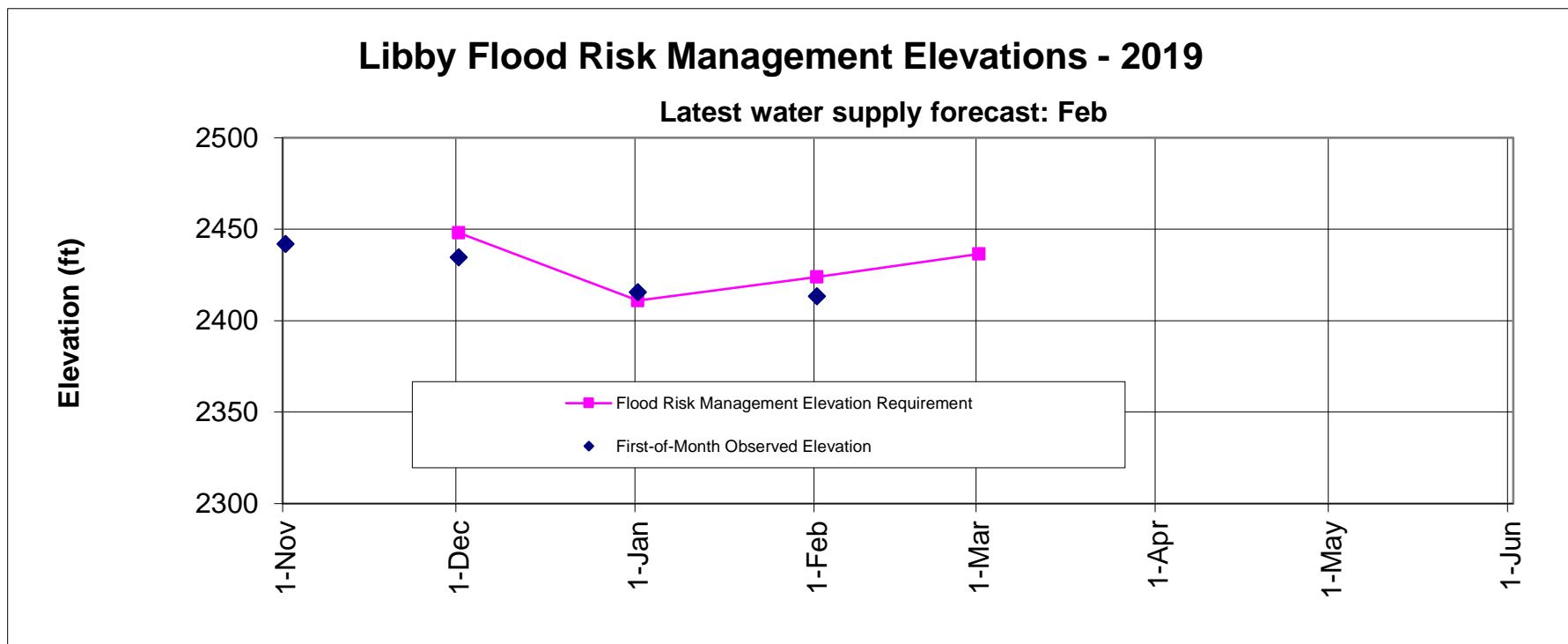
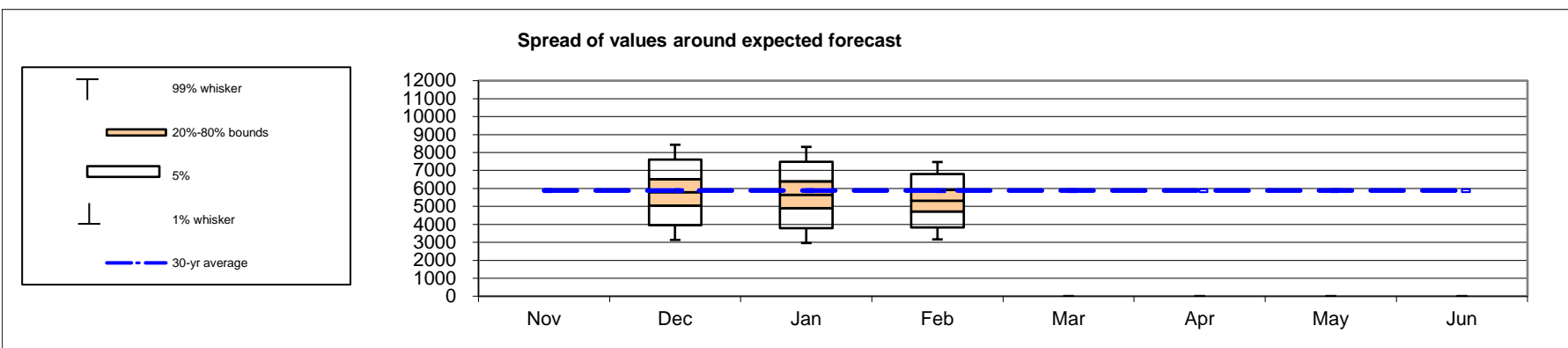


