

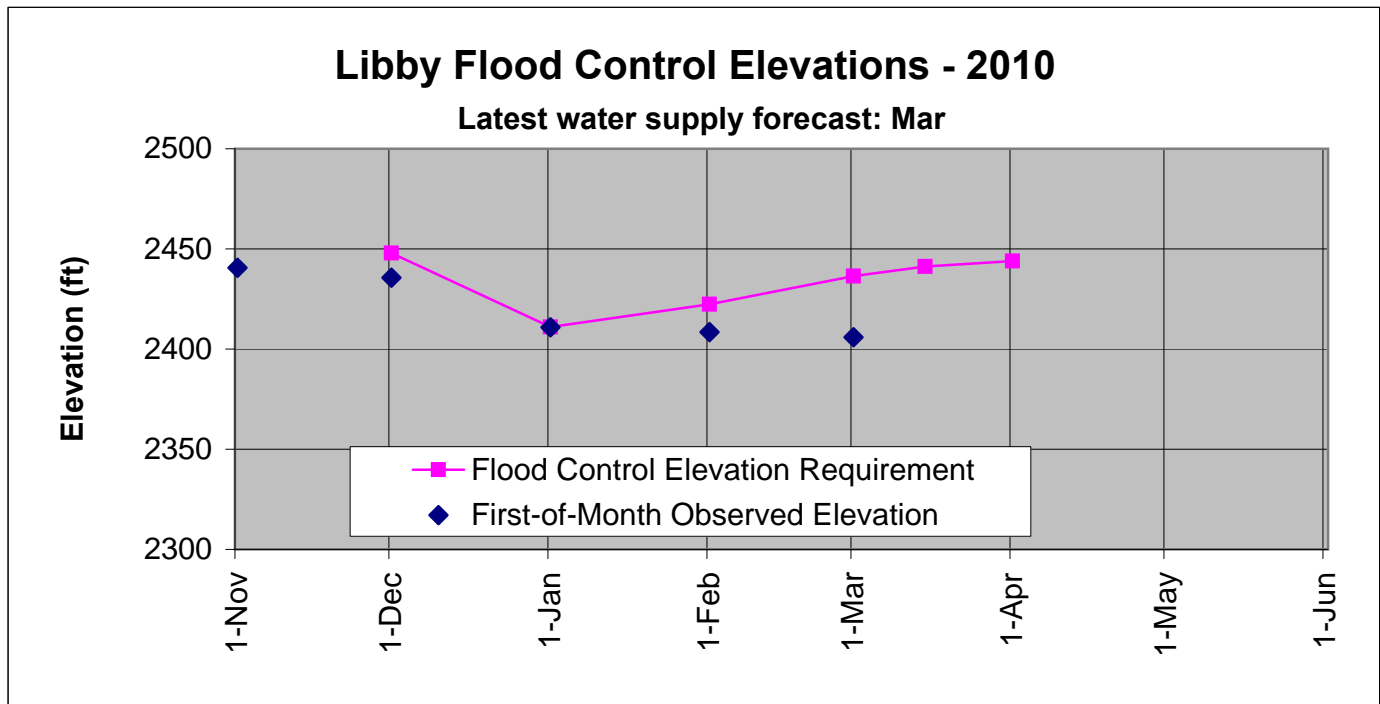
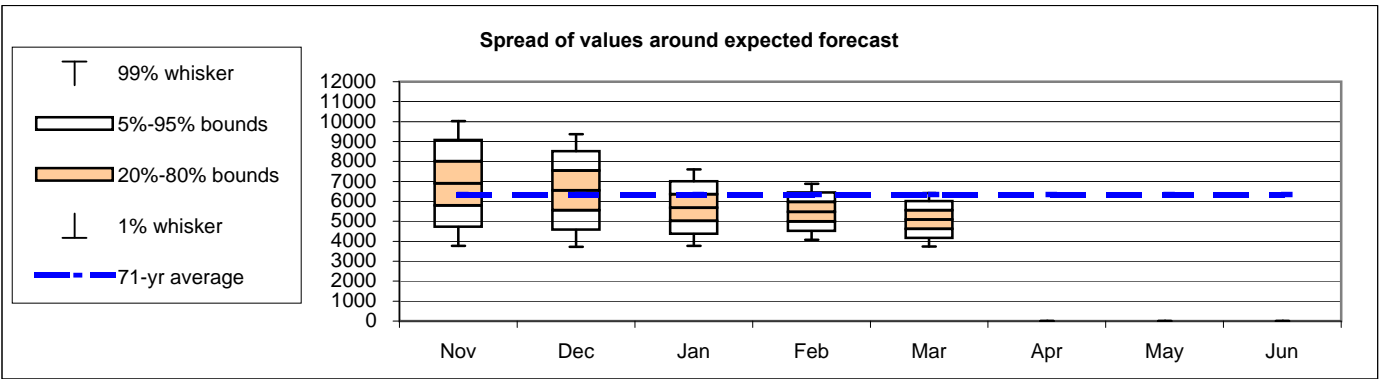
Libby : March Runoff Forecast & Flood Control Calculation

WY 2010

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	5084	KAF
	Apr-Jul	4630	KAF
	May-Jul	4209	KAF
31-Mar Flood Control Space		675	KAF
31-Mar Flood Control Elevation		2444.0	ft

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

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			
First-of-Month Elev	2440.5	2435.6	2410.9	2408.5	2405.9			
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Control Space	500	2000	1546	1000	800	675		
Flood Control Elevation	2448.0	2411.0	2422.4	2436.4	2441.1	2444.0		



- 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.
 - 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	ΣOct,Nov,Dec Prcp	inches	22.87	105%	19.6	448.9
Kaslo, BC	ΣOct,Nov,Dec Prcp	inches	11.95	105%	41.4	494.9
Fortine 1N, MT	ΣOct,Nov,Dec Prcp	inches	4.08	104%	103.4	422.0
West Glacier, MT	ΣOct,Nov,Dec Prcp	inches	8.06	94%	45.1	363.4
Banff, AB	ΣDec,Jan.Feb Prcp	inches	0.88	26%	74.3	65.5
Fernie, BC	ΣDec,Jan.Feb Prcp	inches	5.84	37%	31.4	183.2
Cranbrook, BC	ΣDec,Jan.Feb Prcp	inches	2.24	49%	56.9	127.2
Libby 1 NE RS, MT	ΣDec,Jan.Feb Prcp	inches	2.83	47%	72.3	204.6
Vermillion R #3, BC	1-Mar SWE ³	inches	7.95	70%	----	
Marble Canyon, BC	1-Mar SWE ³	inches	9.73		44.3	431.2
East Creek, BC	1-Mar SWE	inches	24.21	78%	18.3	442.4
Hawkins Lake, MT	1-Mar SWE	inches	15.50	70%	22.0	341.7
Stahl Peak, MT	1-Mar SWE	inches	24.70	83%	20.6	508.3
Intercept			1		1050.8	1050.8
1-Mar Forecast (KAF)					Σ	5084.2

Data used in Libby Water Supply Forecast

WY 2010

Climate Data	June	July	Aug	Sep					Units
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				mm
Fernie, BC	101.10	82.30	85.70	43.00	19.60				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				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				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				mm
East Creek, BC			450	585	615				mm
Morrissey Ridge, BC									mm
Moyie Mountain, BC									mm
Sullivan Mine, BC									mm
Hawkins Lake, MT				13.8	15.5				inch
Stahl Peak, MT				20.8	24.7				inch
Streamflow			Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			162.3	130.0					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				feet