	75.5	24.9	572.9
Buffalo Bill Riv Flo	cfs	200	200	200	200	200	802	1381	1669	1670	1269	1269	405	
Station Gain	kaf	41.8	27.8	27.6	28.4	68.9	37.3	53.2	84.1	-20.0	-8.4	32.8	66.5	440.0
Monthly Inflow	kaf	83.5	70.9	70.7	67.3	112.0	135.6	205.7	303.7	207.1	164.2	176.7	162.1	1759.5
Monthly Inflow	cfs	1403	1153	1150	1212	1822	2279	3345	5104	3368	2670	2970	2636	
Turbine Release	kaf	85.1	87.9	87.9	79.4	87.9	85.6	99.9	166.4	206.0	187.3	174.1	160.5	1508.0
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	85.1	87.9	87.9	79.4	87.9	85.6	99.9	166.4	206.0	187.3	174.1	160.5	1508.0
Total Release	cfs	1430	1430	1430	1430	1430	1439	1625	2796	3350	3046	2926	2610	
Spring Flow	kaf	4.2	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	4.3	4.2	4.3	50.8
Irrigation Reqmnt	kaf	0.0	0.0	0.0	0.0	0.0	0.5	11.2	21.8	27.7	26.8	18.8	0.0	106.8
Afterbay Rels	kaf	89.3	92.2	92.2	83.3	92.2	89.8	104.2	170.6	210.3	191.6	178.3	164.8	1558.8
Afterbay Rels	cfs	1501	1499	1499	1500	1499	1509	1695	2867	3420	3116	2996	2680	
River Release	kaf	89.3	92.2	92.2	83.3	92.2	89.3	93.0	148.8	182.6	164.8	159.5	164.8	1452.0
River Release	cfs	1501	1499	1499	1500	1499	1501	1513	2501	2970	2680	2680	2680	
Min Release	kaf	89.3	92.2	92.2	83.3	92.2	89.3	92.2	148.8	153.7	153.7	148.8	153.7	1389.4
End-Month Targets	kaf	1011.0								1070.0				
End-Month Content	kaf	798.0	781.0	763.8	751.7	775.8	825.8	931.6	1068.9	1070.0	1046.9	1049.5	1051.1	
End-Month Elevation	ft	3609.17	3606.38	3603.42	3601.28	3605.50	3613.43	3626.99	3639.91	3640.00	3638.12	3638.33	3638.46	
Net Change Content	kaf	-1.6	-17.0	-17.2	-12.1	24.1	50.0	105.8	137.3	1.1	-23.1	2.6	1.6	251.5
