

Libby : April Runoff Forecast & Flood Risk Management Calculation

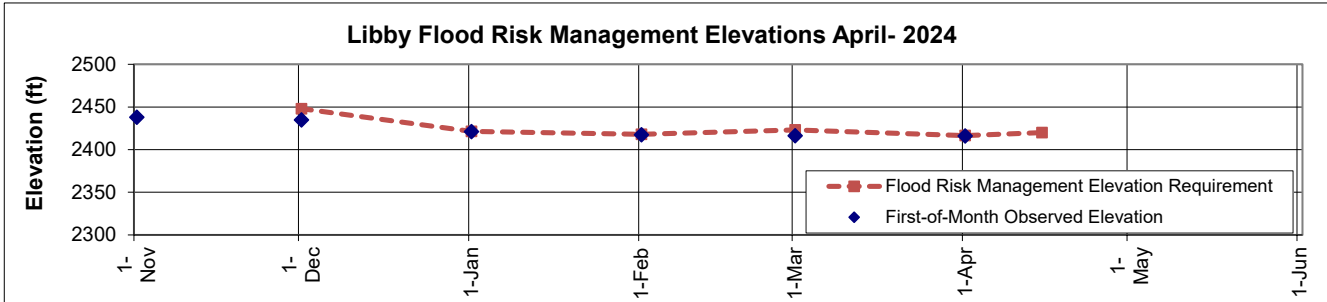
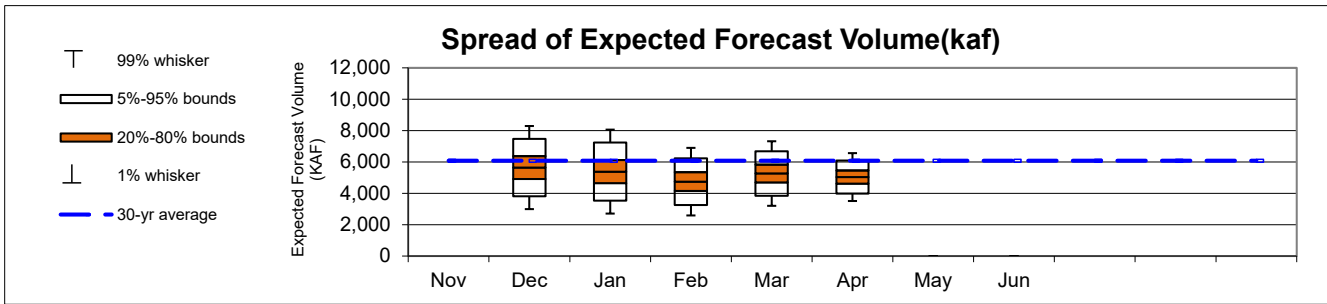
WY 2024

Runoff Forecast	April	1991-2020 Average	1991 - 2020 Percent of Average	1929-2020 Average	1929 - 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	5036	6080	83%	6259	80%
Most Probable Runoff Volume: Apr-Jul (kaf)	4614	5570	83%	5708	81%
Most Probable Runoff Volume: May-Jul (kaf)	4153	5014	83%	5183	80%

Flood Risk Management		April
30-Apr Flood Risk Management Space (kaf)		1666
30-Apr Flood Risk Management Elevation (ft)		2419.9

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		5642	5385	4743	5261	5036		
First-of-Month Elev (ft)	2437.9	2434.8	2421.2	2417.5	2416.4	2415.9		

Seasonal FRM Requirements	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr		
Flood Risk Management Space (kaf)	500	1613	1745	1547	1799	1666		
Flood Risk Management Elevation (ft)	2448.0	2421.3	2417.9	2423.0	2416.4	2419.9		



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, Courtney Moore (206) 316-3005, David Varner (206) 316-3155 or Jason Chang (206) 764-3528.
- 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					
Eureka RS, MT	ΣOct:Mar Prcp	inches	5.82	93%	68.52	398.5
West Glacier, MT	ΣOct:Mar Prcp	inches	16.19	91%	29.47	477.1
Cranbrook A, BC	ΣOct:Mar Prcp	millimeters	127.60	74%	2.99	381.5
Fernie, BC	ΣOct:Mar Prcp	millimeters	745.41	109%	0.71	529.2
Hawkins Lake, MT	1-Apr SWE	inches	20.50	80%	22.43	459.8
Stahl Peak, MT	1-Apr SWE	inches	30.70	86%	19.70	604.8
East Creek, BC	1-Apr SWE	millimeters	711.53	80%	0.73	519.4
Moyie Mountain, BC	1-Apr SWE	millimeters	270.04	61%	1.21	326.7
Sunshine Village, AB	1-Apr SWE	millimeters	372.21	66%	1.43	532.3
Akamina Pass, AB	1-Apr SWE	millimeters	383.89	82%	0.72	276.4
South Racehorse Creek, AB	1-Apr SWE	millimeters	340.74	82%	1.35	460.0
Intercept			1		70.54	70.5
April Forecast	April - August	kaf				5036.3

Data used in Libby Water Supply Forecast

Climate Data	Jun-23	Jul-23
SOI	0.30	-0.30

Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Eureka RS, MT (inch)	0.58	1.88	0.70	1.12	0.56	0.98		
West Glacier, MT (inch)	1.52	4.12	2.74	3.39	2.46	1.96		
Cranbrook A, BC (mm)	4.80	22.20	27.40	24.10	25.30	23.80		
Fernie, BC (mm)	98.30	129.79	243.33	87.63	96.44	89.92		

Snow Water Equiv	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hawkins Lake, MT (inch)				8.7	15.6	20.5		
Stahl Peak, MT (inch)			11.9	21.4	26.3	30.7		
East Creek, BC (mm)				433.0	602.5	711.5		
Moyie Mountain, BC (mm)			85.0	138.4	226.5	270.0		
Sunshine Village, AB (mm)			168.7	233.9	370.1	372.2		
Akamina Pass, AB (mm)				211.6	289.5	383.9		
South Racehorse Creek, AB (mm)				147.6	264.0	340.7		

Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)			161.5	192.0	226.6			

Reservoir Elevation	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby FOM Elev (feet)	2437.9	2434.8	2421.2	2417.5	2416.4	2415.9		

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