

RECLAMATION

Managing Water in the West

March 7, 2008

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans as prepared on March 7, 2008. The snowpack conditions in the Sun River basin have improved during the last few weeks. Reclamation will continue to closely monitor these conditions. We hope you find the information useful. If you have any questions or concerns, please call me at (406) 247-7318.

Jeremy Giovando
Reservoir and River Operations



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

SUN RIVER PROJECT OPERATIONS
 Water Supply Forecasts and Reservoir Operations
 March 1, 2008

Elevations & Storages:

<u>Reservoir</u>	<u>Storage</u>	<u>Percent of Normal</u>	<u>Percent of Full</u>
Gibson	23,300	52	24
Willow Creek	24,200	117	76
Pishkun	16,000	47	36

Actual Inflows to Gibson Reservoir (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
September	10.0	52
October	9.8	52
November	9.0	53
December	8.9	57
January	7.9	57
February	6.0	49

March 1 Forecast of April-July Inflow (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
Reclamation	435	91
NRCS	490	103
Average	463	97

Mountain Snowpack Conditions:

Based on Mountain Data from NRCS SNOTEL Sites
 As of MONDAY: MARCH 3 , 2008

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

SUN, TETON AND MARIAS RIVER BASINS							
BADGER PASS	6900	32.8	30.1	109	-M	30.4	*
DUPUYER CREEK	5750	7.6	9.2	83	12.2	13.3	92
MOUNT LOCKHART	6400	20.8	17.9	116	26.5	21.5	123
PIKE CREEK	5930	24.7	23.2	106	28.4	27.1	105
WALDRON	5600	10.6	9.9	107	16.3	14.4	113
WOOD CREEK	5960	8.6	7.9	109	14.0	13.1	107
				107			
Basin wide percent of average				107			
					109		

