

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

Station - 05424300 ROCK RIVER TRIBUTARY NEAR WATERTOWN, 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	=	22
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	22
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.393
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	15.0
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	15.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		22.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		553.3

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	15.0	0.9091	1.9972	0.3297	-1.084
BULL.17B ESTIMATE	15.0	0.9091	1.9972	0.3297	-0.699

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	36.1	35.9	33.6	22.8	49.7
0.8000	54.5	56.3	52.7	38.0	72.0
0.5000	108.5	113.7	108.5	82.8	143.9
0.2000	190.4	189.2	194.4	143.6	276.2
0.1000	244.0	230.9	253.0	179.7	375.0
0.0400	307.7	272.9	326.2	220.2	502.2
0.0200	351.4	297.4	378.4	246.9	594.9
0.0100	391.7	317.2	428.9	271.0	684.0
0.0050	429.0	333.3	476.5	292.7	769.0
0.0020	473.9	349.9	535.6	318.4	875.0
0.6667	77.4	( 1.50-year flood )			
0.4292	124.1	( 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
1959	150.0		1970	30.0	
1960	230.0		1971	175.0	
1961	95.0		1972	120.0	
1962	140.0		1973	140.0	
1963	25.0		1974	175.0	
1964	15.0		1975	260.0	
1965	40.0		1976	185.0	
1966	95.0		1977	15.0	L
1967	45.0		1978	150.0	
1968	120.0		1979	85.0	
1969	140.0		1980	225.0	

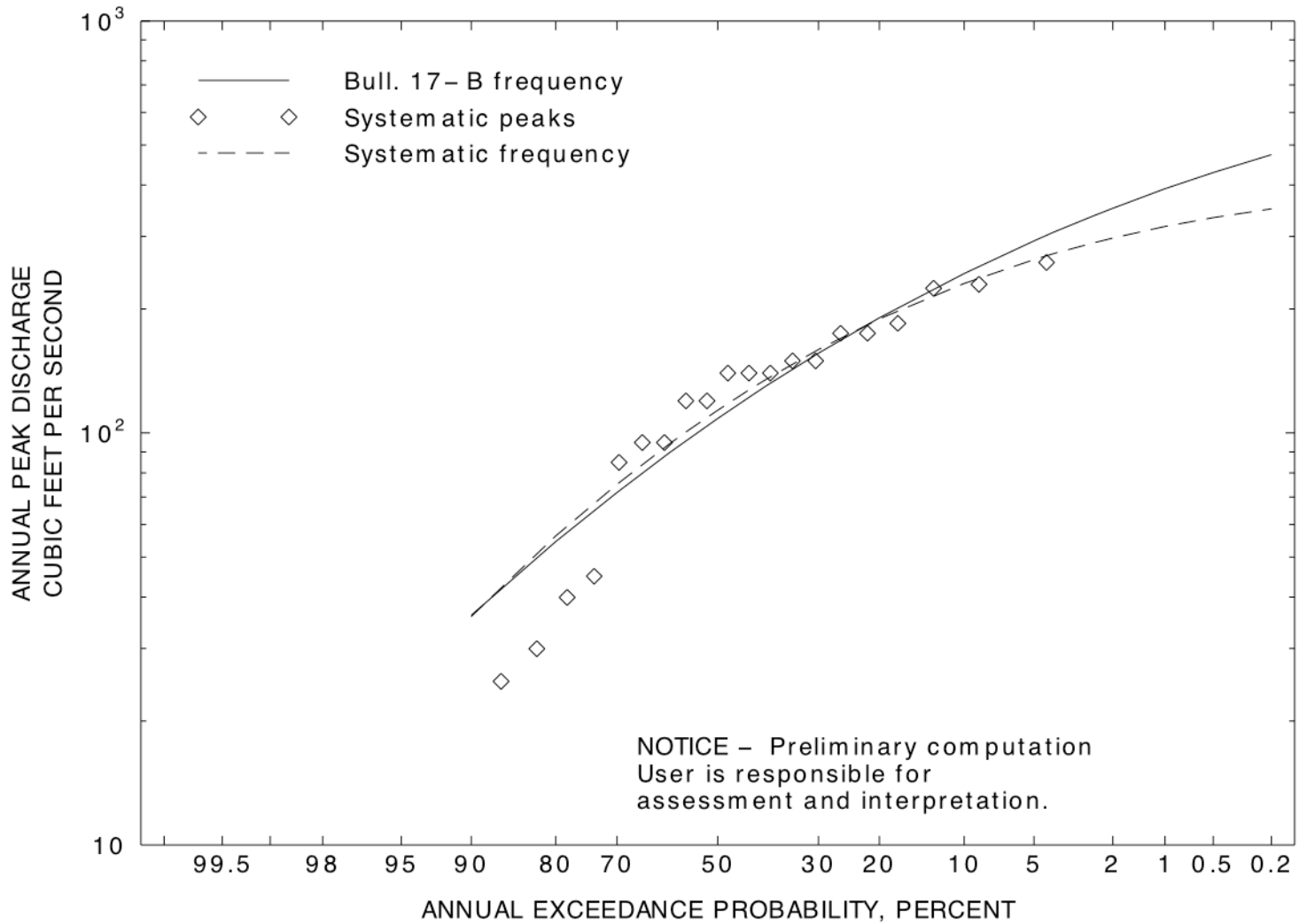
Explanation of peak discharge qualification codes

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
1975	260.0	0.0435	0.0435
1960	230.0	0.0870	0.0870
1980	225.0	0.1304	0.1304
1976	185.0	0.1739	0.1739
1971	175.0	0.2174	0.2174
1974	175.0	0.2609	0.2609
1959	150.0	0.3043	0.3043
1978	150.0	0.3478	0.3478
1962	140.0	0.3913	0.3913
1969	140.0	0.4348	0.4348
1973	140.0	0.4783	0.4783
1968	120.0	0.5217	0.5217
1972	120.0	0.5652	0.5652
1961	95.0	0.6087	0.6087
1966	95.0	0.6522	0.6522
1979	85.0	0.6957	0.6957
1967	45.0	0.7391	0.7391
1965	40.0	0.7826	0.7826
1970	30.0	0.8261	0.8261
1963	25.0	0.8696	0.8696
1964	15.0	--	--
1977	15.0	--	--



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