

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

Station - 04024400 STONEY BROOK NEAR SUPERIOR, WI
 2002 MAR 13 09:01:59

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

Number of peaks in record	=	42
Peaks not used in analysis	=	1
Systematic peaks in analysis	=	41
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.193
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. *****

**WCF109W-PEAKS WITH MINUS-FLAGGED DISCHARGES WERE BYPASSED.		1
**WCF113W-NUMBER OF SYSTEMATIC PEAKS HAS BEEN REDUCED TO NSYS =	=	41
WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.		0.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		26.9
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		1108.6
WCF002J-CALCS COMPLETED. RETURN CODE = 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	2.2372	0.3000	-0.608
BULL.17B ESTIMATE	0.0	1.0000	2.2372	0.3000	-0.457

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	21.7	19.7	18.5	13.1	31.2
0.9900	27.6	25.7	24.4	17.5	38.3
0.9500	51.1	49.8	48.4	36.5	65.6
0.9000	69.4	69.0	67.2	52.3	86.3
0.8000	98.6	99.5	97.1	78.4	119.2
0.5000	182.0	185.1	182.0	152.1	218.4
0.2000	311.9	312.2	315.3	257.4	393.9
0.1000	401.8	395.3	410.0	325.0	527.1
0.0400	515.7	495.2	533.6	406.8	705.9
0.0200	599.3	564.9	626.9	464.8	843.2
0.0100	681.2	630.2	721.0	520.2	981.9
0.0050	761.4	691.8	815.5	573.6	1122.0
0.0020	865.2	767.6	942.7	641.2	1307.0
0.6667	134.1	(1.50-year flood)			
0.4292	205.9	(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
1959	35.0		1980	315.0	
1960	140.0		1981	215.0	
1961	165.0		1982	265.0	
1962	280.0		1983	255.0	
1963	30.0		1984	210.0	
1964	275.0		1985	595.0	
1965	90.0		1986	240.0	
1966	460.0		1987	105.0	
1967	200.0		1988	85.0	
1968	128.0		1989	93.0	
1969	85.0		1990	-300.0	G
1970	285.0		1991	220.0	
1971	165.0		1992	244.0	
1972	460.0		1993	289.0	
1973	115.0		1994	101.0	
1974	243.0		1995	90.0	
1975	285.0		1996	135.0	
1976	300.0		1997	94.3	
1977	177.0		1998	47.1	
1978	320.0		1999	480.0	
1979	270.0		2000	86.6	

