

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05340000 Sunrise River near Stacy, Minn.

Peak-flow information:

Number of systematic peak flows in record	17
Systematic period begins	1949
Systematic period ends	1965
Length of systematic record	17
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.235
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
	2.4824	0.2177	-0.016

Outlier criteria and number of peak flows exceeding:

Low	95.5	0
High	966.0	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.4824	0.2177	-0.150

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	77.8	42.5	111	--	--	--
0.9900	89.6	51.5	124	--	--	--
0.9500	130.0	85.8	170	--	--	--
0.9000	159.0	111.0	200	--	--	--
0.8000	200.0	150.0	246	--	--	--
0.6667	247.0	195.0	302	--	--	--
0.5000	308.0	250.0	379	316	252	397
0.4292	336.0	275.0	419	--	--	--
0.2000	464.0	377.0	620	474	370	608
0.1000	572.0	454.0	811	588	444	778
0.0400	711.0	547.0	1,080	734	526	1,020
0.0200	816.0	613.0	1,300	842	579	1,230
0.0100	922.0	678.0	1,540	956	628	1,460
0.0050	1,030.0	742.0	1,790	--	--	--
0.0020	1,170.0	825.0	2,140	1,220	726	2,070

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1949	168	--
1950	384	--
1951	325	--
1952	806	--
1953	322	--
1954	481	--
1955	202	--
1956	296	--
1957	378	--
1958	135	--
1959	120	--
1960	324	--
1961	326	--
1962	314	--
1963	252	--
1964	290	--
1965	684	--