Annual Peak-Flow Frequency Analysis
For more information on the contents of this documentation, see Kessler and others (2013).

Streamgage number and name:

05320400 Maple 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	-0.142
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
2.1561	0.4616	0.450

Outlier criteria and number of peak flows exceeding:

Low	9.8	0
High	2084.2	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.1561	0.4616	0.123

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	10.5	4.4	18.6	––	––	––
0.9900	13.3	6.0	22.8	––	––	––
0.9500	25.9	13.8	40.4	––	––	––
0.9000	37.2	21.5	55.5	––	––	––
0.8000	58.2	36.9	83.3	––	––	––
0.6667	89.1	60.3	125.0	––	––	––
0.5000	140.0	99.1	198.0	135	92.6	198
0.4292	170.0	121.0	242.0	––	––	––
0.2000	348.0	243.0	549.0	312	206.0	472
0.1000	567.0	379.0	986.0	469	295.0	746
0.0400	962.0	602.0	1,900.0	704	411.0	1,210
0.0200	1,360.0	810.0	2,930.0	912	499.0	1,670
0.0100	1,870.0	1,060.0	4,370.0	1,140	586.0	2,200
0.0050	2,500.0	1,360.0	6,320.0	––	––	––
0.0020	3,580.0	1,830.0	9,970.0	1,770	787.0	3,960

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1959	54	−−
1960	548	−−
1961	257	−−
1962	175	−−
1963	43	−−
1964	44	−−
1965	285	−−
1966	96	−−
1967	381	−−
1968	284	−−
1969	191	−−
1970	38	−−
1971	500	−−
1972	23	−−
1973	107	−−
1974	140	−−
1975	189	−−
1976	43	−−
1977	190	−−
1978	114	−−
1979	65	−−
1980	73	−−
1981	2,000	−−
1982	42	−−
1983	204	−−
1984	854	−−
1985	144	−−