

U. S. GEOLOGICAL SURVEY
 ANNUAL PEAK FLOW FREQUENCY ANALYSIS
 Following Bulletin 17-B Guidelines
 Program peakfq
 (Version 4.0, December, 2000)

Station - 05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WI
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I N P U T D A T A S U M M A R Y

Number of peaks in record	=	71
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	71
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	0.000
Standard error of generalized skew	=	0.550
Skew option	=	STATION SKEW
Gage base discharge	=	0.0
User supplied high outlier threshold	=	--
User supplied low outlier criterion	=	--
Plotting position parameter	=	0.00

***** NOTICE -- Preliminary machine computations. *****
 ***** User responsible for assessment and interpretation. *****

WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.		0.0	
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1	10503.7	
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		122763.8	
*WCF151I-17B WEIGHTED SKEW REPLACED BY USER OPTION.	-0.271	-0.357	-1

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	4.5686	0.1889	-0.583
BULL.17B ESTIMATE	10503.7	0.9859	4.5734	0.1784	-0.357

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY' ESTIMATE	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
				LOWER	UPPER
0.9950	--	9547.0	--	--	--
0.9900	--	11230.0	--	--	--
0.9500	18320.0	16980.0	18010.0	15870.0	20570.0
0.9000	21830.0	20790.0	21600.0	19320.0	24140.0
0.8000	26740.0	26140.0	26610.0	24180.0	29180.0
0.5000	38370.0	38630.0	38370.0	35400.0	41630.0
0.2000	53190.0	53770.0	53400.0	48700.0	58900.0
0.1000	62260.0	62500.0	62720.0	56420.0	70090.0
0.0400	72920.0	72220.0	73840.0	65240.0	83680.0
0.0200	80340.0	78610.0	81700.0	71240.0	93360.0
0.0100	87350.0	84390.0	89230.0	76850.0	102700.0
0.0050	94040.0	89650.0	96520.0	82130.0	111700.0
0.0020	102500.0	95960.0	105900.0	88710.0	123200.0
0.6667	32030.2	(1.50-year flood)			
0.4292	41297.5	(2.33-year flood)			

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I N P U T D A T A L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1927	52100.0	K	1963	24100.0	K
1928	48700.0	K	1964	12600.0	K
1929	44000.0	K	1965	44700.0	K
1930	40200.0	K	1966	33000.0	K
1931	19000.0	K	1967	83300.0	K
1932	50100.0	K	1968	41600.0	K
1933	24300.0	K	1969	39000.0	K
1934	33700.0	K	1970	27100.0	K
1935	48000.0	K	1971	49700.0	K
1936	43400.0	K	1972	41100.0	K
1937	27800.0	K	1973	58600.0	K
1938	64600.0	K	1974	34200.0	K
1939	55900.0	K	1975	39200.0	K
1940	31600.0	K	1976	51400.0	K
1941	102000.0	K	1977	26700.0	K
1942	60100.0	K	1978	25700.0	K
1943	81000.0	K	1979	30900.0	K
1944	29900.0	K	1980	33000.0	K
1945	40900.0	K	1981	38900.0	K
1946	50400.0	K	1982	60300.0	K
1947	26700.0	K	1983	54200.0	K
1948	9860.0	K	1987	32200.0	K
1949	28000.0	K	1988	14900.0	K
1950	43400.0	K	1989	18600.0	K
1951	56200.0	K	1990	31900.0	K
1952	37600.0	K	1991	32600.0	K
1953	34800.0	K	1992	48700.0	K
1954	69400.0	K	1993	60300.0	K
1955	32400.0	K	1994	52300.0	K
1956	32600.0	K	1995	27400.0	K
1957	12300.0	K	1996	58500.0	K
1958	31400.0	K	1997	50400.0	K
1959	33600.0	K	1998	45500.0	K
1960	33500.0	K	1999	26400.0	K
1961	29300.0	K	2000	32900.0	K
1962	27700.0	K			

