

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

Station - 05543830 FOX RIVER AT WAUKESHA, WI
 2002 MAR 15 14:50:13

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

Number of peaks in record	=	39
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	38
Historic peaks in analysis	=	1
Years of historic record	=	49
Generalized skew	=	-0.400
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	0.0
User supplied high outlier threshold	=	2500.0
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.		300.2
*WCF161I-USER HIGH OUTLIER CRITERION REPLACES 17B.	2500.0	2681.4
WCF165I-HIGH OUTLIERS AND HISTORIC PEAKS ABOVE HHBASE.	0 1	2500.0

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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	2.9529	0.1787	-0.167
BULL.17B ESTIMATE	0.0	1.0000	2.9620	0.1874	-0.103

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	289.1	291.5	266.0	213.9	357.9
0.9900	324.9	327.7	304.6	246.5	395.9
0.9500	444.9	447.5	431.9	359.7	521.0
0.9000	524.6	526.0	515.0	437.1	603.5
0.8000	638.7	637.1	632.8	549.1	722.8
0.5000	923.0	907.6	923.0	821.1	1038.0
0.2000	1320.0	1272.0	1331.0	1166.0	1537.0
0.1000	1585.0	1508.0	1612.0	1379.0	1899.0
0.0400	1920.0	1800.0	1978.0	1636.0	2383.0
0.0200	2170.0	2012.0	2262.0	1822.0	2759.0
0.0100	2419.0	2221.0	2555.0	2003.0	3146.0
0.0050	2670.0	2427.0	2861.0	2182.0	3545.0
0.0020	3006.0	2698.0	3289.0	2416.0	4092.0
0.6667	765.5	(1.50-year flood)			
0.4292	996.9	(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
-1960	2500.0	H	1982	965.0	
1963	620.0		1983	1060.0	
1964	644.0		1984	562.0	
1965	1240.0		1985	646.0	
1966	1040.0		1986	955.0	
1967	369.0		1987	653.0	
1968	542.0		1988	793.0	
1969	1220.0		1989	759.0	
1970	660.0		1990	1210.0	
1971	660.0		1991	755.0	
1972	1150.0		1992	479.0	
1973	2260.0		1993	1520.0	
1974	1520.0		1994	800.0	
1975	1200.0		1995	1070.0	
1976	1080.0		1996	967.0	
1977	379.0		1997	1320.0	
1978	910.0		1998	1460.0	
1979	1270.0		1999	1010.0	
1980	569.0		2000	1730.0	
1981	900.0				

