

RECLAMATION

Managing Water in the West

June 1, 2008

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans prepared in June 2008. Storage in Bighorn Lake on June 1 was at 106 percent of average and 18.0 feet higher than on May 1, thanks to abundant precipitation throughout the basin late in the month. Based on the remaining snowpack and projected releases out of Boysen and Buffalo Bill Reservoirs during June and July, the June-July inflow to Bighorn Lake is now forecast at 990,900 acre-feet or 141 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
 June 1, 2008

Present Elevations & Storages:

<u>Reservoir</u>	<u>Elevation</u>	<u>Storage</u>	<u>Percent of Normal</u>
Boysen	4711.45	513,065	---
Buffalo Bill	5371.31	477,316	---
Bighorn Lake	3628.85	930,319	106

Actual Inflows (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
April-July, 2007	614.1	51
WY-2007 Total	1,364.2	54
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

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

<u>Month</u>	<u>Gains</u>	<u>Percent of Normal</u>
April-July, 2007	188.2	60
WY-2007 Total	462.0	64
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 Forecast of June-July Runoff (1,000 Acre-Feet):

<u>Agency</u>	<u>Gains</u>	<u>Percent of Normal</u>
USBR	218.2	139
	<u>Inflows</u>	
USBR	990.9	141

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 SUNDAY: JUNE 1 , 2008

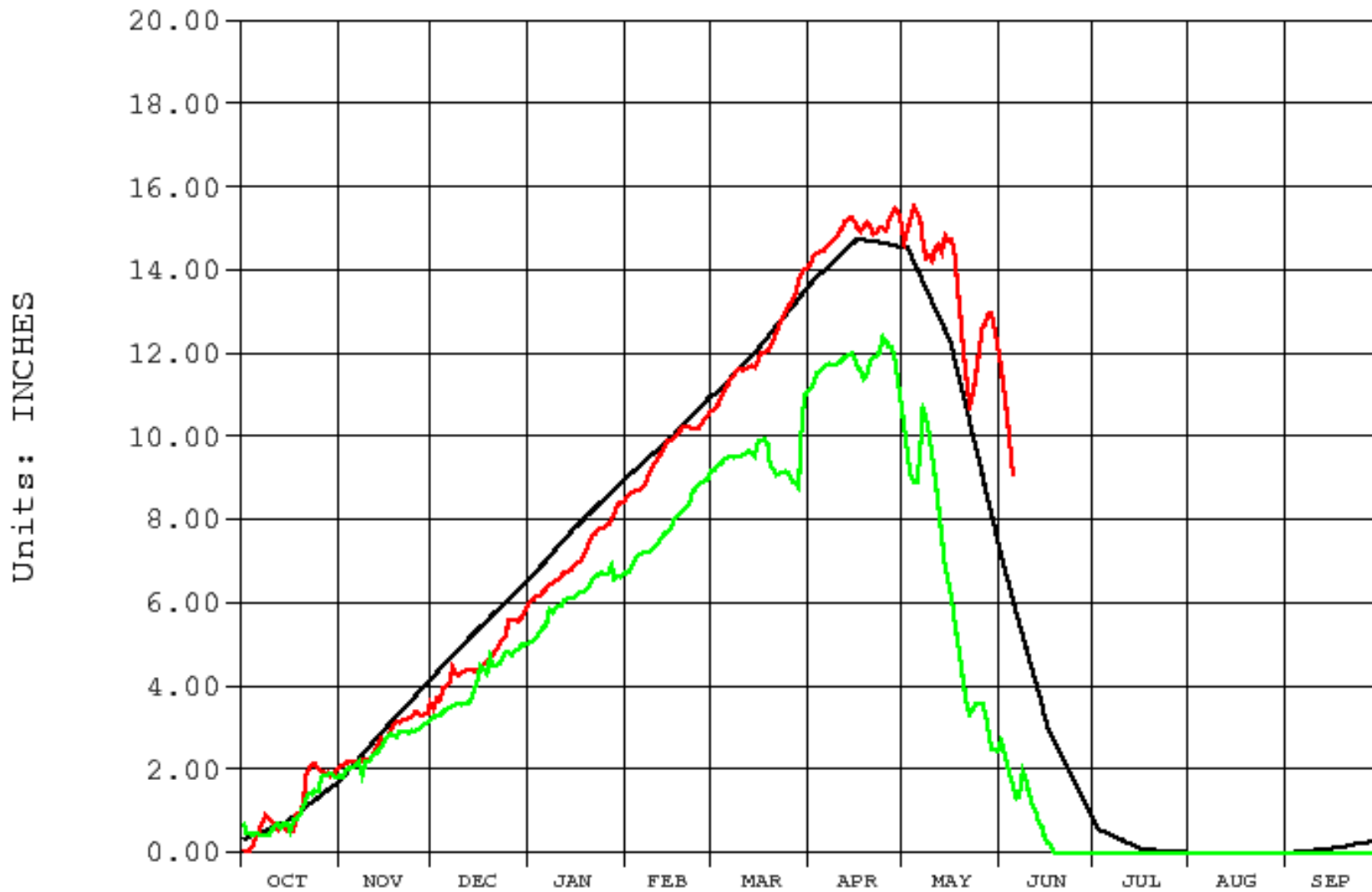
<u>BASIN</u> Data Site Name	<u>ELEV.</u> (Ft)	<u>SNOW WATER EQUIVALENT</u>			<u>TOTAL PRECIPITATION</u>		
		<u>Current</u>	<u>Average</u>	<u>% Avg</u>	<u>Current</u>	<u>Average</u>	<u>% Avg</u>

