



# LOW FLOWS AND FLOW DURATION OF TENNESSEE STREAMS THROUGH 1981

# U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 84-4347



Prepared in cooperation with the

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT,
DIVISION OF WATER MANAGEMENT

## 03539800 - OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, on left bank at Alley Ford, 2.9 miles southwest of Lancing, 3.0 miles downstream from Clear Creek, and at mile 1.5.

DRAINAGE AREA. -- 518 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1958-68, 1974-81.

REMARKS .--

 $\label{eq:flow-decomposition} FLOW \ DURATION$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 1.2       | 80         | 52        | 20         | 1,500     |
| 99.1       | 1.5       | 70         | 110       | 10         | 2,600     |
| 99         | 1.6       | 60         | 230       | 5          | 4,000     |
| 98         | 2.8       | 50         | 420       | 2          | 6,900     |
| 95         | 9.3       | 40         | 660       | 1          | 9,900     |
| 90         | 21        | 30         | 980       | 0.5        | 13,500    |

LOW FLOW

| Period<br>(consecutive |     |     | e interval<br>ears) |     |
|------------------------|-----|-----|---------------------|-----|
| days)                  | 2   | 5   | 10                  | 20  |
| 1                      | 6.5 | 2.0 | 0.9                 | 0.5 |
| 3                      | 7.0 | 2.2 | 1.1                 | 0.6 |
| 7                      | 8.0 | 2.6 | 1.3                 | 0.7 |
| 14                     | 10  | 3.2 | 1.6                 | 0.9 |
| 30                     | 19  | 6.0 | 3.0                 | 1.5 |
| 60                     | 38  | 13  | 7.1                 | 4.0 |
| 90                     | 62  | 24  | 14                  | 8.2 |

## 03540000 - EMORY RIVER AT DEERMONT, TN

LOCATION.--Lat 36°01'39", long 84°34'47", Morgan County, on county highway bridge at Deermont siding on Southern Railway, 0.4 mile upstream from Crab Orchard Creek, 2.0 miles downstream from Crooked Fork, 3.2 miles northwest of Oakdale, and at mile 21.8.

DRAINAGE AREA. -- 704 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1921-27.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 3.99      | 80         | 68.8      | 20         | 1,980     |
| 99.1       | 4.24      | 70         | 164       | 10         | 3,420     |
| 99         | 4.30      | 60         | 373       | 5          | 5,300     |
| 98         | 5.00      | 50         | 6 54      | 2          | 6,200     |
| 95         | 8.36      | 40         | 981       | 1          | 12,600    |
| 90         | 18.4      | 30         | 1,340     | 0.5        | 16,000    |

LOW FLOW

| Period<br>Consecutive |     | Recurrence<br>(in y | e interval<br>ears) |    |
|-----------------------|-----|---------------------|---------------------|----|
| days)                 | 2   | 5                   | 10                  | 20 |
| 1                     | 4.5 | 3.8                 | 3.6                 | *  |
| 3                     | 4.9 | 4.2                 | 4.0                 | *  |
| 7                     | 5.8 | 4.5                 | 4.0                 | *  |
| 14                    |     |                     |                     |    |
| 30                    |     |                     |                     |    |
| 60                    |     |                     |                     |    |
| 90                    |     |                     |                     |    |

<sup>\*</sup> Figures cannot be determined from available data.

## 03540500 - EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, on left bank at Oakdale, 1,000 feet downstream from highway bridge, 1,100 feet downstream from Mud Lick Creek, and at mile 18.3.

