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

Streamgage number and name:

05331580 Mississippi River below Lock and Dam Number 2 at Hastings, Minn.

Peak-flow information:

Number of systematic peak flows in record	11
Systematic period begins	1997
Systematic period ends	2011
Length of systematic record	15
Years without information	4
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	STATION SKEW
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
4.8231	0.2372	-0.043

Outlier criteria and number of peak flows exceeding:

Low	21271.2	0
High	208212.9	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
4.8231	0.2372	-0.043

Annual frequency curve at selected exceedance probabilities:

Exceedance probability	Peak estimate	Lower-95 level	Upper-95 level
0.9950	15,900	6,500	25,000
0.9900	18,400	8,070	27,900
0.9500	26,900	14,400	37,900
0.9000	33,000	19,400	44,800
0.8000	42,100	27,600	55,600
0.6667	52,800	37,400	69,200
0.5000	66,800	50,000	89,500
0.4292	73,600	55,700	100,000
0.2000	106,000	79,800	161,000
0.1000	134,000	98,400	226,000
0.0400	172,000	121,000	328,000
0.0200	202,000	138,000	418,000
0.0100	233,000	154,000	521,000
0.0050	266,000	171,000	637,000
0.0020	312,000	193,000	814,000

Peak-flow data used in the analysis:

Explanation of symbols and codes

−− none

Water year	Peak flow	Peak-flow code
1997	138,000	−−
1998	56,100	−−
1999	64,200	−−
2000	25,700	−−
2001	147,000	−−
2002	44,900	−−
2003	39,500	−−
2004	48,800	−−
Gap in systematic record		
2009	67,100	−−
2010	100,000	−−
2011	104,000	−−