

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

Station - 05435900 SUGAR RIVER TRIBUTARY NEAR PINE BLUFF, 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	=	33
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	33
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.399
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	30.0
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.	2	30.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		25.1
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		1047.4

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	30.0	0.9394	2.1819	0.3274	0.128
BULL.17B ESTIMATE	30.0	0.9394	2.1819	0.3274	-0.056

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
0.9000	57.6	58.5	55.5	40.7	74.8
0.8000	80.8	80.3	79.3	60.6	101.8
0.5000	153.1	149.6	153.1	122.8	190.9
0.2000	287.3	285.2	292.4	227.9	383.0
0.1000	397.6	403.4	411.6	306.7	561.2
0.0400	560.7	587.8	596.7	415.8	848.5
0.0200	698.9	752.6	762.5	503.7	1110.0
0.0100	851.3	942.5	955.2	597.1	1413.0
0.0050	1019.0	1160.0	1180.0	696.5	1763.0
0.0020	1265.0	1497.0	1534.0	837.7	2303.0
0.6667	110.5	(1.50-year flood)			
0.4292	175.1	(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
1961	420.0		1978	130.0	
1962	55.0		1979	68.0	
1963	62.0		1980	235.0	
1964	48.0		1981	100.0	
1965	330.0		1982	300.0	
1966	275.0		1983	75.0	
1967	460.0		1984	450.0	
1968	77.0		1985	140.0	
1969	110.0		1986	95.0	
1970	95.0		1987	30.0	L
1971	110.0		1988	30.0	L
1972	165.0		1989	350.0	
1973	165.0		1990	150.0	
1974	280.0		1991	160.0	
1975	210.0		1992	65.0	
1976	255.0		1993	800.0	
1977	250.0				

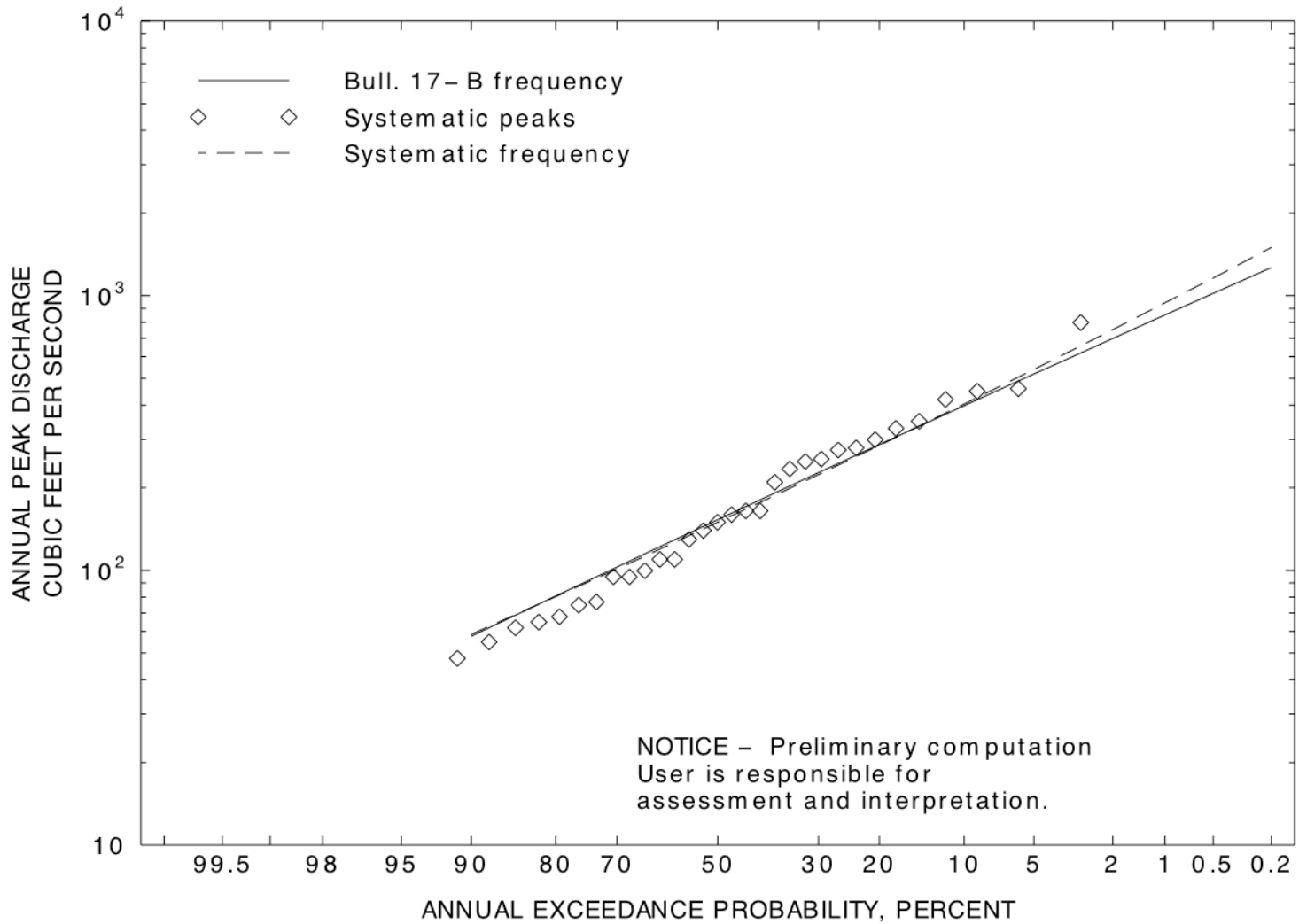
Explanation of peak discharge qualification codes

PEAKFQ CODE	WATSTORE 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
1993	800.0	0.0294	0.0294
1967	460.0	0.0588	0.0588
1984	450.0	0.0882	0.0882
1961	420.0	0.1176	0.1176
1989	350.0	0.1471	0.1471
1965	330.0	0.1765	0.1765
1982	300.0	0.2059	0.2059
1974	280.0	0.2353	0.2353
1966	275.0	0.2647	0.2647
1976	255.0	0.2941	0.2941
1977	250.0	0.3235	0.3235
1980	235.0	0.3529	0.3529
1975	210.0	0.3824	0.3824
1972	165.0	0.4118	0.4118
1973	165.0	0.4412	0.4412
1991	160.0	0.4706	0.4706
1990	150.0	0.5000	0.5000
1985	140.0	0.5294	0.5294
1978	130.0	0.5588	0.5588
1969	110.0	0.5882	0.5882
1971	110.0	0.6176	0.6176
1981	100.0	0.6471	0.6471
1970	95.0	0.6765	0.6765
1986	95.0	0.7059	0.7059
1968	77.0	0.7353	0.7353
1983	75.0	0.7647	0.7647
1979	68.0	0.7941	0.7941
1992	65.0	0.8235	0.8235
1963	62.0	0.8529	0.8529
1962	55.0	0.8824	0.8824
1964	48.0	0.9118	0.9118
1987	30.0	--	--
1988	30.0	--	--



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