

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

Station - 04086400 MILWAUKEE RIVER TRIBUTARY NR FREDONIA, WI
 2002 MAR 13 09:02:40

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

Number of peaks in record	=	19
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	19
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.379
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	10.0
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	10.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		10.3
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		327.3

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	10.0	0.8947	1.7065	0.3649	-0.797
BULL.17B ESTIMATE	10.0	0.8947	1.7065	0.3649	-0.576

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
0.8000	25.9	26.4	24.9	16.7	36.1
0.5000	55.1	56.8	55.1	39.9	77.2
0.2000	104.5	104.4	107.5	74.8	164.2
0.1000	139.9	135.5	147.2	97.3	237.2
0.0400	185.2	171.9	201.5	124.1	340.9
0.0200	218.4	196.4	243.9	142.8	423.3
0.0100	250.6	218.6	287.4	160.3	507.8
0.0050	282.0	238.6	332.0	176.9	593.8
0.0020	321.9	262.2	391.6	197.5	708.4
0.6667	38.0	(1.50-year flood)			
0.4292	64.0	(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
1962	45.0		1972	70.0	
1963	10.0	L	1973	90.0	
1964	15.0		1974	95.0	
1965	210.0		1975	70.0	
1966	70.0		1976	36.0	
1967	20.0		1977	39.0	
1968	13.0		1978	100.0	
1969	95.0		1979	108.0	
1970	10.0	L	1980	70.0	
1971	88.0				

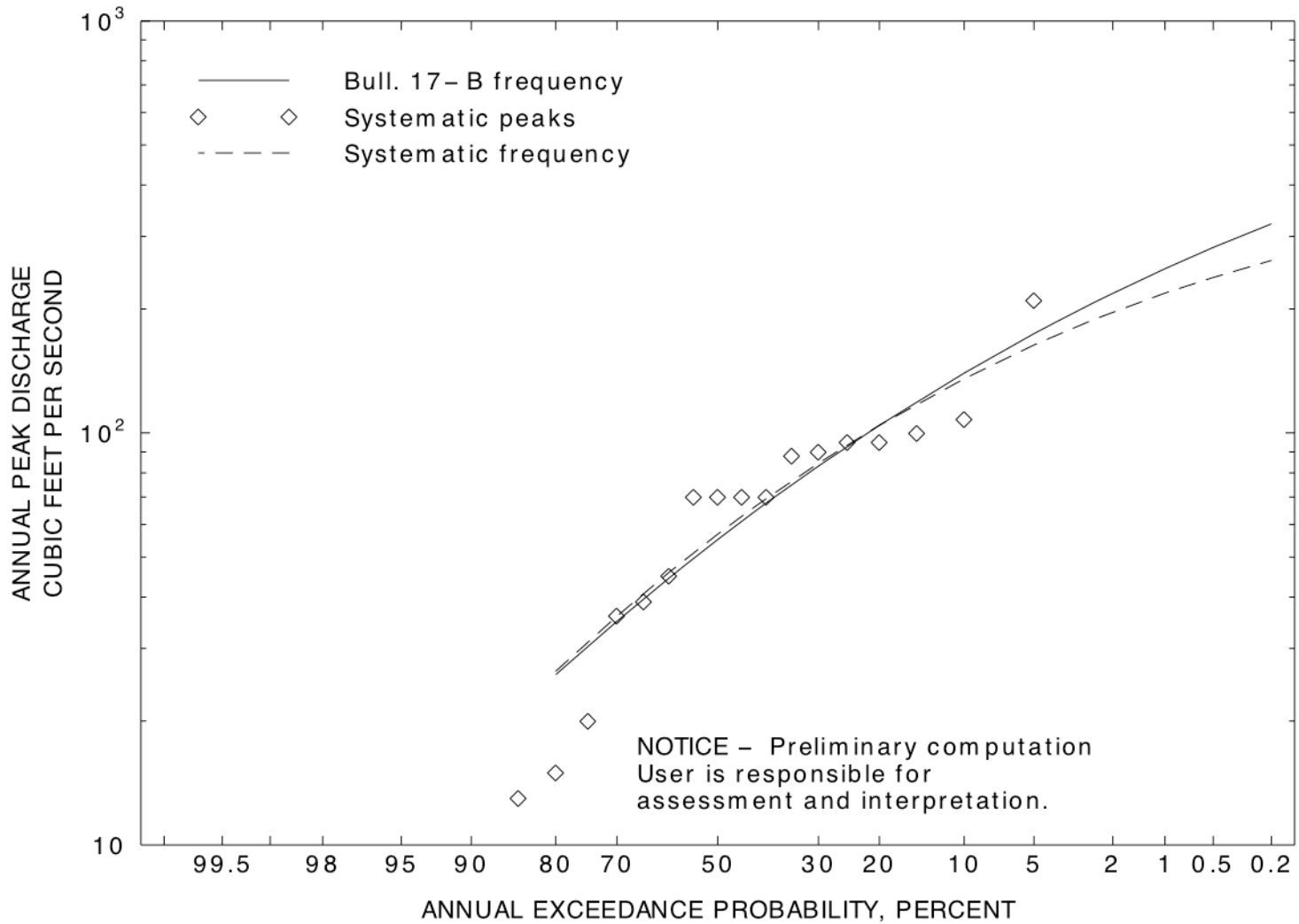
Explanation of peak discharge qualification codes

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
1965	210.0	0.0500	0.0500
1979	108.0	0.1000	0.1000
1978	100.0	0.1500	0.1500
1969	95.0	0.2000	0.2000
1974	95.0	0.2500	0.2500
1973	90.0	0.3000	0.3000
1971	88.0	0.3500	0.3500
1966	70.0	0.4000	0.4000
1972	70.0	0.4500	0.4500
1975	70.0	0.5000	0.5000
1980	70.0	0.5500	0.5500
1962	45.0	0.6000	0.6000
1977	39.0	0.6500	0.6500
1976	36.0	0.7000	0.7000
1967	20.0	0.7500	0.7500
1964	15.0	0.8000	0.8000
1968	13.0	0.8500	0.8500
1963	10.0	--	--
1970	10.0	--	--



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