

Libby : April Runoff Forecast & Flood Control Calculation

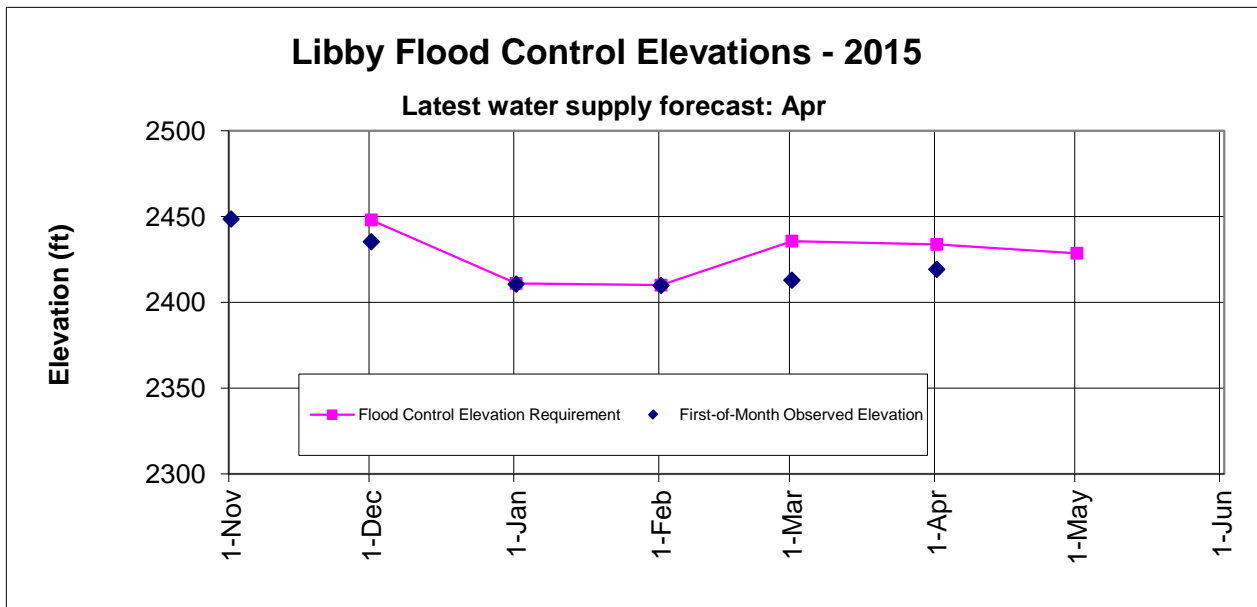
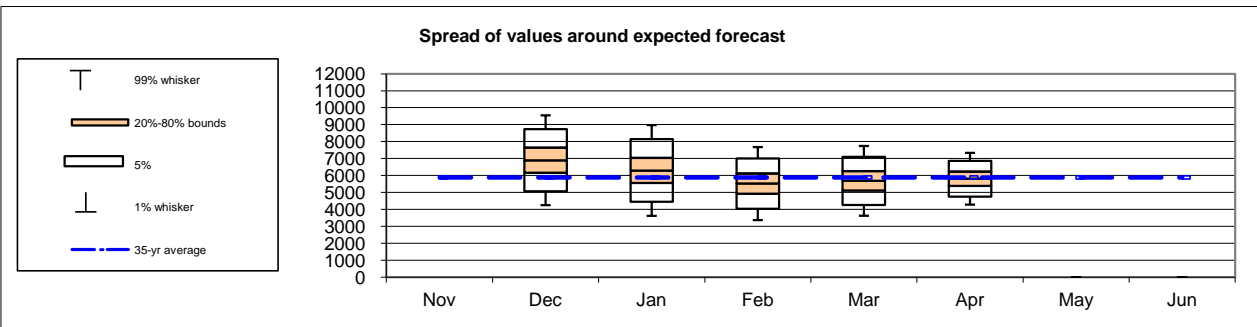
WY 2015

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	5808	KAF
	Apr-Jul	5272	KAF
	May-Jul	4758	KAF
30-Apr Flood Control Space		1324	KAF
30-Apr Flood Control Elevation		2428.6	ft

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	99%	6282	92%
5342	99%	5720	92%
4821	99%	5199	92%

Seasonal Flood Control							
VARQ Flood Control Implemented							
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May
Apr-Aug Runoff Forecast		6899	6297	5523	5683	5808	
First-of-Month Elev	2448.5	2435.3	2410.6	2409.8	2412.9	2419.2	

Date >>	30-Nov	31-Dec	31-Jan	28/29-Feb	31-Mar	30-Apr
Flood Control Space	500	2000	2037	1032	1112	1324
Flood Control Elevation	2448.0	2411.0	2410.0	2435.7	2433.8	2428.6



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 or Kevin Shaffer (206) 764-3660.
2. If a prior month's forecast as published in this document is different than what was originally published in the issue month, then the earlier forecast has been adjusted to reflect updated values for precipitation 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
SOI	∑Jun:Jul					
Eureka RS, MT	∑Oct:Mar Prcp	inches	8.18	140%	68.5	560.5
West Glacier, MT	∑Oct:Mar Prcp	inches	21.45	130%	29.5	632.1
Cranbrook A, BC	∑Oct:Mar Prcp	millimeters	198.70	125%	3.0	594.1
Fernie, BC	∑Oct:Mar Prcp	millimeters	863.50	128%	0.7	613.1
Hawkins Lake, MT	1-Apr SWE	inches	21.10	84%	22.4	473.3
Stahl Peak, MT	1-Apr SWE	inches	27.90	80%	19.7	549.6
East Creek, BC	1-Apr SWE	millimeters	872.00	101%	0.7	636.6
Moyie Mountain, BC	1-Apr SWE	millimeters	265.00	62%	1.2	320.7
Sunshine Village, AB	1-Apr SWE	millimeters	447.00	79%	1.4	639.2
Akamina Pass, AB	1-Apr SWE	millimeters	293.00	63%	0.7	211.0
South Racehorse Creek, AB	1-Apr SWE	millimeters	376.00	88%	1.4	507.6
Intercept			1		70.5	70.5
	1-Feb Forecast (KAF)				∑	5808.2

Data used in Libby Water Supply Forecast

WY 2015

	Jan-14	Feb-14	Mar-14	Jun-14	Jul-14	Oct-14	Nov-14	Dec-14	Jan-15
Climate Data									
SOI				0.20	-0.20				
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT	0.55	2.42	1.22	1.21	0.65	2.13			inch
West Glacier, MT	2.64	5.77	4.07	3.08	2.58	3.31			inch
Cranbrook A, BC	29.40	53.60	25.50	22.90	20.20	47.10			mm
Fernie, BC	126.90	273.00	95.00	93.00	81.00	194.60			mm
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Hawkins Lake, MT				12	16	21			inch
Stahl Peak, MT			15	19	24	28			inch
East Creek, BC				537	706	872			mm
Moyie Mountain, BC			131	193	228	265			mm
Sunshine Village, AB			200	266	372	447			mm
Akamina Pass, AB				230	290	293			mm
South Racehorse Creek, AB				234	303	376			mm
Streamflow				Jan	Feb	Mar	Apr	May	Units
Libby Inflow Volume				220.6	335.4	485.2			KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2448.5	2435.3	2410.6	2409.8	2412.9	2419.2			feet

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