

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

Station - 05413400 PIGEON CREEK NEAR LANCASTER, WI
2002 MAR 13 09:03:13

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

Number of peaks in record	=	41
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	41
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	=	150.0
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.	5	150.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		3789.8
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		60.2

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	150.0	0.8780	2.6156	0.3683	0.368
BULL.17B ESTIMATE	150.0	0.8780	2.6156	0.3683	0.111

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
0.8000	201.3	199.9	198.7	151.3	254.6
0.5000	406.2	391.8	406.2	325.3	506.8
0.2000	838.3	826.3	852.5	662.9	1114.0
0.1000	1235.0	1258.0	1278.0	946.6	1741.0
0.0400	1880.0	2016.0	2000.0	1378.0	2854.0
0.0200	2476.0	2770.0	2703.0	1755.0	3960.0
0.0100	3179.0	3719.0	3577.0	2183.0	5342.0
0.0050	4005.0	4907.0	4661.0	2667.0	7053.0
0.0020	5313.0	6930.0	6502.0	3404.0	9918.0
0.6667	283.0	(1.50-year flood)			
0.4292	472.2	(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	1100.0		1981	310.0	
1961	120.0		1982	180.0	
1962	580.0		1983	183.0	
1963	155.0		1984	315.0	
1964	210.0		1985	390.0	
1965	491.0		1986	255.0	
1966	2000.0		1987	225.0	
1967	2800.0		1988	150.0	L
1968	110.0		1989	420.0	
1969	320.0		1990	630.0	
1970	280.0		1991	990.0	
1971	260.0		1992	150.0	L
1972	1860.0		1993	1250.0	
1973	1360.0		1994	300.0	
1974	900.0		1995	180.0	
1975	280.0		1996	180.0	
1976	560.0		1997	400.0	
1977	760.0		1998	640.0	
1978	1200.0		1999	150.0	
1979	500.0		2000	1000.0	
1980	220.0				

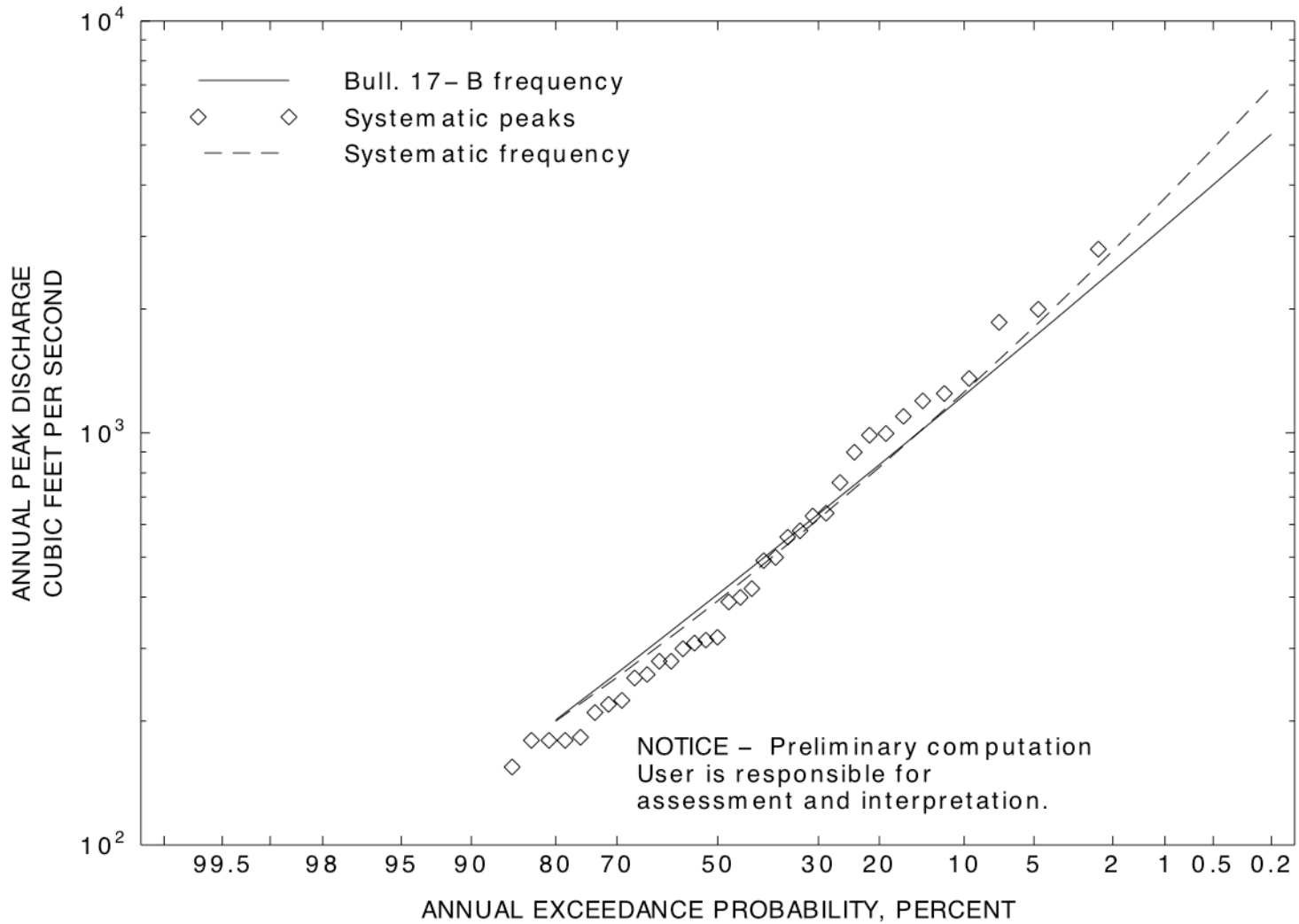
Explanation of peak discharge qualification codes

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
1967	2800.0	0.0238	0.0238
1966	2000.0	0.0476	0.0476
1972	1860.0	0.0714	0.0714
1973	1360.0	0.0952	0.0952
1993	1250.0	0.1190	0.1190
1978	1200.0	0.1429	0.1429
1960	1100.0	0.1667	0.1667
2000	1000.0	0.1905	0.1905
1991	990.0	0.2143	0.2143
1974	900.0	0.2381	0.2381
1977	760.0	0.2619	0.2619
1998	640.0	0.2857	0.2857
1990	630.0	0.3095	0.3095
1962	580.0	0.3333	0.3333
1976	560.0	0.3571	0.3571
1979	500.0	0.3810	0.3810
1965	491.0	0.4048	0.4048
1989	420.0	0.4286	0.4286
1997	400.0	0.4524	0.4524
1985	390.0	0.4762	0.4762
1969	320.0	0.5000	0.5000
1984	315.0	0.5238	0.5238
1981	310.0	0.5476	0.5476
1994	300.0	0.5714	0.5714
1970	280.0	0.5952	0.5952
1975	280.0	0.6190	0.6190
1971	260.0	0.6429	0.6429
1986	255.0	0.6667	0.6667
1987	225.0	0.6905	0.6905
1980	220.0	0.7143	0.7143
1964	210.0	0.7381	0.7381
1983	183.0	0.7619	0.7619
1982	180.0	0.7857	0.7857
1995	180.0	0.8095	0.8095
1996	180.0	0.8333	0.8333
1963	155.0	0.8571	0.8571
1988	150.0	--	--
1992	150.0	--	--
1999	150.0	--	--
1961	120.0	--	--
1968	110.0	--	--



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