

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05378235 Garvin Brook near Minnesota City, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	10
Systematic period begins	1982
Systematic period ends	1991
Length of systematic record	10
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.193
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
2.9151	0.5751	0.207

**Outlier criteria and number of peak flows exceeding:**

Low	55.5	0
High	12187.4	0

**Bulletin 17B Final analysis results:**

**Moments of the common logarithms of the peak flows:**

	Standard	
Mean	deviation	Skewness
2.9151	0.5751	-0.084

**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	24.5	2.2	77.1	--	--	--
0.9900	34.8	3.9	101.0	--	--	--
0.9500	90.3	17.4	214.0	--	--	--
0.9000	149.0	37.4	324.0	--	--	--
0.8000	271.0	90.4	550.0	--	--	--
0.6667	472.0	194.0	942.0	--	--	--
0.5000	838.0	398.0	1,780.0	1,030	592	1,790
0.4292	1,060.0	521.0	2,360.0	--	--	--
0.2000	2,520.0	1,240.0	7,590.0	2,520	1,580	4,020
0.1000	4,430.0	2,040.0	17,400.0	3,770	2,430	5,850
0.0400	8,040.0	3,340.0	43,300.0	5,610	3,630	8,680
0.0200	11,800.0	4,520.0	78,300.0	7,180	4,540	11,400
0.0100	16,500.0	5,900.0	133,000.0	9,010	5,400	15,000
0.0050	22,400.0	7,480.0	217,000.0	--	--	--
0.0020	32,500.0	9,920.0	391,000.0	14,000	7,440	26,500

**Peak-flow data used in the analysis:**

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1982	212	--
1983	471	--
1984	803	--
1985	1,570	--
1986	1,580	--
1987	484	--
1988	82	--
1989	1,240	--
1990	1,290	--
1991	11,200	--