

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

Station - 04027500 WHITE RIVER NEAR ASHLAND, WI
 2002 MAR 13 09:02:14

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

Number of peaks in record	=	52
Peaks not used in analysis	=	2
Systematic peaks in analysis	=	50
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.147
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.		2
**WCF113W-NUMBER OF SYSTEMATIC PEAKS HAS BEEN REDUCED TO NSYS =	=	50
WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.		0.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		664.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		10267.2
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	3.4171	0.2147	-0.101
BULL.17B ESTIMATE	0.0	1.0000	3.4171	0.2147	-0.113

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	693.7	697.7	645.6	517.8	862.0
0.9900	793.9	797.4	750.7	607.0	970.4
0.9500	1141.0	1142.0	1111.0	927.2	1338.0
0.9000	1379.0	1379.0	1357.0	1154.0	1588.0
0.8000	1728.0	1728.0	1715.0	1490.0	1958.0
0.5000	2637.0	2634.0	2637.0	2347.0	2964.0
0.2000	3971.0	3970.0	4000.0	3504.0	4608.0
0.1000	4893.0	4896.0	4964.0	4251.0	5836.0
0.0400	6089.0	6102.0	6247.0	5179.0	7510.0
0.0200	6998.0	7021.0	7250.0	5863.0	8832.0
0.0100	7919.0	7956.0	8296.0	6542.0	10210.0
0.0050	8859.0	8910.0	9392.0	7221.0	11650.0
0.0020	10130.0	10210.0	10930.0	8124.0	13650.0
0.6667	2128.0	(1.50-year flood)			
0.4292	2880.4	(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
1949	3720.0		1975	1400.0	
1950	3480.0		1976	2750.0	
1951	3480.0		1977	1930.0	
1952	5390.0		1978	5660.0	
1953	6270.0		1979	-3020.0	K
1954	3800.0		1980	1220.0	
1955	2200.0		1981	1700.0	
1956	2060.0		1982	2630.0	
1957	1010.0		1983	1450.0	
1958	1430.0		1984	3840.0	
1959	940.0		1985	3870.0	
1960	4630.0		1986	4960.0	
1961	1900.0		1987	3660.0	
1962	2860.0		1988	2810.0	
1963	2660.0		1989	1930.0	
1964	3200.0		1990	1910.0	
1965	2960.0		1991	2650.0	
1966	2160.0		1992	6270.0	
1967	4210.0		1993	2110.0	
1968	1270.0		1994	2260.0	
1969	1960.0		1995	1700.0	
1970	1370.0		1996	4930.0	
1971	3060.0		1997	3360.0	
1972	5050.0		1998	3050.0	
1973	1650.0		1999	4520.0	
1974	1400.0		2000	-2000.0	K

