

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

Station - 05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI
 2002 MAR 13 09:03:09

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

Number of peaks in record	=	13
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	13
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.391
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
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	110.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	6810.6

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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	2.9377	0.4117	-0.284
BULL.17B ESTIMATE	0.0	1.0000	2.9377	0.4117	-0.345

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	55.5	58.6	26.0	12.6	122.1
0.9900	75.4	78.5	42.8	19.7	155.1
0.9500	167.0	169.4	132.0	62.5	293.7
0.9000	249.6	250.7	217.0	110.4	411.4
0.8000	398.0	396.4	372.1	209.0	622.1
0.5000	914.9	906.2	914.9	581.7	1459.0
0.2000	1947.0	1944.0	2052.0	1242.0	3748.0
0.1000	2804.0	2826.0	3098.0	1718.0	6170.0
0.0400	4050.0	4137.0	4826.0	2344.0	10350.0
0.0200	5075.0	5239.0	6449.0	2822.0	14300.0
0.0100	6169.0	6438.0	8412.0	3305.0	18960.0
0.0050	7329.0	7732.0	10790.0	3795.0	24360.0
0.0020	8961.0	9590.0	14690.0	4452.0	32660.0
0.6667	603.1	(1.50-year flood)			
0.4292	1083.9	(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
1988	117.0		1995	682.0	
1989	563.0		1996	1540.0	
1990	4010.0		1997	349.0	
1991	643.0		1998	1200.0	
1992	3560.0		1999	885.0	
1993	424.0		2000	1480.0	
1994	1050.0				

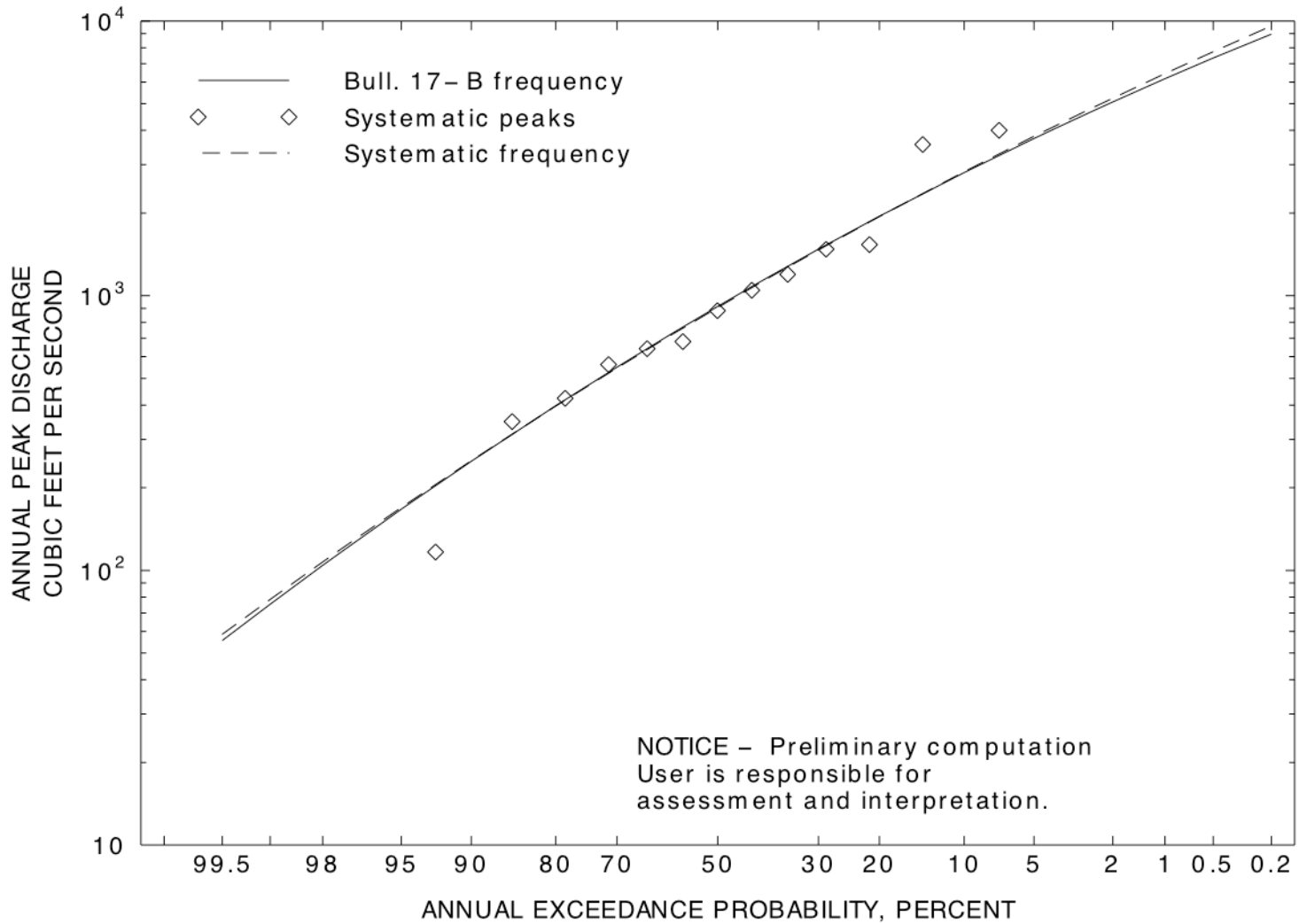
Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	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
1990	4010.0	0.0714	0.0714
1992	3560.0	0.1429	0.1429
1996	1540.0	0.2143	0.2143
2000	1480.0	0.2857	0.2857
1998	1200.0	0.3571	0.3571
1994	1050.0	0.4286	0.4286
1999	885.0	0.5000	0.5000
1995	682.0	0.5714	0.5714
1991	643.0	0.6429	0.6429
1989	563.0	0.7143	0.7143
1993	424.0	0.7857	0.7857
1997	349.0	0.8571	0.8571
1988	117.0	0.9286	0.9286



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