

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

Station - 04026300 SIOUX RIVER NEAR WASHBURN, WI
2002 MAR 13 09:01:59

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

Number of peaks in record	=	42
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	42
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.130
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	187.0
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. *****

WCF133I-SYSTEMATIC PEAKS BELOW GAGE BASE WERE NOTED.	2	187.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		2304.3
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		111.2

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	187.0	0.9524	2.6889	0.2508	0.873
BULL.17B ESTIMATE	187.0	0.9524	2.6889	0.2508	0.477

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
0.9500	205.6	222.4	200.6	160.1	248.9
0.9000	241.6	251.1	237.6	193.2	287.8
0.8000	298.0	298.2	295.3	245.8	349.2
0.5000	466.7	449.7	466.7	401.4	541.0
0.2000	780.0	763.0	789.8	666.6	942.3
0.1000	1048.0	1058.0	1076.0	874.7	1323.0
0.0400	1466.0	1561.0	1541.0	1180.0	1964.0
0.0200	1843.0	2053.0	1983.0	1442.0	2579.0
0.0100	2282.0	2667.0	2524.0	1737.0	3332.0
0.0050	2794.0	3434.0	3190.0	2069.0	4250.0
0.0020	3601.0	4745.0	4314.0	2574.0	5773.0
0.6667	368.4	(1.50-year flood)			
0.4292	515.9	(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
1959	310.0		1980	470.0	
1960	1620.0		1981	275.0	
1961	430.0		1982	580.0	
1962	820.0		1983	550.0	
1963	380.0		1984	1260.0	
1964	1630.0		1985	2200.0	
1965	260.0		1986	225.0	
1966	525.0		1987	305.0	
1967	580.0		1988	170.0	
1968	280.0		1989	325.0	
1969	435.0		1990	230.0	
1970	370.0		1991	470.0	
1971	580.0		1992	1000.0	
1972	1420.0		1993	390.0	
1973	340.0		1994	440.0	
1974	770.0		1995	277.0	
1975	320.0		1996	559.0	
1976	365.0		1997	561.0	
1977	495.0		1998	343.0	
1978	695.0		1999	730.0	
1979	425.0		2000	187.0	L

