

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

Station - 05395000 WISCONSIN RIVER AT MERRILL, WI
 2002 JUL 10 11:21:07

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

Number of peaks in record	=	86
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	86
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	
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		3901.5	
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		44693.4	
*WCF151I-17B WEIGHTED SKEW REPLACED BY USER OPTION.	-0.316	-0.403	-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	4.1207	0.1785	-0.403
BULL.17B ESTIMATE	0.0	1.0000	4.1207	0.1785	-0.403

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	3924.0	3924.0	3760.0	3240.0	4571.0
0.9900	4502.0	4502.0	4358.0	3784.0	5173.0
0.9500	6428.0	6428.0	6336.0	5647.0	7150.0
0.9000	7685.0	7685.0	7618.0	6885.0	8428.0
0.8000	9441.0	9441.0	9403.0	8624.0	10230.0
0.5000	13570.0	13570.0	13570.0	12620.0	14620.0
0.2000	18770.0	18770.0	18830.0	17310.0	20570.0
0.1000	21900.0	21900.0	22030.0	20020.0	24350.0
0.0400	25540.0	25540.0	25800.0	23080.0	28870.0
0.0200	28040.0	28040.0	28410.0	25140.0	32050.0
0.0100	30380.0	30380.0	30890.0	27050.0	35060.0
0.0050	32590.0	32590.0	33260.0	28830.0	37940.0
0.0020	35350.0	35350.0	36260.0	31040.0	41570.0
0.6667	11325.4	(1.50-year flood)			
0.4292	14609.2	(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
1915	7300.0	K	1958	6900.0	K
1916	21900.0	K	1959	19400.0	K
1917	9740.0	K	1960	18200.0	K
1918	15400.0	K	1961	9120.0	K
1919	11900.0	K	1962	11600.0	K
1920	17500.0	K	1963	7690.0	K
1921	15100.0	K	1964	5100.0	K
1922	17700.0	K	1965	12000.0	K
1923	20600.0	K	1966	10100.0	K
1924	13100.0	K	1967	22800.0	K
1925	5850.0	K	1968	15600.0	K
1926	11300.0	K	1969	17200.0	K
1927	15700.0	K	1970	6510.0	K
1928	19400.0	K	1971	18900.0	K
1929	20700.0	K	1972	18100.0	K
1930	10900.0	K	1973	21600.0	K
1931	8180.0	K	1974	9910.0	K
1932	10500.0	K	1975	15600.0	K
1933	8660.0	K	1976	18000.0	
1934	9440.0	K	1977	6040.0	
1935	16600.0	K	1978	9420.0	K
1936	13600.0	K	1979	20000.0	K
1937	12400.0	K	1980	21200.0	
1938	17300.0	K	1981	19400.0	
1939	14600.0	K	1982	16700.0	
1940	17600.0	K	1983	17200.0	
1941	33700.0	K	1984	11600.0	
1942	25000.0	K	1985	14000.0	
1943	14600.0	K	1986	21900.0	
1944	10800.0	K	1987	14100.0	
1945	8640.0	K	1988	7440.0	
1946	16700.0	K	1989	8160.0	
1947	8620.0	K	1990	18400.0	
1948	5430.0	K	1991	17600.0	K
1949	7510.0	K	1992	10400.0	K
1950	18100.0	K	1993	20600.0	K
1951	18100.0	K	1994	19700.0	K
1952	15900.0	K	1995	12000.0	K
1953	10900.0	K	1996	23400.0	K
1954	16800.0	K	1997	21300.0	K
1955	11400.0	K	1998	13500.0	K
1956	8650.0	K	1999	9440.0	K
1957	5620.0	K	2000	11100.0	K