UPPER SUN RIVER MONTHLY OPERATIONS

Gibson Reservoir		Initial Cont Elev 23.3 kaf 4647.80 ft				Maximum Cont Elev 96.5 kaf 4724.02 ft				Minimum Cont Elev 5.0 kaf 4608.95 ft				Total	
	2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		
Monthly Inflow	kaf	13.9	39.9	171.6	188.0	63.5	23.3	17.9	17.7	17.4	15.7	13.2	11.7	593.8	
Spillway Rels	cfs	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Release	kaf	6.6	38.7	119.4	175.5	98.4	66.7	22.0	13.0	11.6	8.8	7.5	7.0	575.2	
Total Release	cfs	107	650	1942	2949	1600	1085	370	211	195	143	122	126		
End-Month Content	kaf	30.6	31.8	84.0	96.5	61.6	18.2	14.1	18.8	24.6	31.5	37.2	41.9		
End-Month Elevation	ft	4659.21	4660.95	4714.21	4724.02	4694.80	4638.88	4631.06	4639.97	4649.96	4660.52	4668.33	4674.18		
End-Month Area	acre	685.1	699.4	1249.1	1296.2	1047.1	547.7	500.7	554.0	606.4	695.7	767.3	842.0		
Net Change Content	kaf	7.3	1.2	52.2	12.5	-34.9	-43.4	-4.1	4.7	5.8	6.9	5.7	4.7	18.6	
Sun River Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Gain Below Gibson	cfs	13	39	153	168	55	21	15	16	15	15	13	9		
Rels to WFC	cfs	0	76	73	0	0	0	0	39	76	23	0	0		
Rels to PSC	cfs	0	474	859	1506	1365	823	227	54	0	0	0	0		
Total Diversion	kaf	0.0	32.7	57.3	89.6	83.9	50.6	13.5	5.7	4.5	1.4	0.0	0.0	339.2	
Total Diversion	cfs	0	550	932	1506	1365	823	227	93	76	23	0	0		
Flow Over Div Dam	kaf	7.4	8.3	71.5	95.9	17.9	17.4	9.4	8.3	8.0	8.3	8.3	7.5	268.2	
Flow Over Div Dam	cfs	120	139	1163	1612	291	283	158	135	134	135	135	135		
Min River Rels	kaf	7.4	8.3	9.2	8.9	6.8	6.8	6.5	8.3	8.0	8.3	8.3	7.5	94.3	
Min River Rels	cfs	120	140	150	150	110	110	110	135	135	135	135	135		
Willow Crk Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Native Inflow	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Inflow	kaf	0.1	3.9	3.8	0.0	0.0	0.0	0.0	2.0	3.8	1.2	0.0	0.0	0.0	14.8
WCR Dam Rels	kaf	0.1	0.0	0.0	0.0	6.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
End-Month Content	kaf	24.2	28.1	31.9	31.9	25.0	18.0	18.0	20.0	23.8	25.0	25.0	25.0		
End-Month Elevation	ft	4136.54	4139.38	4142.04	4142.04	4137.13	4131.58	4131.58	4133.28	4136.24	4137.13	4137.13	4137.13		
Net Change Content	kaf	0.0	3.9	3.8	0.0	-6.9	-7.0	0.0	2.0	3.8	1.2	0.0	0.0	0.8	
Pishkun Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Rels to PSC	kaf	0.0	28.2	52.8	89.6	83.9	50.6	13.5	3.3	0.0	0.0	0.0	0.0	321.9	
Total Inflow	kaf	0.0	24.0	42.2	73.5	71.3	43.0	11.5	2.8	0.0	0.0	0.0	0.0	268.3	
PSH Dam Rels	kaf	0.0	0.0	35.0	74.0	85.0	40.0	15.0	0.0	0.0	0.0	0.0	0.0	249.0	
End-Month Content	kaf	16.0	40.0	47.2	46.7	33.0	36.0	32.5	35.3	35.3	35.3	35.3	35.3		
End-Month Elevation	ft	4341.99	4365.44	4370.33	4370.00	4360.21	4362.54	4359.81	4362.01	4362.01	4362.01	4362.01	4362.01		
Net Change Content	kaf	0.0	24.0	7.2	-0.5	-13.7	3.0	-3.5	2.8	0.0	0.0	0.0	0.0	19.3	
Greenfields Irrig		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
GID Demand	kaf	0.0	0.0	35.0	74.0	85.0	40.0	15.0	0.0	0.0	0.0	0.0	0.0	249.0	
GID Delivery	kaf	0.0	0.0	35.0	74.0	85.0	40.0	15.0	0.0	0.0	0.0	0.0	0.0	249.0	
River Blw Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Flow Over Div Dam	cfs	120	139	1163	1612	291	283	158	135	134	135	135	135		
PSC Return Flow	cfs	0	57	138	217	174	111	34	8	0	0	0	0		
WCR Dam Rels	cfs	2	0	0	0	112	114	0	0	0	0	0	0		
Sr Demand Above	kaf	0.0	0.0	7.7	12.9	13.3	13.3	2.0	1.0	0.0	0.0	0.0	0.0	50.2	
Sr Demand Below	kaf	0.0	0.0	5.5	5.4	5.5	5.5	2.0	1.0	0.0	0.0	0.0	0.0	24.9	
Flow @ Ft. Shaw Div	cfs	146	245	1199	1628	278	213	134	125	143	148	150	151		
Ft Shaw Demand	kaf	0.0	0.7	10.0	10.0	14.0	10.0	5.0	1.0	0.0	0.0	0.0	0.0	50.7	
Ft Shaw Tot Deliv	kaf	0.0	0.7	10.0	10.0	14.0	10.0	5.0	1.0	0.0	0.0	0.0	0.0	50.7	
Flow blw Ft. Shaw	cfs	146	234	1036	1460	50	50	50	109	143	148	150	151		

