

## Annual Peak-Flow Frequency Analysis

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

### Streamgage number and name:

05330000 Minnesota River near Jordan, Minn.

### Peak-flow information:

Number of systematic peak flows in record	77
Systematic period begins	1935
Systematic period ends	2011
Length of systematic record	77
Years without information	0
Number of historical peak flows in record	0

### Frequency analysis options:

Method	Bulletin 17B
Skew option	STATION SKEW
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
	4.3070	0.3315
		0.034

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

Low	2170.3	0
High	189415.0	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
4.3070	0.3315	0.034

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

Exceedance probability	Peak estimate	Lower-95 level	Upper-95 level
0.9950	2,910	2,080	3,790
0.9900	3,500	2,560	4,480
0.9500	5,820	4,550	7,110
0.9000	7,640	6,170	9,140
0.8000	10,600	8,890	12,500
0.6667	14,500	12,400	16,800
0.5000	20,200	17,500	23,300
0.4292	23,100	20,000	26,800
0.2000	38,500	32,900	46,100
0.1000	54,100	45,200	67,000
0.0400	77,900	63,200	101,000
0.0200	98,600	78,300	132,000
0.0100	122,000	95,000	167,000
0.0050	148,000	113,000	209,000
0.0020	188,000	140,000	274,000

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1935	4,010	--
1936	23,200	--
1937	8,310	--
1938	8,760	--
1939	8,500	--
1940	3,560	--
1941	12,300	--
1942	8,400	--
1943	25,900	--
1944	25,100	--
1945	18,200	--
1946	13,900	--
1947	20,400	--
1948	22,000	--
1949	32,600	--
1950	13,300	--
1951	64,100	--
1952	60,600	--
1953	23,000	--
1954	10,300	--
1955	7,650	--
1956	12,800	--
1957	40,800	--
1958	7,640	--
1959	3,880	--
1960	36,400	--
1961	15,700	--
1962	39,700	--
1963	14,400	--
1964	12,900	--
1965	117,000	--
1966	16,200	--
1967	19,400	--
1968	15,700	--
1969	84,600	--
1970	9,510	--
1971	24,100	--
1972	16,800	--
1973	21,900	--

Water year	Peak flow	Peak-flow code
1974	13,900	--
1975	22,900	--
1976	5,490	--
1977	6,610	--
1978	13,800	--
1979	32,600	--
1980	14,200	--
1981	12,400	--
1982	17,300	--
1983	33,700	--
1984	45,300	--
1985	32,300	--
1986	36,700	--
1987	9,270	--
1988	5,560	--
1989	14,800	--
1990	17,000	--
1991	33,300	--
1992	26,200	--
1993	92,200	--
1994	22,400	--
1995	29,700	--
1996	31,500	--
1997	82,300	--
1998	32,300	--
1999	25,200	--
2000	16,900	--
2001	87,100	--
2002	18,300	--
2003	15,900	--
2004	28,500	--
2005	24,500	--
2006	37,400	--
2007	32,800	--
2008	22,100	--
2009	18,400	--
2010	74,700	--
2011	72,300	--