

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

Station - 05433500 YELLOWSTONE RIVER NEAR BLANCHARDVILLE, WI
 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	=	45
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	45
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.	66.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	24205.1

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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	3.1042	0.4693	-0.786
BULL.17B ESTIMATE	0.0	1.0000	3.1042	0.4693	-0.642

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	41.3	36.0	32.0	18.9	72.9
0.9900	62.8	56.5	51.7	31.1	104.7
0.9500	180.6	174.8	166.6	108.9	264.6
0.9000	301.9	300.2	287.6	198.4	419.4
0.8000	538.2	546.5	526.1	383.8	714.6
0.5000	1426.0	1463.0	1426.0	1093.0	1875.0
0.2000	3210.0	3207.0	3256.0	2408.0	4539.0
0.1000	4615.0	4493.0	4734.0	3367.0	6865.0
0.0400	6509.0	6117.0	6784.0	4597.0	10220.0
0.0200	7946.0	7273.0	8376.0	5495.0	12910.0
0.0100	9372.0	8361.0	9996.0	6362.0	15670.0
0.0050	10770.0	9376.0	11620.0	7198.0	18470.0
0.0020	12580.0	10610.0	13780.0	8250.0	22180.0
0.6667	883.3	(1.50-year flood)			
0.4292	1728.4	(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
1955	2100.0		1979	243.0	
1956	463.0		1980	2600.0	
1957	2500.0		1981	4500.0	
1958	1320.0		1982	2450.0	
1959	3100.0		1983	695.0	
1960	4500.0		1984	800.0	
1961	1310.0		1985	1450.0	
1962	1700.0		1986	275.0	
1963	2700.0		1987	92.0	
1964	1900.0		1988	144.0	
1965	2500.0		1989	1420.0	
1966	2100.0		1990	8500.0	
1967	3600.0		1991	800.0	
1968	825.0		1992	620.0	
1969	3050.0		1993	4700.0	
1970	114.0		1994	2150.0	
1971	300.0		1995	195.0	
1972	1750.0		1996	5100.0	
1973	2100.0		1997	940.0	
1975	2550.0		1998	380.0	
1976	1750.0		1999	836.0	
1977	1100.0		2000	2920.0	
1978	3050.0				