UPPER YELLOWSTONE RIVER BASIN							
BEARTOOTH LAKE	9360	27.7	20.1	138	31.7	27.0	117
BOX CANYON	6670	.6	.0		20.2	18.2	111
BRACKETT CREEK	7320	10.2	5.1	200	36.5	36.8	99
BURNT MTN CANYON	5880	.0	.0	100	20.0	25.3	79
CANYON	7870	5.2	1.3	400	25.8	20.5	126
COLE CREEK	7850	14.8	11.0	135	21.3	27.4	78
EVENING STAR	9200	29.2	26.7	109	44.7	34.4	130
FISHER CREEK	9100	-M	30.1	*	48.7	46.7	104

MONUMENT PEAK	8850	21.0	15.9	132	30.8	29.0	106
NORTHEAST ENTRANCE	7350	.1	.4	25	19.6	17.6	111
PARKER PEAK	9400	29.4	18.5	159	34.7	23.2	150
PLACER BASIN	8830	20.8	14.6	142	30.1	29.0	104
PORCUPINE	6500	.1	.0		18.8	18.8	100
SACAJAWEA	6550	.0	.0	100	35.4	33.1	107
SHOWER FALLS	8100	34.5	20.5	168	43.1	36.8	117
S FORK SHIELDS	8100	17.3	12.3	141	32.0	31.2	103
SYLVAN LAKE	8420	19.3	11.4	169	35.8	29.0	123
SYLVAN ROAD	7120	.0	.0	100	27.7	23.3	119
THUMB DIVIDE	7980	1.5	1.9	79	26.5	24.8	107
TWO OCEAN PLATEAU	9240	42.6	25.2	169	41.1	36.3	113
WHITE MILL	8700	26.6	18.0	148	35.2	35.2	100
WOLVERINE	7650	.0	.0	100	20.5	18.3	112
YOUNTS PEAK	8350	10.9	7.0	156	23.9	22.1	108
Basin wide percent of average				148			109
WIND RIVER BASIN (WYOMING)							
BURROUGHS CREEK	8750	10.1	3.4	297	24.8	22.6	110
COLD SPRINGS	9630	.0	1.1	0	17.0	17.1	99
DEER PARK	9700	13.9	8.0	174	28.5	30.9	92
HOBBS PARK	10100	15.2	10.1	150	23.4	21.0	111
KIRWIN	9550	9.2	5.5	167	21.8	17.5	125
LITTLE WARM	9370	.0	1.9	0	20.0	20.0	100
OWL CREEK	8975	1.1	.5	220	12.9	11.1	116
SOUTH PASS	9040	6.9	6.3	110	25.2	26.0	97
ST. LAWRENCE ALT	8620	.2	.7	29	15.3	15.2	101
TOGWOTEE PASS	9580	28.5	21.9	130	38.0	32.7	116
TOWNSEND CREEK	8700	.0	1.7	0	20.1	18.8	107
YOUNTS PEAK	8350	10.9	7.0	156	23.9	22.1	108
Basin wide percent of average				141			106
SHOSHONE RIVER BASIN (WYOMING)							
BLACKWATER	9780	31.2	24.7	126	33.9	28.9	117
EVENING STAR	9200	29.2	26.7	109	44.7	34.4	130
MARQUETTE	8760	7.0	4.2	167	20.0	18.0	111
SYLVAN LAKE	8420	19.3	11.4	169	35.8	29.0	123
SYLVAN ROAD	7120	.0	.0	100	27.7	23.3	119
YOUNTS PEAK	8350	10.9	7.0	156	23.9	22.1	108
Basin wide percent of average				132			119
BIGHORN RIVER BASIN (WYOMING)							
BALD MTN.	9380	19.0	16.7	114	24.8	25.3	98
BEAR TRAP MEADOW	8200	.0	.0	100	18.4	14.2	130
BLACKWATER	9780	31.2	24.7	126	33.9	28.9	117
BONE SPRINGS DIV	9350	14.5	8.2	177	27.2	22.3	122
EVENING STAR	9200	29.2	26.7	109	44.7	34.4	130
GRAVE SPRINGS	8550	6.5	1.8	361	18.4	16.1	114
KIRWIN	9550	9.2	5.5	167	21.8	17.5	125
MARQUETTE	8760	7.0	4.2	167	20.0	18.0	111
MIDDLE POWDER	7760	3.0	2.6	115	17.5	19.1	92
OWL CREEK	8975	1.1	.5	220	12.9	11.1	116
POWDER RIVER PASS	9480	8.0	2.3	348	24.3	19.6	124
SHELL CREEK	9580	18.2	10.4	175	25.1	20.5	122
SYLVAN LAKE	8420	19.3	11.4	169	35.8	29.0	123
SYLVAN ROAD	7120	.0	.0	100	27.7	23.3	119
TIMBER CREEK	7950	2.4	.5	480	18.0	14.4	125
YOUNTS PEAK	8350	10.9	7.0	156	23.9	22.1	108
Basin wide percent of average				147			117

