

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

Station - 05380900 POPLAR RIVER NEAR OWEN, WI
2002 MAR 13 09:02:57

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

Number of peaks in record	=	42
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	42
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.299
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	1500.0
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.	2	1500.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		1220.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		18531.1

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	1500.0	0.9524	3.6622	0.2272	0.072
BULL.17B ESTIMATE	1500.0	0.9524	3.6622	0.2272	-0.037

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	1932.0	1964.0	1872.0	1518.0	2317.0
0.9000	2345.0	2359.0	2299.0	1904.0	2757.0
0.8000	2960.0	2952.0	2931.0	2489.0	3416.0
0.5000	4609.0	4565.0	4609.0	4027.0	5276.0
0.2000	7142.0	7121.0	7211.0	6187.0	8495.0
0.1000	8963.0	9017.0	9134.0	7625.0	11030.0
0.0400	11400.0	11630.0	11800.0	9461.0	14630.0
0.0200	13310.0	13730.0	13960.0	10850.0	17570.0
0.0100	15300.0	15950.0	16290.0	12250.0	20740.0
0.0050	17360.0	18320.0	18800.0	13670.0	24130.0
0.0020	20230.0	21680.0	22470.0	15610.0	29000.0
0.6667	3677.1	(1.50-year flood)			
0.4292	5059.1	(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
1958	10000.0		1979	3700.0	
1959	2800.0		1980	12500.0	
1960	5100.0		1981	4300.0	
1961	1800.0		1982	2300.0	
1962	1500.0		1984	3400.0	
1963	3410.0		1985	2480.0	
1964	3380.0		1986	6100.0	
1965	7800.0		1987	9200.0	
1966	5600.0		1988	6150.0	
1967	10000.0		1989	9600.0	
1968	5100.0		1990	9100.0	
1969	5700.0		1991	5400.0	
1970	4300.0		1992	7600.0	
1971	6200.0		1993	10800.0	
1972	4300.0		1994	2660.0	
1973	8800.0		1995	4600.0	
1974	2300.0		1996	2790.0	
1975	2750.0		1997	4800.0	
1976	3700.0		1998	2740.0	
1977	2600.0		1999	1500.0	L
1978	5600.0		2000	4120.0	

