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

Station - 04063800 WOODS CREEK NEAR FENCE, WI
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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	=	1
Systematic peaks in analysis	=	35
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.121
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. *********

**WCF109W-PEAKS WITH MINUS-FLAGGED DISCHARGES WERE BYPASSED. 1
**WCF113W-NUMBER OF SYSTEMATIC PEAKS HAS BEEN REDUCED TO NSYS = 35
WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE. 0.0
WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION. 1 558.5
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION. 74.4
WCF002J-CALCS COMPLETED. RETURN CODE = 2

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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	2.3092	0.1666	1.656
BULL.17B ESTIMATE	0.0	1.0000	2.3092	0.1666	0.570

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	93.0	129.5	89.5	74.0	109.5
0.9900	98.2	130.4	95.1	79.1	114.8
0.9500	116.0	135.1	113.9	96.6	133.0
0.9000	128.4	139.9	126.8	108.9	145.6
0.8000	146.7	149.2	145.7	127.3	164.6
0.5000	196.5	184.3	196.5	176.0	218.9
0.2000	277.2	263.2	280.1	247.5	318.6
0.1000	339.1	338.9	346.5	297.5	403.0
0.0400	427.4	468.9	445.6	365.0	532.1
0.0200	501.0	596.5	533.0	418.9	645.6
0.0100	581.7	756.8	633.7	476.2	775.2
0.0050	670.6	958.1	751.5	537.6	923.2
0.0020	802.2	1306.0	938.5	626.0	1152.0
0.6667	168.3	(1.50-year flood)			
0.4292	210.0	(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
1958	130.0		1976	185.0	
1959	170.0		1977	180.0	
1960	275.0		1978	130.0	
1961	295.0		1979	260.0	
1962	155.0		1980	280.0	
1963	160.0		1981	215.0	
1964	130.0		1982	190.0	
1965	853.0		1983	195.0	
1966	170.0		1984	160.0	
1967	190.0		1985	180.0	
1968	160.0		1986	310.0	
1969	130.0		1987	150.0	
1970	125.0		1988	200.0	
1971	190.0		1989	-99999.0	
1972	305.0		1990	250.0	
1973	190.0		1991	420.0	
1974	160.0		1992	240.0	
1975	258.0		1993	208.0	

