

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

Station - 04063640 N BR PINE RIVER AT WINDSOR DAM NEAR ALVIN, WI
 2002 MAR 13 09:02:14

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

Number of peaks in record	=	29
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	29
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.109
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	24.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		165.1

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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	1.8440	0.1803	-1.328
BULL.17B ESTIMATE	24.2	0.9655	1.8590	0.1421	-0.118

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	--	14.6	--	--	--
0.9900	--	18.3	--	--	--
0.9500	41.7	31.3	40.5	34.5	47.8
0.9000	47.3	40.1	46.5	40.2	53.4
0.8000	55.0	51.9	54.5	48.1	61.2
0.5000	72.7	76.3	72.7	65.7	80.6
0.2000	95.4	98.8	96.2	85.7	109.1
0.1000	109.5	108.3	111.3	97.2	128.6
0.0400	126.5	116.3	130.3	110.3	153.4
0.0200	138.6	120.2	144.5	119.4	171.9
0.0100	150.4	123.0	158.8	128.1	190.2
0.0050	161.9	125.0	173.5	136.4	208.6
0.0020	176.9	126.9	193.6	147.0	233.2
0.6667	63.1	(1.50-year flood)			
0.4292	77.1	(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
1967	112.0		1986	70.0	
1970	75.0		1987	48.0	
1971	107.0		1988	48.0	
1972	85.0		1989	72.0	
1973	75.0		1990	17.0	
1974	110.0		1991	68.0	
1975	72.0		1992	79.0	
1976	84.0		1993	61.0	
1977	96.0		1995	31.0	
1980	165.0		1996	100.0	
1981	73.0		1997	70.0	
1982	63.0		1998	62.0	
1983	72.0		1999	85.0	
1984	68.0		2000	55.0	
1985	54.0				

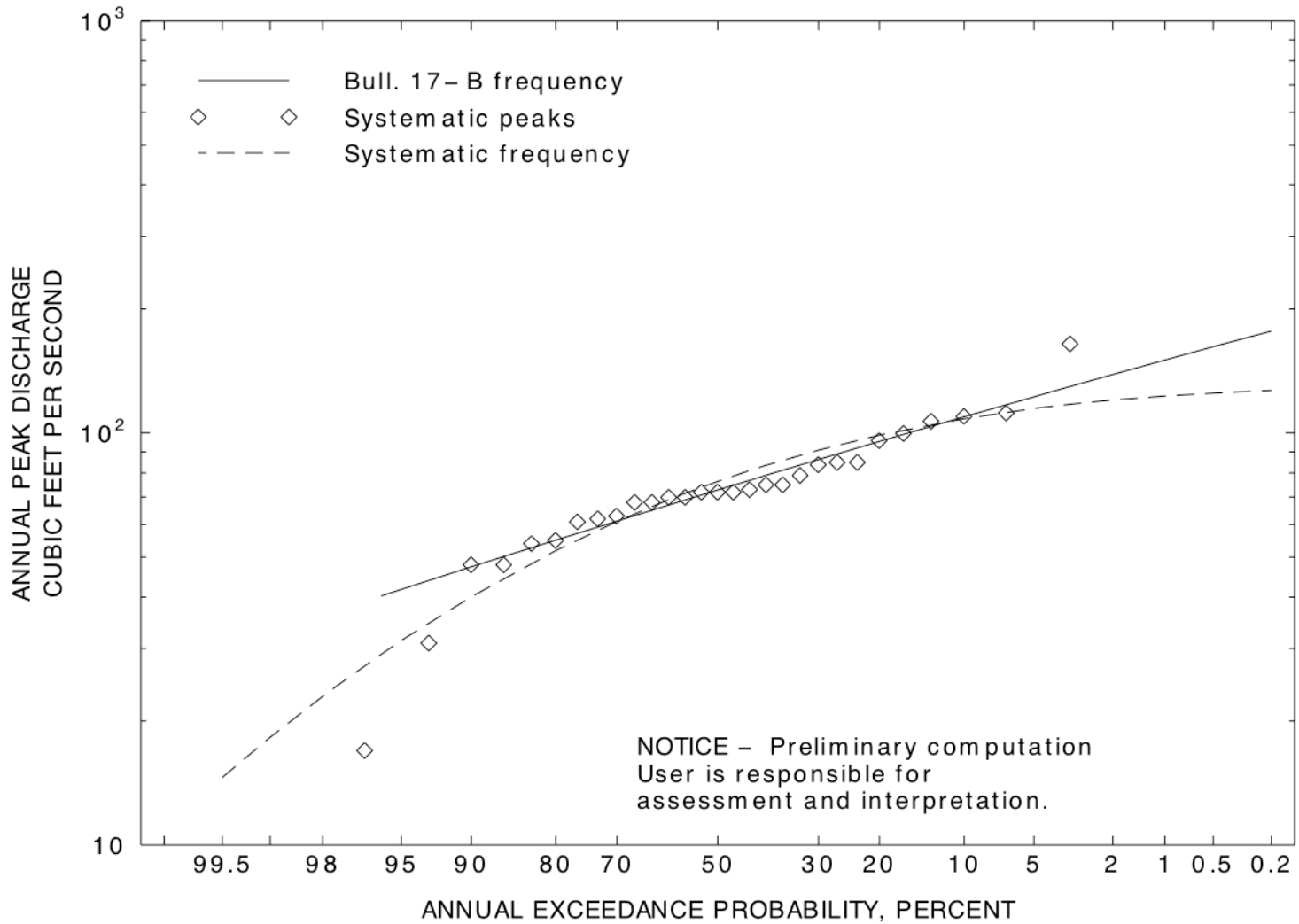
Explanation of peak discharge qualification codes

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
1980	165.0	0.0333	0.0333
1967	112.0	0.0667	0.0667
1974	110.0	0.1000	0.1000
1971	107.0	0.1333	0.1333
1996	100.0	0.1667	0.1667
1977	96.0	0.2000	0.2000
1972	85.0	0.2333	0.2333
1999	85.0	0.2667	0.2667
1976	84.0	0.3000	0.3000
1992	79.0	0.3333	0.3333
1970	75.0	0.3667	0.3667
1973	75.0	0.4000	0.4000
1981	73.0	0.4333	0.4333
1975	72.0	0.4667	0.4667
1983	72.0	0.5000	0.5000
1989	72.0	0.5333	0.5333
1986	70.0	0.5667	0.5667
1997	70.0	0.6000	0.6000
1984	68.0	0.6333	0.6333
1991	68.0	0.6667	0.6667
1982	63.0	0.7000	0.7000
1998	62.0	0.7333	0.7333
1993	61.0	0.7667	0.7667
2000	55.0	0.8000	0.8000
1985	54.0	0.8333	0.8333
1987	48.0	0.8667	0.8667
1988	48.0	0.9000	0.9000
1995	31.0	0.9333	0.9333
1990	17.0	0.9667	0.9667



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