DRAINAGE AREA. -- 764 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1928-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.60      | 80         | 55        | 20         | 2,000     |
| 99.1       | 1.2       | 70         | 130       | 10         | 3,600     |
| 99         | 1.3       | 60         | 260       | 5          | 5,600     |
| 98         | 2.6       | 50         | 5 30      | 2          | 10,000    |
| 95         | 7.0       | 40         | 890       | 1          | 14,000    |
| 90         | 18        | 30         | 1,300     | 0.5        | 21,000    |

LOW FLOW

| Period<br>(consecutive |      | Recurrence<br>(in ye |      |      |
|------------------------|------|----------------------|------|------|
| days)                  | 2    | 5                    | 10   | 20   |
| 1                      | 5.70 | 1.20                 | 0.40 | 0.0  |
| 3                      | 6.30 | 1.40                 | • 4  | 0.0  |
| 7                      | 7.10 | 1.60                 | •6   | • 2  |
| 14                     | 8.80 | 2.10                 | .9   | • 3  |
| 30                     | 16.7 | 3.85                 | 1.53 | .6   |
| 60                     | 34.9 | 9.37                 | 4.34 | 2.20 |
| 90                     | 63.0 | 18.2                 | 8.81 | 4.64 |

# 03541300 - BITTER CREEK NEAR OAKDALE, TN

LOCATION.--Lat 35°59'22", long 84°29'16", Morgan County, on left bank 0.2 mile upstream from bridge on U.S. Highway 27, 3.9 miles east of Oakdale, and at mile 0.3.

DRAINAGE AREA. -- 12.6 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1968-75.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.13      | . 80       | 1.23      | 20         | 38.2      |
| 99.1       | •16       | 7Ó         | 2.70      | 10         | 68.0      |
| 99         | • 16      | 60         | 5.18      | 5          | 112       |
| 98         | .22       | 50         | 10.3      | 2          | 212       |
| 95         | .35       | 40         | 17.1      | 1          | 363       |
| 90         | .58       | 30         | 25.7      | 0.5        | 590       |

LOW FLOW

| Period<br>consecutive |     |   | e interval<br>vears) |    |
|-----------------------|-----|---|----------------------|----|
| days)                 | 2   | 5 | 10                   | 20 |
| 1                     | 0.1 | 0 | 0                    | 0  |
| 3                     | •1  | 0 | 0                    | 0  |
| 7                     | .1  | 0 | 0                    | 0  |
| 14                    |     |   |                      |    |
| 30                    |     |   |                      |    |
| 60                    |     |   |                      |    |
| 90                    |     |   |                      |    |

## 03541500 - WHITES CREEK NEAR GLEN ALICE, TN

LOCATION.--Lat 35°47'49", long 84°45'37", Roane County, on left bank, 0.25 mile upstream from Black Creek, 2,200 feet upstream, from Southern Railway bridge, and 1.5 miles southwest of Glen Alice.

DRAINAGE AREA. -- 108 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1934-55.

REMARKS.--

 $\label{eq:flow-decomposition} FLOW \ DURATION$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.13      | 80         | 4.78      | 20         | 283       |
| 99.1       | •17       | 70         | 12.7      | 10         | 532       |
| 99         | .18       | 60         | 26.8      | 5          | 8 71      |
| 98         | .23       | 50         | 55.1      | 2          | 1,490     |
| 95         | •45       | 40         | 110       | 1          | 2,170     |
| 90         | 1.15      | 30         | 178       | 0.5        | 3,120     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |      | Recurrence<br>(in ye |      |      |
|-----------------------|------|----------------------|------|------|
| days)                 | 2    | 5                    | 10   | 20   |
| 1                     | 0.39 | 0.15                 | 0.10 | 0.07 |
| 3                     | .42  | .16                  | .10  | .07  |
| 7                     | .48  | .18                  | .12  | . 08 |
| 14                    | .64  | .23                  | .14  | .10  |
| 30                    | .98  | .34                  | .20  | .13  |
| 60                    | 2.13 | .66                  | .35  | .21  |
| 90                    | 5.13 | 1.28                 | .60  | .30  |

#### 03543500 - SEWEE CREEK NEAR DECATUR, TN

LOCATION.--Lat 35°34'53", long 84°44'53", Meigs County, on right bank
0.3 mile downstream from bridge on State Highway 58, 0.5 mile
downstream from Dry Fork, 5 miles north of Decatur, and at mile 5.7.

