

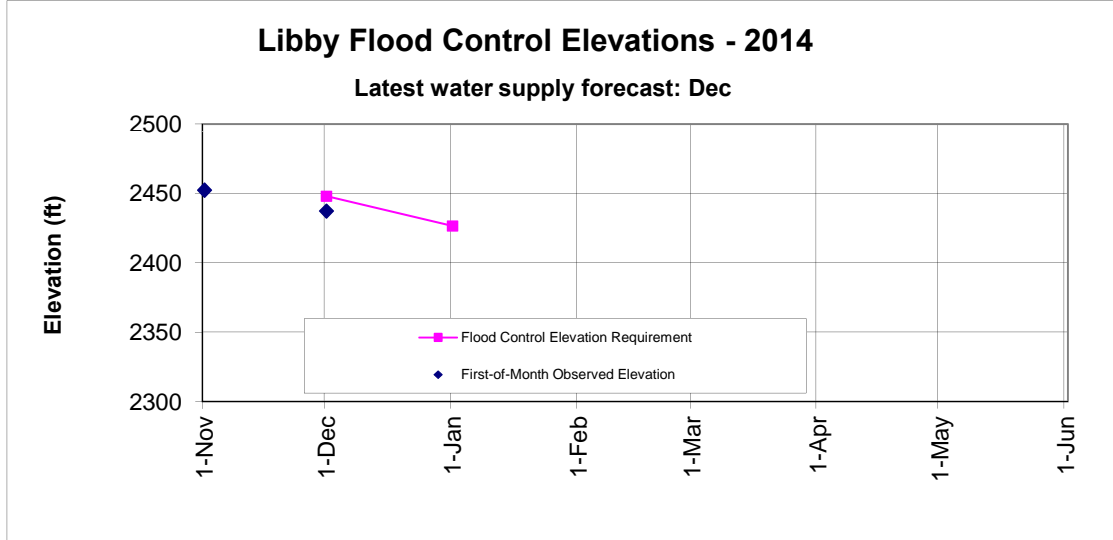
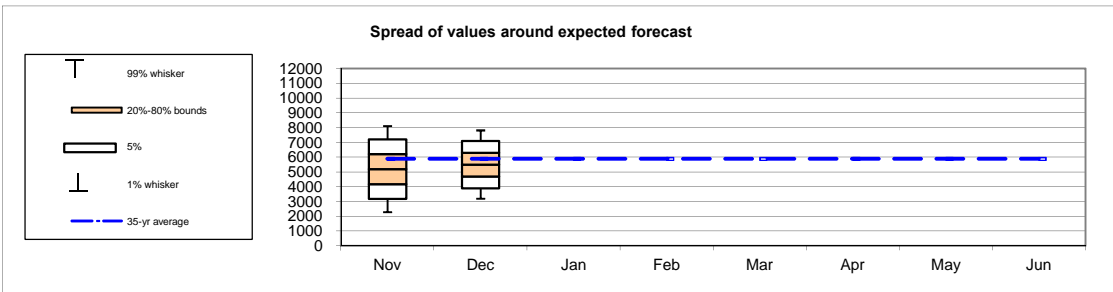
Libby : December Runoff Forecast & Flood Control Calculation

WY 2014

Runoff Forecast and Flood Control			
Most Probable Runoff Volume:	Apr-Aug	5502	KAF
	Apr-Jul	4995	KAF
	May-Jul	4507	KAF
31-Dec Flood Control Space		1403	KAF
31-Dec Flood Control Elevation		2426.6	ft

1981-2010 Average	Percent of Average	1929-1999 Average	Percent of Average
5885	94%	6337	87%
5342	94%	5771	87%
4821	94%	5247	86%

Seasonal Flood Control		Variable End-of-Dec Flood Control Implemented						
Forecast Date >>	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Aug Runoff Forecast	5199	5502						
First-of-Month Elev	2452.5	2437.4						
Date >>	30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr
Flood Control Space	500	1403						
Flood Control Elevation	2448.0	2426.6						



Notes:

- 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.
- 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.

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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		2.00		62.3	124.6
QBO	ΣJan:Mar		-4.45		-1.7	7.6
Eureka, MT	ΣOct,Nov Precip	inches	1.77	82%	233.4	413.2
Libby 1 NE RS, MT	ΣOct,Nov Precip	inches	2.81	76%	148.2	416.5
West Glacier, MT	ΣOct,Nov Precip	inches	4.86	90%	99.8	484.8
Fernie, BC	ΣOct,Nov Precip	inches	6.14	60%	44.5	273.2
Intercept			1		3782.4	3782.4
	1-Dec Forecast (KAF)				Σ	5502.3

Data used in Libby Water Supply Forecast

WY Jul-05

Climate Data	Jan-13	Feb-13	Mar-13	Jun-13	Jul-13	Oct-13	Nov-13	Dec-13	Jan-14
SOI				1.20	0.80				
QBO	-6.07	-1.23	2.85						
PNA						-0.21	-1.14		
Precipitation Data	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Units
Eureka, MT	0.61	1.16							inch
Libby 1 NE RS, MT	0.59	2.22							inch
West Glacier, MT	0.55	4.31							inch
Fernie, BC	27.50	128.50							mm
Snow Water Equiv	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	Units		
Floe Lake, BC							mm		
Sunshine Village, AB							mm		
East Creek, BC							mm		
Stahl Peak, MT							inch		
Gardiner Creek, AB							mm		
Three Isle Lake, AB							mm		
Lost Creek South, AB							mm		
Morrissey Ridge, BC							mm		
Hawkins Lake, MT							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	2452.5	2437.4							feet

for: Peter F. Brooks, P.E., D. WRE
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