Yellowtail Power	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Turbine Release	kaf	85.1	87.9	87.9	79.4	87.9	85.6	99.9	166.4	206.0	187.3	174.1	160.5	1508.0
Generation	gwh	31.846	32.773	32.550	29.227	32.435	32.058	38.515	66.806	84.452	76.538	70.928	65.428	593.556
End-Month Power Cap	mw	258.3	255.8	253.1	251.2	255.0	262.1	274.8	287.4	287.5	285.6	285.8	286.0	
% Max Gen		15	15	15	15	15	15	18	32	39	36	34	31	
Ave kwh/af		374	373	370	368	369	375	386	401	410	409	407	408	394
Upstream Generation	gwh	5.334	5.532	5.535	4.481	5.569	18.096	28.249	32.696	34.570	31.958	28.734	14.453	215.207
Total Generation	gwh	37.180	38.305	38.085	33.708	38.004	50.154	66.764	99.502	119.022	108.496	99.662	79.881	808.763

BHXAOP V1.12 Run: 06-Nov-2006 11:38
 Based on Minimum Probable Inflow Forecast

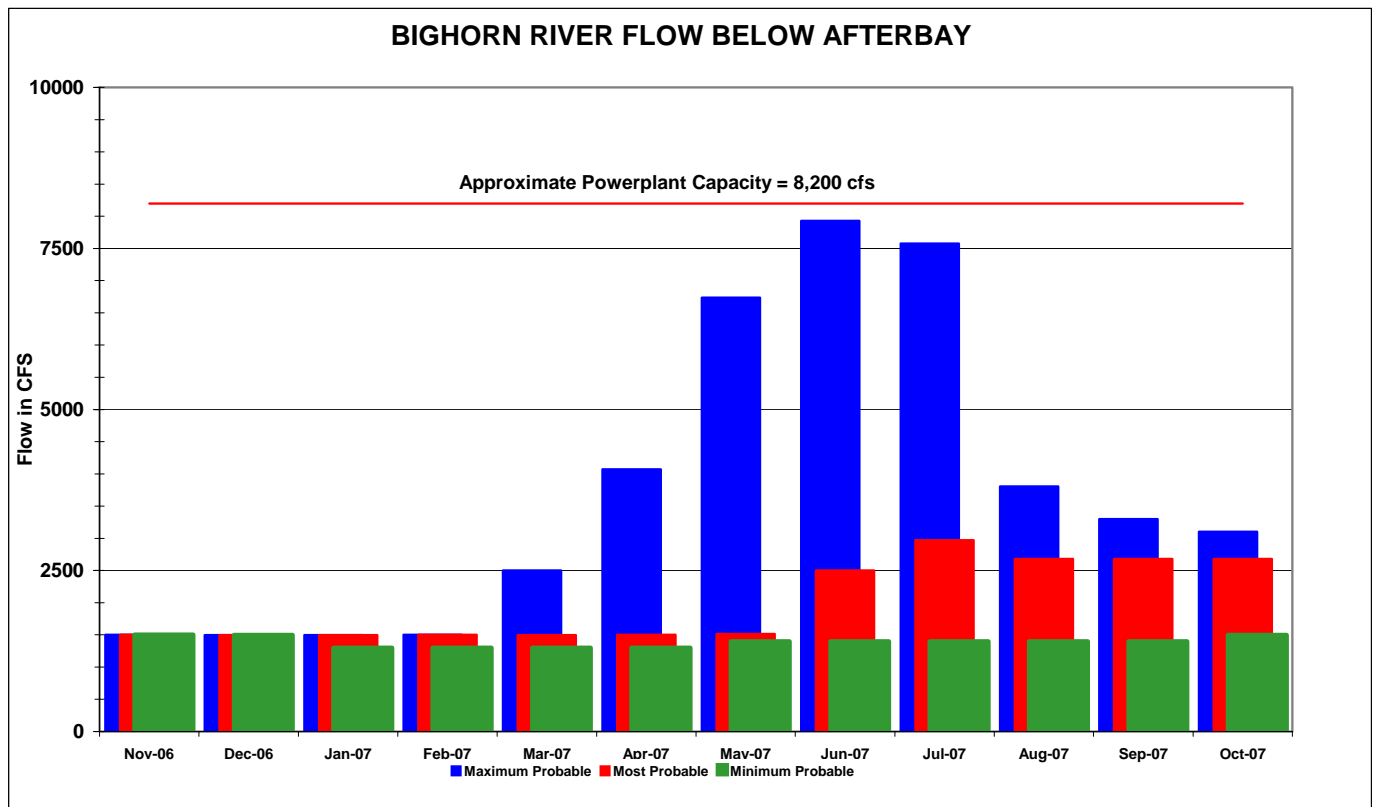
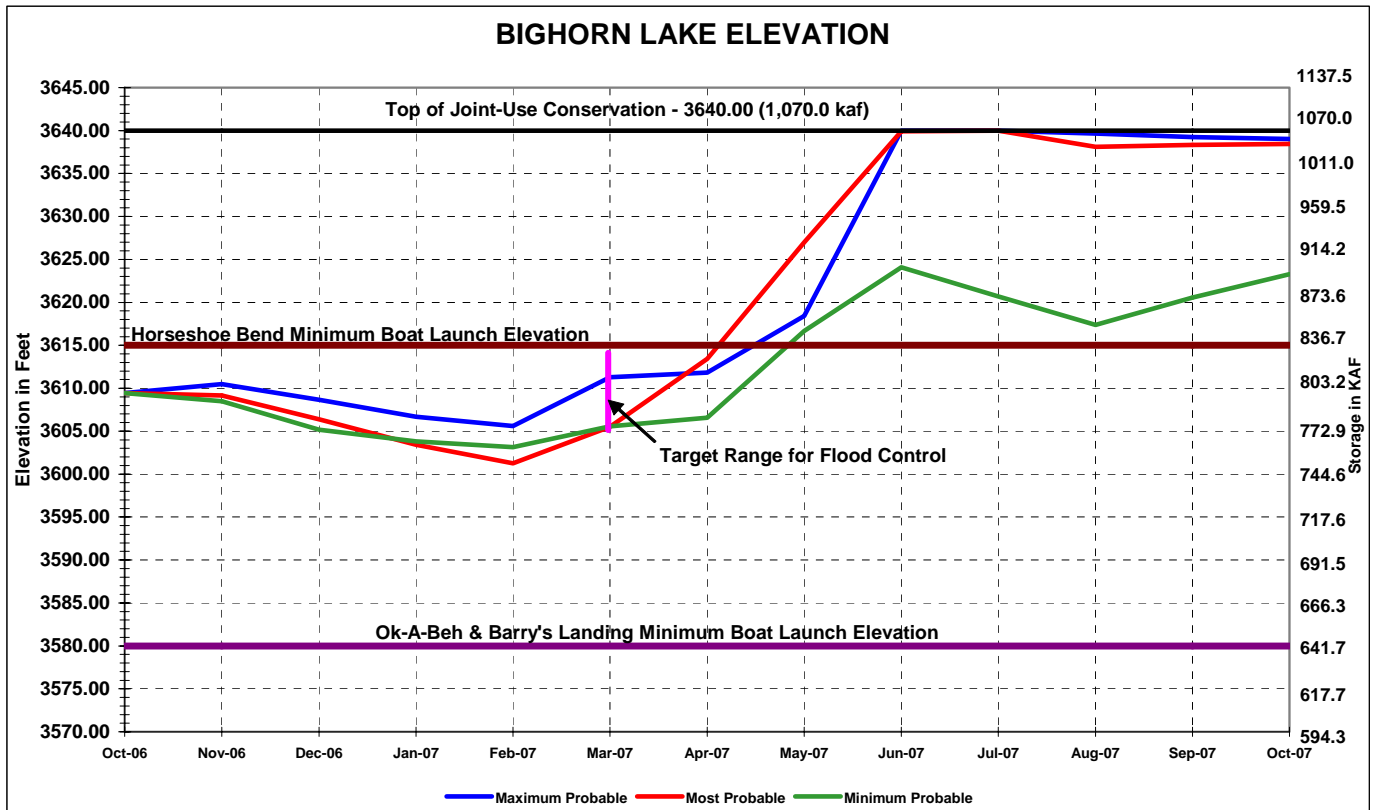
BIGHORN LAKE MONTHLY OPERATIONS

Bighorn Reservoir		Initial Cont Elev 3609.42 ft				Maximum Cont Elev 3657.00 ft				Minimum Cont Elev 3547.00 ft				Total
	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Boysen Release	kaf	29.8	30.7	30.7	27.8	30.7	38.7	60.0	68.4	68.9	60.3	44.6	30.7	521.3
Boysen Release	cfs	501	499	499	501	499	650	976	1150	1121	981	750	499	
Buffalo Bill Riv Flo	kaf	11.9	12.3	12.3	11.1	12.3	24.4	64.9	62.7	70.4	63.0	50.0	18.4	413.7
Buffalo Bill Riv Flo	cfs	200	200	200	200	200	410	1055	1054	1145	1025	840	299	
Station Gain	kaf	37.6	25.0	24.8	25.6	46.5	16.7	34.5	27.5	-57.1	-39.9	27.3	60.8	229.3
Monthly Inflow	kaf	79.3	68.0	67.8	64.5	89.5	79.8	159.4	158.6	82.2	83.4	121.9	109.9	1164.3
