

## LIBBY PROJECT INFLOW FORECAST, KAF

1999

FORECAST DATE	1 Jan	1 Feb	1 Mar
FORECAST'S KAF			
Apr-Aug runoff, Fort Steele	3109	4134	4050
Apr-Aug runoff, Libby Local	2375	2333	3043
Apr-Aug runoff, Libby inflow	6633	6924	7093
Apr-Aug norm, 6376.8, 1961-1990	104.0%	108.6%	111.2%
Apr-Jul runoff	6011	6275	6428
May-Jul runoff	5514	5756	5896
Jan-Jul runoff	6634	6949	7119
Date-Jul runoff	6634	6698	6660
Date-Jul standard error	1069	731	666
Date-Jul confidence limit, 1.645	1759	1202	1096
Date-Jul 95% confidence	4875	5496	5565
Date-Jul 5% confidence	8392	7901	7756

FLOOD CONTROL, DRAFT BY:	31 Jan	28 Feb	15 Mar
required draft, KAF	3109.3	4133.5	4581.2
required elevation, FT	2375.5	2333.4	2310.9

FORECAST COMPONENT SUMMARY	FRO	WP	WP+NS	SWE	SWE+NS	NSSPW	INT	TOTAL
FORT STEELE, B.C., (FS)	1.076	79.94	88.40	135.1	149.8	29.20		
inches=(fro(1.309)+wp(0.068)+swe(0.067)+sp(0.167))-5.114								
inches	1.408		6.011		10.038	4.876	-5.114	17.220
inches*235.2=kaf								4050
LIBBY LOCAL, (LL)	0.934	64.28	72.76	111.4	122.7	25.62		
inches=(fro(0.921)+wp(0.086)+swe(0.046)+sp(0.152))-4.183								
inches	0.861		6.257		5.6421	3.894	-4.183	12.471
inches*244.0=kaf								3043

## TERM DEFINITION

fall runoff is FRO  
winter precip is WP  
normal subsequent is NS  
snow water equivalent is SWE  
normal subsequent spring precip(weighted) is NSSPW  
equation constant, or, y-INTERCEPT is INT

## OBSERVED DATA, usage, FS=Fort Steele, LL=Libby Local

WINTER PRECIP(WP), inches		Oct	Nov	Dec	Jan	Feb
Banff	FS	1.79	1.19	1.30	0.85	2.17
Brisco	FS	1.69	1.61	2.24	0.94	1.17
Fernie	LL	1.77	9.09	4.25	5.79	3.84
Kaslo	FS	2.56	5.83	6.77	5.29	2.60
Rogers Pass	FS	2.54	9.17	9.17	13.19	7.87
Fortine	LL	0.59	2.92	1.12	1.21	0.73
Libby RS	LL	0.90	3.62	2.94	2.12	1.60
Bonners Ferry	LL	0.77	2.70	2.59	0.75	2.80
Polebridge	LL	0.91	3.70	3.85	1.61	2.11
SNOW WATER EQUIVALENT(SWE), inches				31 DEC	31 JAN	28 FEB
Glacier	FS			15.4	24.4	30.7
Kicking Horse	FS			9.0	14.0	15.0
Kimberly	LL			3.9	3.9	8.1
Marble Canyon	FS			7.5	13.0	15.3
Mirror Lake	FS			7.4	10.7	12.3
Morrissey Ridge	FS & LL*.5			17.7	24.1	29.1
New Fernie	FS & LL			5.7	10.8	17.0
Sullivan Mine	FS & LL			6.8	11.1	15.7
Red Mtn.	LL			10.2	14.1	20.4
Weisel Divide	LL			18.6	29.5	35.6

FALL RUNOFF(FRO), kaf		Oct	Nov	SUM
Fort Steele	f=235.2	138	115	253
Libby local	f=244.0	112	116	228

f=, is to convert from basin inches to acre feet(x), or acre feet to basin inches(/).

LIBBY INFLOW, kaf		Oct	Nov	Dec	Jan	Feb
		250	231	216	251	208

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