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

Streamgage number and name:

05316538 Ramsey Creek near Redwood Falls, Minn.

Peak-flow information:

Number of systematic peak flows in record	20
Systematic period begins	1991
Systematic period ends	2011
Length of systematic record	21
Years without information	1
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.172
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
2.6564	0.2709	-0.703

Outlier criteria and number of peak flows exceeding:

Low	102.4	0
High	2006.9	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.6564	0.2709	-0.366

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	73.5	36.0	114	––	––	––
0.9900	90.1	47.2	134	––	––	––
0.9500	153.0	95.0	208	––	––	––
0.9000	200.0	134.0	262	––	––	––
0.8000	272.0	198.0	346	––	––	––
0.6667	358.0	274.0	450	––	––	––
0.5000	471.0	372.0	599	443	338	579
0.4292	525.0	417.0	677	––	––	––
0.2000	772.0	606.0	1,070	737	562	965
0.1000	980.0	751.0	1,440	947	704	1,270
0.0400	1,240.0	924.0	1,960	1,230	874	1,740
0.0200	1,440.0	1,050.0	2,370	1,460	992	2,150
0.0100	1,630.0	1,160.0	2,790	1,710	1,110	2,630
0.0050	1,820.0	1,280.0	3,240	––	––	––
0.0020	2,080.0	1,420.0	3,840	2,340	1,360	4,030

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1991	755	−−
1992	665	−−
1993	920	−−
Gap in systematic record		
1995	500	−−
1996	305	−−
1997	825	−−
1998	276	−−
1999	305	−−
2000	225	−−
2001	781	−−
2002	406	−−
2003	138	−−
2004	863	−−
2005	120	−−
2006	350	−−
2007	710	−−
2008	323	−−
2009	470	−−
2010	860	−−
2011	831	−−