Annual Peak-Flow Frequency Analysis

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

Streamgage number and name:

05338200 Mission Creek near Hinckley, Minn.

Peak-flow information:

Number of systematic peak flows in record	26
Systematic period begins	1960
Systematic period ends	1985
Length of systematic record	26
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.262
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
1.8535	0.2682	-0.179

Outlier criteria and number of peak flows exceeding:

Low	15.2	0
High	334.6	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
1.8535	0.2682	-0.223

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	12.8	7.2	18.5	−−	−−	−−
0.9900	15.3	9.1	21.6	−−	−−	−−
0.9500	24.9	16.8	32.6	−−	−−	−−
0.9000	31.9	22.9	40.5	−−	−−	−−
0.8000	42.8	32.7	52.8	−−	−−	−−
0.6667	55.8	44.4	68.1	−−	−−	−−
0.5000	73.0	59.6	89.7	74	58.9	93
0.4292	81.4	66.7	101.0	−−	−−	−−
0.2000	121.0	97.6	158.0	125	97.8	159
0.1000	155.0	122.0	214.0	163	124.0	214
0.0400	200.0	153.0	295.0	217	157.0	301
0.0200	235.0	176.0	360.0	263	182.0	380
0.0100	271.0	199.0	431.0	312	206.0	472
0.0050	308.0	221.0	506.0	−−	−−	−−
0.0020	358.0	251.0	612.0	444	263.0	751

Peak-flow data used in the analysis:

Explanation of symbols and codes

−−　　none

Water year	Peak flow	Peak-flow code
1960	45	−−
1961	28	−−
1962	121	−−
1963	21	−−
1964	52	−−
1965	143	−−
1966	98	−−
1967	82	−−
1968	65	−−
1969	146	−−
1970	158	−−
1971	56	−−
1972	217	−−
1973	26	−−
1974	122	−−
1975	76	−−
1976	45	−−
1977	34	−−
1978	133	−−
1979	143	−−
1980	42	−−
1981	74	−−
1982	66	−−
1983	104	−−
1984	55	−−
1985	54	−−