

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

Station - 040857005 OTTER CREEK AT WILLOW ROAD NEAR PLYMOUTH, WI
 2002 MAR 13 09:02:40

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

Number of peaks in record	=	10
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	10
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.362
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.	28.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	584.1
**WCF233W-EXPECTED PROB OUT OF RANGE AT TAB PROB.	0.00003 0.00200
WCF002J-CALCS COMPLETED. RETURN CODE = 2	

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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	2.1081	0.3234	-0.933
BULL.17B ESTIMATE	0.0	1.0000	2.1081	0.3234	-0.559

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	12.8	10.0	4.8	2.7	26.4
0.9900	16.8	14.0	8.2	4.3	32.5
0.9500	33.9	32.0	25.7	12.8	56.0
0.9000	47.8	47.3	40.7	21.7	74.3
0.8000	70.5	72.6	65.4	38.4	104.7
0.5000	137.4	143.8	137.4	91.3	212.0
0.2000	242.8	242.2	255.3	163.0	453.3
0.1000	315.1	299.9	345.4	205.3	664.5
0.0400	405.1	362.1	473.3	253.5	972.6
0.0200	469.8	400.8	577.2	285.9	1223.0
0.0100	532.1	433.8	688.2	315.8	1483.0
0.0050	592.0	462.0	804.7	343.6	1753.0
0.0020	667.6	493.2	--	377.4	2117.0
0.6667	98.8	(1.50-year flood)			
0.4292	157.0	(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
1991	69.0		1996	167.0	
1992	69.0		1997	234.0	
1993	223.0		1998	255.0	
1994	82.0		1999	247.0	
1995	29.0		2000	194.0	

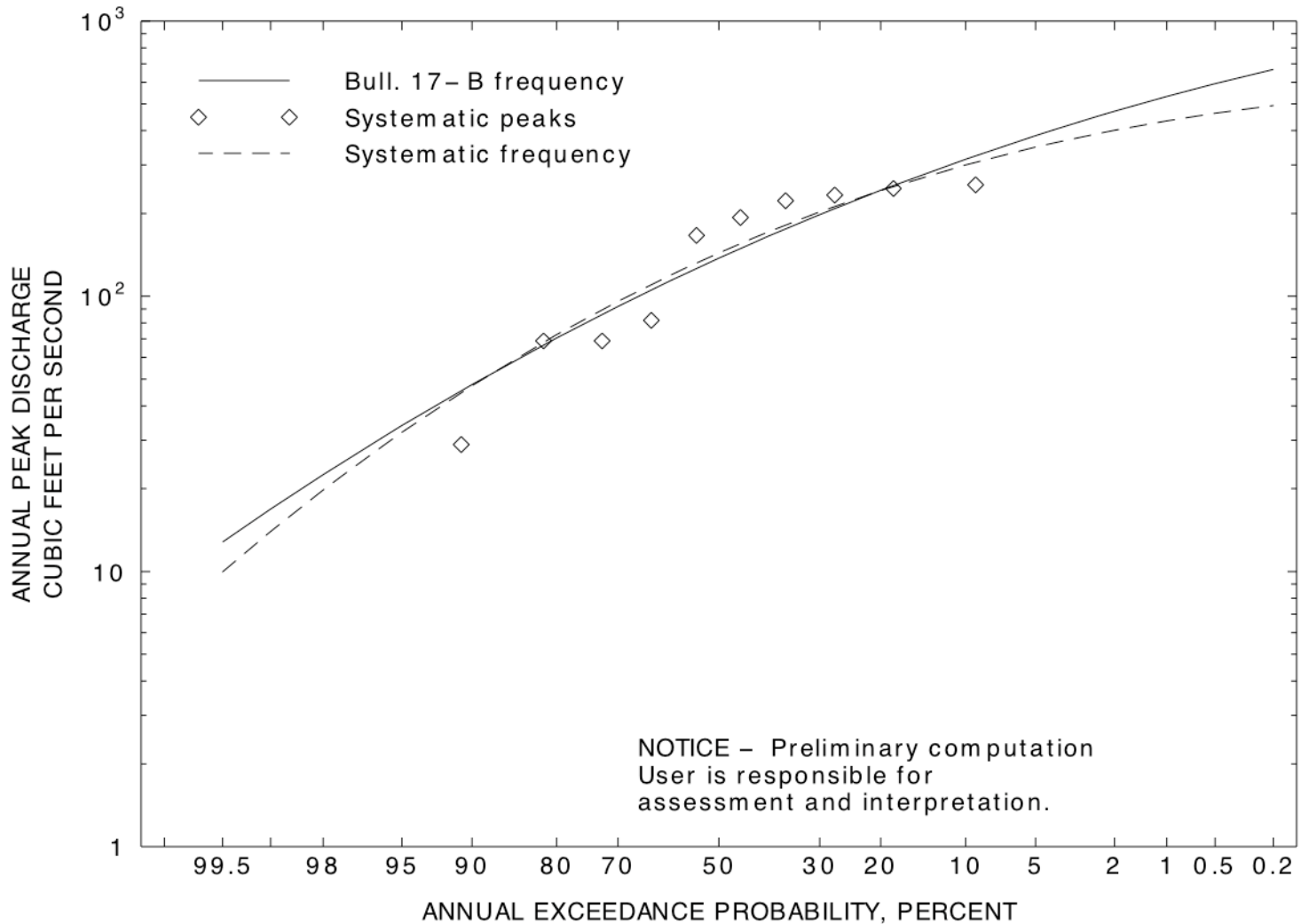
Explanation of peak discharge qualification codes

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
1998	255.0	0.0909	0.0909
1999	247.0	0.1818	0.1818
1997	234.0	0.2727	0.2727
1993	223.0	0.3636	0.3636
2000	194.0	0.4545	0.4545
1996	167.0	0.5455	0.5455
1994	82.0	0.6364	0.6364
1991	69.0	0.7273	0.7273
1992	69.0	0.8182	0.8182
1995	29.0	0.9091	0.9091



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