

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05245800 Sevenmile Creek near Pillager, Minn.

Peak-flow information:

Number of systematic peak flows in record	15
Systematic period begins	1979
Systematic period ends	1993
Length of systematic record	15
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.097
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
1.9769	0.3061	-0.014

Outlier criteria and number of peak flows exceeding:

Low	19.5	0
High	462.0	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.9769	0.3061	-0.067

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	14.8	5.9	24.7	--	--	--
0.9900	17.8	7.7	28.7	--	--	--
0.9500	29.4	15.5	43.2	--	--	--
0.9000	38.2	22.3	54.1	--	--	--
0.8000	52.5	33.9	71.7	--	--	--
0.6667	70.4	49.0	95.0	--	--	--
0.5000	95.6	69.8	131.0	102	74.6	140
0.4292	108.0	79.9	151.0	--	--	--
0.2000	172.0	126.0	267.0	182	128.0	259
0.1000	233.0	165.0	398.0	248	167.0	369
0.0400	320.0	216.0	616.0	344	216.0	546
0.0200	393.0	256.0	819.0	422	253.0	705
0.0100	472.0	297.0	1,060.0	509	288.0	897
0.0050	557.0	339.0	1,340.0	--	--	--
0.0020	681.0	398.0	1,780.0	736	371.0	1,460

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1979	180	--
1980	72	--
1981	118	--
1982	200	--
1983	285	--
1984	47	--
1985	86	--
1986	108	--
1987	46	--
1988	30	--
1989	64	--
1990	220	--
1991	80	--
1992	38	--
1993	200	--