

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

Station - 05334100 SAWYER CREEK NEAR SHELL LAKE, WI  
2002 MAR 13 09:02:45

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	=	-0.278
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	20.0
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.	2	20.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		15.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		146.3

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	20.0	0.9048	1.6404	0.2248	-0.040
BULL.17B ESTIMATE	20.0	0.9048	1.6404	0.2248	-0.144

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	22.3	22.5	21.8	16.3	27.8
0.8000	28.4	28.3	27.8	21.9	34.5
0.5000	44.2	43.8	44.2	36.5	53.7
0.2000	67.8	67.6	69.0	55.7	87.9
0.1000	84.1	84.6	87.2	67.6	115.0
0.0400	105.3	107.4	112.4	82.2	153.4
0.0200	121.5	125.1	133.0	92.7	184.6
0.0100	137.9	143.5	155.4	103.1	217.8
0.0050	154.5	162.6	179.9	113.3	253.1
0.0020	177.1	189.1	216.1	126.8	303.0
0.6667	35.3	( 1.50-year flood )			
0.4292	48.5	( 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	53.0		1971	68.0	
1961	52.0		1972	75.0	
1962	20.0	L	1973	32.0	
1963	28.0		1974	28.0	
1964	32.0		1975	25.0	
1965	97.0		1976	70.0	
1966	28.0		1977	40.0	
1967	100.0		1978	22.0	
1968	88.0		1979	53.0	
1969	45.0		1980	57.0	
1970	20.0	L			

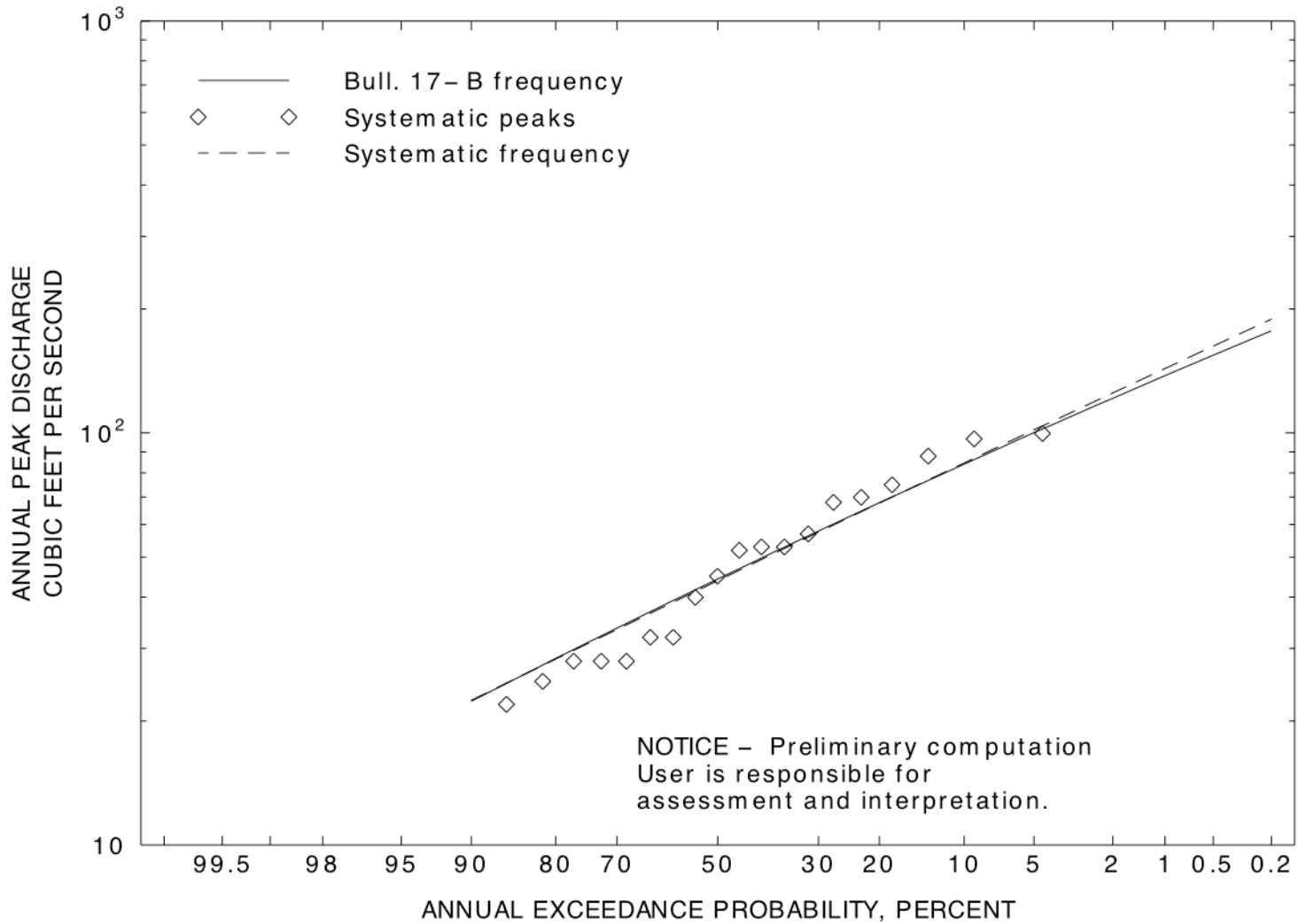
Explanation of peak discharge qualification codes

PEAKFQ CODE	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
1967	100.0	0.0455	0.0455
1965	97.0	0.0909	0.0909
1968	88.0	0.1364	0.1364
1972	75.0	0.1818	0.1818
1976	70.0	0.2273	0.2273
1971	68.0	0.2727	0.2727
1980	57.0	0.3182	0.3182
1960	53.0	0.3636	0.3636
1979	53.0	0.4091	0.4091
1961	52.0	0.4545	0.4545
1969	45.0	0.5000	0.5000
1977	40.0	0.5455	0.5455
1964	32.0	0.5909	0.5909
1973	32.0	0.6364	0.6364
1963	28.0	0.6818	0.6818
1966	28.0	0.7273	0.7273
1974	28.0	0.7727	0.7727
1975	25.0	0.8182	0.8182
1978	22.0	0.8636	0.8636
1962	20.0	--	--
1970	20.0	--	--



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