

RECLAMATION

Managing Water in the West

November 2, 2009

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans as prepared on November 2, 2009. If you have any questions or concerns, please call me at (406) 247-7334.

Chuck Heinje
Reservoir and River Operations



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

MILK RIVER PROJECT OPERATIONS

Water Supply Forecasts and Reservoir Operations November 1, 2009

Storage (acre-feet):

		% Normal	% Full
Sherburne Reservoir:	19,151	193	27
Fresno Reservoir:	42,157	108	45
Nelson Reservoir:	69,315	117	88

Past Inflows: (1,000 acre-feet):

Month	Sherburne Reservoir		Fresno Reservoir	
	Inflow	% Normal	Inflow	% Normal
<i>April-Jul, 2009</i>	<i>76.4</i>	<i>74</i>	<i>147.4</i>	<i>90</i>
<i>April-Jul, 2008</i>	<i>115.8</i>	<i>111</i>	<i>176.2</i>	<i>107</i>
October	4.2	69	1.5	21
November	4.3	78	3.1	146
December	2.3	62	0.8	83
January	1.9	67	0.1	11
February	1.2	51	-0.3	N.A
March	1.2	41	13.5	44
April	8.3	92	37.6	95
May	26.0	81	43.3	99
June	26.8	64	36.4	80
July	15.2	72	30.1	85
August	8.4	88	30.2	92
September	4.1	64	24.7	95
October	4.5	74	4.5	60

November Forecast of Natural Inflow (1,000 acre-feet):