DRAINAGE AREA. -- 117 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1935-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 14.5      | 80         | 30.4      | . 20       | 250       |
| 99.1       | 16.0      | 70         | 40.0      | 10         | 420       |
| 99         | 16.1      | 60         | 55.2      | 5          | 670       |
| 98 ^       | 17.5      | 50         | 78.0      | 2          | 1,200     |
| 95         | 21.0      | 40         | 113       | 1          | 1,700     |
| 90         | 24.0      | 30         | 167       | 0.5        | 2,600     |

LOW FLOW

| Period<br>(consecutive |      |      | e interval |      |
|------------------------|------|------|------------|------|
| days)                  | 2    | 5    | 10         | 20   |
| 1.                     | 19.5 | 15.5 | 13.9       | 12.8 |
| 3                      | 19.9 | 15.7 | 14.1       | 12.9 |
| 7                      | 20.6 | 16.3 | 14.5       | 13.3 |
| 14                     | 21.6 | 17.2 | 15.5       | 14.3 |
| 30                     | 24.1 | 19.1 | 17.2       | 15.9 |
| 60                     | 27.3 | 21.3 | 19.2       | 17.8 |
| 90                     | 30.6 | 23.2 | 20.9       | 19.4 |

## 03544500 - RICHLAND CREEK NEAR DAYTON, TN

LOCATION.--Lat 35°30'17", long 85°01'20", Rhea County, on left bank at Morgantown, 0.4 mile upstream from bridge on State Highway 30, 1.0 mile northwest of Dayton, 1.8 miles downstream from Payne Creek, and at mile 5.2.

DRAINAGE AREA. -- 50.2 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1929-55, 1981.

REMARKS.--

 $\label{eq:flow_def} \textbf{FLOW DURATION}$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Díscharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0         | 80         | 1.1       | 20         | 158       |
| 99.1       | 0         | 70         | 5.3       | 10         | 2.60      |
| 99         | 0         | 60         | 17.0      | 5          | 404       |
| 98         | 0.1       | 50         | 38.0      | 2          | 712       |
| 95         | 0.2       | 40         | 65.7      | 1          | 1,030     |
| 90         | 0.3       | 30         | 102       | 0.5        | 1,480     |

LOW FLOW

| Period<br>(consecutive |     | Recurrenc<br>(in y | e interval<br>ears) |    |
|------------------------|-----|--------------------|---------------------|----|
| days)                  | 2   | 5                  | 10                  | 20 |
| 1                      | 0.1 | 0                  | 0                   | 0  |
| 3                      | •1  | 0                  | 0                   | 0  |
| 7                      | • 2 | 0                  | 0                   | 0  |
| 14                     | . 2 | 0                  | 0                   | 0  |
| 30                     | .3  | .1                 | 0                   | 0  |
| 60                     | .8  | .2                 | .1                  | 0  |
| 90                     | 1.9 | •4                 | .2                  | .1 |

## 03556000 - TURTLETOWN CREEK AT TURTLETOWN, TN

LOCATION.--Lat 35°07'57", long 84°20'37", Polk County, on left bank
0.5 mile north of Turtletown, 0.75 mile downstream from Nigger Creek,
and 6 miles upstream from mouth.

DRAINAGE AREA. -- 26.9 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1934-71.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 12.6      | 80         | 25.6      | 20         | 68.7      |
| 99.1       | 14.1      | 70         | 30.2      | . 10       | 87.5      |
| 99         | 14.3      | 60         | 35.6      | 5          | 112       |
| 98         | 15.7      | 50         | 42.2      | 2          | 161       |
| 95         | 18.0      | 40         | 49.6      | 1          | 220       |
| 90         | 20.8      | 30         | 58.6      | 0.5        | 280       |

LOW FLOW

| Period<br>consecutive |      |      | e interval<br>ears) |      |
|-----------------------|------|------|---------------------|------|
| days)                 | 2    | 5    | 10                  | 20   |
| 1                     | 18.3 | 14.3 | 12.7                | 11.4 |
| 3                     | 18.6 | 14.6 | 12.9                | 11.6 |
| 7                     | 19.2 | 14.9 | 13.1                | 11.7 |
| 14                    | 20.0 | 15.8 | 13.9                | 12.6 |
| 30                    | 21.6 | 16.8 | 14.8                | 13.4 |
| 60                    | 23.8 | 18.7 | 16.6                | 15.1 |
| 90                    | 25.4 | 20.2 | 18.1                | 16.6 |

# 03556500 - HIWASSEE RIVER NEAR McFARLAND, TN

LOCATION.--Lat 35°10'48", long 84°26'36", Polk County, on left bank 0.25 mile downstream from Smith Creek, 0.4 mile downstream from Appalachia powerhouse of Tennessee Valley Authority, 2.8 miles west of McFarland, and at mile 53.2.

