

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

Station - 05392150 MISHONAGON CREEK NEAR WOODRUFF, WI  
 2002 MAR 13 09:03:01

I N P U T   D A T A   S U M M A R Y

|                                      |   |          |
|--------------------------------------|---|----------|
| Number of peaks in record            | = | 43       |
| Peaks not used in analysis           | = | 0        |
| Systematic peaks in analysis         | = | 43       |
| Historic peaks in analysis           | = | 0        |
| Years of historic record             | = | 0        |
| Generalized skew                     | = | -0.142   |
| 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.      | 32.1  |
| WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE. | 140.8 |

Station - 05392150 MISHONAGON CREEK NEAR WOODRUFF, WI  
 2002 MAR 13 09:03:01

ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

|                   | FLOOD BASE |                        | LOGARITHMIC |                    |        |
|-------------------|------------|------------------------|-------------|--------------------|--------|
|                   | DISCHARGE  | EXCEEDANCE PROBABILITY | MEAN        | STANDARD DEVIATION | SKEW   |
| SYSTEMATIC RECORD | 0.0        | 1.0000                 | 1.8276      | 0.1184             | -0.417 |
| BULL.17B ESTIMATE | 0.0        | 1.0000                 | 1.8276      | 0.1184             | -0.326 |

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                        | 30.7              | 30.0                | 29.0                            | 25.4   | 35.1  |
| 0.9900                        | 33.4              | 32.8                | 32.1                            | 28.2   | 37.8  |
| 0.9500                        | 41.9              | 41.7                | 41.2                            | 36.9   | 46.2  |
| 0.9000                        | 47.0              | 46.9                | 46.5                            | 42.2   | 51.2  |
| 0.8000                        | 53.7              | 53.8                | 53.4                            | 49.2   | 57.8  |
| 0.5000                        | 68.2              | 68.5                | 68.2                            | 63.7   | 73.2  |
| 0.2000                        | 84.9              | 84.9                | 85.2                            | 78.8   | 92.8  |
| 0.1000                        | 94.3              | 94.0                | 95.1                            | 86.9   | 104.8 |
| 0.0400                        | 105.0             | 104.0               | 106.5                           | 95.6   | 118.7 |
| 0.0200                        | 112.1             | 110.6               | 114.3                           | 101.4  | 128.3 |
| 0.0100                        | 118.7             | 116.5               | 121.7                           | 106.6  | 137.3 |
| 0.0050                        | 124.9             | 122.0               | 128.7                           | 111.5  | 145.8 |
| 0.0020                        | 132.5             | 128.6               | 137.7                           | 117.4  | 156.4 |
| 0.6667                        | 60.5              | ( 1.50-year flood ) |                                 |  |       |
| 0.4292                        | 71.6              | ( 2.33-year flood ) |                                 |  |       |

Station - 05392150 MISHONAGON CREEK NEAR WOODRUFF, WI  
 2002 MAR 13 09:03:01

I N P U T   D A T A   L I S T I N G

| WATER YEAR | DISCHARGE | CODES | WATER YEAR | DISCHARGE | CODES |
|------------|-----------|-------|------------|-----------|-------|
| 1958       | 56.0      |       | 1980       | 76.0      |       |
| 1959       | 80.0      |       | 1981       | 80.0      |       |
| 1960       | 59.0      |       | 1982       | 55.0      |       |
| 1961       | 60.0      |       | 1983       | 95.0      |       |
| 1962       | 48.0      |       | 1984       | 70.0      |       |
| 1963       | 55.0      |       | 1985       | 71.0      |       |
| 1964       | 34.0      |       | 1986       | 76.0      |       |
| 1965       | 62.0      |       | 1987       | 98.0      |       |
| 1966       | 66.0      |       | 1988       | 70.0      |       |
| 1967       | 56.0      |       | 1989       | 77.0      |       |
| 1968       | 70.0      |       | 1990       | 65.0      |       |
| 1969       | 93.0      |       | 1991       | 49.0      |       |
| 1970       | 67.0      |       | 1992       | 36.0      |       |
| 1971       | 62.0      |       | 1993       | 40.0      |       |
| 1972       | 117.0     |       | 1994       | 65.0      |       |
| 1973       | 95.0      |       | 1995       | 89.0      |       |
| 1974       | 74.0      |       | 1996       | 78.0      |       |
| 1975       | 45.0      |       | 1997       | 60.0      |       |
| 1976       | 70.0      |       | 1998       | 57.5      |       |
| 1977       | 85.0      |       | 1999       | 65.4      |       |
| 1978       | 110.0     |       | 2000       | 69.4      |       |
| 1979       | 88.0      |       |            |           |       |