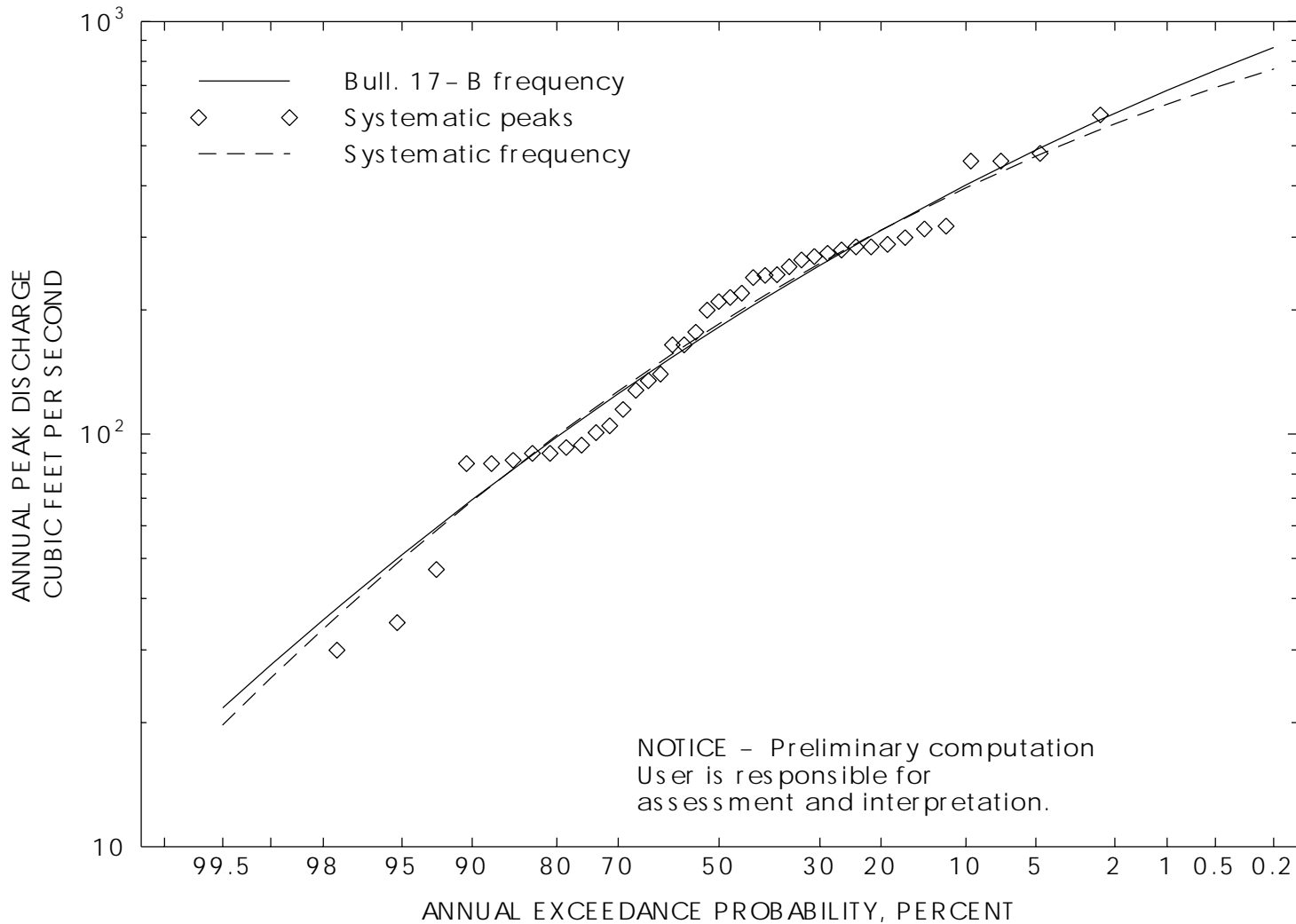
Explanation of peak discharge qualification codes

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
1985	595.0	0.0238	0.0238
1999	480.0	0.0476	0.0476
1966	460.0	0.0714	0.0714
1972	460.0	0.0952	0.0952
1978	320.0	0.1190	0.1190
1980	315.0	0.1429	0.1429
1976	300.0	0.1667	0.1667
1993	289.0	0.1905	0.1905
1970	285.0	0.2143	0.2143
1975	285.0	0.2381	0.2381
1962	280.0	0.2619	0.2619
1964	275.0	0.2857	0.2857
1979	270.0	0.3095	0.3095
1982	265.0	0.3333	0.3333
1983	255.0	0.3571	0.3571
1992	244.0	0.3810	0.3810
1974	243.0	0.4048	0.4048
1986	240.0	0.4286	0.4286
1991	220.0	0.4524	0.4524
1981	215.0	0.4762	0.4762
1984	210.0	0.5000	0.5000
1967	200.0	0.5238	0.5238
1977	177.0	0.5476	0.5476
1961	165.0	0.5714	0.5714
1971	165.0	0.5952	0.5952
1960	140.0	0.6190	0.6190
1996	135.0	0.6429	0.6429
1968	128.0	0.6667	0.6667
1973	115.0	0.6905	0.6905
1987	105.0	0.7143	0.7143
1994	101.0	0.7381	0.7381
1997	94.3	0.7619	0.7619
1989	93.0	0.7857	0.7857
1965	90.0	0.8095	0.8095
1995	90.0	0.8333	0.8333
2000	86.6	0.8571	0.8571
1969	85.0	0.8810	0.8810
1988	85.0	0.9048	0.9048
1998	47.1	0.9286	0.9286
1959	35.0	0.9524	0.9524
1963	30.0	0.9762	0.9762
1990	-300.0	--	--



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