

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

Station - W4064500 PINE RIVER BELOW PINE R POWERPLANT NR FLORENCE,
 2002 MAR 13 09:02:28

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

Number of peaks in record	=	56
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	56
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.120
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.	704.9
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	5650.2

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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	3.3001	0.1608	0.000
BULL.17B ESTIMATE	0.0	1.0000	3.3001	0.1608	-0.028

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	761.4	768.9	728.4	623.5	885.7
0.9900	836.9	843.3	808.3	696.1	963.0
0.9500	1082.0	1085.0	1065.0	937.3	1212.0
0.9000	1240.0	1242.0	1228.0	1095.0	1371.0
0.8000	1462.0	1461.0	1455.0	1317.0	1598.0
0.5000	1999.0	1996.0	1999.0	1841.0	2171.0
0.2000	2727.0	2725.0	2741.0	2495.0	3027.0
0.1000	3204.0	3207.0	3236.0	2898.0	3627.0
0.0400	3802.0	3816.0	3871.0	3385.0	4411.0
0.0200	4245.0	4269.0	4353.0	3736.0	5010.0
0.0100	4686.0	4722.0	4844.0	4079.0	5619.0
0.0050	5128.0	5178.0	5349.0	4419.0	6242.0
0.0020	5719.0	5791.0	6044.0	4865.0	7090.0
0.6667	1704.2	(1.50-year flood)			
0.4292	2135.5	(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
1924	1870.0		1952	2440.0	
1925	1320.0		1953	2090.0	
1926	1840.0		1954	2420.0	
1927	1740.0		1955	2340.0	
1928	2730.0		1956	1340.0	
1929	4380.0		1957	1440.0	
1930	1220.0		1958	1600.0	
1931	819.0		1959	1760.0	
1932	1380.0		1960	3220.0	
1933	2070.0		1961	1720.0	
1934	1600.0		1962	1730.0	
1935	1490.0		1963	1300.0	
1936	1960.0		1964	1280.0	
1937	2110.0		1965	4300.0	
1938	2590.0		1966	1580.0	
1939	2380.0		1967	2800.0	
1940	1910.0		1968	2220.0	
1941	2160.0		1969	2290.0	
1942	3230.0		1970	2020.0	
1943	2410.0		1971	2780.0	
1944	1460.0		1972	4000.0	
1945	1680.0		1973	2300.0	
1946	1830.0		1974	1490.0	
1947	1440.0		1975	3250.0	
1948	866.0		1997	2730.0	
1949	1460.0		1998	2360.0	
1950	2900.0		1999	3260.0	
1951	3440.0		2000	1170.0	

