

Libby : January Runoff Forecast & Flood Risk Management Calculation

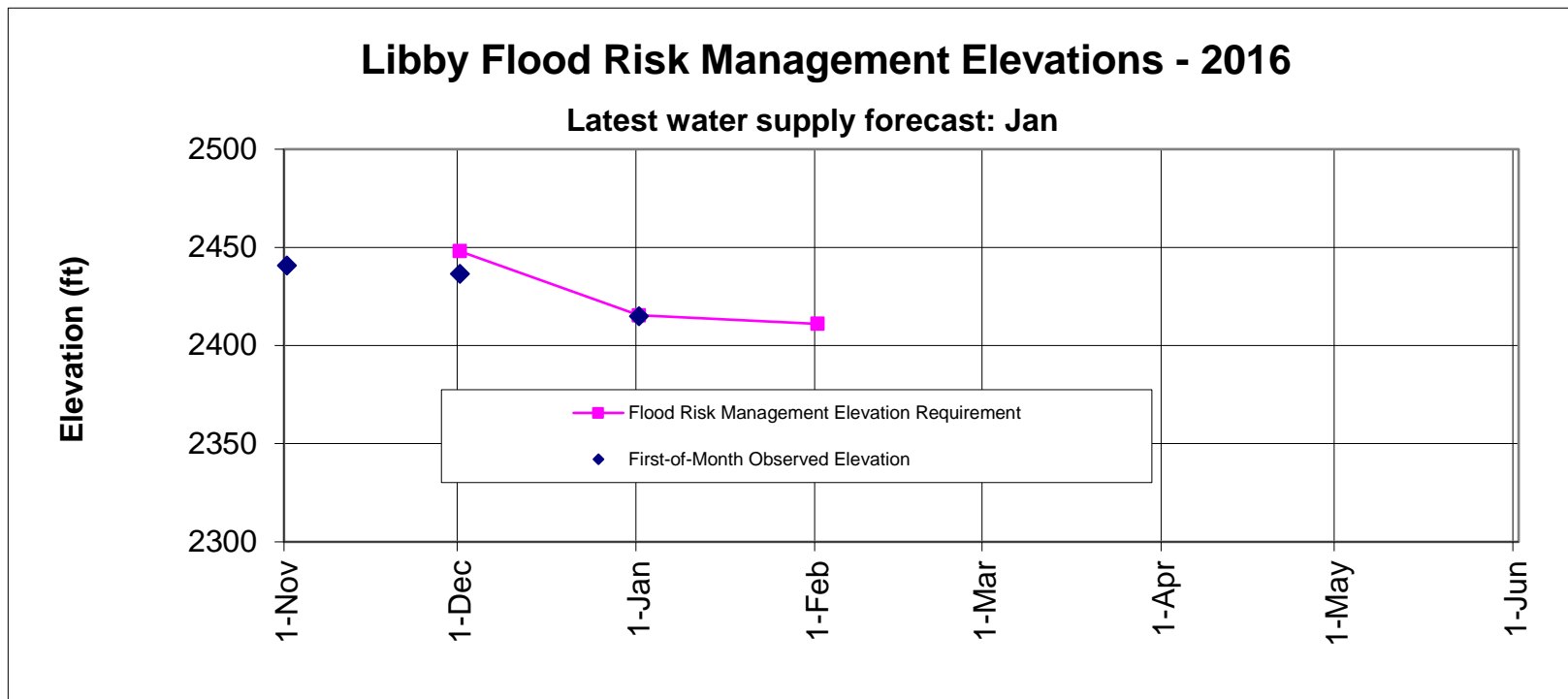
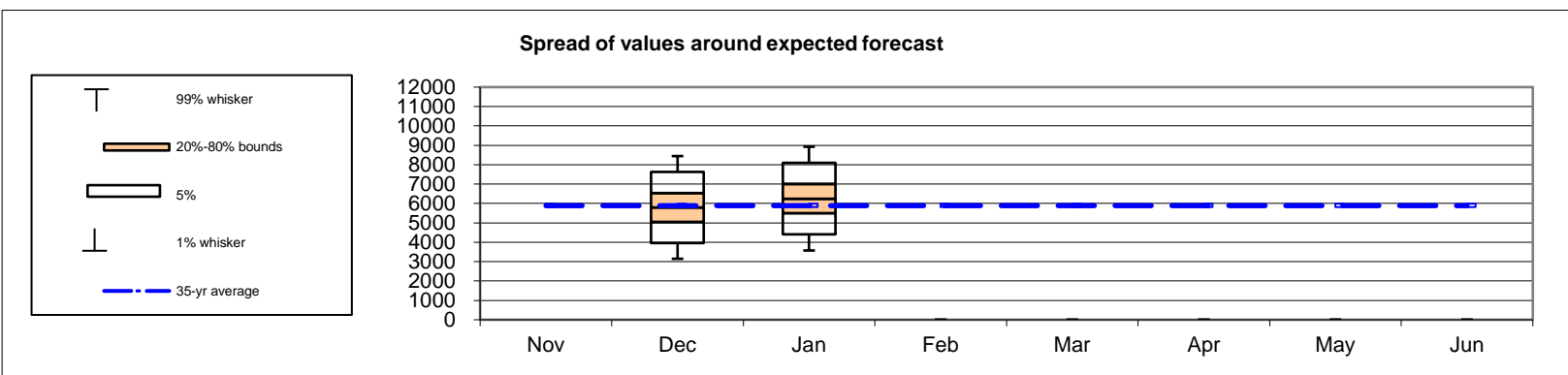
WY 2016

