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

Streamgage number and name:

05127210 Armstrong Creek near Ely, Minn.

Peak-flow information:

Number of systematic peak flows in record	11
Systematic period begins	1968
Systematic period ends	1978
Length of systematic record	11
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.122
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
1.7413	0.1869	1.064

Outlier criteria and number of peak flows exceeding:

Low	22.4	0
High	135.4	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
1.7413	0.1869	0.343

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	20.9	11.2	28.8	−−	−−	−−
0.9900	22.6	12.6	30.6	−−	−−	−−
0.9500	28.4	17.8	36.8	−−	−−	−−
0.9000	32.3	21.5	41.1	−−	−−	−−
0.8000	38.2	27.3	47.6	−−	−−	−−
0.6667	44.9	34.0	55.6	−−	−−	−−
0.5000	53.8	42.6	67.4	62.5	48.9	79.9
0.4292	58.1	46.5	73.8	−−	−−	−−
0.2000	78.5	63.0	109.0	99.0	73.1	134.0
0.1000	97.0	76.0	148.0	134.0	93.6	193.0
0.0400	123.0	92.3	210.0	198.0	128.0	307.0
0.0200	144.0	105.0	268.0	261.0	159.0	429.0
0.0100	167.0	118.0	335.0	342.0	197.0	592.0
0.0050	192.0	131.0	415.0	−−	−−	−−
0.0020	228.0	149.0	542.0	601.0	307.0	1,180.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1968	41	−−
1969	62	−−
1970	131	−−
1971	64	−−
1972	45	−−
1973	57	−−
1974	106	−−
1975	50	−−
1976	37	−−
1977	36	−−
1978	37	−−