

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

Station - 04087088 UNDERWOOD CREEK AT WAUWATOSA, WI
 2002 MAR 13 09:02:42

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
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	8639.4
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	109.8

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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	2.9886	0.3788	0.610
BULL.17B ESTIMATE	0.0	1.0000	2.9886	0.3788	0.156

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	117.1	169.1	95.9	57.1	188.2
0.9900	141.6	190.1	120.9	72.7	221.0
0.9500	241.4	274.0	223.6	142.3	349.2
0.9000	323.5	342.4	308.2	204.3	451.6
0.8000	464.8	461.2	453.2	316.5	627.1
0.5000	952.4	892.0	952.4	712.1	1270.0
0.2000	2015.0	1955.0	2073.0	1495.0	2952.0
0.1000	3020.0	3105.0	3196.0	2157.0	4814.0
0.0400	4696.0	5300.0	5217.0	3170.0	8331.0
0.0200	6281.0	7660.0	7303.0	4063.0	12020.0
0.0100	8188.0	10840.0	10040.0	5085.0	16820.0
0.0050	10470.0	15090.0	13650.0	6249.0	23020.0
0.0020	14160.0	22920.0	20250.0	8039.0	33870.0
0.6667	657.6	(1.50-year flood)			
0.4292	1111.5	(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	540.0		1988	1480.0	
1976	388.0		1989	725.0	
1977	396.0		1990	1170.0	
1978	320.0		1991	1040.0	
1979	434.0		1992	371.0	
1980	343.0		1993	767.0	
1981	2100.0		1994	1800.0	
1982	579.0		1995	435.0	
1983	378.0		1996	1850.0	
1984	812.0		1997	4650.0	
1985	1160.0		1998	7500.0	
1986	1460.0		1999	3280.0	
1987	1120.0		2000	2940.0	

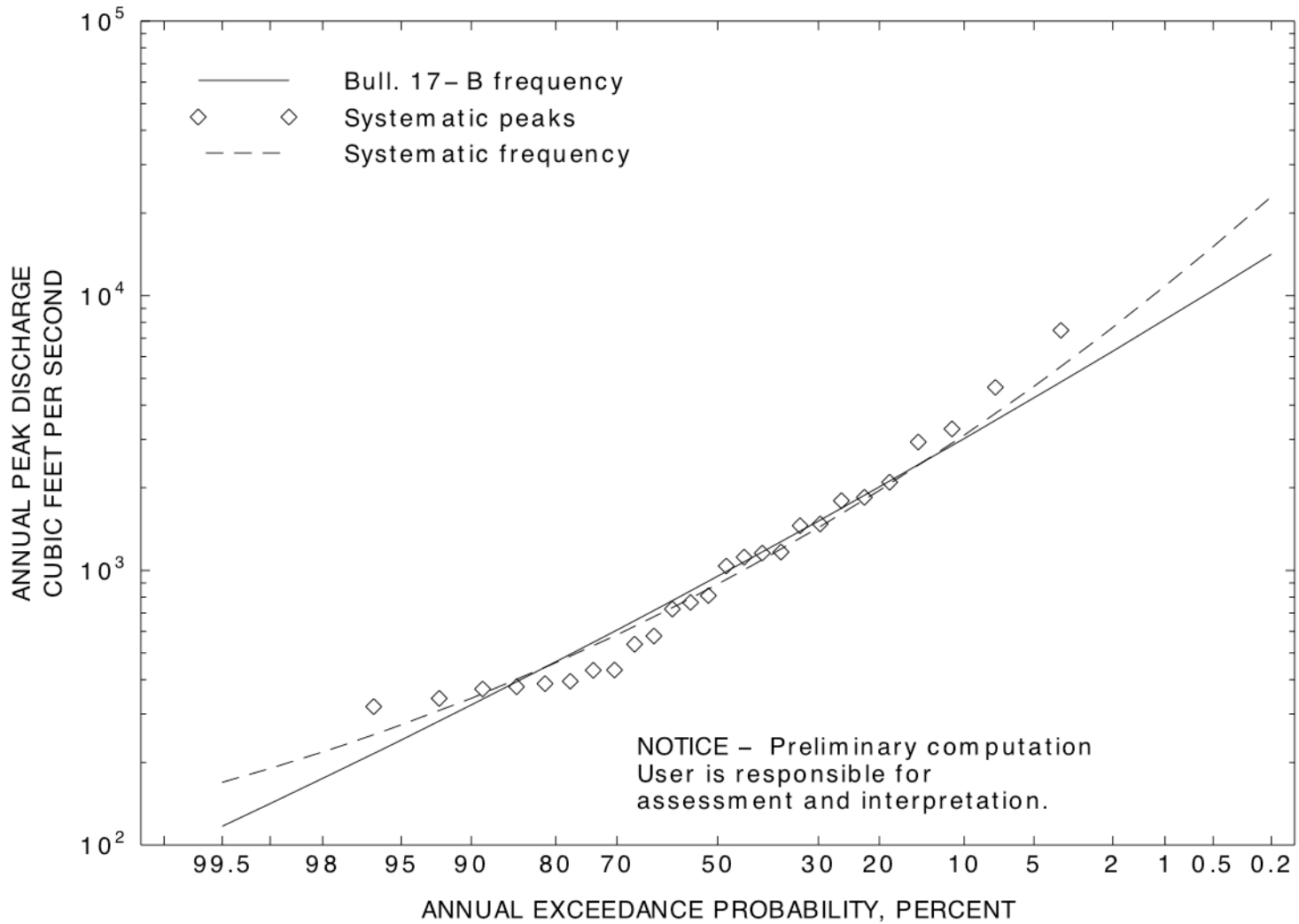
Explanation of peak discharge qualification codes

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
1998	7500.0	0.0370	0.0370
1997	4650.0	0.0741	0.0741
1999	3280.0	0.1111	0.1111
2000	2940.0	0.1481	0.1481
1981	2100.0	0.1852	0.1852
1996	1850.0	0.2222	0.2222
1994	1800.0	0.2593	0.2593
1988	1480.0	0.2963	0.2963
1986	1460.0	0.3333	0.3333
1990	1170.0	0.3704	0.3704
1985	1160.0	0.4074	0.4074
1987	1120.0	0.4444	0.4444
1991	1040.0	0.4815	0.4815
1984	812.0	0.5185	0.5185
1993	767.0	0.5556	0.5556
1989	725.0	0.5926	0.5926
1982	579.0	0.6296	0.6296
1975	540.0	0.6667	0.6667
1995	435.0	0.7037	0.7037
1979	434.0	0.7407	0.7407
1977	396.0	0.7778	0.7778
1976	388.0	0.8148	0.8148
1983	378.0	0.8519	0.8519
1992	371.0	0.8889	0.8889
1980	343.0	0.9259	0.9259
1978	320.0	0.9630	0.9630



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