DRAINAGE AREA. -- 1, 136 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1944-81.

REMARKS. -- Flow regulated by Chatuge, Nottely, and Hiwassee Lakes (for period of Record), and by Appalachia Lake (since February 1943).

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 108       | 80         | 1,440     | 20         | 3,090     |
| 99.1       | 151       | 70         | 1,800     | 10         | 3,300     |
| 99         | 157       | 60         | 2,250     | 5          | 4,080     |
| 98         | 210       | 50         | 2,500     | 2          | 6,000     |
| 95         | 450       | 40         | 2,690     | 1          | 7,830     |
| 90         | 890       | 30         | 2,890     | 0.5        | 9,200     |

LOW FLOW

| Period<br>(consecutive | Recurrence interval (in years) |       |       |      |  |
|------------------------|--------------------------------|-------|-------|------|--|
| days)                  | 2                              | 5     | 10    | 20   |  |
| 1                      | 132                            | 74.6  | 59.1  | 50.2 |  |
| 3                      | 335                            | 165   | 110   | 76.7 |  |
| 7                      | 519                            | 257   | 167   | 113  |  |
| 14                     | 768                            | 381   | 237   | 151  |  |
| 30                     | 1,150                          | 656   | 427   | 277  |  |
| 60                     | 1,330                          | 975   | 828   | 723  |  |
| 90                     | 1,580                          | 1,240 | 1,060 | 978  |  |

#### 03557000 - HIWASSEE RIVER NEAR RELIANCE, TN

LOCATION.--Lat 35°13'20", long 84°31'34", Polk County, on State Highway 40, 0.5 mile downstream from Spring Creek, 2.9 miles downstream from Reliance, 8.6 miles downstream from Appalachia powerhouse of Tennessee Valley Authority, and at mile 45.0.

DRAINAGE AREA. -- 1,223 mi2.

PERIOD OF RECORD. -- 1901-13.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
|            |           |            |           | •          |           |
| 99.5       | 429       | 80         | 1,140     | 20         | 3,590     |
| 99.1       | 500       | 70         | 1,410     | 10         | 5,040     |
| 99         | 513       | 60         | 1,740     | 5          | 7,000     |
| 98         | 606       | 50         | 2,040     | 2          | 11,200    |
| 95         | 725       | 40         | 2,460     | 1          | 15,500    |
| 90         | 886       | 30         | 2,940     | 0.5        | 22,000    |

LOW FLOW

| Period<br>(consecutive | Recurrence interval (in years) |      |     |      |  |
|------------------------|--------------------------------|------|-----|------|--|
| days)                  | 2                              | 5    | 10  | 20   |  |
| 1                      | 790                            | 570  | 480 | 410  |  |
| 3                      | 800                            | 5 70 | 480 | 410  |  |
| 7                      | 840                            | 590  | 490 | 410  |  |
| 14                     | 8 80                           | 620  | 510 | 4 30 |  |
| 30                     | 970                            | 690  | 560 | 470  |  |
| 60                     | 1,100                          | 760  | 620 | 5 20 |  |
| 90                     | 1,200                          | 820  | 680 | 590  |  |

#### 03559500 - OCOEE RIVER AT COPPERHILL, TN

LOCATION.--Lat 34°59'29", long 84°22'33", Polk County, on right bank 0.2 mile upstream from Fightingtown Creek, 0.4 mile downstream from Copperhill, and at mile 37.5.

DRAINAGE AREA. -- 352 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1943-71.

