

Annual Peak-Flow Frequency Analysis

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

Streamgauge number and name:

05313800 Kandiyohi County Ditch Number 16 near Blomkest, Minn.

Peak-flow information:

Number of systematic peak flows in record	14
Systematic period begins	1959
Systematic period ends	1972
Length of systematic record	14
Years without information	0
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.155
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	
1.4847	0.3563	-1.026	

Outlier criteria and number of peak flows exceeding:

Low	5.0	0
High	187.5	0

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

	Standard		
Mean	deviation	Skewness	
1.4847	0.3563	-0.391	

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	2.7	0.8	5.3	--	--	--
0.9900	3.6	1.2	6.6	--	--	--
0.9500	7.3	3.2	11.7	--	--	--
0.9000	10.4	5.3	15.8	--	--	--
0.8000	15.6	9.2	22.7	--	--	--
0.6667	22.4	14.6	32.2	--	--	--
0.5000	32.2	22.1	47.5	28.5	19.2	42.3
0.4292	37.2	25.8	56.0	--	--	--
0.2000	61.6	42.3	106.0	54.5	36.9	80.5
0.1000	83.9	55.7	160.0	74.3	48.8	113.0
0.0400	114.0	72.4	245.0	102.0	63.8	165.0
0.0200	138.0	84.7	319.0	126.0	74.7	213.0
0.0100	162.0	96.6	401.0	152.0	85.7	269.0
0.0050	187.0	108.0	492.0	--	--	--
0.0020	220.0	124.0	622.0	220.0	110.0	441.0

Peak-flow data used in the analysis:

Explanation of symbols and codes

-- none

Water	Peak	Peak-flow
year	flow	code
1959	5.0	--
1960	51.0	--
1961	8.6	--
1962	49.0	--
1963	74.0	--
1964	70.0	--
1965	69.0	--
1966	26.0	--
1967	57.0	--
1968	33.0	--
1969	34.0	--
1970	23.0	--
1971	32.0	--
1972	13.0	--