

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

Station - 05415000 GALENA RIVER AT BUNCOMBE, WI
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	=	54
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	54
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.		752.8
WCF162I-SYSTEMATIC PEAKS EXCEEDED HIGH-OUTLIER CRITERION.	1	25422.7

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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	3.6409	0.2732	0.349
BULL.17B ESTIMATE	0.0	1.0000	3.6409	0.2732	0.137

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	938.9	1064.0	878.0	674.9	1205.0
0.9900	1080.0	1192.0	1023.0	794.2	1363.0
0.9500	1594.0	1661.0	1553.0	1248.0	1932.0
0.9000	1973.0	2008.0	1940.0	1593.0	2345.0
0.8000	2567.0	2557.0	2545.0	2141.0	2992.0
0.5000	4312.0	4218.0	4312.0	3738.0	4972.0
0.2000	7393.0	7328.0	7463.0	6345.0	8854.0
0.1000	9880.0	9991.0	10070.0	8302.0	12270.0
0.0400	13550.0	14140.0	14030.0	11040.0	17630.0
0.0200	16670.0	17850.0	17520.0	13290.0	22420.0
0.0100	20130.0	22150.0	21520.0	15710.0	27950.0
0.0050	23970.0	27140.0	26130.0	18320.0	34290.0
0.0020	29700.0	34940.0	33300.0	22120.0	44100.0
0.6667	3300.0	(1.50-year flood)			
0.4292	4820.8	(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
1937	18000.0		1966	4000.0	
1940	3860.0		1967	4540.0	
1941	2760.0		1968	2340.0	
1942	5820.0		1969	29700.0	
1943	7420.0		1970	2940.0	
1944	4640.0		1971	3200.0	
1945	4370.0		1972	5780.0	
1946	8080.0		1973	3200.0	
1947	5820.0		1974	6760.0	
1948	8960.0		1975	7770.0	
1949	6600.0		1976	5400.0	
1950	7000.0		1977	4820.0	
1951	6800.0		1978	4140.0	
1952	6200.0		1979	2810.0	
1953	12400.0		1980	2760.0	
1954	5010.0		1981	2260.0	
1955	7250.0		1982	2880.0	
1956	3390.0		1983	1810.0	
1957	4630.0		1984	1640.0	
1958	2890.0		1985	4400.0	
1959	6460.0		1986	3430.0	
1960	8430.0		1987	1050.0	
1961	2240.0		1988	1300.0	
1962	3530.0		1989	2500.0	
1963	4560.0		1990	10300.0	
1964	2790.0		1991	2600.0	
1965	6280.0		1992	1640.0	