Lake Sherburne

	Inflow	% Average
Reclamation	4.0	72
NRCS	N.A.	N.A.
Average	4.0	72

MILK RIVER BASIN MONTHLY OPERATIONS

Sherburne Reservoir		Initial Cont Elev		18.2 kaf 4751.43 ft		Maximum Cont Elev		66.2 kaf 4788.03 ft		Minimum Cont Elev		3.1 kaf 4731.73 ft		Total	
2008	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct			
Monthly Inflow	kaf	4.0	3.5	2.7	2.1	2.8	9.0	34.1	40.2	19.1	8.0	5.5	4.8	135.8	
Release	kaf	0.0	0.0	0.0	0.0	0.0	27.1	14.0	9.3	29.1	38.2	14.7	0.0	132.4	
Release	cfs	0	0	0	0	0	455	228	156	473	621	247	0		
Net Change Content	kaf	4.0	3.5	2.7	2.1	2.8	-18.1	20.1	30.9	-10.0	-30.2	-9.2	4.8	3.4	
End-Month Content	kaf	22.2	25.7	28.4	30.5	33.3	15.2	35.3	66.2	56.2	26.0	16.8	21.6		
End-Month Elevation	ft	4755.49	4758.83	4761.29	4763.15	4765.55	4748.18	4767.22	4788.03	4782.02	4759.11	4749.94	4754.90		
St. Mary River		2008	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
St. Mary Gain	kaf	9.0	6.8	5.4	5.1	6.7	13.8	94.3	134.1	58.8	25.8	17.4	11.9	389.1	
Nat. flow at bound.	kaf	13.0	10.3	8.1	7.2	9.5	22.8	128.4	174.3	77.9	33.8	22.9	16.7	524.9	
US share	kaf	6.5	5.2	4.1	3.6	4.8	5.7	53.9	77.2	28.7	8.5	5.7	4.2	208.1	
Can share	kaf	6.5	5.1	4.0	3.6	4.7	17.1	74.5	97.1	49.2	25.3	17.2	12.5	316.8	
Can del.	kaf	6.5	5.1	4.0	3.6	4.7	17.1	74.5	97.1	49.2	25.3	17.2	11.4	315.7	
Excess to Canada	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	7.8	
US share to Canada	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	8.2	
Max canal flow	cfs	0	0	0	0	400	650	650	640	630	630	600	0		
Desired canal div	cfs	0	0	0	0	0	400	550	640	630	630	250	0		
St. Mary Canal Div	cfs	0	0	0	0	33	400	550	640	629	629	250	0		
St. Mary Canal Div	kaf	0.0	0.0	0.0	0.0	2.0	23.8	33.8	38.1	38.7	38.7	14.9	0.0	190.0	
Fresno Reservoir		2008	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
		Initial Cont Elev		42.2 kaf 2560.40 ft		Maximum Cont Elev		97.0 kaf 2575.83 ft		Minimum Cont Elev		0.5 kaf 2530.27 ft			
Milk R. runoff	kaf	1.9	1.0	0.5	1.5	12.0	16.6	20.3	15.8	5.8	1.6	4.6	2.9	84.5	
From St. Mary Canal	kaf	0.0	0.0	0.0	0.0	1.8	21.4	30.4	34.3	34.8	34.8	13.4	0.0	170.9	
Total inflow	kaf	1.9	1.0	0.5	1.5	13.8	38.0	50.7	50.1	40.6	36.4	18.0	2.9	255.4	
Release	kaf	2.6	2.6	2.6	2.4	4.4	2.6	39.4	64.1	52.4	43.7	36.3	2.6	255.7	
Release	cfs	44	42	42	43	72	44	641	1077	852	711	610	42		
Project irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	17.7	48.7	39.7	28.3	23.7	0.0	158.1	
Bowdoin WR req	kaf	0.0	0.0	0.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.0	3.5	
Ft Belknap irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.0	4.0	0.0	13.0	
Nelson transfer	kaf	0.0	0.0	0.0	0.0	14.0	15.0	15.0	10.0	9.0	9.0	10.0	5.0	87.0	
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0	2.0	19.2	48.7	43.7	33.3	27.7	0.0	174.6	
Fresno bypass	kaf	2.6	2.6	2.6	2.4	0.0	1.1	10.1	0.0	0.0	0.0	-0.1	2.0	23.3	
Irrigation shortage	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	
Net Change Content	kaf	-0.7	-1.6	-2.1	-0.9	9.4	35.4	11.3	-14.0	-11.8	-7.2	-18.4	0.3	-0.3	
End-Month Content	kaf	41.5	39.9	37.8	36.9	46.3	81.7	93.0	79.0	67.2	59.9	41.6	41.9		
End-Month Elevation	ft	2560.10	2559.41	2558.49	2558.08	2562.04	2572.59	2575.02	2571.96	2568.97	2566.87	2560.13	2560.27		
Nelson Reservoir		2008	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
		Initial Cont Elev		69.3 kaf 2219.28 ft		Maximum Cont Elev		79.0 kaf 2221.61 ft		Minimum Cont Elev		18.0 kaf 2199.91 ft			
Nelson delivery	kaf	0.0	0.0	0.0	0.0	13.0	8.4	11.7	9.9	8.4	8.7	9.5	5.0	74.6	
Nelson Release	kaf	0.0	0.0	0.0	0.0	0.0	1.0	9.9	12.0	15.1	15.2	7.1	0.0	60.3	
Malta irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	7.8	8.0	10.1	8.9	4.7	0.0	39.5	
Glasgow irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.0	5.0	6.3	2.4	0.0	19.8	
Net Change Content	kaf	-1.8	-1.8	-1.8	-1.7	11.2	5.6	0.0	-3.9	-8.5	-8.3	0.6	3.2	-7.2	
End-Month Content	kaf	67.5	65.7	63.9	62.2	73.4	79.0	79.0	75.1	66.6	58.3	58.9	62.1		
End-Month Elevation	ft	2218.82	2218.36	2217.90	2217.45	2220.29	2221.61	2221.61	2220.70	2218.59	2216.41	2216.57	2217.43		

