

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

Station - 05423800 EAST BRANCH ROCK RIVER TRIB NR SLINGER, WI
 2002 MAR 13 09:03:16

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	=	-0.382
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	40.0
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	40.0
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1	56.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		419.5

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	40.0	0.9706	2.2020	0.1808	-0.538
BULL.17B ESTIMATE	56.2	0.9412	2.2123	0.1595	-0.085

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	--	75.8	--	--	--
0.9000	101.5	91.7	99.7	86.0	115.1
0.8000	119.9	113.9	118.8	104.5	134.0
0.5000	163.9	165.2	163.9	147.5	182.2
0.2000	222.4	227.4	224.3	199.0	255.3
0.1000	260.2	263.5	264.4	229.7	306.8
0.0400	306.8	303.9	315.8	265.9	373.8
0.0200	340.9	330.7	354.9	291.4	424.7
0.0100	374.5	355.1	394.9	316.1	476.3
0.0050	407.8	377.4	436.2	340.1	528.8
0.0020	451.8	404.5	493.5	371.3	599.9
0.6667	139.8	(1.50-year flood)			
0.4292	175.0	(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
1960	190.0		1977	125.0	
1961	85.0		1978	133.0	
1962	130.0		1979	130.0	
1963	150.0		1980	320.0	
1964	190.0		1981	90.0	
1965	215.0		1982	160.0	
1966	160.0		1983	250.0	
1967	120.0		1984	190.0	
1968	50.0		1985	115.0	
1969	167.0		1986	325.0	
1970	40.0	L	1987	210.0	
1971	105.0		1988	150.0	
1972	340.0		1989	200.0	
1973	115.0		1990	186.0	
1974	180.0		1991	210.0	
1975	235.0		1992	215.0	
1976	120.0		1993	205.0	

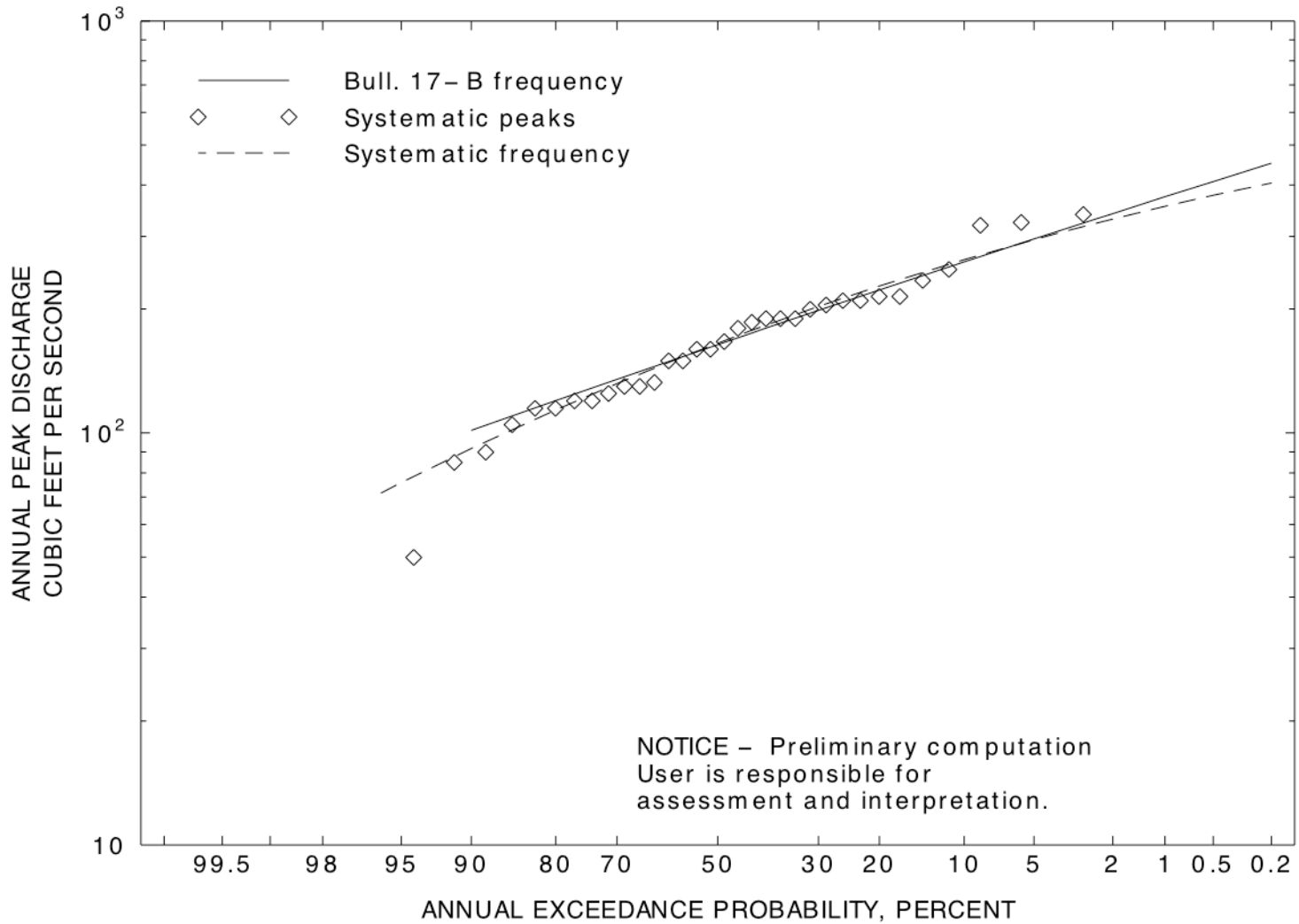
Explanation of peak discharge qualification codes

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	340.0	0.0286	0.0286
1986	325.0	0.0571	0.0571
1980	320.0	0.0857	0.0857
1983	250.0	0.1143	0.1143
1975	235.0	0.1429	0.1429
1965	215.0	0.1714	0.1714
1992	215.0	0.2000	0.2000
1987	210.0	0.2286	0.2286
1991	210.0	0.2571	0.2571
1993	205.0	0.2857	0.2857
1989	200.0	0.3143	0.3143
1960	190.0	0.3429	0.3429
1964	190.0	0.3714	0.3714
1984	190.0	0.4000	0.4000
1990	186.0	0.4286	0.4286
1974	180.0	0.4571	0.4571
1969	167.0	0.4857	0.4857
1966	160.0	0.5143	0.5143
1982	160.0	0.5429	0.5429
1963	150.0	0.5714	0.5714
1988	150.0	0.6000	0.6000
1978	133.0	0.6286	0.6286
1962	130.0	0.6571	0.6571
1979	130.0	0.6857	0.6857
1977	125.0	0.7143	0.7143
1967	120.0	0.7429	0.7429
1976	120.0	0.7714	0.7714
1973	115.0	0.8000	0.8000
1985	115.0	0.8286	0.8286
1971	105.0	0.8571	0.8571
1981	90.0	0.8857	0.8857
1961	85.0	0.9143	0.9143
1968	50.0	0.9429	0.9429
1970	40.0	--	--



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