

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

Station - 05425827 DUP-MAUNESHA RIVER NEAR SUN PRAIRIE, WI
2002 MAR 13 09:03:18

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

Number of peaks in record	=	17
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	17
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.392
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
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1	114.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		1307.6

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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	2.6233	0.2452	-0.667
BULL.17B ESTIMATE	114.0	0.9412	2.6422	0.2093	-0.258

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	--	69.2	--	--	--
0.9900	--	86.4	--	--	--
0.9500	--	151.0	--	--	--
0.9000	233.8	198.0	222.2	166.2	292.9
0.8000	294.6	268.4	287.3	223.9	360.1
0.5000	447.9	447.1	447.9	367.0	548.7
0.2000	661.3	681.6	675.3	540.6	872.8
0.1000	801.5	822.2	834.1	642.1	1119.0
0.0400	975.7	980.9	1047.0	759.9	1452.0
0.0200	1103.0	1086.0	1215.0	841.8	1713.0
0.0100	1227.0	1181.0	1393.0	919.7	1981.0
0.0050	1351.0	1267.0	1584.0	994.5	2257.0
0.0020	1512.0	1370.0	1856.0	1090.0	2635.0
0.6667	362.8	(1.50-year flood)			
0.4292	488.2	(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
1973	475.0		1982	410.0	
1974	1150.0		1983	240.0	
1975	980.0		1984	440.0	
1976	485.0		1985	490.0	
1977	165.0		1986	425.0	
1978	360.0		1987	110.0	
1979	515.0		1988	620.0	
1980	525.0		1989	460.0	
1981	335.0				

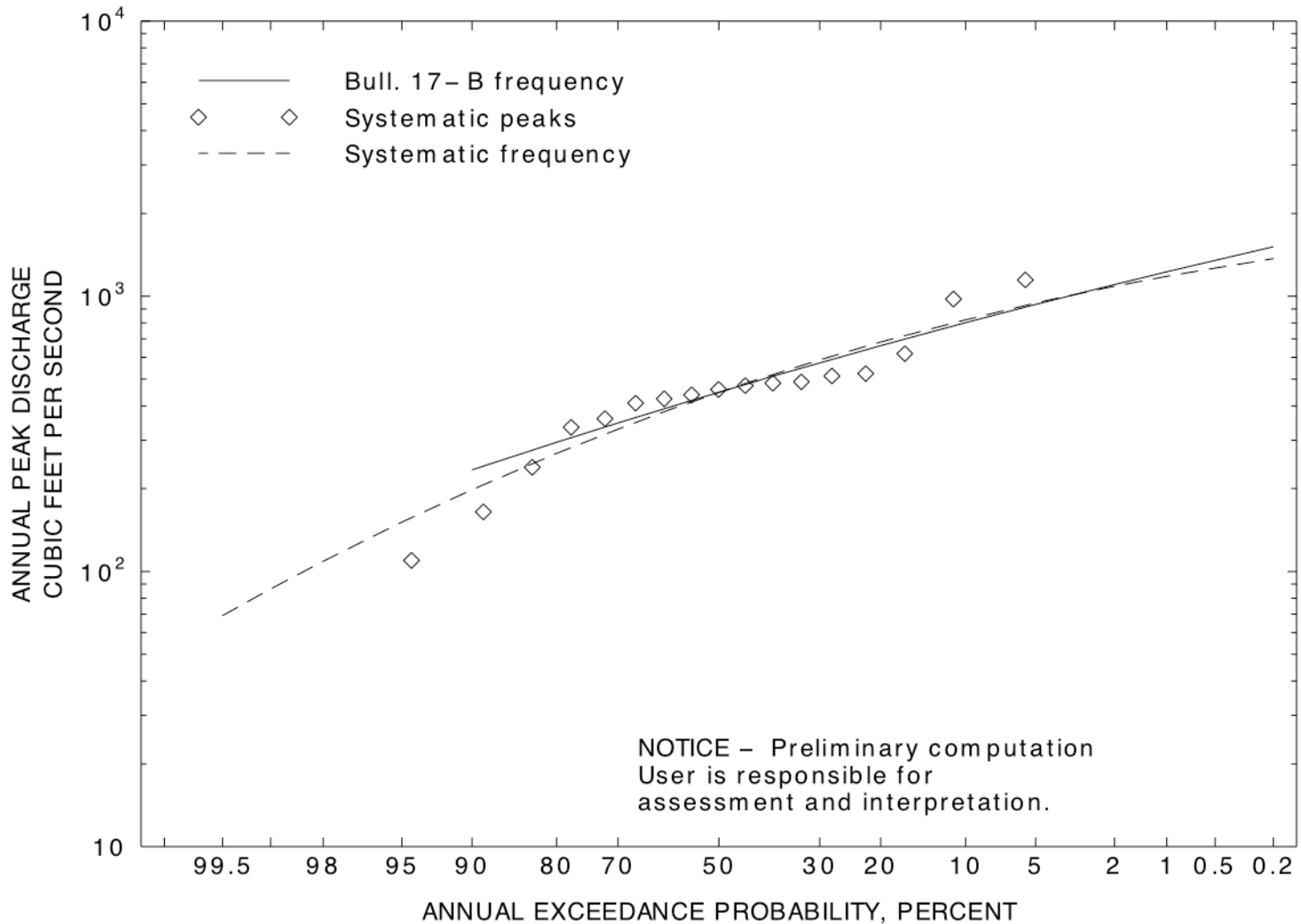
Explanation of peak discharge qualification codes

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
1974	1150.0	0.0556	0.0556
1975	980.0	0.1111	0.1111
1988	620.0	0.1667	0.1667
1980	525.0	0.2222	0.2222
1979	515.0	0.2778	0.2778
1985	490.0	0.3333	0.3333
1976	485.0	0.3889	0.3889
1973	475.0	0.4444	0.4444
1989	460.0	0.5000	0.5000
1984	440.0	0.5556	0.5556
1986	425.0	0.6111	0.6111
1982	410.0	0.6667	0.6667
1978	360.0	0.7222	0.7222
1981	335.0	0.7778	0.7778
1983	240.0	0.8333	0.8333
1977	165.0	0.8889	0.8889
1987	110.0	0.9444	0.9444



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