

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05217700 Bluff Creek near Jacobson, Minn.

Peak-flow information:

Number of systematic peak flows in record	21
Systematic period begins	1961
Systematic period ends	1981
Length of systematic record	21
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.194
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	
1.5269	0.3284	-0.082	

Outlier criteria and number of peak flows exceeding:

Low	5.4	0
High	207.8	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
1.5269	0.3284	-0.146	

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	4.3	2.0	7.1	--	--	--
0.9900	5.3	2.6	8.4	--	--	--
0.9500	9.4	5.5	13.5	--	--	--
0.9000	12.6	7.9	17.4	--	--	--
0.8000	17.9	12.3	23.8	--	--	--
0.6667	24.7	18.0	32.4	--	--	--
0.5000	34.3	25.9	45.5	32.9	24.5	44.2
0.4292	39.2	29.8	52.7	--	--	--
0.2000	63.9	48.0	93.4	61.1	44.3	84.3
0.1000	87.5	63.7	138.0	83.2	58.0	119.0
0.0400	122.0	84.6	210.0	115.0	75.0	175.0
0.0200	150.0	101.0	276.0	140.0	87.2	225.0
0.0100	180.0	118.0	351.0	168.0	99.0	284.0
0.0050	213.0	135.0	437.0	--	--	--
0.0020	260.0	159.0	568.0	240.0	126.0	459.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1961	18	--
1962	60	--
1963	10	--
1964	41	--
1965	41	--
1966	59	--
1967	31	--
1968	15	--
1969	59	--
1970	26	--
1971	49	--
1972	38	--
1973	18	--
1974	44	--
1975	73	--
1976	9	--
1977	20	--
1978	139	--
1979	112	--
1980	12	--
1981	42	--