

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

Station - 05414900 PATS CREEK NEAR ELK GROVE, WI
 2002 MAR 13 09:03:16

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

Number of peaks in record	=	40
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	40
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	=	200.0
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	200.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		7449.6
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		48.0

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	200.0	0.8750	2.7122	0.4284	1.500
BULL.17B ESTIMATE	200.0	0.8750	2.7122	0.4284	0.422

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	221.7	228.4	220.7	158.1	292.6
0.5000	481.1	406.9	481.1	369.5	623.3
0.2000	1152.0	1019.0	1177.0	874.7	1606.0
0.1000	1892.0	1921.0	1981.0	1380.0	2848.0
0.0400	3316.0	4281.0	3618.0	2274.0	5527.0
0.0200	4848.0	7716.0	5508.0	3171.0	8710.0
0.0100	6905.0	13770.0	8223.0	4310.0	13330.0
0.0050	9641.0	24380.0	12130.0	5747.0	19960.0
0.0020	14630.0	51430.0	20000.0	8224.0	33120.0
0.6667	320.3	(1.50-year flood)			
0.4292	571.4	(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
1960	720.0		1981	320.0	
1961	310.0		1982	490.0	
1962	350.0		1983	218.0	
1963	140.0		1984	310.0	
1964	350.0		1985	430.0	
1965	500.0		1986	200.0	L
1966	420.0		1987	200.0	L
1967	1680.0		1988	200.0	L
1968	265.0		1989	355.0	
1969	7040.0		1990	3100.0	
1970	510.0		1991	320.0	
1971	620.0		1992	250.0	
1972	260.0		1993	7000.0	
1973	310.0		1994	660.0	
1974	1580.0		1995	440.0	
1975	180.0		1996	380.0	
1976	560.0		1997	460.0	
1978	1160.0		1998	340.0	
1979	250.0		1999	980.0	
1980	410.0		2000	6600.0	

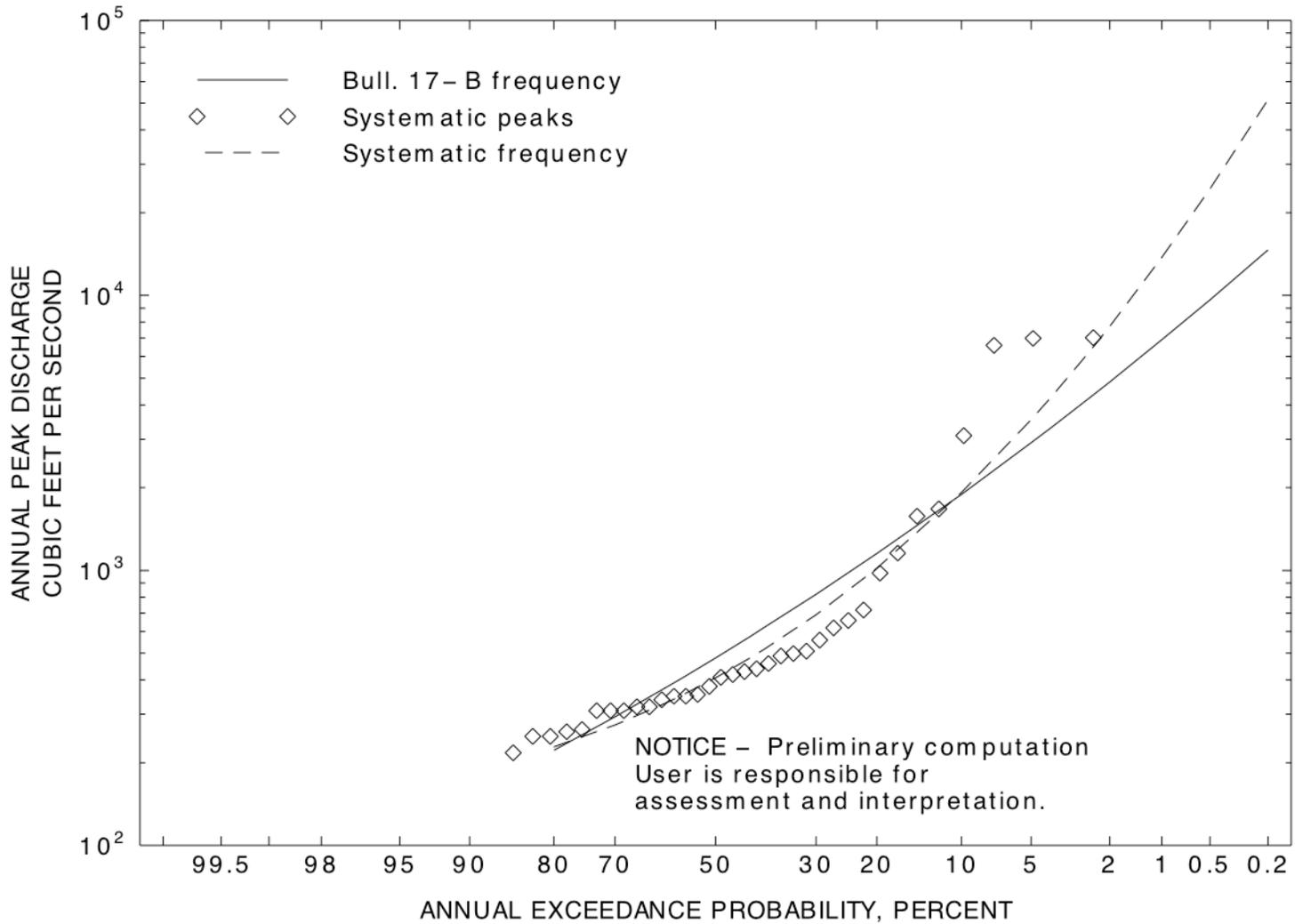
Explanation of peak discharge qualification codes

PEAKFQ	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
1969	7040.0	0.0244	0.0244
1993	7000.0	0.0488	0.0488
2000	6600.0	0.0732	0.0732
1990	3100.0	0.0976	0.0976
1967	1680.0	0.1220	0.1220
1974	1580.0	0.1463	0.1463
1978	1160.0	0.1707	0.1707
1999	980.0	0.1951	0.1951
1960	720.0	0.2195	0.2195
1994	660.0	0.2439	0.2439
1971	620.0	0.2683	0.2683
1976	560.0	0.2927	0.2927
1970	510.0	0.3171	0.3171
1965	500.0	0.3415	0.3415
1982	490.0	0.3659	0.3659
1997	460.0	0.3902	0.3902
1995	440.0	0.4146	0.4146
1985	430.0	0.4390	0.4390
1966	420.0	0.4634	0.4634
1980	410.0	0.4878	0.4878
1996	380.0	0.5122	0.5122
1989	355.0	0.5366	0.5366
1962	350.0	0.5610	0.5610
1964	350.0	0.5854	0.5854
1998	340.0	0.6098	0.6098
1981	320.0	0.6341	0.6341
1991	320.0	0.6585	0.6585
1961	310.0	0.6829	0.6829
1973	310.0	0.7073	0.7073
1984	310.0	0.7317	0.7317
1968	265.0	0.7561	0.7561
1972	260.0	0.7805	0.7805
1979	250.0	0.8049	0.8049
1992	250.0	0.8293	0.8293
1983	218.0	0.8537	0.8537
1986	200.0	--	--
1987	200.0	--	--
1988	200.0	--	--
1975	180.0	--	--
1963	140.0	--	--



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