

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

Station - 05545200 WHITE RIVER TRIBUTARY NEAR BURLINGTON, WI  
2002 MAR 13 09:03:28

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	43
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	43
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	=	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.	18.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	491.7

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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	1.9736	0.2650	0.076
BULL.17B ESTIMATE	0.0	1.0000	1.9736	0.2650	-0.062

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	18.9	20.4	17.1	12.8	25.0
0.9900	22.1	23.6	20.5	15.5	28.8
0.9500	34.1	35.0	32.9	25.9	42.1
0.9000	42.9	43.3	41.9	33.8	51.7
0.8000	56.4	56.2	55.8	46.2	66.6
0.5000	94.7	93.4	94.7	81.1	110.7
0.2000	157.5	156.9	159.3	133.5	192.4
0.1000	204.8	206.7	209.2	170.0	259.9
0.0400	270.3	278.2	280.8	218.0	359.4
0.0200	322.8	337.7	340.4	255.1	443.5
0.0100	378.4	402.6	405.8	293.2	535.7
0.0050	437.2	473.3	477.8	332.6	636.6
0.0020	520.3	576.6	584.6	386.9	784.2
0.6667	72.7	( 1.50-year flood )			
0.4292	105.6	( 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	40.0		1980	87.0	
1959	100.0		1981	95.0	
1960	235.0		1982	205.0	
1961	80.0		1983	170.0	
1962	57.0		1984	85.0	
1963	50.0		1985	85.0	
1964	50.0		1986	185.0	
1965	70.0		1987	80.0	
1966	225.0		1988	80.0	
1967	215.0		1989	97.0	
1968	58.0		1990	101.0	
1969	167.0		1991	58.0	
1970	35.0		1992	35.0	
1971	100.0		1993	120.0	
1972	155.0		1994	130.0	
1973	290.0		1995	40.0	
1974	75.0		1996	182.0	
1975	105.0		1997	72.0	
1976	65.0		1998	24.0	
1977	70.0		1999	354.0	
1978	110.0		2000	150.0	
1979	66.0				

