

# Libby : June Runoff Forecast & Flood Control Calculation

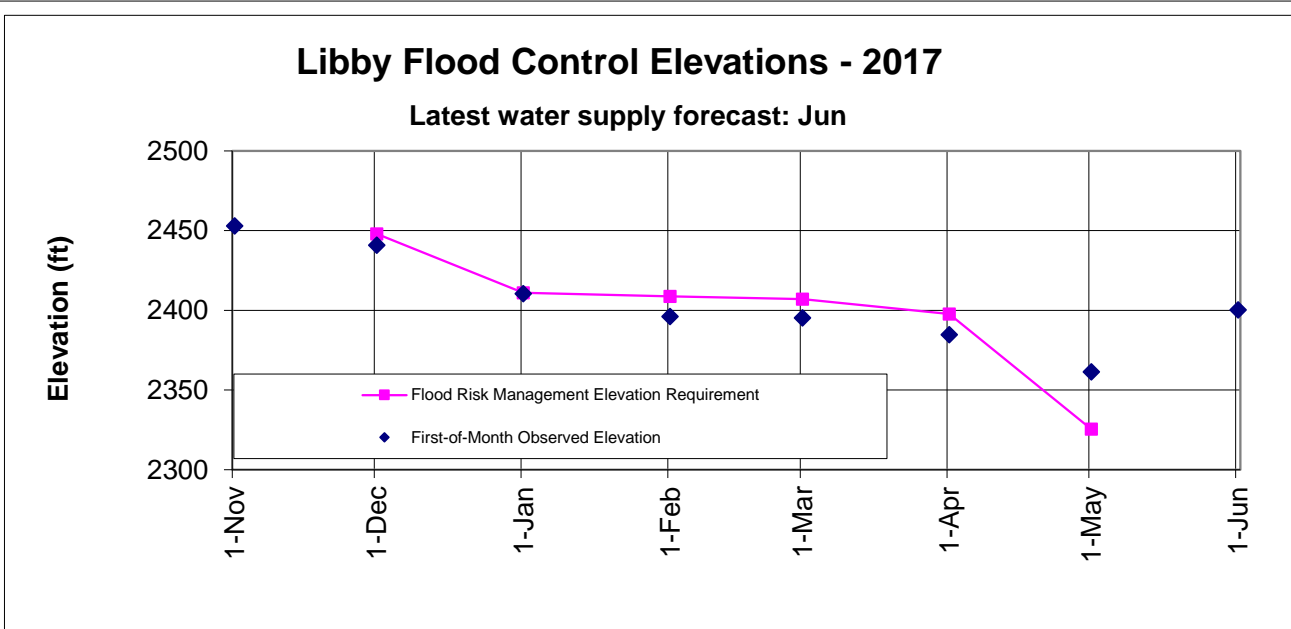
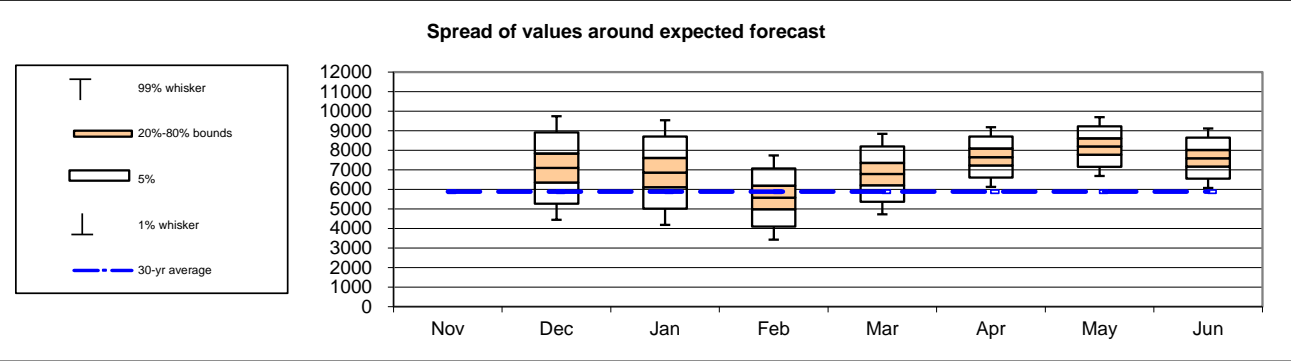
WY 2017