REMARKS.--Sixty-six percent of drainage area regulated by Blue Ridge Lake.
Record includes diversion from this stream by Tennessee Copper Co.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage                             | Discharge | Percentage | Discharge |
|------------|-----------|--|-----------|------------|-----------|
|            |           | ······································ |           |            |           |
| 99.5       | 110       | 80                                     | 480       | 20         | 1,120     |
| 99.1       | 121       | 70                                     | 615       | 10         | 1,320     |
| 99         | 124       | 60                                     | 717       | 5          | 1,520     |
| 98         | 144       | 50                                     | 806       | 2          | 1,940     |
| 95         | 217       | 40                                     | 891       | 1          | 2,470     |
| 90         | 316       | 30                                     | 987       | 0.5        | 2,690     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive | Recurrence interval (in years) |      |      |      |  |
|-----------------------|--------------------------------|------|------|------|--|
| days)                 | 2                              | 5    | 10   | 20   |  |
| 1                     | 128                            | 90.0 | 80.0 | 77.6 |  |
| 3                     | 169                            | 119  | 88.0 | 84.4 |  |
| 7                     | 249                            | 140  | 110  | 90.0 |  |
| 14                    | 327                            | 200  | 130  | 110  |  |
| 30                    | 447                            | 318  | 210  | 160  |  |
| 60                    | 542                            | 422  | 280  | 260  |  |
| 90                    | 598                            | 473  | 340  | 300  |  |

#### 03560500 - DAVIS MILL CREEK AT COPPERHILL, TN

LOCATION.--Lat 34°59'43", long 84°22'56", Polk County, on right bank 0.1 mile upstream from mouth, 0.4 mile northwest of Louisville & Nashville Railroad station, and 0.8 mile northwest of post office at Copperhill.

DRAINAGE AREA. -- 5.16 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1950-77.

REMARKS.--Flow includes an unknown amount of diversion from other drainage basins through the sulphuric acid plant of Tennessee Copper Co. Some fluctuation due to irregular release of wastes by Tennessee Copper Co. just above gage.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 5.6       | 80         | 32        | 20         | 64        |
| 99.1       | 5.9       | 70         | 35        | 10         | 120       |
| 99         | 6.0       | 60         | 39        | 5          | 140       |
| 98         | 6.8       | 50         | 43        | 2          | 160       |
| 95         | 23        | 40         | 46        | 1          | 170       |
| 90         | 27        | 30         | 51        | 0.5        | 180       |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |      |      | e interval<br>ears) |      |
|-----------------------|------|------|---------------------|------|
| days)                 | 2    | 5    | 10                  | 20   |
| 1                     | 24.5 | 17.6 | 15.2                | 13.7 |
| 3                     | 26.1 | 18.8 | 16.3                | 14.7 |
| 7                     | 27.8 | 19.9 | 17.1                | 15.4 |
| 14                    | 28.8 | 21.0 | 18.5                | 16.8 |
| 30                    | 30.2 | 23.8 | 22.0                | 21.1 |
| 60                    | 33.2 | 25.7 | 23.7                | 22.7 |
| 90                    | 35.1 | 26.8 | 24.6                | 23.4 |

#### 03561000 - NORTH POTATO CREEK NEAR DUCKTOWN, TN

LOCATION.--Lat 35°00'54", long 84°22'58", Polk County, on right bank 50 feet upstream from bridge on State Highway 40, 1.5 miles south of Ducktown, and 2 miles upstream from mouth.

DRAINAGE AREA. -- 13.0 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1934-70.

REMARKS.--Discharge includes diversion from Brush Creek and from Ocoee River. This diversion was small prior to June 1941. Some fluctuations caused by Tennessee Copper Co. plant's irregular pumpage from mines.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 6.41      | 80         | 16.2      | 20         | 37.6      |
| 99.1       | 6.89      | 70         | 19.0      | 10         | 50.0      |
| 99         | 7.01      | 60         | 21.5      | 5          | 67.4      |
| 98         | 7.94      | 50         | 24.4      | 2          | 100       |
| 95         | 10.2      | 40         | 27.9      | 1          | 146       |
| 90         | 12.7      | 30         | 32.0      | 0.5        | 190       |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period consecutive |      | Recurrence<br>(in ye | e interval<br>ears) |      |
|--------------------|------|----------------------|---------------------|------|
| days)              | 2    | 5                    | 10                  | 20   |
| 1                  | 11.9 | 7.91                 | 5.40                | 4.71 |
| 3                  | 12.4 | 8.20                 | 6.00                | 5.26 |
| 7                  | 13.0 | 9.16                 | 6.60                | 6.06 |
| 14                 | 13.7 | 9.80                 | 7.50                | 7.10 |
| 30                 | 15.4 | 11.2                 | 8.00                | 7.50 |
| 60                 | 17.9 | 13.0                 | 9.20                | 8.50 |
| 90                 | 19.0 | 14.0                 | 10.0                | 9.00 |

