

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05373900 Trout Brook tributary near Goodhue, 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	-0.222
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
1.9682	0.3559	0.833

Outlier criteria and number of peak flows exceeding:

Low	11.8	0
High	732.2	1

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
1.9682	0.3559	0.206	

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	13.2	6.9	20.3	--	--	--
0.9900	15.7	8.6	23.5	--	--	--
0.9500	25.4	15.7	35.6	--	--	--
0.9000	33.2	21.8	45.1	--	--	--
0.8000	46.3	32.5	61.1	--	--	--
0.6667	63.9	47.2	82.9	--	--	--
0.5000	90.4	69.1	118.0	77.7	58	104
0.4292	105.0	80.6	138.0	--	--	--
0.2000	184.0	139.0	260.0	141.0	103	192
0.1000	270.0	198.0	414.0	190.0	136	265
0.0400	413.0	286.0	700.0	269.0	187	387
0.0200	547.0	364.0	996.0	348.0	234	517
0.0100	707.0	453.0	1,380.0	448.0	286	700
0.0050	899.0	554.0	1,870.0	--	--	--
0.0020	1,210.0	710.0	2,720.0	746.0	424	1,310

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1960	55	--
1961	64	--
1962	75	--
1963	163	--
1964	37	--
1965	126	--
1966	181	--
1967	54	--
1968	88	--
1969	33	--
1970	592	--
1971	102	--
1972	72	--
1973	71	--
1974	88	--
1975	69	--
1976	95	--
1977	31	--
1978	759	--
1979	169	--
1980	115	--
1981	70	--
1982	25	--
1983	90	--
1984	228	--
1985	37	--
1986	225	--