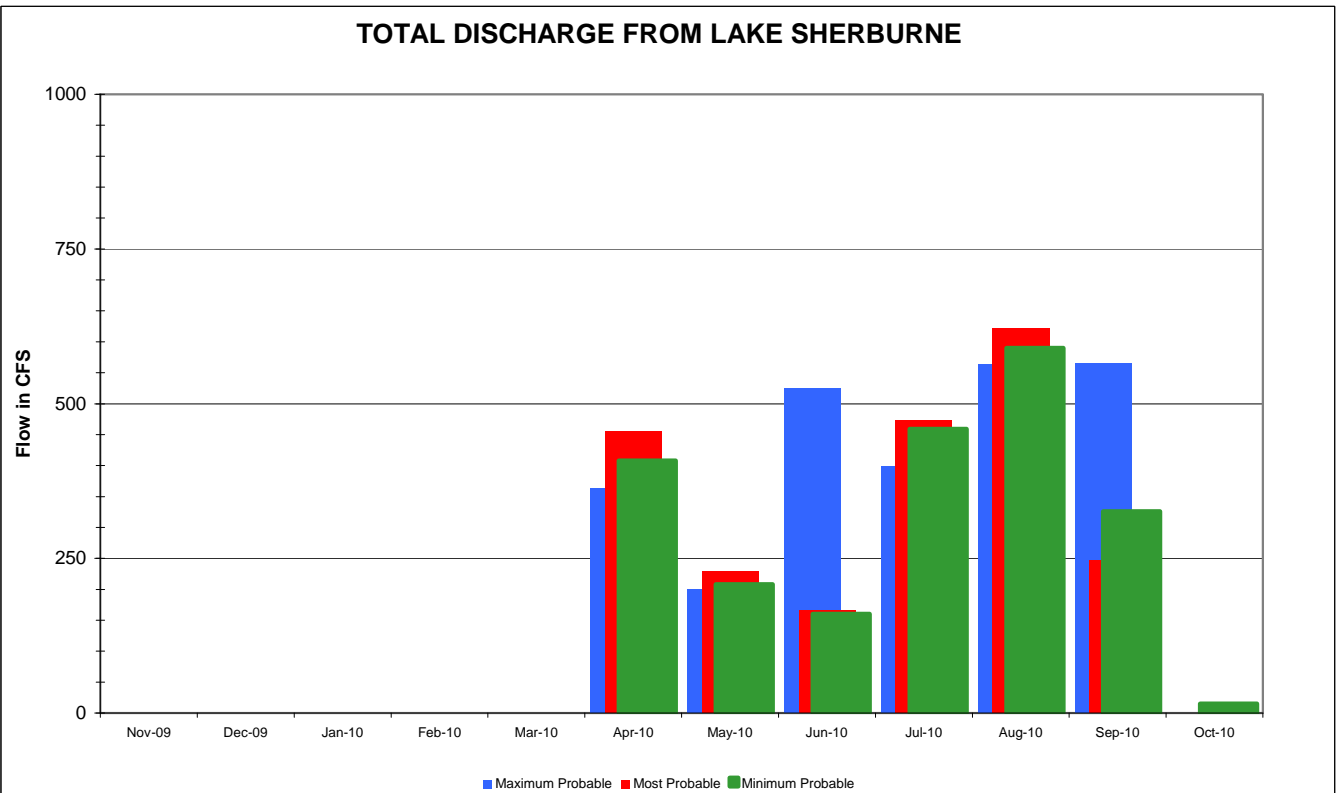
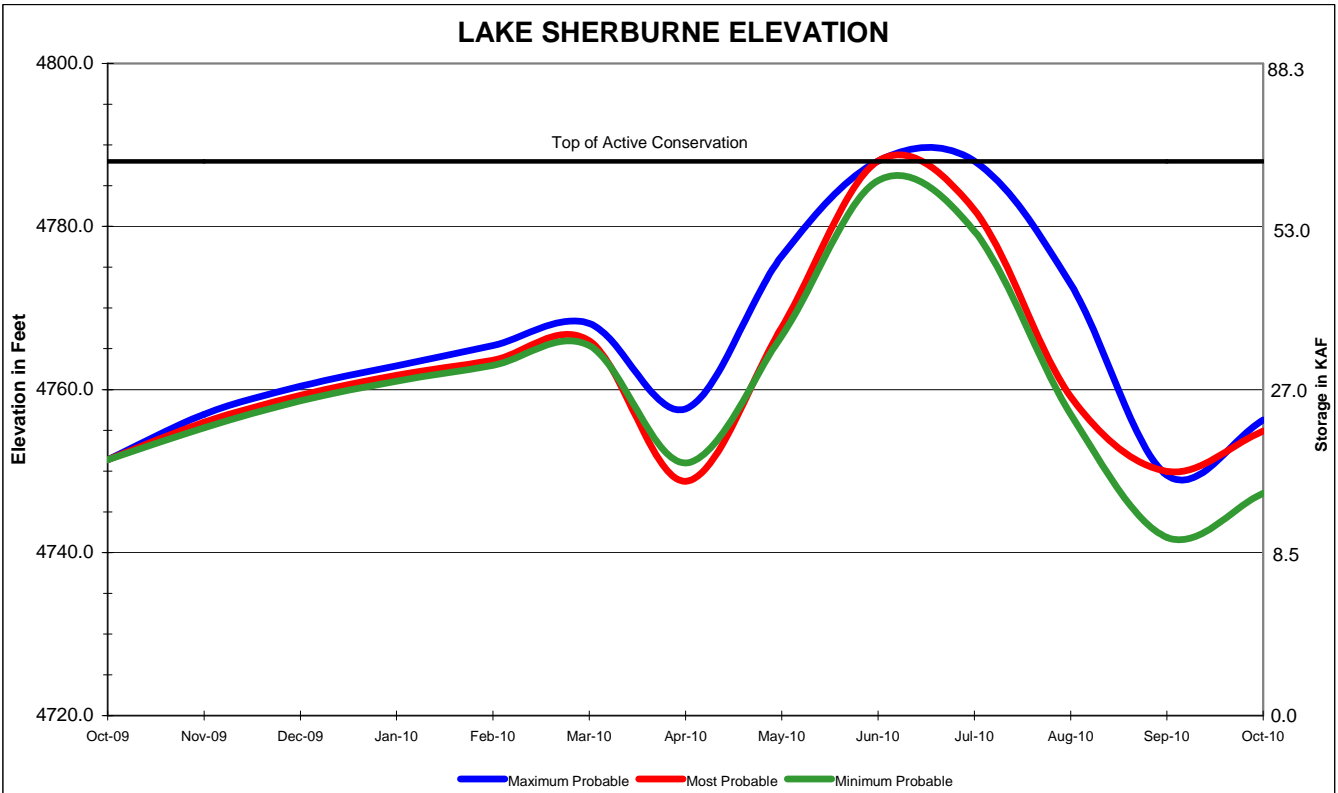
MILK RIVER BASIN MONTHLY OPERATIONS

