

Annual Peak-Flow Frequency Analysis

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

**Streamgauge number and name:**

05244200 Cat River near Nimrod, Minn.

**Peak-flow information:**

Number of systematic peak flows in record	51
Systematic period begins	1961
Systematic period ends	2011
Length of systematic record	51
Years without information	0
Number of historical peak flows in record	0

**Frequency analysis options:**

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	-0.02
Standard error of generalized skew	0.4266
Low-outlier method	Multiple Grubbs-Beck test

**EMA systematic record analysis results:**

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

	Standard	
Mean	deviation	Skewness
2.2255	0.2806	-0.086

**Low-outlier information:**

Number of low outliers	0
Low-outlier threshold	Not determined

**Final analysis results:**

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

	Standard		
Mean	deviation	Skewness	
2.2255	0.2805	-0.061	

**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	30.7	13.7	44.8	--	--	--
0.9900	36.4	18.4	50.8	--	--	--
0.9500	57.5	38.0	73.6	--	--	--
0.9000	73.2	53.4	91.1	--	--	--
0.8000	97.8	76.8	119.0	--	--	--
0.6667	128.0	104.0	155.0	--	--	--
0.5000	169.0	140.0	205.0	174	146	208
0.4292	190.0	157.0	230.0	--	--	--
0.2000	290.0	239.0	365.0	299	246	363
0.1000	383.0	310.0	513.0	398	318	499
0.0400	514.0	402.0	773.0	543	412	716
0.0200	620.0	470.0	1,030.0	664	482	916
0.0100	734.0	535.0	1,360.0	797	551	1,150
0.0050	855.0	599.0	1,760.0	--	--	--
0.0020	1,030.0	680.0	2,440.0	1,160	715	1,870

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

Explanation of symbols and codes

< Less than

-- none

Water	Peak	Peak-flow	Water	Peak	Peak-flow
year	flow	code	year	flow	code
1961	217	--	1987	79	--
1962	316	--	1988	50	--
1963	125	--	1989	155	--
1964	200	--	1990	185	--
1965	488	--	1991	92	--
1966	336	--	1992	70	--
1967	244	--	1993	147	--
1968	410	--	1994	140	--
1969	410	--	1995	223	--
1970	240	--	1996	250	--
1971	140	--	1997	400	--
1972	255	--	1998	110	--
1973	79	--	1999	300	--
1974	560	--	2000	70	--
1975	305	--	2001	277	--
1976	64	--	2002	120	--
1977	59	--	2003	<74	--
1978	206	--	2004	102	--
1979	390	--	2005	79	--
1980	125	--	2006	216	--
1981	69	--	2007	121	--
1982	415	--	2008	194	--
1983	116	--	2009	422	--
1984	110	--	2010	100	--
1985	205	--	2011	171	--
1986	205	--			