

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

Station - 05406800 ROCKY BRANCH NEAR RICHLAND CENTER, WI
 2002 MAR 13 09:03:11

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	34
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	34
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.396
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	50.0
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.	10	50.0	
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		1122.1	
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		24.4	
**WCF199W-NUMBER OF PEAKS BELOW FLOOD BASE EXCEEDS 17B SPEC.	10	50.0	8
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	50.0	0.7059	2.0271	0.4264	0.178
BULL.17B ESTIMATE	50.0	0.7059	2.0271	0.4264	-0.022

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
0.5000	106.8	103.4	106.8	80.5	141.8
0.2000	243.5	240.9	249.0	180.9	351.7
0.1000	373.7	381.1	390.6	267.6	581.1
0.0400	589.2	629.5	638.4	400.6	1003.0
0.0200	790.1	876.7	884.3	517.4	1432.0
0.0100	1028.0	1187.0	1194.0	649.5	1976.0
0.0050	1308.0	1572.0	1582.0	798.5	2654.0
0.0020	1749.0	2221.0	2249.0	1024.0	3796.0
0.6667	70.0	(1.50-year flood)			
0.4292	127.3	(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	150.0		1977	85.0	
1961	160.0		1978	380.0	
1962	170.0		1979	240.0	
1963	30.0		1980	80.0	
1964	40.0		1981	300.0	
1965	407.0		1982	125.0	
1966	220.0		1983	245.0	
1967	850.0		1984	40.0	
1968	70.0		1985	70.0	
1969	227.0		1986	40.0	
1970	50.0		1987	50.0	
1971	60.0		1988	50.0	L
1972	870.0		1989	50.0	
1973	70.0		1990	50.0	
1974	105.0		1991	40.0	L
1975	255.0		1992	110.0	
1976	55.0		1993	150.0	

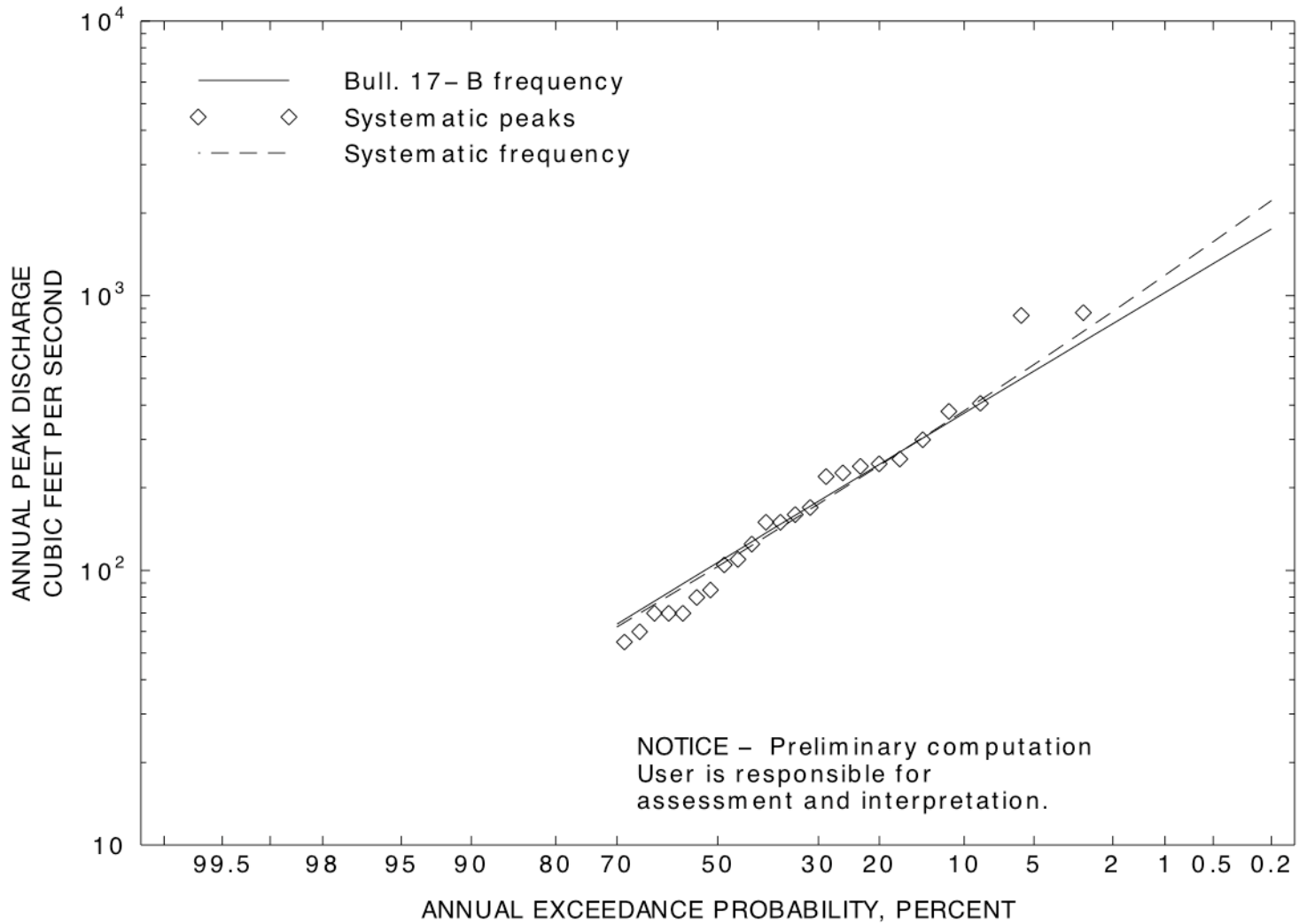
Explanation of peak discharge qualification codes

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
1972	870.0	0.0286	0.0286
1967	850.0	0.0571	0.0571
1965	407.0	0.0857	0.0857
1978	380.0	0.1143	0.1143
1981	300.0	0.1429	0.1429
1975	255.0	0.1714	0.1714
1983	245.0	0.2000	0.2000
1979	240.0	0.2286	0.2286
1969	227.0	0.2571	0.2571
1966	220.0	0.2857	0.2857
1962	170.0	0.3143	0.3143
1961	160.0	0.3429	0.3429
1960	150.0	0.3714	0.3714
1993	150.0	0.4000	0.4000
1982	125.0	0.4286	0.4286
1992	110.0	0.4571	0.4571
1974	105.0	0.4857	0.4857
1977	85.0	0.5143	0.5143
1980	80.0	0.5429	0.5429
1968	70.0	0.5714	0.5714
1973	70.0	0.6000	0.6000
1985	70.0	0.6286	0.6286
1971	60.0	0.6571	0.6571
1976	55.0	0.6857	0.6857
1970	50.0	--	--
1987	50.0	--	--
1988	50.0	--	--
1989	50.0	--	--
1990	50.0	--	--
1964	40.0	--	--
1984	40.0	--	--
1986	40.0	--	--
1991	40.0	--	--
1963	30.0	--	--



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