Sherburne Reservoir		Initial Cont Elev		18.2 kaf 4751.43 ft		Maximum Cont Elev		66.2 kaf 4788.03 ft		Minimum Cont Elev		3.1 kaf 4731.73 ft		Total
2009		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Monthly Inflow	kaf	3.8	3.5	2.6	2.2	2.8	9.0	29.5	37.1	18.2	7.9	5.6	5.4	127.6
Release	kaf	0.0	0.0	0.0	0.0	0.0	24.3	12.8	9.5	28.2	36.3	19.4	0.9	131.4
Release	cfs	0	0	0	0	0	408	208	160	459	590	326	15	
Net Change Content	kaf	3.8	3.5	2.6	2.2	2.8	-15.3	16.7	27.6	-10.0	-28.4	-13.8	4.5	-3.8
End-Month Content	kaf	22.0	25.5	28.1	30.3	33.1	17.8	34.5	62.1	52.1	23.7	9.9	14.4	
End-Month Elevation	ft	4755.30	4758.64	4761.02	4762.97	4765.38	4751.01	4766.56	4785.62	4779.41	4756.95	4741.85	4747.28	
St. Mary River		Initial Cont Elev		42.2 kaf 2560.40 ft		Maximum Cont Elev		97.0 kaf 2575.83 ft		Minimum Cont Elev		0.5 kaf 2530.27 ft		Total
2009		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
St. Mary Gain	kaf	8.9	6.6	5.1	4.9	6.4	12.8	85.9	114.2	59.7	25.9	12.7	12.5	355.6
Nat. flow at bound.	kaf	12.7	10.1	7.7	7.1	9.2	21.8	115.4	151.3	77.9	33.8	18.3	17.9	483.2
US share	kaf	6.4	5.1	3.9	3.6	4.6	5.5	47.4	65.7	28.7	8.5	4.6	4.5	188.5
Can share	kaf	6.3	5.0	3.8	3.5	4.6	16.3	68.0	85.6	49.2	25.3	13.7	13.4	294.7
Can del.	kaf	6.3	5.0	3.8	3.5	4.6	16.3	68.0	85.6	49.2	25.3	13.7	13.4	294.7
Excess to Canada	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
US share to Canada	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
Max canal flow	cfs	0	0	0	0	0	650	650	640	630	630	500	300	
Desired canal div	cfs	0	0	0	0	0	350	500	640	630	600	310	0	
St. Mary Canal Div	cfs	0	0	0	0	0	350	499	640	629	600	309	0	
St. Mary Canal Div	kaf	0.0	0.0	0.0	0.0	0.0	20.8	30.7	38.1	38.7	36.9	18.4	0.0	183.6
Fresno Reservoir		Initial Cont Elev		42.2 kaf 2560.40 ft		Maximum Cont Elev		97.0 kaf 2575.83 ft		Minimum Cont Elev		0.5 kaf 2530.27 ft		Total
2009		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Milk R. runoff	kaf	1.9	1.0	0.5	1.5	12.0	16.6	20.3	15.8	5.8	1.6	4.6	4.0	85.6
From St. Mary Canal	kaf	0.0	0.0	0.0	0.0	0.0	18.7	27.6	34.3	34.8	33.2	16.6	0.0	165.2
Total inflow	kaf	1.9	1.0	0.5	1.5	12.0	35.3	47.9	50.1	40.6	34.8	21.2	4.0	250.8
Release	kaf	2.6	2.6	2.6	2.4	2.6	4.4	32.1	65.4	63.6	46.7	22.4	2.6	250.0
Release	cfs	44	42	42	43	42	74	522	1099	1034	760	376	42	
Project irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	18.1	49.9	48.7	29.0	16.2	0.0	161.9
Bowdoin WR req	kaf	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Ft Belknap irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.0	4.0	0.0	13.0
Nelson transfer	kaf	0.0	0.0	0.0	0.0	8.0	12.0	26.0	10.0	10.0	11.0	0.0	0.0	77.0
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0	2.0	18.1	49.9	52.7	34.0	20.2	0.0	176.9
Fresno bypass	kaf	2.6	2.6	2.6	2.4	3.7	0.0	1.7	0.0	-0.1	0.0	5.0	7.6	28.1
Irrigation shortage	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
Net Change Content	kaf	-0.7	-1.6	-2.1	-0.9	9.4	30.9	15.9	-15.4	-22.9	-11.9	-1.3	1.4	0.8
End-Month Content	kaf	41.5	39.9	37.8	36.9	46.3	77.2	93.0	77.7	54.7	42.8	41.6	43.0	
End-Month Elevation	ft	2560.10	2559.41	2558.49	2558.08	2562.06	2571.53	2575.03	2571.64	2565.18	2560.66	2560.13	2560.73	
Nelson Reservoir		Initial Cont Elev		69.3 kaf 2219.28 ft		Maximum Cont Elev		79.0 kaf 2221.61 ft		Minimum Cont Elev		18.0 kaf 2199.91 ft		Total
2009		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Nelson delivery	kaf	0.0	0.0	0.0	0.0	8.0	11.0	13.8	9.9	9.5	10.7	0.0	0.0	62.9
Nelson Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	10.6	12.3	21.5	15.5	1.2	0.0	61.1
Malta irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	8.0	8.2	14.3	9.1	0.8	0.0	40.4
Glasgow irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.1	7.2	6.4	0.4	0.0	20.2
Net Change Content	kaf	-1.8	-1.8	-1.8	-1.7	6.2	9.2	1.4	-4.2	-13.8	-6.6	-3.0	-1.8	-19.7
End-Month Content	kaf	67.5	65.7	63.9	62.2	68.4	77.6	79.0	74.8	61.0	54.4	51.4	49.6	
End-Month Elevation	ft	2218.82	2218.36	2217.90	2217.45	2219.05	2221.29	2221.61	2220.62	2217.14	2215.32	2214.46	2213.92	

