

Libby : June Runoff Forecast & Flood Control Calculation

WY 2018

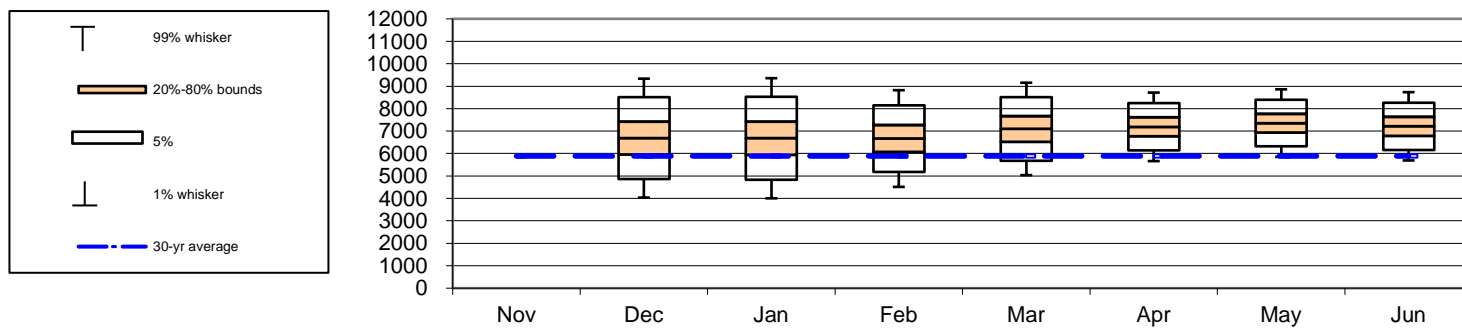
Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	7213	KAF
	Apr-Jul	6681	KAF
	May-Jul	6222	KAF

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	123%	6282	115%
5342	125%	5720	117%
4821	129%	5199	120%

Seasonal Flood Control VARQ Flood Control Implemented								
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast		6687	6681	6668	7096	7189	7356	7213
First-of-Month Elev	2441.8	2436.5	2410.6	2401.8	2385.9	2358.4	2363.5	2430.5

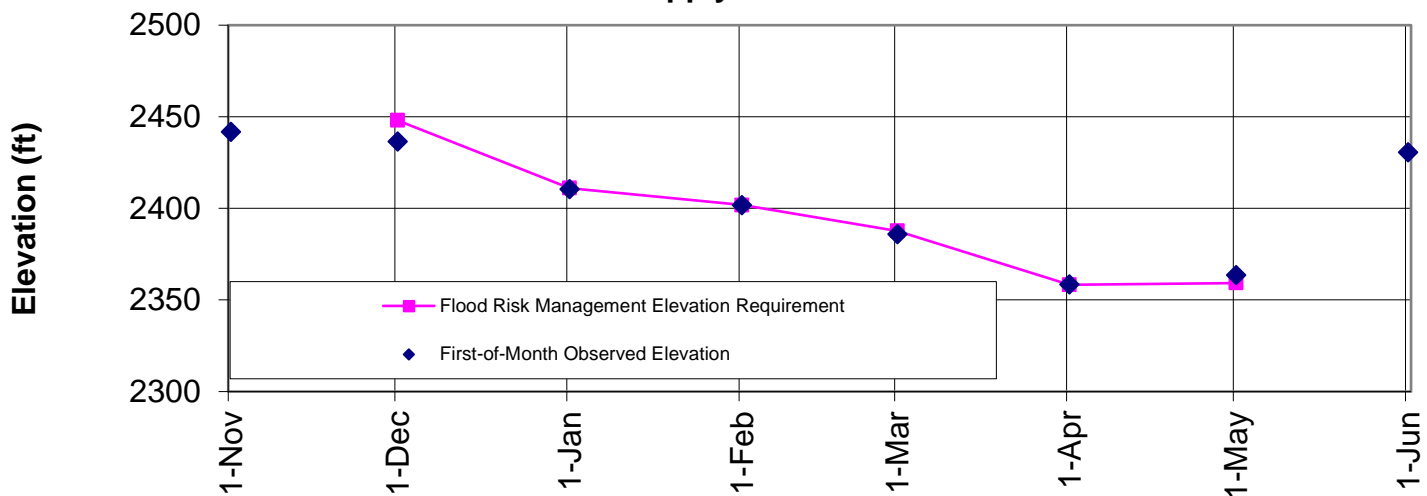
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
Flood Control Space	500	2000	2322	2762	3558	3533
Flood Control Elevation	2448.0	2411.0	2401.8	2387.7	2358.3	2359.3

