

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

Station - 05383000 LA CROSSE RIVER NEAR WEST SALEM, WI
2002 MAR 13 09:02:59

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

Number of peaks in record	=	58
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	58
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.400
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.	547.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	10867.7

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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	3.3874	0.2297	-0.032
BULL.17B ESTIMATE	0.0	1.0000	3.3874	0.2297	-0.117

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	589.4	615.0	551.7	442.4	732.8
0.9900	681.2	704.1	647.0	523.5	833.0
0.9500	1005.0	1017.0	981.0	819.9	1179.0
0.9000	1231.0	1237.0	1213.0	1034.0	1418.0
0.8000	1569.0	1565.0	1557.0	1356.0	1776.0
0.5000	2465.0	2447.0	2465.0	2197.0	2768.0
0.2000	3819.0	3811.0	3845.0	3371.0	4421.0
0.1000	4773.0	4797.0	4836.0	4147.0	5675.0
0.0400	6028.0	6124.0	6171.0	5128.0	7405.0
0.0200	6993.0	7166.0	7223.0	5859.0	8784.0
0.0100	7979.0	8250.0	8325.0	6591.0	10230.0
0.0050	8992.0	9382.0	9485.0	7330.0	11750.0
0.0020	10380.0	10960.0	11120.0	8320.0	13880.0
0.6667	1959.7	(1.50-year flood)			
0.4292	2709.4	(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	1800.0		1943	2790.0	
1915	1800.0		1944	2150.0	
1916	1850.0		1945	4590.0	
1917	2990.0		1946	4170.0	
1918	3130.0		1947	2900.0	
1919	3900.0		1948	2300.0	
1920	2600.0		1949	2020.0	
1921	1150.0		1950	2900.0	
1922	2920.0		1951	1630.0	
1923	2480.0		1952	2470.0	
1924	2600.0		1953	1320.0	
1925	2120.0		1954	1730.0	
1926	1920.0		1955	3650.0	
1927	1370.0		1956	5720.0	
1928	5160.0		1957	984.0	
1929	1170.0		1958	1310.0	
1930	3270.0		1959	3270.0	
1931	635.0		1960	1780.0	
1932	2380.0		1961	4490.0	
1933	4310.0		1962	2150.0	
1934	3890.0		1963	2060.0	
1935	8200.0		1964	1020.0	
1936	3020.0		1965	2610.0	
1937	1100.0		1966	5940.0	
1938	3490.0		1967	3620.0	
1939	1510.0		1968	2360.0	
1940	1140.0		1969	1750.0	
1941	3020.0		1970	1800.0	
1942	4170.0		1978	7600.0	