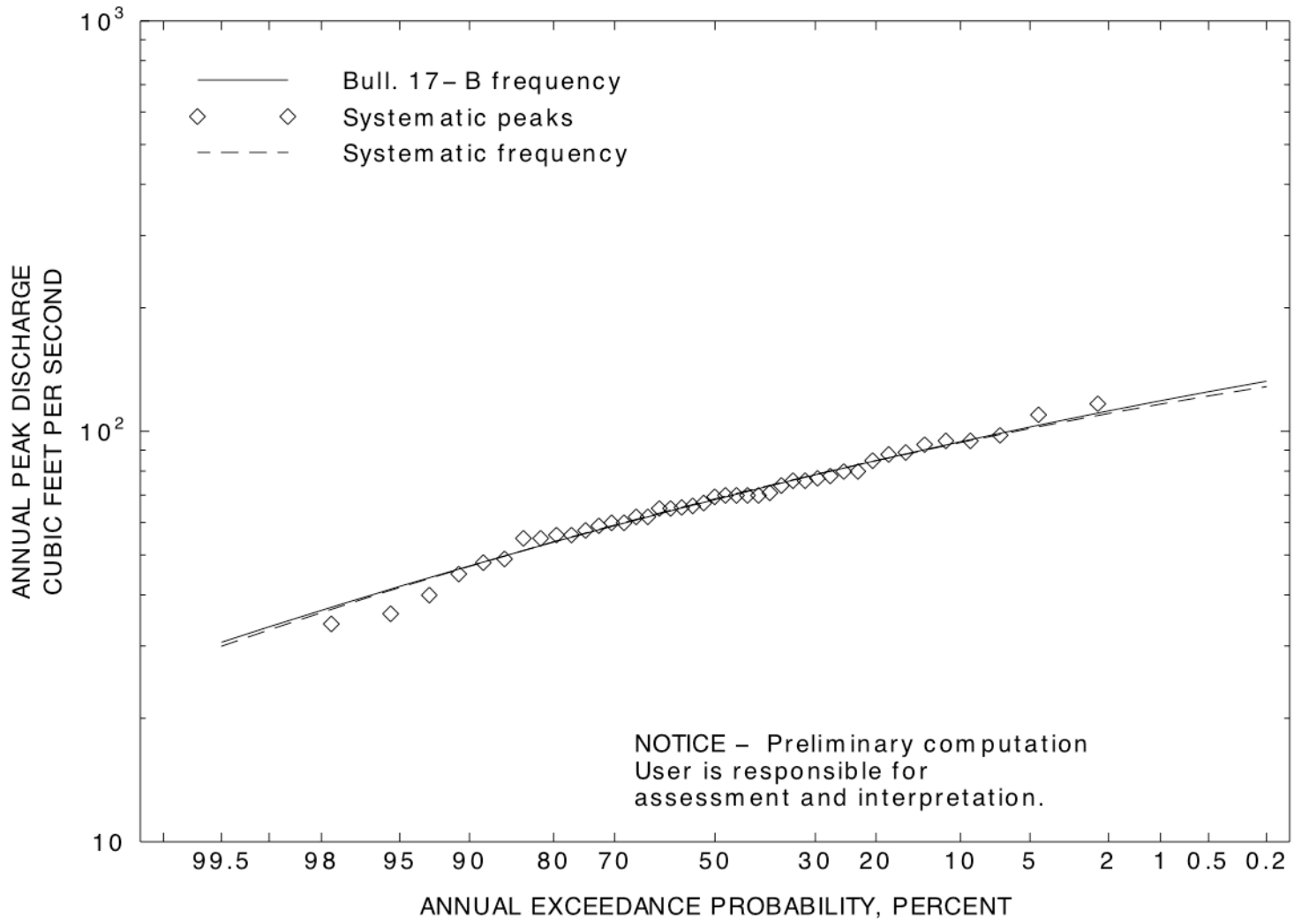
Explanation of peak discharge qualification codes

