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

Station - 04079700   SPAULDING CREEK NEAR BIG FALLS, WI
2002 DEC 5 16:25:51

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	=	0
Systematic peaks in analysis	=	42
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.278
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	20.0
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.   1   20.0
  WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.   24.7
  WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.   123.5

ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

| | FLOOD BASE | | LOGARITHMIC | | |
| | | EXCEEDANCE | | STANDARD | |
	DISCHARGE	PROBABILITY	MEAN	DEVIATION	SKEW
SYSTEMATIC RECORD	20.0	0.9762	1.7377	0.1317	−0.037
BULL.17B ESTIMATE	20.0	0.9762	1.7377	0.1317	−0.107

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
0.9500	32.9	33.1	32.3	28.6	36.6
0.9000	36.9	37.0	36.5	32.7	40.6
0.8000	42.4	42.4	42.2	38.4	46.1
0.5000	55.0	54.8	55.0	50.8	59.4
0.2000	70.7	70.6	71.0	65.0	78.2
0.1000	80.3	80.5	81.2	73.2	90.6
0.0400	91.9	92.6	93.7	82.6	106.0
0.0200	100.1	101.3	102.8	89.0	117.4
0.0100	108.1	109.8	111.9	95.2	128.5
0.0050	115.8	118.2	121.0	101.1	139.6
0.0020	125.8	129.1	133.2	108.7	154.2
0.6667	48.2 (1.50-year flood)				
0.4292	58.0 (2.33-year flood)				

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	28.0		1980	62.0	
1960	101.0		1981	73.0	
1961	40.0		1982	49.0	
1962	37.0		1983	56.0	
1963	20.0	L	1984	54.0	
1964	57.0		1985	79.0	
1965	92.0		1986	56.0	
1966	38.0		1987	30.0	
1967	51.0		1988	40.0	
1968	42.0		1989	54.0	
1969	40.0		1990	72.0	
1970	80.0		1991	53.0	
1971	43.0		1992	90.0	
1972	52.0		1993	69.0	
1973	74.0		1994	66.0	
1974	66.0		1995	47.0	
1975	46.0		1996	93.0	
1976	48.0		1997	45.0	
1977	45.0		1998	63.0	
1978	61.0		1999	55.0	
1979	62.0		2000	55.0	

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

EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1960	101.0	0.0233	0.0233
1996	93.0	0.0465	0.0465
1965	92.0	0.0698	0.0698
1992	90.0	0.0930	0.0930
1970	80.0	0.1163	0.1163
1985	79.0	0.1395	0.1395
1973	74.0	0.1628	0.1628
1981	73.0	0.1860	0.1860
1990	72.0	0.2093	0.2093
1993	69.0	0.2326	0.2326
1974	66.0	0.2558	0.2558
1994	66.0	0.2791	0.2791
1998	63.0	0.3023	0.3023
1979	62.0	0.3256	0.3256
1980	62.0	0.3488	0.3488
1978	61.0	0.3721	0.3721
1964	57.0	0.3953	0.3953
1983	56.0	0.4186	0.4186
1986	56.0	0.4419	0.4419
1999	55.0	0.4651	0.4651
2000	55.0	0.4884	0.4884
1984	54.0	0.5116	0.5116
1989	54.0	0.5349	0.5349
1991	53.0	0.5581	0.5581
1972	52.0	0.5814	0.5814
1967	51.0	0.6047	0.6047
1982	49.0	0.6279	0.6279
1976	48.0	0.6512	0.6512
1995	47.0	0.6744	0.6744
1975	46.0	0.6977	0.6977
1977	45.0	0.7209	0.7209
1997	45.0	0.7442	0.7442
1971	43.0	0.7674	0.7674
1968	42.0	0.7907	0.7907
1961	40.0	0.8140	0.8140
1969	40.0	0.8372	0.8372
1988	40.0	0.8605	0.8605
1966	38.0	0.8837	0.8837
1962	37.0	0.9070	0.9070
1987	30.0	0.9302	0.9302
1959	28.0	0.9535	0.9535
1963	20.0	--	--