Runoff Forecast and Flood Control				1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
<b>Most Probable Runoff Volume:</b>	<b>Apr-Aug</b>	<b>7594</b>	<b>KAF</b>	5885	129%	6282	121%
	<b>Apr-Jul</b>	<b>6939</b>	<b>KAF</b>	5342	130%	5720	121%
	<b>May-Jul</b>	<b>6202</b>	<b>KAF</b>	4821	129%	5199	119%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Apr-Aug Runoff Forecast</b>		7093	6861	5583	6783	7654	8190	7594
<b>First-of-Month Elev</b>	2452.9	2440.9	2410.5	2396.2	2395.2	2384.7	2361.5	2400.3

Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
<b>Flood Control Space</b>	500	2000	2083	2145	2453	4303
<b>Flood Control Elevation</b>	2448.0	2411.0	2408.7	2407.0	2397.8	2325.4



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, Kristy Riley (206) 316-3947, Kevin Shaffer (206) 764-3660, Logan Osgood-Jacobs (206) 764-6928, or Kristian Mickelson (206) 764-6927.
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.
3. October Precip capped at Mean plus 2 standard deviations. A memo to NWD summarizes the methodology used.

# Libby : June Runoff Forecast & Flood Control Calculation

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:May Prcp	inches	11.71	135%	37.7	440.9
West Glacier, MT	∑Oct:May Prcp	inches	27.44	130%	22.5	616.3
Cranbrook A, BC	∑Oct:May Prcp	millimeters	339.93	147%	2.0	690.1
Fernie, BC	∑Oct:May Prcp	millimeters	950.92	112%	0.5	477.4
Hawkins Lake, MT	1-Jun SWE	inches	14.80	117%	10.1	149.4
Stahl Creek, MT	1-Jun SWE	inches	42.60	147%	10.3	439.1
East Creek, BC	1-Jun SWE	millimeters	938.00	128%	0.4	405.5
Moyie Mountain, BC	1-Jun SWE	millimeters	3.00	3%	0.8	2.5
Sunshine Village, AB	1-Jun SWE	millimeters	585.00	123%	0.6	363.5
Akamina Pass, AB	1-Jun SWE	millimeters	0.00	0%	0.7	0.0
South Racehorse Creek, AB	1-Jun SWE	millimeters	1.00	1%	0.6	0.6
Intercept			1		978.0	978.0
	1-June Forecast (KAF)				∑	4563.3

## Data used in Libby Water Supply Forecast

WY 2017

Climate Data				Jun-16	Jul-16				
SOI				0.60	0.40				
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT	2.34	1.07	1.53	0.57	3.12	1.27	1.23	0.58	inch
West Glacier, MT	5.91	2.71	2.27	1.32	3.53	5.53	4.83	1.34	inch
Cranbrook A, BC	54.93	20.20	46.60	16.80	83.80	51.60	37.00	29.00	mm
Fernie, BC	238.07	157.00	76.00	33.00	168.00	124.00	114.85	40.00	mm
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Hawkins Lake, MT				12	22	30	34	15	inch
Stahl Creek, MT			21	22	33	40	50	43	inch
East Creek, BC				527	711	1020	1170	938	mm
Moyie Mountain, BC			171	221	376	560	587	3	mm
Sunshine Village, AB			281	388	514	681	810	585	mm
Akamina Pass, AB				188	368	516	472	0	mm
South Racehorse Creek, AB				206	340	506	407	1	mm
Streamflow			Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			227.9	203.7	452.8	737.0	2293.7		KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2452.9	2440.9	2410.5	2396.2	2395.2	2384.7	2361.5	2400.3	feet

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