

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05062280 Mosquito Creek near Bagley, Minn.

Peak-flow information:

Number of systematic peak flows in record	25
Systematic period begins	1961
Systematic period ends	1985
Length of systematic record	25
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.351
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
	1.4723	0.3552	-0.729

Outlier criteria and number of peak flows exceeding:

Low	3.9	0
High	226.6	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
1.4723	0.3552	-0.504	

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	2.5	1.1	4.2	--	--	--
0.9900	3.3	1.6	5.4	--	--	--
0.9500	6.9	4.0	10.1	--	--	--
0.9000	10.1	6.4	13.9	--	--	--
0.8000	15.3	10.7	20.3	--	--	--
0.6667	22.1	16.3	29.0	--	--	--
0.5000	31.8	24.2	42.1	36.7	27.5	48.9
0.4292	36.6	28.0	49.2	--	--	--
0.2000	59.8	44.9	86.6	72.8	54.8	96.6
0.1000	80.2	58.6	124.0	102.0	74.8	138.0
0.0400	107.0	75.4	176.0	144.0	101.0	207.0
0.0200	127.0	87.4	219.0	181.0	121.0	272.0
0.0100	146.0	98.9	262.0	224.0	142.0	353.0
0.0050	166.0	110.0	308.0	--	--	--
0.0020	191.0	124.0	369.0	341.0	192.0	604.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water year	Peak flow	Peak-flow code
1961	5	--
1962	29	--
1963	37	--
1964	36	--
1965	67	--
1966	60	--
1967	68	--
1968	11	--
1969	57	--
1970	12	--
1971	21	--
1972	32	--
1973	57	--
1974	34	--
1975	71	--
1976	33	--
1977	8	--
1978	62	--
1979	90	--
1980	23	--
1981	6	--
1982	73	--
1983	23	--
1984	16	--
1985	32	--