

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05320300 Cobb River tributary near Mapleton, Minn.

Peak-flow information:

Number of systematic peak flows in record	27
Systematic period begins	1959
Systematic period ends	1985
Length of systematic record	27
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.137
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	
2.1278	0.2608	0.313	

Outlier criteria and number of peak flows exceeding:

Low	29.6	0
High	609.1	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
2.1278	0.2608	0.071	

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	29.8	18.1	41.3	--	--	--
0.9900	34.3	21.7	46.6	--	--	--
0.9500	50.6	35.3	65.1	--	--	--
0.9000	62.5	45.8	78.3	--	--	--
0.8000	80.8	62.4	98.9	--	--	--
0.6667	103.0	82.7	125.0	--	--	--
0.5000	133.0	110.0	162.0	133	106	167
0.4292	148.0	122.0	182.0	--	--	--
0.2000	222.0	181.0	287.0	226	175	292
0.1000	291.0	232.0	398.0	302	225	406
0.0400	390.0	299.0	570.0	418	292	597
0.0200	471.0	352.0	724.0	517	343	778
0.0100	560.0	408.0	899.0	632	398	1,000
0.0050	656.0	466.0	1,100.0	--	--	--
0.0020	796.0	548.0	1,400.0	946	526	1,700

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	258	--
1960	526	--
1961	176	--
1962	126	--
1963	137	--
1964	92	--
1965	293	--
1966	71	--
1967	252	--
1968	302	--
1969	162	--
1970	60	--
1971	140	--
1972	38	--
1973	135	--
1974	343	--
1975	109	--
1976	76	--
1977	86	--
1978	74	--
1979	119	--
1980	86	--
1981	112	--
1982	105	--
1983	234	--
1984	98	--
1985	135	--