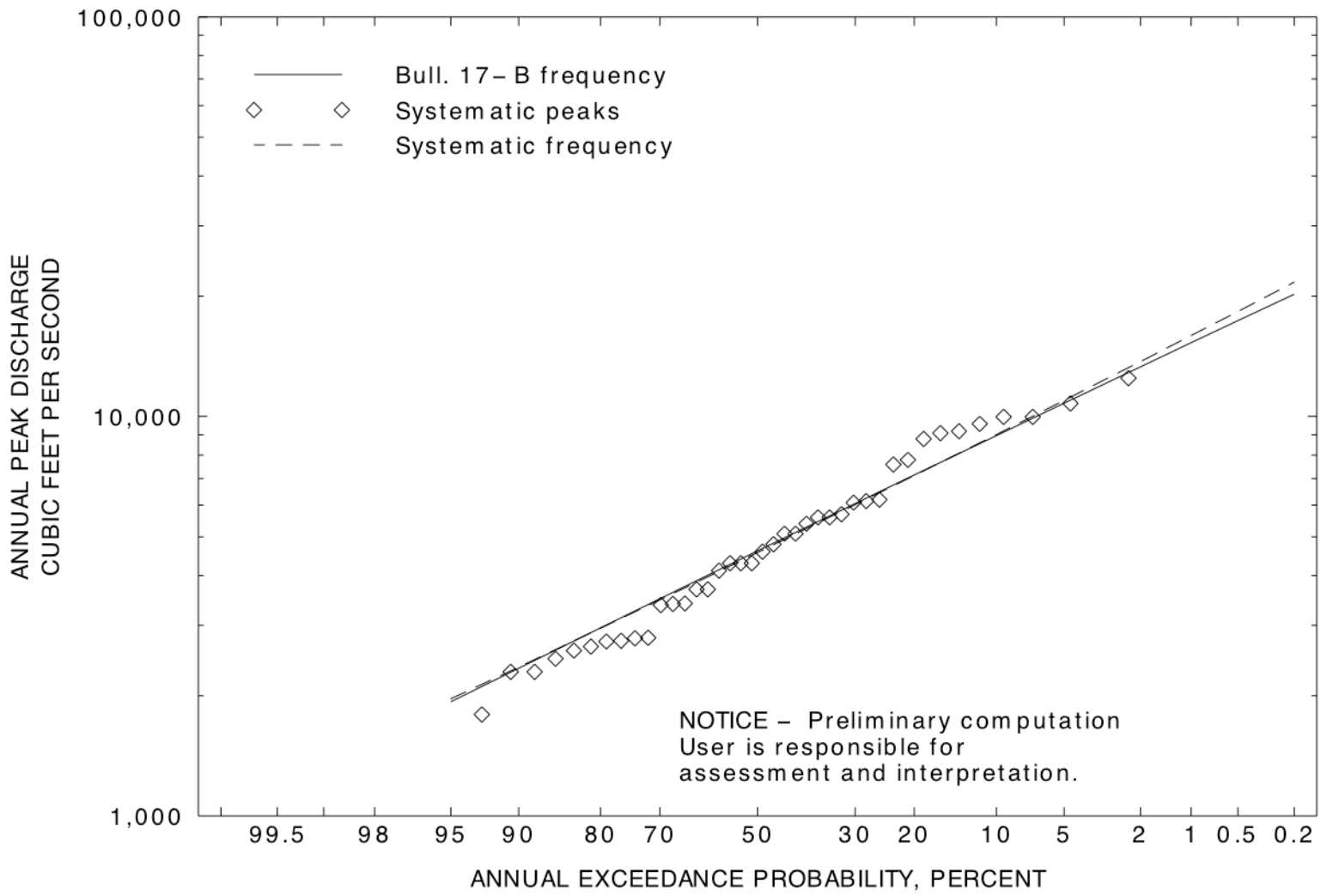
Explanation of peak discharge qualification codes

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
1980	12500.0	0.0233	0.0233
1993	10800.0	0.0465	0.0465
1958	10000.0	0.0698	0.0698
1967	10000.0	0.0930	0.0930
1989	9600.0	0.1163	0.1163
1987	9200.0	0.1395	0.1395
1990	9100.0	0.1628	0.1628
1973	8800.0	0.1860	0.1860
1965	7800.0	0.2093	0.2093
1992	7600.0	0.2326	0.2326
1971	6200.0	0.2558	0.2558
1988	6150.0	0.2791	0.2791
1986	6100.0	0.3023	0.3023
1969	5700.0	0.3256	0.3256
1966	5600.0	0.3488	0.3488
1978	5600.0	0.3721	0.3721
1991	5400.0	0.3953	0.3953
1960	5100.0	0.4186	0.4186
1968	5100.0	0.4419	0.4419
1997	4800.0	0.4651	0.4651
1995	4600.0	0.4884	0.4884
1970	4300.0	0.5116	0.5116
1972	4300.0	0.5349	0.5349
1981	4300.0	0.5581	0.5581
2000	4120.0	0.5814	0.5814
1976	3700.0	0.6047	0.6047
1979	3700.0	0.6279	0.6279
1963	3410.0	0.6512	0.6512
1984	3400.0	0.6744	0.6744
1964	3380.0	0.6977	0.6977
1959	2800.0	0.7209	0.7209
1996	2790.0	0.7442	0.7442
1975	2750.0	0.7674	0.7674
1998	2740.0	0.7907	0.7907
1994	2660.0	0.8140	0.8140
1977	2600.0	0.8372	0.8372
1985	2480.0	0.8605	0.8605
1974	2300.0	0.8837	0.8837
1982	2300.0	0.9070	0.9070
1961	1800.0	0.9302	0.9302
1962	1500.0	--	--
1999	1500.0	--	--



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