

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

04024098 Deer Creek near Holyoke, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	25
Systematic period begins	1977
Systematic period ends	2001
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	-0.036
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
2.5600	0.3558	0.621

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

Low	47.4	0
High	2782.7	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.5600	0.3558	0.236

**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	52.8	26.9	82.3	--	--	--
0.9900	62.3	33.2	94.6	--	--	--
0.9500	99.9	60.4	142.0	--	--	--
0.9000	130.0	83.7	179.0	--	--	--
0.8000	181.0	125.0	241.0	--	--	--
0.6667	249.0	181.0	326.0	--	--	--
0.5000	352.0	266.0	463.0	346	255	471
0.4292	407.0	310.0	542.0	--	--	--
0.2000	716.0	538.0	1,030.0	688	479	986
0.1000	1,060.0	766.0	1,660.0	992	651	1,510
0.0400	1,620.0	1,110.0	2,840.0	1,470	882	2,440
0.0200	2,160.0	1,420.0	4,080.0	1,890	1,070	3,360
0.0100	2,810.0	1,770.0	5,700.0	2,390	1,260	4,510
0.0050	3,590.0	2,170.0	7,800.0	--	--	--
0.0020	4,860.0	2,790.0	11,500.0	3,880	1,790	8,420

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1977	289	--
1978	378	--
1979	383	--
1980	214	--
1981	235	--
1982	204	--
1983	1,010	--
1984	646	--
1985	2,000	--
1986	1,440	--
1987	96	--
1988	166	--
1989	109	--
1990	1,730	--
1991	328	--
1992	270	--
1993	350	--
1994	392	--
1995	218	--
1996	251	--
1997	332	--
1998	163	--
1999	791	--
2000	186	--
2001	781	--