Explanation of peak discharge qualification codes

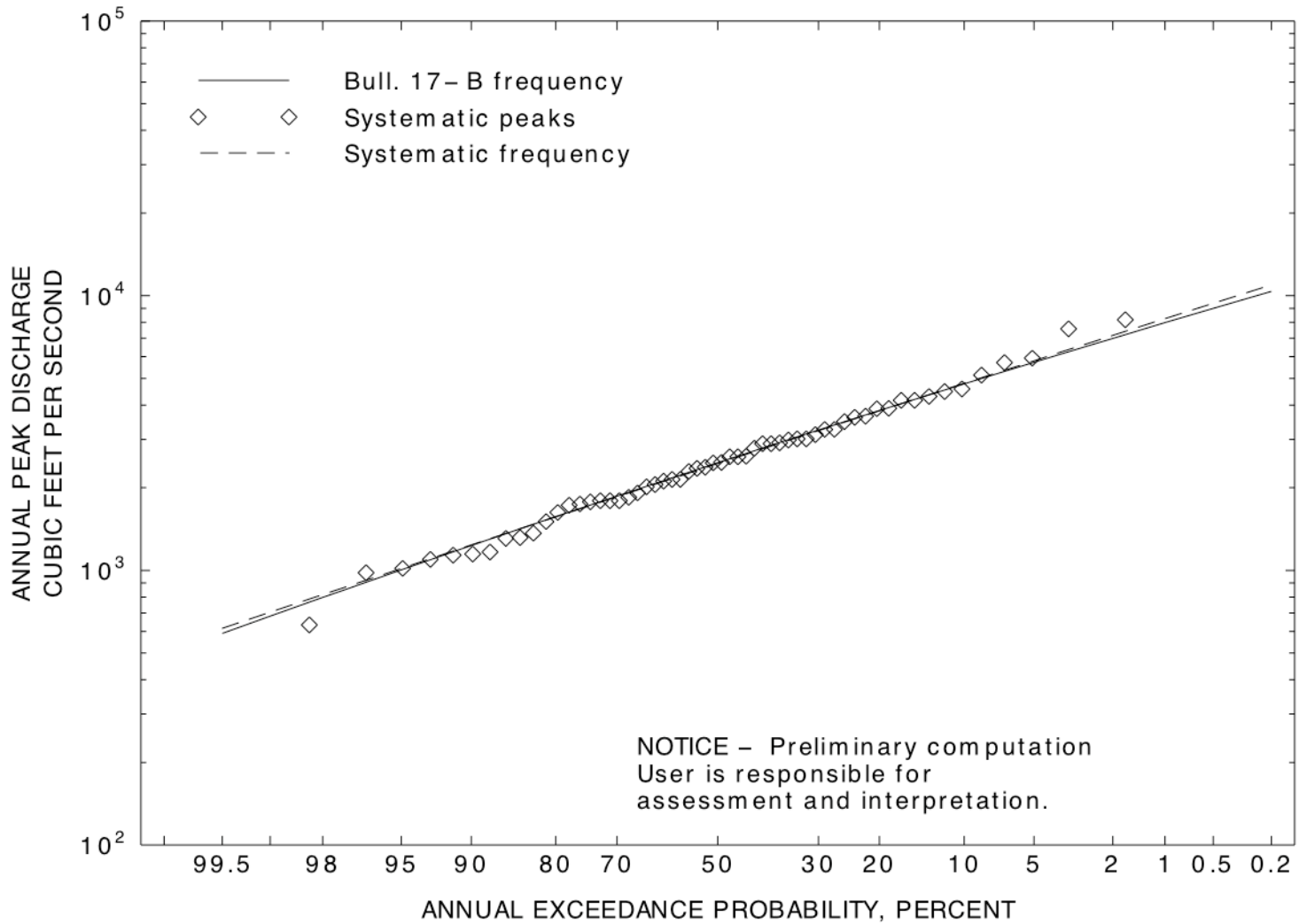
PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1935	8200.0	0.0169	0.0169
1978	7600.0	0.0339	0.0339
1966	5940.0	0.0508	0.0508
1956	5720.0	0.0678	0.0678
1928	5160.0	0.0847	0.0847
1945	4590.0	0.1017	0.1017
1961	4490.0	0.1186	0.1186
1933	4310.0	0.1356	0.1356
1942	4170.0	0.1525	0.1525
1946	4170.0	0.1695	0.1695
1919	3900.0	0.1864	0.1864
1934	3890.0	0.2034	0.2034
1955	3650.0	0.2203	0.2203
1967	3620.0	0.2373	0.2373
1938	3490.0	0.2542	0.2542
1930	3270.0	0.2712	0.2712
1959	3270.0	0.2881	0.2881
1918	3130.0	0.3051	0.3051
1936	3020.0	0.3220	0.3220
1941	3020.0	0.3390	0.3390
1917	2990.0	0.3559	0.3559
1922	2920.0	0.3729	0.3729
1947	2900.0	0.3898	0.3898
1950	2900.0	0.4068	0.4068
1943	2790.0	0.4237	0.4237
1965	2610.0	0.4407	0.4407
1920	2600.0	0.4576	0.4576
1924	2600.0	0.4746	0.4746
1923	2480.0	0.4915	0.4915
1952	2470.0	0.5085	0.5085
1932	2380.0	0.5254	0.5254
1968	2360.0	0.5424	0.5424
1948	2300.0	0.5593	0.5593
1944	2150.0	0.5763	0.5763
1962	2150.0	0.5932	0.5932
1925	2120.0	0.6102	0.6102
1963	2060.0	0.6271	0.6271
1949	2020.0	0.6441	0.6441
1926	1920.0	0.6610	0.6610
1916	1850.0	0.6780	0.6780
1914	1800.0	0.6949	0.6949
1915	1800.0	0.7119	0.7119
1970	1800.0	0.7288	0.7288
1960	1780.0	0.7458	0.7458
1969	1750.0	0.7627	0.7627
1954	1730.0	0.7797	0.7797
1951	1630.0	0.7966	0.7966
1939	1510.0	0.8136	0.8136

1927	1370.0	0.8305	0.8305
1953	1320.0	0.8475	0.8475
1958	1310.0	0.8644	0.8644
1929	1170.0	0.8814	0.8814
1921	1150.0	0.8983	0.8983
1940	1140.0	0.9153	0.9153
1937	1100.0	0.9322	0.9322
1964	1020.0	0.9492	0.9492
1957	984.0	0.9661	0.9661
1931	635.0	0.9831	0.9831



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