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

Station - 04066500 PIKE RIVER AT AMBERG, WI
2002 MAR 13 09:02:28

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

Number of peaks in record	=	57
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	57
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.160
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. 354.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE. 2941.6

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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	3.0088	0.1632	0.244
BULL.17B ESTIMATE	0.0	1.0000	3.0088	0.1632	0.139

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	407.2	422.5	392.1	336.4	470.9
0.9900	442.5	455.7	429.4	370.6	507.0
0.9500	558.5	565.2	550.2	484.6	624.6
0.9000	634.3	637.4	628.3	560.3	701.3
0.8000	742.1	741.1	738.6	668.1	811.4
0.5000	1012.0	1005.0	1012.0	931.0	1099.0
0.2000	1396.0	1393.0	1404.0	1277.0	1550.0
0.1000	1660.0	1666.0	1678.0	1500.0	1882.0
0.0400	2005.0	2031.0	2045.0	1780.0	2335.0
0.0200	2269.0	2316.0	2334.0	1988.0	2694.0
0.0100	2541.0	2614.0	2638.0	2198.0	3072.0
0.0050	2820.0	2926.0	2961.0	2411.0	3469.0
0.0020	3206.0	3364.0	3420.0	2699.0	4029.0
0.6667	862.3	(1.50-year flood)			
0.4292	1081.3	(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
1914	1220.0		1943	837.0	
1915	778.0		1944	691.0	
1916	1200.0		1945	1060.0	
1917	1160.0		1946	837.0	
1918	862.0		1947	1160.0	
1919	1040.0		1948	619.0	
1920	1450.0		1949	800.0	
1921	1750.0		1950	1450.0	
1922	2800.0		1951	1980.0	
1923	1950.0		1952	1080.0	
1924	1250.0		1953	860.0	
1925	582.0		1954	1120.0	
1926	778.0		1955	852.0	
1927	1040.0		1956	856.0	
1928	947.0		1957	1080.0	
1929	1250.0		1958	788.0	
1930	582.0		1959	664.0	
1931	376.0		1960	2290.0	
1932	1410.0		1961	687.0	
1933	1480.0		1962	1230.0	
1934	1160.0		1963	598.0	
1935	920.0		1964	716.0	
1936	785.0		1965	1240.0	
1937	970.0		1966	676.0	
1938	1600.0		1967	1140.0	
1939	1730.0		1968	851.0	
1940	763.0		1969	1070.0	
1941	1010.0		1970	1530.0	
1942	875.0				