| PEAKFQ<br>CODE | WATSTORE<br>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                              |

Station - 05392150 MISHONAGON CREEK NEAR WOODRUFF, WI  
2002 MAR 13 09:03:01

EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

| WATER<br>YEAR | RANKED<br>DISCHARGE | SYSTEMATIC<br>RECORD | BULL.17B<br>ESTIMATE |
|---------------|---------------------|----------------------|----------------------|
| 1972          | 117.0               | 0.0227               | 0.0227               |
| 1978          | 110.0               | 0.0455               | 0.0455               |
| 1987          | 98.0                | 0.0682               | 0.0682               |
| 1973          | 95.0                | 0.0909               | 0.0909               |
| 1983          | 95.0                | 0.1136               | 0.1136               |
| 1969          | 93.0                | 0.1364               | 0.1364               |
| 1995          | 89.0                | 0.1591               | 0.1591               |
| 1979          | 88.0                | 0.1818               | 0.1818               |
| 1977          | 85.0                | 0.2045               | 0.2045               |
| 1959          | 80.0                | 0.2273               | 0.2273               |
| 1981          | 80.0                | 0.2500               | 0.2500               |
| 1996          | 78.0                | 0.2727               | 0.2727               |
| 1989          | 77.0                | 0.2955               | 0.2955               |
| 1980          | 76.0                | 0.3182               | 0.3182               |
| 1986          | 76.0                | 0.3409               | 0.3409               |
| 1974          | 74.0                | 0.3636               | 0.3636               |
| 1985          | 71.0                | 0.3864               | 0.3864               |
| 1968          | 70.0                | 0.4091               | 0.4091               |
| 1976          | 70.0                | 0.4318               | 0.4318               |
| 1984          | 70.0                | 0.4545               | 0.4545               |
| 1988          | 70.0                | 0.4773               | 0.4773               |
| 2000          | 69.4                | 0.5000               | 0.5000               |
| 1970          | 67.0                | 0.5227               | 0.5227               |
| 1966          | 66.0                | 0.5455               | 0.5455               |
| 1999          | 65.4                | 0.5682               | 0.5682               |
| 1990          | 65.0                | 0.5909               | 0.5909               |
| 1994          | 65.0                | 0.6136               | 0.6136               |
| 1965          | 62.0                | 0.6364               | 0.6364               |
| 1971          | 62.0                | 0.6591               | 0.6591               |
| 1961          | 60.0                | 0.6818               | 0.6818               |
| 1997          | 60.0                | 0.7045               | 0.7045               |
| 1960          | 59.0                | 0.7273               | 0.7273               |
| 1998          | 57.5                | 0.7500               | 0.7500               |
| 1958          | 56.0                | 0.7727               | 0.7727               |
| 1967          | 56.0                | 0.7955               | 0.7955               |
| 1963          | 55.0                | 0.8182               | 0.8182               |
| 1982          | 55.0                | 0.8409               | 0.8409               |
| 1991          | 49.0                | 0.8636               | 0.8636               |
| 1962          | 48.0                | 0.8864               | 0.8864               |
| 1975          | 45.0                | 0.9091               | 0.9091               |
| 1993          | 40.0                | 0.9318               | 0.9318               |
| 1992          | 36.0                | 0.9545               | 0.9545               |
| 1964          | 34.0                | 0.9773               | 0.9773               |



Station - 05392150 MISHONAGON CREEK NEAR WOODRUFF, WI  
 2002 MAR 13 09:03:01