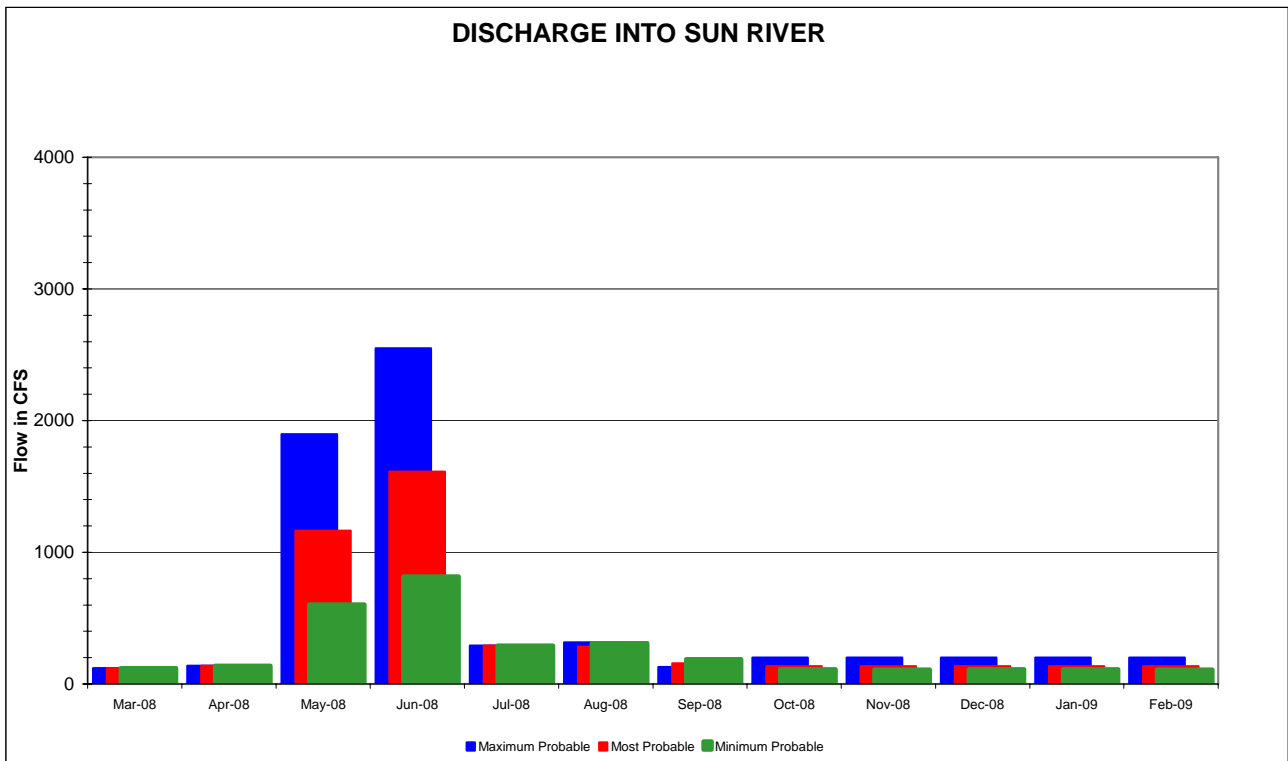
