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

Streamgage number and name:

05126210 South Kawishiwi River above White Iron Lake near Ely, Minn.

Peak-flow information:

Number of systematic peak flows in record	12
Systematic period begins	1976
Systematic period ends	2011
Length of systematic record	36
Years without information	24
Number of historical peak flows in record	0

Frequency analysis options:

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	0.14
Standard error of generalized skew	0.4266
Low-outlier method	Multiple Grubbs-Beck test

EMA systematic record analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
3.4898	0.2705	-0.595

Low-outlier information:

Number of low outliers	0
Low-outlier threshold	Not determined

Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
3.4898	0.2705	-0.068

Annual frequency curve at selected exceedance probabilities:

Exceedance probability	Peak estimate	Lower-95 level	Upper-95 level
0.9950	597	92.3	1,080
0.9900	703	131.0	1,210
0.9500	1,100	361.0	1,700
0.9000	1,380	601.0	2,080
0.8000	1,830	998.0	2,680
0.6667	2,380	1,470.0	3,450
0.5000	3,110	2,070.0	4,610
0.4292	3,480	2,350.0	5,260
0.2000	5,230	3,600.0	9,170
0.1000	6,830	4,610.0	14,500
0.0400	9,060	5,880.0	26,300
0.0200	10,800	6,790.0	40,800
0.0100	12,700	7,660.0	59,700
0.0050	14,800	8,490.0	81,600
0.0020	17,600	9,530.0	121,000

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1976	8,080	−−
1977	4,020	−−
1978	4,730	−−
Gap in systematic record		
2003	1,240	−−
2004	3,050	−−
2005	2,420	−−
2006	5,270	−−
2007	2,870	−−
2008	5,150	−−
2009	3,630	−−
2010	926	−−
2011	2,050	−−