Monthly Inflow	cfs	1333	1106	1103	1161	1456	1341	2592	2665	1337	1356	2049	1787	
Turbine Release	kaf	85.1	87.9	75.6	68.3	75.6	73.7	93.0	100.9	109.5	108.6	97.9	87.9	1064.0
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	85.1	87.9	75.6	68.3	75.6	73.7	93.0	100.9	109.5	108.6	97.9	87.9	1064.0
Total Release	cfs	1430	1430	1230	1230	1230	1239	1513	1696	1781	1766	1645	1430	
Spring Flow	kaf	4.2	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	4.3	4.2	4.3	50.8
Irrigation Reqmnt	kaf	0.0	0.0	0.0	0.0	0.0	0.5	11.2	21.8	27.7	26.8	18.8	0.0	106.8
Afterbay Rels	kaf	89.3	92.2	79.9	72.2	79.9	77.9	97.3	105.1	113.8	112.9	102.1	92.2	1114.8
Afterbay Rels	cfs	1501	1499	1299	1300	1299	1309	1582	1766	1851	1836	1716	1499	
River Release	kaf	89.3	92.2	79.9	72.2	79.9	77.4	86.1	83.3	86.1	86.1	83.3	92.2	1008.0
River Release	cfs	1501	1499	1299	1300	1299	1301	1400	1400	1400	1400	1400	1499	
Min Release	kaf	89.3	92.2	79.9	72.2	79.9	77.4	86.1	83.3	86.1	86.1	83.3	92.2	1008.0
End-Month Targets	kaf									1070.0				
End-Month Content	kaf	793.8	773.9	766.1	762.3	776.2	782.3	848.7	906.4	879.1	853.9	877.9	899.9	
End-Month Elevation	ft	3608.49	3605.17	3603.82	3603.16	3605.56	3606.59	3616.67	3624.08	3620.71	3617.38	3620.55	3623.30	
Net Change Content	kaf	-5.8	-19.9	-7.8	-3.8	13.9	6.1	66.4	57.7	-27.3	-25.2	24.0	22.0	100.3
Yellowtail Power	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Turbine Release	kaf	85.1	87.9	75.6	68.3	75.6	73.7	93.0	100.9	109.5	108.6	97.9	87.9	1064.0
Generation	gwh	31.819	32.700	27.968	25.207	27.959	27.367	35.028	38.885	42.426	41.687	37.571	34.011	402.628
End-Month Power Cap	mw	257.7	254.7	253.5	252.9	255.0	256.0	265.1	272.0	268.9	265.8	268.7	271.3	
