

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

Station - 05370600 ARKANSAW CREEK TRIBUTARY NEAR ARKANSAW, WI
2002 MAR 13 09:02:55

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

Number of peaks in record	=	35
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	35
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.376
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	100.0
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.	6	100.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		67.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		609.6

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	EXCEEDANCE DISCHARGE	PROBABILITY	MEAN	STANDARD	SKEW
				DEVIATION	
SYSTEMATIC RECORD	100.0	0.8286	2.2515	0.2159	-0.028
BULL.17B ESTIMATE	100.0	0.8286	2.2515	0.2159	-0.141

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY'	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
			ESTIMATE	LOWER	UPPER
0.8000	117.9	117.5	116.9	98.2	136.7
0.5000	180.5	178.8	180.5	156.8	208.0
0.2000	271.9	271.3	274.8	234.4	326.7
0.1000	334.7	336.9	341.6	283.4	416.4
0.0400	415.6	423.9	431.0	343.6	539.2
0.0200	476.7	491.5	501.4	387.4	636.4
0.0100	538.4	561.3	575.3	430.5	737.9
0.0050	601.0	633.6	653.3	473.3	843.8
0.0020	685.3	733.6	764.0	529.8	991.1
0.6667	145.4	(1.50-year flood)			
0.4292	197.3	(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
1959	130.0		1977	190.0	
1960	110.0		1978	200.0	
1961	130.0		1979	85.0	
1962	200.0		1980	280.0	
1963	42.0		1981	235.0	
1964	105.0		1982	60.0	L
1965	330.0		1983	220.0	
1966	150.0		1984	200.0	
1967	280.0		1985	260.0	
1968	110.0		1986	250.0	
1969	165.0		1987	220.0	
1970	115.0		1988	100.0	L
1971	155.0		1989	300.0	
1972	105.0		1990	325.0	
1973	165.0		1991	100.0	L
1974	90.0		1992	525.0	
1975	420.0		1993	220.0	
1976	335.0				

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
1992	525.0	0.0278	0.0278
1975	420.0	0.0556	0.0556
1976	335.0	0.0833	0.0833
1965	330.0	0.1111	0.1111
1990	325.0	0.1389	0.1389
1989	300.0	0.1667	0.1667
1967	280.0	0.1944	0.1944
1980	280.0	0.2222	0.2222
1985	260.0	0.2500	0.2500
1986	250.0	0.2778	0.2778
1981	235.0	0.3056	0.3056
1983	220.0	0.3333	0.3333
1987	220.0	0.3611	0.3611
1993	220.0	0.3889	0.3889
1962	200.0	0.4167	0.4167
1978	200.0	0.4444	0.4444
1984	200.0	0.4722	0.4722
1977	190.0	0.5000	0.5000
1969	165.0	0.5278	0.5278
1973	165.0	0.5556	0.5556
1971	155.0	0.5833	0.5833
1966	150.0	0.6111	0.6111
1959	130.0	0.6389	0.6389
1961	130.0	0.6667	0.6667
1970	115.0	0.6944	0.6944
1960	110.0	0.7222	0.7222
1968	110.0	0.7500	0.7500
1964	105.0	0.7778	0.7778
1972	105.0	0.8056	0.8056
1988	100.0	--	--
1991	100.0	--	--
1974	90.0	--	--
1979	85.0	--	--
1982	60.0	--	--
1963	42.0	--	--

