

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05317850 Foster Creek near Alden, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	26
Systematic period begins	1959
Systematic period ends	1984
Length of systematic record	26
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.203
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
1.9258	0.3422	-1.190

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

Low	11.7	0
High	605.3	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
1.9258	0.3422	-0.524

**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	7.5	3.4	12.6	--	--	--
0.9900	10.0	4.9	15.9	--	--	--
0.9500	20.7	12.4	29.5	--	--	--
0.9000	29.7	19.4	40.3	--	--	--
0.8000	44.7	31.8	58.4	--	--	--
0.6667	63.8	47.9	82.2	--	--	--
0.5000	90.3	69.7	118.0	89.8	66.9	121
0.4292	104.0	80.2	137.0	--	--	--
0.2000	166.0	126.0	235.0	166.0	125.0	220
0.1000	219.0	163.0	329.0	222.0	164.0	301
0.0400	288.0	207.0	460.0	298.0	209.0	424
0.0200	338.0	238.0	563.0	357.0	239.0	533
0.0100	388.0	268.0	669.0	421.0	268.0	659
0.0050	436.0	296.0	776.0	--	--	--
0.0020	498.0	332.0	918.0	579.0	327.0	1,020

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	13	--
1960	112	--
1961	175	--
1962	86	--
1963	24	--
1964	13	--
1965	185	--
1966	108	--
1967	152	--
1968	183	--
1969	123	--
1970	39	--
1971	147	--
1972	46	--
1973	85	--
1974	148	--
1975	169	--
1976	80	--
1977	115	--
1978	137	--
1979	67	--
1980	75	--
1981	223	--
1982	30	--
1983	98	--
1984	108	--