

LIBBY PROJECT INFLOW FORECAST, KAF

1999

FORECAST DATE	1 Jan	1 Feb	1 Mar	1 Apr	1 May	1 Jun
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FORECAST'S KAF						
Apr-Aug runoff, Fort Steele	3109	4134	4050	4013	4013	3828
Apr-Aug runoff, Libby Local	2375	2333	3043	2943	2943	2750
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Apr-Aug runoff, Libby inflow	6633	6924	7093	6956	6734	6578
Apr-Aug norm, 6376.8, 1961-1990	104.0%	108.6%	111.2%	109.1%	105.6%	103.2%
Apr-Jul runoff	6011	6275	6428	6304	6103	5975
May-Jul runoff	5514	5756	5896	5782	5550	5417
Jan-Jul runoff	6634	6949	7119	7000	6799	6657
Date-Jul runoff	6634	6698	6660	6318	5559	3945
Jun-Aug residual forecast						4548
Date-Jul standard error	1069	731	666	643	572	443
Date-Jul confidence limit, 1.64	1759	1202	1096	1058	941	729
Date-Jul 95% confidence	4875	5496	5565	5260	4618	3216
Date-Jul 5% confidence	8392	7901	7756	7376	6500	4674
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FLOOD CONTROL, DRAFT BY:	31 Jan	28 Feb	15 Mar	31 Mar	30 Apr	lookback
required draft, KAF	3109.3	4133.5	4581.2	4447.0	3879.4	
required elevation, FT	2375.5	2333.4	2310.9	2318.1	2344.8	
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FORECAST COMPONENT SUMMARY	FRO	WP	SWE	SP	SP+NS	INT TOTAL
FORT STEELE, B.C., (FS)	1.076	88.56	147.3	10.73	24.49	
inches=(fro(1.309)+wp(0.068)+swe(0.067)+sp(0.167))-5.114						
inches	1.408	6.022	9.869		4.090	-5.114 16.275
inches*235.2=kaf						3828
LIBBY LOCAL, (LL)	0.934	69.37	120.1	8.49	20.42	
inches=(fro(0.921)+wp(0.086)+swe(0.046)+sp(0.152))-4.183						
inches	0.861	5.966	5.525		3.104	-4.183 11.272
inches*244.0=kaf						2750
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TERM DEFINITION						
fall runoff is FRO						
winter precip is WP						
normal subsequent is NS						
snow water equivalent is SWE						
spring precip(weighted) is SP						
equation constant, or, y-INTERCEPT is INT						
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OBSERVED DATA, usage, FS=Fort Steele, LL=Libby Local						
WINTER PRECIP(WP), inches	Oct	Nov	Dec	Jan	Feb	Mar
Banff FS	1.79	1.19	1.30	0.85	2.17	1.02
Brisco FS	1.69	1.61	2.24	0.94	1.17	0.68
Fernie LL	1.77	9.09	4.25	5.79	3.84	1.85
Kaslo FS	2.56	5.83	6.77	5.29	2.60	2.92
Rogers Pass FS	2.54	9.17	9.17	13.19	7.87	4.00
Fortine LL	0.59	2.92	1.12	1.21	0.73	0.86
Libby RS LL	0.90	3.62	2.94	2.12	1.60	0.92
Bonnars Ferry LL	0.77	2.70	2.59	0.75	2.80	0.42
Polebridge LL	0.91	3.70	3.85	1.61	2.11	1.04
SNOW WATER EQUIVALENT(SWE), inches			31 DEC	31 JAN	28 FEB	31 MAR
Glacier FS			15.4	24.4	30.7	36.5
Kicking Horse FS			9.0	14.0	15.0	15.5
Kimberly LL			3.9	3.9	8.1	6.0
Marble Canyon FS			7.5	13.0	15.3	16.1
Mirror Lake FS			7.4	10.7	12.3	15.9
Morrissey Ridge FS & LL*.5			17.7	24.1	29.1	33.2
New Fernie FS & LL			5.7	10.8	17.0	14.2
Sullivan Mine FS & LL			6.8	11.1	15.7	15.9
Red Mtn. LL			10.2	14.1	20.4	25.6
Weisel Divide LL			18.6	29.5	35.6	41.8

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	Mar	Apr	May
		250	231	216	251	208	223	558	1472

SPRING PRECIP(SP), inches		Apr	May
Brisco	FS	0.78	0.40
Creston	FS	0.82	1.16
Kaslo	FS & LL	0.70	2.05
Wasa	FS	0.83	1.90
Fortine	LL	0.54	1.03
Porthill	FS & LL	0.53	1.56
Whitefish	LL	1.28	0.80

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 Previous fcsts have changed because some estimated precip has been replaced with observed.  
 Questions? Russ Morrow, 503-808-3951 or Bruce Glabau, 503-808-3950