MILK RIVER BASIN MONTHLY OPERATIONS

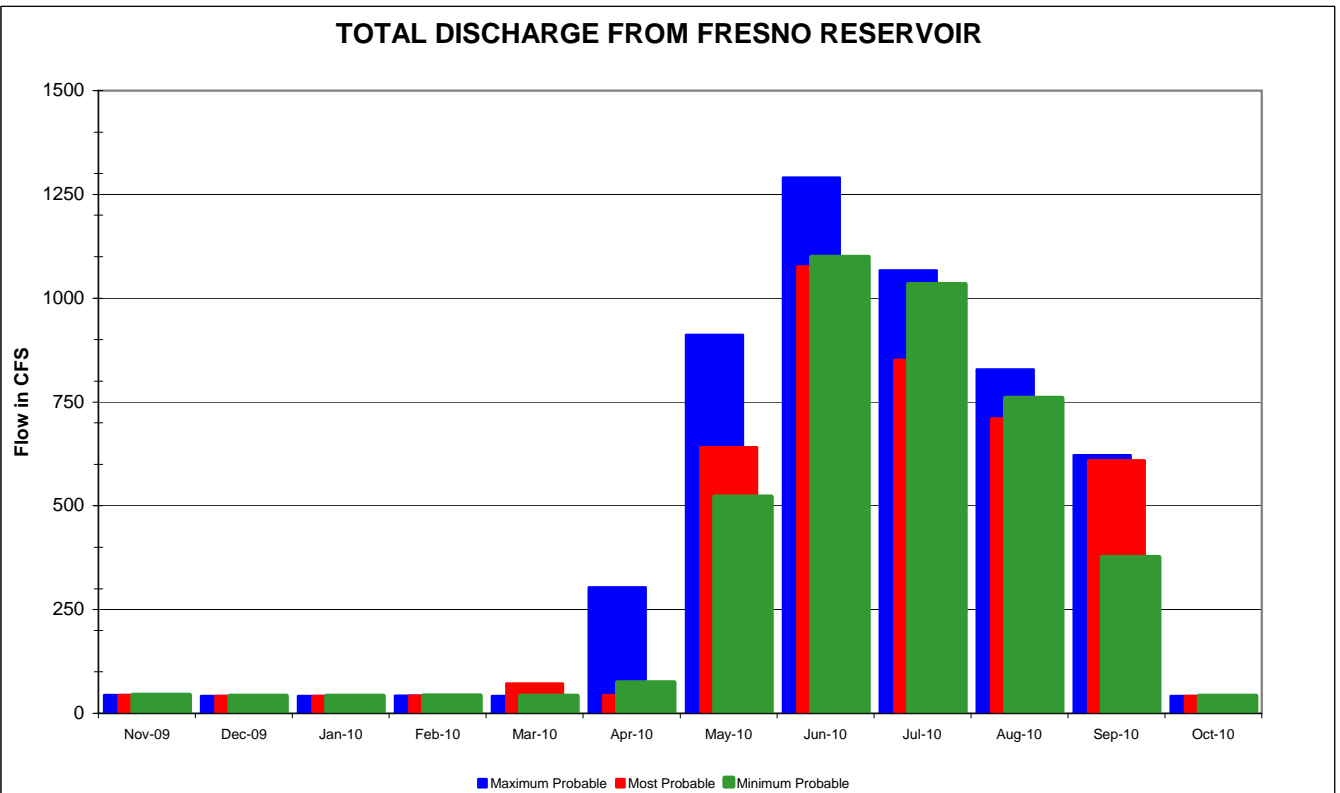
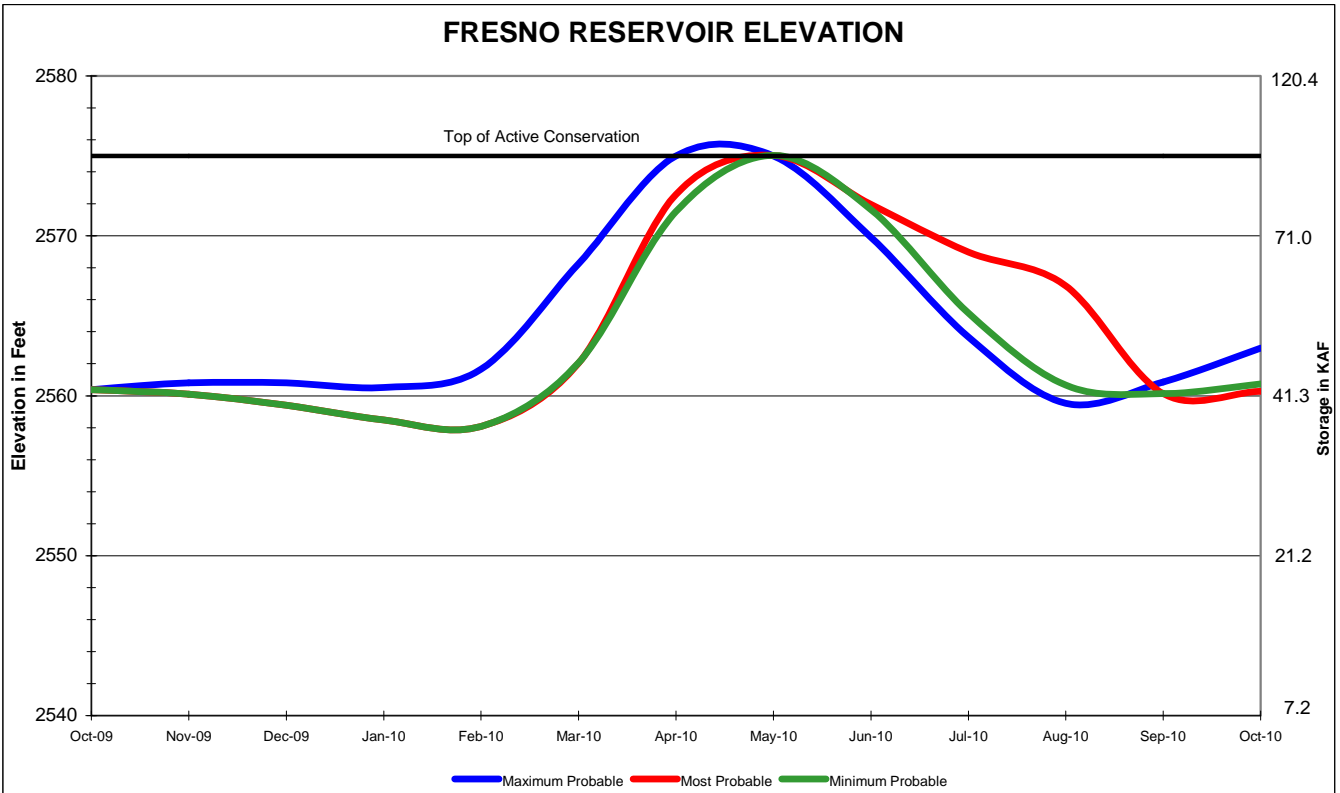
Sherburne Reservoir		Initial Cont Elev		18.2 kaf 4751.43 ft		Maximum Cont Elev			66.2 kaf 4788.03 ft		Minimum Cont Elev		3.1 kaf 4731.73 ft		Total
	2009	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
Monthly Inflow	kaf	5.5	3.7	2.8	2.9	3.3	9.6	35.4	49.9	24.5	11.0	7.4	6.6	162.6	
Release	kaf	0.0	0.0	0.0	0.0	0.0	21.6	12.3	31.2	24.5	34.6	33.6	0.0	157.8	
Release	cfs	0	0	0	0	0	363	200	524	398	563	565	0		
Net Change Content	kaf	5.5	3.7	2.8	2.9	3.3	-12.0	23.1	18.7	0.0	-23.6	-26.2	6.6	4.8	
End-Month Content	kaf	23.7	27.4	30.2	33.1	36.4	24.4	47.5	66.2	66.2	42.6	16.4	23.0		
End-Month Elevation	ft	4756.95	4760.39	4762.89	4765.38	4768.12	4757.61	4776.36	4788.03	4788.03	4772.92	4749.50	4756.27		
St. Mary River		Initial Cont Elev		42.2 kaf 2560.40 ft		Maximum Cont Elev			97.0 kaf 2575.83 ft		Minimum Cont Elev		0.5 kaf 2530.27 ft		Total
	2009	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
St. Mary Gain	kaf	13.3	13.2	10.4	9.3	11.2	33.9	125.2	170.6	103.4	42.4	19.2	19.5	571.6	
Nat. flow at bound.	kaf	18.8	16.9	13.2	12.2	14.5	43.5	160.6	220.5	127.9	53.4	26.6	26.1	734.2	
US share	kaf	9.4	8.5	6.6	6.1	7.3	11.8	70.0	100.3	53.7	16.4	6.7	6.5	303.3	
Can share	kaf	9.4	8.4	6.6	6.1	7.2	31.7	90.6	120.2	74.2	37.0	19.9	19.6	430.9	
Can del.	kaf	9.4	8.4	6.6	6.1	7.2	31.7	90.6	120.2	74.2	37.0	18.3	19.4	429.1	
