

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05278930 Buffalo Creek near Glencoe, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	27
Systematic period begins	1972
Systematic period ends	2011
Length of systematic record	40
Years without information	13
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	-0.14
Standard error of generalized skew	0.4266
Low-outlier method	Multiple Grubbs-Beck test

**EMA systematic record analysis results:**

**Moments of the common logarithms of the peak flows:**

	Standard	
Mean	deviation	Skewness
3.1457	0.3392	-0.388

**Low-outlier information:**

Number of low outliers	0
Low-outlier threshold	Not determined

**Final analysis results:**

**Moments of the common logarithms of the peak flows:**

	Standard		
Mean	deviation	Skewness	
3.1457	0.3392	-0.252	

**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	156	25.9	291	--	--	--
0.9900	197	43.9	345	--	--	--
0.9500	367	153.0	560	--	--	--
0.9000	504	263.0	733	--	--	--
0.8000	733	457.0	1,020	--	--	--
0.6667	1,030	703.0	1,400	--	--	--
0.5000	1,450	1,040.0	1,970	1,360	1,020	1,810
0.4292	1,660	1,210.0	2,270	--	--	--
0.2000	2,720	2,000.0	3,950	2,530	1,880	3,400
0.1000	3,720	2,690.0	5,960	3,430	2,470	4,760
0.0400	5,120	3,580.0	9,730	4,700	3,200	6,890
0.0200	6,250	4,210.0	13,700	5,740	3,720	8,870
0.0100	7,440	4,790.0	18,800	6,870	4,230	11,200
0.0050	8,690	5,330.0	25,300	--	--	--
0.0020	10,400	5,960.0	36,900	9,830	5,320	18,100

### Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1972	2,370	--
1973	728	--
1974	514	--
1975	2,190	--
1976	471	--
1977	352	--
1978	1,410	--
1979	2,590	--
1980	671	--
Gap in systematic record		
1991	4,300	--
1992	1,430	--
1993	3,380	--
1994	1,370	--
Gap in systematic record		
1998	2,000	--
1999	1,010	--
2000	314	--
2001	4,000	--
2002	1,240	--
2003	815	--
2004	2,760	--
2005	2,040	--
2006	1,750	--
2007	1,530	--
2008	440	--
2009	1,550	--
2010	4,150	--
2011	3,490	--