

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

Station - 05394200 DEVIL CREEK NEAR MERRILL, WI
2002 MAR 13 09:03:04

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	=	-0.242
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	125.0
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.	3	125.0
WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION.	1	1069.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		92.5

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	125.0	0.9250	2.4778	0.2068	0.977
BULL.17B ESTIMATE	125.0	0.9250	2.4778	0.2068	0.452

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
0.9000	167.8	175.3	165.4	138.8	194.6
0.8000	199.9	200.3	198.4	169.8	228.6
0.5000	289.9	278.4	289.9	255.2	328.5
0.2000	442.3	431.5	447.1	387.4	519.3
0.1000	563.3	568.7	576.1	483.7	686.3
0.0400	741.0	792.6	773.3	617.3	949.0
0.0200	892.6	1003.0	950.3	726.5	1186.0
0.0100	1062.0	1258.0	1157.0	844.7	1462.0
0.0050	1251.0	1567.0	1402.0	973.1	1783.0
0.0020	1537.0	2077.0	1793.0	1161.0	2288.0
0.6667	238.4	(1.50-year flood)			
0.4292	315.0	(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
1961	145.0		1981	290.0	
1962	285.0		1982	400.0	
1963	90.0		1983	360.0	
1964	140.0		1984	295.0	
1965	250.0		1985	245.0	
1966	115.0		1986	400.0	
1967	300.0		1987	500.0	
1968	190.0		1988	400.0	
1969	280.0		1989	300.0	
1970	250.0		1990	1600.0	
1971	320.0		1991	360.0	
1972	480.0		1992	335.0	
1973	380.0		1993	255.0	
1974	195.0		1994	172.0	
1975	430.0		1995	276.0	
1976	500.0		1996	344.0	
1977	150.0		1997	310.0	
1978	500.0		1998	272.0	
1979	290.0		1999	125.0	L
1980	765.0		2000	225.0	

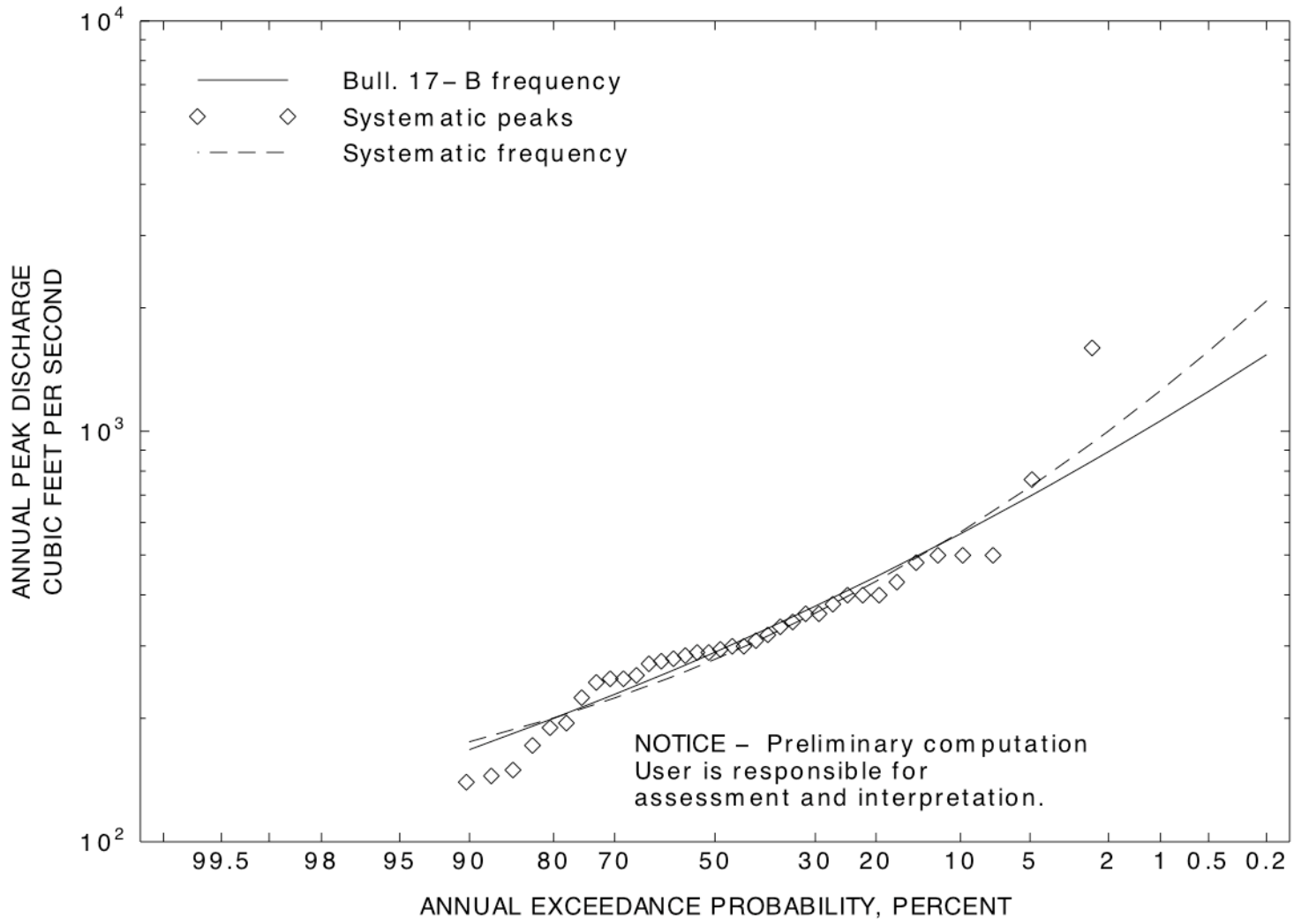
Explanation of peak discharge qualification codes

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
1990	1600.0	0.0244	0.0244
1980	765.0	0.0488	0.0488
1976	500.0	0.0732	0.0732
1978	500.0	0.0976	0.0976
1987	500.0	0.1220	0.1220
1972	480.0	0.1463	0.1463
1975	430.0	0.1707	0.1707
1982	400.0	0.1951	0.1951
1986	400.0	0.2195	0.2195
1988	400.0	0.2439	0.2439
1973	380.0	0.2683	0.2683
1983	360.0	0.2927	0.2927
1991	360.0	0.3171	0.3171
1996	344.0	0.3415	0.3415
1992	335.0	0.3659	0.3659
1971	320.0	0.3902	0.3902
1997	310.0	0.4146	0.4146
1967	300.0	0.4390	0.4390
1989	300.0	0.4634	0.4634
1984	295.0	0.4878	0.4878
1979	290.0	0.5122	0.5122
1981	290.0	0.5366	0.5366
1962	285.0	0.5610	0.5610
1969	280.0	0.5854	0.5854
1995	276.0	0.6098	0.6098
1998	272.0	0.6341	0.6341
1993	255.0	0.6585	0.6585
1965	250.0	0.6829	0.6829
1970	250.0	0.7073	0.7073
1985	245.0	0.7317	0.7317
2000	225.0	0.7561	0.7561
1974	195.0	0.7805	0.7805
1968	190.0	0.8049	0.8049
1994	172.0	0.8293	0.8293
1977	150.0	0.8537	0.8537
1961	145.0	0.8780	0.8780
1964	140.0	0.9024	0.9024
1999	125.0	--	--
1966	115.0	--	--
1963	90.0	--	--



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