% Max Gen		15	15	13	13	13	13	16	19	20	19	18	16	
Ave kwh/af		374	372	370	369	370	371	377	385	387	384	384	387	378
Upstream Generation	gwh	5.324	5.497	5.489	4.458	5.508	10.812	24.383	24.886	26.762	24.074	19.271	8.150	164.614
Total Generation	gwh	37.143	38.197	33.457	29.665	33.467	38.179	59.411	63.771	69.188	65.761	56.842	42.161	567.242

BIGHORN LAKE MONTHLY OPERATIONS

Bighorn Reservoir		Initial Cont Elev 3609.42 ft				Maximum Cont Elev 3657.00 ft				Minimum Cont Elev 3547.00 ft				Total
	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Boysen Release	kaf	29.7	30.7	30.6	27.7	86.5	113.3	186.4	228.4	236.1	130.8	68.4	70.7	1239.3
Boysen Release	cfs	499	499	498	499	1407	1904	3032	3838	3840	2127	1150	1150	
Buffalo Bill Riv Flo	kaf	11.9	12.3	12.3	11.1	12.3	68.8	161.1	228.8	207.7	104.9	77.8	24.9	933.9
Buffalo Bill Riv Flo	cfs	200	200	200	200	200	1156	2620	3845	3378	1706	1307	405	
Station Gain	kaf	50.2	33.4	33.1	34.1	85.7	59.7	120.2	240.6	45.4	16.7	59.6	87.6	866.3
Monthly Inflow	kaf	91.8	76.4	76.0	72.9	184.5	241.8	467.7	697.8	489.2	252.4	205.8	183.2	3039.5
Monthly Inflow	cfs	1543	1243	1236	1313	3001	4064	7606	11727	7956	4105	3459	2979	
Turbine Release	kaf	85.1	87.9	87.9	79.4	149.4	238.4	421.1	489.3	489.2	256.5	211.0	186.3	2781.5
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	85.1	87.9	87.9	79.4	149.4	238.4	421.1	489.3	489.2	256.5	211.0	186.3	2781.5
Total Release	cfs	1430	1430	1430	1430	2430	4006	6849	8223	7956	4172	3546	3030	
Spring Flow	kaf	4.2	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	4.3	4.2	4.3	50.8
