

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

Station - 05397600 BIG SANDY CREEK NEAR WAUSAU, WI  
 2002 MAR 13 09:03:04

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	42
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	42
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.244
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	20.0
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. \*\*\*\*\*

WCF133I-SYSTEMATIC PEAKS BELOW GAGE BASE WERE NOTED.	1	20.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		2272.6
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		116.8

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	20.0	0.9762	2.7042	0.2427	0.458
BULL.17B ESTIMATE	20.0	0.9762	2.7042	0.2427	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
0.9500	209.3	218.3	203.3	163.0	253.0
0.9000	250.9	255.6	246.3	201.4	297.8
0.8000	314.6	313.7	311.6	261.3	366.8
0.5000	495.9	485.0	495.9	428.9	572.4
0.2000	804.3	796.5	813.3	690.4	967.1
0.1000	1048.0	1058.0	1072.0	880.6	1310.0
0.0400	1402.0	1461.0	1462.0	1142.0	1845.0
0.0200	1700.0	1820.0	1807.0	1353.0	2320.0
0.0100	2029.0	2233.0	2203.0	1579.0	2867.0
0.0050	2393.0	2709.0	2661.0	1822.0	3494.0
0.0020	2932.0	3452.0	3382.0	2172.0	4464.0
0.6667	391.7	( 1.50-year flood )			
0.4292	547.3	( 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
1959	2120.0		1980	455.0	
1960	470.0		1981	330.0	
1961	610.0		1982	740.0	
1962	560.0		1983	460.0	
1963	220.0		1984	465.0	
1964	400.0		1985	345.0	
1965	1040.0		1986	310.0	
1966	160.0		1987	520.0	
1967	1000.0		1988	400.0	
1968	1200.0		1989	460.0	
1969	720.0		1990	850.0	
1970	390.0		1991	730.0	
1971	950.0		1992	335.0	
1972	780.0		1993	1300.0	
1973	340.0		1994	375.0	
1974	240.0		1995	1600.0	
1975	310.0		1996	523.0	
1976	470.0		1997	420.0	
1977	20.0	L	1998	241.0	
1978	660.0		1999	390.0	
1979	360.0		2000	540.0	

