

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

Station - 05427948 PHEASANT BRANCH AT MIDDLETON, WI
2002 MAR 13 09:03:20

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

Number of peaks in record	=	26
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	26
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.397
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.	49.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	1850.1

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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	2.4823	0.3137	-0.671
BULL.17B ESTIMATE	0.0	1.0000	2.4823	0.3137	-0.546

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	32.7	30.2	24.4	15.8	52.4
0.9900	42.6	40.0	34.2	22.2	65.3
0.9500	83.6	82.0	76.3	52.2	115.6
0.9000	116.5	116.0	110.3	78.8	154.4
0.8000	169.8	171.2	165.4	124.3	217.1
0.5000	324.1	329.0	324.1	255.9	413.6
0.2000	563.8	563.9	573.8	439.7	775.9
0.1000	727.0	716.3	750.6	554.0	1055.0
0.0400	929.8	897.1	980.7	688.1	1428.0
0.0200	1076.0	1021.0	1153.0	780.7	1713.0
0.0100	1216.0	1136.0	1326.0	867.3	1997.0
0.0050	1350.0	1243.0	1499.0	948.6	2280.0
0.0020	1520.0	1373.0	1726.0	1049.0	2649.0
0.6667	235.4	(1.50-year flood)			
0.4292	368.7	(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
1975	516.0		1988	75.0	
1976	515.0		1989	501.0	
1977	377.0		1990	256.0	
1978	479.0		1991	288.0	
1979	101.0		1992	154.0	
1980	227.0		1993	746.0	
1981	434.0		1994	615.0	
1982	357.0		1995	108.0	
1983	112.0		1996	437.0	
1984	398.0		1997	538.0	
1985	492.0		1998	505.0	
1986	123.0		1999	391.0	
1987	85.0		2000	902.0	

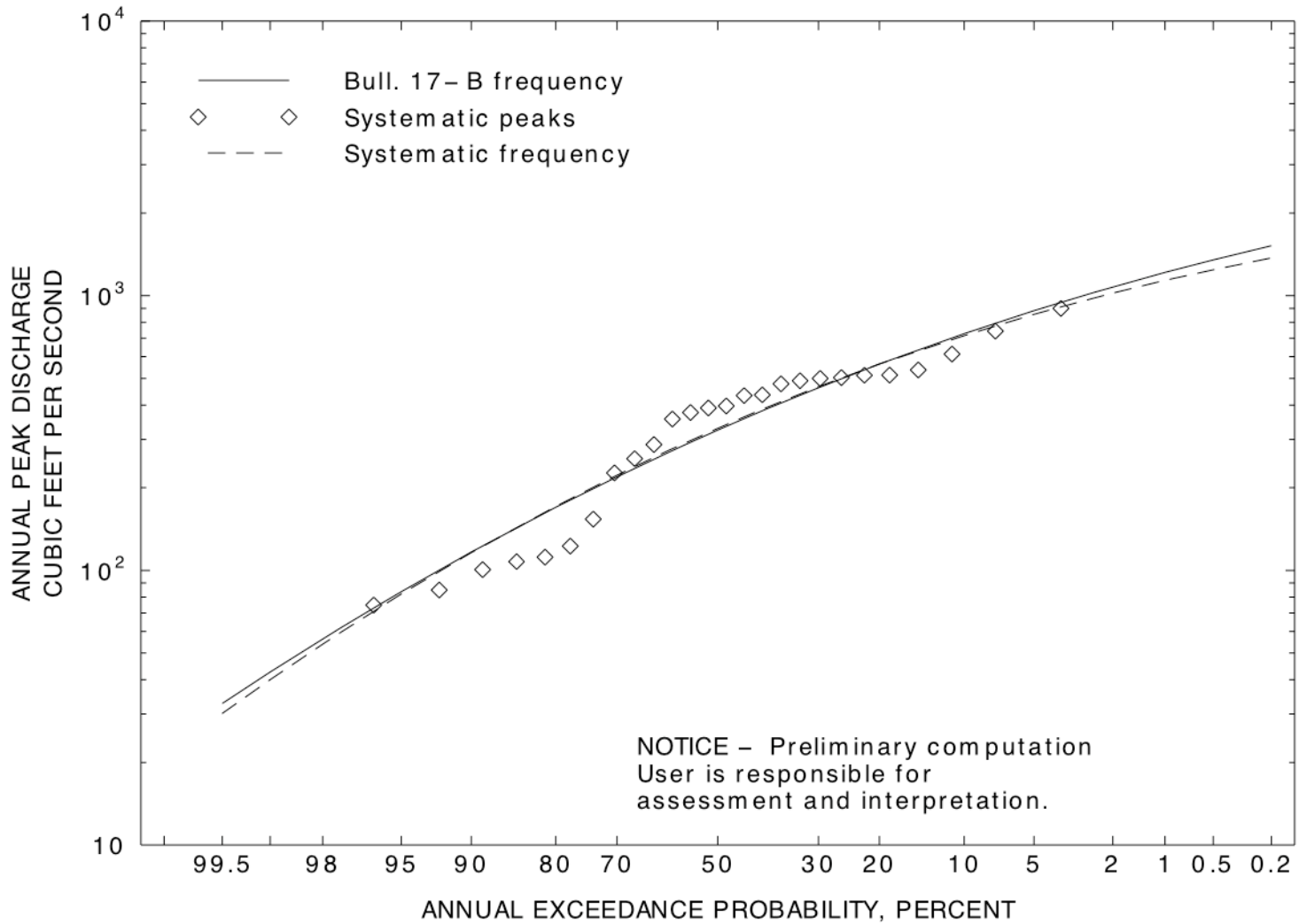
Explanation of peak discharge qualification codes

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
2000	902.0	0.0370	0.0370
1993	746.0	0.0741	0.0741
1994	615.0	0.1111	0.1111
1997	538.0	0.1481	0.1481
1975	516.0	0.1852	0.1852
1976	515.0	0.2222	0.2222
1998	505.0	0.2593	0.2593
1989	501.0	0.2963	0.2963
1985	492.0	0.3333	0.3333
1978	479.0	0.3704	0.3704
1996	437.0	0.4074	0.4074
1981	434.0	0.4444	0.4444
1984	398.0	0.4815	0.4815
1999	391.0	0.5185	0.5185
1977	377.0	0.5556	0.5556
1982	357.0	0.5926	0.5926
1991	288.0	0.6296	0.6296
1990	256.0	0.6667	0.6667
1980	227.0	0.7037	0.7037
1992	154.0	0.7407	0.7407
1986	123.0	0.7778	0.7778
1983	112.0	0.8148	0.8148
1995	108.0	0.8519	0.8519
1979	101.0	0.8889	0.8889
1987	85.0	0.9259	0.9259
1988	75.0	0.9630	0.9630



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