

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

04024200 South Fork Nemadji River near Holyoke, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	25
Systematic period begins	1961
Systematic period ends	1985
Length of systematic record	25
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.076
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
2.8640	0.2788	-0.162

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

Low	148.2	0
High	3606.2	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.8640	0.2788	-0.116

**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	130	72.5	191	--	--	--
0.9900	156	90.8	222	--	--	--
0.9500	249	165.0	331	--	--	--
0.9000	319	224.0	410	--	--	--
0.8000	428	321.0	535	--	--	--
0.6667	560	439.0	692	--	--	--
0.5000	740	596.0	921	731	571	936
0.4292	830	671.0	1,040	--	--	--
0.2000	1,260	1,010.0	1,680	1,240	950	1,630
0.1000	1,650	1,280.0	2,340	1,630	1,200	2,220
0.0400	2,190	1,650.0	3,330	2,180	1,510	3,140
0.0200	2,620	1,920.0	4,180	2,640	1,740	3,990
0.0100	3,080	2,200.0	5,120	3,140	1,970	5,000
0.0050	3,560	2,490.0	6,170	--	--	--
0.0020	4,240	2,880.0	7,710	4,520	2,520	8,130

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1961	458	--
1962	900	--
1963	190	--
1964	1,120	--
1965	352	--
1966	1,220	--
1967	1,210	--
1968	730	--
1969	1,590	--
1970	2,100	--
1971	590	--
1972	2,030	--
1973	370	--
1974	760	--
1975	890	--
1976	244	--
1977	688	--
1978	430	--
1979	990	--
1980	610	--
1981	1,060	--
1982	440	--
1983	1,950	--
1984	710	--
1985	424	--