

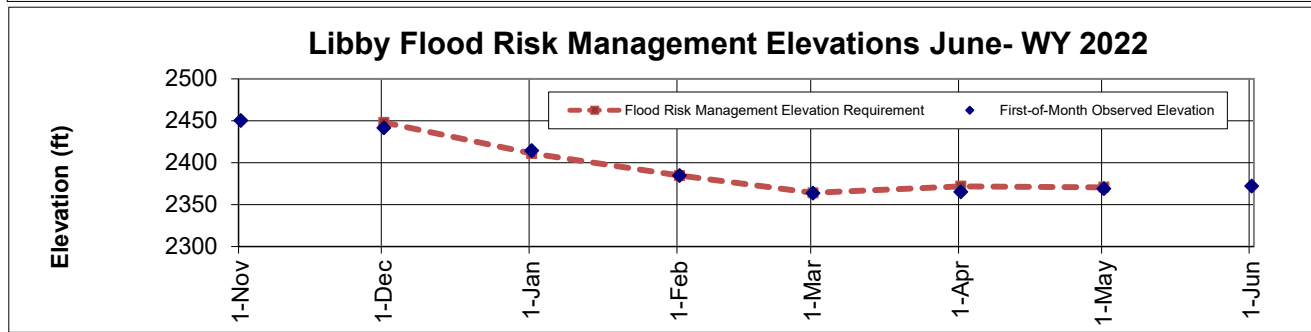
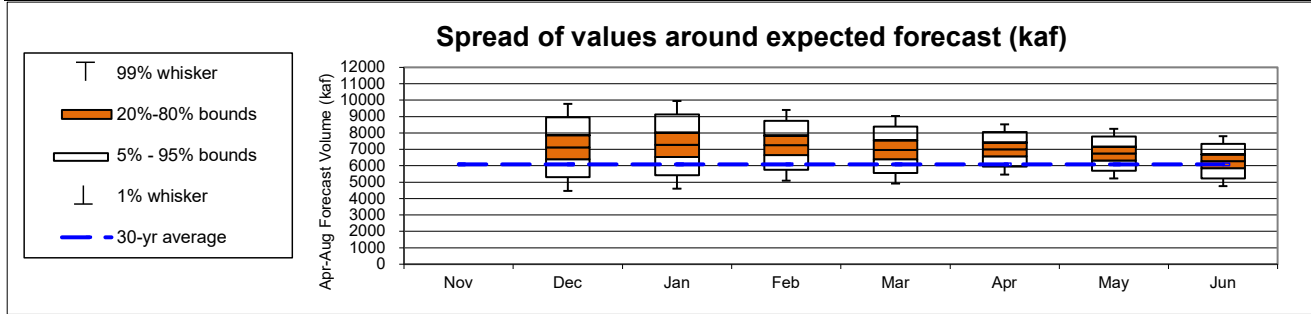
Libby : June Runoff Forecast & Flood Risk Management Calculation

WY 2022

Runoff Forecast	June	1991-2020 Average	1991 - 2020 Percent of Average	1929-2020 Average	1929 - 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	6276	6080	103%	6259	100%
Most Probable Runoff Volume: Apr-Jul (kaf)	5634	5570	101%	5708	99%
Most Probable Runoff Volume: May-Jul (kaf)	5288	5014	105%	5183	102%

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		7123	7273	7249	6972	6992	6740	6276
First-of-Month Elev (ft)	2450.2	2441.6	2414.4	2384.5	2363.5	2365.3	2369.0	2372.0

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, Logan Osgood-Zimmerman (206) 764-6928 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 used instead of Cranbrook Airport Auto used in previous months. Cranbrook A gage is the default gage for the WSF regression.

Libby : June 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:May Prcp	inches	7.6	142%	37.7	284.7
West Glacier, MT	ΣOct:May Prcp	inches	26.8	177%	22.5	602.9
Cranbrook A, BC	ΣOct:May Prcp	millimeters	208.5	143%	2.0	423.3
Fernie, BC	ΣOct:May Prcp	millimeters	1100.8	191%	0.5	552.6
Hawkins Lake, MT	1-Jun SWE	inches	21.1	103%	10.1	212.9
Stahl Peak, MT	1-Jun SWE	inches	47.5	160%	10.3	489.6
East Creek, BC	1-Jun SWE	millimeters	1212.0	165%	0.4	523.9
Moyie Mountain, BC	1-Jun SWE	millimeters	82.0	22%	0.8	69.6
Sunshine Village, AB	1-Jun SWE	millimeters	746.5	168%	0.6	463.8
Akamina Pass, AB	1-Jun SWE	millimeters	169.2	42%	0.7	115.1
South Racehorse Creek, AB	1-Jun SWE	millimeters	82.3	25%	0.6	52.8
Intercept			1		978.0	978.0
Forecast Inflow	June-August	kaf				4769.3
Observed Inflow	April - May	kaf	1507.0			1507.0
May Forecast	April - August	kaf				6276.3

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	1.5
West Glacier, MT (inch)	3.5	4.6	4.5	3.0	3.0	3.9	1.4	2.8
Cranbrook A, BC (mm)	34.2	34.1	45.8	33.2	3.8	23.9	12.4	21.1
Fernie, BC (mm)	180.9	337.0	194.8	106.2	52.1	99.8	37.1	93.0

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	21.1
Stahl Peak, MT (inch)			19.3	28.1	35.1	42.0	48.0	47.5
East Creek, BC (mm)				935.0	1040.0	1177.0	1264.0	1212.0
Moyie Mountain, BC (mm)			127.0	235.0	300.0	349.0	359.0	82.0
Sunshine Village, AB (mm)			432.5	596.9	617.5	707.4	757.7	746.5
Akamina Pass, AB (mm)				420.3	455.2	558.7	448.5	169.2
South Racehorse Creek, AB (mm)				347.2	396.4	461.7	398.3	82.3

Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)			299.2	206.1	291.0	346.3	1160.7	

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	2372.0

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