#### 03561500 - OCOEE RIVER AT McHARG, TN

LOCATION.--Lat 35°00'25", long 84°24'46", Polk County, 0.6 mile downstream from highway bridge, 1 mile downstream from McHarg railroad siding, 1 mile downstream from North Potato Creek, 3 miles downstream from Copperhill, and at mile 34.6.

DRAINAGE AREA. -- 447 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1920-31.

REMARKS.--

 $\label{eq:flow-duration} \textbf{Flow DURATION}$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 136       | 80         | 529       | 20         | 1,520     |
| 99.1       | 152       | 70         | 6 60      | 10         | 2,000     |
| 99         | 156       | 60         | 779       | 5          | 2,590     |
| 98         | 196       | 50         | 926       | 2          | 3,460     |
| 95         | 3 04      | 40         | 1,080     | 1          | 4,400     |
| 90         | 395       | 30         | 1,270     | 0.5        | 5,350     |

LOW FLOW

| Period<br>(consecutive |     |      | ce interval<br>years) |     |
|------------------------|-----|------|-----------------------|-----|
| days)                  | 2   | 5    | 10                    | 20  |
| 1                      | 340 | 190  | 120                   | 100 |
| 3                      | 360 | 2 20 | 130                   | 110 |
| 7                      | 380 | 240  | 140                   | 120 |
| 14                     | 410 | 250  | 150                   | 140 |
| 30                     | 450 | 290  | 170                   | 160 |
| 60                     | 500 | 3 20 | 190                   | 180 |
| 90                     | 560 | 370  | 220                   | 190 |

# 03561500 - OCOEE RIVER AT McHARG, TN

LOCATION.--Lat 35°00'25", long 84°24'46", Polk County, 0.6 mile downstream from highway bridge, 1 mile downstream from McHarg railroad siding, 1 mile downstream from North Potato Creek, 3 miles downstream from Copperhill, and at mile 34.6.

DRAINAGE AREA. -- 447 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1931-42.

REMARKS. -- Flow regulated by Blue Ridge Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 146       | 80         | 410       | 20         | 1,210     |
| 99.1       | 154       | 70         | 619       | 10         | 1,490     |
| 99         | 156       | 60         | 797       | 5          | 1,880     |
| 98         | 175       | 50         | 911       | 2          | 2,540     |
| 95         | 210       | 40         | 1,010     | 1          | 3,400     |
| 90         | 264       | 30         | 1,100     | 0.5        | 4,090     |

LOW FLOW

| Period<br>(consecutive |      |      | ce interval<br>years) |     |
|------------------------|------|------|-----------------------|-----|
| days)                  | 2    | 5    | 10                    | 20  |
| 1                      | 170  | 140  | 130                   | 120 |
| 3                      | 200  | 160  | 140                   | 130 |
| 7                      | 240  | 170  | 150                   | 130 |
| 14                     | 300  | 200  | 170                   | 150 |
| 30                     | 360  | 240  | 190                   | 160 |
| 60                     | 4 70 | 3 30 | 270                   | 230 |
| 90                     | 560  | 400  | 340                   | 300 |

#### 03562000 - BRUSH CREEK NEAR DUCKTOWN, TN

LOCATION.--Lat 35°02'12", long 84°26'09", Polk County, 100 feet downstream from bridge on U.S. Highway 64, 3 miles west of Ducktown, at mile 0.75.

DRAINAGE AREA. -- 14.4 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1934-42.