Explanation of peak discharge qualification codes

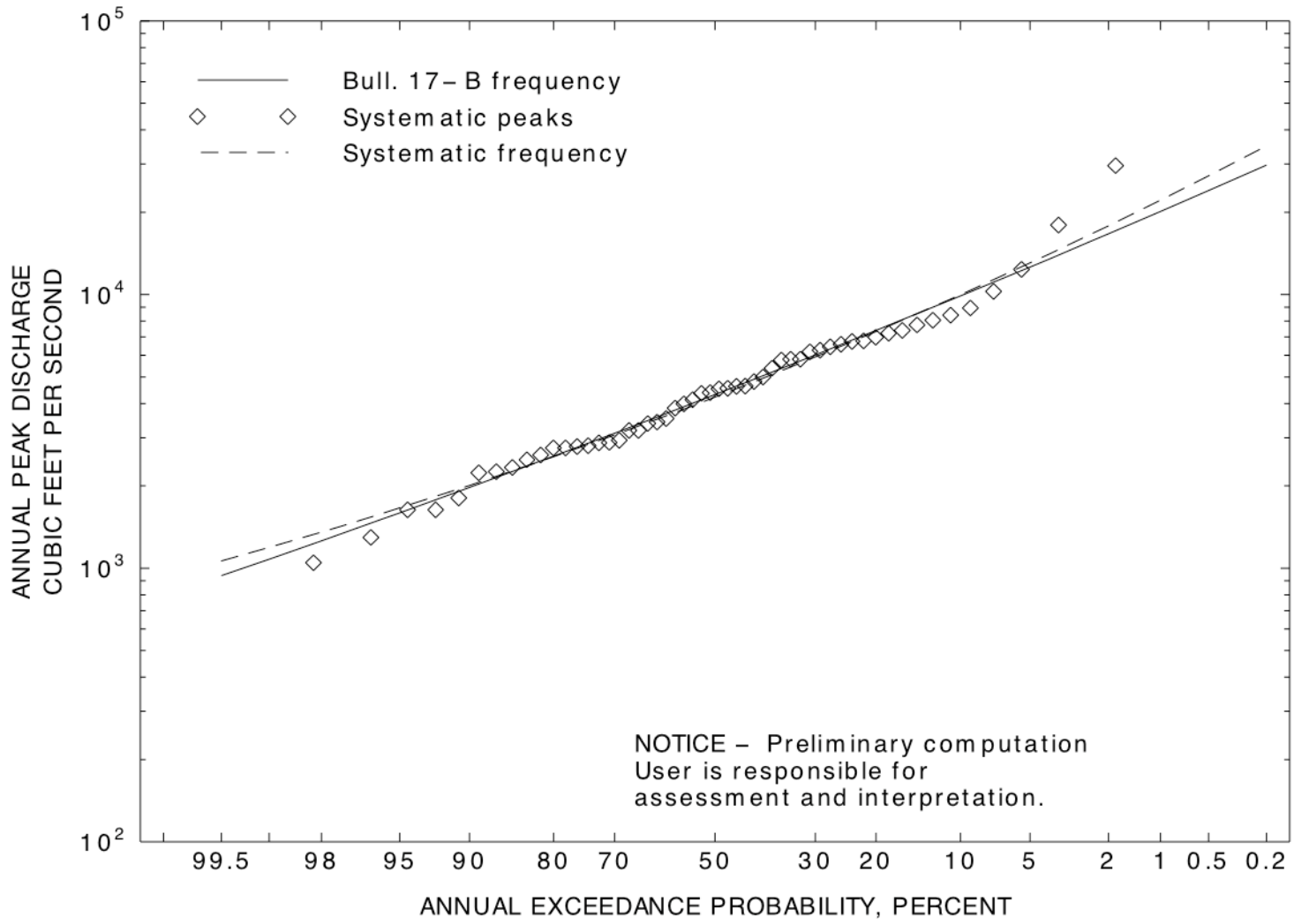
PEAKFQ CODE	WATSTORE CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1969	29700.0	0.0182	0.0182
1937	18000.0	0.0364	0.0364
1953	12400.0	0.0545	0.0545
1990	10300.0	0.0727	0.0727
1948	8960.0	0.0909	0.0909
1960	8430.0	0.1091	0.1091
1946	8080.0	0.1273	0.1273
1975	7770.0	0.1455	0.1455
1943	7420.0	0.1636	0.1636
1955	7250.0	0.1818	0.1818
1950	7000.0	0.2000	0.2000
1951	6800.0	0.2182	0.2182
1974	6760.0	0.2364	0.2364
1949	6600.0	0.2545	0.2545
1959	6460.0	0.2727	0.2727
1965	6280.0	0.2909	0.2909
1952	6200.0	0.3091	0.3091
1942	5820.0	0.3273	0.3273
1947	5820.0	0.3455	0.3455
1972	5780.0	0.3636	0.3636
1976	5400.0	0.3818	0.3818
1954	5010.0	0.4000	0.4000
1977	4820.0	0.4182	0.4182
1944	4640.0	0.4364	0.4364
1957	4630.0	0.4545	0.4545
1963	4560.0	0.4727	0.4727
1967	4540.0	0.4909	0.4909
1985	4400.0	0.5091	0.5091
1945	4370.0	0.5273	0.5273
1978	4140.0	0.5455	0.5455
1966	4000.0	0.5636	0.5636
1940	3860.0	0.5818	0.5818
1962	3530.0	0.6000	0.6000
1986	3430.0	0.6182	0.6182
1956	3390.0	0.6364	0.6364
1971	3200.0	0.6545	0.6545
1973	3200.0	0.6727	0.6727
1970	2940.0	0.6909	0.6909
1958	2890.0	0.7091	0.7091
1982	2880.0	0.7273	0.7273
1979	2810.0	0.7455	0.7455
1964	2790.0	0.7636	0.7636
1941	2760.0	0.7818	0.7818
1980	2760.0	0.8000	0.8000
1991	2600.0	0.8182	0.8182
1989	2500.0	0.8364	0.8364
1968	2340.0	0.8545	0.8545
1981	2260.0	0.8727	0.8727

1961	2240.0	0.8909	0.8909
1983	1810.0	0.9091	0.9091
1984	1640.0	0.9273	0.9273
1992	1640.0	0.9455	0.9455
1988	1300.0	0.9636	0.9636
1987	1050.0	0.9818	0.9818



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