

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05384200 Gribben Creek near Whalen, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	27
Systematic period begins	1959
Systematic period ends	1985
Length of systematic record	27
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.234
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
2.7849	0.5017	0.262

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

Low	33.2	0
High	11186.2	0

**Bulletin 17B Final analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.7849	0.5017	-0.002

**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	31.0	11.7	59.2	--	--	--
0.9900	41.4	16.9	75.5	--	--	--
0.9500	91.1	45.4	148.0	--	--	--
0.9000	139.0	76.2	214.0	--	--	--
0.8000	230.0	140.0	340.0	--	--	--
0.6667	371.0	243.0	535.0	--	--	--
0.5000	610.0	419.0	888.0	550	374	809
0.4292	749.0	519.0	1,110.0	--	--	--
0.2000	1,610.0	1,090.0	2,650.0	1,270	879	1,840
0.1000	2,680.0	1,730.0	4,870.0	1,880	1,300	2,740
0.0400	4,600.0	2,780.0	9,510.0	2,830	1,910	4,180
0.0200	6,530.0	3,760.0	14,700.0	3,700	2,430	5,630
0.0100	8,940.0	4,900.0	21,900.0	4,780	2,980	7,670
0.0050	11,900.0	6,250.0	31,500.0	--	--	--
0.0020	16,900.0	8,380.0	49,000.0	7,920	4,370	14,400

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

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	510	--
1960	4,880	--
1961	562	--
1962	581	--
1963	221	--
1964	1,430	--
1965	868	--
1966	247	--
1967	2,460	--
1968	1,170	--
1969	543	--
1970	182	--
1971	855	--
1972	360	--
1973	175	--
1974	5,200	--
1975	200	--
1976	580	--
1977	2,030	--
1978	264	--
1979	230	--
1980	2,350	--
1981	4,400	--
1982	50	--
1983	450	--
1984	382	--
1985	280	--