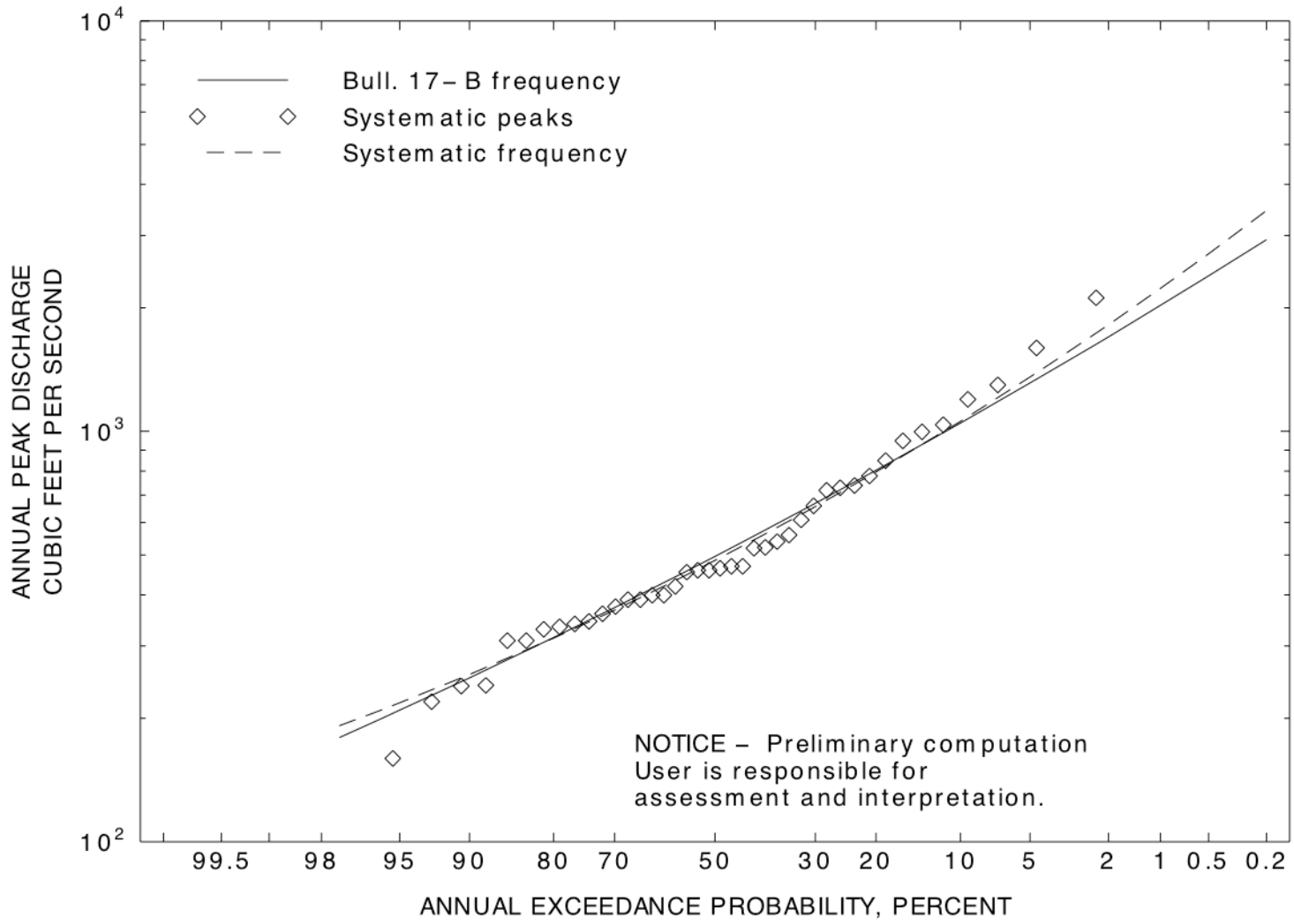
Explanation of peak discharge qualification codes

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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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1959	2120.0	0.0233	0.0233
1995	1600.0	0.0465	0.0465
1993	1300.0	0.0698	0.0698
1968	1200.0	0.0930	0.0930
1965	1040.0	0.1163	0.1163
1967	1000.0	0.1395	0.1395
1971	950.0	0.1628	0.1628
1990	850.0	0.1860	0.1860
1972	780.0	0.2093	0.2093
1982	740.0	0.2326	0.2326
1991	730.0	0.2558	0.2558
1969	720.0	0.2791	0.2791
1978	660.0	0.3023	0.3023
1961	610.0	0.3256	0.3256
1962	560.0	0.3488	0.3488
2000	540.0	0.3721	0.3721
1996	523.0	0.3953	0.3953
1987	520.0	0.4186	0.4186
1960	470.0	0.4419	0.4419
1976	470.0	0.4651	0.4651
1984	465.0	0.4884	0.4884
1983	460.0	0.5116	0.5116
1989	460.0	0.5349	0.5349
1980	455.0	0.5581	0.5581
1997	420.0	0.5814	0.5814
1964	400.0	0.6047	0.6047
1988	400.0	0.6279	0.6279
1970	390.0	0.6512	0.6512
1999	390.0	0.6744	0.6744
1994	375.0	0.6977	0.6977
1979	360.0	0.7209	0.7209
1985	345.0	0.7442	0.7442
1973	340.0	0.7674	0.7674
1992	335.0	0.7907	0.7907
1981	330.0	0.8140	0.8140
1975	310.0	0.8372	0.8372
1986	310.0	0.8605	0.8605
1998	241.0	0.8837	0.8837
1974	240.0	0.9070	0.9070
1963	220.0	0.9302	0.9302
1966	160.0	0.9535	0.9535
1977	20.0	--	--



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