Irrigation Reqmnt	kaf	0.0	0.0	0.0	0.0	0.0	0.5	11.2	21.8	27.7	26.8	18.8	0.0	106.8
Afterbay Rels	kaf	89.3	92.2	92.2	83.3	153.7	242.6	425.4	493.5	493.5	260.8	215.2	190.6	2832.3
Afterbay Rels	cfs	1501	1499	1499	1500	2500	4077	6918	8294	8026	4242	3617	3100	
River Release	kaf	89.3	92.2	92.2	83.3	153.7	242.1	414.2	471.7	465.8	234.0	196.4	190.6	2725.5
River Release	cfs	1501	1499	1499	1500	2500	4069	6736	7927	7576	3806	3301	3100	
Min Release	kaf	89.3	92.2	92.2	83.3	153.7	148.8	153.7	148.8	153.7	221.4	196.4	190.6	1724.1
End-Month Targets	kaf					836.7			1070.0	1070.0				
End-Month Content	kaf	806.3	794.8	782.9	776.4	811.5	814.9	861.5	1070.0	1070.0	1065.9	1060.7	1057.6	
End-Month Elevation	ft	3610.48	3608.65	3606.69	3605.60	3611.29	3611.81	3618.41	3640.00	3640.00	3639.67	3639.25	3639.00	
Net Change Content	kaf	6.7	-11.5	-11.9	-6.5	35.1	3.4	46.6	208.5	0.0	-4.1	-5.2	-3.1	258.0
Yellowtail Power	2006	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Turbine Release	kaf	85.1	87.9	87.9	79.4	149.4	238.4	421.1	489.3	489.2	256.5	211.0	186.3	2781.5
Generation	gwh	31.897	32.916	32.765	29.488	55.801	89.713	159.972	194.298	200.585	105.109	86.346	76.145	1095.035
End-Month Power Cap	mw	259.4	257.8	256.0	255.1	260.2	260.7	266.7	287.5	287.5	287.2	286.8	286.5	
% Max Gen		15	15	15	15	26	43	75	94	94	49	42	36	
Ave kwh/af		375	374	373	371	374	376	380	397	410	410	409	409	394
Upstream Generation	gwh	5.328	5.530	5.532	4.492	9.814	27.039	31.823	33.049	35.303	35.084	28.683	14.458	236.135
Total Generation	gwh	37.225	38.446	38.297	33.980	65.615	116.752	191.795	227.347	235.888	140.193	115.029	90.603	1331.170

BIGHORN LAKE



WATER YEAR 2007