Explanation of peak discharge qualification codes

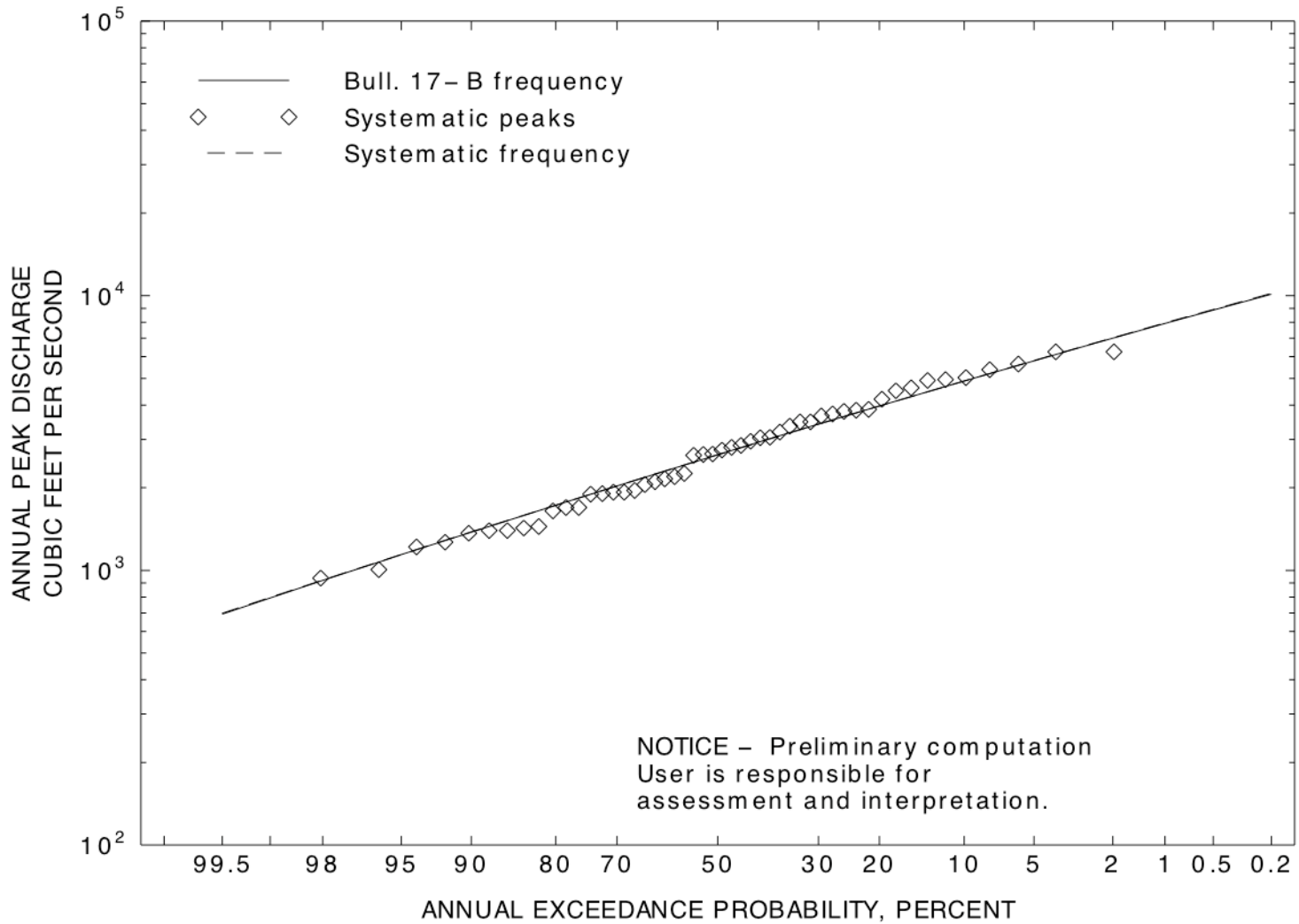
PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1953	6270.0	0.0196	0.0196
1992	6270.0	0.0392	0.0392
1978	5660.0	0.0588	0.0588
1952	5390.0	0.0784	0.0784
1972	5050.0	0.0980	0.0980
1986	4960.0	0.1176	0.1176
1996	4930.0	0.1373	0.1373
1960	4630.0	0.1569	0.1569
1999	4520.0	0.1765	0.1765
1967	4210.0	0.1961	0.1961
1985	3870.0	0.2157	0.2157
1984	3840.0	0.2353	0.2353
1954	3800.0	0.2549	0.2549
1949	3720.0	0.2745	0.2745
1987	3660.0	0.2941	0.2941
1950	3480.0	0.3137	0.3137
1951	3480.0	0.3333	0.3333
1997	3360.0	0.3529	0.3529
1964	3200.0	0.3725	0.3725
1971	3060.0	0.3922	0.3922
1998	3050.0	0.4118	0.4118
1965	2960.0	0.4314	0.4314
1962	2860.0	0.4510	0.4510
1988	2810.0	0.4706	0.4706
1976	2750.0	0.4902	0.4902
1963	2660.0	0.5098	0.5098
1991	2650.0	0.5294	0.5294
1982	2630.0	0.5490	0.5490
1994	2260.0	0.5686	0.5686
1955	2200.0	0.5882	0.5882
1966	2160.0	0.6078	0.6078
1993	2110.0	0.6275	0.6275
1956	2060.0	0.6471	0.6471
1969	1960.0	0.6667	0.6667
1977	1930.0	0.6863	0.6863
1989	1930.0	0.7059	0.7059
1990	1910.0	0.7255	0.7255
1961	1900.0	0.7451	0.7451
1981	1700.0	0.7647	0.7647
1995	1700.0	0.7843	0.7843
1973	1650.0	0.8039	0.8039
1983	1450.0	0.8235	0.8235
1958	1430.0	0.8431	0.8431
1974	1400.0	0.8627	0.8627
1975	1400.0	0.8824	0.8824
1970	1370.0	0.9020	0.9020
1968	1270.0	0.9216	0.9216
1980	1220.0	0.9412	0.9412

1957	1010.0	0.9608	0.9608
1959	940.0	0.9804	0.9804
2000	-2000.0	--	--
1979	-3020.0	--	--



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