Spread of values around expected forecast



Libby Flood Control Elevations - 2018

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 Logan Osgood-Zimmerman (206) 764-6928, Jon Moen (206) 764-3561, or the general Water Management line (206) 764-3584.
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. The Akamina Pass snow station was destroyed in a fire in Sept. 2017. Akamina Pass SWE was estimated based on a regression equation and observed values at nearby sites Grave Creek, Poorman Creek, Morrissey Ridge, and Mount Odium.

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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	ΣJun:Jul					
Eureka RS, MT	ΣOct:May Prcp	inches	10.95	126%	37.7	412.4
West Glacier, MT	ΣOct:May Prcp	inches	27.39	129%	22.5	615.3
Cranbrook A, BC	ΣOct:May Prcp	millimeters	288.30	125%	2.0	585.3
Fernie, BC	ΣOct:May Prcp	millimeters	893.80	105%	0.5	448.7
Hawkins Lake, MT	1-Jun SWE	inches	0.00	0%	10.1	0.0
Stahl Peak, MT	1-Jun SWE	inches	28.10	97%	10.3	289.6
East Creek, BC	1-Jun SWE	millimeters	438.00	60%	0.4	189.3
Moyie Mountain, BC	1-Jun SWE	millimeters	0.00	0%	0.8	0.0
Sunshine Village, AB	1-Jun SWE	millimeters	255.20	54%	0.6	158.6
Akamina Pass, AB	1-Jun SWE	millimeters	36.80	59%	0.7	25.0
South Racehorse Creek, AB	1-Jun SWE	millimeters	0.00	0%	0.6	0.0
Intercept			1		978.0	978.0

Forecast June-August Inflow (KAF)	Σ	3702.2
Observed April-May Inflow (KAF)		3510.4
1-June Forecast, April-August Inflow (KAF)	Σ	7212.7

Data used in Libby Water Supply Forecast

WY 2018

Climate Data	SOI	Jun-17	Jul-17						Units
		-0.40	0.80						
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT	0.87	1.76	2.33	0.84	1.35	1.01	2.23	0.56	inch
West Glacier, MT	3.10	4.57	4.23	4.18	5.02	1.73	2.47	2.09	inch
Cranbrook A, BC	25.00	63.60	47.00	29.80	27.20	26.40	44.10	25.20	mm
Fernie, BC	132.00	193.00	77.00	180.00	84.80	104.00	98.00	25.00	mm
Snow Water Equiv	1-Jan			1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Hawkins Lake, MT				18	23	29	32	0	inch
Stahl Peak, MT	15			26	35	43	52	28	inch
East Creek, BC				659	803	905	1033	438	mm
Moyie Mountain, BC	194			318	429	518	537	0	mm
Sunshine Village, AB	284			407	511	609	652	255	mm
Akamina Pass, AB				362	479	598	529	37	mm
South Racehorse Creek, AB				240	356	445	380	0	mm
Streamflow	Jan		Feb	Mar	Apr	May	Jun	Units	
Libby Inflow Volume	205.1		166.2	214.4	459.4	3051.1		KAF	
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2441.8	2436.5	2410.6	2401.8	2385.9	2358.4	2363.5	2430.5	feet

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