

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05129710 Johnson Creek near Britt, Minn.

Peak-flow information:

Number of systematic peak flows in record	14
Systematic period begins	1961
Systematic period ends	1975
Length of systematic record	15
Years without information	1
Number of historical peak flows in record	0

Frequency analysis options:

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	0.05
Standard error of generalized skew	0.4266
Low-outlier method	Fixed Threshold

EMA systematic record analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.3991	0.1262	-0.842

Low-outlier information:

Number of low outliers	0
Low-outlier threshold	5

Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
1.3991	0.1262	-0.222

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	11.2	4.54	14.8	--	--	--
0.9900	12.2	5.45	15.8	--	--	--
0.9500	15.3	9.04	18.7	--	--	--
0.9000	17.2	11.60	20.6	--	--	--
0.8000	19.7	15.00	23.3	--	--	--
0.6667	22.3	18.00	26.2	--	--	--
0.5000	25.3	21.20	29.8	25.8	22.2	30.0
0.4292	26.7	22.50	31.6	--	--	--
0.2000	32.1	27.40	39.9	32.8	27.9	38.6
0.1000	36.1	30.60	47.9	37.2	31.0	44.7
0.0400	40.8	34.10	60.0	42.6	34.3	52.9
0.0200	44.0	36.30	70.6	46.5	36.4	59.4
0.0100	47.0	38.10	82.6	50.3	38.2	66.2
0.0050	49.9	39.70	95.8	--	--	--
0.0020	53.5	41.50	115.0	59.3	42.0	83.8

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water Peak Peak-flow

year flow code

1961 28 --

1962 22 --

1963 13 --

1964 29 --

Gap in systematic record

1966 35 --

1967 17 --

1968 22 --

1969 31 --

1970 26 --

1971 37 --

1972 23 --

1973 20 --

1974 29 --

1975 32 --