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

Streamgage number and name:
    04015500 Second Creek near Aurora, Minn.

Peak-flow information:

Number of systematic peak flows in record	26
Systematic period begins	1955
Systematic period ends	1980
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	0.114
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
2.0953	0.1494	0.755

Outlier criteria and number of peak flows exceeding:

Low	52.7	0
High	294.5	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.0953	0.1494	0.375

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	58.0	44.5	69.1	−−	−−	−−
0.9900	61.6	48.1	72.8	−−	−−	−−
0.9500	73.5	60.0	84.8	−−	−−	−−
0.9000	81.4	68.1	92.8	−−	−−	−−
0.8000	92.8	79.7	104.0	−−	−−	−−
0.6667	106.0	92.7	118.0	−−	−−	−−
0.5000	122.0	109.0	136.0	124	108	141
0.4292	130.0	116.0	146.0	−−	−−	−−
0.2000	165.0	147.0	192.0	169	143	199
0.1000	196.0	171.0	236.0	203	166	248
0.0400	237.0	202.0	299.0	251	194	325
0.0200	270.0	226.0	352.0	291	215	393
0.0100	304.0	250.0	410.0	333	236	471
0.0050	341.0	275.0	474.0	−−	−−	−−
0.0020	392.0	309.0	568.0	446	284	701

Peak-flow data used in the analysis:
Explanation of symbols and codes
  −−   none

Water year	Peak flow	Peak-flow code
1955	130	−−
1956	107	−−
1957	247	−−
1958	109	−−
1959	81	−−
1960	129	−−
1961	254	−−
1962	99	−−
1963	194	−−
1964	101	−−
1965	84	−−
1966	119	−−
1967	118	−−
1968	164	−−
1969	130	−−
1970	95	−−
1971	235	−−
1972	160	−−
1973	109	−−
1974	144	−−
1975	98	−−
1976	98	−−
1977	92	−−
1978	96	−−
1979	174	−−
1980	75	−−