

LIBBY PROJECT INFLOW FORECAST, KAF

2005

FORECAST DATE	1 Nov	1 Dec	1 Jan	1 Feb	1 Mar	1 Apr	1 May	1 Jun
FORECAST'S KAF Draft requirements based on Libby VARQ storage reservation diagram.								
Apr-Aug runoff, Libby inflow	6174	6181	5786	5781	5508	5519	5240	4723
Apr-Aug normal, 6248 KAF, 1971-2000	98.8%	98.9%	92.6%	92.5%	88.2%	88.3%	83.9%	75.6%
Apr-Jul runoff	5575	5581	5225	5220	4974	4983	4732	4265
May-Jul runoff	5060	5066	4743	4738	4514	4523	4280	3812
Jan-Jul runoff	6231	6238	5840	5952	5767	5830	5578	5111
Date-Jul runoff	6231	6238	5840	5631	5189	4983	4278	2369
Jun-Aug residual forecast								2827
Forecast standard error, KAF	1352	1175	776	579	553	542	481	465
95% Confidence Error -	2258	1962	1296	967	924	905	803	777
Single Tailed Probability @ 1.67								
95% Non-exceedance Limit, KAF	8432	8143	7082	6748	6431	6424	6043	5500
5% Non-exceedance Limit, KAF	3916	4218	4490	4814	4584	4614	4437	3947
VARQ FLOOD CONTROL, DRAFT BY:	30 Nov	31 Dec	31 Jan	28 Feb	15 Mar	31 Mar	30 Apr	lookback
required draft, KAF	500	2000	1629	1393	813	832	618	
required elevation, ft	2448.0	2411.0	2420.9	2426.9	2440.8	2440.4	2445.3	

Variable	Observed Value	Percent Average	Regression Coefficient	Marginal RO (KAF)	Percent Average
Oct-Dec Precip at Glacier NP RP, BC	19.15	89%	9.217	177	
Oct-Dec Precip at Kaslo, BC	10.01	84%	23.890	239	
Oct-Dec Precip at West Glacier, MT	10.49	120%	30.481	320	
May Precip at Banff, AB	0.84	39%	54.401	46	
May Precip at Cranbrook, BC	1.92	111%	167.165	321	
May Precip at Fernie, BC	3.42	109%	42.711	146	
1-May Hawkins Lake Snow Course, MT	13.90	48%	19.406	270	
1-May Morrissey Ridge Snow Course, BC	21.26	71%	18.702	398	
1-May Stahl Peak, MT	29.60	79%	20.453	605	
15-May East Creek Snow Course, BC	27.32	73%	12.459	340	
15-May Moyie Mountain Snow Course, BC	0.00	0%	28.811	0	
15-May Sullivan Mine Snow Course, BC	0.00	0%	37.686	0	
Intercept	1.00		-34.748	-35	
LIBBY OBSERVED INFLOW FOR APRIL, KAF				453	87.0%
LIBBY OBSERVED INFLOW FOR MAY, KAF				1443	85.8%
LIBBY JUN-AUG RUNOFF FORECAST, KAF				2827	69.9%
LIBBY APR-AUG RUNOFF FORECAST, KAF				4723	75.6%
95% Non-exceedance Limit, KAF				5500	88.0%
5% Non-exceedance Limit, KAF				3947	63.2%
REGRESSION MODEL FORECAST STATISTICS					
1971-2000 Normal Runoff, JUN-AUG, KAF				4046	100.0%
1971-2000 Normal Inflow, Apr, KAF				521	100.0%
1971-2000 Normal Inflow, May, KAF				1681	100.0%
1971-2000 Normal Runoff, APR-AUG, KAF				6248	100.0%
Forecast Standard Error, APR-AUG, KAF			465		
95% Confidence Factor -			777		
1.67-constant Single Tailed Probability					
LONG TERM HISTORIC STATISTICS					
1929-2002 Normal Runoff, APR-AUG, KAF				6313	
1929-2002 Standard Deviation, APR-AUG, KAF			1492		
Historic 74-year 95% non-exceedance limit				8805	139.5%
Historic 74-year 5% non-exceedance limit				3821	60.5%

The given forecast values are to be considered the Corps of Engineers Official Forecast for Libby.

Questions? Ken Soderlind, 503-808-3950; Chan Modini, 503-808-3958; John McCoskery, 503-808-3951

Footnote:

1/ Forecasts for months other than the current month may be different than the official forecast released earlier. Differences are due to updated streamflow, precip, or snow data.