

Libby : April Runoff Forecast & Flood Control Calculation

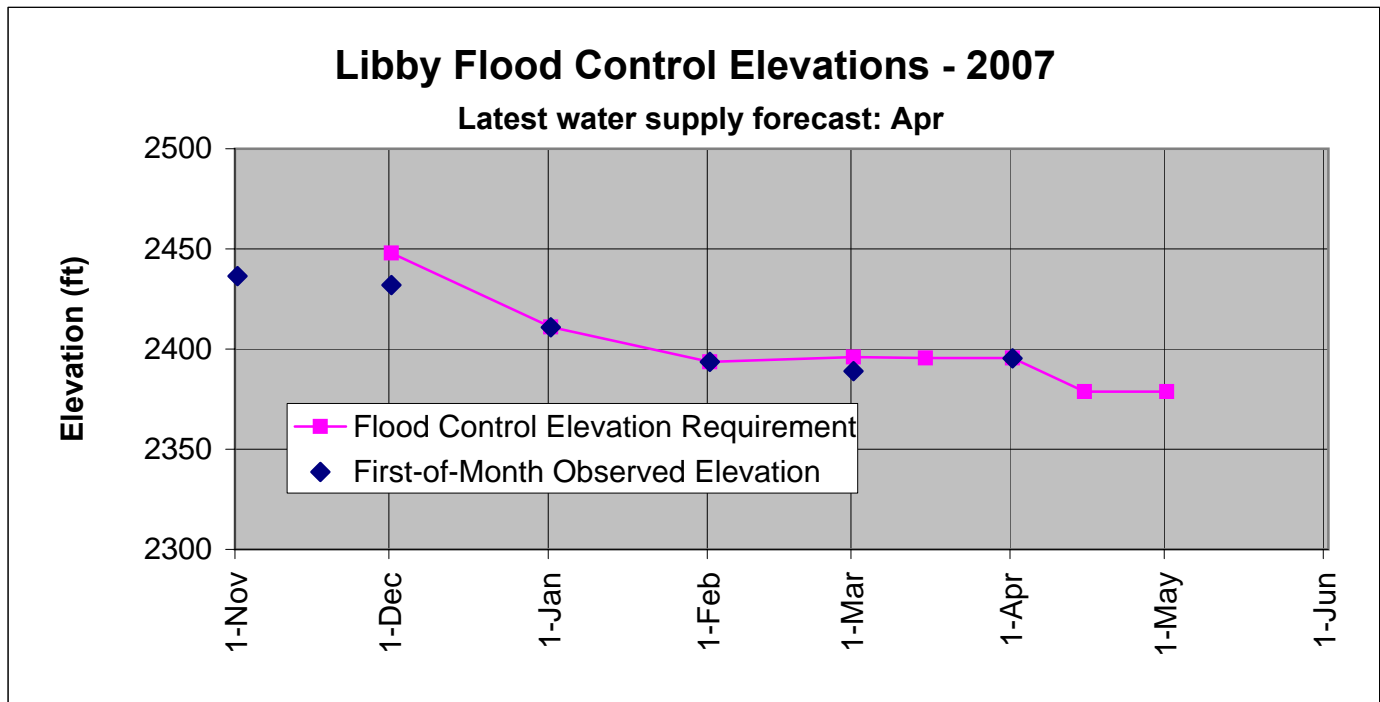
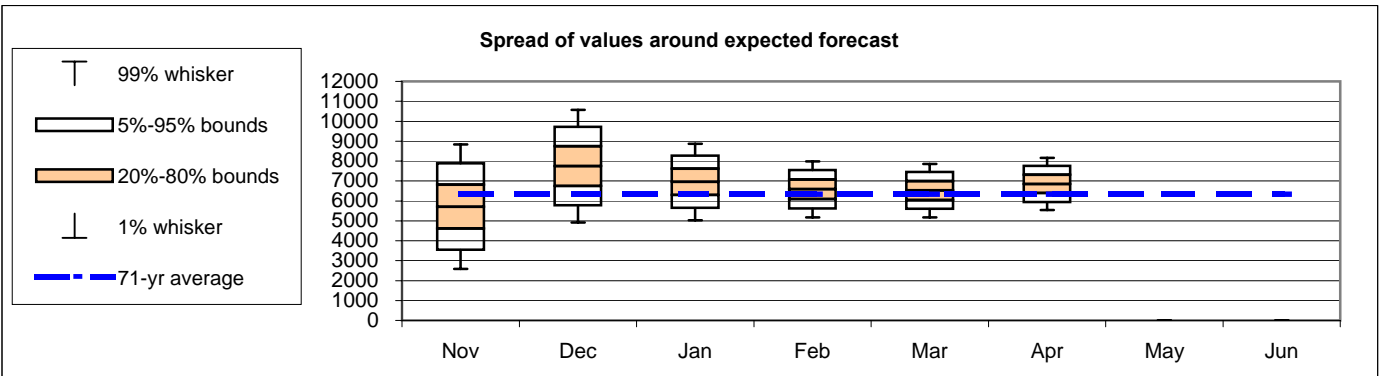
WY 2007

