

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

Station - 05429500 YAHARA RIVER NEAR MC FARLAND, WI  
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I N P U T   D A T A   S U M M A R Y

Number of peaks in record	=	68
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	68
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	0.000
Standard error of generalized skew	=	0.550
Skew option	=	STATION SKEW
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.		176.5
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		988.3
*WCF151I-17B WEIGHTED SKEW REPLACED BY USER OPTION.	0.054	0.068 -1

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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	2.6208	0.1298	0.068
BULL.17B ESTIMATE	0.0	1.0000	2.6208	0.1298	0.068

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	197.2	197.2	192.0	171.5	219.9
0.9900	211.6	211.6	207.1	185.9	234.2
0.9500	257.0	257.0	254.3	231.9	279.1
0.9000	285.4	285.4	283.6	261.0	307.3
0.8000	324.5	324.5	323.4	300.8	346.4
0.5000	416.2	416.2	416.2	391.9	442.0
0.2000	536.5	536.5	538.3	502.6	578.5
0.1000	613.8	613.8	618.1	569.9	671.6
0.0400	709.5	709.5	718.6	650.6	790.9
0.0200	779.8	779.8	793.9	708.5	880.7
0.0100	849.4	849.4	869.9	765.0	971.2
0.0050	919.0	919.0	947.3	820.8	1063.0
0.0020	1012.0	1012.0	1053.0	894.1	1187.0
0.6667	366.3	( 1.50-year flood )			
0.4292	438.9	( 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
1931	211.0	K	1965	504.0	K
1932	353.0	K	1966	333.0	K
1933	655.0	K	1967	327.0	K
1934	223.0	K	1968	313.0	K
1935	370.0	K	1969	327.0	K
1936	347.0	K	1970	275.0	K
1937	672.0	K	1971	386.0	K
1938	508.0	K	1974	537.0	K
1939	439.0	K	1975	598.0	
1940	258.0	K	1976	451.0	
1941	416.0	K	1977	404.0	
1942	350.0	K	1978	636.0	K
1943	462.0	K	1979	332.0	
1944	462.0	K	1980	415.0	
1945	255.0	K	1981	432.0	
1946	613.0	K	1982	423.0	
1947	404.0	K	1983	366.0	
1948	531.0	K	1984	325.0	
1949	350.0	K	1985	426.0	
1950	600.0	K	1986	415.0	
1951	416.0	K	1987	387.0	
1952	531.0	K	1988	330.0	
1953	496.0	K	1989	272.0	
1954	500.0	K	1990	395.0	
1955	391.0	K	1991	510.0	K
1956	338.0	K	1992	361.0	K
1957	296.0	K	1993	681.0	K
1958	282.0	K	1994	465.0	K
1959	867.0	K	1995	340.0	K
1960	580.0	K	1996	778.0	K
1961	433.0	K	1997	429.0	K
1962	453.0	K	1998	533.0	K
1963	425.0	K	1999	552.0	K
1964	256.0	K	2000	681.0	K