ANNUAL PEAK DISCHARGE CUBIC FEET PER SECOND

10^3

10^2

10

Bull. 17- B frequency
◇   ◇   Systematic peaks
— — — -   Systematic frequency
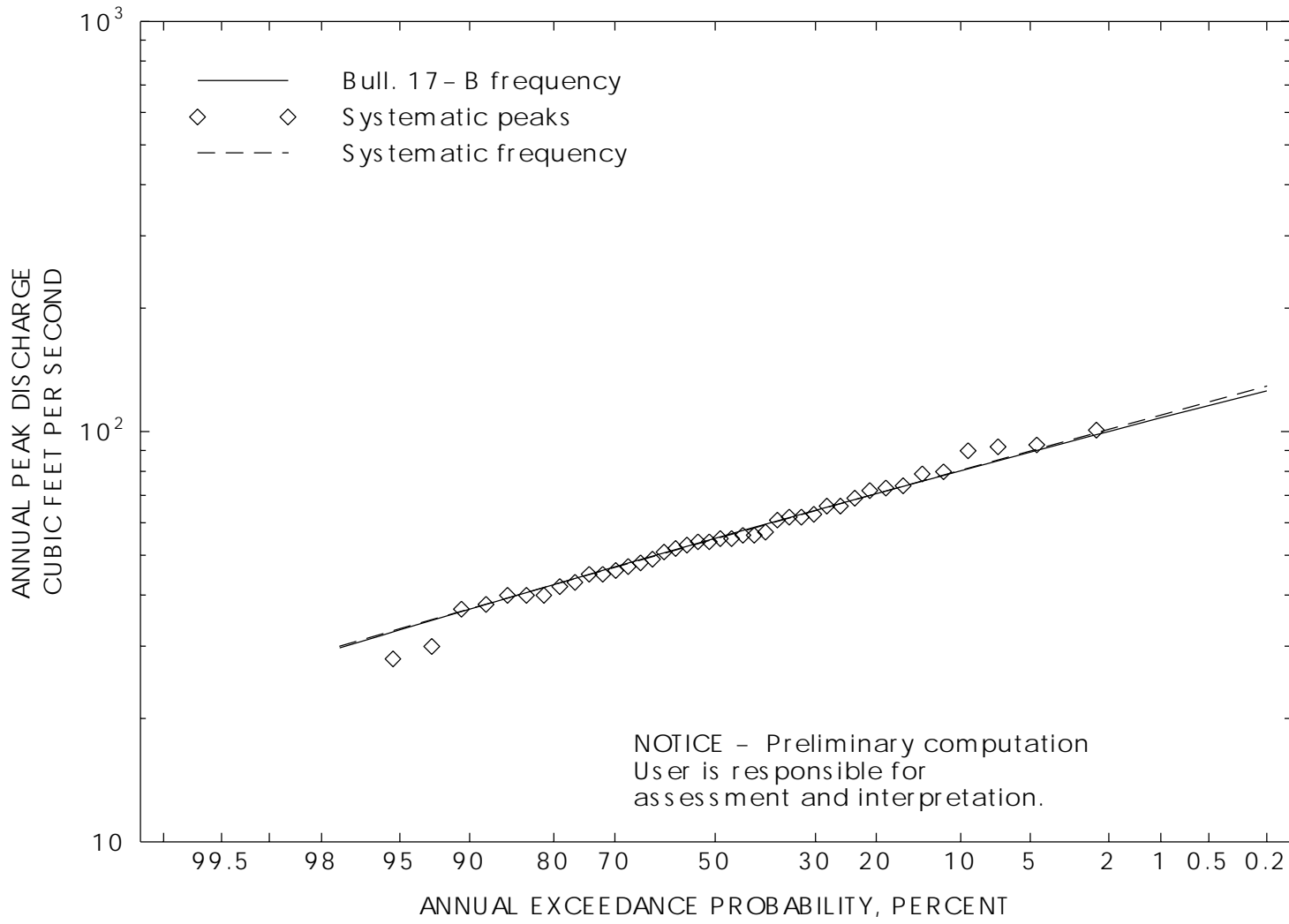
NOTICE – Preliminary computation
User is responsible for
assessment and interpretation.

99.5   98   95   90   80 70   50   30 20   10   5   2   1 0.5 0.2

ANNUAL EXCEEDANCE PROBABILITY, PERCENT

Station – 04079700 SPAULDING CREEK NEAR BIG FALLS, WI
2005 JUL 26 11:53:40