

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

Station - 05380800 BLACK RIVER TRIBUTARY NEAR WHITTLESEY, WI  
2002 MAR 13 09:02:57

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	33
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	33
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.254
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
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	32.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	388.5

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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	2.0474	0.2081	-0.221
BULL.17B ESTIMATE	0.0	1.0000	2.0474	0.2081	-0.233

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	29.2	29.4	25.9	20.0	37.9
0.9900	33.7	33.9	30.8	23.9	42.9
0.9500	49.2	49.3	47.2	37.9	59.4
0.9000	59.7	59.7	58.2	47.8	70.5
0.8000	75.0	75.0	74.1	62.5	86.8
0.5000	113.6	113.5	113.6	98.8	130.9
0.2000	167.7	167.7	169.5	144.7	201.4
0.1000	203.4	203.6	207.5	172.7	252.8
0.0400	248.1	248.6	256.9	205.9	320.7
0.0200	280.8	281.7	294.6	229.4	372.9
0.0100	313.1	314.4	333.3	252.1	426.0
0.0050	345.1	347.0	373.1	274.1	480.0
0.0020	387.2	389.9	428.1	302.5	553.2
0.6667	92.2	( 1.50-year flood )			
0.4292	123.8	( 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
1960	98.0		1977	45.0	
1961	94.0		1978	60.0	
1962	85.0		1979	98.0	
1963	67.0		1980	305.0	
1964	170.0		1981	105.0	
1965	182.0		1982	160.0	
1966	170.0		1983	108.0	
1967	220.0		1984	41.0	
1968	160.0		1985	74.0	
1969	107.0		1986	120.0	
1970	65.0		1988	161.0	
1971	170.0		1989	136.0	
1972	175.0		1990	98.0	
1973	175.0		1991	64.0	
1974	85.0		1992	57.0	
1975	105.0		1993	165.0	
1976	170.0				

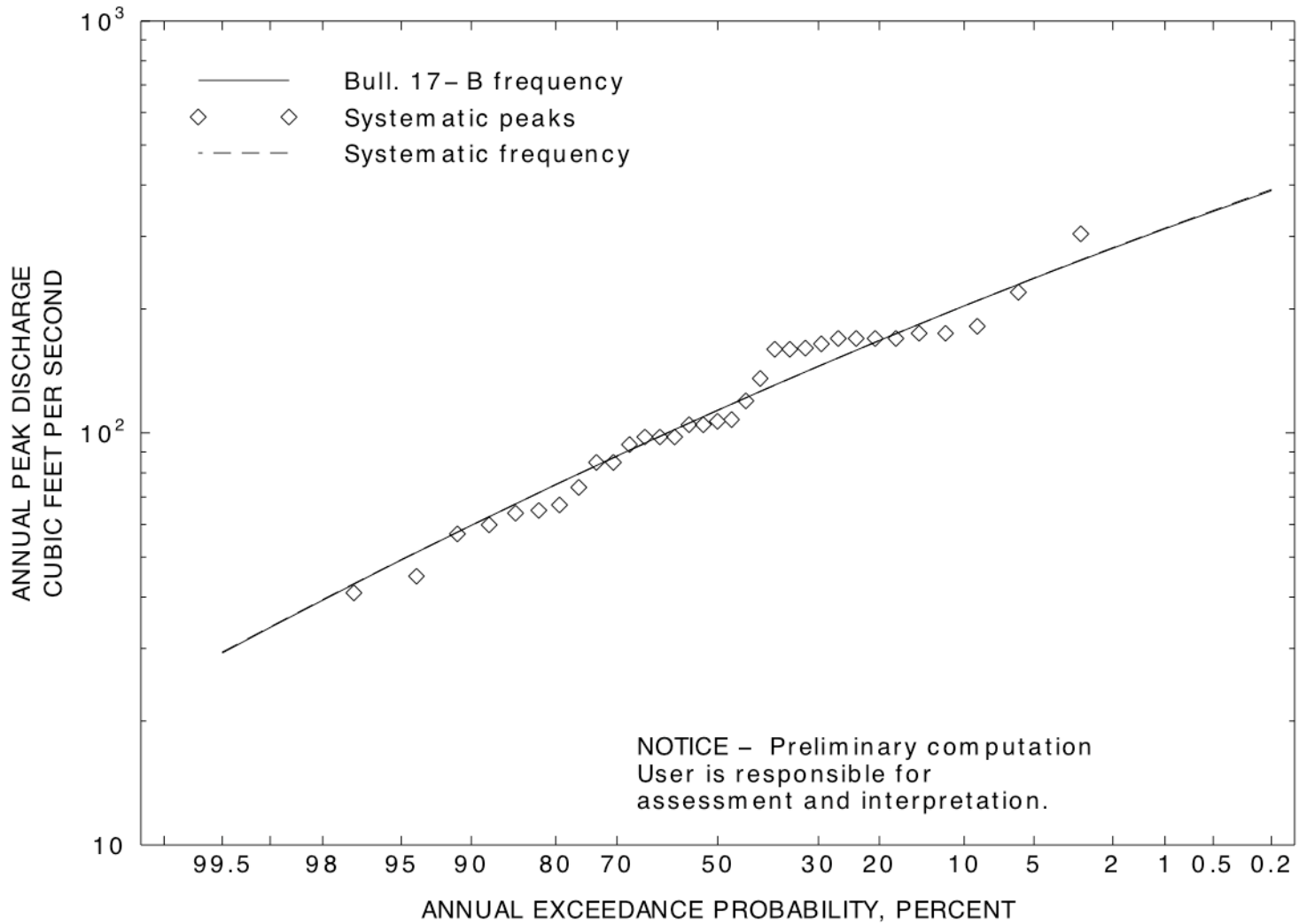
Explanation of peak discharge qualification codes

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
1980	305.0	0.0294	0.0294
1967	220.0	0.0588	0.0588
1965	182.0	0.0882	0.0882
1972	175.0	0.1176	0.1176
1973	175.0	0.1471	0.1471
1964	170.0	0.1765	0.1765
1966	170.0	0.2059	0.2059
1971	170.0	0.2353	0.2353
1976	170.0	0.2647	0.2647
1993	165.0	0.2941	0.2941
1988	161.0	0.3235	0.3235
1968	160.0	0.3529	0.3529
1982	160.0	0.3824	0.3824
1989	136.0	0.4118	0.4118
1986	120.0	0.4412	0.4412
1983	108.0	0.4706	0.4706
1969	107.0	0.5000	0.5000
1975	105.0	0.5294	0.5294
1981	105.0	0.5588	0.5588
1960	98.0	0.5882	0.5882
1979	98.0	0.6176	0.6176
1990	98.0	0.6471	0.6471
1961	94.0	0.6765	0.6765
1962	85.0	0.7059	0.7059
1974	85.0	0.7353	0.7353
1985	74.0	0.7647	0.7647
1963	67.0	0.7941	0.7941
1970	65.0	0.8235	0.8235
1991	64.0	0.8529	0.8529
1978	60.0	0.8824	0.8824
1992	57.0	0.9118	0.9118
1977	45.0	0.9412	0.9412
1984	41.0	0.9706	0.9706



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