

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

Station - 05395100 TRAPPE RIVER TRIBUTARY NEAR MERRILL, WI  
 2002 MAR 13 09:03:04

I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	42
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	42
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.233
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	20.0
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	20.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		21.5
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		820.5

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	20.0	0.9762	2.1133	0.2982	-0.158
BULL.17B ESTIMATE	20.0	0.9762	2.1133	0.2982	-0.181

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	40.5	40.7	38.8	29.4	51.6
0.9000	53.2	53.3	51.7	40.4	65.8
0.8000	73.3	73.3	72.3	58.5	88.5
0.5000	132.5	132.2	132.5	111.1	158.3
0.2000	232.6	232.4	235.4	192.6	292.2
0.1000	308.5	309.1	315.7	249.8	404.2
0.0400	413.4	415.7	430.5	324.8	569.4
0.0200	497.2	501.4	525.7	382.4	708.4
0.0100	585.1	591.9	629.3	441.1	860.0
0.0050	677.4	687.4	742.0	501.3	1025.0
0.0020	806.3	821.6	907.5	583.2	1263.0
0.6667	98.3	( 1.50-year flood )			
0.4292	149.8	( 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
1959	385.0		1980	185.0	
1960	305.0		1981	155.0	
1961	120.0		1982	95.0	
1962	190.0		1983	102.0	
1963	70.0		1984	92.0	
1964	80.0		1985	90.0	
1965	380.0		1986	355.0	
1966	100.0		1987	330.0	
1967	150.0		1988	67.0	
1968	360.0		1989	140.0	
1969	186.0		1990	390.0	
1970	325.0		1991	110.0	
1971	139.0		1992	105.0	
1972	109.0		1993	171.0	
1973	102.0		1994	90.0	
1974	25.0		1995	396.0	
1975	42.0		1996	124.0	
1976	91.0		1997	76.0	
1977	20.0	L	1998	95.0	
1978	135.0		1999	143.0	
1979	113.0		2000	30.0	

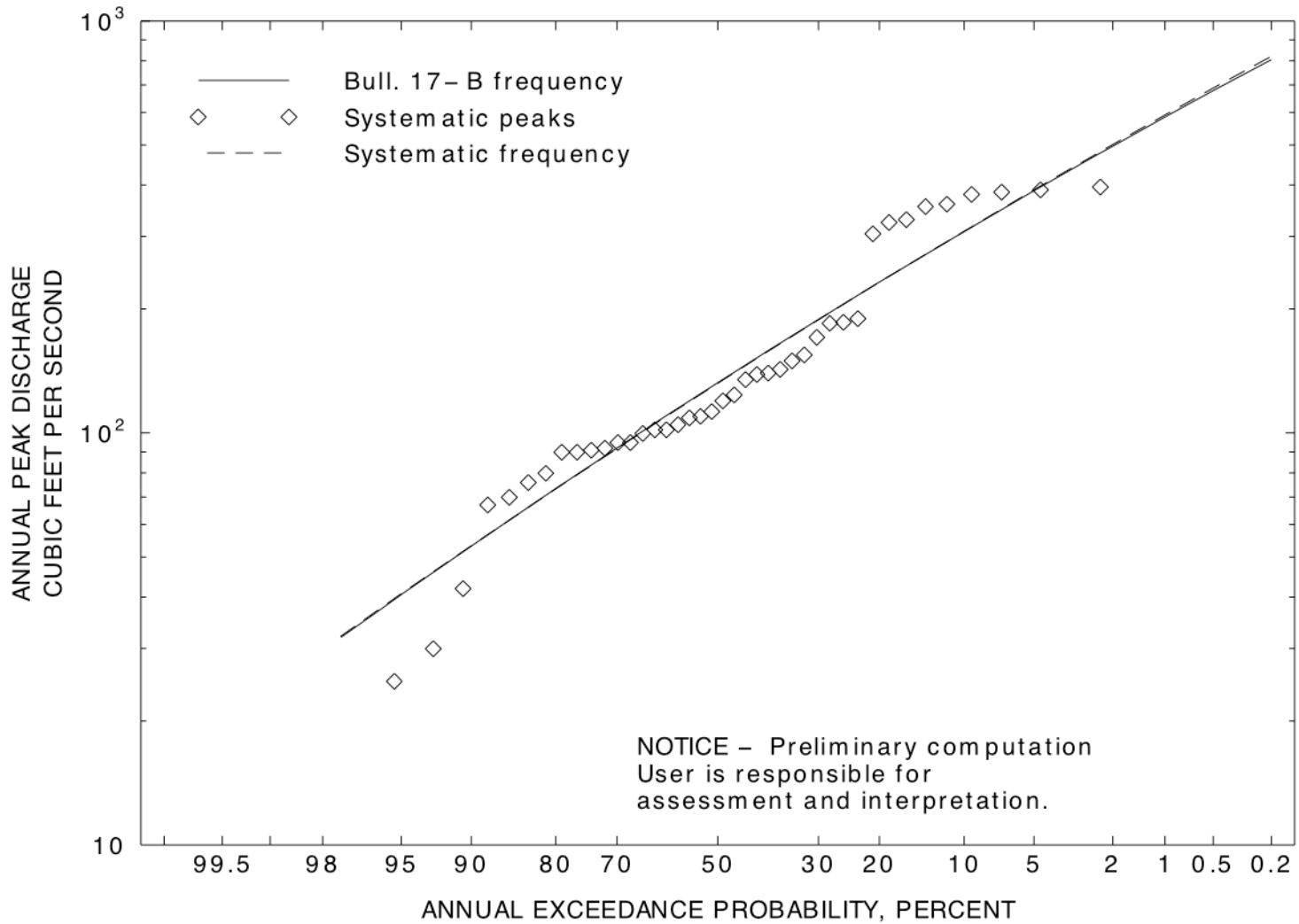
Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
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
1995	396.0	0.0233	0.0233
1990	390.0	0.0465	0.0465
1959	385.0	0.0698	0.0698
1965	380.0	0.0930	0.0930
1968	360.0	0.1163	0.1163
1986	355.0	0.1395	0.1395
1987	330.0	0.1628	0.1628
1970	325.0	0.1860	0.1860
1960	305.0	0.2093	0.2093
1962	190.0	0.2326	0.2326
1969	186.0	0.2558	0.2558
1980	185.0	0.2791	0.2791
1993	171.0	0.3023	0.3023
1981	155.0	0.3256	0.3256
1967	150.0	0.3488	0.3488
1999	143.0	0.3721	0.3721
1989	140.0	0.3953	0.3953
1971	139.0	0.4186	0.4186
1978	135.0	0.4419	0.4419
1996	124.0	0.4651	0.4651
1961	120.0	0.4884	0.4884
1979	113.0	0.5116	0.5116
1991	110.0	0.5349	0.5349
1972	109.0	0.5581	0.5581
1992	105.0	0.5814	0.5814
1973	102.0	0.6047	0.6047
1983	102.0	0.6279	0.6279
1966	100.0	0.6512	0.6512
1982	95.0	0.6744	0.6744
1998	95.0	0.6977	0.6977
1984	92.0	0.7209	0.7209
1976	91.0	0.7442	0.7442
1985	90.0	0.7674	0.7674
1994	90.0	0.7907	0.7907
1964	80.0	0.8140	0.8140
1997	76.0	0.8372	0.8372
1963	70.0	0.8605	0.8605
1988	67.0	0.8837	0.8837
1975	42.0	0.9070	0.9070
2000	30.0	0.9302	0.9302
1974	25.0	0.9535	0.9535
1977	20.0	--	--



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