

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05200200 Hennepin Creek near Bécida, Minn.

Peak-flow information:

Number of systematic peak flows in record	22
Systematic period begins	1979
Systematic period ends	2000
Length of systematic record	22
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.299
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
1.9520	0.2578	0.521

Outlier criteria and number of peak flows exceeding:

Low	21.2	0
High	378.6	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.9520	0.2578	0.028

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	19.7	11.2	28.2	--	--	--
0.9900	22.8	13.5	31.9	--	--	--
0.9500	33.9	22.6	44.5	--	--	--
0.9000	41.9	29.5	53.6	--	--	--
0.8000	54.3	40.7	67.7	--	--	--
0.6667	69.2	54.2	85.2	--	--	--
0.5000	89.3	72.0	111.0	96.7	76.2	123
0.4292	99.3	80.5	124.0	--	--	--
0.2000	147.0	118.0	197.0	162.0	123.0	212
0.1000	192.0	150.0	273.0	216.0	159.0	295
0.0400	255.0	192.0	391.0	298.0	205.0	432
0.0200	306.0	224.0	495.0	368.0	241.0	562
0.0100	361.0	257.0	613.0	446.0	277.0	718
0.0050	420.0	291.0	748.0	--	--	--
0.0020	504.0	339.0	952.0	662.0	366.0	1,200

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1979	244	--
1980	65	--
1981	59	--
1982	136	--
1983	98	--
1984	77	--
1985	375	--
1986	105	--
1987	72	--
1988	50	--
1989	78	--
1990	30	--
1991	41	--
1992	78	--
1993	77	--
1994	44	--
1995	65	--
1996	140	--
1997	100	--
1998	147	--
1999	180	--
2000	106	--