

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05244100 Kitten Creek near Sebeka, Minn.

Peak-flow information:

Number of systematic peak flows in record	18
Systematic period begins	1961
Systematic period ends	1978
Length of systematic record	18
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.057
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
2.0087	0.3541	-0.234

Outlier criteria and number of peak flows exceeding:

Low	15.2	0
High	684.8	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.0087	0.3541	-0.125

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	11.3	4.4	19.9	--	--	--
0.9900	14.2	6.0	23.8	--	--	--
0.9500	25.9	13.5	39.3	--	--	--
0.9000	35.5	20.4	51.4	--	--	--
0.8000	51.6	33.0	71.9	--	--	--
0.6667	72.8	50.1	99.9	--	--	--
0.5000	104.0	74.7	144.0	104	74.6	144
0.4292	120.0	87.2	170.0	--	--	--
0.2000	204.0	146.0	320.0	199	139.0	286
0.1000	287.0	198.0	495.0	278	186.0	418
0.0400	410.0	270.0	794.0	392	245.0	629
0.0200	515.0	327.0	1,080.0	484	287.0	817
0.0100	631.0	386.0	1,410.0	587	329.0	1,050
0.0050	757.0	448.0	1,810.0	--	--	--
0.0020	942.0	536.0	2,440.0	853	424.0	1,720

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1961	41	--
1962	60	--
1963	36	--
1964	174	--
1965	320	--
1966	143	--
1967	200	--
1968	160	--
1969	227	--
1970	125	--
1971	76	--
1972	91	--
1973	41	--
1974	400	--
1975	160	--
1976	49	--
1977	21	--
1978	120	--