Archive Data From 1-OCT Through 30-SEP

Plotted 06/04/2008 18:11



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

SE_AVG Snow Water Equivalent Average (inches)

2008

SE Snow Water Equivalent (inches)

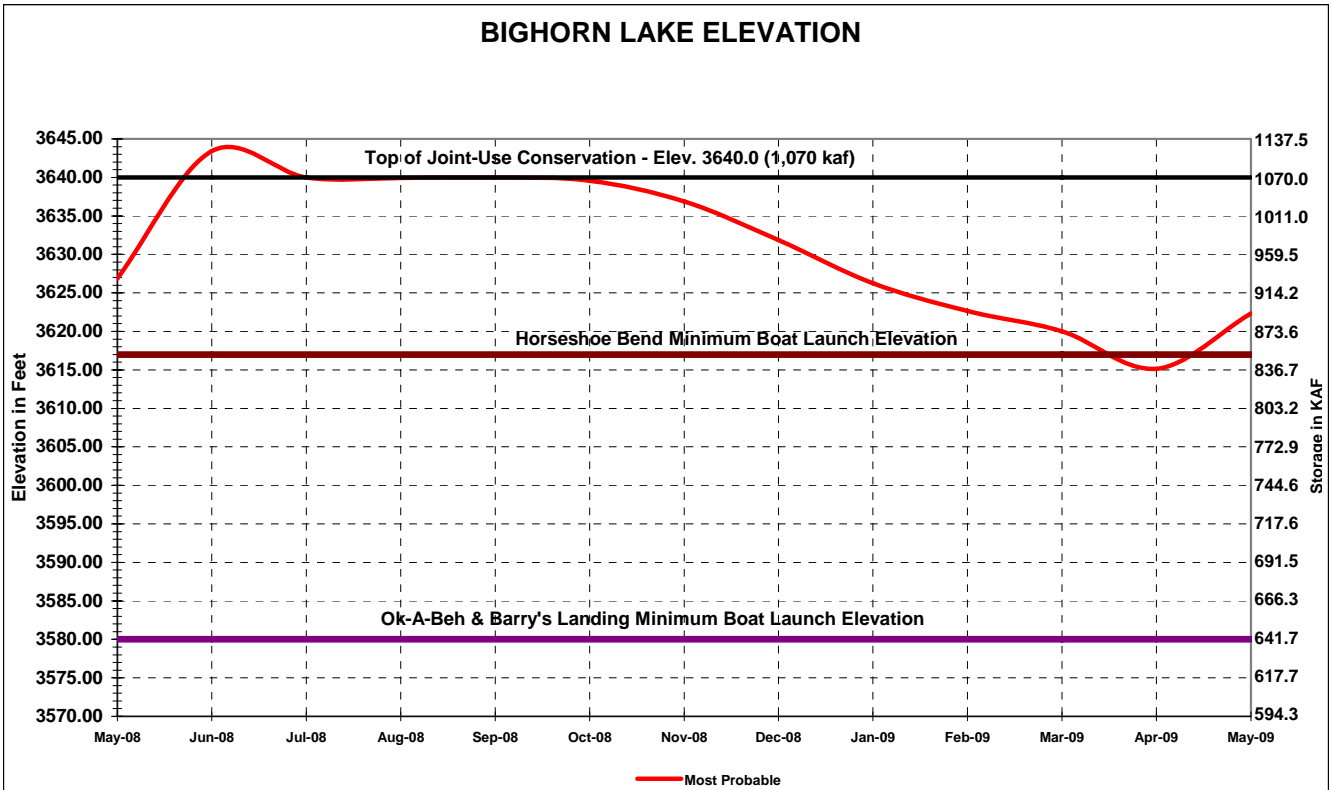
2008 2007

BIGHORN LAKE MONTHLY OPERATIONS

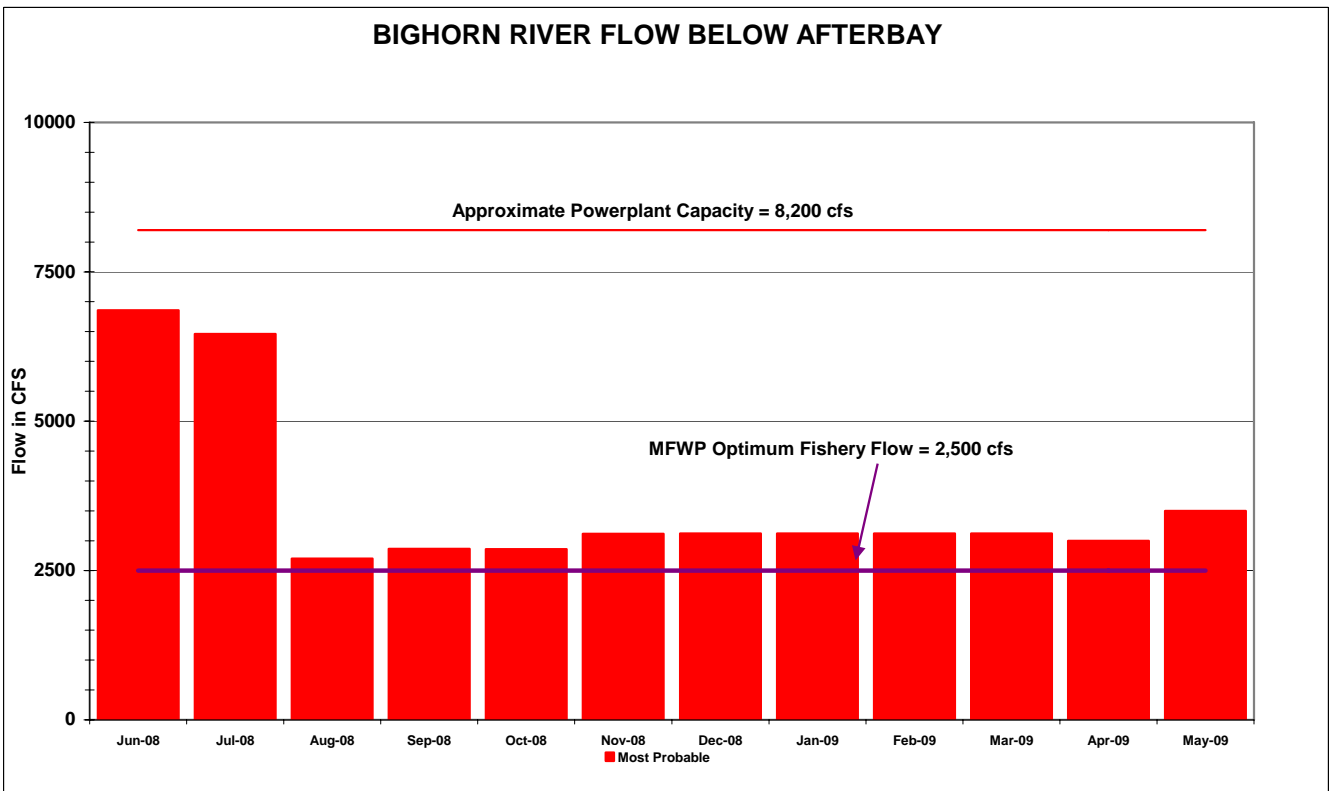
Bighorn Reservoir		Initial Cont Elev 3626.85 ft				Maximum Cont Elev 3657.00 ft				Minimum Cont Elev 3547.00 ft				Total
	2008	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
Boysen Release	kaf	166.5	166.8	79.9	59.5	61.5	59.5	61.5	61.4	55.5	61.5	59.5	112.0	1005.1
Boysen Release	cfs	2798	2713	1299	1000	1000	1000	1000	999	999	1000	1000	1822	
Buffalo Bill Riv Flo	kaf	256.1	183.3	94.3	72.8	24.9	20.8	21.5	21.5	19.4	21.5	24.4	73.2	833.7
Buffalo Bill Riv Flo	cfs	4304	2981	1534	1223	405	350	350	350	349	350	410	1190	
Station Gain	kaf	192.4	25.8	13.2	53.8	83.7	68.5	50.4	51.2	64.3	83.3	55.0	104.7	846.3
Monthly Inflow	kaf	615.0	375.9	187.4	186.1	170.1	148.8	133.4	134.1	139.2	166.3	138.9	289.9	2685.1
