

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05303450 Hassel Creek near Clontarf, Minn.

Peak-flow information:

Number of systematic peak flows in record	19
Systematic period begins	1962
Systematic period ends	1980
Length of systematic record	19
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.169
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
1.7386	0.2818	1.317

Outlier criteria and number of peak flows exceeding:

Low	11.8	0
High	253.5	1

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
1.7386	0.2818	0.220	

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	11.8	6.2	17.5	--	--	--
0.9900	13.5	7.4	19.6	--	--	--
0.9500	19.7	12.2	26.9	--	--	--
0.9000	24.3	16.0	32.2	--	--	--
0.8000	31.5	22.3	40.8	--	--	--
0.6667	40.6	30.3	52.0	--	--	--
0.5000	53.5	41.4	68.9	57.8	43.4	76.9
0.4292	60.1	46.9	78.2	--	--	--
0.2000	93.8	72.6	132.0	113.0	81.4	158.0
0.1000	128.0	95.6	195.0	171.0	117.0	250.0
0.0400	179.0	128.0	304.0	275.0	175.0	432.0
0.0200	224.0	154.0	410.0	371.0	222.0	620.0
0.0100	275.0	182.0	539.0	498.0	282.0	879.0
0.0050	333.0	213.0	698.0	--	--	--
0.0020	422.0	258.0	961.0	863.0	426.0	1,750.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1962	177	--
1963	44	--
1964	81	--
1965	30	--
1966	38	--
1967	56	--
1968	28	--
1969	313	--
1970	76	--
1971	61	--
1972	110	--
1973	48	--
1974	22	--
1975	35	--
1976	37	--
1977	43	--
1978	58	--
1979	40	--
1980	44	--