

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05339500 St. Croix River near Rush City, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	39
Systematic period begins	1923
Systematic period ends	1961
Length of systematic record	39
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.246
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
	4.2719	0.2534	-0.476

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

Low	3936.3	0
High	88864.9	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
4.2719	0.2534	-0.365

**Annual frequency curve at selected exceedance probabilities:**

Exceedance probability	Peak estimate	Lower-95 level	Upper-95 level
0.9950	3,410	2,220	4,630
0.9900	4,120	2,790	5,450
0.9500	6,770	5,060	8,400
0.9000	8,690	6,800	10,500
0.8000	11,600	9,500	13,700
0.6667	15,000	12,600	17,500
0.5000	19,400	16,600	22,700
0.4292	21,500	18,400	25,300
0.2000	30,800	26,100	37,700
0.1000	38,500	32,000	48,800
0.0400	48,100	39,100	63,500
0.0200	55,200	44,100	74,700
0.0100	62,000	48,900	86,000
0.0050	68,800	53,600	97,400
0.0020	77,700	59,500	113,000

**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
1923	8,300	--	1943	26,000	--
1924	9,320	--	1944	38,900	--
1925	5,700	--	1945	37,600	--
1926	4,780	--	1946	30,500	--
1927	20,300	--	1947	15,300	--
1928	19,100	--	1948	15,300	--
1929	12,700	--	1949	20,900	--
1930	15,900	--	1950	60,600	--
1931	15,400	--	1951	35,100	--
1932	14,600	--	1952	43,100	--
1933	5,610	--	1953	26,700	--
1934	8,740	--	1954	43,700	--
1935	21,400	--	1955	18,500	--
1936	27,700	--	1956	28,100	--
1937	11,700	--	1957	23,000	--
1938	24,600	--	1958	27,200	--
1939	23,200	--	1959	13,200	--
1940	19,700	--	1960	11,100	--
1941	24,200	--	1961	24,700	--
1942	16,400	--			