

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

Station - 05415500 EAST FORK GALENA RIVER AT COUNCIL HILL, IL
 2002 MAR 13 09:03:16

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

Number of peaks in record	=	30
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	30
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.	209.6
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	19019.3

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	3.3003	0.3819	0.342
BULL.17B ESTIMATE	0.0	1.0000	3.3003	0.3819	0.051

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	216.1	274.8	178.6	109.4	343.4
0.9900	266.7	322.6	229.7	142.2	410.7
0.9500	476.0	514.4	443.4	290.8	677.3
0.9000	650.1	671.3	621.7	424.5	892.0
0.8000	950.5	942.3	929.1	666.5	1261.0
0.5000	1982.0	1899.0	1982.0	1512.0	2597.0
0.2000	4176.0	4109.0	4276.0	3150.0	5951.0
0.1000	6191.0	6333.0	6488.0	4508.0	9500.0
0.0400	9453.0	10270.0	10300.0	6542.0	15900.0
0.0200	12450.0	14220.0	14050.0	8297.0	22330.0
0.0100	15960.0	19210.0	18770.0	10260.0	30410.0
0.0050	20060.0	25470.0	24710.0	12460.0	40450.0
0.0020	26490.0	36200.0	34980.0	15770.0	57310.0
0.6667	1359.6	(1.50-year flood)			
0.4292	2317.5	(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
1940	565.0		1955	634.0	
1941	825.0		1956	1740.0	
1942	3860.0		1957	4190.0	
1943	8620.0		1958	858.0	
1944	2060.0		1959	1230.0	
1945	5080.0		1960	2270.0	
1946	1540.0		1961	2390.0	
1947	16600.0		1962	1320.0	
1948	2890.0		1963	975.0	
1949	5250.0		1964	907.0	
1950	3590.0		1965	6650.0	
1951	4000.0		1966	2540.0	
1952	842.0		1967	2370.0	
1953	2770.0		1968	462.0	
1954	652.0		1969	1300.0	

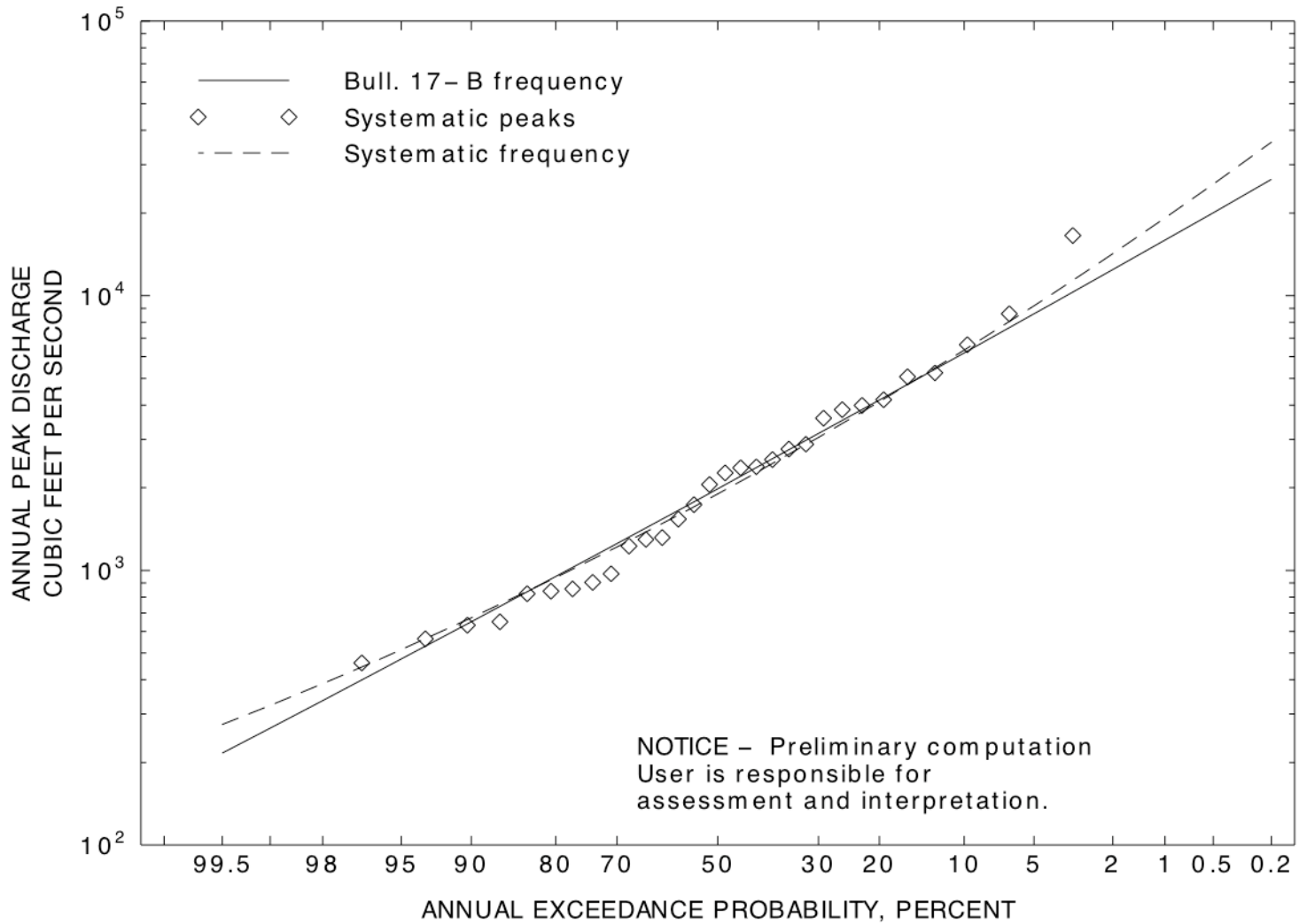
Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
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
1947	16600.0	0.0323	0.0323
1943	8620.0	0.0645	0.0645
1965	6650.0	0.0968	0.0968
1949	5250.0	0.1290	0.1290
1945	5080.0	0.1613	0.1613
1957	4190.0	0.1935	0.1935
1951	4000.0	0.2258	0.2258
1942	3860.0	0.2581	0.2581
1950	3590.0	0.2903	0.2903
1948	2890.0	0.3226	0.3226
1953	2770.0	0.3548	0.3548
1966	2540.0	0.3871	0.3871
1961	2390.0	0.4194	0.4194
1967	2370.0	0.4516	0.4516
1960	2270.0	0.4839	0.4839
1944	2060.0	0.5161	0.5161
1956	1740.0	0.5484	0.5484
1946	1540.0	0.5806	0.5806
1962	1320.0	0.6129	0.6129
1969	1300.0	0.6452	0.6452
1959	1230.0	0.6774	0.6774
1963	975.0	0.7097	0.7097
1964	907.0	0.7419	0.7419
1958	858.0	0.7742	0.7742
1952	842.0	0.8065	0.8065
1941	825.0	0.8387	0.8387
1954	652.0	0.8710	0.8710
1955	634.0	0.9032	0.9032
1940	565.0	0.9355	0.9355
1968	462.0	0.9677	0.9677



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