

# Libby : June Runoff Forecast & Flood Control Calculation

WY 2014

Runoff Forecast and Flood Control			
<b>Most Probable Runoff Volume:</b>	<b>Apr-Aug</b>	<b>7074</b>	<b>KAF</b>
	<b>Apr-Jul</b>	<b>6425</b>	<b>KAF</b>
	<b>May-Jul</b>	<b>5964</b>	<b>KAF</b>

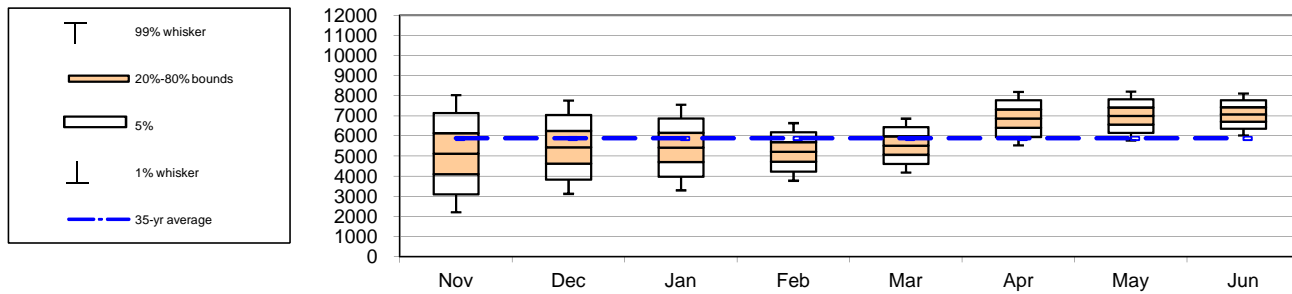
1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	120%	6282	113%
5342	120%	5720	112%
4821	124%	5199	115%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Apr-Aug Runoff Forecast</b>	5125	5446	5432	5213	5528	6868	6996	7074
<b>First-of-Month Elev</b>	2452.5	2437.4	2426.3	2424.9	2422.8	2418.6	2387.9	2413.8

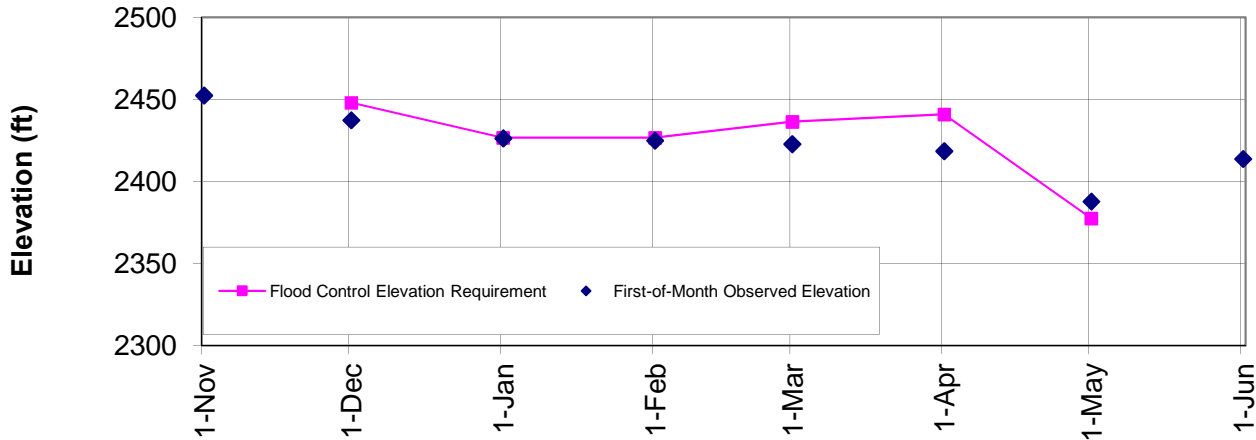
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
<b>Flood Control Space</b>	500	1400	1400	1000	809	3051
<b>Flood Control Elevation</b>	2448.0	2426.7	2426.7	2436.4	2440.9	2377.6

Spread of values around expected forecast



## Libby Flood Control Elevations - 2014

Latest water supply forecast: Jun



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, Kevin Shaffer (206) 764-3660, Adam Price (206) 764-3604, 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.

# 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
QBO	∑Jan:Mar		-4.45		-1.8	8.1
PNA	∑Oct:Jan		-1.92		-72.4	139.0
West Glacier, MT	∑Jan:May Prcp	inches	16.09	127%	87.2	1403.7
Fernie, BC	∑Jan:May Prcp	inches	18.54	92%	35.9	665.8
East Creek, BC	1-Jun SWE	inches	29.84	105%	21.9	654.6
Stahl Peak, MT	1-Jun SWE	inches	36.90	134%	22.0	813.5
Gardiner Creek, AB	1-Jun SWE	inches	19.06	139%	16.3	309.7
Intercept			1		526.2	526.2
1-June Jun-Aug Forecast (KAF)						∑ 4520.6
Libby Inflow (KAF)	April	461	88%	May	2092	132%
1-June Apr-Aug Forecast (KAF)						7073.5

## Data used in Libby Water Supply Forecast

	WY 2014									
Climate Data	Jan-13	Feb-13	Mar-13	Jun-13	Jul-13	Oct-13	Nov-13	Dec-13	Jan-14	
SOI				1.20	0.80					
QBO	-6.07	-1.23	2.85							
PNA						-0.21	-1.14	-1.16	0.59	
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units	
Eureka, MT	0.37	1.16	0.77	1.06	0.73					inch
Libby 1 NE RS, MT	0.59	2.22	1.20	1.08	1.96					inch
West Glacier, MT	0.55	4.31	2.66	3.37	2.05	6.49	2.17	2.01		inch
Fernie, BC	27.50	128.50	210.00	91.50	64.00	161.81	27.47	126.02		mm
Snow Water Equiv				1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Floe Lake, BC				274	408	519				mm
Sunshine Village, AB				236	329	409	593	644		mm
East Creek, BC				335	471	581	910	1167	758	mm
Stahl Peak, MT				15	21	26	40	44	37	inch
Gardiner Creek, AB				257	352	488	753	810	484	mm
Three Isle Lake, AB				213	279	352	522			mm
Lost Creek South, AB				273	408	535				mm
Morrissey Ridge, BC				286	401	537				mm
Hawkins Lake, MT				8	14	20				inch
Streamflow				Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume				190.4	137.7	255.5	460.6	2092.4		KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units	
Libby FOM Elev	2452.5	2437.4	2426.3	2424.9	2422.8	2418.6	2387.9	2413.8		feet

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