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

Streamgage number and name:

05280300 School Lake Creek tributary near St. Michael, Minn.

Peak-flow information:

Number of systematic peak flows in record	27
Systematic period begins	1964
Systematic period ends	1990
Length of systematic record	27
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	-0.19
Standard error of generalized skew	0.4266
Low-outlier method	Single Grubbs-Beck test

EMA systematic record analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
1.5016	0.4136	0.736

Low-outlier information:

Number of low outliers	0
Low-outlier threshold	6.1

Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
1.5016	0.4136	0.195

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	3.25	0.73	5.93	−−	−−	−−
0.9900	3.97	1.10	6.82	−−	−−	−−
0.9500	7.00	3.16	10.80	−−	−−	−−
0.9000	9.57	5.21	14.30	−−	−−	−−
0.8000	14.10	8.83	20.70	−−	−−	−−
0.6667	20.60	13.70	30.00	−−	−−	−−
0.5000	30.80	21.00	45.90	30.2	21.4	42.7
0.4292	36.50	25.00	55.40	−−	−−	−−
0.2000	70.00	46.80	123.00	64.0	43.4	94.3
0.1000	110.00	69.90	235.00	92.8	59.8	144.0
0.0400	179.00	106.00	543.00	134.0	80.1	225.0
0.0200	248.00	137.00	1,010.00	170.0	95.2	305.0
0.0100	333.00	172.00	1,870.00	208.0	110.0	396.0
0.0050	439.00	209.00	3,420.00	−−	−−	−−
0.0020	617.00	264.00	7,490.00	315.0	143.0	692.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1964	9.1	−−
1965	434.0	−−
1966	47.0	−−
1967	166.0	−−
1968	15.0	−−
1969	61.0	−−
1970	21.0	−−
1971	39.0	−−
1972	33.0	−−
1973	20.0	−−
1974	59.0	−−
1975	135.0	−−
1976	36.0	−−
1977	22.0	−−
1978	44.0	−−
1979	17.0	−−
1980	20.0	−−
1981	17.0	−−
1982	6.1	−−
1983	22.0	−−
1984	18.0	−−
1985	66.0	−−
1986	44.0	−−
1987	9.0	−−
1988	10.0	−−
1989	39.0	−−
1990	58.0	−−