Explanation of peak discharge qualification codes

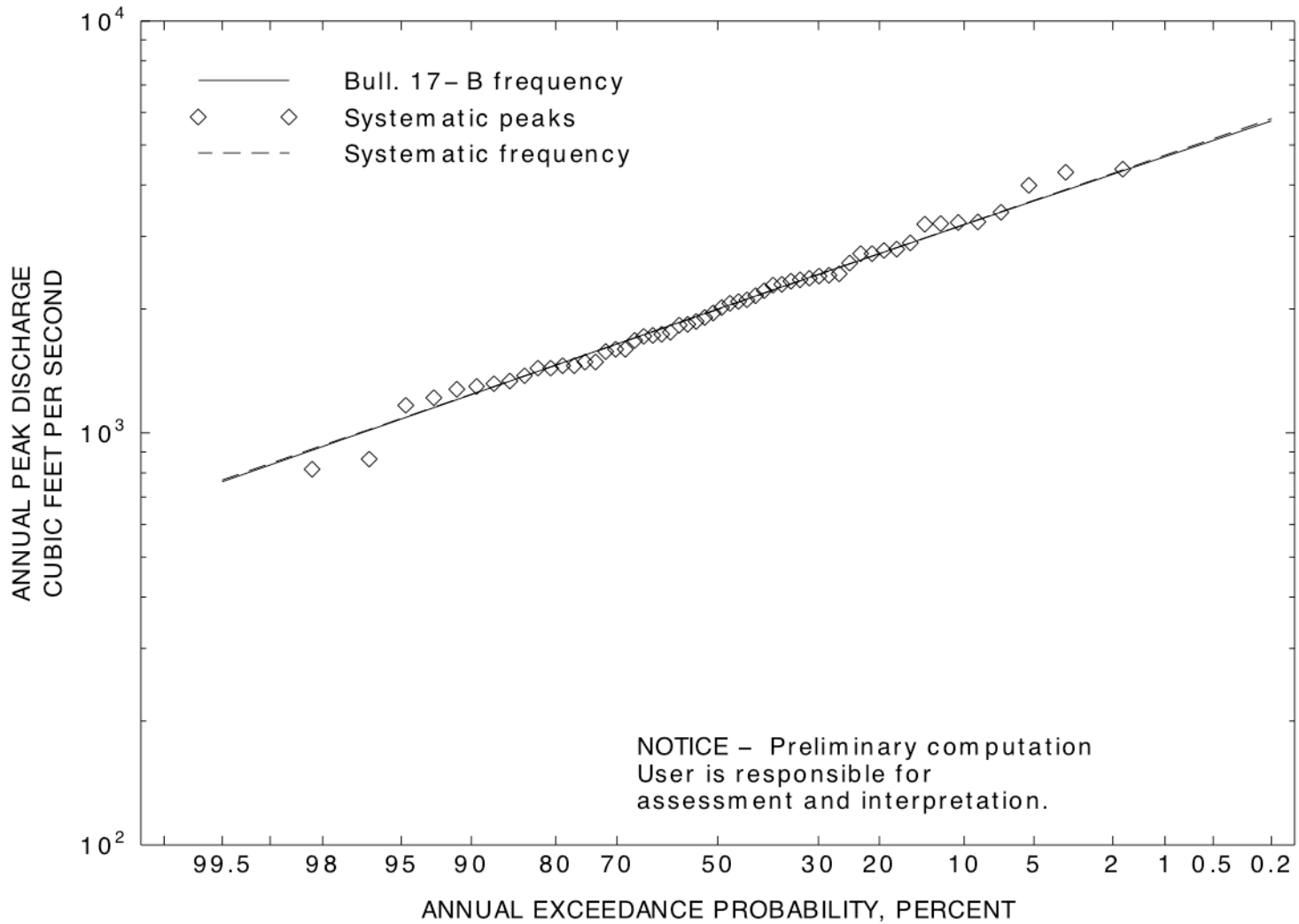
PEAKFQ	WATSTORE	DEFINITION
CODE	CODE	
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1929	4380.0	0.0175	0.0175
1965	4300.0	0.0351	0.0351
1972	4000.0	0.0526	0.0526
1951	3440.0	0.0702	0.0702
1999	3260.0	0.0877	0.0877
1975	3250.0	0.1053	0.1053
1942	3230.0	0.1228	0.1228
1960	3220.0	0.1404	0.1404
1950	2900.0	0.1579	0.1579
1967	2800.0	0.1754	0.1754
1971	2780.0	0.1930	0.1930
1928	2730.0	0.2105	0.2105
1997	2730.0	0.2281	0.2281
1938	2590.0	0.2456	0.2456
1952	2440.0	0.2632	0.2632
1954	2420.0	0.2807	0.2807
1943	2410.0	0.2982	0.2982
1939	2380.0	0.3158	0.3158
1998	2360.0	0.3333	0.3333
1955	2340.0	0.3509	0.3509
1973	2300.0	0.3684	0.3684
1969	2290.0	0.3860	0.3860
1968	2220.0	0.4035	0.4035
1941	2160.0	0.4211	0.4211
1937	2110.0	0.4386	0.4386
1953	2090.0	0.4561	0.4561
1933	2070.0	0.4737	0.4737
1970	2020.0	0.4912	0.4912
1936	1960.0	0.5088	0.5088
1940	1910.0	0.5263	0.5263
1924	1870.0	0.5439	0.5439
1926	1840.0	0.5614	0.5614
1946	1830.0	0.5789	0.5789
1959	1760.0	0.5965	0.5965
1927	1740.0	0.6140	0.6140
1962	1730.0	0.6316	0.6316
1961	1720.0	0.6491	0.6491
1945	1680.0	0.6667	0.6667
1934	1600.0	0.6842	0.6842
1958	1600.0	0.7018	0.7018
1966	1580.0	0.7193	0.7193
1935	1490.0	0.7368	0.7368
1974	1490.0	0.7544	0.7544
1944	1460.0	0.7719	0.7719
1949	1460.0	0.7895	0.7895
1947	1440.0	0.8070	0.8070
1957	1440.0	0.8246	0.8246
1932	1380.0	0.8421	0.8421

1956	1340.0	0.8596	0.8596
1925	1320.0	0.8772	0.8772
1963	1300.0	0.8947	0.8947
1964	1280.0	0.9123	0.9123
1930	1220.0	0.9298	0.9298
2000	1170.0	0.9474	0.9474
1948	866.0	0.9649	0.9649
1931	819.0	0.9825	0.9825



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