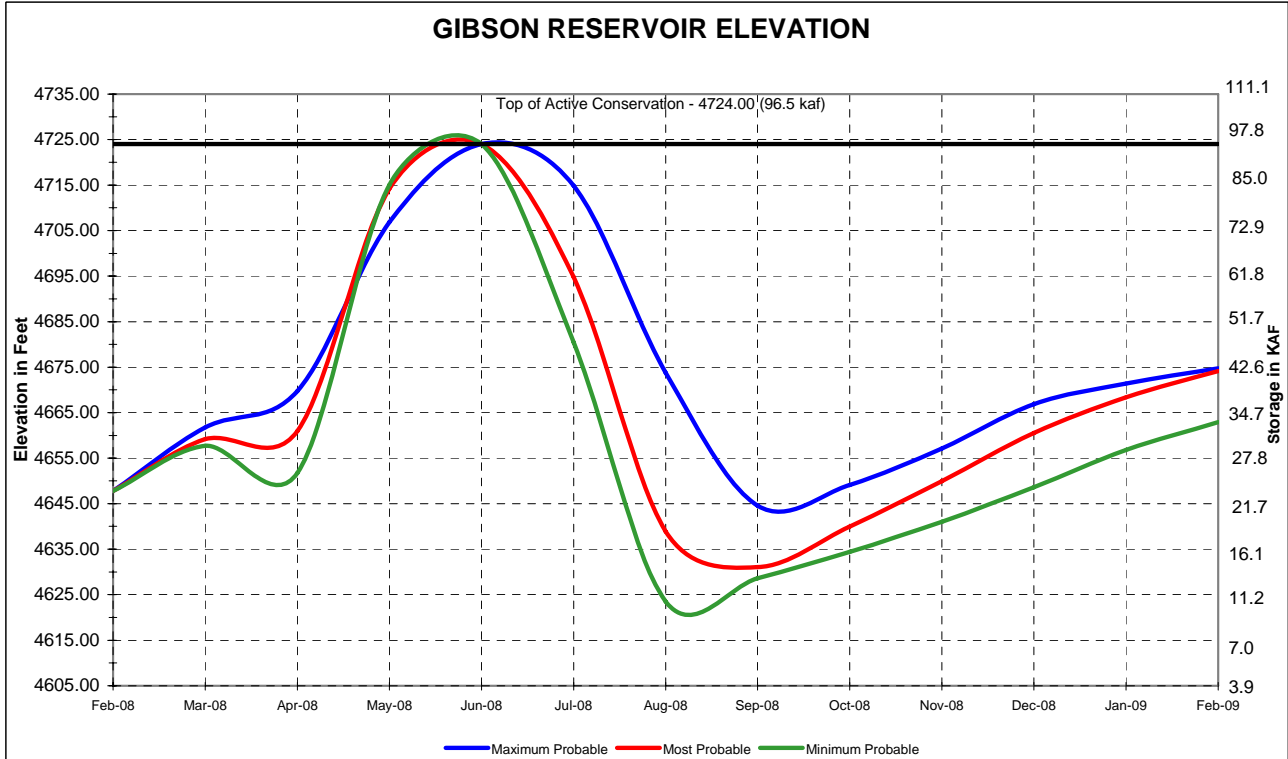
UPPER SUN RIVER MONTHLY OPERATIONS