REMARKS.--Some flow diverted to North Potato Creek. Site inundated by Ocoee No. 3 Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 5.25      | 80         | 10.1      | 20         | . 33.9    |
| 99.1       | 5.46      | 70         | 12.2      | 10         | 47.4      |
| 99         | 5.51      | 60         | 14.8      | 5          | 66.8      |
| 98         | 5.96      | 50         | 17.7      | 2          | 115       |
| 95         | 6.59      | 40         | 21.4      | 1          | 170       |
| 90         | 7.69      | 30         | 26.2      | 0.5        | 243       |

LOW FLOW

| Period<br>(consecutive |     | Recurrence<br>(in y | e interval<br>ears) |    |
|------------------------|-----|---------------------|---------------------|----|
| days)                  | 2   | 5                   | 10                  | 20 |
| 1                      | 5.6 | 5.1                 | 5.0                 | *  |
| 3                      | 5.7 | 5.3                 | 5.1                 | *  |
| 7                      | 6.1 | 5.4                 | 5.2                 | *  |
| 14                     |     |                     |                     |    |
| 30                     |     |                     |                     |    |
| 60                     |     |                     |                     |    |
| 90                     |     |                     |                     |    |

<sup>\*</sup> Figures cannot be determined from available data.

#### 03563000 - OCOEE RIVER AT EMF, TN

LOCATION.--Lat 35°05'48", long 84°32'07", Polk County, on left bank, 150 feet west of U.S. Highway 64, 700 feet downstream from Tennessee Valley Authority's Ocoee No. 2 powerplant, 0.75 mile upstream from former village of Emf (Caney Creek), 0.75 mile upstream from Big Creek, 2.4 miles south of Archville, and at mile 19.6.

DRAINAGE AREA. -- 524 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1943-81.

REMARKS.--Flow regulated by Blue Ridge Lake, Ocoee No. 3 Lake, and by powerplant above station.

 $\label{eq:flow-decomposition} Flow \ \mbox{in cubic feet per second, which was equaled or exceeded for percentage}$  of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 65.0      | 80         | 943       | 20         | 1,590     |
| 99.1       | 130       | 70         | 1,000     | 10         | 1,800     |
| 99         | 170       | 60         | 1,070     | 5          | 2,340     |
| 98         | 410       | 50         | 1,100     | 2          | 3,300     |
| 95         | 630       | 40         | 1,200     | 1          | 3,900     |
| 90         | 780       | 30         | 1,380     | 0.5        | 4,900     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period consecutive |      |      | ce interval<br>years) |      |
|--------------------|------|------|-----------------------|------|
| days)              | 2    | 5    | 10                    | 20   |
| 1                  | 90.2 | 23.8 | 11.6                  | 6.37 |
| 3                  | 280  | 80.1 | 34.8                  | 15.9 |
| 7                  | 560  | 380  | 250                   | 140  |
| 14                 | 720  | 460  | 320                   | 210  |
| 30                 | 780  | 610  | 520                   | 450  |
| 60                 | 8 70 | 730  | 660                   | 5 90 |
| 90                 | 930  | 800  | 740                   | 690  |

#### 03564500 - OCOEE RIVER AT PARKSVILLE, TN

LOCATION.--Lat 35°05'48", long 84°39'15", Polk County, on right bank 0.4 mile downstream from Parksville Dam and Ocoee No. 1 power plant of Tennessee Valley Authority at Parksville, and at mile 11.5.

DRAINAGE AREA. -- 595 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1943-81.

REMARKS.--Flow regulated by Blue Ridge Lake, Ocoee No. 3 Lake, and Lake Ocoee.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 110       | 80         | 880       | 20         | 1,820     |
| 99.1       | 120       | 70         | 1,000     | 10         | 2,200     |
| 99         | 122       | 60         | 1,160     | 5          | 2,790     |
| 98         | 156       | 50         | 1,300     | 2          | 3,470     |
| 95         | 220       | 40         | 1,440     | 1          | 4,600     |
| 90         | 480       | 30         | 1,580     | 0.5        | 5,500     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive | Recurrence interval (in years) |      |       |      |  |
|-----------------------|--------------------------------|------|-------|------|--|
| days)                 | 2                              | 5    | 10    | 20   |  |
| 1                     | 117                            | 83.1 | 72.7  | 66.4 |  |
| 3                     | 287                            | 167  | 123   | 93.9 |  |
| 7                     | 530                            | 360  | 285   | 231  |  |
| 14                    | 658                            | 487  | 407   | 347  |  |
| 30                    | 800                            | 646  | 569   | 508  |  |
| 60                    | 922                            | 794  | 728   | 675  |  |
| 90                    | 993                            | 877  | 8 2 1 | 777  |  |

