

Libby : June Runoff Forecast & Flood Control Calculation

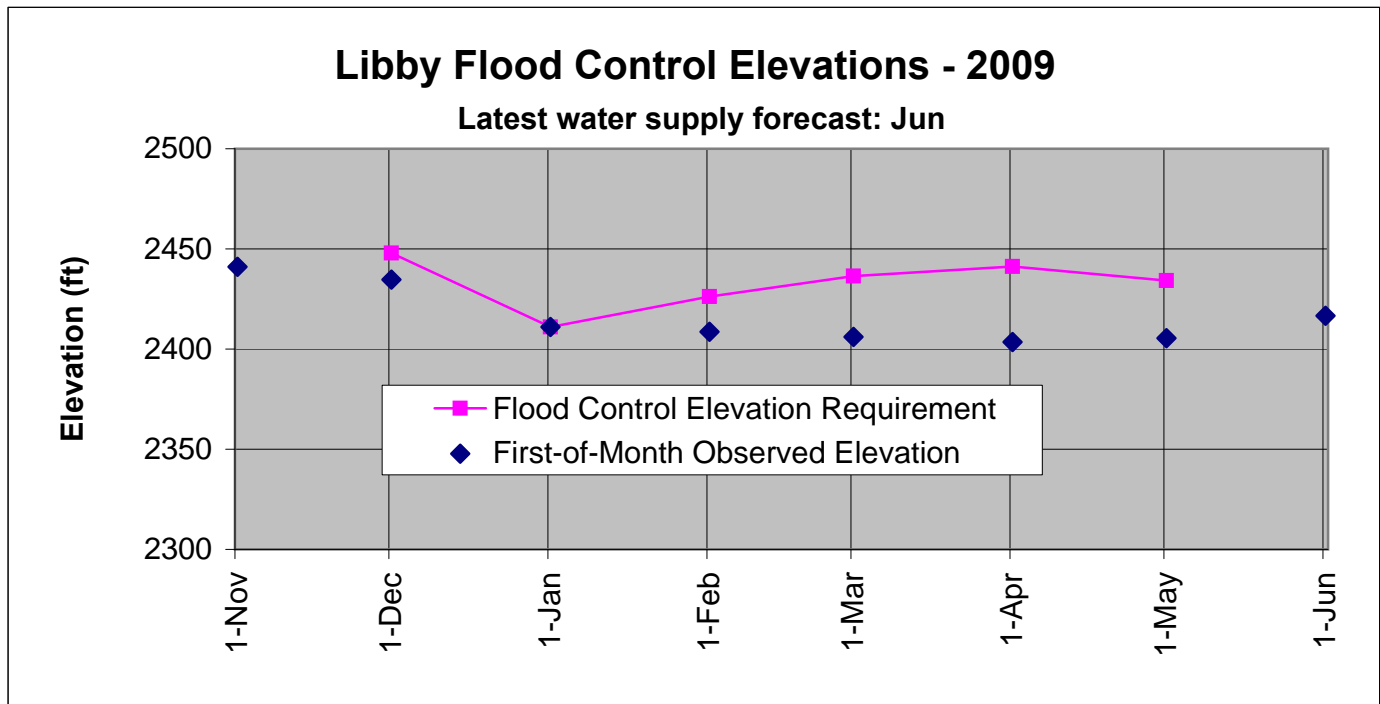
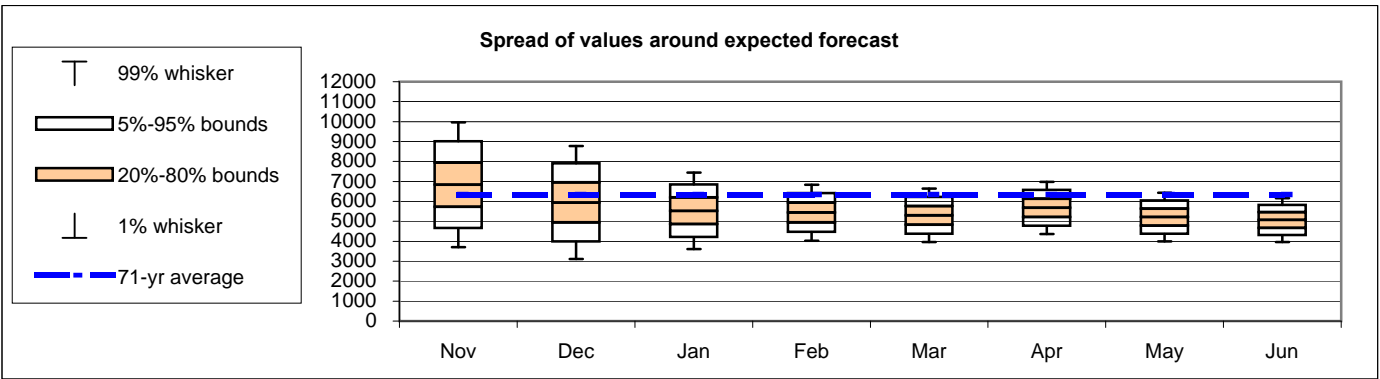
WY 2009

