

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

Station - 05432300 ROCK BRANCH NEAR MINERAL POINT, WI
 2002 MAR 13 09:03:23

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	=	-0.400
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	100.0
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.	6	100.0
WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION.	1	2648.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		44.0

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	100.0	0.8571	2.4636	0.3602	0.857
BULL.17B ESTIMATE	100.0	0.8571	2.4636	0.3602	0.363

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
0.8000	143.2	143.1	141.3	108.6	179.8
0.5000	276.6	258.6	276.6	222.8	342.1
0.2000	573.7	552.5	583.7	457.6	753.4
0.1000	864.9	882.2	896.5	667.5	1207.0
0.0400	1371.0	1538.0	1467.0	1007.0	2075.0
0.0200	1869.0	2273.0	2062.0	1322.0	3000.0
0.0100	2491.0	3302.0	2849.0	1698.0	4233.0
0.0050	3264.0	4734.0	3892.0	2145.0	5857.0
0.0020	4570.0	7502.0	5800.0	2868.0	8791.0
0.6667	196.0	(1.50-year flood)			
0.4292	319.8	(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	730.0		1980	160.0	
1960	1160.0		1981	670.0	
1961	330.0		1982	160.0	
1962	520.0		1983	161.0	
1963	350.0		1984	375.0	
1964	135.0		1985	185.0	
1965	380.0		1986	100.0	L
1966	315.0		1987	100.0	L
1967	1180.0		1988	100.0	L
1968	210.0		1989	225.0	
1969	400.0		1990	1250.0	
1970	130.0		1991	151.0	
1971	150.0		1992	210.0	
1972	570.0		1993	3100.0	
1973	260.0		1994	1570.0	
1974	210.0		1995	55.0	
1975	250.0		1996	175.0	
1976	290.0		1997	275.0	
1977	450.0		1998	90.0	
1978	410.0		1999	400.0	
1979	145.0		2000	78.0	

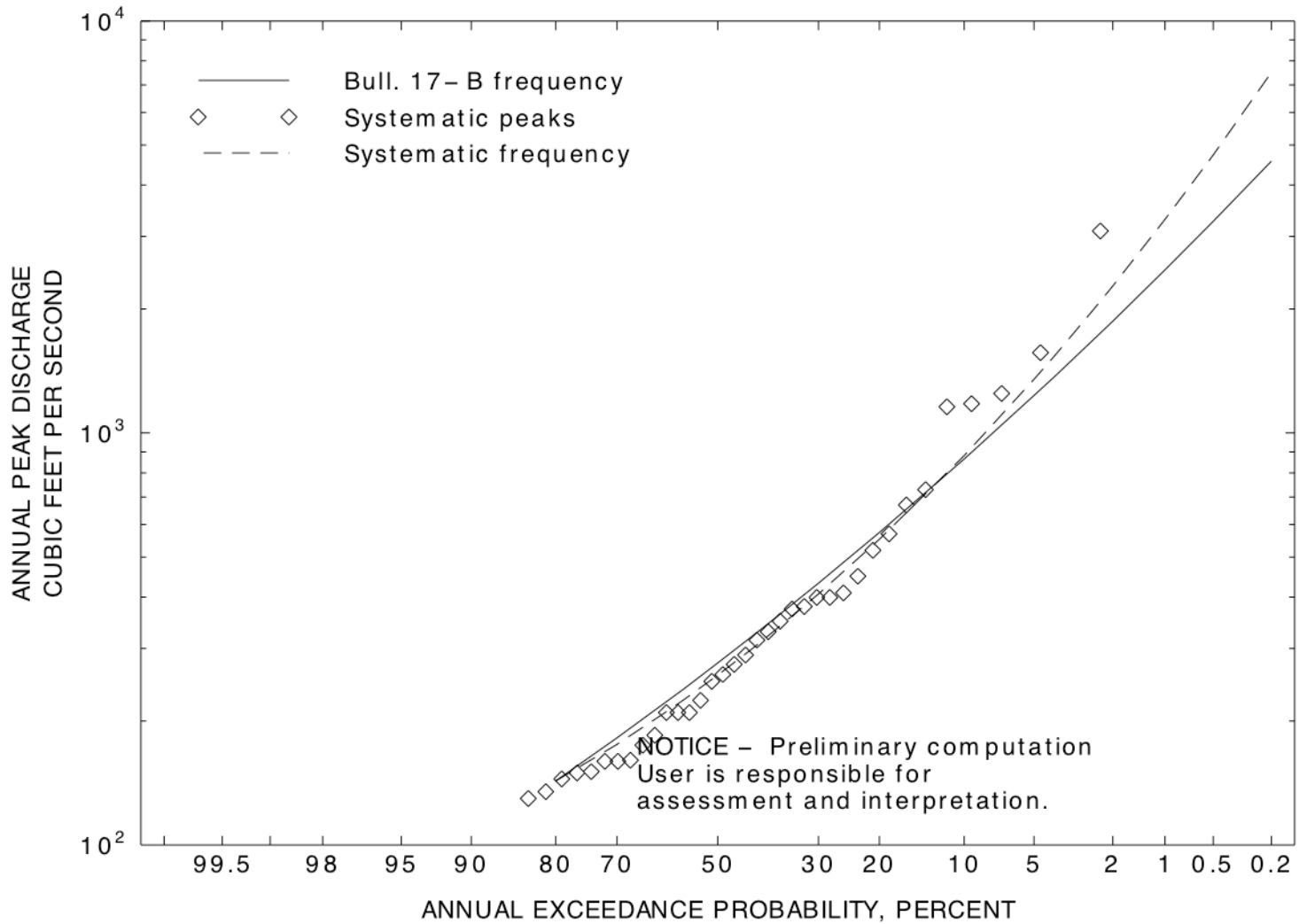
Explanation of peak discharge qualification codes

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
1993	3100.0	0.0233	0.0233
1994	1570.0	0.0465	0.0465
1990	1250.0	0.0698	0.0698
1967	1180.0	0.0930	0.0930
1960	1160.0	0.1163	0.1163
1959	730.0	0.1395	0.1395
1981	670.0	0.1628	0.1628
1972	570.0	0.1860	0.1860
1962	520.0	0.2093	0.2093
1977	450.0	0.2326	0.2326
1978	410.0	0.2558	0.2558
1969	400.0	0.2791	0.2791
1999	400.0	0.3023	0.3023
1965	380.0	0.3256	0.3256
1984	375.0	0.3488	0.3488
1963	350.0	0.3721	0.3721
1961	330.0	0.3953	0.3953
1966	315.0	0.4186	0.4186
1976	290.0	0.4419	0.4419
1997	275.0	0.4651	0.4651
1973	260.0	0.4884	0.4884
1975	250.0	0.5116	0.5116
1989	225.0	0.5349	0.5349
1968	210.0	0.5581	0.5581
1974	210.0	0.5814	0.5814
1992	210.0	0.6047	0.6047
1985	185.0	0.6279	0.6279
1996	175.0	0.6512	0.6512
1983	161.0	0.6744	0.6744
1980	160.0	0.6977	0.6977
1982	160.0	0.7209	0.7209
1991	151.0	0.7442	0.7442
1971	150.0	0.7674	0.7674
1979	145.0	0.7907	0.7907
1964	135.0	0.8140	0.8140
1970	130.0	0.8372	0.8372
1986	100.0	--	--
1987	100.0	--	--
1988	100.0	--	--
1998	90.0	--	--
2000	78.0	--	--
1995	55.0	--	--



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