

Libby : January Runoff Forecast & Flood Risk Management Calculation

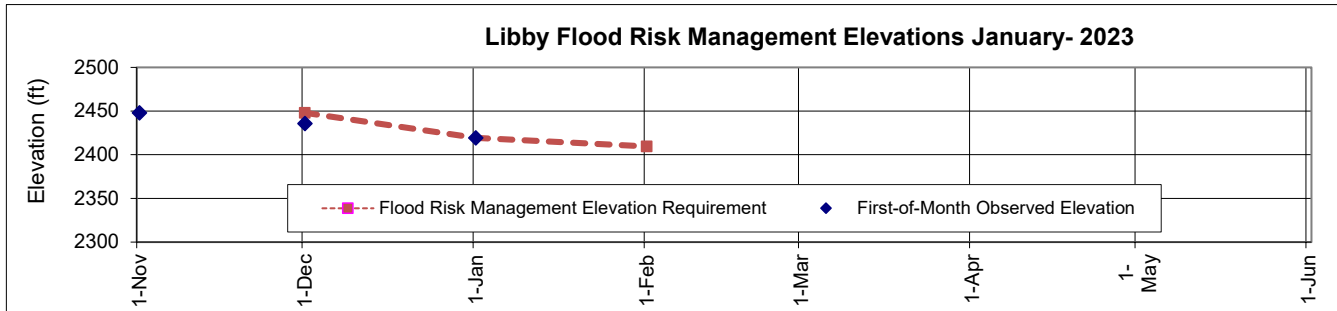
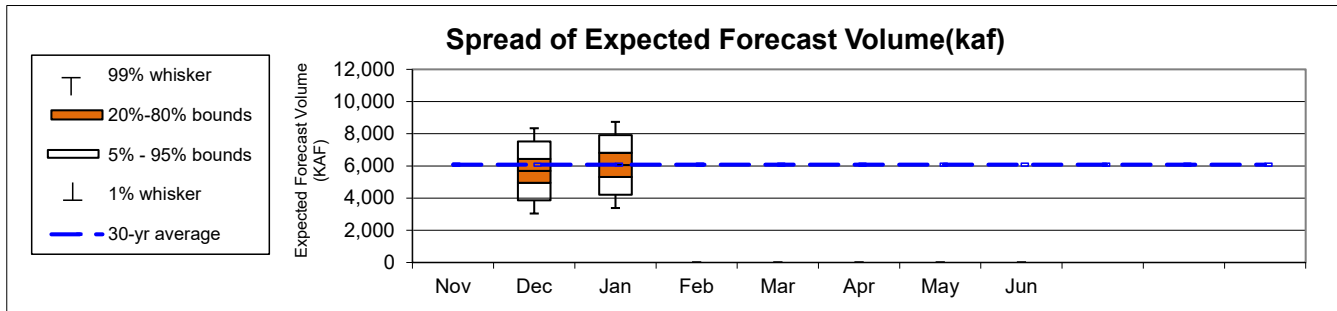
WY 2023

Runoff Forecast	January	1991 2020 Average	1991 2020 Percent of Average	1929 2020 Average	1929 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	6061	6080	100%	6259	97%
Most Probable Runoff Volume: Apr-Jul (kaf)	5553	5570	100%	5708	97%
Most Probable Runoff Volume: May-Jul (kaf)	4998	5014	100%	5183	96%

Flood Risk Management	January
31-Jan Flood Risk Management Space (kaf)	2054
31-Jan Flood Risk Management Elevation (ft)	2409.5

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		5692	6061					
First-of-Month Elev (ft)	2448.0	2435.9	2419.3					

Seasonal FRM Requirements	30 Nov	31-Dec	31-Jan	28-Feb	31-Mar	30 Apr		
Flood Risk Management Space (kaf)	500	1689	2054					
Flood Risk Management Elevation (ft)	2448.0	2419.3	2409.5					



Notes:

- The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Leon Basdekas (208) 353-2564, Jason Chang (206) 764-3528, Lumas Helaire (206) 316-3875, Ethan Cheng (206) 316-3909, or Kevin Shaffer (206) 764-3660.
- 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 : January Runoff Forecast & Flood Risk Management Calculation**  
**Apr-Aug Runoff Forecast Calculation:**

Variable	Month(s)	Units	Observed Value A	Percent of Average (1991-2020)	Regression Coefficient B	Marginal Runoff (KAF) A*B
SOI	∑Jun:Jul		2.50		95.28	238.2
Eureka RS, MT	∑Oct:Dec Prcp	inches	3.05	82%	141.74	432.3
West Glacier, MT	∑Oct:Dec Prcp	inches	9.26	98%	58.42	541.0
Cranbrook A, BC	∑Oct:Dec Prcp	millimeters	73.70	76%	4.58	337.5
Fernie, BC	∑Oct:Dec Prcp	millimeters	329.08	87%	1.20	394.9
Hawkins Lake, MT	1-Jan SWE	inches				
Stahl Peak, MT	1-Jan SWE	inches	15.60	92%	34.63	540.2
East Creek, BC	1-Jan SWE	millimeters				
Moyie Mountain, BC	1-Jan SWE	millimeters	219.00	121%	1.59	347.1
Sunshine Village, AB	1-Jan SWE	millimeters	236.14	87%	2.14	505.3
Akamina Pass, AB	1-Jan SWE	millimeters				
South Racehorse Creek, AB	1-Jan SWE	millimeters				
Intercept			1		2724.44	2724.4
January Forecast	April - August	kaf				6061.0

**Data used in Libby Water Supply Forecast**

Climate Data	Jun-22	Jul 22
SOI	1.70	0.80

Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Eureka RS, MT (inch)	0.40	1.08	1.57					
West Glacier, MT (inch)	2.02	2.76	4.48					
Cranbrook A, BC (mm)	13.00	24.50	36.20					
Fernie, BC (mm)	98.81	118.00	112.27					

Snow Water Equiv	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hawkins Lake, MT (inch)								
Stahl Peak, MT (inch)			16					
East Creek, BC (mm)								
Moyie Mountain, BC (mm)			219					
Sunshine Village, AB (mm)			236					
Akamina Pass, AB (mm)								
South Racehorse Creek, AB (mm)								

Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)								

Reservoir Elevation	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby FOM Elev (feet)	2448.0	2435.9	2419.3					

Kasi Whorley, P.E. signing for William Proctor  
 Approving Official  
 Ch., Hydrologic Engineering and Power Branch

Leon Basdekas, P.E.  
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