Explanation of peak discharge qualification codes

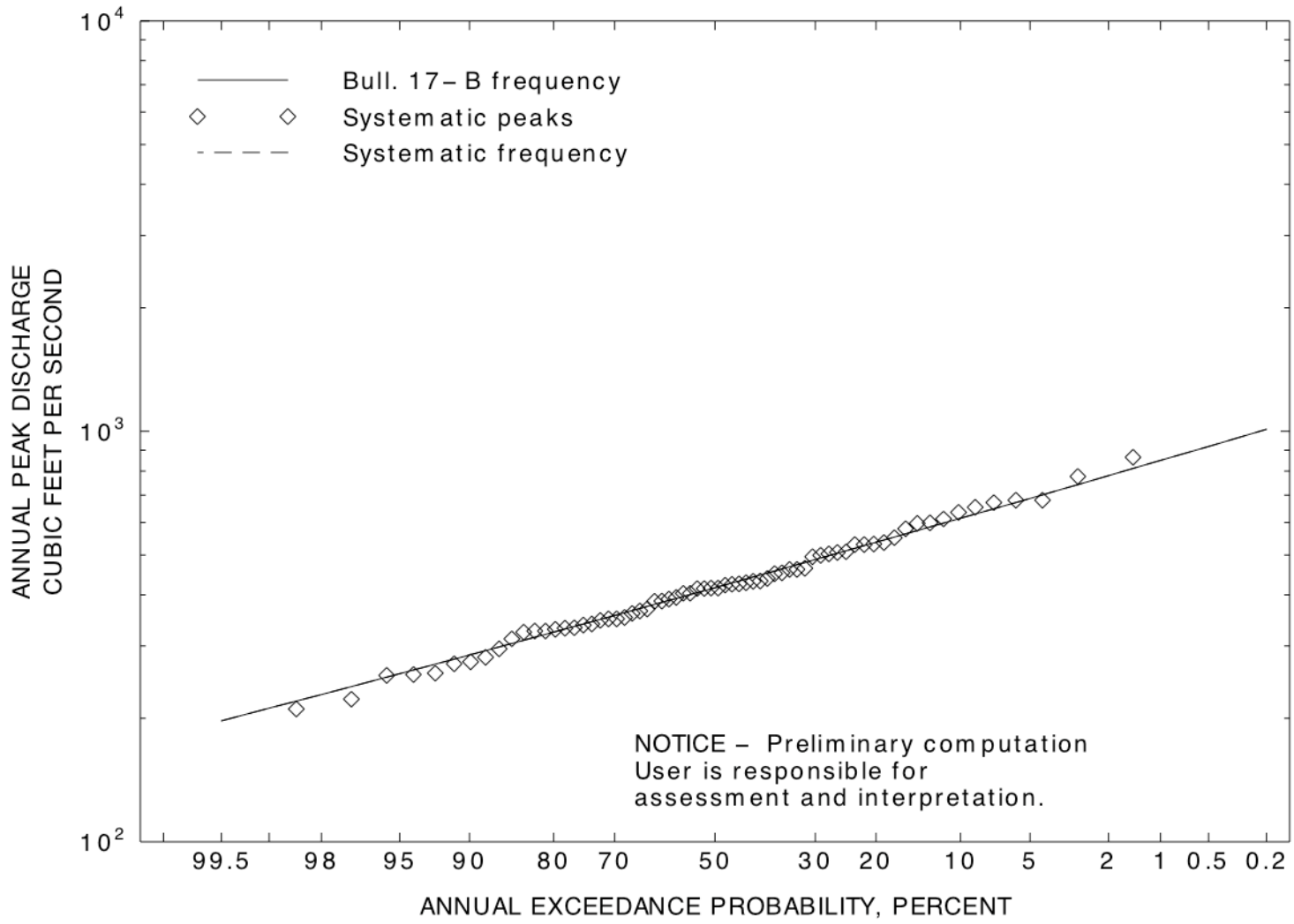
PEAKFQ CODE	WATSTORE CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1959	867.0	0.0145	0.0145
1996	778.0	0.0290	0.0290
1993	681.0	0.0435	0.0435
2000	681.0	0.0580	0.0580
1937	672.0	0.0725	0.0725
1933	655.0	0.0870	0.0870
1978	636.0	0.1014	0.1014
1946	613.0	0.1159	0.1159
1950	600.0	0.1304	0.1304
1975	598.0	0.1449	0.1449
1960	580.0	0.1594	0.1594
1999	552.0	0.1739	0.1739
1974	537.0	0.1884	0.1884
1998	533.0	0.2029	0.2029
1948	531.0	0.2174	0.2174
1952	531.0	0.2319	0.2319
1991	510.0	0.2464	0.2464
1938	508.0	0.2609	0.2609
1965	504.0	0.2754	0.2754
1954	500.0	0.2899	0.2899
1953	496.0	0.3043	0.3043
1994	465.0	0.3188	0.3188
1943	462.0	0.3333	0.3333
1944	462.0	0.3478	0.3478
1962	453.0	0.3623	0.3623
1976	451.0	0.3768	0.3768
1939	439.0	0.3913	0.3913
1961	433.0	0.4058	0.4058
1981	432.0	0.4203	0.4203
1997	429.0	0.4348	0.4348
1985	426.0	0.4493	0.4493
1963	425.0	0.4638	0.4638
1982	423.0	0.4783	0.4783
1941	416.0	0.4928	0.4928
1951	416.0	0.5072	0.5072
1980	415.0	0.5217	0.5217
1986	415.0	0.5362	0.5362
1947	404.0	0.5507	0.5507
1977	404.0	0.5652	0.5652
1990	395.0	0.5797	0.5797
1955	391.0	0.5942	0.5942
1987	387.0	0.6087	0.6087
1971	386.0	0.6232	0.6232
1935	370.0	0.6377	0.6377
1983	366.0	0.6522	0.6522
1992	361.0	0.6667	0.6667
1932	353.0	0.6812	0.6812
1942	350.0	0.6957	0.6957

1949	350.0	0.7101	0.7101
1936	347.0	0.7246	0.7246
1995	340.0	0.7391	0.7391
1956	338.0	0.7536	0.7536
1966	333.0	0.7681	0.7681
1979	332.0	0.7826	0.7826
1988	330.0	0.7971	0.7971
1967	327.0	0.8116	0.8116
1969	327.0	0.8261	0.8261
1984	325.0	0.8406	0.8406
1968	313.0	0.8551	0.8551
1957	296.0	0.8696	0.8696
1958	282.0	0.8841	0.8841
1970	275.0	0.8986	0.8986
1989	272.0	0.9130	0.9130
1940	258.0	0.9275	0.9275
1964	256.0	0.9420	0.9420
1945	255.0	0.9565	0.9565
1934	223.0	0.9710	0.9710
1931	211.0	0.9855	0.9855



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