

LIBBY PROJECT INFLOW FORECAST, KAF

2004

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	6533	6445	5337	5644	5344	5311	4943	4429
Apr-Aug norm, 6248, 1971-2000	104.6%	103.2%	85.4%	90.3%	85.5%	85.0%	79.1%	70.9%
Apr-Jul runoff	5900	5820	4820	5097	4825	4796	4463	4000
May-Jul runoff	5355	5283	4374	4626	4380	4353	3858	3371
Jan-Jul runoff	7184	6765	5387	5656	5333	5301	4968	4505
Date-Jul runoff	7184	6765	5387	5498	5034	4796	3835	2271
Jun-Aug residual forecast								2701
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	8791	8407	6621	6608	8791	8791	5732	5188
5% Non-exceedance Limit, KAF	4275	4483	4053	4681	4275	4275	4153	3671
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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	1400	1202	800	743	410	
required elevation, ft	2448.0	2411.0	2426.7	2431.6	2441.1	2442.5	2450.0	

FORECAST	Observed Value	Percent Average	Regression Coefficient	Marginal RO (KAF)	Percent Average
Oct-Dec Precip at Glacier NP RP, BC	19.09	89%	9.2	176	
Oct-Dec Precip at Kaslo, BC	9.76	82%	23.9	233	
Oct-Dec Precip at West Glacier, MT	9.18	105%	30.5	280	
May Precip at Banff, AB	1.69	79%	54.4	92	
May Precip at Cranbrook, BC	1.43	82%	167.2	238	
May Precip at Fernie, BC	2.03	65%	42.7	87	
1-May Hawkins Lake Snow Course, MT	18.50	64%	19.4	359	
1-May Morrissey Ridge Snow Course, BC	15.35	51%	18.7	287	
1-May Stahl Peak, MT	30.00	80%	20.5	614	
15-May East Creek Snow Course, BC	29.69	79%	12.5	370	
15-May Moyie Mountain Snow Course, BC	0.00	0%	28.8	0	
15-May Sullivan Mine Snow Course, BC	0.00	0%	37.7	0	
Intercept	1.00		-34.7	-35	
LIBBY OBSERVED INFLOW FOR APRIL, KAF				628	120.6%
LIBBY OBSERVED INFLOW FOR MAY, KAF				1100	65.4%
LIBBY JUN-AUG RUNOFF FORECAST, KAF				2701	66.8%
LIBBY APR-AUG RUNOFF FORECAST, KAF				4429	70.9%
95% Non-exceedance Limit, KAF				5189	83.1%
5% Non-exceedance Limit, KAF				3670	58.7%

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	455	
95% Confidence Factor -	760	
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; Arun Mylvahanan, 503-808-3961

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.