

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05330550 East Branch Raven Stream near New Prague, Minn.

Peak-flow information:

Number of systematic peak flows in record	26
Systematic period begins	1960
Systematic period ends	1985
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	-0.155
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	
2.2323	0.2658	0.797	

Outlier criteria and number of peak flows exceeding:

Low	36.9	0
High	789.6	1

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.2323	0.2658	0.229

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	40.2	24.6	55.8	--	--	--
0.9900	45.6	28.8	62.0	--	--	--
0.9500	65.0	45.0	84.1	--	--	--
0.9000	79.2	57.4	100.0	--	--	--
0.8000	101.0	77.4	125.0	--	--	--
0.6667	129.0	102.0	157.0	--	--	--
0.5000	167.0	136.0	204.0	171	135	216
0.4292	186.0	152.0	229.0	--	--	--
0.2000	284.0	230.0	370.0	301	229	396
0.1000	379.0	299.0	526.0	418	303	577
0.0400	522.0	396.0	784.0	608	411	900
0.0200	646.0	474.0	1,020.0	778	496	1,220
0.0100	785.0	559.0	1,310.0	983	593	1,630
0.0050	942.0	651.0	1,660.0	--	--	--
0.0020	1,180.0	785.0	2,210.0	1,560	822	2,960

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1960	929	--
1961	161	--
1962	126	--
1963	73	--
1964	112	--
1965	505	--
1966	163	--
1967	249	--
1968	61	--
1969	325	--
1970	122	--
1971	211	--
1972	192	--
1973	113	--
1974	180	--
1975	240	--
1976	110	--
1977	94	--
1978	101	--
1979	308	--
1980	140	--
1981	82	--
1982	228	--
1983	318	--
1984	148	--
1985	183	--