

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05299100 Lazarus Creek tributary near Canby, Minn.

Peak-flow information:

Number of systematic peak flows in record	31
Systematic period begins	1960
Systematic period ends	1990
Length of systematic record	31
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.311
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
1.9939	0.5659	-0.827

Outlier criteria and number of peak flows exceeding:

Low	3.4	0
High	2833.4	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.9939	0.5659	-0.533

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	1.8	0.6	3.9	--	--	--
0.9900	2.9	1.0	5.9	--	--	--
0.9500	9.7	4.5	16.6	--	--	--
0.9000	17.5	9.3	28.0	--	--	--
0.8000	34.5	20.8	51.9	--	--	--
0.6667	62.3	40.5	91.5	--	--	--
0.5000	111.0	75.0	165.0	99.1	65	151
0.4292	139.0	94.3	210.0	--	--	--
0.2000	301.0	199.0	506.0	258.0	173	385
0.1000	478.0	304.0	873.0	397.0	261	605
0.0400	748.0	452.0	1,500.0	596.0	369	962
0.0200	975.0	570.0	2,070.0	762.0	445	1,310
0.0100	1,220.0	693.0	2,720.0	936.0	516	1,700
0.0050	1,480.0	818.0	3,450.0	--	--	--
0.0020	1,840.0	986.0	4,520.0	1,400.0	668	2,920

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1960	139	--
1961	55	--
1962	387	--
1963	1,000	--
1964	51	--
1965	204	--
1966	74	--
1967	71	--
1968	5	--
1969	330	--
1970	486	--
1971	420	--
1972	228	--
1973	99	--
1974	20	--
1975	74	--
1976	61	--
1977	169	--
1978	120	--
1979	145	--
1980	220	--
1981	122	--
1982	4	--
1983	64	--
1984	440	--
1985	8	--
1986	190	--
1987	59	--
1988	30	--
1989	82	--
1990	298	--