

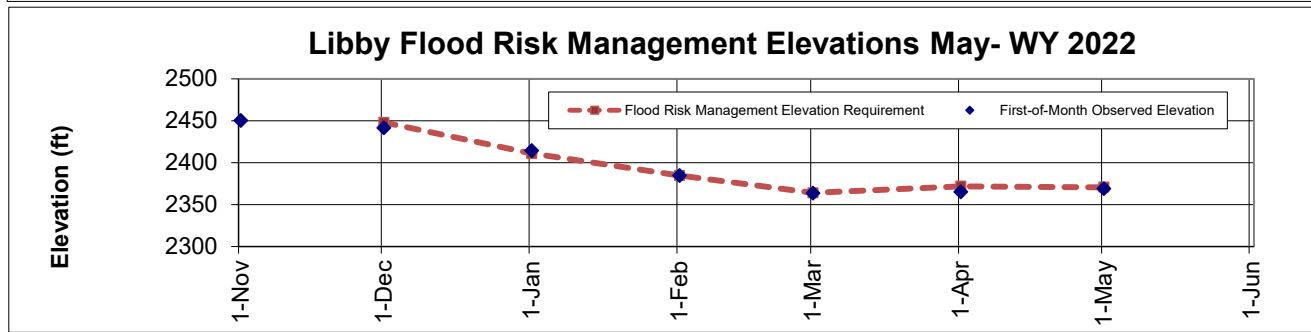
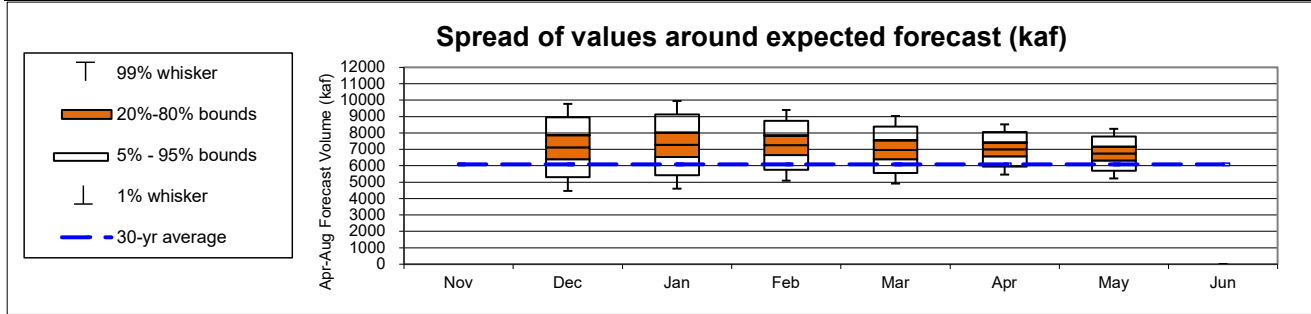
Libby : May Runoff Forecast & Flood Risk Management Calculation

WY 2022

Runoff Forecast	May	1991-2020 Average	1991 - 2020 Percent of Average	1929-2020 Average	1929 - 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	6740	6080	111%	6259	108%
Most Probable Runoff Volume: Apr-Jul (kaf)	6150	5570	110%	5708	108%
Most Probable Runoff Volume: May-Jul (kaf)	5804	5014	116%	5183	112%

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		7123	7273	7249	6972	6992	6740	
First-of-Month Elev (ft)	2450.2	2441.6	2414.4	2384.5	2363.5	2365.3	2369.0	

Seasonal FRM Requirements	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr		
Flood Risk Management Space (kaf)	500	2000	2851	3416	3208	3238		
Flood Risk Management Elevation (ft)	2448.0	2411.0	2384.6	2363.9	2371.8	2370.7		



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, 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.
3. Cranbrook A gage data was intermittent in the month of October through April. Nearby Cranbrook Airport Auto gage data was used instead.

Libby : May 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	ΣJun:Jul		1.8		0.0	0.0
Eureka RS, MT	ΣOct:Apr Prcp	inches	6.1	114%	57.5	351.0
West Glacier, MT	ΣOct:Apr Prcp	inches	24.0	158%	28.0	673.2
Cranbrook A, BC	ΣOct:Apr Prcp	millimeters	187.4	129%	2.8	524.7
Fernie, BC	ΣOct:Apr Prcp	millimeters	1007.8	175%	0.6	614.8
Hawkins Lake, MT	1-May SWE	inches	25.4	124%	17.3	439.4
Stahl Peak, MT	1-May SWE	inches	48.0	162%	16.7	803.5
East Creek, BC	1-May SWE	millimeters	1264.0	172%	0.6	720.5
Moyie Mountain, BC	1-May SWE	millimeters	359.0	98%	0.9	326.7
Sunshine Village, AB	1-May SWE	millimeters	757.7	171%	1.3	954.7
Akamina Pass, AB	1-May SWE	millimeters	448.5	112%	0.6	246.7
South Racehorse Creek, AB	1-May SWE	millimeters	398.3	119%	0.8	330.6
Intercept			1		408.0	408.0
Forecast Inflow	May-August	kaf				6393.8
Observed Inflow	April	kaf	346.3			346.3
May Forecast	April - August	kaf				6740.1

Data used in Libby Water Supply Forecast

Climate Data				Jun-21	Jul-21
SOI				0.4	1.4

Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Eureka RS, MT (inch)	1.5	1.1	0.6	0.7	0.9	0.9	0.4	
West Glacier, MT (inch)	3.5	4.6	4.5	3.0	3.0	3.9	1.4	
Cranbrook A, BC (mm)	34.2	34.1	45.8	33.2	3.8	23.9	12.4	
Fernie, BC (mm)	180.9	337.0	194.8	106.2	52.1	99.8	37.1	

Snow Water Equiv	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Hawkins Lake, MT (inch)				16.9	19.8	22.5	25.4	
Stahl Peak, MT (inch)			19.3	28.1	35.1	42.0	48.0	
East Creek, BC (mm)				935.0	1040.0	1177.0	1264.0	
Moyie Mountain, BC (mm)			127.0	235.0	300.0	349.0	359.0	
Sunshine Village, AB (mm)			432.5	596.9	617.5	707.4	757.7	
Akamina Pass, AB (mm)				420.3	455.2	558.7	448.5	
South Racehorse Creek, AB (mm)				347.2	396.4	461.7	398.3	

Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)			299.2	206.1	291.0	346.3		

Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Libby FOM Elev (feet)	2450.2	2441.6	2414.4	2384.5	2363.5	2365.3	2369.0	

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