

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

Station - 05423300 SOUTH BRANCH ROCK RIVER TRIB NR WAUPUN, WI  
 2002 MAR 13 09:03:16

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	=	-0.372
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.	1	10.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		13.1
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		1953.1

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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	0.9545	2.1731	0.4704	-0.633
BULL.17B ESTIMATE	10.0	0.9545	2.1731	0.4704	-0.506

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	21.8	21.1	18.5	9.9	36.6
0.9000	35.5	35.3	32.2	18.5	55.9
0.8000	62.1	62.9	59.3	36.9	92.5
0.5000	163.2	166.9	163.2	110.8	243.4
0.2000	376.7	377.0	389.1	251.9	640.4
0.1000	555.6	543.5	589.1	357.7	1034.0
0.0400	811.5	769.0	895.7	498.1	1670.0
0.0200	1017.0	941.0	1159.0	604.5	2230.0
0.0100	1231.0	1112.0	1452.0	710.9	2853.0
0.0050	1452.0	1281.0	1771.0	817.0	3534.0
0.0020	1753.0	1500.0	2234.0	956.1	4511.0
0.6667	101.1	( 1.50-year flood )			
0.4292	198.0	( 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
1959	575.0		1970	10.0	L
1960	285.0		1971	375.0	
1961	400.0		1972	200.0	
1962	530.0		1973	400.0	
1963	40.0		1974	230.0	
1964	25.0		1975	485.0	
1965	25.0		1976	210.0	
1966	405.0		1977	70.0	
1967	90.0		1978	240.0	
1968	35.0		1979	210.0	
1969	118.0		1980	60.0	

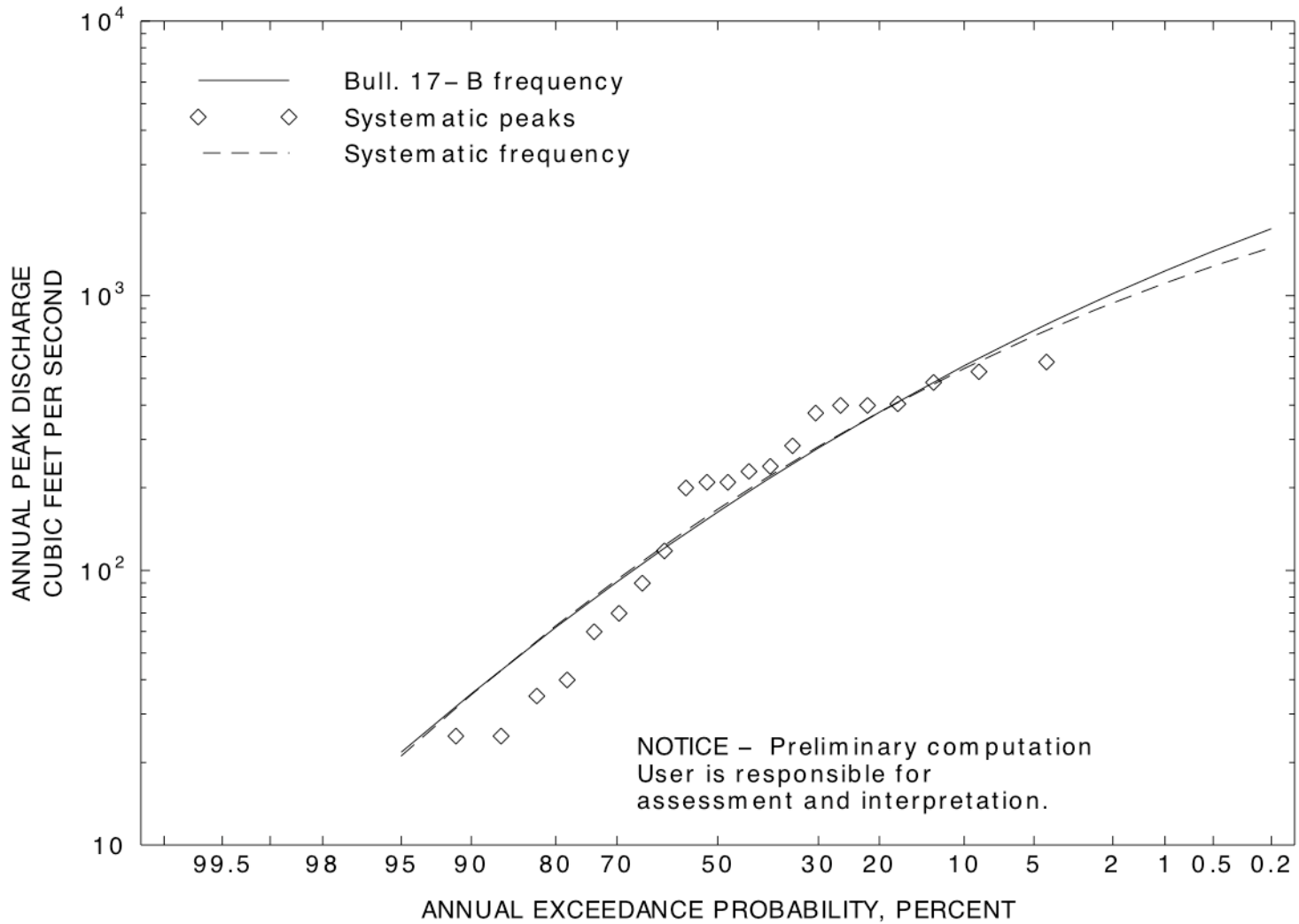
Explanation of peak discharge qualification codes

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
1959	575.0	0.0435	0.0435
1962	530.0	0.0870	0.0870
1975	485.0	0.1304	0.1304
1966	405.0	0.1739	0.1739
1961	400.0	0.2174	0.2174
1973	400.0	0.2609	0.2609
1971	375.0	0.3043	0.3043
1960	285.0	0.3478	0.3478
1978	240.0	0.3913	0.3913
1974	230.0	0.4348	0.4348
1976	210.0	0.4783	0.4783
1979	210.0	0.5217	0.5217
1972	200.0	0.5652	0.5652
1969	118.0	0.6087	0.6087
1967	90.0	0.6522	0.6522
1977	70.0	0.6957	0.6957
1980	60.0	0.7391	0.7391
1963	40.0	0.7826	0.7826
1968	35.0	0.8261	0.8261
1964	25.0	0.8696	0.8696
1965	25.0	0.9130	0.9130
1970	10.0	--	--



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