

## Annual Peak-Flow Frequency Analysis

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

### Streamgauge number and name:

05061400 Spring Creek above Downer, Minn.

### Peak-flow information:

Number of systematic peak flows in record	40
Systematic period begins	1961
Systematic period ends	2000
Length of systematic record	40
Years without information	0
Number of historical peak flows in record	0

### Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.296
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
	1.7603	0.5527	0.605

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

Low	1.9	0
High	1748.4	0

**Bulletin 17B Final analysis results:**

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

	Standard		
Mean	deviation	Skewness	
1.7603	0.5527	0.161	

**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	2.6	1.2	4.7	--	--	--
0.9900	3.5	1.7	5.9	--	--	--
0.9500	7.5	4.2	11.7	--	--	--
0.9000	11.5	6.9	17.2	--	--	--
0.8000	19.6	12.7	28.0	--	--	--
0.6667	32.4	22.3	45.2	--	--	--
0.5000	55.7	39.7	77.9	63.3	45.1	88.8
0.4292	69.9	50.1	98.8	--	--	--
0.2000	166.0	116.0	256.0	183.0	126.0	266.0
0.1000	300.0	200.0	506.0	315.0	206.0	482.0
0.0400	572.0	356.0	1,080.0	551.0	331.0	915.0
0.0200	876.0	517.0	1,800.0	776.0	438.0	1,370.0
0.0100	1,290.0	725.0	2,870.0	1,040.0	554.0	1,960.0
0.0050	1,850.0	990.0	4,430.0	--	--	--
0.0020	2,880.0	1,450.0	7,570.0	1,820.0	841.0	3,920.0

**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
1961	21.0	--	1981	11.0	--
1962	860.0	--	1982	10.0	--
1963	69.0	--	1983	184.0	--
1964	41.0	--	1984	45.0	--
1965	103.0	--	1985	53.0	--
1966	53.0	--	1986	839.0	--
1967	12.0	--	1987	28.0	--
1968	35.0	--	1988	15.0	--
1969	117.0	--	1989	51.0	--
1970	15.0	--	1990	13.0	--
1971	84.0	--	1991	30.0	--
1972	84.0	--	1992	54.0	--
1973	84.0	--	1993	265.0	--
1974	11.0	--	1994	31.0	--
1975	1,460.0	--	1995	47.0	--
1976	5.8	--	1996	225.0	--
1977	31.0	--	1997	234.0	--
1978	74.0	--	1998	264.0	--
1979	46.0	--	1999	78.0	--
1980	22.0	--	2000	128.0	--