

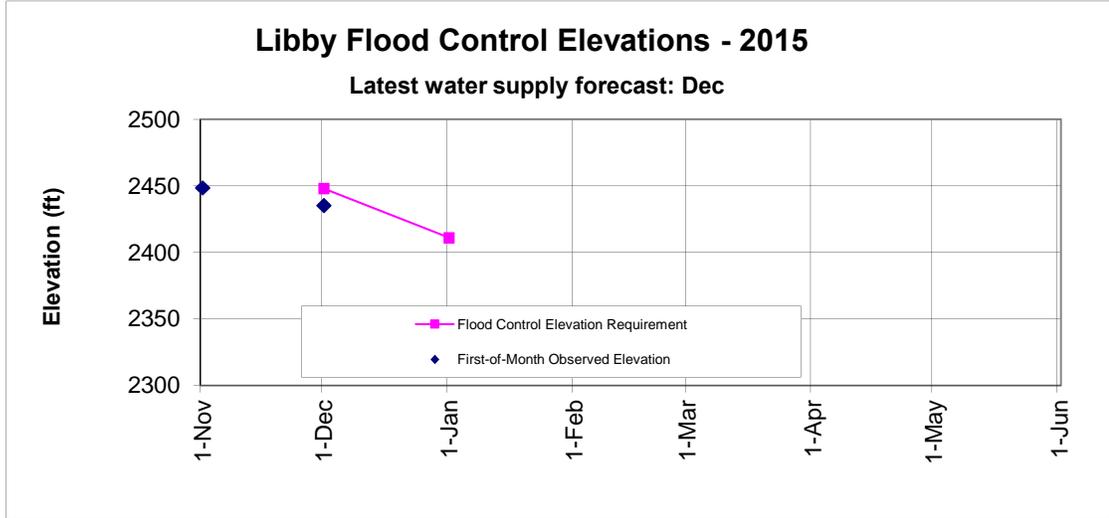
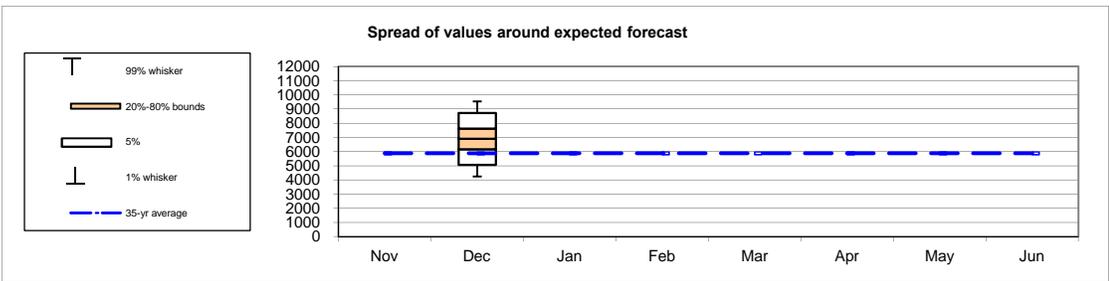
# Libby : December Runoff Forecast & Flood Control Calculation

WY 2015

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	6903	KAF
	Apr-Jul	6267	KAF
	May-Jul	5655	KAF
31-Dec Flood Control Space		2000	KAF
31-Dec Flood Control Elevation		2411.0	ft

1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average
5885	117%	6282	110%
5342	117%	5720	110%
4821	117%	5199	109%

Seasonal Flood Control		Variable End-of-Dec Flood Control Implemented						
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast		6903						
First-of-Month Elev	2448.5	2435.3						
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Control Space	500	2000						
Flood Control Elevation	2448.0	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, Adam Price (206) 764-3604, or Kristian Mickelson (206) 764-6927.
2. Precipitation data were missing for Fernie on various days in October and November. On October's missing days, nearby gages at Sparwood and Cranbrook recorded no precipitation, so totals as reported at Fernie were used. In November, 6/30 days were missing, including significant rain events at Sparwood and Cranbrook. The % of Average precipitation at those two gages (149% & 203%) was used to scale up Fernie's average precipitation to the 275 mm shown here (177% of Fernie's Average November precip.)
3. If you notice that 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.

# Libby : December Runoff Forecast & Flood Control 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		0.00		133.4	0.0
Eureka RS, MT	∑Oct,Nov Precip	inches	2.97	126%	267.7	795.0
West Glacier, MT	∑Oct,Nov Precip	inches	8.41	140%	106.0	891.1
Cranbrook A, BC	∑Oct,Nov Precip	mm	83.00	140%	8.8	729.6
Fernie, BC	∑Oct,Nov Precip	mm	401.90	151%	2.0	783.7
Intercept			1		3704.0	3704.0
	1-Dec Forecast (KAF)				∑	6903.3

## Data used in Libby Water Supply Forecast

WY Jul-05

Climate Data	Jan-14	Feb-14	Mar-14	Jun-14	Jul-14	Oct-14	Nov-14	Dec-14	Jan-15
SOI				0.20	-0.20				
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka RS, MT	0.55	2.42							inch
West Glacier, MT	2.64	5.77							inch
Cranbrook A, BC	29.40	53.60							mm
Fernie, BC	126.90	275.00							mm
Snow Water Equiv	1-Jan			1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Hawkins Lake, MT									mm
Stahl Creek, MT									mm
East Creek, BC									inch
Moyie Mountain, BC									mm
Sunshine Village, AB									mm
Akamina Pass, AB									mm
South Racehorse Creek, AB									inch
Streamflow	Jan			Feb	Mar	Apr	May	Jun	Units
Libby Inflow Volume									KAF
Reservoir Elevation	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units
Libby FOM Elev	2448.5	2435.3							feet

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