

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

Station - 05427200 ALLEN CREEK NEAR FORT ATKINSON, WI  
 2002 MAR 13 09:03:20

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	36
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	36
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.400
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	25.0
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	25.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		25.6
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		428.8

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	25.0	0.9444	2.0017	0.2428	0.029
BULL.17B ESTIMATE	25.0	0.9444	2.0017	0.2428	-0.108

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	48.7	49.1	47.5	38.2	58.7
0.8000	62.9	62.7	62.1	51.4	74.2
0.5000	101.4	100.1	101.4	86.8	118.6
0.2000	161.2	160.6	163.1	136.7	197.4
0.1000	204.2	205.9	208.9	169.7	260.0
0.0400	261.6	268.7	272.5	211.6	349.3
0.0200	306.3	319.3	324.2	243.0	422.5
0.0100	352.5	373.1	379.8	274.5	500.9
0.0050	400.4	430.3	439.9	306.4	584.9
0.0020	466.4	511.9	527.5	349.3	704.7
0.6667	79.6	( 1.50-year flood )			
0.4292	112.1	( 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
1958	175.0		1976	88.0	
1959	100.0		1977	45.0	
1960	380.0		1978	80.0	
1961	100.0		1979	135.0	
1962	80.0		1980	110.0	
1963	200.0		1981	125.0	
1964	55.0		1982	165.0	
1965	65.0		1983	172.0	
1966	90.0		1984	40.0	
1967	89.0		1985	112.0	
1968	62.0		1986	15.0	
1969	168.0		1987	35.0	
1970	55.0		1988	255.0	
1971	140.0		1989	125.0	
1972	80.0		1990	72.0	
1973	205.0		1991	122.0	
1974	112.0		1992	25.0	L
1975	192.0		1993	80.0	

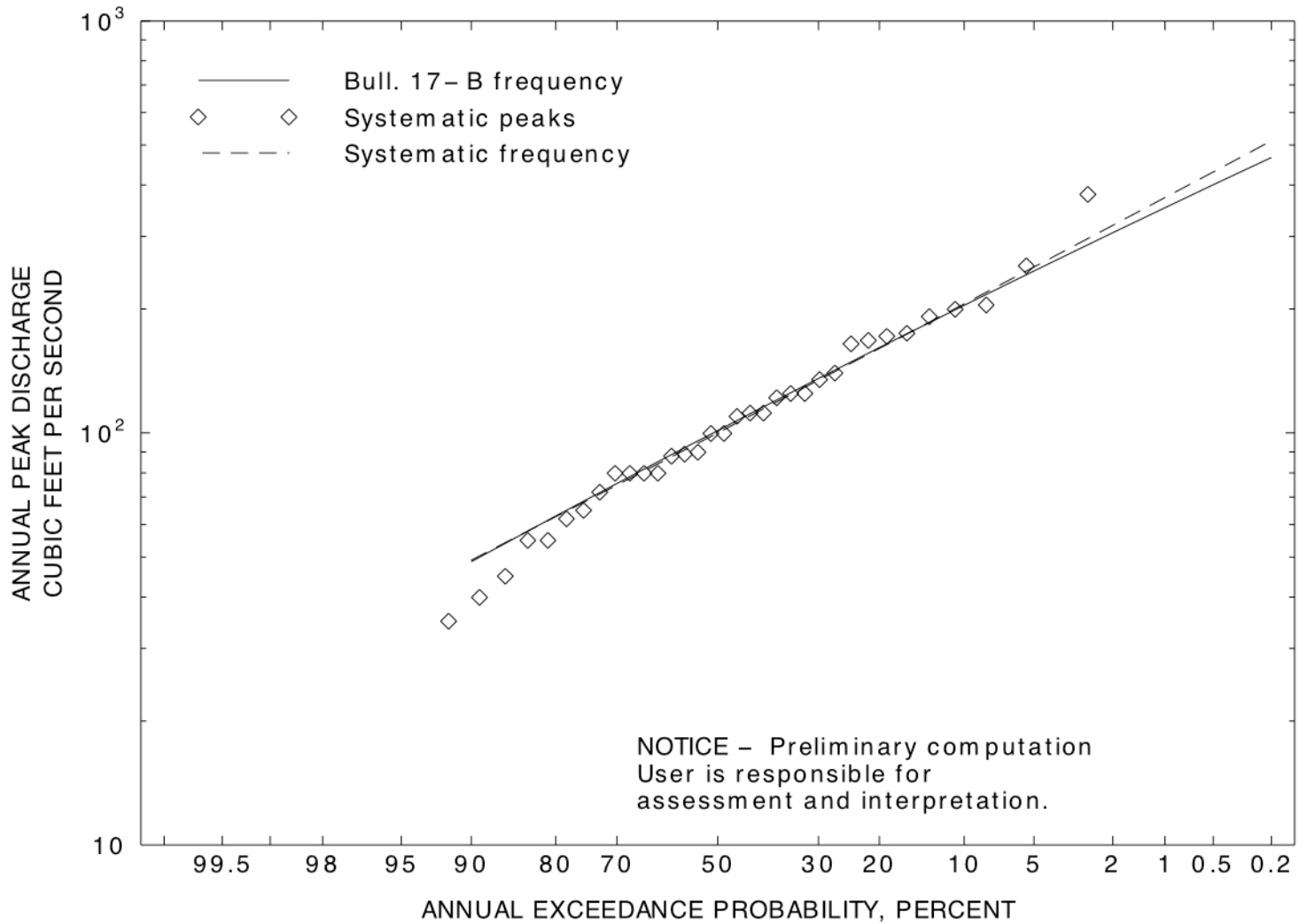
Explanation of peak discharge qualification codes

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
1960	380.0	0.0270	0.0270
1988	255.0	0.0541	0.0541
1973	205.0	0.0811	0.0811
1963	200.0	0.1081	0.1081
1975	192.0	0.1351	0.1351
1958	175.0	0.1622	0.1622
1983	172.0	0.1892	0.1892
1969	168.0	0.2162	0.2162
1982	165.0	0.2432	0.2432
1971	140.0	0.2703	0.2703
1979	135.0	0.2973	0.2973
1981	125.0	0.3243	0.3243
1989	125.0	0.3514	0.3514
1991	122.0	0.3784	0.3784
1974	112.0	0.4054	0.4054
1985	112.0	0.4324	0.4324
1980	110.0	0.4595	0.4595
1959	100.0	0.4865	0.4865
1961	100.0	0.5135	0.5135
1966	90.0	0.5405	0.5405
1967	89.0	0.5676	0.5676
1976	88.0	0.5946	0.5946
1962	80.0	0.6216	0.6216
1972	80.0	0.6486	0.6486
1978	80.0	0.6757	0.6757
1993	80.0	0.7027	0.7027
1990	72.0	0.7297	0.7297
1965	65.0	0.7568	0.7568
1968	62.0	0.7838	0.7838
1964	55.0	0.8108	0.8108
1970	55.0	0.8378	0.8378
1977	45.0	0.8649	0.8649
1984	40.0	0.8919	0.8919
1987	35.0	0.9189	0.9189
1992	25.0	--	--
1986	15.0	--	--



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