

Libby : June Runoff Forecast & Flood Control Calculation

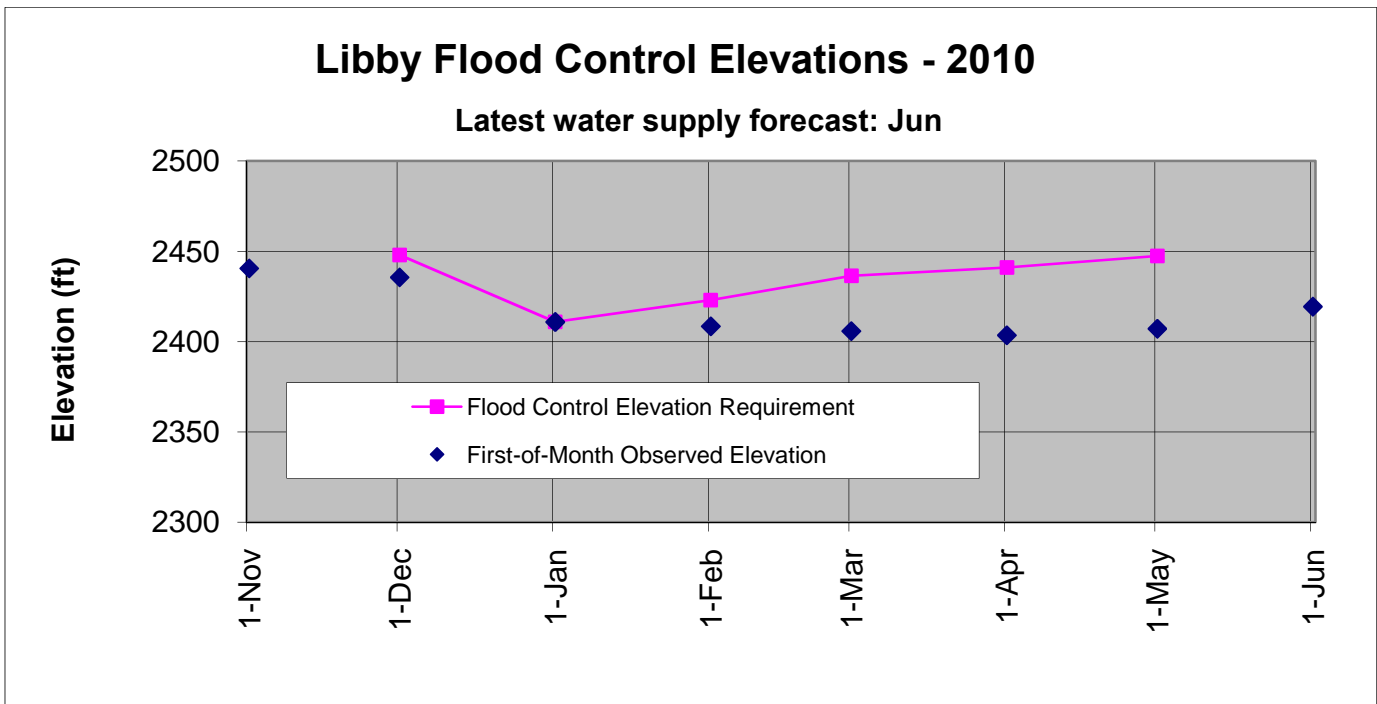
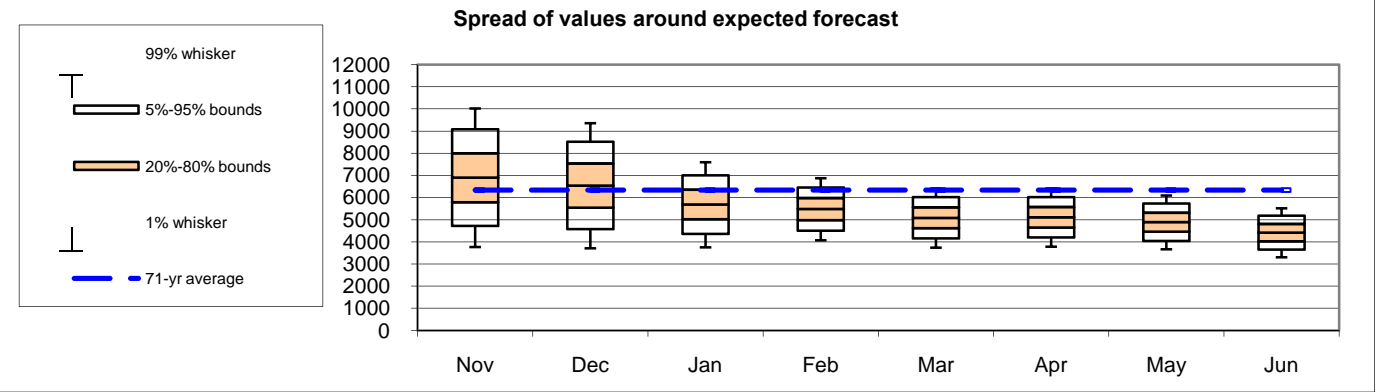
WY 2010