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	6847	KAF
	Apr-Jul	6235	KAF
	May-Jul	5669	KAF
30-Apr Flood Control Space		3020	KAF
30-Apr Flood Control Elevation		2378.7	ft

1929-1999 Average	Percent of Average
6337	108%
5771	108%
5247	108%

Seasonal Flood Control		VARQ Flood Control Implemented						
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast	5710	7745	6955	6582	6516	6847		
First-of-Month Elev	2436.4	2432.0	2410.8	2393.7	2389.0	2395.4		

Date >>	30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Control Space	500	2000	2582	2511	2524	2524	3020	3020
Flood Control Elevation	2448.0	2411.0	2393.7	2396.0	2395.5	2395.5	2378.7	2378.7



- Notes:
1. The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Ken Soderlind (503 808-3950), Patti Etzel (503 808-3958) or John McCoskery (503 808-3951).
 2. Subsequent forecasts may differ from the originally published forecast due to updated values for precipitation, snow or streamflow.
 3. Vermillion River snow measurements, with adjustments, are serving as a surrogate for Marble Canyon.

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Apr-Aug Runoff Forecast Calculation:						
Variable	Month(s)	Units	Observed Value	Percent of Average	Regression Coefficient	Marginal Runoff (KAF)
			A		B	=A*B
Glacier NP RP, BC	∑Oct,Nov,Dec Prcp	inches	23.72	109%	19.4	459.3
Kaslo, BC	∑Oct,Nov,Dec Prcp	inches	13.72	121%	43.1	591.2
Fortine 1N, MT	∑Oct,Nov,Dec Prcp	inches	4.75	121%	104.8	497.9
West Glacier, MT	∑Oct,Nov,Dec Prcp	inches	10.29	119%	46.1	474.1
Banff, AB	∑Dec-to-Mar Prcp	inches	3.87	90%	69.1	267.5
Fernie, BC	∑Dec-to-Mar Prcp	inches	19.40	100%	30.6	593.1
Cranbrook, BC	∑Dec-to-Mar Prcp	inches	4.61	85%	56.6	261.1
Libby 1 NE RS, MT	∑Dec-to-Mar Prcp	inches	7.37	101%	65.0	478.9
Vermillion R #3, BC	1-Apr SWE ³	inches	11.81	102%	----	
Marble Canyon, BC	1-Apr SWE ³	inches	15.14		47.0	712.0
East Creek, BC	1-Apr SWE	inches	46.22	127%	17.8	824.6
Hawkins Lake, MT	1-Apr SWE	inches	28.70	109%	19.9	571.9
Stahl Peak, MT	1-Apr SWE	inches	31.20	89%	19.8	617.3
Intercept			1		497.9	497.9
1-Apr Forecast (KAF)					∑	6846.9

Data used in Libby Water Supply Forecast

WY 2007

Climate Data	June	July	Aug	Sep					Units	
SOI	-0.70	-0.80	-1.60	-0.70						
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units	
Cranbrook A, BC			36.00	28.60	31.70	20.80			mm	
Fernie, BC	48.30	438.40	104.60	113.40	80.00	194.80			mm	
Glacier NP Rogrs Pass, BC	94.50	315.00	193.00						mm	
Kaslo, BC	33.40	221.00	94.00						mm	
Banff, AB			20.50	17.40	20.20	40.30			mm	
Fortine 1N, MT	1.05	2.62	1.08						inch	
West Glacier, MT	1.89	6.21	2.19						inch	
Libby 1 NE RS, MT	1.36	5.85	2.25	2.01	1.11	2.00			inch	
Snow Water Equiv				1-Jan	1-Feb	1-Mar	1-Apr	1-May	15-May	Units
Vermillion Rvr No. 3, BC				184	238	286	300			mm
East Creek, BC				555	746	875	1174			mm
Morrissey Ridge, BC										mm
Moyie Mountain, BC										mm
Sullivan Mine, BC										mm
Hawkins Lake, MT				20.0	25.0	28.7				inch
Stahl Peak, MT				21.9	27.5	31.2				inch
Streamflow				Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume				210.8	160.3	499.6				KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units	
Libby FOM Elev	2436.4	2432.0	2410.8	2393.7	2389.0	2395.4			feet	