Explanation of peak discharge qualification codes

PEAKFQ CODE	WATSTORE 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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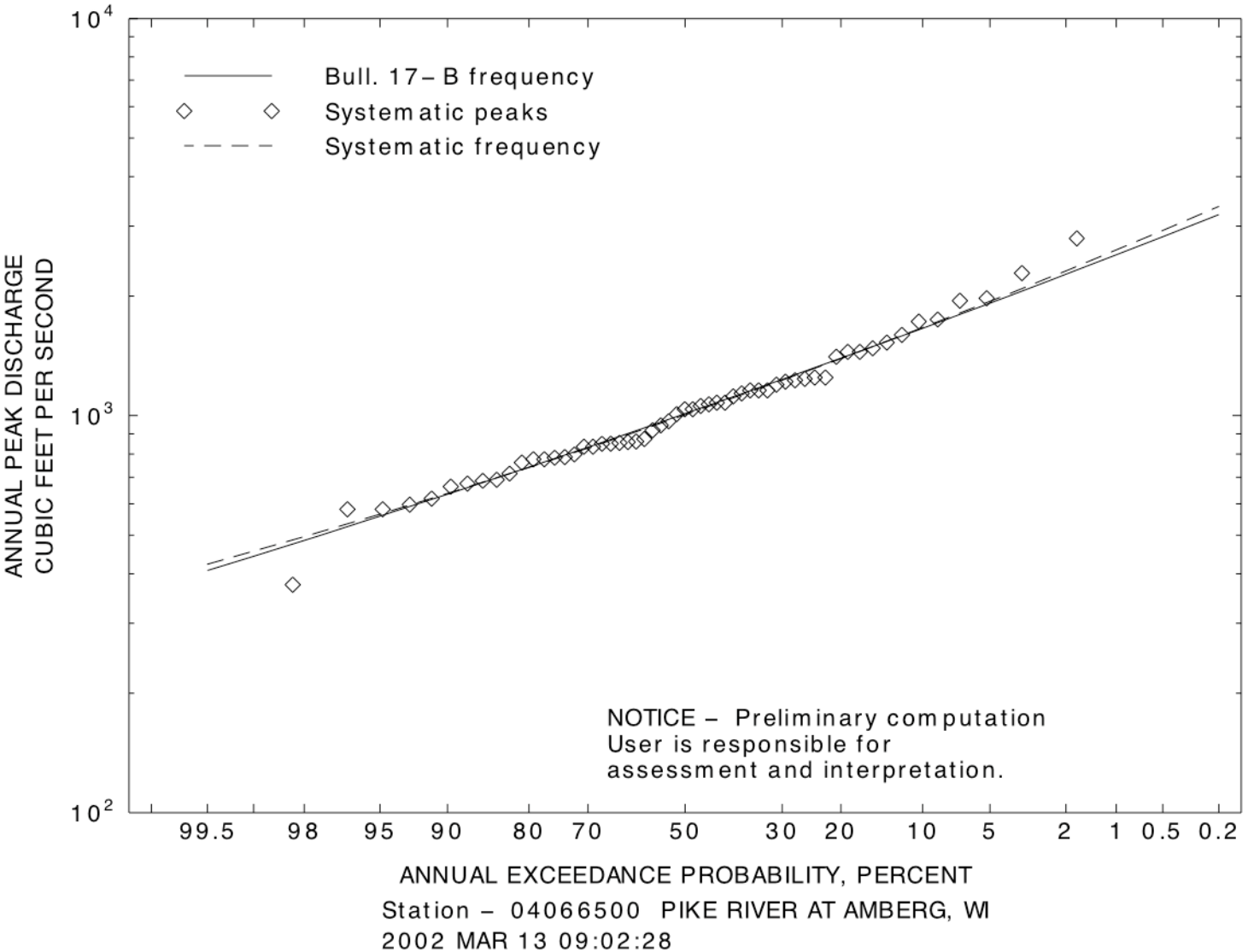
EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1922	2800.0	0.0172	0.0172
1960	2290.0	0.0345	0.0345
1951	1980.0	0.0517	0.0517
1923	1950.0	0.0690	0.0690
1921	1750.0	0.0862	0.0862
1939	1730.0	0.1034	0.1034
1938	1600.0	0.1207	0.1207
1970	1530.0	0.1379	0.1379
1933	1480.0	0.1552	0.1552
1920	1450.0	0.1724	0.1724
1950	1450.0	0.1897	0.1897
1932	1410.0	0.2069	0.2069
1924	1250.0	0.2241	0.2241
1929	1250.0	0.2414	0.2414
1965	1240.0	0.2586	0.2586
1962	1230.0	0.2759	0.2759
1914	1220.0	0.2931	0.2931
1916	1200.0	0.3103	0.3103
1917	1160.0	0.3276	0.3276
1934	1160.0	0.3448	0.3448
1947	1160.0	0.3621	0.3621
1967	1140.0	0.3793	0.3793
1954	1120.0	0.3966	0.3966
1952	1080.0	0.4138	0.4138
1957	1080.0	0.4310	0.4310
1969	1070.0	0.4483	0.4483
1945	1060.0	0.4655	0.4655
1919	1040.0	0.4828	0.4828
1927	1040.0	0.5000	0.5000
1941	1010.0	0.5172	0.5172
1937	970.0	0.5345	0.5345
1928	947.0	0.5517	0.5517
1935	920.0	0.5690	0.5690
1942	875.0	0.5862	0.5862
1918	862.0	0.6034	0.6034
1953	860.0	0.6207	0.6207
1956	856.0	0.6379	0.6379
1955	852.0	0.6552	0.6552
1968	851.0	0.6724	0.6724
1943	837.0	0.6897	0.6897
1946	837.0	0.7069	0.7069
1949	800.0	0.7241	0.7241
1958	788.0	0.7414	0.7414
1936	785.0	0.7586	0.7586
1915	778.0	0.7759	0.7759
1926	778.0	0.7931	0.7931
1940	763.0	0.8103	0.8103
1964	716.0	0.8276	0.8276

1944	691.0	0.8448	0.8448
1961	687.0	0.8621	0.8621
1966	676.0	0.8793	0.8793
1959	664.0	0.8966	0.8966
1948	619.0	0.9138	0.9138
1963	598.0	0.9310	0.9310
1925	582.0	0.9483	0.9483
1930	582.0	0.9655	0.9655
1931	376.0	0.9828	0.9828


Bull. 17–B frequency
Systematic peaks
Systematic frequency
NOTICE – Preliminary computation
User is responsible for
assessment and interpretation.
ANNUAL PEAK DISCHARGE
CUBIC FEET PER SECOND
10^4
10^3
10^2
99.5 98 95 90 80 70 50 30 20 10 5 2 1 0.5 0.2
ANNUAL EXCEEDANCE PROBABILITY, PERCENT
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