Runoff Forecast and Flood Risk Management

Most Probable Runoff Volume:	Apr-Aug	6249	KAF
	Apr-Jul	5673	KAF
	May-Jul	5119	KAF
31-Jan Flood Risk Management Space		1999	KAF
31-Jan Flood Risk Management Elevation		2411.0	ft

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	106%	6282	99%
5342	106%	5720	99%
4821	106%	5199	98%

Seasonal Flood Risk Management		VARQ Flood Risk Management Implemented						
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast		5793	6249					
First-of-Month Elev	2440.7	2436.5	2415.0					
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Risk Management Space	500	1840	1999					
Flood Risk Management Elevation	2448.0	2415.3	2411.0					



Notes:

1. The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Joel Fenolio (206) 764-6683, Kevin Shaffer (206) 764-3660, Logan Osgood-Jacobs (206) 764-6928, or Kristian Mickelson (206) 764-6927.
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.

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Apr-Aug Runoff Forecast Calculation:						
Variable	Month(s)	Units	Observed Value	Percent of Average	Regression Coefficient	Marginal Runoff (KAF)
			A		B	=A*B
SOI	ΣJun:Jul		-2.80		95.3	-266.8
Eureka RS, MT	ΣOct,Nov,Dec Prcp	inches	5.79	170%	141.7	820.7
West Glacier, MT	ΣOct,Nov,Dec Prcp	inches	9.00	100%	58.4	525.8
Cranbrook A, BC	ΣOct,Nov,Dec Prcp	inches	116.70	128%	4.6	534.5
Fernie, BC	ΣOct,Nov,Dec Prcp	inches	474.40	130%	1.2	569.3
Hawkins Lake, MT	1-Jan SWE	inches				0.0
Stahl Creek, MT	1-Jan SWE	inches	14.70	90%	34.6	509.1
East Creek, BC	1-Jan SWE	inches				0.0
Moyie Mountain, BC	1-Jan SWE	inches	185.00	103%	1.6	293.2
Sunshine Village, AB	1-Jan SWE	inches	252.00	92%	2.1	539.3
Akamina Pass, AB	1-Jan SWE	inches				0.0
South Racehorse Creek, AB	1-Jan SWE	inches				0.0
Intercept			1		2724.4	2724.4
1-Jan Forecast (KAF)					Σ	6249.4

Data used in Libby Water Supply Forecast	WY		2016								
	WY	WY	Jan-15	Feb-15	Mar-15	Jun-15	Jul-15	Oct-15	Nov-15	Dec-15	Jan-16
Climate Data											
SOI						-0.90	-1.90				
Precipitation Data			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT			1.37	1.73	2.69						inch
West Glacier, MT			1.93	2.45	4.62						inch
Cranbrook A, BC			16.60	49.30	50.80						mm
Fernie, BC			104.00	198.40	172.00						mm
Snow Water Equiv			1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun			Units
Hawkins Lake, MT											inch
Stahl Creek, MT											inch
East Creek, BC											mm
Moyie Mountain, BC					185						mm
Sunshine Village, AB					252						mm
Akamina Pass, AB											mm
South Racehorse Creek, AB											mm
Streamflow			Jan	Feb	Mar	Apr	May	Jun			Units
Libby Inflow Volume						801.2	1924.2				KAF
Reservoir Elevation			1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev			2440.7	2436.5	2415.0						feet

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