

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05383700 Mill Creek tributary near Chatfield, Minn.

Peak-flow information:

Number of systematic peak flows in record	17
Systematic period begins	1959
Systematic period ends	1975
Length of systematic record	17
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.248
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:

	Mean	Standard deviation	Skewness
	2.6020	0.2036	-0.032

Outlier criteria and number of peak flows exceeding:

Low	135.4	0
High	1180.8	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.6020	0.2036	-0.164

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	111	62.9	155	--	--	--
0.9900	127	75.5	173	--	--	--
0.9500	181	122.0	231	--	--	--
0.9000	218	156.0	271	--	--	--
0.8000	271	207.0	329	--	--	--
0.6667	330	264.0	398	--	--	--
0.5000	405	334.0	493	380	306	473
0.4292	440	364.0	541	--	--	--
0.2000	595	489.0	780	565	451	708
0.1000	723	582.0	1,000	708	555	903
0.0400	885	692.0	1,310	930	707	1,220
0.0200	1,000	769.0	1,560	1,130	831	1,530
0.0100	1,120	844.0	1,810	1,330	946	1,880
0.0050	1,240	917.0	2,080	--	--	--
0.0020	1,400	1,010.0	2,460	1,870	1,210	2,900

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	402	--
1960	703	--
1961	435	--
1962	405	--
1963	235	--
1964	141	--
1965	506	--
1966	271	--
1967	780	--
1968	345	--
1969	524	--
1970	376	--
1971	344	--
1972	274	--
1973	361	--
1974	1,030	--
1975	407	--