

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

Station - 05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI  
2002 MAR 13 09:03:06

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	76
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	76
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.292
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.	1226.9
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	48779.6

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 2002 MAR 13 09:03:06

ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	3.8885	0.2737	-0.166
BULL.17B ESTIMATE	0.0	1.0000	3.8885	0.2737	-0.192

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	1363.0	1384.0	1279.0	1011.0	1722.0
0.9900	1635.0	1655.0	1557.0	1245.0	2028.0
0.9500	2654.0	2666.0	2595.0	2154.0	3145.0
0.9000	3409.0	3414.0	3362.0	2850.0	3958.0
0.8000	4582.0	4578.0	4552.0	3947.0	5219.0
0.5000	7893.0	7872.0	7893.0	7003.0	8903.0
0.2000	13210.0	13210.0	13290.0	11590.0	15360.0
0.1000	17110.0	17140.0	17310.0	14760.0	20410.0
0.0400	22340.0	22470.0	22800.0	18870.0	27500.0
0.0200	26430.0	26670.0	27170.0	21990.0	33230.0
0.0100	30650.0	31020.0	31770.0	25140.0	39300.0
0.0050	35010.0	35550.0	36610.0	28350.0	45710.0
0.0020	41010.0	41820.0	43430.0	32680.0	54720.0
0.6667	5997.0	( 1.50-year flood )			
0.4292	8834.0	( 2.33-year flood )			

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 2002 MAR 13 09:03:06

I N P U T   D A T A   L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1914	40000.0		1963	6730.0	
1915	3420.0		1964	10700.0	
1916	6050.0		1965	13700.0	
1917	3770.0		1966	8350.0	
1918	6510.0		1967	18100.0	
1919	5610.0		1968	14800.0	
1920	8810.0		1969	9340.0	
1921	8150.0		1970	10200.0	
1922	9900.0		1971	8900.0	
1923	2510.0		1972	14600.0	
1924	8810.0		1973	8840.0	
1925	2710.0		1974	5520.0	
1937	1650.0		1975	4110.0	
1938	41000.0		1976	9470.0	
1939	8200.0		1977	1400.0	
1940	10200.0		1978	9350.0	
1941	7160.0		1979	10900.0	
1942	9710.0		1980	32900.0	
1943	18500.0		1981	5770.0	
1944	3370.0		1982	10400.0	
1945	24700.0		1983	10400.0	
1946	7840.0		1984	7040.0	
1947	7050.0		1985	4780.0	
1948	8460.0		1986	10400.0	
1949	7380.0		1987	9540.0	
1950	10500.0		1988	1600.0	
1951	9280.0		1989	11600.0	
1952	11500.0		1990	11900.0	
1953	10600.0		1991	7920.0	
1954	7650.0		1992	10600.0	
1955	6200.0		1993	11100.0	
1956	10500.0		1994	4790.0	
1957	4000.0		1995	2790.0	
1958	8890.0		1996	4650.0	
1959	5610.0		1997	8360.0	
1960	8460.0		1998	4070.0	
1961	7100.0		1999	4030.0	
1962	6040.0		2000	8710.0	

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

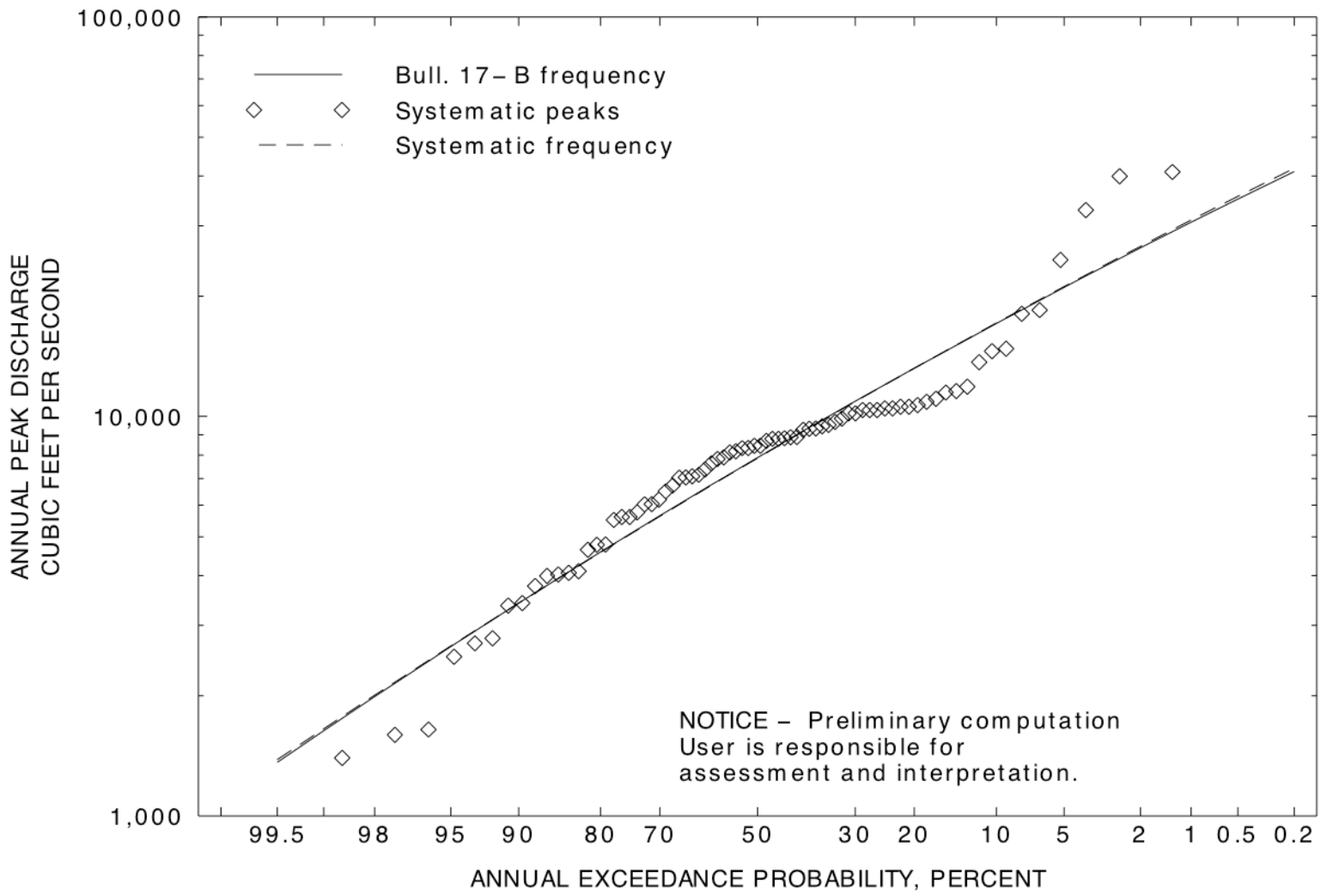
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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2002 MAR 13 09:03:06

EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1938	41000.0	0.0130	0.0130
1914	40000.0	0.0260	0.0260
1980	32900.0	0.0390	0.0390
1945	24700.0	0.0519	0.0519
1943	18500.0	0.0649	0.0649
1967	18100.0	0.0779	0.0779
1968	14800.0	0.0909	0.0909
1972	14600.0	0.1039	0.1039
1965	13700.0	0.1169	0.1169
1990	11900.0	0.1299	0.1299
1989	11600.0	0.1429	0.1429
1952	11500.0	0.1558	0.1558
1993	11100.0	0.1688	0.1688
1979	10900.0	0.1818	0.1818
1964	10700.0	0.1948	0.1948
1953	10600.0	0.2078	0.2078
1992	10600.0	0.2208	0.2208
1950	10500.0	0.2338	0.2338
1956	10500.0	0.2468	0.2468
1982	10400.0	0.2597	0.2597
1983	10400.0	0.2727	0.2727
1986	10400.0	0.2857	0.2857
1940	10200.0	0.2987	0.2987
1970	10200.0	0.3117	0.3117
1922	9900.0	0.3247	0.3247
1942	9710.0	0.3377	0.3377
1987	9540.0	0.3506	0.3506
1976	9470.0	0.3636	0.3636
1978	9350.0	0.3766	0.3766
1969	9340.0	0.3896	0.3896
1951	9280.0	0.4026	0.4026
1971	8900.0	0.4156	0.4156
1958	8890.0	0.4286	0.4286
1973	8840.0	0.4416	0.4416
1920	8810.0	0.4545	0.4545
1924	8810.0	0.4675	0.4675
2000	8710.0	0.4805	0.4805
1948	8460.0	0.4935	0.4935
1960	8460.0	0.5065	0.5065
1997	8360.0	0.5195	0.5195
1966	8350.0	0.5325	0.5325
1939	8200.0	0.5455	0.5455
1921	8150.0	0.5584	0.5584
1991	7920.0	0.5714	0.5714
1946	7840.0	0.5844	0.5844
1954	7650.0	0.5974	0.5974
1949	7380.0	0.6104	0.6104
1941	7160.0	0.6234	0.6234

1961	7100.0	0.6364	0.6364
1947	7050.0	0.6494	0.6494
1984	7040.0	0.6623	0.6623
1963	6730.0	0.6753	0.6753
1918	6510.0	0.6883	0.6883
1955	6200.0	0.7013	0.7013
1916	6050.0	0.7143	0.7143
1962	6040.0	0.7273	0.7273
1981	5770.0	0.7403	0.7403
1919	5610.0	0.7532	0.7532
1959	5610.0	0.7662	0.7662
1974	5520.0	0.7792	0.7792
1994	4790.0	0.7922	0.7922
1985	4780.0	0.8052	0.8052
1996	4650.0	0.8182	0.8182
1975	4110.0	0.8312	0.8312
1998	4070.0	0.8442	0.8442
1999	4030.0	0.8571	0.8571
1957	4000.0	0.8701	0.8701
1917	3770.0	0.8831	0.8831
1915	3420.0	0.8961	0.8961
1944	3370.0	0.9091	0.9091
1995	2790.0	0.9221	0.9221
1925	2710.0	0.9351	0.9351
1923	2510.0	0.9481	0.9481
1937	1650.0	0.9610	0.9610
1988	1600.0	0.9740	0.9740
1977	1400.0	0.9870	0.9870



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 2002 MAR 13 09:03:06