Gibson Reservoir		Initial Cont Elev 23.3 kaf 4647.80 ft				Maximum Cont Elev 96.5 kaf 4724.02 ft				Minimum Cont Elev 5.0 kaf 4608.95 ft				Total	
2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total		
Monthly Inflow	kaf	12.9	34.8	141.3	142.3	49.5	19.6	14.4	14.4	13.7	11.7	11.2	9.8	475.6	
Spillway Rels	cfs	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Release	kaf	6.6	38.7	82.0	130.8	98.6	56.5	12.0	11.5	10.1	7.3	6.0	5.6	465.7	
Total Release	cfs	107	650	1334	2198	1604	919	202	187	170	119	98	101		
End-Month Content	kaf	29.6	25.7	85.0	96.5	47.4	10.5	12.9	15.8	19.4	23.8	29.0	33.2		
End-Month Elevation	ft	4657.74	4651.73	4715.01	4724.02	4680.42	4623.46	4628.63	4634.39	4641.04	4648.64	4656.84	4662.93		
End-Month Area	acre	673.2	624.5	1255.1	1296.2	920.8	444.1	483.8	521.4	559.7	599.5	666.0	716.0		
Net Change Content	kaf	6.3	-3.9	59.3	11.5	-49.1	-36.9	2.4	2.9	3.6	4.4	5.2	4.2	9.9	
Sun River Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Gain Below Gibson	cfs	13	39	153	168	55	21	15	16	15	15	13	9		
Rels to WFC	cfs	0	76	36	37	0	0	0	39	76	23	0	0		
Rels to PSC	cfs	0	474	847	1513	1368	631	30	54	0	0	0	0		
Total Diversion	kaf	0.0	32.7	54.3	92.2	84.1	38.8	1.8	5.7	4.5	1.4	0.0	0.0	315.5	
Total Diversion	cfs	0	550	883	1549	1368	631	30	93	76	23	0	0		
Flow Over Div Dam	kaf	7.4	8.3	37.1	48.6	17.9	19.0	11.1	6.8	6.5	6.8	6.8	6.1	182.4	
Flow Over Div Dam	cfs	120	139	603	817	291	309	187	111	109	111	111	110		
Min River Rels	kaf	7.4	8.3	9.2	8.9	6.8	6.8	6.5	6.8	6.5	6.8	6.8	6.1	86.9	
Min River Rels	cfs	120	140	150	150	110	110	110	110	110	110	110	110		
Willow Crk Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Native Inflow	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Inflow	kaf	0.1	3.9	1.9	1.9	0.0	0.0	0.0	2.0	3.8	1.2	0.0	0.0	0.0	14.8
WCR Dam Rels	kaf	0.1	0.0	0.0	0.0	6.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
End-Month Content	kaf	24.2	28.1	30.0	31.9	25.0	18.0	18.0	20.0	23.8	25.0	25.0	25.0		
End-Month Elevation	ft	4136.54	4139.38	4140.72	4142.04	4137.13	4131.58	4131.58	4133.28	4136.24	4137.13	4137.13	4137.13		
Net Change Content	kaf	0.0	3.9	1.9	1.9	-6.9	-7.0	0.0	2.0	3.8	1.2	0.0	0.0	0.8	
Pishkun Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Rels to PSC	kaf	0.0	28.2	52.1	90.0	84.1	38.8	1.8	3.3	0.0	0.0	0.0	0.0	298.3	
Total Inflow	kaf	0.0	24.0	41.7	73.8	71.5	33.0	1.5	2.8	0.0	0.0	0.0	0.0	248.3	
PSH Dam Rels	kaf	0.0	0.0	35.0	74.0	85.0	30.0	5.0	0.0	0.0	0.0	0.0	0.0	229.0	
End-Month Content	kaf	16.0	40.0	46.7	46.5	33.0	36.0	32.5	35.3	35.3	35.3	35.3	35.3		
End-Month Elevation	ft	4341.99	4365.44	4370.00	4369.87	4360.21	4362.54	4359.81	4362.01	4362.01	4362.01	4362.01	4362.01		
Net Change Content	kaf	0.0	24.0	6.7	-0.2	-13.5	3.0	-3.5	2.8	0.0	0.0	0.0	0.0	19.3	
Greenfields Irrig		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
GID Demand	kaf	0.0	0.0	35.0	74.0	85.0	30.0	5.0	0.0	0.0	0.0	0.0	0.0	229.0	
GID Delivery	kaf	0.0	0.0	35.0	74.0	85.0	30.0	5.0	0.0	0.0	0.0	0.0	0.0	229.0	
River Blw Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Flow Over Div Dam	cfs	120	139	603	817	291	309	187	111	109	111	111	110		
PSC Return Flow	cfs	0	57	135	218	174	85	5	8	0	0	0	0		
WCR Dam Rels	cfs	2	0	0	0	112	114	0	0	0	0	0	0		
Sr Demand Above	kaf	0.0	0.0	7.7	12.9	13.3	13.3	2.0	1.0	0.0	0.0	0.0	0.0	50.2	
Sr Demand Below	kaf	0.0	0.0	5.5	5.4	5.5	5.5	2.0	1.0	0.0	0.0	0.0	0.0	24.9	
Flow @ Ft. Shaw Div	cfs	146	245	636	835	278	213	134	101	118	124	125	126		
Ft Shaw Demand	kaf	0.0	0.7	10.0	10.0	14.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	49.7	
Ft Shaw Tot Deliv	kaf	0.0	0.7	10.0	10.0	14.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	49.7	
Flow blw Ft. Shaw	cfs	146	234	473	667	50	50	50	101	118	124	125	126		

