

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

Station - 04085030 APPLE CREEK NEAR KAUKAUNA, WI
2002 MAR 13 09:02:38

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

Number of peaks in record	=	34
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	34
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.311
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	70.0
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.	1	70.0
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1	160.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		3175.2

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	70.0	0.9706	2.8743	0.2753	-1.298
BULL.17B ESTIMATE	160.0	0.9412	2.8889	0.2464	-0.721

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	--	221.1	--	--	--
0.9000	363.3	320.4	350.9	279.9	442.1
0.8000	495.2	474.5	487.2	402.3	586.8
0.5000	828.5	855.3	828.5	705.2	979.0
0.2000	1259.0	1274.0	1271.0	1060.0	1559.0
0.1000	1512.0	1470.0	1538.0	1254.0	1931.0
0.0400	1793.0	1644.0	1842.0	1460.0	2365.0
0.0200	1976.0	1734.0	2044.0	1591.0	2658.0
0.0100	2138.0	1800.0	2228.0	1705.0	2924.0
0.0050	2284.0	1848.0	2394.0	1806.0	3168.0
0.0020	2454.0	1894.0	2595.0	1923.0	3458.0
0.6667	644.1	(1.50-year flood)			
0.4292	916.2	(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	1040.0		1977	70.0	L
1961	1200.0		1978	530.0	
1962	1150.0		1979	1110.0	
1963	1040.0		1980	930.0	
1964	340.0		1981	1120.0	
1965	380.0		1982	800.0	
1966	770.0		1983	450.0	
1967	720.0		1984	950.0	
1968	940.0		1985	1510.0	
1969	530.0		1986	1250.0	
1970	135.0		1987	180.0	
1971	610.0		1988	1050.0	
1972	320.0		1989	430.0	
1973	1150.0		1990	1110.0	
1974	1210.0		1991	1210.0	
1975	890.0		1992	1010.0	
1976	1330.0		1993	1900.0	

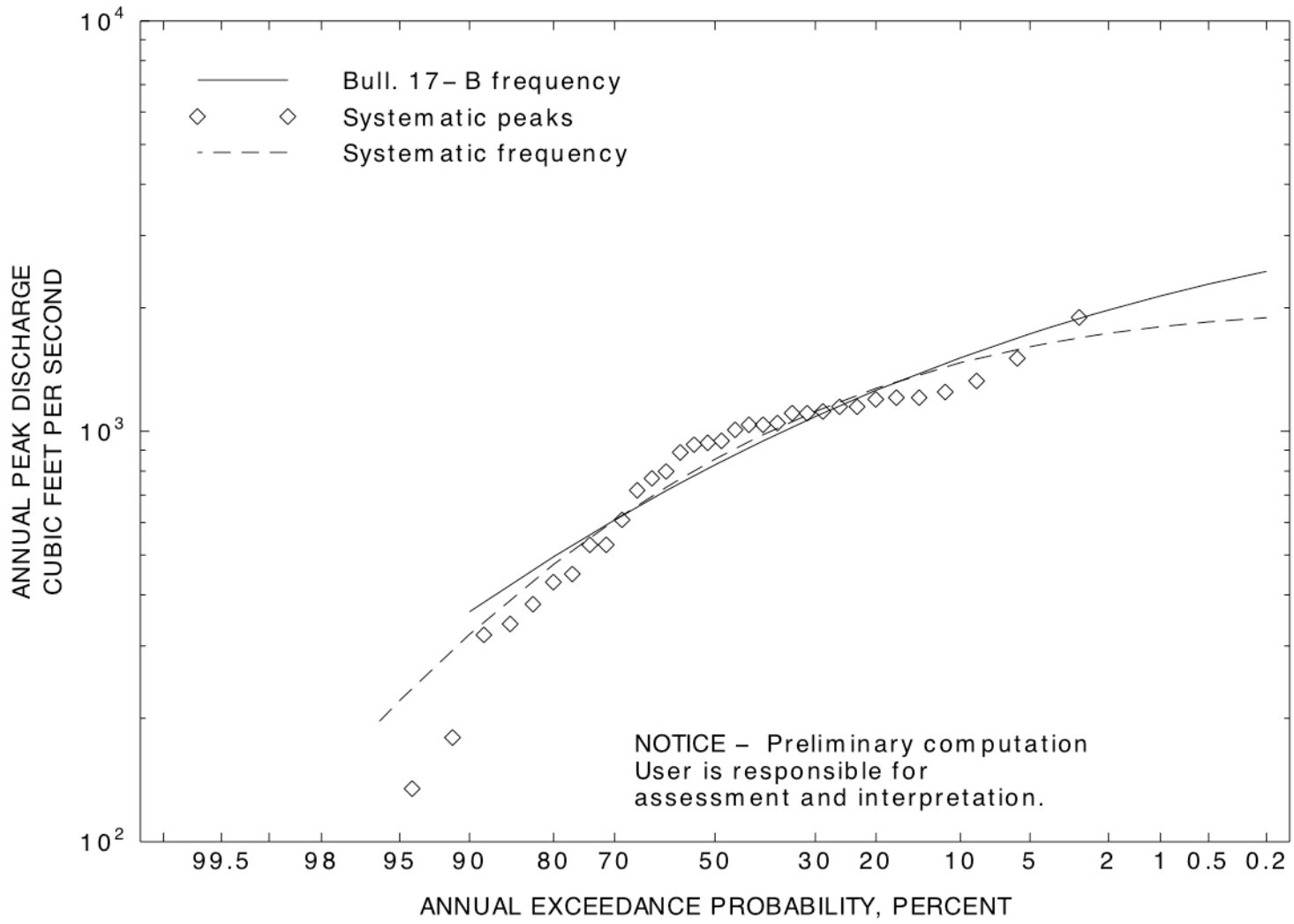
Explanation of peak discharge qualification codes

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
1993	1900.0	0.0286	0.0286
1985	1510.0	0.0571	0.0571
1976	1330.0	0.0857	0.0857
1986	1250.0	0.1143	0.1143
1974	1210.0	0.1429	0.1429
1991	1210.0	0.1714	0.1714
1961	1200.0	0.2000	0.2000
1962	1150.0	0.2286	0.2286
1973	1150.0	0.2571	0.2571
1981	1120.0	0.2857	0.2857
1979	1110.0	0.3143	0.3143
1990	1110.0	0.3429	0.3429
1988	1050.0	0.3714	0.3714
1960	1040.0	0.4000	0.4000
1963	1040.0	0.4286	0.4286
1992	1010.0	0.4571	0.4571
1984	950.0	0.4857	0.4857
1968	940.0	0.5143	0.5143
1980	930.0	0.5429	0.5429
1975	890.0	0.5714	0.5714
1982	800.0	0.6000	0.6000
1966	770.0	0.6286	0.6286
1967	720.0	0.6571	0.6571
1971	610.0	0.6857	0.6857
1969	530.0	0.7143	0.7143
1978	530.0	0.7429	0.7429
1983	450.0	0.7714	0.7714
1989	430.0	0.8000	0.8000
1965	380.0	0.8286	0.8286
1964	340.0	0.8571	0.8571
1972	320.0	0.8857	0.8857
1987	180.0	0.9143	0.9143
1970	135.0	0.9429	0.9429
1977	70.0	--	--



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