Explanation of peak discharge qualification codes

PEAKFQ WATSTORE

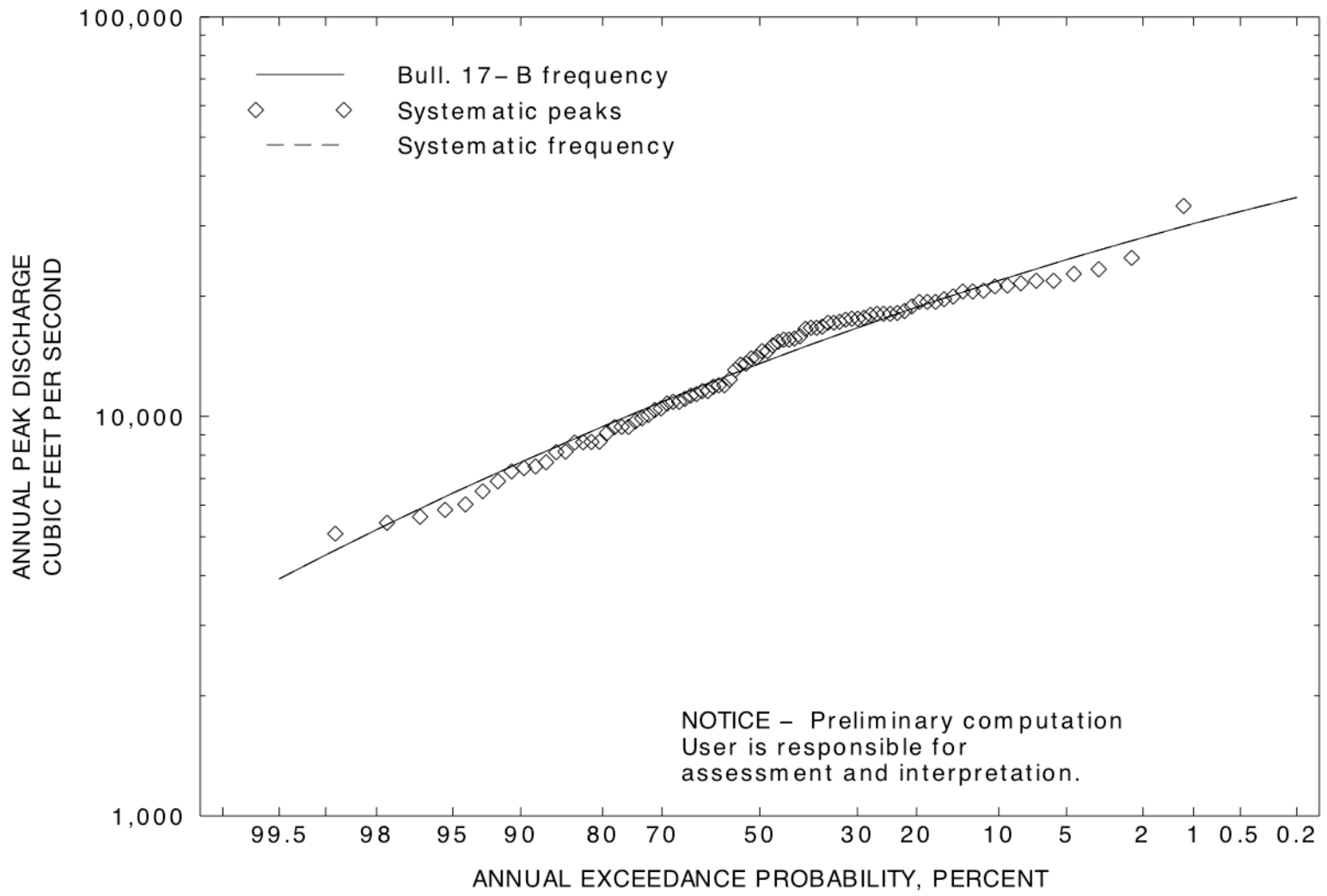
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1941	33700.0	0.0115	0.0115
1942	25000.0	0.0230	0.0230
1996	23400.0	0.0345	0.0345
1967	22800.0	0.0460	0.0460
1916	21900.0	0.0575	0.0575
1986	21900.0	0.0690	0.0690
1973	21600.0	0.0805	0.0805
1997	21300.0	0.0920	0.0920
1980	21200.0	0.1034	0.1034
1929	20700.0	0.1149	0.1149
1923	20600.0	0.1264	0.1264
1993	20600.0	0.1379	0.1379
1979	20000.0	0.1494	0.1494
1994	19700.0	0.1609	0.1609
1928	19400.0	0.1724	0.1724
1959	19400.0	0.1839	0.1839
1981	19400.0	0.1954	0.1954
1971	18900.0	0.2069	0.2069
1990	18400.0	0.2184	0.2184
1960	18200.0	0.2299	0.2299
1950	18100.0	0.2414	0.2414
1951	18100.0	0.2529	0.2529
1972	18100.0	0.2644	0.2644
1976	18000.0	0.2759	0.2759
1922	17700.0	0.2874	0.2874
1940	17600.0	0.2989	0.2989
1991	17600.0	0.3103	0.3103
1920	17500.0	0.3218	0.3218
1938	17300.0	0.3333	0.3333
1969	17200.0	0.3448	0.3448
1983	17200.0	0.3563	0.3563
1954	16800.0	0.3678	0.3678
1946	16700.0	0.3793	0.3793
1982	16700.0	0.3908	0.3908
1935	16600.0	0.4023	0.4023
1952	15900.0	0.4138	0.4138
1927	15700.0	0.4253	0.4253
1968	15600.0	0.4368	0.4368
1975	15600.0	0.4483	0.4483
1918	15400.0	0.4598	0.4598
1921	15100.0	0.4713	0.4713
1939	14600.0	0.4828	0.4828
1943	14600.0	0.4943	0.4943
1987	14100.0	0.5057	0.5057
1985	14000.0	0.5172	0.5172
1936	13600.0	0.5287	0.5287
1998	13500.0	0.5402	0.5402
1924	13100.0	0.5517	0.5517

1937	12400.0	0.5632	0.5632
1965	12000.0	0.5747	0.5747
1995	12000.0	0.5862	0.5862
1919	11900.0	0.5977	0.5977
1962	11600.0	0.6092	0.6092
1984	11600.0	0.6207	0.6207
1955	11400.0	0.6322	0.6322
1926	11300.0	0.6437	0.6437
2000	11100.0	0.6552	0.6552
1930	10900.0	0.6667	0.6667
1953	10900.0	0.6782	0.6782
1944	10800.0	0.6897	0.6897
1932	10500.0	0.7011	0.7011
1992	10400.0	0.7126	0.7126
1966	10100.0	0.7241	0.7241
1974	9910.0	0.7356	0.7356
1917	9740.0	0.7471	0.7471
1934	9440.0	0.7586	0.7586
1999	9440.0	0.7701	0.7701
1978	9420.0	0.7816	0.7816
1961	9120.0	0.7931	0.7931
1933	8660.0	0.8046	0.8046
1956	8650.0	0.8161	0.8161
1945	8640.0	0.8276	0.8276
1947	8620.0	0.8391	0.8391
1931	8180.0	0.8506	0.8506
1989	8160.0	0.8621	0.8621
1963	7690.0	0.8736	0.8736
1949	7510.0	0.8851	0.8851
1988	7440.0	0.8966	0.8966
1915	7300.0	0.9080	0.9080
1958	6900.0	0.9195	0.9195
1970	6510.0	0.9310	0.9310
1977	6040.0	0.9425	0.9425
1925	5850.0	0.9540	0.9540
1957	5620.0	0.9655	0.9655
1948	5430.0	0.9770	0.9770
1964	5100.0	0.9885	0.9885



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