

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

Station - 05434500 PECATONICA RIVER AT MARTINTOWN, WI
 2002 MAR 13 09:03:25

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	62
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	62
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.400
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
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
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	921.5
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	28743.8

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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	3.7115	0.2622	-0.163
BULL.17B ESTIMATE	0.0	1.0000	3.7115	0.2622	-0.219

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	960.0	990.8	889.3	694.3	1230.0
0.9900	1147.0	1176.0	1081.0	853.3	1441.0
0.9500	1839.0	1855.0	1790.0	1468.0	2199.0
0.9000	2344.0	2351.0	2305.0	1933.0	2743.0
0.8000	3120.0	3113.0	3095.0	2658.0	3579.0
0.5000	5261.0	5232.0	5261.0	4633.0	5980.0
0.2000	8601.0	8591.0	8660.0	7492.0	10110.0
0.1000	10980.0	11030.0	11130.0	9409.0	13270.0
0.0400	14130.0	14310.0	14470.0	11840.0	17660.0
0.0200	16550.0	16860.0	17080.0	13650.0	21150.0
0.0100	19010.0	19490.0	19810.0	15460.0	24800.0
0.0050	21520.0	22220.0	22650.0	17270.0	28620.0
0.0020	24930.0	25970.0	26630.0	19690.0	33930.0
0.6667	4042.0	(1.50-year flood)			
0.4292	5860.9	(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
1916	14000.0		1970	2060.0	
1940	3680.0		1971	4600.0	
1941	5820.0		1972	3970.0	
1942	5660.0		1973	5690.0	
1943	7900.0		1974	6420.0	
1944	7240.0		1975	12900.0	
1945	4700.0		1976	3880.0	
1946	11000.0		1977	2510.0	
1947	5520.0		1978	4490.0	
1948	13400.0		1979	5670.0	
1949	6000.0		1980	3470.0	
1950	9360.0		1981	4130.0	
1951	8580.0		1982	5780.0	
1952	7250.0		1983	2860.0	
1953	10600.0		1984	2530.0	
1954	4180.0		1985	8660.0	
1955	3700.0		1986	4770.0	
1956	2280.0		1987	1300.0	
1957	2720.0		1988	1940.0	
1958	4300.0		1989	4900.0	
1959	14200.0		1990	12000.0	
1960	12800.0		1991	2920.0	
1961	5570.0		1992	1780.0	
1962	4890.0		1993	9600.0	
1963	9160.0		1994	3900.0	
1964	2080.0		1995	1690.0	
1965	11300.0		1996	5230.0	
1966	5600.0		1997	4900.0	
1967	6090.0		1998	3730.0	
1968	1810.0		1999	5610.0	
1969	15100.0		2000	8120.0	

