

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

Station - W5431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON,
 2002 MAR 13 09:03:23

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

Number of peaks in record	=	62
Peaks not used in analysis	=	1
Systematic peaks in analysis	=	61
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. *****

**WCF109W-PEAKS WITH MINUS-FLAGGED DISCHARGES WERE BYPASSED. 1
 **WCF113W-NUMBER OF SYSTEMATIC PEAKS HAS BEEN REDUCED TO NSYS = 61
 WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE. 0.0
 WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION. 203.3
 WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION. 1 15603.2
 WCF002J-CALCS COMPLETED. RETURN CODE = 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	0.0	1.0000	3.2506	0.3317	-0.042
BULL.17B ESTIMATE	0.0	1.0000	3.2506	0.3317	-0.123

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	228.1	241.7	208.3	152.5	310.4
0.9900	281.4	294.3	262.2	194.5	373.9
0.9500	494.1	502.5	478.1	371.5	619.3
0.9000	663.0	667.0	649.6	518.7	809.5
0.8000	941.2	938.0	931.7	767.0	1121.0
0.5000	1809.0	1790.0	1809.0	1538.0	2129.0
0.2000	3401.0	3392.0	3432.0	2853.0	4177.0
0.1000	4689.0	4722.0	4775.0	3846.0	5978.0
0.0400	6562.0	6706.0	6776.0	5224.0	8754.0
0.0200	8124.0	8400.0	8493.0	6332.0	11180.0
0.0100	9822.0	10280.0	10410.0	7503.0	13910.0
0.0050	11660.0	12360.0	12540.0	8743.0	16960.0
0.0020	14320.0	15430.0	15740.0	10490.0	21520.0
0.6667	1298.5	(1.50-year flood)			
0.4292	2073.1	(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
1938	-10700.0	H	1970	1300.0	
1940	2020.0		1971	2500.0	
1941	1120.0		1972	2570.0	
1942	1950.0		1973	16500.0	
1943	3950.0		1974	2840.0	
1944	2980.0		1975	3190.0	
1945	3380.0		1976	2780.0	
1946	5850.0		1977	1410.0	
1947	1270.0		1978	1840.0	
1948	5350.0		1979	2600.0	
1949	6560.0		1980	763.0	
1950	4150.0		1981	1010.0	
1951	2060.0		1982	3340.0	
1952	1930.0		1983	1180.0	
1953	2350.0		1984	1190.0	
1954	756.0		1985	1100.0	
1955	2270.0		1986	3120.0	
1956	590.0		1987	854.0	
1957	800.0		1988	1500.0	
1958	320.0		1989	1170.0	
1959	3020.0		1990	929.0	
1960	3400.0		1991	924.0	
1961	1600.0		1992	570.0	
1962	1880.0		1993	5580.0	
1963	1300.0		1994	4600.0	
1964	2640.0		1995	416.0	
1965	1800.0		1996	1170.0	
1966	2500.0		1997	3070.0	
1967	560.0		1998	2290.0	
1968	269.0		1999	1760.0	
1969	1070.0		2000	1670.0	

