

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

Station - 04074300 MUD CREEK NEAR NASHVILLE, WI
2002 MAR 13 09:02:33

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

Number of peaks in record	=	24
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	24
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.157
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
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1 27.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	115.8

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	EXCEEDANCE DISCHARGE	PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	1.7805	0.1362	-0.925
BULL.17B ESTIMATE	27.8	0.9583	1.7914	0.1116	-0.057

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	
				LOWER	UPPER
0.9950	--	20.6	--	--	--
0.9900	--	23.7	--	--	--
0.9500	40.4	33.6	39.3	34.1	45.3
0.9000	44.4	39.6	43.7	38.5	49.2
0.8000	49.9	47.4	49.4	44.3	54.6
0.5000	62.0	63.3	62.0	56.7	67.8
0.2000	76.8	78.8	77.5	70.1	86.5
0.1000	85.8	86.3	87.3	77.5	99.1
0.0400	96.5	93.5	99.4	85.8	114.7
0.0200	104.0	97.6	108.5	91.5	126.2
0.0100	111.3	100.9	117.6	96.8	137.6
0.0050	118.3	103.7	127.0	101.9	148.9
0.0020	127.3	106.6	139.8	108.4	163.8
0.6667	55.5	(1.50-year flood)			
0.4292	64.9	(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
1970	24.0		1982	56.0	
1971	72.0		1983	50.0	
1972	65.0		1984	50.0	
1973	72.0		1985	70.0	
1974	39.0		1986	78.0	
1975	96.0		1987	62.0	
1976	83.0		1988	48.0	
1977	44.0		1989	44.0	
1978	56.0		1990	61.0	
1979	75.0		1991	71.0	
1980	56.0		1992	65.0	
1981	105.0		1993	70.0	

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
1981	105.0	0.0400	0.0400
1975	96.0	0.0800	0.0800
1976	83.0	0.1200	0.1200
1986	78.0	0.1600	0.1600
1979	75.0	0.2000	0.2000
1971	72.0	0.2400	0.2400
1973	72.0	0.2800	0.2800
1991	71.0	0.3200	0.3200
1985	70.0	0.3600	0.3600
1993	70.0	0.4000	0.4000
1972	65.0	0.4400	0.4400
1992	65.0	0.4800	0.4800
1987	62.0	0.5200	0.5200
1990	61.0	0.5600	0.5600
1978	56.0	0.6000	0.6000
1980	56.0	0.6400	0.6400
1982	56.0	0.6800	0.6800
1983	50.0	0.7200	0.7200
1984	50.0	0.7600	0.7600
1988	48.0	0.8000	0.8000
1977	44.0	0.8400	0.8400
1989	44.0	0.8800	0.8800
1974	39.0	0.9200	0.9200
1970	24.0	0.9600	0.9600

