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

Streamgage number and name:

05278120 North Fork Crow River near Kingston, Minn.

Peak-flow information:

Number of systematic peak flows in record	27
Systematic period begins	1985
Systematic period ends	2011
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	-0.15
Standard error of generalized skew	0.4266
Low-outlier method	Fixed Threshold

EMA systematic record analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
3.2239	0.3613	-0.930

Low-outlier information:

Number of low outliers	0
Low-outlier threshold	250

Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
3.2291	0.3501	-0.413

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	156	18.7	314	––	––	––
0.9900	204	33.3	381	––	––	––
0.9500	412	148.0	654	––	––	––
0.9000	586	278.0	875	––	––	––
0.8000	878	519.0	1,250	––	––	––
0.6667	1,260	834.0	1,740	––	––	––
0.5000	1,790	1,270.0	2,450	1,710	1,270	2,300
0.4292	2,060	1,480.0	2,830	––	––	––
0.2000	3,380	2,470.0	4,840	3,220	2,400	4,320
0.1000	4,570	3,330.0	7,120	4,360	3,180	6,000
0.0400	6,160	4,360.0	11,200	5,920	4,090	8,570
0.0200	7,390	5,050.0	15,100	7,180	4,720	10,900
0.0100	8,630	5,640.0	19,800	8,510	5,330	13,600
0.0050	9,900	6,130.0	25,700	––	––	––
0.0020	11,600	6,670.0	35,400	11,900	6,580	21,500

Peak-flow data used in the analysis:

Explanation of symbols and codes

<	Less than
−−	none

Water year	Peak flow	Peak-flow code
1985	3,000	−−
1986	4,850	−−
1987	500	−−
1988	290	−−
1989	500	−−
1990	2,700	−−
1991	2,750	−−
1992	1,450	−−
1993	2,770	−−
1994	2,060	−−
1995	3,050	−−
1996	2,600	−−
1997	3,540	−−
1998	1,430	−−
1999	1,000	−−
2000	<1,000	−−
2001	4,280	−−
2002	3,970	−−
2003	2,410	−−
2004	<1,020	−−
2005	1,430	−−
2006	1,320	−−
2007	1,190	−−
2008	<1,000	−−
2009	2,940	−−
2010	3,990	−−
2011	2,830	−−