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	4413	KAF
	Apr-Jul	3981	KAF
	May-Jul	3617	KAF

1929-1999 Average	Percent of Average
6337	70%
5771	69%
5247	69%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast	6895	6544	5682	5478	5084	5103	4887	4413
First-of-Month Elev	2440.5	2435.6	2410.9	2408.5	2405.9	2403.6	2407.2	2419.4

Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
Flood Control Space	500	2000	1546	1000	800	522
Flood Control Elevation	2448.0	2411.0	2423.0	2436.4	2441.1	2447.5



Notes:

- 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).
- 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	22.87	105%	9.2	210.8	
Kaslo, BC	ΣOct,Nov,Dec Prcp	inches	11.95	105%	23.9	285.6	
West Glacier, MT	ΣOct,Nov,Dec Prcp	inches	8.06	94%	30.5	245.7	
Banff, AB	May Prcp	inches	0.52	24%	54.4	28.5	
Fernie, BC	May Prcp	inches	3.02	95%	42.7	129.1	
Cranbrook, BC	May Prcp	inches	1.90	116%	167.2	317.2	
Morrissey Ridge, BC	1-May SWE	inches	17.72	64%	18.7	331.3	
Hawkins Lake, MT	1-May SWE	inches	19.80	71%	19.4	384.2	
Stahl Peak, MT	1-May SWE	inches	34.00	93%	20.5	695.4	
East Creek, BC	15-May SWE	inches	29.69	82%	12.5	369.8	
Sullivan Mine, BC	15-May SWE	inches	0.00	0%	37.7	0.0	
Moyie Mtn, BC	15-May SWE	inches	5.12	51%	28.811	147.5	
Intercept			1		-34.7	-34.7	
1-June Jun-Aug Forecast (KAF)						Σ	3110.4
Libby Inflow (KAF)	April	364	69%	May	938	54%	
1-June Apr-Aug Forecast (KAF)							4412.5

Data used in Libby Water Supply Forecast

WY 2010

Climate Data	June	July	Aug	Sep					
SOI	-0.30	0.10	-0.70	0.30					
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Cranbrook A, BC			23.20	29.40	4.20	13.40	27.00	48.20	mm
Fernie, BC	101.10	82.30	85.70	43.00	19.60	98.70	58.80	76.80	mm
Glacier NP Rogrs Pass, BC	179.40	258.50	143.00						mm
Kaslo, BC	126.60	95.20	81.80						mm
Banff, AB			9.90	11.10	1.40	17.20	30.90	13.30	mm
Fortine 1N, MT	1.82	0.73	1.53						inch
West Glacier, MT	3.18	1.38	3.50						inch
Libby 1 NE RS, MT	1.98	1.16	1.23	1.28	0.32	1.39			inch
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	15-May	Units
Vermillion Rvr No. 3, BC			123	175	202	231			mm
East Creek, BC			450	585	615	727	757	754	mm
Morrissey Ridge, BC							450		mm
Moyie Mountain, BC								130	mm
Sullivan Mine, BC								0	mm
Hawkins Lake, MT				13.8	15.5	19.9	19.8		inch
Stahl Peak, MT				20.8	24.7	29.8	34.0		inch
Streamflow			Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			162.3	130.0	164.0	364.0	938.2		KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2440.5	2435.6	2410.9	2408.5	2405.9	2403.6	2407.2	2419.4	feet