

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

Station - 05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, 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	=	-0.373
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. *****

WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.		0.0
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1	53.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		2677.3

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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	2.6105	0.3386	-0.798
BULL.17B ESTIMATE	53.0	0.9706	2.6247	0.3108	-0.496

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	--	30.9	--	--	--
0.9900	--	42.8	--	--	--
0.9500	118.4	97.2	110.8	80.0	157.3
0.9000	163.5	143.9	157.0	117.8	209.3
0.8000	236.3	222.0	231.7	181.4	292.9
0.5000	447.0	452.0	447.0	364.5	551.0
0.2000	778.0	795.0	788.6	626.0	1019.0
0.1000	1007.0	1012.0	1032.0	792.7	1378.0
0.0400	1295.0	1262.0	1350.0	992.6	1861.0
0.0200	1506.0	1428.0	1590.0	1133.0	2232.0
0.0100	1711.0	1576.0	1832.0	1267.0	2605.0
0.0050	1911.0	1710.0	2075.0	1394.0	2980.0
0.0020	2167.0	1866.0	2399.0	1554.0	3476.0
0.6667	325.8	(1.50-year flood)			
0.4292	508.0	(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
1949	398.0		1966	1280.0	
1950	818.0		1967	189.0	
1951	584.0		1968	170.0	
1952	1000.0		1969	510.0	
1953	507.0		1988	218.0	
1954	168.0		1989	376.0	
1955	570.0		1990	379.0	
1956	753.0		1991	444.0	
1957	170.0		1992	395.0	
1958	51.0		1993	920.0	
1959	1500.0		1994	453.0	
1960	1150.0		1995	386.0	
1961	369.0		1996	530.0	
1962	990.0		1997	349.0	
1963	253.0		1998	387.0	
1964	57.0		1999	809.0	
1965	371.0		2000	264.0	

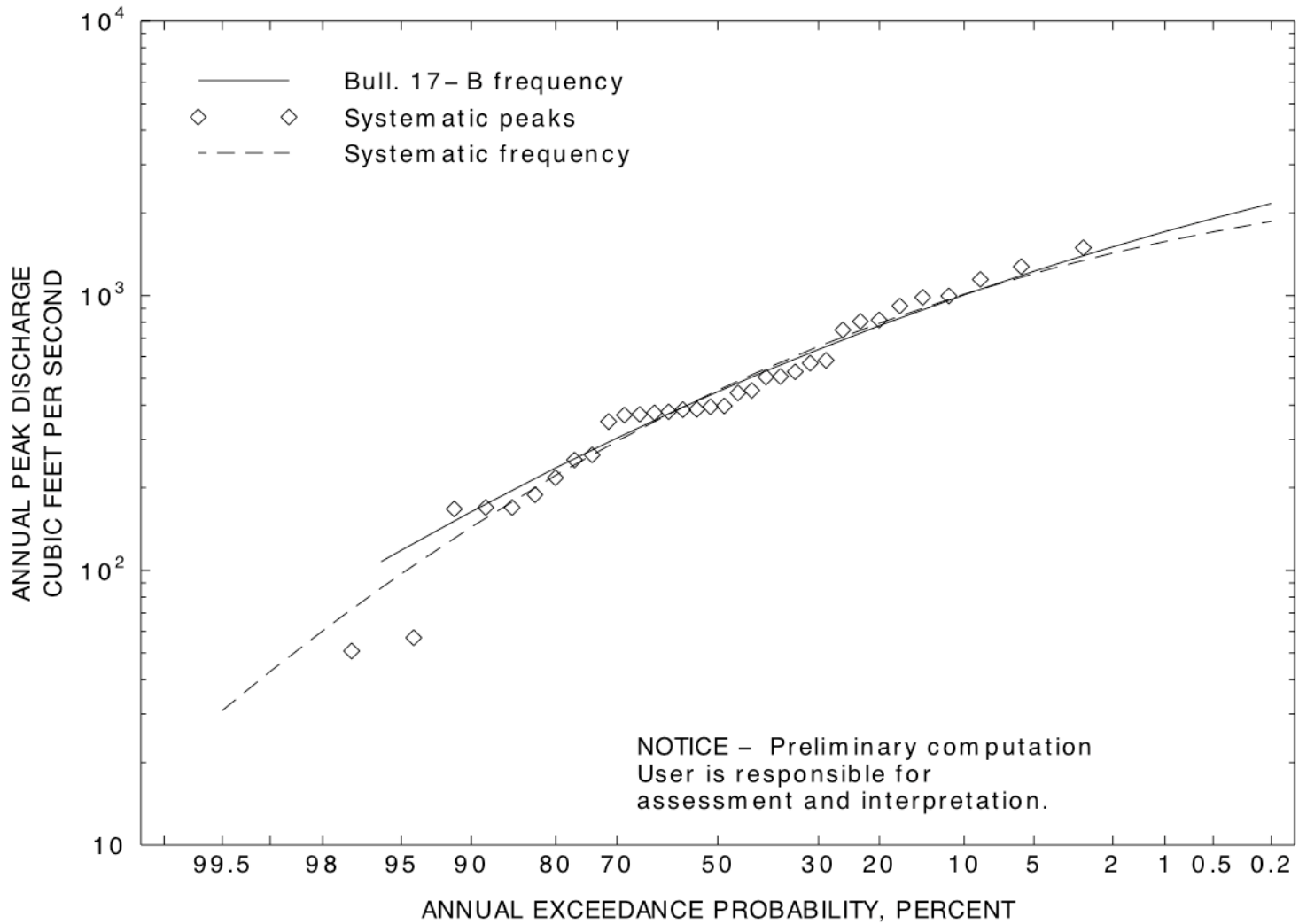
Explanation of peak discharge qualification codes

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
1959	1500.0	0.0286	0.0286
1966	1280.0	0.0571	0.0571
1960	1150.0	0.0857	0.0857
1952	1000.0	0.1143	0.1143
1962	990.0	0.1429	0.1429
1993	920.0	0.1714	0.1714
1950	818.0	0.2000	0.2000
1999	809.0	0.2286	0.2286
1956	753.0	0.2571	0.2571
1951	584.0	0.2857	0.2857
1955	570.0	0.3143	0.3143
1996	530.0	0.3429	0.3429
1969	510.0	0.3714	0.3714
1953	507.0	0.4000	0.4000
1994	453.0	0.4286	0.4286
1991	444.0	0.4571	0.4571
1949	398.0	0.4857	0.4857
1992	395.0	0.5143	0.5143
1998	387.0	0.5429	0.5429
1995	386.0	0.5714	0.5714
1990	379.0	0.6000	0.6000
1989	376.0	0.6286	0.6286
1965	371.0	0.6571	0.6571
1961	369.0	0.6857	0.6857
1997	349.0	0.7143	0.7143
2000	264.0	0.7429	0.7429
1963	253.0	0.7714	0.7714
1988	218.0	0.8000	0.8000
1967	189.0	0.8286	0.8286
1957	170.0	0.8571	0.8571
1968	170.0	0.8857	0.8857
1954	168.0	0.9143	0.9143
1964	57.0	0.9429	0.9429
1958	51.0	0.9714	0.9714



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