Annual Peak-Flow Frequency Analysis
For more information on the contents of this documentation, see Kessler and others (2013).

Streamgage number and name:
    04014500 Baptism River near Beaver Bay, Minn.

Peak-flow information:

Number of systematic peak flows in record	63
Systematic period begins	1930
Systematic period ends	1993
Length of systematic record	64
Years without information	1
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	0.5
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
3.3971	0.2329	0.537

Outlier criteria and number of peak flows exceeding:

Low	540.0	0
High	11528.3	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
3.3971	0.2329	0.522

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	814	648	973	−−	−−	−−
0.9900	882	711	1,050	−−	−−	−−
0.9500	1,130	938	1,300	−−	−−	−−
0.9000	1,300	1,100	1,490	−−	−−	−−
0.8000	1,580	1,370	1,780	−−	−−	−−
0.6667	1,910	1,690	2,140	−−	−−	−−
0.5000	2,380	2,130	2,660	2,390	2,090	2,740
0.4292	2,620	2,340	2,940	−−	−−	−−
0.2000	3,840	3,410	4,420	3,870	3,250	4,600
0.1000	5,080	4,420	6,020	5,110	4,120	6,340
0.0400	6,970	5,890	8,640	7,020	5,270	9,350
0.0200	8,670	7,160	11,100	8,720	6,180	12,300
0.0100	10,600	8,580	14,000	10,700	7,140	16,000
0.0050	12,900	10,200	17,600	−−	−−	−−
0.0020	16,400	12,600	23,300	16,300	9,530	27,900

Peak-flow data used in the analysis:

Explanation of symbols and codes

—— none

Water year	Peak flow	Peak-flow code	Water year	Peak flow	Peak-flow code
1930	1,480	——	1962	1,440	——
1931	1,480	——	1963	880	——
1932	1,560	——	1964	3,220	——
1933	3,500	——	1965	2,580	——
1934	1,200	——	1966	2,160	——
1935	1,540	——	1967	2,220	——
1936	3,120	——	1968	2,840	——
1937	3,790	——	1969	2,370	——
1938	3,360	——	1970	2,790	——
1939	9,350	——	1971	3,230	——
1940	1,570	——	1972	8,320	——
1941	9,080	——	1973	2,430	——
1942	2,320	——	1974	3,490	——
1943	2,940	——	1975	2,570	——
1944	3,130	——	1976	2,960	——
1945	5,180	——	1977	10,000	——
1946	1,240	——	1978	1,400	——
1947	3,960	——	1979	3,120	——
Gap in systematic record			1980	1,570	——
1949	1,100	——	1981	1,560	——
1950	6,060	——	1982	3,750	——
1951	2,910	——	1983	2,400	——
1952	2,790	——	1984	1,990	——
1953	1,610	——	1985	1,560	——
1954	3,500	——	1986	1,990	——
1955	1,660	——	1987	2,260	——
1956	2,650	——	1988	1,230	——
1957	2,940	——	1989	2,750	——
1958	928	——	1990	3,300	——
1959	1,220	——	1991	1,720	——
1960	3,040	——	1992	2,420	——
1961	2,980	——	1993	3,930	——