Explanation of peak discharge qualification codes

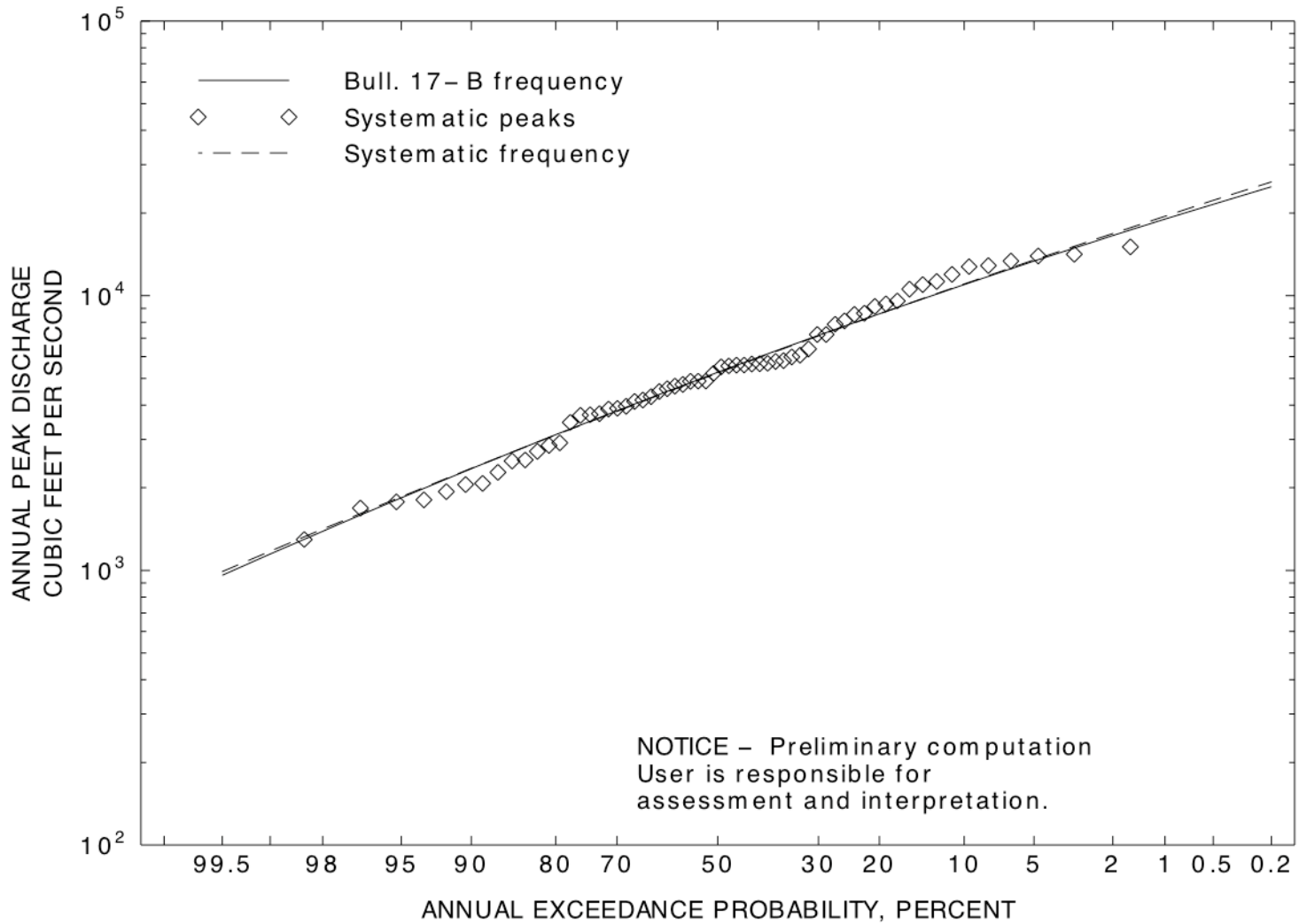
PEAKFQ	WATSTORE	
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1969	15100.0	0.0159	0.0159
1959	14200.0	0.0317	0.0317
1916	14000.0	0.0476	0.0476
1948	13400.0	0.0635	0.0635
1975	12900.0	0.0794	0.0794
1960	12800.0	0.0952	0.0952
1990	12000.0	0.1111	0.1111
1965	11300.0	0.1270	0.1270
1946	11000.0	0.1429	0.1429
1953	10600.0	0.1587	0.1587
1993	9600.0	0.1746	0.1746
1950	9360.0	0.1905	0.1905
1963	9160.0	0.2063	0.2063
1985	8660.0	0.2222	0.2222
1951	8580.0	0.2381	0.2381
2000	8120.0	0.2540	0.2540
1943	7900.0	0.2698	0.2698
1952	7250.0	0.2857	0.2857
1944	7240.0	0.3016	0.3016
1974	6420.0	0.3175	0.3175
1967	6090.0	0.3333	0.3333
1949	6000.0	0.3492	0.3492
1941	5820.0	0.3651	0.3651
1982	5780.0	0.3810	0.3810
1973	5690.0	0.3968	0.3968
1979	5670.0	0.4127	0.4127
1942	5660.0	0.4286	0.4286
1999	5610.0	0.4444	0.4444
1966	5600.0	0.4603	0.4603
1961	5570.0	0.4762	0.4762
1947	5520.0	0.4921	0.4921
1996	5230.0	0.5079	0.5079
1989	4900.0	0.5238	0.5238
1997	4900.0	0.5397	0.5397
1962	4890.0	0.5556	0.5556
1986	4770.0	0.5714	0.5714
1945	4700.0	0.5873	0.5873
1971	4600.0	0.6032	0.6032
1978	4490.0	0.6190	0.6190
1958	4300.0	0.6349	0.6349
1954	4180.0	0.6508	0.6508
1981	4130.0	0.6667	0.6667
1972	3970.0	0.6825	0.6825
1994	3900.0	0.6984	0.6984
1976	3880.0	0.7143	0.7143
1998	3730.0	0.7302	0.7302
1955	3700.0	0.7460	0.7460
1940	3680.0	0.7619	0.7619

1980	3470.0	0.7778	0.7778
1991	2920.0	0.7937	0.7937
1983	2860.0	0.8095	0.8095
1957	2720.0	0.8254	0.8254
1984	2530.0	0.8413	0.8413
1977	2510.0	0.8571	0.8571
1956	2280.0	0.8730	0.8730
1964	2080.0	0.8889	0.8889
1970	2060.0	0.9048	0.9048
1988	1940.0	0.9206	0.9206
1968	1810.0	0.9365	0.9365
1992	1780.0	0.9524	0.9524
1995	1690.0	0.9683	0.9683
1987	1300.0	0.9841	0.9841



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