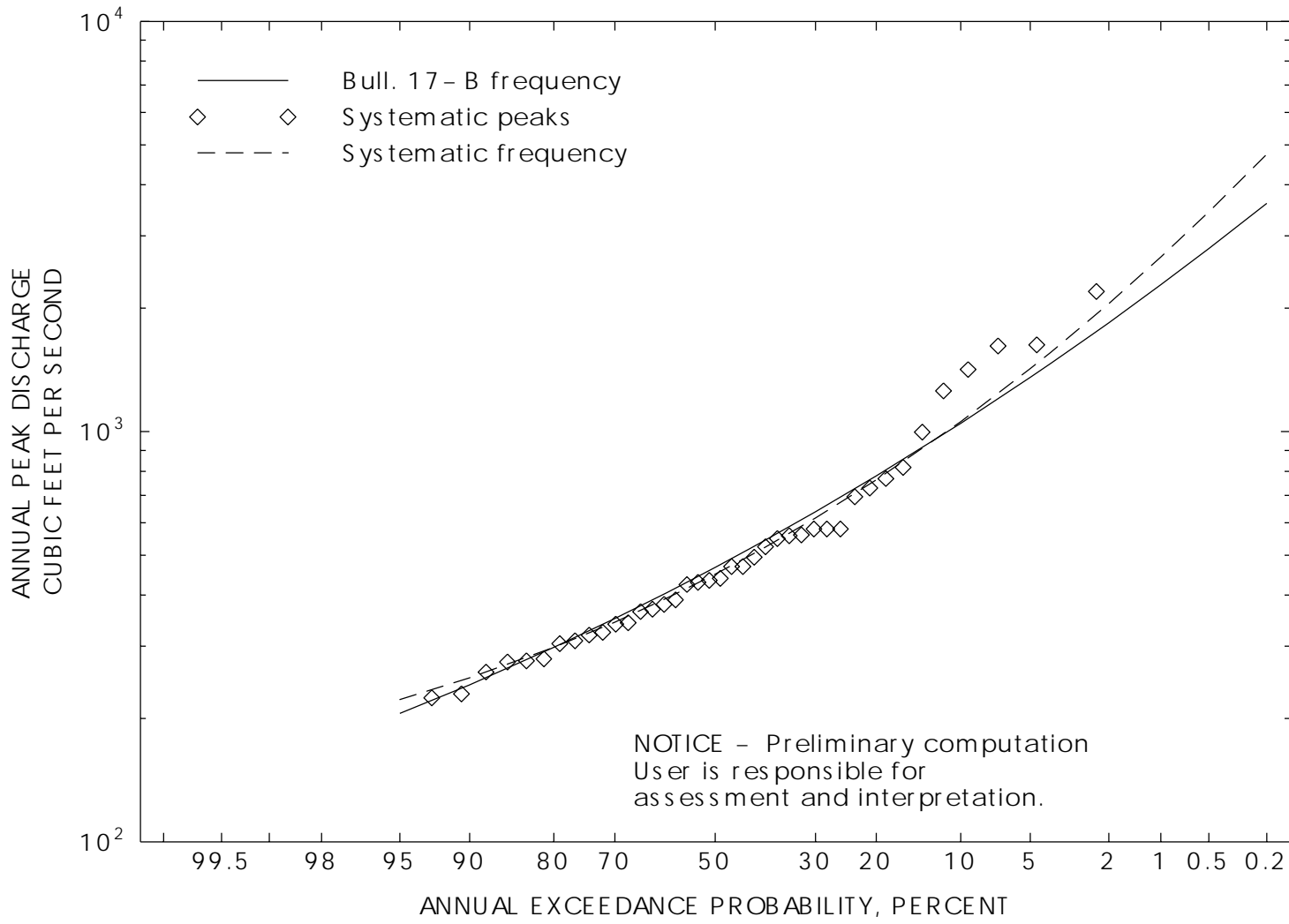
Explanation of peak discharge qualification codes

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
1985	2200.0	0.0233	0.0233
1964	1630.0	0.0465	0.0465
1960	1620.0	0.0698	0.0698
1972	1420.0	0.0930	0.0930
1984	1260.0	0.1163	0.1163
1992	1000.0	0.1395	0.1395
1962	820.0	0.1628	0.1628
1974	770.0	0.1860	0.1860
1999	730.0	0.2093	0.2093
1978	695.0	0.2326	0.2326
1967	580.0	0.2558	0.2558
1971	580.0	0.2791	0.2791
1982	580.0	0.3023	0.3023
1997	561.0	0.3256	0.3256
1996	559.0	0.3488	0.3488
1983	550.0	0.3721	0.3721
1966	525.0	0.3953	0.3953
1977	495.0	0.4186	0.4186
1980	470.0	0.4419	0.4419
1991	470.0	0.4651	0.4651
1994	440.0	0.4884	0.4884
1969	435.0	0.5116	0.5116
1961	430.0	0.5349	0.5349
1979	425.0	0.5581	0.5581
1993	390.0	0.5814	0.5814
1963	380.0	0.6047	0.6047
1970	370.0	0.6279	0.6279
1976	365.0	0.6512	0.6512
1998	343.0	0.6744	0.6744
1973	340.0	0.6977	0.6977
1989	325.0	0.7209	0.7209
1975	320.0	0.7442	0.7442
1959	310.0	0.7674	0.7674
1987	305.0	0.7907	0.7907
1968	280.0	0.8140	0.8140
1995	277.0	0.8372	0.8372
1981	275.0	0.8605	0.8605
1965	260.0	0.8837	0.8837
1990	230.0	0.9070	0.9070
1986	225.0	0.9302	0.9302
2000	187.0	--	--
1988	170.0	--	--



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