

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

Station - W4087159 KINNICKINNIC RIVER AT S. 11TH ST. AT MILWAUKEE,
 2002 MAR 13 09:02:42

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

Number of peaks in record	=	18
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	18
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.		1482.9
WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION.	1	9841.9

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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	3.5821	0.1760	0.274
BULL.17B ESTIMATE	0.0	1.0000	3.5821	0.1760	-0.059

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	1315.0	1493.0	1107.0	832.0	1729.0
0.9900	1462.0	1616.0	1281.0	960.8	1885.0
0.9500	1948.0	2027.0	1835.0	1412.0	2392.0
0.9000	2267.0	2303.0	2185.0	1723.0	2725.0
0.8000	2720.0	2705.0	2669.0	2175.0	3207.0
0.5000	3836.0	3750.0	3836.0	3257.0	4520.0
0.2000	5379.0	5338.0	5476.0	4561.0	6731.0
0.1000	6405.0	6489.0	6633.0	5333.0	8412.0
0.0400	7703.0	8057.0	8209.0	6246.0	10720.0
0.0200	8669.0	9308.0	9486.0	6895.0	12560.0
0.0100	9636.0	10630.0	10870.0	7523.0	14480.0
0.0050	10610.0	12040.0	12380.0	8140.0	16500.0
0.0020	11910.0	14040.0	14630.0	8943.0	19330.0
0.6667	3219.2	(1.50-year flood)			
0.4292	4123.0	(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
1983	2430.0		1992	4280.0	
1984	1550.0		1993	3850.0	
1985	2760.0		1994	4720.0	
1986	10600.0		1995	4320.0	
1987	3710.0		1996	3230.0	
1988	2560.0		1997	4420.0	
1989	3350.0		1998	3990.0	
1990	4260.0		1999	4980.0	
1991	3420.0		2000	6170.0	

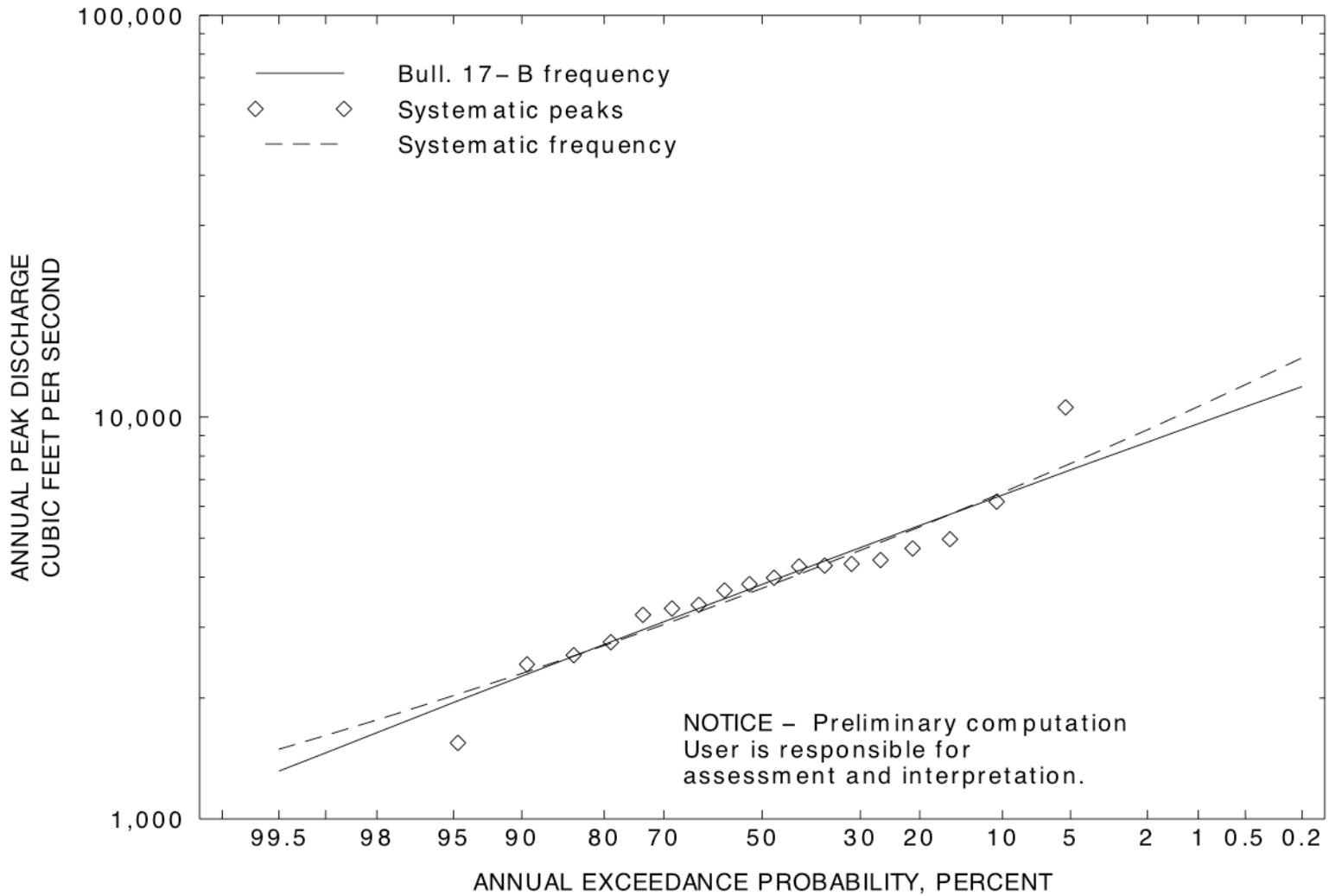
Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	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
1986	10600.0	0.0526	0.0526
2000	6170.0	0.1053	0.1053
1999	4980.0	0.1579	0.1579
1994	4720.0	0.2105	0.2105
1997	4420.0	0.2632	0.2632
1995	4320.0	0.3158	0.3158
1992	4280.0	0.3684	0.3684
1990	4260.0	0.4211	0.4211
1998	3990.0	0.4737	0.4737
1993	3850.0	0.5263	0.5263
1987	3710.0	0.5789	0.5789
1991	3420.0	0.6316	0.6316
1989	3350.0	0.6842	0.6842
1996	3230.0	0.7368	0.7368
1985	2760.0	0.7895	0.7895
1988	2560.0	0.8421	0.8421
1983	2430.0	0.8947	0.8947
1984	1550.0	0.9474	0.9474



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