

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

04018800 East Two River tributary at Virginia, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	14
Systematic period begins	1959
Systematic period ends	1972
Length of systematic record	14
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.061
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:**

	Standard	
Mean	deviation	Skewness
1.7313	0.1571	-0.036

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

Low	24.2	0
High	120.0	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
1.7313	0.1571	0.028

**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	21.4	13.3	27.9	--	--	--
0.9900	23.4	15.0	30.0	--	--	--
0.9500	29.8	21.2	36.5	--	--	--
0.9000	33.9	25.4	40.7	--	--	--
0.8000	39.7	31.4	46.8	--	--	--
0.6667	46.0	37.9	54.0	--	--	--
0.5000	53.8	45.5	63.6	53.2	44.2	64.1
0.4292	57.4	48.8	68.5	--	--	--
0.2000	73.0	61.9	92.4	73.6	59.5	91.0
0.1000	85.7	71.4	115.0	87.7	68.6	112.0
0.0400	102.0	82.5	146.0	107.0	79.2	143.0
0.0200	114.0	90.4	171.0	121.0	86.9	170.0
0.0100	126.0	98.0	197.0	137.0	94.1	200.0
0.0050	138.0	106.0	225.0	--	--	--
0.0020	154.0	115.0	264.0	178.0	111.0	285.0

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	44	--
1960	46	--
1961	54	--
1962	44	--
1963	40	--
1964	81	--
1965	54	--
1966	41	--
1967	48	--
1968	85	--
1969	100	--
1970	26	--
1971	74	--
1972	64	--