Monthly Inflow	cfs	10335	6113	3048	3128	2766	2501	2170	2181	2506	2705	2334	4715	
Turbine Release	kaf	430.5	420.7	188.5	184.9	175.6	181.3	187.4	187.4	169.3	187.4	174.9	235.5	2723.4
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	430.5	420.7	188.5	184.9	175.6	181.3	187.4	187.4	169.3	187.4	174.9	235.5	2723.4
Total Release	cfs	7235	6842	3066	3107	2856	3047	3048	3048	3048	3048	2939	3830	
Spring Flow	kaf	4.2	4.3	4.3	4.2	4.3	4.2	4.3	4.3	3.9	4.3	4.2	4.3	50.8
Irrigation Reqmnt	kaf	26.8	27.7	26.8	18.8	4.1	0.0	0.0	0.0	0.0	0.0	0.6	24.6	129.4
Afterbay Rels	kaf	434.7	425.0	192.8	189.1	179.9	185.5	191.7	191.7	173.2	191.7	179.1	239.8	2774.2
Afterbay Rels	cfs	7305	6912	3136	3178	2926	3117	3118	3118	3119	3118	3010	3900	
River Release	kaf	407.9	397.3	166.0	170.3	175.8	185.5	191.7	191.7	173.2	191.7	178.5	215.2	2644.8
River Release	cfs	6855	6461	2700	2862	2859	3117	3118	3118	3119	3118	3000	3500	
Min Release	kaf	148.8	153.7	153.7	148.8	153.7	148.8	153.7	153.7	138.8	153.7	178.5	215.2	1901.1
End-Month Targets	kaf		1070.0								873.6			
End-Month Content	kaf	1114.8	1070.0	1068.9	1070.1	1064.6	1032.1	978.1	924.8	894.7	873.6	837.6	892.0	