UPPER SUN RIVER MONTHLY OPERATIONS

Gibson Reservoir		Initial Cont Elev 23.3 kaf 4647.80 ft				Maximum Cont Elev 96.5 kaf 4724.02 ft				Minimum Cont Elev 5.0 kaf 4608.95 ft				Total	
	2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		
Monthly Inflow	kaf	15.7	44.6	198.2	255.4	86.9	31.4	22.4	21.9	20.0	18.3	15.0	13.4	743.2	
Spillway Rels	cfs	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Release	kaf	6.6	38.7	161.5	233.9	98.6	74.7	42.5	19.2	14.9	11.4	11.5	10.6	724.1	
Total Release	cfs	107	650	2627	3931	1604	1215	714	312	250	185	187	191		
End-Month Content	kaf	32.4	38.3	75.0	96.5	84.8	41.5	21.4	24.1	29.2	36.1	39.6	42.4		
End-Month Elevation	ft	4661.80	4669.75	4706.83	4724.02	4714.85	4673.71	4644.56	4649.14	4657.14	4666.88	4671.39	4674.78		
End-Month Area	acre	706.5	781.7	1181.0	1296.2	1253.9	835.4	578.1	602.1	668.4	752.5	803.4	850.1		
Net Change Content	kaf	9.1	5.9	36.7	21.5	-11.7	-43.3	-20.1	2.7	5.1	6.9	3.5	2.8	19.1	
Sun River Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Gain Below Gibson	cfs	13	39	153	168	55	21	15	16	15	15	13	9		
Rels to WFC	cfs	0	76	36	37	0	0	76	75	66	0	0	0		
Rels to PSC	cfs	0	474	847	1513	1368	919	524	54	0	0	0	0		
Total Diversion	kaf	0.0	32.7	54.3	92.2	84.1	56.5	35.7	7.9	3.9	0.0	0.0	0.0	367.3	
Total Diversion	cfs	0	550	883	1549	1368	919	600	128	66	0	0	0		
Flow Over Div Dam	kaf	7.4	8.3	116.6	151.7	17.9	19.5	7.7	12.3	11.9	12.3	12.3	11.1	389.0	
Flow Over Div Dam	cfs	120	139	1896	2549	291	317	129	200	200	200	200	200		
Min River Rels	kaf	7.4	8.3	9.2	8.9	6.8	6.8	6.5	12.3	11.9	12.3	12.3	11.1	113.8	
Min River Rels	cfs	120	140	150	150	110	110	110	200	200	200	200	200		
Willow Crk Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Native Inflow	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Inflow	kaf	0.1	3.9	1.9	1.9	0.0	0.0	3.8	3.9	3.3	0.0	0.0	0.0	0.0	18.8
WCR Dam Rels	kaf	0.1	0.0	0.0	0.0	6.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
End-Month Content	kaf	24.2	28.1	30.0	31.9	25.0	20.0	23.8	27.7	31.0	31.0	31.0	31.0		
End-Month Elevation	ft	4136.54	4139.38	4140.72	4142.04	4137.13	4133.28	4136.24	4139.10	4141.42	4141.42	4141.42	4141.42		
Net Change Content	kaf	0.0	3.9	1.9	1.9	-6.9	-5.0	3.8	3.9	3.3	0.0	0.0	0.0	6.8	
Pishkun Operations		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Rels to PSC	kaf	0.0	28.2	52.1	90.0	84.1	56.5	31.2	3.3	0.0	0.0	0.0	0.0	345.4	
Total Inflow	kaf	0.0	24.0	41.7	73.8	71.5	48.0	26.5	2.8	0.0	0.0	0.0	0.0	288.3	
PSH Dam Rels	kaf	0.0	0.0	35.0	74.0	85.0	45.0	30.0	0.0	0.0	0.0	0.0	0.0	269.0	
End-Month Content	kaf	16.0	40.0	46.7	46.5	33.0	36.0	32.5	35.3	35.3	35.3	35.3	35.3		
End-Month Elevation	ft	4341.99	4365.44	4370.00	4369.87	4360.21	4362.54	4359.81	4362.01	4362.01	4362.01	4362.01	4362.01		
Net Change Content	kaf	0.0	24.0	6.7	-0.2	-13.5	3.0	-3.5	2.8	0.0	0.0	0.0	0.0	19.3	
Greenfields Irrig		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
GID Demand	kaf	0.0	0.0	35.0	74.0	85.0	45.0	30.0	0.0	0.0	0.0	0.0	0.0	269.0	
GID Delivery	kaf	0.0	0.0	35.0	74.0	85.0	45.0	30.0	0.0	0.0	0.0	0.0	0.0	269.0	
River Blw Div Dam		2008	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Flow Over Div Dam	cfs	120	139	1896	2549	291	317	129	200	200	200	200	200		
PSC Return Flow	cfs	0	57	135	218	174	125	79	8	0	0	0	0		
WCR Dam Rels	cfs	2	0	0	0	112	81	0	0	0	0	0	0		
Sr Demand Above	kaf	0.0	0.0	7.7	12.9	13.3	13.3	2.0	1.0	0.0	0.0	0.0	0.0	50.2	
Sr Demand Below	kaf	0.0	0.0	5.5	5.4	5.5	5.5	2.0	1.0	0.0	0.0	0.0	0.0	24.9	
Flow @ Ft. Shaw Div	cfs	146	245	1929	2568	278	229	151	190	208	213	215	216		
Ft Shaw Demand	kaf	0.0	0.7	10.0	10.0	14.0	11.0	6.0	0.0	0.0	0.0	0.0	0.0	51.7	
Ft Shaw Tot Deliv	kaf	0.0	0.7	10.0	10.0	14.0	11.0	6.0	0.0	0.0	0.0	0.0	0.0	51.7	
Flow blw Ft. Shaw	cfs	146	234	1766	2400	50	50	50	190	208	213	215	216		

