

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05318000 East Branch Blue Earth River near Bricelyn, Minn.

Peak-flow information:

Number of systematic peak flows in record	35
Systematic period begins	1951
Systematic period ends	1987
Length of systematic record	37
Years without information	2
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.179
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
	2.5477	0.3907	-0.587

Outlier criteria and number of peak flows exceeding:

Low	33.2	0
High	3753.3	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
2.5477	0.3907	-0.376	

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	25.4	12.4	41.6	--	--	--
0.9900	34.1	17.9	53.5	--	--	--
0.9500	73.5	45.5	104.0	--	--	--
0.9000	108.0	72.2	147.0	--	--	--
0.8000	169.0	122.0	221.0	--	--	--
0.6667	251.0	190.0	323.0	--	--	--
0.5000	373.0	290.0	483.0	401	299	538
0.4292	437.0	340.0	571.0	--	--	--
0.2000	761.0	582.0	1,060.0	826	618	1,100
0.1000	1,070.0	795.0	1,580.0	1,180	863	1,620
0.0400	1,510.0	1,080.0	2,380.0	1,720	1,190	2,500
0.0200	1,860.0	1,300.0	3,060.0	2,170	1,420	3,320
0.0100	2,230.0	1,520.0	3,810.0	2,690	1,680	4,330
0.0050	2,610.0	1,740.0	4,620.0	--	--	--
0.0020	3,140.0	2,040.0	5,780.0	4,050	2,200	7,420

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water year	Peak flow	Peak-flow code
1951	1,320	--
1952	776	--
1953	231	--
1954	274	--
1955	196	--
1956	207	--
1957	62	--
1958	56	--
1959	81	--
1960	935	--
1961	502	--
1962	1,150	--
1963	211	--
1964	128	--
1965	1,260	--
1966	268	--
1967	725	--
1968	469	--
1969	792	--
1970	140	--
Gap in systematic record		
1973	524	--
1974	432	--
1975	690	--
1976	80	--
1977	74	--
1978	636	--
1979	680	--
1980	500	--
1981	770	--
1982	270	--
1983	720	--
1984	690	--
1985	320	--
1986	580	--
1987	280	--