Explanation of peak discharge qualification codes

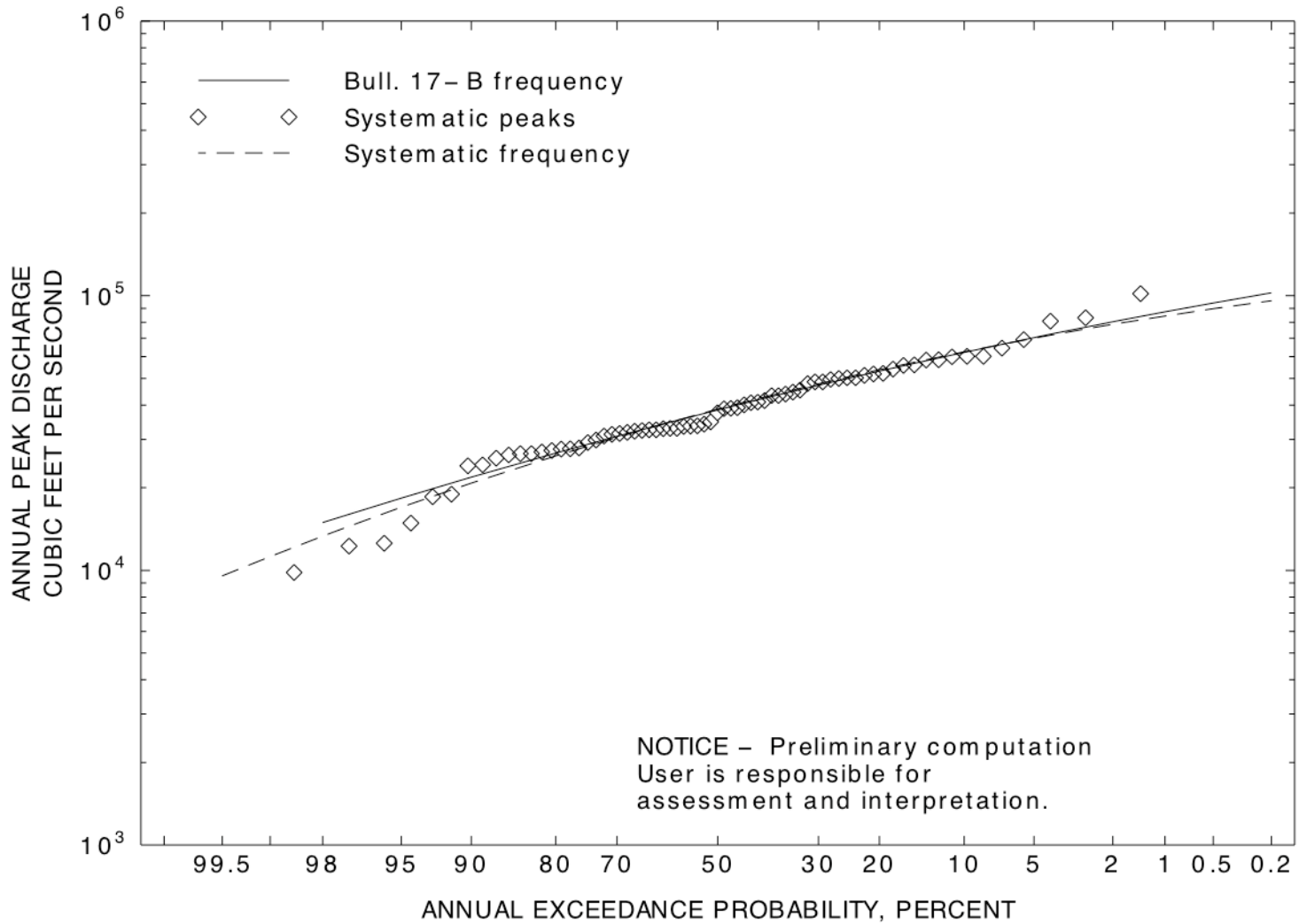
PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1941	102000.0	0.0139	0.0139
1967	83300.0	0.0278	0.0278
1943	81000.0	0.0417	0.0417
1954	69400.0	0.0556	0.0556
1938	64600.0	0.0694	0.0694
1982	60300.0	0.0833	0.0833
1993	60300.0	0.0972	0.0972
1942	60100.0	0.1111	0.1111
1973	58600.0	0.1250	0.1250
1996	58500.0	0.1389	0.1389
1951	56200.0	0.1528	0.1528
1939	55900.0	0.1667	0.1667
1983	54200.0	0.1806	0.1806
1994	52300.0	0.1944	0.1944
1927	52100.0	0.2083	0.2083
1976	51400.0	0.2222	0.2222
1946	50400.0	0.2361	0.2361
1997	50400.0	0.2500	0.2500
1932	50100.0	0.2639	0.2639
1971	49700.0	0.2778	0.2778
1928	48700.0	0.2917	0.2917
1992	48700.0	0.3056	0.3056
1935	48000.0	0.3194	0.3194
1998	45500.0	0.3333	0.3333
1965	44700.0	0.3472	0.3472
1929	44000.0	0.3611	0.3611
1936	43400.0	0.3750	0.3750
1950	43400.0	0.3889	0.3889
1968	41600.0	0.4028	0.4028
1972	41100.0	0.4167	0.4167
1945	40900.0	0.4306	0.4306
1930	40200.0	0.4444	0.4444
1975	39200.0	0.4583	0.4583
1969	39000.0	0.4722	0.4722
1981	38900.0	0.4861	0.4861
1952	37600.0	0.5000	0.5000
1953	34800.0	0.5139	0.5139
1974	34200.0	0.5278	0.5278
1934	33700.0	0.5417	0.5417
1959	33600.0	0.5556	0.5556
1960	33500.0	0.5694	0.5694
1966	33000.0	0.5833	0.5833
1980	33000.0	0.5972	0.5972
2000	32900.0	0.6111	0.6111
1956	32600.0	0.6250	0.6250
1991	32600.0	0.6389	0.6389
1955	32400.0	0.6528	0.6528
1987	32200.0	0.6667	0.6667

1990	31900.0	0.6806	0.6806
1940	31600.0	0.6944	0.6944
1958	31400.0	0.7083	0.7083
1979	30900.0	0.7222	0.7222
1944	29900.0	0.7361	0.7361
1961	29300.0	0.7500	0.7500
1949	28000.0	0.7639	0.7639
1937	27800.0	0.7778	0.7778
1962	27700.0	0.7917	0.7917
1995	27400.0	0.8056	0.8056
1970	27100.0	0.8194	0.8194
1947	26700.0	0.8333	0.8333
1977	26700.0	0.8472	0.8472
1999	26400.0	0.8611	0.8611
1978	25700.0	0.8750	0.8750
1933	24300.0	0.8889	0.8889
1963	24100.0	0.9028	0.9028
1931	19000.0	0.9167	0.9167
1989	18600.0	0.9306	0.9306
1988	14900.0	0.9444	0.9444
1964	12600.0	0.9583	0.9583
1957	12300.0	0.9722	0.9722
1948	9860.0	0.9861	0.9861



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