

# Libby : June Runoff Forecast & Flood Control Calculation

WY 2011

Runoff Forecast and Flood Control			
<b>Most Probable Runoff Volume:</b>	<b>Apr-Aug</b>	<b>8099</b>	<b>KAF</b>
	<b>Apr-Jul</b>	<b>7185</b>	<b>KAF</b>
	<b>May-Jul</b>	<b>6874</b>	<b>KAF</b>

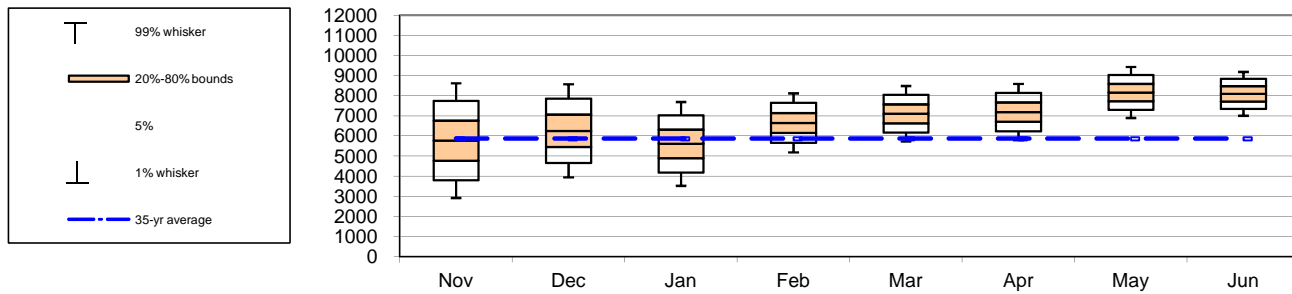
1975-2009 Average	Percent of Average	1929-1999 Average	Percent of Average
5865	138%	6337	128%
5303	135%	5771	125%
4797	143%	5247	131%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Apr-Aug Runoff Forecast</b>	5775	6262	5610	6656	7111	7191	8165	8099
<b>First-of-Month Elev</b>	2441.5	2434.2	2411.9	2410.2	2391.1	2364.6	2349.9	2367.8

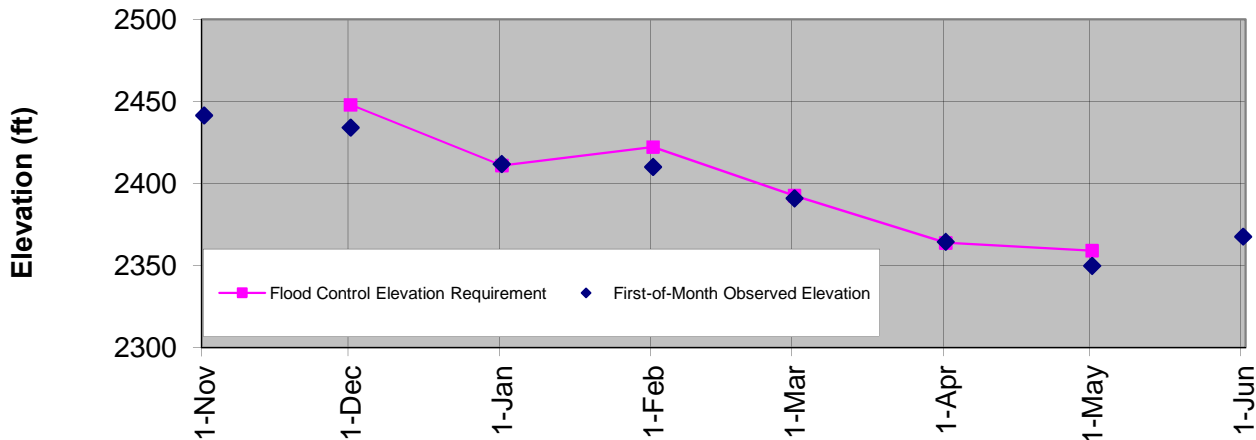
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
<b>Flood Control Space</b>	500	2000	1488	2612	3416	3536
<b>Flood Control Elevation</b>	2448.0	2411.0	2422.3	2392.7	2364.0	2359.2

Spread of values around expected forecast



## Libby Flood Control Elevations - 2011

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, Amy Reese (206) 764-3660, or Kristian Mickelson (206 ) 764-6927.
2. Subsequent forecasts may differ from the originally published forecast due to updated values for precipitation, snow 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		-52.68		-1.5	78.9	
PNA	∑Oct:Jan		-0.12		-71.1	8.5	
West Glacier, MT	∑Jan:May Prcp	inches	20.66	176%	85.8	1772.8	
Fernie, BC	∑Jan:May Prcp	inches	25.69	128%	37.1	952.1	
East Creek, BC	1-Jun SWE	inches	38.23	134%	21.5	821.3	
Stahl Peak, MT	1-Jun SWE	inches	57.40	208%	22.1	1271.2	
Gardiner Creek, AB	1-Jun SWE	inches	37.57	274%	16.468	618.7	
Intercept			1		579.2	579.2	
1-June Jun-Aug Forecast (KAF)						∑	6102.8
Libby Inflow (KAF)	April	311	61%	May	1685	105%	
1-June Apr-Aug Forecast (KAF)							8099.2

### Data used in Libby Water Supply Forecast

WY 2011

Climate Data	Jan-10	Feb-10	Mar-10	Jun-10	Jul-10	Oct-10	Nov-10	Dec-10	Jan-11
SOI				0.10	2.00				
QBO	-16.02	-16.98	-19.68						
PNA						1.80	-0.84	-2.08	1.00
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka, MT	0.52	2.11	0.84	1.13	1.14				inch
Libby 1 NE RS, MT	1.27	2.65	2.71	2.21	1.76				inch
West Glacier, MT	2.36	3.65	4.53	6.32	2.35	4.01	4.72	3.26	inch
Fernie, BC	73.50	174.70	97.89	217.30	126.00	67.60	142.00	99.50	mm
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Floe Lake, BC			251	458	623				mm
Sunshine Village, AB			167	335	461	615	731		mm
East Creek, BC			296	574	758	941	1080	971	mm
Stahl Peak, MT			20	30	37	48	59	57	inch
Gardiner Creek, AB			334	521	647	812	1019	954	mm
Three Isle Lake, AB			165	301	366	501			mm
Lost Creek South, AB			162	341	459				mm
Morrissey Ridge, BC			233	521	578				mm
Hawkins Lake, MT			11	17	26				inch
Streamflow			Jan	Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume			217.0	173.6	217.4	311.0	1685.4		KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2441.5	2434.2	2411.9	2410.2	2391.1	2364.6	2349.9	2367.8	feet