Excess to Canada	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.7	13.7	0.0	0.0	0.0	43.4	
US share to Canada	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	13.7	0.0	0.0	0.0	56.6	
Max canal flow	cfs	0	0	0	0	0	650	650	650	650	650	600	200		
Desired canal div	cfs	0	0	0	0	0	400	500	650	650	650	580	0		
St. Mary Canal Div	cfs	0	0	0	0	0	400	563	650	651	651	580	0		
St. Mary Canal Div	kaf	0.0	0.0	0.0	0.0	0.0	23.8	34.6	38.7	40.0	40.0	34.5	0.0	211.6	
Fresno Reservoir		Initial Cont Elev		42.2 kaf 2560.40 ft		Maximum Cont Elev			97.0 kaf 2575.83 ft		Minimum Cont Elev		0.5 kaf 2530.27 ft		Total
	2009	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
Milk R. runoff	kaf	3.6	2.6	1.9	5.2	21.9	25.0	25.0	19.7	9.5	4.7	9.0	8.0	136.1	
From St. Mary Canal	kaf	0.0	0.0	0.0	0.0	0.0	21.4	31.1	34.8	36.0	36.0	31.1	0.0	190.4	
Total inflow	kaf	3.6	2.6	1.9	5.2	21.9	46.4	56.1	54.5	45.5	40.7	40.1	8.0	326.5	
Release	kaf	2.6	2.6	2.6	2.4	2.6	18.1	56.1	76.8	65.6	51.0	37.0	2.6	320.0	
Release	cfs	44	42	42	43	42	304	912	1291	1067	829	622	42		
Project irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	21.8	60.1	49.0	34.9	29.3	0.0	195.1	
Bowdoin WR req	kaf	0.0	0.0	0.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.0	3.5	
Ft Belknap irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.0	4.0	0.0	13.0	
Nelson transfer	kaf	0.0	0.0	0.0	0.0	10.0	18.0	16.0	14.0	12.0	12.0	3.0	0.0	85.0	