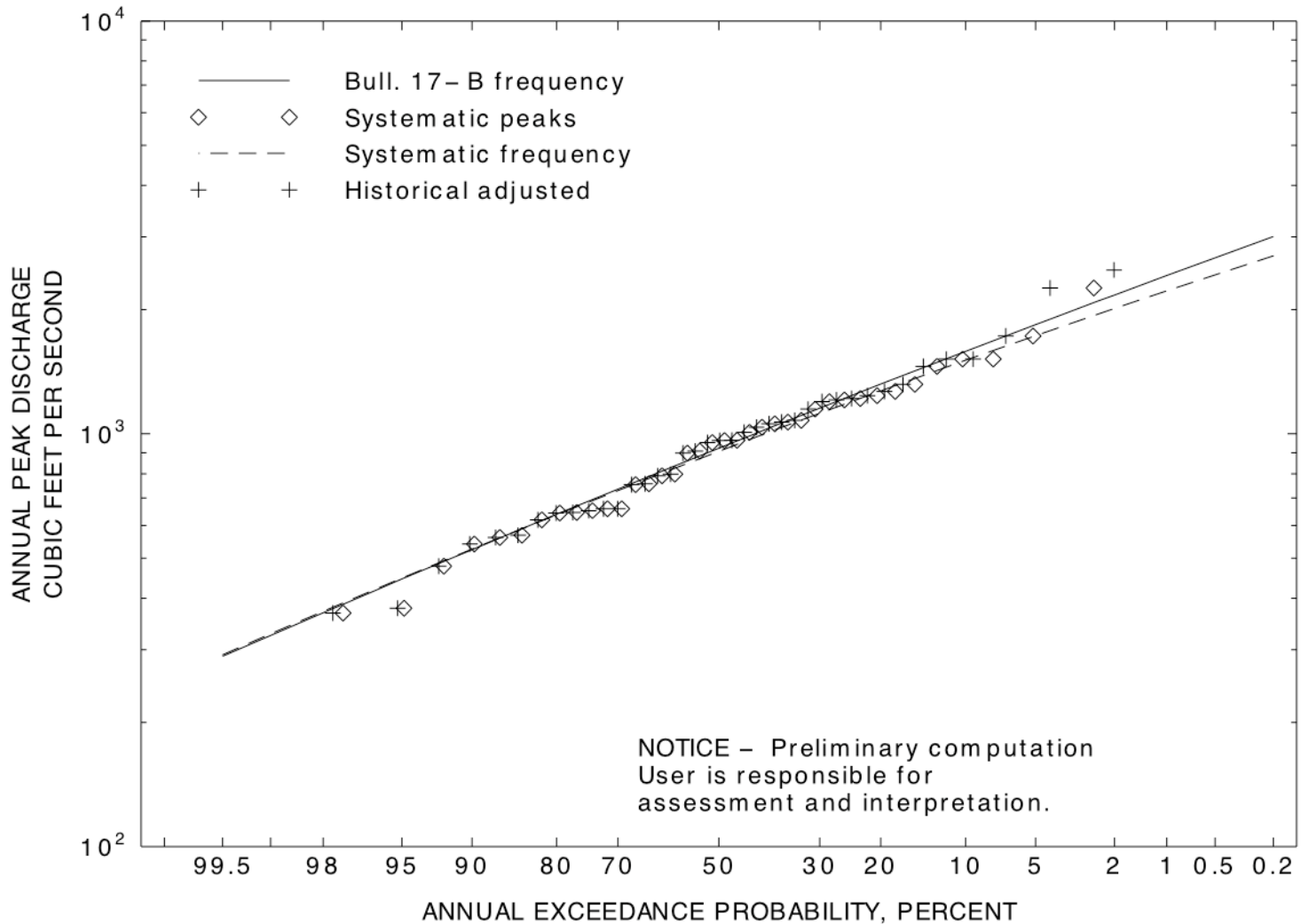
Explanation of peak discharge qualification codes

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
-1960	2500.0	--	0.0200
1973	2260.0	0.0256	0.0426
2000	1730.0	0.0513	0.0679
1974	1520.0	0.0769	0.0932
1993	1520.0	0.1026	0.1184
1998	1460.0	0.1282	0.1437
1997	1320.0	0.1538	0.1689
1979	1270.0	0.1795	0.1942
1965	1240.0	0.2051	0.2195
1969	1220.0	0.2308	0.2447
1990	1210.0	0.2564	0.2700
1975	1200.0	0.2821	0.2953
1972	1150.0	0.3077	0.3205
1976	1080.0	0.3333	0.3458
1995	1070.0	0.3590	0.3711
1983	1060.0	0.3846	0.3963
1966	1040.0	0.4103	0.4216
1999	1010.0	0.4359	0.4468
1996	967.0	0.4615	0.4721
1982	965.0	0.4872	0.4974
1986	955.0	0.5128	0.5226
1978	910.0	0.5385	0.5479
1981	900.0	0.5641	0.5732
1994	800.0	0.5897	0.5984
1988	793.0	0.6154	0.6237
1989	759.0	0.6410	0.6489
1991	755.0	0.6667	0.6742
1970	660.0	0.6923	0.6995
1971	660.0	0.7179	0.7247
1987	653.0	0.7436	0.7500
1985	646.0	0.7692	0.7753
1964	644.0	0.7949	0.8005
1963	620.0	0.8205	0.8258
1980	569.0	0.8462	0.8511
1984	562.0	0.8718	0.8763
1968	542.0	0.8974	0.9016
1992	479.0	0.9231	0.9268
1977	379.0	0.9487	0.9521
1967	369.0	0.9744	0.9774



NOTICE - Preliminary computation
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ANNUAL EXCEEDANCE PROBABILITY, PERCENT
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