

**Libby : December Runoff Forecast & Flood Risk Management Calculation**

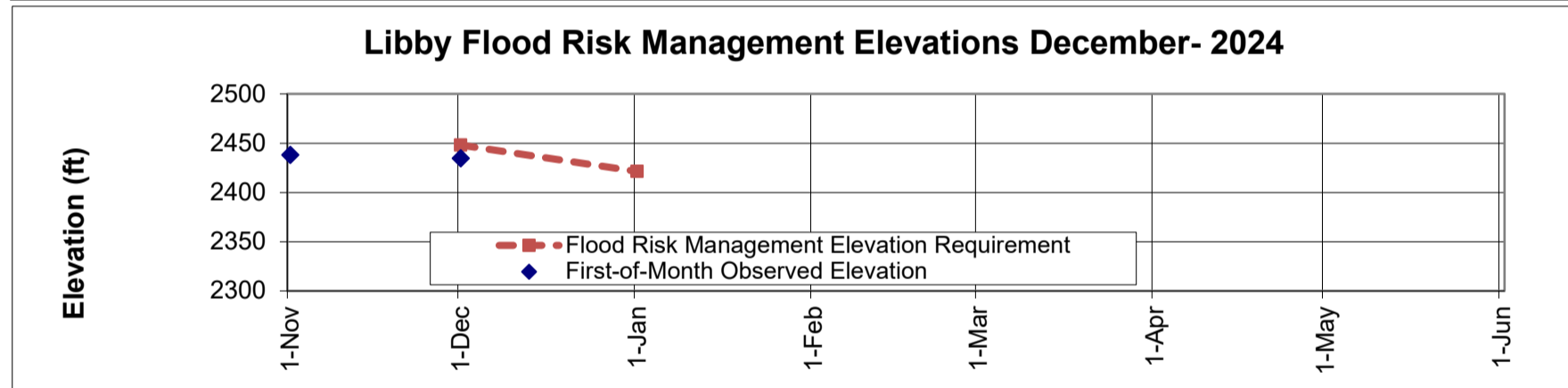
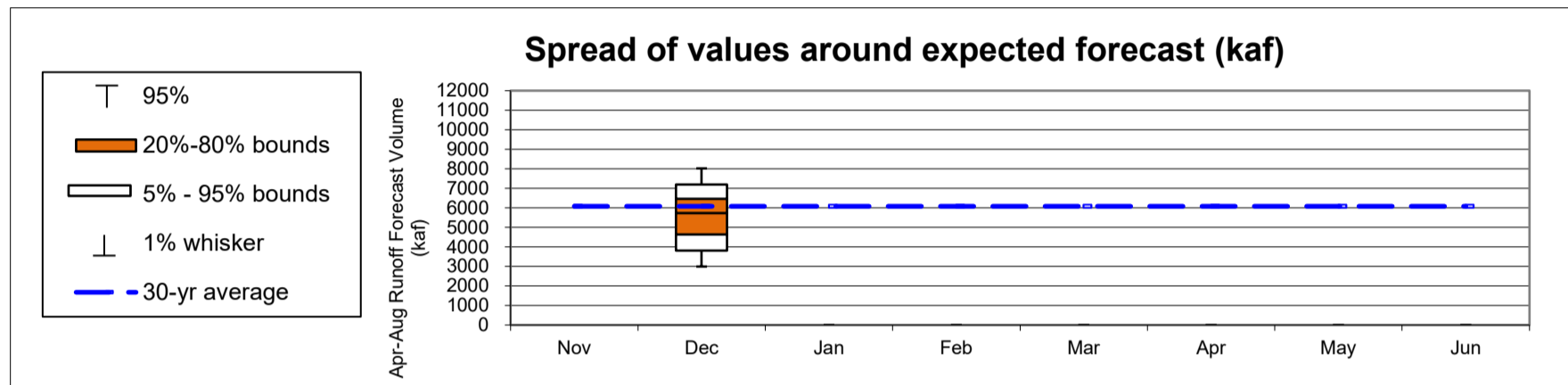
**WY 2024**

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)	5642	6080	93%	6259	90%
Most Probable Runoff Volume: Apr-Jul (kaf)	5169	5570	93%	5708	91%
Most Probable Runoff Volume: May-Jul (kaf)	4653	5014	93%	5183	90%

Flood Risk Management	December
31-Dec Flood Risk Management Space (kaf)	1613
31-Dec Flood Risk Management Elevation (ft)	2421.3

Forecast/Reservoir Data	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast (kaf)		5642						
First-of-Month Elev (ft)	2437.9	2434.8						

Seasonal FRM Requirements	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr		
Flood Risk Management Space (kaf)	500	1613						
Flood Risk Management Elevation (ft)	2448.0	2421.3						



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, Courtney Moore (206) 316-3005, David Varner (206) 316-3155, Ethan Cheng (206) 316-3909 , Lumas Helaire (206) 316-3875, or Jason Chang (206) 764-3528.
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 fully available in the months of October and November. Nearby Cranbrook Airport Auto gage data was not used.

**Libby : December Runoff Forecast & Flood Risk Management Calculation**  
**Apr-Aug Runoff Forecast Calculation:**

<i>Variable</i>	<i>Month(s)</i>	<i>Units</i>	<i>Observed Value A</i>	<i>Percent of Average (1991-2020)</i>	<i>Regression Coefficient B</i>	<i>Marginal Runoff (KAF) =A*B</i>
SOI	∑Jun:Jul		0.00		133.38	0.0
Eureka RS, MT	∑Oct:Nov Prcp	inches	2.46	99%	267.66	658.4
West Glacier, MT	∑Oct:Nov Prcp	inches	5.64	90%	105.96	597.6
Cranbrook A, BC	∑Oct:Nov Prcp	millimeters	27.00	43%	8.79	237.3
Fernie, BC	∑Oct:Nov Prcp	millimeters	228.09	83%	1.95	444.8
Intercept			1		3704.00	3704.0
December Forecast	April - August	kaf				5642.2

**Data used in Libby Water Supply Forecast**

<i>Climate Data</i>	<i>Jun-23</i>	<i>Jul-23</i>
SOI	0.30	-0.30

<i>Precipitation Data</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>
Eureka RS, MT (inch)	0.58	1.88						
West Glacier, MT (inch)	1.52	4.12						
Cranbrook A, BC (mm)	4.80	22.20						
Fernie, BC (mm)	98.30	129.79						

<i>Snow Water Equiv</i>	<i>1-Nov</i>	<i>1-Dec</i>	<i>1-Jan</i>	<i>1-Feb</i>	<i>1-Mar</i>	<i>1-Apr</i>	<i>1-May</i>	<i>1-Jun</i>
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)								

<i>Streamflow</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Libby Inflow Volume (kaf)								

<i>Reservoir Elevation</i>	<i>1-Nov</i>	<i>1-Dec</i>	<i>1-Jan</i>	<i>1-Feb</i>	<i>1-Mar</i>	<i>1-Apr</i>	<i>1-May</i>	<i>1-Jun</i>
Libby FOM Elev (feet)	2437.9	2434.8						

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