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0	2.0	23.3	60.1	53.0	39.9	33.3	0.0	211.6	
Fresno bypass	kaf	2.6	2.6	2.6	2.4	6.5	19.3	19.6	0.0	0.0	0.0	1.7	9.6	66.9	
Irrigation shortage	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	
Net Change Content	kaf	1.0	0.0	-0.7	2.8	19.3	28.3	0.0	-22.3	-20.1	-10.3	3.1	5.4	6.5	
End-Month Content	kaf	43.2	43.2	42.5	45.3	64.6	92.9	92.9	70.6	50.5	40.2	43.3	48.7		
End-Month Elevation	ft	2560.81	2560.81	2560.52	2561.66	2568.26	2575.00	2575.00	2569.90	2563.67	2559.54	2560.86	2562.98		
Nelson Reservoir		Initial Cont Elev		69.3 kaf 2219.28 ft		Maximum Cont Elev			79.0 kaf 2221.61 ft		Minimum Cont Elev		18.0 kaf 2199.91 ft		Total
	2009	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
Nelson delivery	kaf	0.0	0.0	0.0	0.0	10.0	10.4	15.8	13.5	11.4	11.4	3.0	0.0	75.5	
Nelson Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	14.0	14.7	25.9	15.3	3.1	0.0	73.0	
Malta irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	9.6	9.8	17.3	9.8	2.2	0.0	48.7	
Glasgow irr req	kaf	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.9	8.6	5.5	0.9	0.0	24.3	
Net Change Content	kaf	-1.8	-1.8	-1.8	-1.7	8.2	8.6	0.0	-3.0	-16.3	-5.7	-1.9	-1.8	-19.0	
End-Month Content	kaf	67.5	65.7	63.9	62.2	70.4	79.0	79.0	76.0	59.7	54.0	52.1	50.3		
End-Month Elevation	ft	2218.82	2218.36	2217.90	2217.45	2219.55	2221.61	2221.61	2220.91	2216.79	2215.21	2214.66	2214.13		

