

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

04021205 Floodwood River above Floodwood, Minn.

Peak-flow information:

Number of systematic peak flows in record	16
Systematic period begins	1972
Systematic period ends	1987
Length of systematic record	16
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.133
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
3.0348	0.2234	-0.427

Outlier criteria and number of peak flows exceeding:

Low	335.5	0
High	3498.4	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
3.0348	0.2234	-0.234	

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	257	132	377	--	--	--
0.9900	300	164	426	--	--	--
0.9500	450	286	594	--	--	--
0.9000	554	379	709	--	--	--
0.8000	708	522	882	--	--	--
0.6667	883	686	1,090	--	--	--
0.5000	1,100	887	1,380	1,130	893	1,440
0.4292	1,210	978	1,530	--	--	--
0.2000	1,680	1,340	2,280	1,730	1,340	2,230
0.1000	2,060	1,620	2,990	2,160	1,620	2,870
0.0400	2,550	1,940	3,980	2,710	1,940	3,800
0.0200	2,920	2,170	4,780	3,130	2,150	4,570
0.0100	3,280	2,390	5,610	3,570	2,350	5,440
0.0050	3,640	2,600	6,480	--	--	--
0.0020	4,120	2,870	7,700	4,640	2,750	7,820

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1972	1,590	--
1973	857	--
1974	1,300	--
1975	2,030	--
1976	1,020	--
1977	491	--
1978	1,420	--
1979	2,300	--
1980	386	--
1981	926	--
1982	2,000	--
1983	1,140	--
1984	1,000	--
1985	701	--
1986	1,620	--
1987	662	--