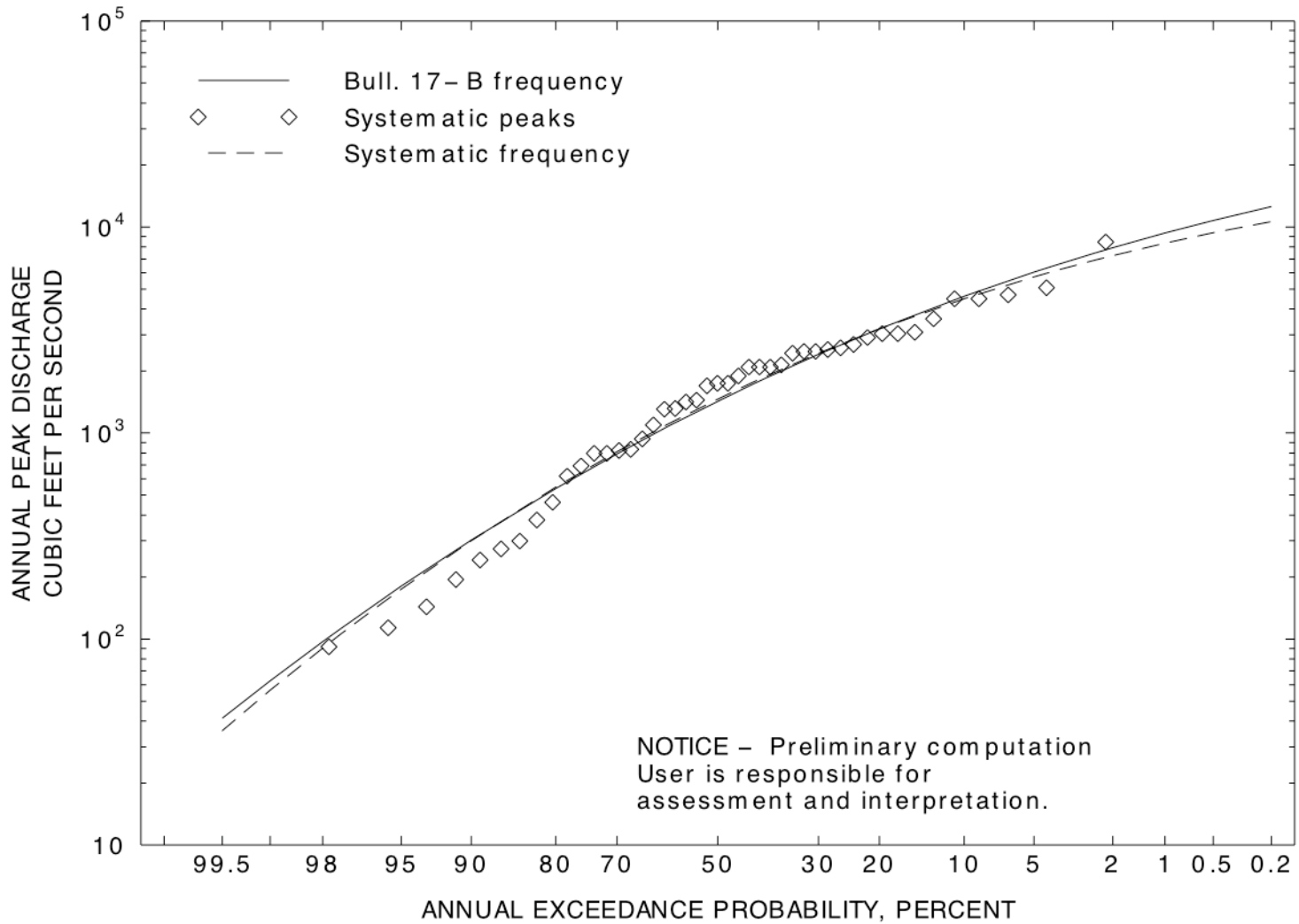
Explanation of peak discharge qualification codes

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
1990	8500.0	0.0217	0.0217
1996	5100.0	0.0435	0.0435
1993	4700.0	0.0652	0.0652
1960	4500.0	0.0870	0.0870
1981	4500.0	0.1087	0.1087
1967	3600.0	0.1304	0.1304
1959	3100.0	0.1522	0.1522
1969	3050.0	0.1739	0.1739
1978	3050.0	0.1957	0.1957
2000	2920.0	0.2174	0.2174
1963	2700.0	0.2391	0.2391
1980	2600.0	0.2609	0.2609
1975	2550.0	0.2826	0.2826
1957	2500.0	0.3043	0.3043
1965	2500.0	0.3261	0.3261
1982	2450.0	0.3478	0.3478
1994	2150.0	0.3696	0.3696
1955	2100.0	0.3913	0.3913
1966	2100.0	0.4130	0.4130
1973	2100.0	0.4348	0.4348
1964	1900.0	0.4565	0.4565
1972	1750.0	0.4783	0.4783
1976	1750.0	0.5000	0.5000
1962	1700.0	0.5217	0.5217
1985	1450.0	0.5435	0.5435
1989	1420.0	0.5652	0.5652
1958	1320.0	0.5870	0.5870
1961	1310.0	0.6087	0.6087
1977	1100.0	0.6304	0.6304
1997	940.0	0.6522	0.6522
1999	836.0	0.6739	0.6739
1968	825.0	0.6957	0.6957
1984	800.0	0.7174	0.7174
1991	800.0	0.7391	0.7391
1983	695.0	0.7609	0.7609
1992	620.0	0.7826	0.7826
1956	463.0	0.8043	0.8043
1998	380.0	0.8261	0.8261
1971	300.0	0.8478	0.8478
1986	275.0	0.8696	0.8696
1979	243.0	0.8913	0.8913
1995	195.0	0.9130	0.9130
1988	144.0	0.9348	0.9348
1970	114.0	0.9565	0.9565
1987	92.0	0.9783	0.9783



NOTICE - Preliminary computation
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