

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

04019000 West Two River near Iron Junction, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	23
Systematic period begins	1954
Systematic period ends	1979
Length of systematic record	26
Years without information	3
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.028
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:**

	Mean	Standard deviation	Skewness
	2.7258	0.2073	-0.722

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

Low	165.3	0
High	1711.1	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.7258	0.2073	-0.263

**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	138	85.4	188	--	--	--
0.9900	160	103.0	212	--	--	--
0.9500	234	169.0	292	--	--	--
0.9000	285	216.0	346	--	--	--
0.8000	358	286.0	426	--	--	--
0.6667	441	365.0	519	--	--	--
0.5000	543	459.0	644	519	429	629
0.4292	591	501.0	706	--	--	--
0.2000	799	671.0	1,000	768	628	940
0.1000	966	797.0	1,270	929	741	1,160
0.0400	1,170	944.0	1,620	1,120	858	1,470
0.0200	1,320	1,050.0	1,890	1,260	927	1,710
0.0100	1,470	1,140.0	2,160	1,400	988	1,970
0.0050	1,620	1,240.0	2,440	--	--	--
0.0020	1,810	1,360.0	2,820	1,700	1,100	2,640

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1954	916	--
1955	705	--
1956	626	--
1957	796	--
1958	328	--
1959	385	--
1960	532	--
1961	856	--
1962	397	--

Gap in systematic record

1966	524	--
1967	510	--
1968	345	--
1969	720	--
1970	568	--
1971	876	--
1972	511	--
1973	199	--
1974	870	--
1975	708	--
1976	354	--
1977	175	--
1978	468	--
1979	1,120	--