

Annual Peak-Flow Frequency Analysis

For more information on the contents of this documentation, see Kessler and others (2013).

Streamgauge number and name:

05374400 Long Creek near Potsdam, Minn.

Peak-flow information:

Number of systematic peak flows in record	25
Systematic period begins	1966
Systematic period ends	1990
Length of systematic record	25
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.232
Standard error of generalized skew	0.426
Low-outlier method	Bulletin 17B Grubbs-Beck test

Bulletin 17B systematic record analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.2869	0.3329	0.082

Outlier criteria and number of peak flows exceeding:

Low	28.8	0
High	1301.2	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.2869	0.3329	-0.085

Annual frequency curve at selected exceedance probabilities:

[WIE, Weighted independent estimate; --, not computed]

Exceedance probability	Peak estimate	Lower-95 level	Upper 95 level	WIE estimate	Lower-95 WIE level	Upper 95 WIE level
0.9950	25.3	12.6	39.8	--	--	--
0.9900	31.0	16.4	47.2	--	--	--
0.9500	53.9	33.0	75.5	--	--	--
0.9000	72.0	47.4	97.3	--	--	--
0.8000	102.0	72.2	133.0	--	--	--
0.6667	140.0	105.0	181.0	--	--	--
0.5000	196.0	151.0	254.0	208	156	277
0.4292	224.0	174.0	294.0	--	--	--
0.2000	370.0	283.0	523.0	433	324	578
0.1000	513.0	381.0	778.0	657	484	891
0.0400	724.0	514.0	1,190.0	1,040	742	1,450
0.0200	902.0	620.0	1,580.0	1,380	955	1,990
0.0100	1,100.0	732.0	2,020.0	1,730	1,150	2,620
0.0050	1,310.0	851.0	2,540.0	--	--	--
0.0020	1,620.0	1,020.0	3,340.0	2,760	1,630	4,660

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1966	228	--
1967	408	--
1968	137	--
1969	97	--
1970	151	--
1971	100	--
1972	78	--
1973	435	--
1974	773	--
1975	200	--
1976	130	--
1977	361	--
1978	574	--
1979	194	--
1980	720	--
1981	163	--
1982	76	--
1983	95	--
1984	40	--
1985	168	--
1986	310	--
1987	82	--
1988	230	--
1989	200	--
1990	436	--