

# Libby: May Runoff Forecast & Flood Risk Management Calculation

WY 2016

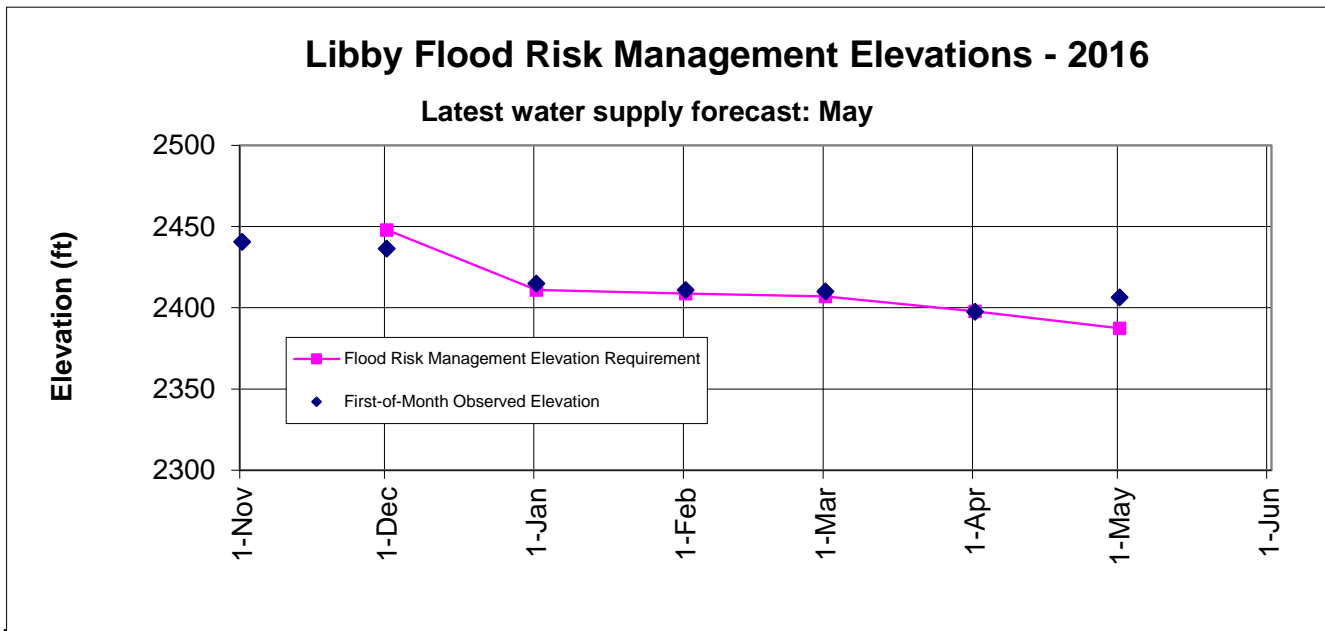
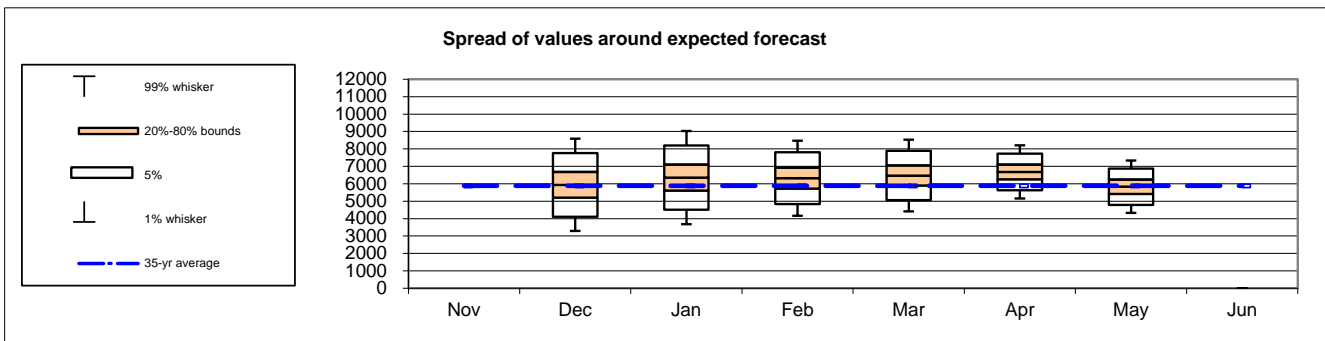
Runoff Forecast and Flood Risk Management			
<b>Most Probable Runoff Volume:</b>	<b>Apr-Aug</b>	<b>5831</b>	<b>KAF</b>
	<b>Apr-Jul</b>	<b>5357</b>	<b>KAF</b>
	<b>May-Jul</b>	<b>4207</b>	<b>KAF</b>