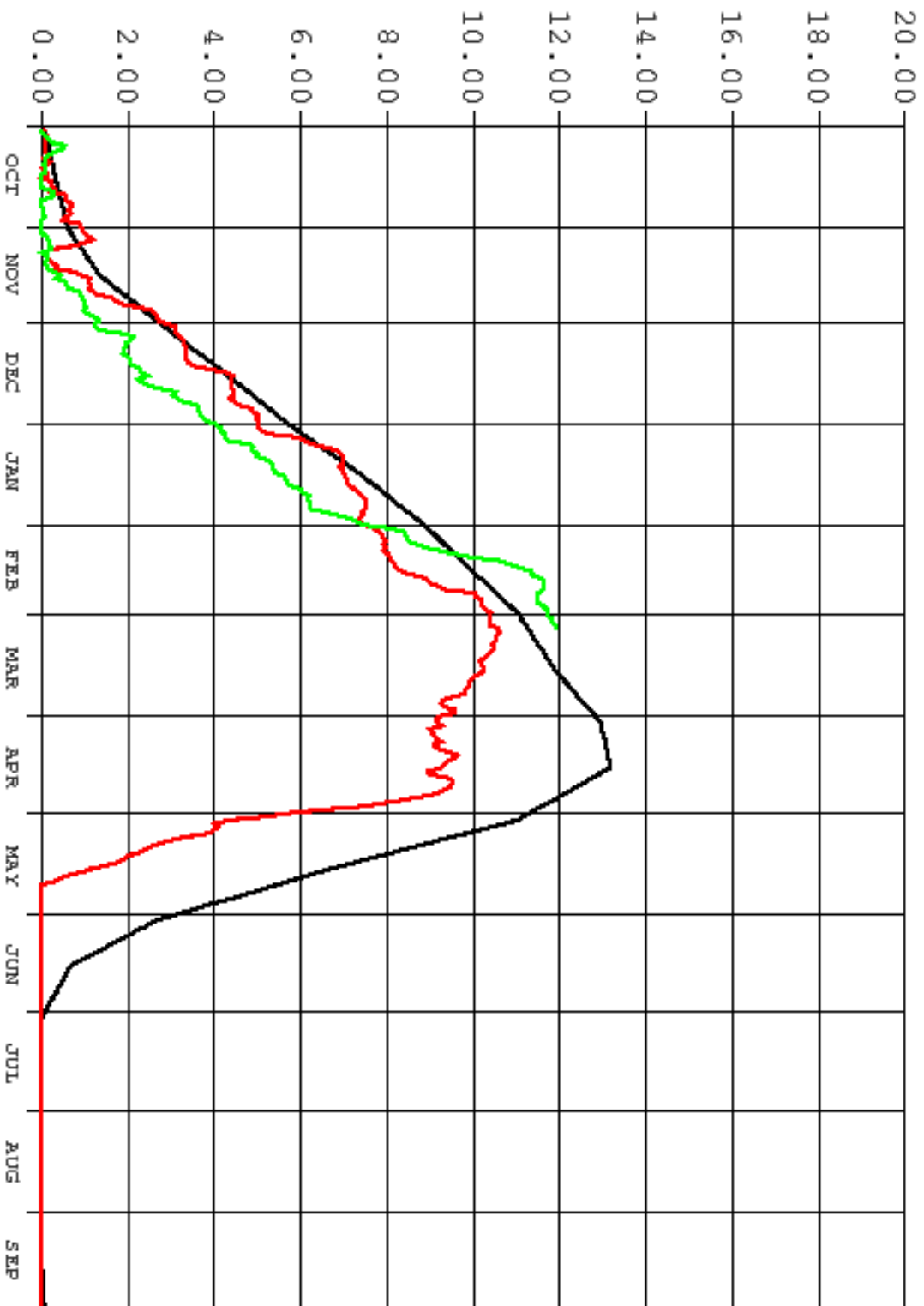
GIBSON RESERVOIR



WATER YEAR 2008

Archive Data From 1-OCT Through 30-SEP
Plotted 03/03/2008 11:13

Units: INCHES



GIBR Gibson Reservoir, Sun River near Great Falls, MT

SE_AVG Snow Water Equivalent Average (inches)

SE Snow Water Equivalent (inches)

2008

2007 2008