

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

04018900 East Two River near Iron Junction, Minn.

Peak-flow information:

Number of systematic peak flows in record	13
Systematic period begins	1967
Systematic period ends	1979
Length of systematic record	13
Years without information	0
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:

	Standard	
Mean	deviation	Skewness
2.5179	0.2156	-0.634

Outlier criteria and number of peak flows exceeding:

Low	111.9	0
High	970.1	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.5179	0.2156	-0.168

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	84.8	40.5	126	--	--	--
0.9900	97.7	49.8	141	--	--	--
0.9500	142.0	85.9	190	--	--	--
0.9000	173.0	113.0	224	--	--	--
0.8000	218.0	155.0	276	--	--	--
0.6667	269.0	204.0	338	--	--	--
0.5000	334.0	263.0	426	315	245	406
0.4292	365.0	290.0	472	--	--	--
0.2000	502.0	397.0	707	475	361	626
0.1000	617.0	476.0	936	582	427	793
0.0400	763.0	570.0	1,260	715	497	1,030
0.0200	873.0	636.0	1,540	810	540	1,220
0.0100	983.0	700.0	1,820	911	580	1,430
0.0050	1,090.0	762.0	2,130	--	--	--
0.0020	1,240.0	843.0	2,570	1,140	657	1,990

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1967	370	--
1968	395	--
1969	370	--
1970	297	--
1971	625	--
1972	316	--
1973	198	--
1974	640	--
1975	405	--
1976	276	--
1977	114	--
1978	190	--
1979	555	--