

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

06483200 Kanaranzi Creek tributary near Lismore, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	23	
Systematic period begins	1959	
Systematic period ends	1993	
Length of systematic record	35	
Years without information	12	
Number of historical peak flows in record	1	1993
Length of historical period	58	
Historical period begins	1959	
Historical period ends	2006	
Historical period based on		Correlation with streamgauge 06603530

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.226
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	
1.9623	0.3044	-0.064	

**Outlier criteria and number of peak flows exceeding:**

Low	16.5	0
High	393.0	0

**Bulletin 17B Final analysis results:**

**Moments of the common logarithms of the peak flows:**

	Standard	
Mean	deviation	Skewness
1.9732	0.3091	-0.082

**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	14.2	7.2	22.0	--	--	--
0.9900	17.2	9.2	25.8	--	--	--
0.9500	28.7	17.7	39.7	--	--	--
0.9000	37.5	24.9	50.1	--	--	--
0.8000	51.8	37.0	67.1	--	--	--
0.6667	69.7	52.5	89.1	--	--	--
0.5000	94.9	73.8	122.0	99.1	77.7	126
0.4292	108.0	84.3	140.0	--	--	--
0.2000	172.0	132.0	240.0	203.0	156.0	264
0.1000	232.0	174.0	349.0	295.0	219.0	398
0.0400	320.0	230.0	523.0	456.0	318.0	653
0.0200	393.0	274.0	680.0	567.0	373.0	863
0.0100	472.0	320.0	860.0	723.0	446.0	1,170
0.0050	557.0	367.0	1,070.0	--	--	--
0.0020	680.0	433.0	1,380.0	1,130.0	605.0	2,110

**Peak-flow data used in the analysis:**

Explanation of symbols and codes

-- none

H Historic, outside of systematic record

Water	Peak	Peak-flow
year	flow	code
1959	174	--
1960	62	--
1961	184	--
1962	72	--
1963	240	--
1964	49	--
1965	180	--
1966	56	--
1967	128	--
1968	42	--
1969	256	--
1970	46	--
1971	123	--
1972	93	--
1973	29	--
1974	28	--
1975	42	--
1976	57	--
1977	83	--
1978	178	--
1979	112	--
1980	273	--
1981	126	--
1993	393	H