

Annual Peak-Flow Frequency Analysis

For more information on the contents of this documentation, see Kessler and others (2013).

Streamgauge number and name:

06483353 Little Rock Creek near Rushmore, Minn.

Peak-flow information:

Number of systematic peak flows in record	16
Systematic period begins	1996
Systematic period ends	2011
Length of systematic record	16
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.208
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:

	Standard	
Mean	deviation	Skewness
2.7106	0.6806	-0.349

Outlier criteria and number of peak flows exceeding:

Low	14.4	0
High	18268.0	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.7106	0.6806	-0.257

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	6.2	0.8	20.0	--	--	--
0.9900	10.0	1.6	29.3	--	--	--
0.9500	35.0	8.8	81.7	--	--	--
0.9000	66.3	20.8	141.0	--	--	--
0.8000	141.0	55.6	275.0	--	--	--
0.6667	277.0	128.0	527.0	--	--	--
0.5000	549.0	281.0	1,090.0	468	322	681
0.4292	724.0	378.0	1,490.0	--	--	--
0.2000	1,950.0	994.0	4,990.0	1,270	857	1,880
0.1000	3,650.0	1,740.0	11,300.0	2,100	1,350	3,260
0.0400	6,910.0	3,000.0	26,700.0	3,430	2,060	5,720
0.0200	10,300.0	4,180.0	46,000.0	4,930	2,700	9,010
0.0100	14,600.0	5,570.0	74,300.0	6,490	3,250	13,000
0.0050	19,900.0	7,170.0	114,000.0	--	--	--
0.0020	28,700.0	9,650.0	190,000.0	11,800	4,900	28,200

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1996	1,810	--
1997	984	--
1998	27	--
1999	258	--
2000	66	--
2001	3,070	--
2002	149	--
2003	102	--
2004	110	--
2005	329	--
2006	2,750	--
2007	2,760	--
2008	2,650	--
2009	361	--
2010	2,780	--
2011	840	--