

## Annual Peak-Flow Frequency Analysis

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

### Streamgauge number and name:

05336200 Glaisby Brook near Kettle River, Minn.

### Peak-flow information:

Number of systematic peak flows in record	52
Systematic period begins	1960
Systematic period ends	2011
Length of systematic record	52
Years without information	0
Number of historical peak flows in record	0

### Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.217
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
	2.5610	0.2686	0.171

#### Outlier criteria and number of peak flows exceeding:

Low	65.1	0
High	2034.8	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.5610	0.2686	0.024

**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	75.0	53.2	97.1	--	--	--
0.9900	87.3	63.5	111.0	--	--	--
0.9500	132.0	103.0	160.0	--	--	--
0.9000	165.0	133.0	196.0	--	--	--
0.8000	216.0	180.0	252.0	--	--	--
0.6667	278.0	238.0	321.0	--	--	--
0.5000	363.0	315.0	419.0	361	304	427
0.4292	405.0	352.0	470.0	--	--	--
0.2000	612.0	525.0	734.0	608	503	735
0.1000	805.0	677.0	1,000.0	800	641	998
0.0400	1,080.0	883.0	1,400.0	1,070	812	1,410
0.0200	1,310.0	1,050.0	1,750.0	1,290	934	1,780
0.0100	1,550.0	1,220.0	2,140.0	1,520	1,050	2,200
0.0050	1,820.0	1,400.0	2,570.0	--	--	--
0.0020	2,200.0	1,650.0	3,220.0	2,130	1,310	3,450

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow	Water	Peak	Peak-flow
year	flow	code	year	flow	code
1960	204	--	1986	580	--
1961	301	--	1987	130	--
1962	476	--	1988	145	--
1963	115	--	1989	304	--
1964	406	--	1990	355	--
1965	813	--	1991	330	--
1966	636	--	1992	270	--
1967	794	--	1993	700	--
1968	270	--	1994	660	--
1969	614	--	1995	515	--
1970	320	--	1996	580	--
1971	770	--	1997	420	--
1972	1,370	--	1998	213	--
1973	162	--	1999	286	--
1974	398	--	2000	164	--
1975	865	--	2001	900	--
1976	428	--	2002	254	--
1977	228	--	2003	134	--
1978	286	--	2004	286	--
1979	1,080	--	2005	250	--
1980	350	--	2006	255	--
1981	260	--	2007	159	--
1982	1,040	--	2008	320	--
1983	300	--	2009	230	--
1984	310	--	2010	156	--
1985	870	--	2011	595	--