

Libby : December Runoff Forecast & Flood Risk Management Calculation

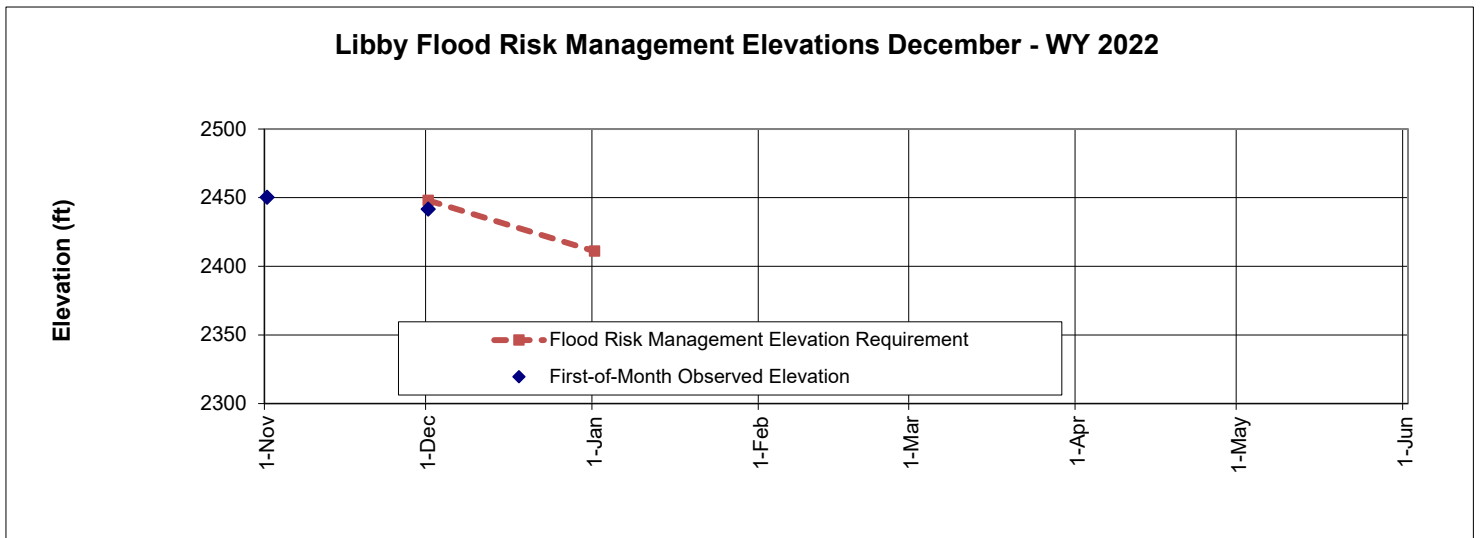
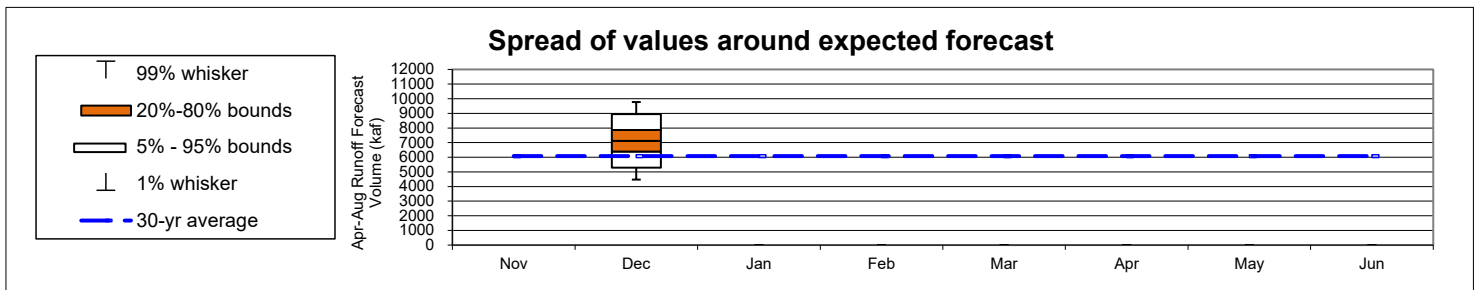
WY 2022

Runoff Forecast	December	1991-2020 Average	1991 - 2020 Percent of Average	1929-2020 Average	1929 - 2020 Percent of Average
Most Probable Runoff Volume: Apr-Aug (kaf)	7123	6080	117%	6259	114%
Most Probable Runoff Volume: Apr-Jul (kaf)	6526	5570	117%	5708	114%
Most Probable Runoff Volume: May-Jul (kaf)	5874	5014	117%	5183	113%

Flood Risk Management	December
31-Dec Flood Risk Management Space (kaf)	2000
31-Dec Flood Risk Management Elevation (ft)	2411.0

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		7123						
First-of-Month Elev (ft)	2450.2	2441.6						

Seasonal FRM Requirements	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr
Flood Risk Management Space	500	2000				
Flood Risk Management Elevation	2448.0	2411.0				



- 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, Logan Osgood-Zimmerman (206) 764-6928, 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.
 - Cranbrook A gage data was intermittent in the month of October and November. Nearby Cranbrook Airport Auto gage data was used instead.

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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	Σ Jun:Jul		1.80		133.4	240.1
Eureka RS, MT	Σ Oct,Nov Prcp	inches	2.64	106%	267.7	706.6
West Glacier, MT	Σ Oct,Nov Prcp	inches	8.14	130%	106.0	862.5
Cranbrook A, BC	Σ Oct,Nov Prcp	millimeters	68.30	110%	8.8	600.4
Fernie, BC	Σ Oct,Nov Prcp	millimeters	517.85	189%	2.0	1009.8
Intercept			1		3704.0	3704.0
December Forecast	April - August	kaf			Σ	7123.4

Data used in Water Supply Forecast

WY 2022

Climate Index	Jun-21	Jul-21
SOI	0.40	1.40

Precipitation Station	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Eureka RS, MT (inch)	1.52	1.12						
West Glacier, MT (inch)	3.51	4.63						
Cranbrook A, BC (mm)	34.20	34.10						
Fernie, BC (mm)	180.85	337.00						
Snow Water Equiv Station	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Hawkins Lake, MT (inch)								
Stahl Peak, MT (inch)								
East Creek, BC (mm)								
Moyie Mountain, BC (mm)								
Sunshine Village, AB (mm)								
Akamina Pass, AB (mm)								
South Racehorse Creek, AB (mm)								
Streamflow	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Libby Inflow Volume (kaf)								
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						

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