

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05095500 Two Rivers below Hallock, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	11
Systematic period begins	1945
Systematic period ends	1955
Length of systematic record	11
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.469
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
2.9447	0.3755	-0.477

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

Low	144.8	0
High	5355.3	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.9447	0.3755	-0.471

**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	65.0	13.0	144	--	--	--
0.9900	87.8	20.7	181	--	--	--
0.9500	191.0	67.7	334	--	--	--
0.9000	281.0	120.0	459	--	--	--
0.8000	437.0	226.0	678	--	--	--
0.6667	644.0	379.0	990	--	--	--
0.5000	942.0	600.0	1,510	1,240	843	1,840
0.4292	1,100.0	708.0	1,810	--	--	--
0.2000	1,850.0	1,190.0	3,620	2,510	1,700	3,710
0.1000	2,530.0	1,570.0	5,680	3,540	2,310	5,400
0.0400	3,450.0	2,030.0	8,960	4,970	3,060	8,060
0.0200	4,150.0	2,370.0	11,800	6,130	3,600	10,400
0.0100	4,860.0	2,690.0	15,000	7,390	4,140	13,200
0.0050	5,580.0	2,990.0	18,500	--	--	--
0.0020	6,520.0	3,390.0	23,500	10,500	5,240	20,900

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1945	856	--
1946	670	--
1947	1,280	--
1948	2,270	--
1949	1,040	--
1950	3,690	--
1951	1,350	--
1952	392	--
1953	146	--
1954	553	--
1955	902	--