End-Month Elevation	ft	3643.39	3640.00	3639.91	3640.01	3639.56	3636.86	3631.88	3626.23	3622.66	3620.00	3615.13	3622.33	
Net Change Content	kaf	184.5	-44.8	-1.1	1.2	-5.5	-32.5	-54.0	-53.3	-30.1	-21.1	-36.0	54.4	-38.3
Yellowtail Power	2008	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Turbine Release	kaf	430.5	420.7	188.5	184.9	175.6	181.3	187.4	187.4	169.3	187.4	174.9	235.5	2723.4
Generation	gwh	174.031	173.619	77.278	75.803	71.945	73.864	75.350	74.069	65.984	72.389	66.871	90.342	1091.545
End-Month Power Cap	mw	288.0	287.5	287.4	287.5	287.1	284.4	279.4	274.0	270.7	268.2	263.7	270.4	
% Max Gen		84	81	36	37	34	36	35	35	34	34	32	42	
Ave kwh/af		404	413	410	410	410	407	402	395	390	386	382	384	401
Upstream Generation	gwh	34.187	35.274	30.596	27.256	13.344	10.929	11.252	11.164	10.013	11.043	12.579	30.974	238.611
Total Generation	gwh	208.218	208.893	107.874	103.059	85.289	84.793	86.602	85.233	75.997	83.432	79.450	121.316	1330.156

BIGHORN LAKE

BIGHORN LAKE ELEVATION



BIGHORN RIVER FLOW BELOW AFTERBAY



WATER YEAR 2008