

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05124990 Filson Creek in SESW sec. 24 near Winton, Minn.

Peak-flow information:

Number of systematic peak flows in record	11
Systematic period begins	1975
Systematic period ends	1985
Length of systematic record	11
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.163
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
2.0845	0.2596	1.116

Outlier criteria and number of peak flows exceeding:

Low	34.9	0
High	423.1	1

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
2.0845	0.2596	0.381	

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	32.3	13.7	50.1	--	--	--
0.9900	35.8	16.1	54.4	--	--	--
0.9500	48.7	25.5	69.8	--	--	--
0.9000	58.1	33.1	81.0	--	--	--
0.8000	72.9	45.8	99.0	--	--	--
0.6667	91.2	62.0	123.0	--	--	--
0.5000	117.0	84.5	160.0	129	93.5	179
0.4292	130.0	95.6	181.0	--	--	--
0.2000	198.0	146.0	313.0	228	152.0	340
0.1000	267.0	190.0	479.0	319	199.0	511
0.0400	372.0	250.0	788.0	472	270.0	824
0.0200	467.0	299.0	1,110.0	615	330.0	1,140
0.0100	575.0	352.0	1,530.0	783	397.0	1,540
0.0050	700.0	410.0	2,070.0	--	--	--
0.0020	895.0	494.0	3,030.0	1,290	574.0	2,900

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1975	152	--
1976	127	--
1977	95	--
1978	139	--
1979	283	--
1980	426	--
1981	70	--
1982	89	--
1983	66	--
1984	68	--
1985	99	--