

Libby : February Runoff Forecast & Flood Risk Management Calculation

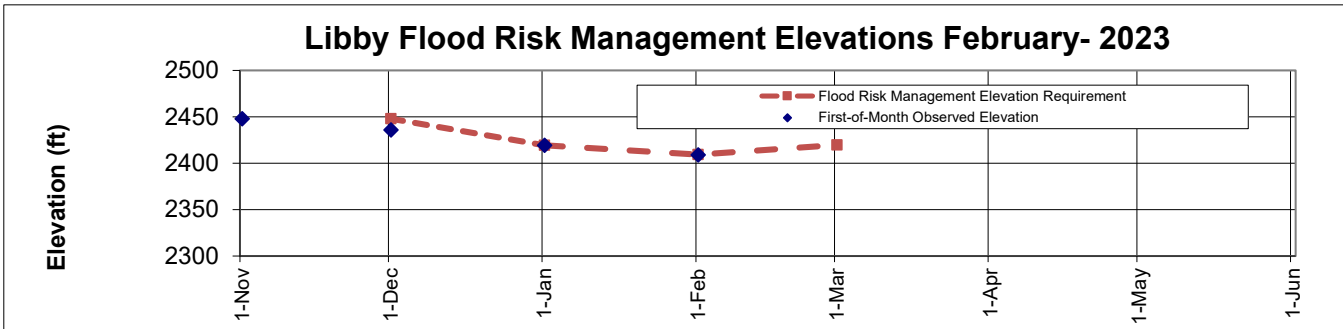
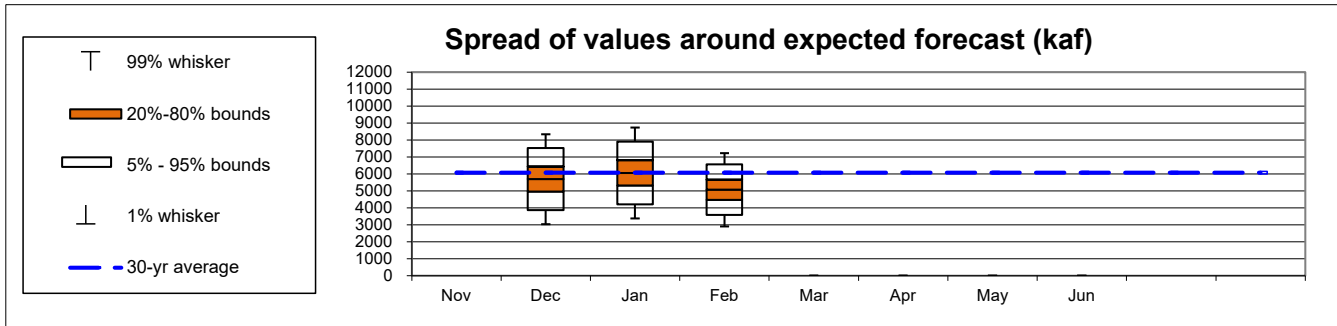
WY 2023

Runoff Forecast	February	1991-2020 Average	1991 - 2020 Percent of Average	1929-2020 Average	1929 - 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	5071	6080	83%	6259	81%
Most Probable Runoff Volume: Apr-Jul (kaf)	4564	5570	82%	5708	80%
Most Probable Runoff Volume: May-Jul (kaf)	4100	5014	82%	5183	79%

Flood Risk Management	February
28-Feb Flood Risk Management Space (kaf)	1678
28-Feb Flood Risk Management Elevation (ft)	2419.6

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		5692	6061	5071				
First-of-Month Elev (ft)	2448.0	2435.9	2419.3	2409.0				

Seasonal FRM Requirements	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr		
Flood Risk Management Space (kaf)	500	1689	2054	1678				
Flood Risk Management Elevation (ft)	2448.0	2419.3	2409.5	2419.6				



Notes:

1. 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) 316-3875, or Kevin Shaffer (206) 764-3660.
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.

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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	ΣJun:Jul		2.50			0.0
Eureka RS, MT	ΣOct:Jan Prcp	inches	3.24	70%	78.47	254.2
West Glacier, MT	ΣOct:Jan Prcp	inches	10.02	77%	30.95	310.1
Cranbrook A, BC	ΣOct:Jan Prcp	millimeters	105.50	85%	2.84	299.6
Fernie, BC	ΣOct:Jan Prcp	millimeters	365.15	73%	0.72	262.9
Hawkins Lake, MT	1-Feb SWE	inches	14.1	86%	30.60	431.5
Stahl Peak, MT	1-Feb SWE	inches	18.99	79%	22.99	436.6
East Creek, BC	1-Feb SWE	millimeters	437.00	71%	0.75	327.8
Moyie Mountain, BC	1-Feb SWE	millimeters	256.00	87%	1.48	378.9
Sunshine Village, AB	1-Feb SWE	millimeters	261.31	68%	1.47	384.1
Akamina Pass, AB	1-Feb SWE	millimeters	254.35	81%	1.27	323.0
South Racehorse Creek, AB	1-Feb SWE	millimeters	242.18	93%	1.53	370.5
Intercept			1		1291.47	1291.5
January Forecast	April - August	kaf				5070.7

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	0.19				
West Glacier, MT (inch)	2.02	2.76	4.48	0.76				
Cranbrook A, BC (mm)	13.00	24.50	36.20	31.80				
Fernie, BC (mm)	98.81	118.00	112.27	36.07				

Snow Water Equiv	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hawkins Lake, MT (inch)				14				
Stahl Peak, MT (inch)			16	19				
East Creek, BC (mm)				437				
Moyie Mountain, BC (mm)			219	256				
Sunshine Village, AB (mm)			236	261				
Akamina Pass, AB (mm)				254				
South Racehorse Creek, AB (mm)				242				

Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)			170.3					

Reservoir Elevation	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby FOM Elev (feet)	2448.0	2435.9	2419.3	2409.0				

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