

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

06482500 North Branch Pipestone Creek near Pipestone, Minn.

Peak-flow information:

Number of systematic peak flows in record	14
Systematic period begins	1991
Systematic period ends	2011
Length of systematic record	21
Years without information	7
Peak flows not used in analysis	7
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.283
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
	2.4354	0.3034	-1.099

Outlier criteria and number of peak flows exceeding:

Low	58.1	0
High	1278.7	7

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
2.4354	0.3034	-0.495	

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	32.7	11.1	58.6	--	--	--
0.9900	41.8	15.9	71.2	--	--	--
0.9500	79.0	39.4	119.0	--	--	--
0.9000	108.0	61.0	155.0	--	--	--
0.8000	155.0	98.9	213.0	--	--	--
0.6667	212.0	147.0	288.0	--	--	--
0.5000	289.0	210.0	402.0	360	272	476
0.4292	326.0	239.0	463.0	--	--	--
0.2000	496.0	360.0	784.0	705	531	937
0.1000	638.0	450.0	1,100.0	977	713	1,340
0.0400	816.0	556.0	1,540.0	1,390	961	2,000
0.0200	945.0	628.0	1,900.0	1,660	1,090	2,530
0.0100	1,070.0	696.0	2,260.0	1,930	1,200	3,110
0.0050	1,190.0	759.0	2,640.0	--	--	--
0.0020	1,350.0	838.0	3,140.0	2,770	1,510	5,070

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

NA Missing peak value

Water	Peak	Peak-flow
year	flow	code
1991	360	--
1992	60	--
1993	NA	--
1994	500	--
1995	420	--
1996	105	--
1997	537	--
1998	451	--
1999	NA	--
2000	394	--
2001	NA	--
2002	362	--
2003	260	--
2004	NA	--
2005	160	--
2006	515	--
2007	NA	--
2008	327	--
2009	108	--
2010	NA	--
2011	NA	--