

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05131000 Dark River near Chisholm, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	33
Systematic period begins	1943
Systematic period ends	1979
Length of systematic record	37
Years without information	4
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.018
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:**

	Mean	Standard deviation	Skewness
	2.4960	0.2485	0.448

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

Low	70.6	0
High	1389.9	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.4960	0.2485	0.228

**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	81.1	54.7	107	--	--	--
0.9900	91.2	63.1	118	--	--	--
0.9500	127.0	94.5	158	--	--	--
0.9000	153.0	118.0	186	--	--	--
0.8000	193.0	155.0	230	--	--	--
0.6667	241.0	199.0	284	--	--	--
0.5000	307.0	259.0	362	289	238	350
0.4292	340.0	288.0	403	--	--	--
0.2000	503.0	423.0	625	461	366	579
0.1000	660.0	542.0	861	583	444	765
0.0400	891.0	705.0	1,230	737	525	1,030
0.0200	1,090.0	838.0	1,570	843	570	1,250
0.0100	1,300.0	980.0	1,970	956	612	1,490
0.0050	1,540.0	1,130.0	2,430	--	--	--
0.0020	1,910.0	1,350.0	3,150	1,200	677	2,120

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1943	213	--
1944	346	--
1945	320	--
1946	191	--
1947	660	--
1948	790	--
1949	215	--
1950	1,170	--
1951	527	--
1952	308	--
1953	218	--
1954	782	--
1955	208	--
1956	255	--
1957	542	--
1958	189	--
1959	180	--
1960	202	--
1961	515	--
Gap in systematic record		
1966	437	--
1967	200	--
1968	200	--
1969	605	--
1970	398	--
1971	620	--
1972	318	--
1973	106	--
1974	238	--
1975	255	--
1976	148	--
1977	204	--
1978	178	--
1979	490	--