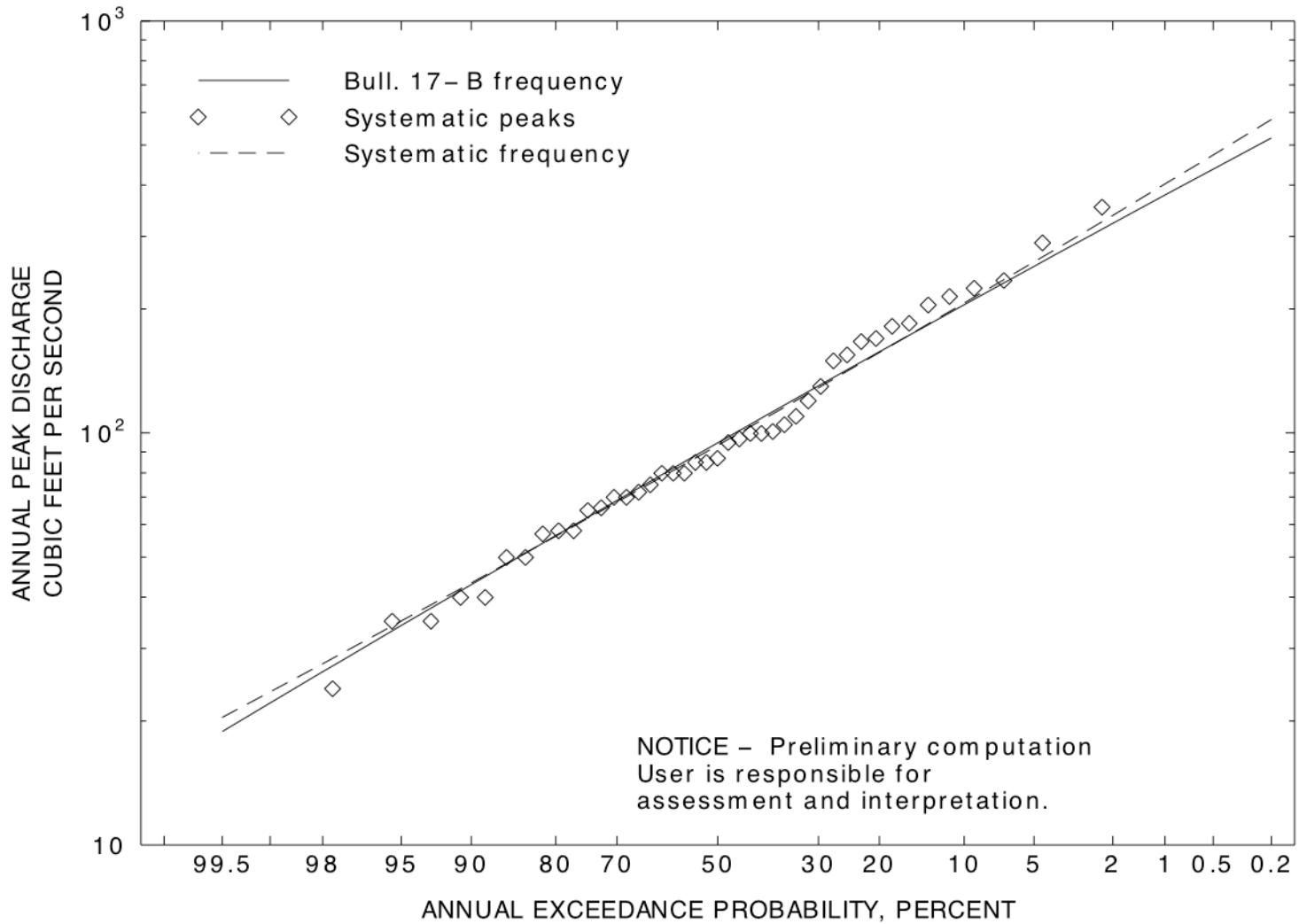
Explanation of peak discharge qualification codes

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
1999	354.0	0.0227	0.0227
1973	290.0	0.0455	0.0455
1960	235.0	0.0682	0.0682
1966	225.0	0.0909	0.0909
1967	215.0	0.1136	0.1136
1982	205.0	0.1364	0.1364
1986	185.0	0.1591	0.1591
1996	182.0	0.1818	0.1818
1983	170.0	0.2045	0.2045
1969	167.0	0.2273	0.2273
1972	155.0	0.2500	0.2500
2000	150.0	0.2727	0.2727
1994	130.0	0.2955	0.2955
1993	120.0	0.3182	0.3182
1978	110.0	0.3409	0.3409
1975	105.0	0.3636	0.3636
1990	101.0	0.3864	0.3864
1959	100.0	0.4091	0.4091
1971	100.0	0.4318	0.4318
1989	97.0	0.4545	0.4545
1981	95.0	0.4773	0.4773
1980	87.0	0.5000	0.5000
1984	85.0	0.5227	0.5227
1985	85.0	0.5455	0.5455
1961	80.0	0.5682	0.5682
1987	80.0	0.5909	0.5909
1988	80.0	0.6136	0.6136
1974	75.0	0.6364	0.6364
1997	72.0	0.6591	0.6591
1965	70.0	0.6818	0.6818
1977	70.0	0.7045	0.7045
1979	66.0	0.7273	0.7273
1976	65.0	0.7500	0.7500
1968	58.0	0.7727	0.7727
1991	58.0	0.7955	0.7955
1962	57.0	0.8182	0.8182
1963	50.0	0.8409	0.8409
1964	50.0	0.8636	0.8636
1958	40.0	0.8864	0.8864
1995	40.0	0.9091	0.9091
1970	35.0	0.9318	0.9318
1992	35.0	0.9545	0.9545
1998	24.0	0.9773	0.9773



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