

Libby : December Runoff Forecast & Flood Risk Management Calculation

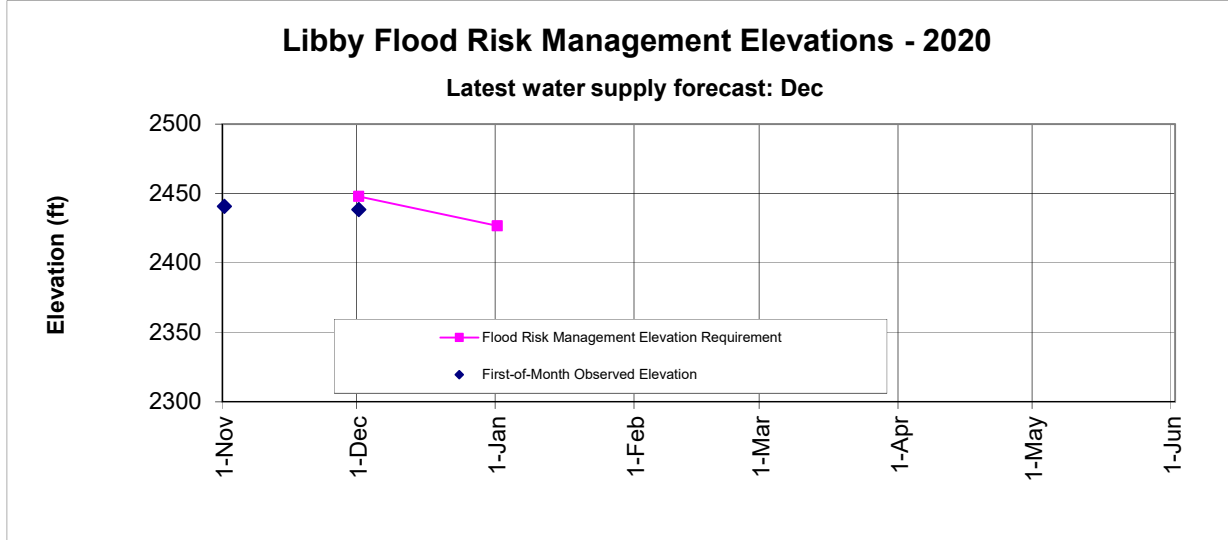
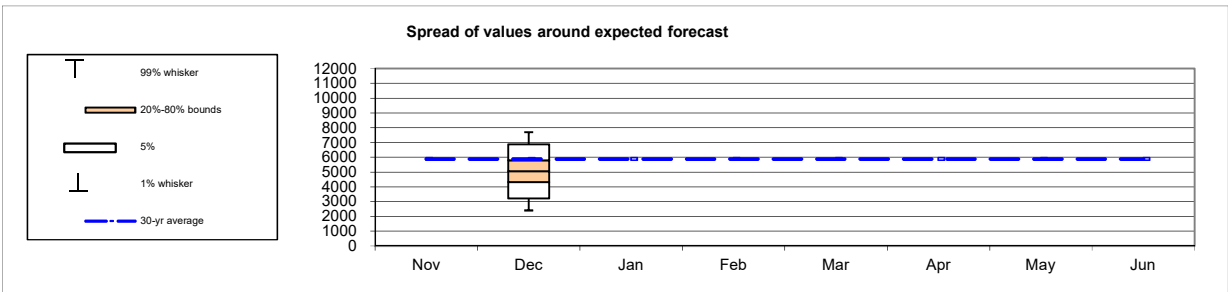
WY 2020

Runoff Forecast and Flood Risk Management			
Most Probable Runoff Volume:	Apr-Aug	5050	KAF
	Apr-Jul	4584	KAF
	May-Jul	4137	KAF
31-Dec Flood Risk Management Space		1400	KAF
31-Dec Flood Risk Management Elevation		2426.7	ft

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	86%	6282	80%
5342	86%	5720	80%
4821	86%	5199	80%

Seasonal Flood Risk Management		Variable End-of-Dec Flood Risk Management Implemented							
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Apr-Aug Runoff Forecast		5050							
First-of-Month Elev	2440.8	2438.4							

Date >>	30-Nov	31-Dec	31-Jan	29-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Risk Management Space	500	1400						
Flood Risk Management Elevation	2448.0	2426.7						



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, Alison Pieper (206) 764-6892, Kevin Shaffer (206) 764-3660, Sonja Michelsen (206) 316-3947, or Jon Moen (206) 764-3561.
2. If you notice that 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.

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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		-0.90		133.4	-120.0
Eureka RS, MT	ΣOct,Nov Precip	inches	1.98	84%	267.7	530.0
West Glacier, MT	ΣOct,Nov Precip	inches	3.73	62%	106.0	395.2
Cranbrook A, BC	ΣOct,Nov Precip	mm	30.90	52%	8.8	271.6
Fernie, BC	ΣOct,Nov Precip	mm	138.00	52%	2.0	269.1
Intercept			1		3704.0	3704.0
	1-Dec Forecast (KAF)				Σ	5049.9

Data used in Libby Water Supply Forecast

WY 2020

Climate Data	SOI	Jun-19	Jul-19						
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
SOI				-0.50	-0.40				
Eureka RS, MT	0.75	1.23							inch
West Glacier, MT	2.08	1.65							inch
Cranbrook A, BC	16.60	14.30							mm
Fernie, BC	103.00	35.00							mm
Snow Water Equiv	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units		
Hawkins Lake, MT									inch
Stahl Peak, MT									inch
East Creek, BC									mm
Moyie Mountain, BC									mm
Sunshine Village, AB									mm
Akamina Pass, AB									mm
South Racehorse Creek, AB									mm
Streamflow	Jan	Feb	Mar	Apr	May	Jun	Units		
Libby Inflow Volume									KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2440.8	2438.4							feet

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