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	99%	6282	93%
5342	100%	5720	94%
4821	87%	5199	81%

Seasonal Flood Risk Management VARQ Flood Risk Management Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Apr-Aug Runoff Forecast</b>		5940	6354	6318	6472	6681	5831	
<b>First-of-Month Elev</b>	2440.7	2436.5	2415.0	2411.0	2410.1	2397.6	2406.5	

Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
<b>d Risk Management Space</b>	500	2000	2083	2145	2453	2772
<b>Risk Management Elevation</b>	2448.0	2411.0	2408.7	2407.0	2397.8	2387.4



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, Kristy Riley (206) 316-3947, Kevin Shaffer (206) 764-3660, Adam Price (206) 764-3604, or Kristian Mickelson (206) 764-6927.
- 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.

# Libby: May Runoff Forecast & Flood Risk Management 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:Apr Prcp	inches	8.89	131%	57.5	510.7
West Glacier, MT	∑Oct:Apr Prcp	inches	19.63	106%	28.0	550.4
Cranbrook A, BC	∑Oct:Apr Prcp	millimeters	206.90	112%	2.8	579.3
Fernie, BC	∑Oct:Apr Prcp	millimeters	790.40	104%	0.6	482.1
Hawkins Lake, MT	1-May SWE	inches	20.90	79%	17.3	361.6
Stahl Creek, MT	1-May SWE	inches	34.10	91%	16.7	570.8
East Creek, BC	1-May SWE	millimeters	791.00	86%	0.6	450.9
Moyie Mountain, BC	1-May SWE	millimeters	0.00	0%	0.9	0.0
Sunshine Village, AB	1-May SWE	millimeters	479.00	78%	1.3	603.5
Akamina Pass, AB	1-May SWE	millimeters	73.00	22%	0.6	40.2
South Racehorse Creek, AB	1-May SWE	millimeters	148.00	41%	0.8	122.8
Intercept			1		408.0	408.0
	1-May Forecast (KAF)				∑	4680.4

## Data used in Libby Water Supply Forecast

WY 2016

Climate Data									Units	
SOI				Jun-15	Jul-15					
				-0.60	-1.10					
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units	
Eureka RS, MT	1.37	1.73	2.69	1.33	0.59	0.51	0.67		inch	
West Glacier, MT	1.93	2.45	4.62	3.07	2.68	3.68	1.20		inch	
Cranbrook A, BC	16.60	49.30	50.80	38.00	17.20	29.00	6.00		mm	
Fernie, BC	104.00	198.40	172.00	104.00	85.00	112.00	15.00		mm	
Snow Water Equiv				1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Hawkins Lake, MT				17	23	30	21			inch
Stahl Creek, MT			15	24	32	39	34			inch
East Creek, BC				691	846	1006	791			mm
Moyie Mountain, BC			185	286	353	406	0			mm
Sunshine Village, AB			252	291	414	541	479			mm
Akamina Pass, AB				283	320	464	73			mm
South Racehorse Creek, AB				286	361	429	148			mm
Streamflow				Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			189.4	199.1	294.0	1150.6				KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units	
Libby FOM Elev	2440.7	2436.5	2415.0	2411.0	2410.1	2397.6	2406.5		feet	

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