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	5062	KAF
	Apr-Jul	4544	KAF
	May-Jul	4241	KAF

1929-1999 Average	Percent of Average
6337	80%
5771	79%
5247	81%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast	6828	5944	5526	5436	5295	5672	5208	5062
First-of-Month Elev	2441.0	2434.7	2411.0	2408.6	2406.1	2403.5	2405.4	2416.6

Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
Flood Control Space	500	2000	1421	1000	800	1092
Flood Control Elevation	2448.0	2411.0	2426.2	2436.4	2441.1	2434.2



Notes:
 1. The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Joel Fenolio (206 764-6683), Amy Reese (206 764-3660), or Kenneth Brettman (206 764-6567).
 2. Subsequent forecasts may differ from the originally published forecast due to updated values for precipitation, snow or streamflow.

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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	ΣOct,Nov,Dec Prcp	inches	20.75	95%	9.2	191.2	
Kaslo, BC	ΣOct,Nov,Dec Prcp	inches	10.74	95%	23.9	256.6	
West Glacier, MT	ΣOct,Nov,Dec Prcp	inches	8.14	95%	30.5	248.1	
Banff, AB	May Prcp	inches	1.46	68%	54.4	79.2	
Fernie, BC	May Prcp	inches	2.78	88%	42.7	118.5	
Cranbrook, BC	May Prcp	inches	0.76	46%	167.2	126.4	
Morrissey Ridge, BC	1-May SWE	inches	23.31	85%	18.7	435.9	
Hawkins Lake, MT	1-May SWE	inches	27.30	98%	19.4	529.8	
Stahl Peak, MT	1-May SWE	inches	32.50	89%	20.5	664.7	
East Creek, BC	15-May SWE	inches	28.94	79%	12.5	360.5	
Sullivan Mine, BC	15-May SWE	inches	7.32	177%	37.7	276.0	
Moyie Mtn, BC	15-May SWE	inches	16.69	166%	28.811	480.9	
Intercept			1		-34.7	-34.7	
1-June Jun-Aug Forecast (KAF)						Σ	3733.2
Libby Inflow (KAF)	April	304	58%	May	1025	59%	
1-June Apr-Aug Forecast (KAF)							5062.1

Data used in Libby Water Supply Forecast

WY 2009

Climate Data	June	July	Aug	Sep					
SOI	0.30	0.20	0.80	1.50					
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Cranbrook A, BC			49.80	8.40	17.00	49.20	25.10	19.20	mm
Fernie, BC	74.00	68.30	85.00	77.00	57.00	91.20	40.90	70.50	mm
Glacier NP Rogrs Pass, BC	164.40	174.60	188.00						mm
Kaslo, BC	82.00	91.60	99.20						mm
Banff, AB			39.10	12.00	24.50	24.00	17.40	37.00	mm
Fortine 1N, MT	0.46	0.65	1.84						inch
West Glacier, MT	1.37	3.20	3.57						inch
Libby 1 NE RS, MT	0.62	0.76	2.75	2.20	1.51	2.55			inch
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	15-May	Units
Vermillion Rvr No. 3, BC			126	192	202	264			mm
East Creek, BC			326	424	503	608	660	735	mm
Morrissey Ridge, BC							592		mm
Moyie Mountain, BC								424	mm
Sullivan Mine, BC								186	mm
Hawkins Lake, MT				13.3	15.3	23.8	27.3		inch
Stahl Peak, MT				18.4	22.5	30.7	32.5		inch
Streamflow			Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			166.0	130.0	154.7	303.7	1025.3		KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2441.0	2434.7	2411.0	2408.6	2406.1	2403.5	2405.4	2416.6	feet