Explanation of peak discharge qualification codes

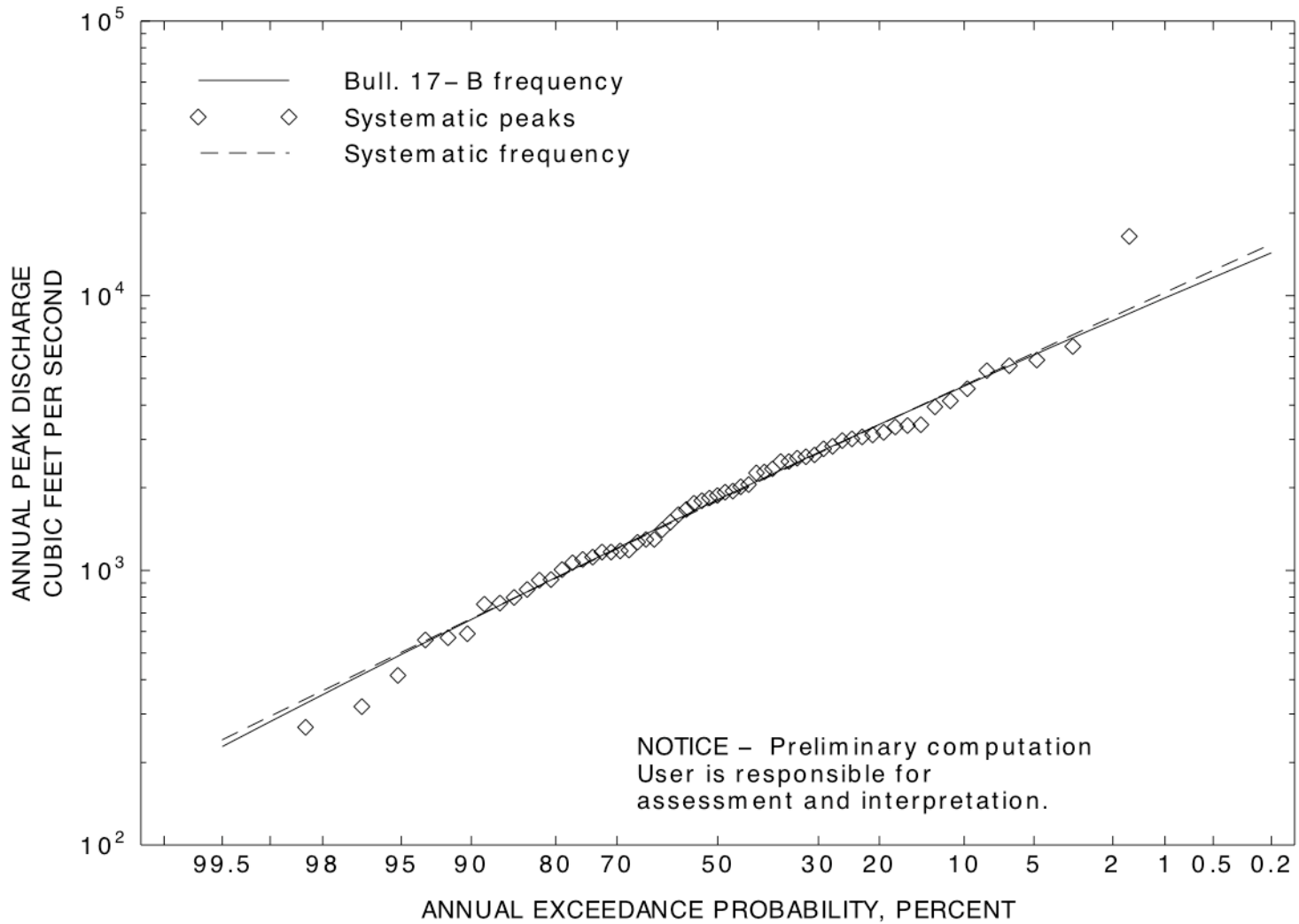
PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1973	16500.0	0.0161	0.0161
1949	6560.0	0.0323	0.0323
1946	5850.0	0.0484	0.0484
1993	5580.0	0.0645	0.0645
1948	5350.0	0.0806	0.0806
1994	4600.0	0.0968	0.0968
1950	4150.0	0.1129	0.1129
1943	3950.0	0.1290	0.1290
1960	3400.0	0.1452	0.1452
1945	3380.0	0.1613	0.1613
1982	3340.0	0.1774	0.1774
1975	3190.0	0.1935	0.1935
1986	3120.0	0.2097	0.2097
1997	3070.0	0.2258	0.2258
1959	3020.0	0.2419	0.2419
1944	2980.0	0.2581	0.2581
1974	2840.0	0.2742	0.2742
1976	2780.0	0.2903	0.2903
1964	2640.0	0.3065	0.3065
1979	2600.0	0.3226	0.3226
1972	2570.0	0.3387	0.3387
1966	2500.0	0.3548	0.3548
1971	2500.0	0.3710	0.3710
1953	2350.0	0.3871	0.3871
1998	2290.0	0.4032	0.4032
1955	2270.0	0.4194	0.4194
1951	2060.0	0.4355	0.4355
1940	2020.0	0.4516	0.4516
1942	1950.0	0.4677	0.4677
1952	1930.0	0.4839	0.4839
1962	1880.0	0.5000	0.5000
1978	1840.0	0.5161	0.5161
1965	1800.0	0.5323	0.5323
1999	1760.0	0.5484	0.5484
2000	1670.0	0.5645	0.5645
1961	1600.0	0.5806	0.5806
1988	1500.0	0.5968	0.5968
1977	1410.0	0.6129	0.6129
1963	1300.0	0.6290	0.6290
1970	1300.0	0.6452	0.6452
1947	1270.0	0.6613	0.6613
1984	1190.0	0.6774	0.6774
1983	1180.0	0.6935	0.6935
1989	1170.0	0.7097	0.7097
1996	1170.0	0.7258	0.7258
1941	1120.0	0.7419	0.7419
1985	1100.0	0.7581	0.7581
1969	1070.0	0.7742	0.7742

1981	1010.0	0.7903	0.7903
1990	929.0	0.8065	0.8065
1991	924.0	0.8226	0.8226
1987	854.0	0.8387	0.8387
1957	800.0	0.8548	0.8548
1980	763.0	0.8710	0.8710
1954	756.0	0.8871	0.8871
1956	590.0	0.9032	0.9032
1992	570.0	0.9194	0.9194
1967	560.0	0.9355	0.9355
1995	416.0	0.9516	0.9516
1958	320.0	0.9677	0.9677
1968	269.0	0.9839	0.9839
1938	-10700.0	--	--



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