

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

Station - 04062011 BRULE RIVER NEAR COMMONWEALTH, WI
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I N P U T D A T A S U M M A R Y

Number of peaks in record	=	11
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	11
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.106
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
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		9268.7
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		1105.6
**WCF233W-EXPECTED PROB OUT OF RANGE AT TAB PROB.	0.00005	0.00200
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	0.0	1.0000	3.5053	0.2211	0.644
BULL.17B ESTIMATE	0.0	1.0000	3.5053	0.2211	0.180

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	940.1	1170.0	689.6	431.1	1397.0
0.9900	1048.0	1249.0	822.8	509.1	1521.0
0.9500	1423.0	1536.0	1271.0	808.2	1945.0
0.9000	1685.0	1744.0	1570.0	1037.0	2240.0
0.8000	2078.0	2069.0	2003.0	1399.0	2695.0
0.5000	3153.0	3032.0	3153.0	2397.0	4127.0
0.2000	4889.0	4800.0	5095.0	3771.0	7237.0
0.1000	6203.0	6303.0	6749.0	4653.0	10170.0
0.0400	8050.0	8645.0	9463.0	5771.0	14990.0
0.0200	9561.0	10760.0	12140.0	6620.0	19450.0
0.0100	11190.0	13220.0	15590.0	7487.0	24740.0
0.0050	12950.0	16100.0	20150.0	8382.0	30980.0
0.0020	15500.0	20650.0	--	9618.0	40910.0
0.6667	2541.1	(1.50-year flood)			
0.4292	3450.0	(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
1990	2310.0		1996	8480.0	
1991	3430.0		1997	5000.0	
1992	3000.0		1998	3880.0	
1993	2380.0		1999	5780.0	
1994	2080.0		2000	1880.0	
1995	1720.0				

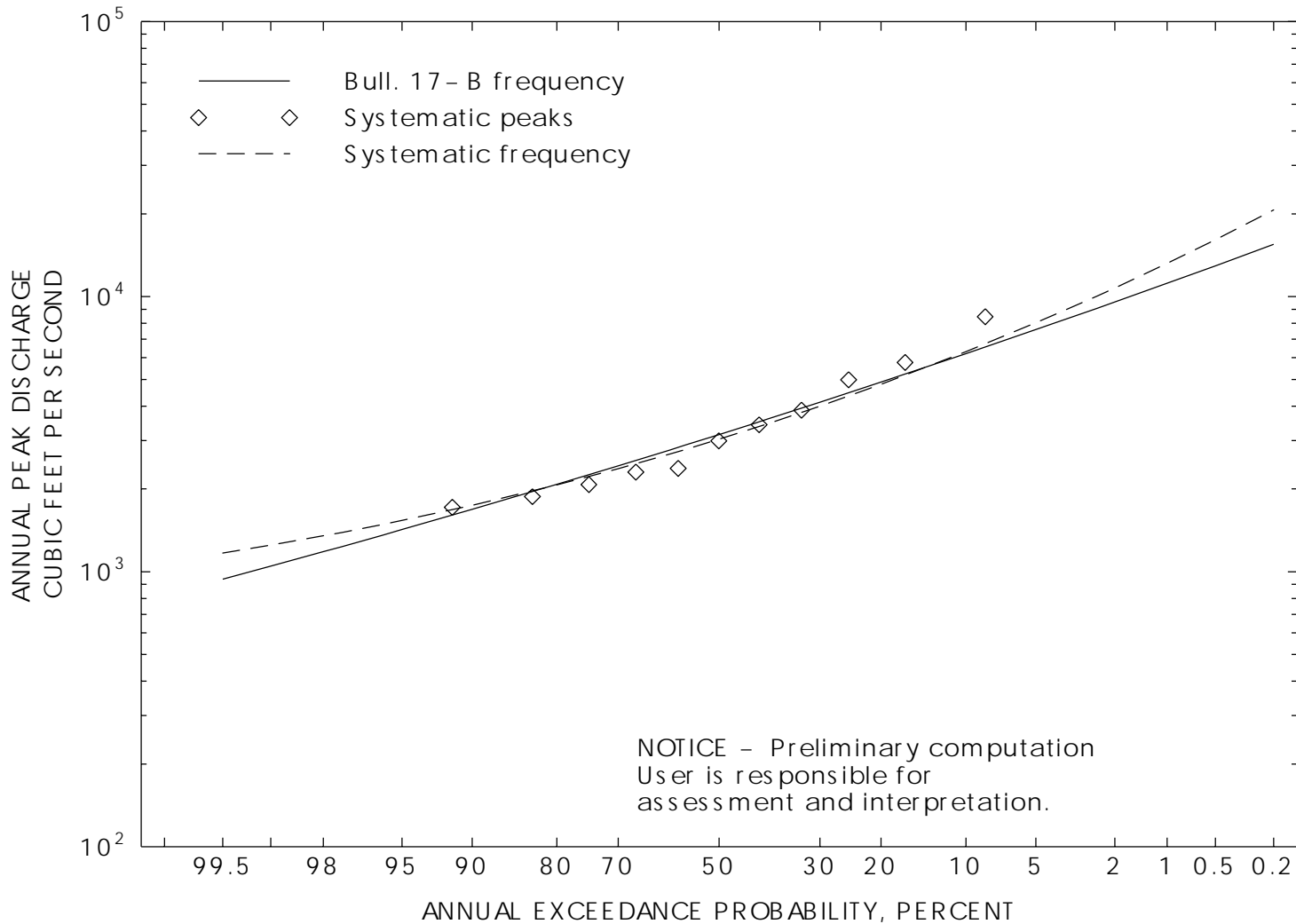
Explanation of peak discharge qualification codes

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
1996	8480.0	0.0833	0.0833
1999	5780.0	0.1667	0.1667
1997	5000.0	0.2500	0.2500
1998	3880.0	0.3333	0.3333
1991	3430.0	0.4167	0.4167
1992	3000.0	0.5000	0.5000
1993	2380.0	0.5833	0.5833
1990	2310.0	0.6667	0.6667
1994	2080.0	0.7500	0.7500
2000	1880.0	0.8333	0.8333
1995	1720.0	0.9167	0.9167



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