# Libby : February Runoff Forecast & Flood Risk Management Calculation

WY 2019

Runoff Forecast and Flood Risk Management			
Most Probable Runoff Volume:	Apr-Aug	5318	KAF
	Apr-Jul	4827	KAF
	May-Jul	4356	KAF
28 Feb Flood Risk Management Space		1002	KAF
28 Feb Flood Risk Management Elevation		2436.4	ft
Seasonal Flood Risk Management		VARQ Flood Risk Management Implemented	
Forecast Date >>	Nov	Dec	Jan
Apr-Aug Runoff Forecast		5784	5639
First-of-Month Elev	2441.9	2434.6	2415.5
Date >>	30-Nov	31-Dec	31-Jan
Flood Risk Management Space	500	2000	1511
Flood Risk Management Elevation	2448.0	2411.0	2423.9

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	90%	6282	85%
5342	90%	5720	85%
4821	90%	5199	85%



Notes:

- The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Logan Osgood-Zimmerman (206) 764-6928, Kevin Shaffer (206) 764-3660, Sonja Michelsen (206) 316-3947, or Jon Moen (206) 764-3561.
- The January forecast as published in this document is lower than what was originally published in the issue month, the earlier forecast has been adjusted to reflect updated updated precipitation values for Eureka and West Glacier.
- The Akamina Pass snow station was destroyed in a fire in Sept. 2017. Akamina Pass SWE was estimated based on a regression equation and observed values at nearby sites Grave Creek, Hand Creek, Lost Creek South, Mount Odlum, and Three Isle Lake.

## Libby : February Runoff Forecast & Flood Risk Management Calculation

Apr-Aug Runoff Forecast Calculation:							
Variable	Month(s)	Units	Observed Value	Percent of Average	Regression Coefficient	Marginal Runoff (KAF)	
			A		B	=A*B	
SOI	∑Jun:Jul						
Eureka RS, MT	∑Oct:Jan Prcp	inches	3.53	82%	78.5	277.0	
West Glacier, MT	∑Oct:Jan Prcp	inches	10.27	84%	31.0	317.9	
Cranbrook A, BC	∑Oct:Jan Prcp	millimeters	94.70	82%	2.8	268.9	
Fernie, BC	∑Oct:Jan Prcp	millimeters	426.00	86%	0.7	306.7	
Hawkins Lake, MT	1-Feb SWE	inches	12.70	77%	30.6	388.6	
Stahl Peak, MT	1-Feb SWE	inches	19.70	84%	23.0	452.9	
East Creek, BC	1-Feb SWE	millimeters	709.00	116%	0.8	531.8	
Moyie Mountain, BC	1-Feb SWE	millimeters	223.00	78%	1.5	330.0	
Sunshine Village, AB	1-Feb SWE	millimeters	373.28	96%	1.5	548.7	
Akamina Pass, AB	1-Feb SWE	millimeters	258.50	81%	1.3	328.3	
South Racehorse Creek, AB	1-Feb SWE	millimeters	180.12	64%	1.5	275.6	
Intercept			1		1291.5	1291.5	
1-Feb Forecast (KAF)						∑	5317.9

### Data used in Libby Water Supply Forecast

WY 2019

Climate Data		Jun-18	Jul-18							
SOI		-0.10	0.20							
Precipitation Data		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT		1.64	0.55	0.40	0.94					inch
West Glacier, MT		2.55	3.19	2.24	2.29					inch
Cranbrook A, BC		34.50	14.60	26.60	19.00					mm
Fernie, BC		87.00	139.00	117.00	83.00					mm
Snow Water Equiv		1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units		
Hawkins Lake, MT			13							inch
Stahl Creek, MT			14	20						inch
East Peak, BC				709						mm
Moyie Mountain, BC			153	223						mm
Sunshine Village, AB			272	373						mm
Akamina Pass, AB				259						mm
South Racehorse Creek, AB				180						mm
Streamflow		Jan	Feb	Mar	Apr	May	Jun	Units		
Libby Inflow Volume		162.5								KAF
Reservoir Elevation		1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev		2441.9	2434.6	2415.5	2413.3					feet

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