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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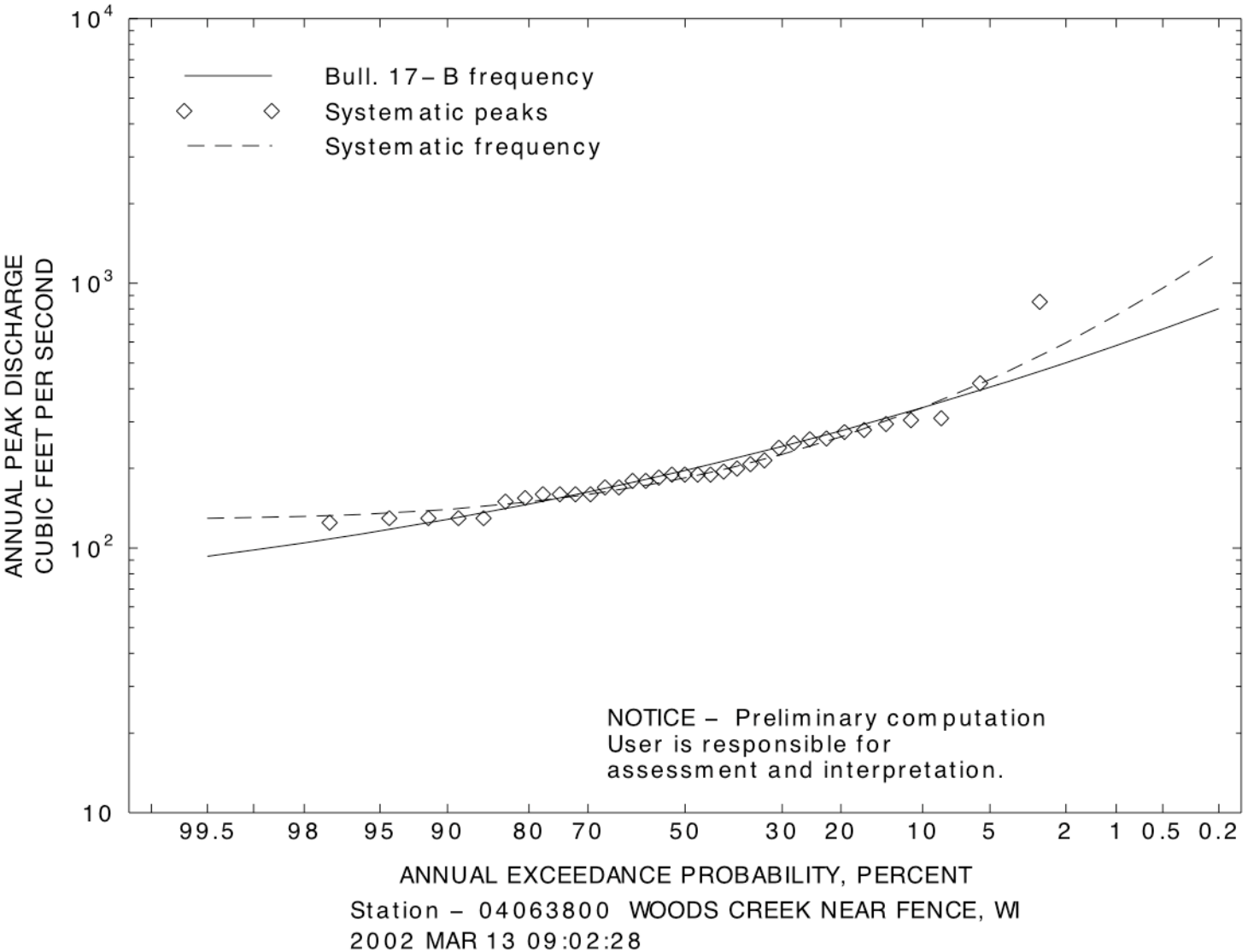
EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1965	853.0	0.0278	0.0278
1991	420.0	0.0556	0.0556
1986	310.0	0.0833	0.0833
1972	305.0	0.1111	0.1111
1961	295.0	0.1389	0.1389
1980	280.0	0.1667	0.1667
1960	275.0	0.1944	0.1944
1979	260.0	0.2222	0.2222
1975	258.0	0.2500	0.2500
1990	250.0	0.2778	0.2778
1992	240.0	0.3056	0.3056
1981	215.0	0.3333	0.3333
1993	208.0	0.3611	0.3611
1988	200.0	0.3889	0.3889
1983	195.0	0.4167	0.4167
1967	190.0	0.4444	0.4444
1971	190.0	0.4722	0.4722
1973	190.0	0.5000	0.5000
1982	190.0	0.5278	0.5278
1976	185.0	0.5556	0.5556
1977	180.0	0.5833	0.5833
1985	180.0	0.6111	0.6111
1959	170.0	0.6389	0.6389
1966	170.0	0.6667	0.6667
1963	160.0	0.6944	0.6944
1968	160.0	0.7222	0.7222
1974	160.0	0.7500	0.7500
1984	160.0	0.7778	0.7778
1962	155.0	0.8056	0.8056
1987	150.0	0.8333	0.8333
1958	130.0	0.8611	0.8611
1964	130.0	0.8889	0.8889
1969	130.0	0.9167	0.9167
1978	130.0	0.9444	0.9444
1970	125.0	0.9722	0.9722
1989	-99999.0	--	--


Bull. 17–B frequency
Systematic peaks
Systematic frequency
NOTICE – Preliminary computation
User is responsible for
assessment and interpretation.
ANNUAL PEAK DISCHARGE
CUBIC FEET PER SECOND
10^4
10^3
10^2
10
99.5 98 95 90 80 70 50 30 20 10 5 2 1 0.5 0.2
ANNUAL EXCEEDANCE PROBABILITY, PERCENT
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