

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05284920 Stanchfield Creek tributary near Day, Minn.

Peak-flow information:

Number of systematic peak flows in record	25
Systematic period begins	1961
Systematic period ends	1985
Length of systematic record	25
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	-0.27
Standard error of generalized skew	0.4266
Low-outlier method	Undocumented (GTBT)

EMA systematic record analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.5109	0.4138	-1.005

Low-outlier information:

Number of low outliers	0
Low-outlier threshold	Not determined

Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.5109	0.4138	-0.562

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	1.69	0.10	4.20	--	--	--
0.9900	2.41	0.20	5.39	--	--	--
0.9500	5.90	1.33	10.60	--	--	--
0.9000	9.16	3.21	15.20	--	--	--
0.8000	15.10	7.44	23.30	--	--	--
0.6667	23.30	13.70	34.50	--	--	--
0.5000	35.40	22.90	51.70	34.4	24.8	47.7
0.4292	41.80	27.60	60.90	--	--	--
0.2000	73.40	50.60	112.00	71.8	51.8	99.6
0.1000	102.00	70.80	171.00	101.0	71.1	144.0
0.0400	141.00	94.90	277.00	142.0	94.5	213.0
0.0200	170.00	110.00	381.00	175.0	111.0	276.0
0.0100	200.00	123.00	509.00	211.0	127.0	351.0
0.0050	229.00	133.00	666.00	--	--	--
0.0020	267.00	143.00	934.00	305.0	162.0	574.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1961	13	--
1962	70	--
1963	22	--
1964	26	--
1965	55	--
1966	48	--
1967	55	--
1968	41	--
1969	47	--
1970	2	--
1971	22	--
1972	203	--
1973	20	--
1974	34	--
1975	99	--
1976	40	--
1977	30	--
1978	14	--
1979	47	--
1980	5	--
1981	72	--
1982	28	--
1983	34	--
1984	104	--
1985	24	--