

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

Station - 05431017 DELAVAN LAKE INLET AT ST HWY 50 AT LAKE LAWN, WI
 2002 MAR 13 09:03:23

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

Number of peaks in record	=	16
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	16
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.	89.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	1245.1

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	2.5227	0.2512	-0.026
BULL.17B ESTIMATE	0.0	1.0000	2.5227	0.2512	-0.213

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	66.9	74.1	48.5	31.8	102.5
0.9900	79.3	85.8	62.1	40.3	117.5
0.9500	124.4	128.1	111.9	74.9	170.0
0.9000	156.9	158.5	147.1	102.4	207.1
0.8000	206.2	204.9	199.8	146.3	264.2
0.5000	340.1	334.0	340.1	265.5	437.4
0.2000	544.9	542.5	559.9	424.8	770.5
0.1000	689.2	698.1	726.2	524.0	1047.0
0.0400	878.1	912.6	964.1	644.3	1450.0
0.0200	1022.0	1084.0	1164.0	731.1	1785.0
0.0100	1168.0	1266.0	1385.0	815.8	2145.0
0.0050	1317.0	1458.0	1634.0	899.2	2533.0
0.0020	1518.0	1729.0	2009.0	1008.0	3086.0
0.6667	264.2	(1.50-year flood)			
0.4292	377.1	(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
1984	310.0		1993	751.0	
1985	216.0		1994	571.0	
1986	823.0		1995	261.0	
1987	421.0		1996	588.0	
1988	118.0		1997	411.0	
1989	195.0		1998	159.0	
1990	222.0		1999	598.0	
1991	224.0		2000	338.0	

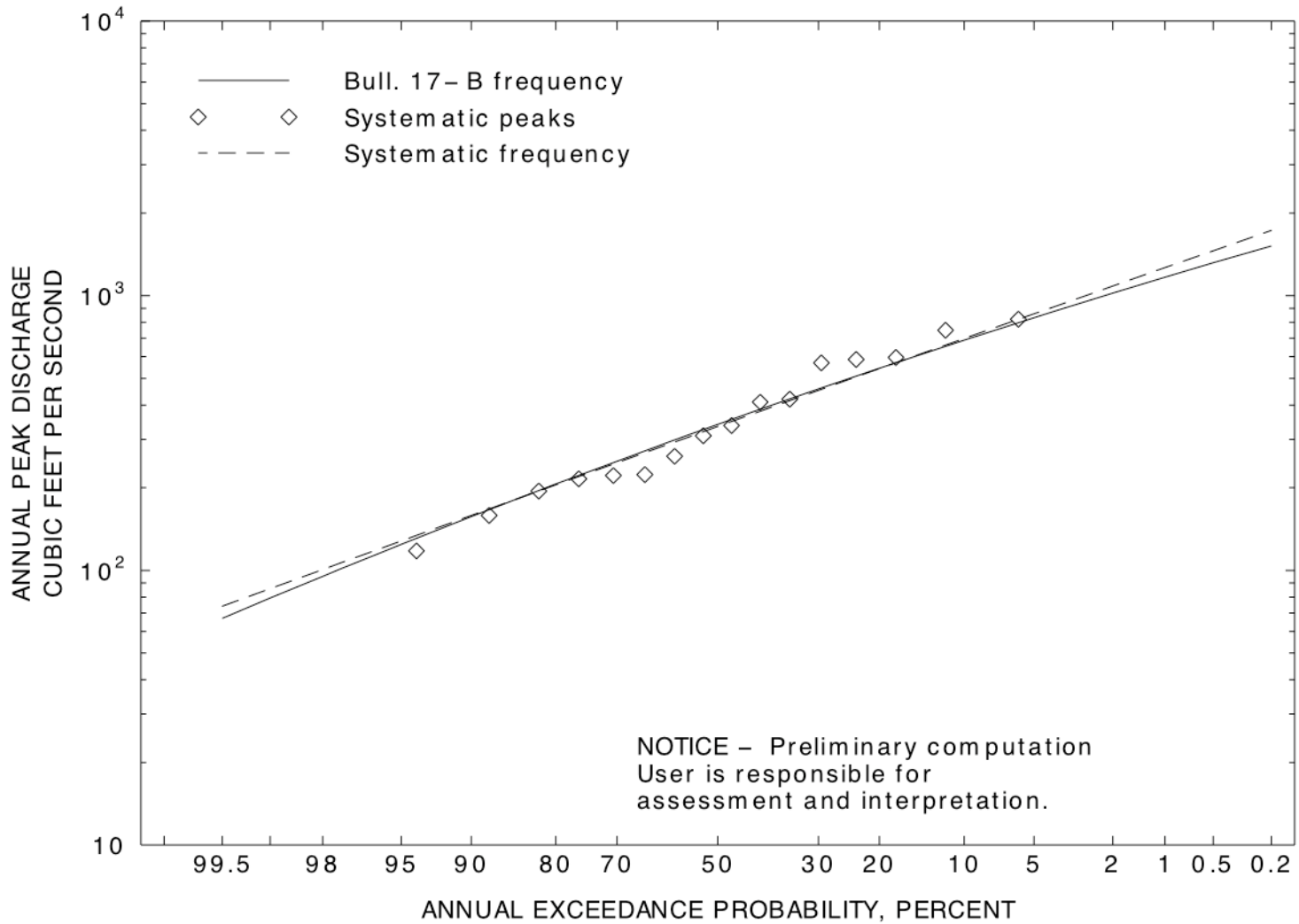
Explanation of peak discharge qualification codes

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	823.0	0.0588	0.0588
1993	751.0	0.1176	0.1176
1999	598.0	0.1765	0.1765
1996	588.0	0.2353	0.2353
1994	571.0	0.2941	0.2941
1987	421.0	0.3529	0.3529
1997	411.0	0.4118	0.4118
2000	338.0	0.4706	0.4706
1984	310.0	0.5294	0.5294
1995	261.0	0.5882	0.5882
1991	224.0	0.6471	0.6471
1990	222.0	0.7059	0.7059
1985	216.0	0.7647	0.7647
1989	195.0	0.8235	0.8235
1998	159.0	0.8824	0.8824
1988	118.0	0.9412	0.9412



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