LAKE SHERBURNE



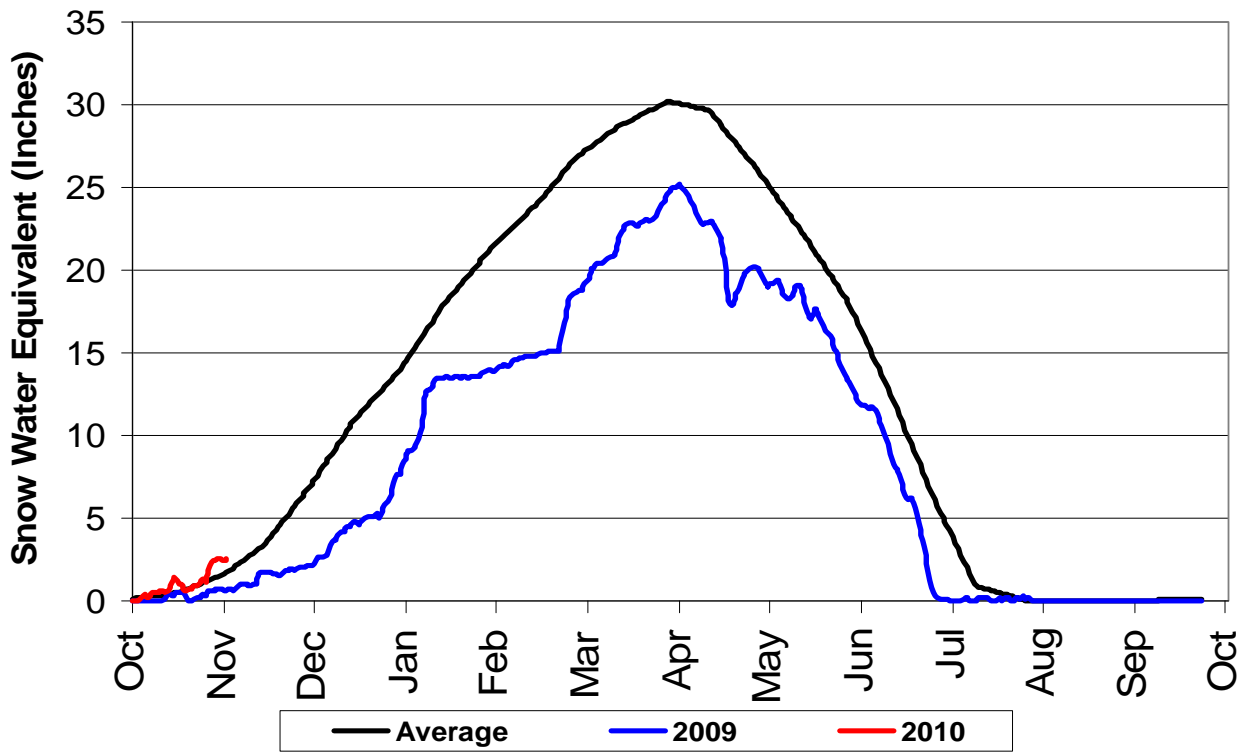
WATER YEAR 2010

FRESNO RESERVOIR



WATER YEAR 2010

Snowpack above Sherburne



Snowpack above Fresno

