

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05051000 Rabbit River at Campbell, Minn.

Peak-flow information:

Number of systematic peak flows in record	10
Systematic period begins	1943
Systematic period ends	1952
Length of systematic record	10
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.23
Standard error of generalized skew	0.427
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
	3.1436	0.3269	0.722

Outlier criteria and number of peak flows exceeding:

Low	300.6	0
High	6444.7	1

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
3.1436	0.3269	0.012

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	202	53.9	382	--	--	--
0.9900	243	72.4	440	--	--	--
0.9500	404	160.0	659	--	--	--
0.9000	531	243.0	825	--	--	--
0.8000	738	395.0	1,100	--	--	--
0.6667	1,000	605.0	1,490	--	--	--
0.5000	1,390	908.0	2,120	1,110	726	1,690
0.4292	1,590	1,060.0	2,500	--	--	--
0.2000	2,620	1,750.0	4,900	2,040	1,300	3,200
0.1000	3,660	2,350.0	8,000	2,800	1,700	4,590
0.0400	5,220	3,150.0	13,800	3,980	2,280	6,960
0.0200	6,560	3,780.0	19,700	5,070	2,740	9,390
0.0100	8,070	4,440.0	27,300	6,310	3,250	12,300
0.0050	9,760	5,140.0	36,900	--	--	--
0.0020	12,300	6,130.0	53,200	9,810	4,420	21,700

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1943	1,850	--
1944	1,860	--
1945	450	--
1946	674	--
1947	1,410	--
1948	734	--
1949	1,300	--
1950	1,430	--
1951	1,940	--
1952	7,000	--