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

Streamgage number and name:

05335170 Crooked Creek near Hinckley, Minn.

Peak-flow information:

Number of systematic peak flows in record	26
Systematic period begins	1986
Systematic period ends	2011
Length of systematic record	26
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	-0.18
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
2.8714	0.2828	-0.702

Low-outlier information:

Number of low outliers	1
Low-outlier threshold	224

Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.8726	0.2792	-0.372

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	114	20.7	196	––	––	––
0.9900	141	31.5	229	––	––	––
0.9500	243	98.7	349	––	––	––
0.9000	320	169.0	440	––	––	––
0.8000	441	285.0	584	––	––	––
0.6667	585	419.0	760	––	––	––
0.5000	776	585.0	1,000	773	611	980
0.4292	869	663.0	1,120	––	––	––
0.2000	1,290	1,000.0	1,740	1,280	1,010	1,630
0.1000	1,650	1,270.0	2,390	1,640	1,260	2,150
0.0400	2,110	1,580.0	3,480	2,100	1,530	2,880
0.0200	2,450	1,790.0	4,490	2,440	1,710	3,490
0.0100	2,790	1,970.0	5,690	2,790	1,860	4,170
0.0050	3,120	2,120.0	7,120	––	––	––
0.0020	3,560	2,290.0	9,430	3,600	2,160	6,000

Peak-flow data used in the analysis:

Explanation of symbols and codes

−−	none
*	Less than low-outlier threshold

Water year	Peak flow	Peak-flow code
1986	1,080	−−
1987	128	*
1988	224	−−
1989	1,630	−−
1990	380	−−
1991	890	−−
1992	590	−−
1993	335	−−
1994	1,020	−−
1995	1,140	−−
1996	1,270	−−
1997	1,500	−−
1998	634	−−
1999	415	−−
2000	460	−−
2001	2,100	−−
2002	918	−−
2003	1,060	−−
2004	683	−−
2005	1,190	−−
2006	1,070	−−
2007	419	−−
2008	1,350	−−
2009	549	−−
2010	527	−−
2011	1,470	−−