

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

Station - 05544300 MUKWONAGO RIVER TRIBUTARY NR MUKWONAGO, WI
 2002 MAR 13 09:03:25

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

Number of peaks in record	=	21
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	21
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	=	10.0
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	10.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		8.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		127.0

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	10.0	0.8571	1.4441	0.2978	-0.707
BULL.17B ESTIMATE	10.0	0.8571	1.4441	0.2978	-0.553

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	16.0	16.2	15.5	11.4	20.7
0.5000	29.6	30.1	29.6	23.0	38.4
0.2000	50.0	50.0	51.1	38.6	70.7
0.1000	63.7	62.5	66.1	47.9	95.4
0.0400	80.3	77.0	85.5	58.7	128.2
0.0200	92.1	86.7	100.1	66.0	153.0
0.0100	103.4	95.6	114.7	72.8	177.7
0.0050	114.1	103.7	129.2	79.1	202.2
0.0020	127.6	113.3	148.2	86.8	234.0
0.6667	21.9	(1.50-year flood)			
0.4292	33.5	(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	36.0		1971	30.0	
1961	13.0		1973	31.0	
1962	14.0		1974	50.0	
1963	10.0	L	1975	44.0	
1964	26.0		1976	56.0	
1965	14.0		1977	11.0	
1966	24.0		1978	58.0	
1967	30.0		1979	60.0	
1968	48.0		1980	58.0	
1969	66.0		1981	10.0	
1970	10.0	L			

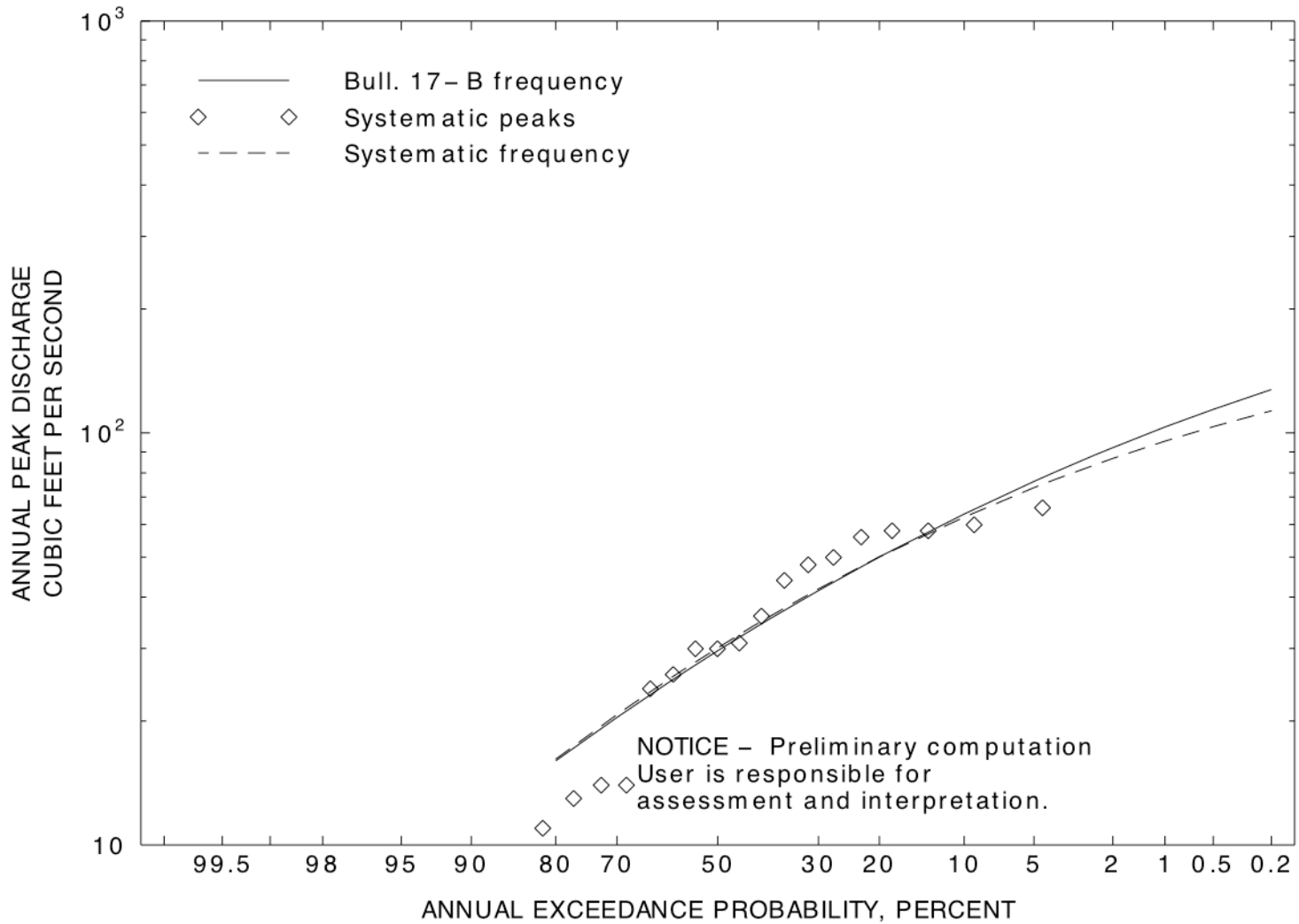
Explanation of peak discharge qualification codes

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
1969	66.0	0.0455	0.0455
1979	60.0	0.0909	0.0909
1978	58.0	0.1364	0.1364
1980	58.0	0.1818	0.1818
1976	56.0	0.2273	0.2273
1974	50.0	0.2727	0.2727
1968	48.0	0.3182	0.3182
1975	44.0	0.3636	0.3636
1960	36.0	0.4091	0.4091
1973	31.0	0.4545	0.4545
1967	30.0	0.5000	0.5000
1971	30.0	0.5455	0.5455
1964	26.0	0.5909	0.5909
1966	24.0	0.6364	0.6364
1962	14.0	0.6818	0.6818
1965	14.0	0.7273	0.7273
1961	13.0	0.7727	0.7727
1977	11.0	0.8182	0.8182
1963	10.0	--	--
1970	10.0	--	--
1981	10.0	--	--



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