

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05355100 Little Cannon River tributary near Kenyon, Minn.

Peak-flow information:

Number of systematic peak flows in record	27
Systematic period begins	1960
Systematic period ends	1986
Length of systematic record	27
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.204
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
2.2340	0.4147	-0.137

Outlier criteria and number of peak flows exceeding:

Low	15.5	0
High	1899.8	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
2.2340	0.4147	-0.171

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	12.6	5.4	22.0	--	--	--
0.9900	16.5	7.6	27.6	--	--	--
0.9500	34.1	19.0	51.3	--	--	--
0.9000	49.6	30.1	71.3	--	--	--
0.8000	77.4	51.5	107.0	--	--	--
0.6667	116.0	82.2	157.0	--	--	--
0.5000	176.0	129.0	241.0	165	117	233
0.4292	209.0	154.0	289.0	--	--	--
0.2000	386.0	279.0	582.0	347	242	496
0.1000	572.0	400.0	934.0	496	334	735
0.0400	861.0	572.0	1,550.0	707	447	1,120
0.0200	1,120.0	715.0	2,140.0	886	529	1,480
0.0100	1,400.0	868.0	2,840.0	1,080	608	1,900
0.0050	1,720.0	1,030.0	3,690.0	--	--	--
0.0020	2,200.0	1,270.0	5,030.0	1,580	780	3,210

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1960	714	--
1961	162	--
1962	270	--
1963	18	--
1964	74	--
1965	280	--
1966	264	--
1967	186	--
1968	1,040	--
1969	217	--
1970	128	--
1971	167	--
1972	190	--
1973	205	--
1974	121	--
1975	229	--
1976	84	--
1977	30	--
1978	561	--
1979	372	--
1980	89	--
1981	268	--
1982	65	--
1983	98	--
1984	68	--
1985	125	--
1986	1,030	--