#### 03565000 - HIWASSEE RIVER ABOVE CHARLESTON, TN

LOCATION.--Lat 35°12'33", long 84°39'31", Polk County, on right bank 0.2 mile downstream from Ocoee River, 0.3 mile upstream from Louisville & Nashville bridge, 2.5 miles north of Benton, 15.2 miles upstream from Charleston, and at mile 34.2.

DRAINAGE AREA. -- 2,001 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1954-76.

REMARKS.--Flow regulated by six reservoirs above station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 940       | 80         | 2,850     | 20         | 5,000     |
| 99.1       | 1,130     | 70         | 3,300     | 10         | 6,200     |
| 99         | 1,170     | 60         | 3,600     | 5          | 8,200     |
| 98         | 1,380     | 50         | 3,900     | 2          | 11,000    |
| 95         | 1,800     | 40         | 4,200     | 1          | 13,500    |
| 90         | 2,300     | 30         | 4,500     | 0.5        | 16,000    |

LOW FLOW

| Period<br>consecutive | Recurrence interval (in years) |       |       |       |  |
|-----------------------|--------------------------------|-------|-------|-------|--|
| days)                 | 2                              | 5     | 10    | 20    |  |
| 1                     | 1,020                          | 682   | 544   | 448   |  |
| 3                     | 1,450                          | 1,080 | 924   | 817   |  |
| 7                     | 1,920                          | 1,430 | 1,220 | 1,060 |  |
| 14                    | 2,110                          | 1,600 | 1,370 | 1,210 |  |
| 30                    | 2,520                          | 1,930 | 1,650 | 1,440 |  |
| 60                    | 2,800                          | 2,340 | 2,140 | 1,980 |  |
| 90                    | 3,000                          | 2,590 | 2,400 | 2,250 |  |

## 03565040 - CHESTUEE CREEK ABOVE ENGLEWOOD, TN

LOCATION.--Lat 35°26'24", long 84°26'51", McMinn County, on left bank 2.5 miles above Englewood, 2.7 miles above mouth of Little Chestuee Creek and 20 feet downstream from road bridge.

DRAINAGE AREA. -- 14.8 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1945-57.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 2.18      | 80         | 4.61      | 20         | 30.5      |
| 99.1       | 2.24      | 70         | 6.40      | 10         | 47.6      |
| 99         | 2.26      | 60         | 8.40      | 5          | 72.3      |
| 98         | 2.42      | 50         | 11.3      | 2          | 125       |
| 95         | 2.87      | 40         | 15.6      | 1          | 210       |
| 90         | 3.43      | 30         | 22.0      | 0.5        | 333       |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |     | Recurrence<br>(in ye | e interval<br>ears) |     |
|-----------------------|-----|----------------------|---------------------|-----|
| days)                 | 2   | 5                    | 10                  | 20  |
| 1                     | 3.0 | 2.4                  | 2.1                 | 2.0 |
| 3                     | 3.0 | 2.4                  | 2.1                 | 2.0 |
| 7                     | 3.1 | 2.5                  | 2.2                 | 2.0 |
| 14                    | 3.3 | 2.5                  | 2.2                 | 2.1 |
| 30                    | 3.7 | 2.7                  | 2.4                 | 2.2 |
| 60                    | 4.3 | 3.0                  | 2.6                 | 2.3 |
| 90                    | 5.0 | 3.5                  | 2.9                 | 2.6 |

## 03565120 - CHESTUEE CREEK AT ZION HILL, TN

LOCATION. -- Lat 35°24'05", long 84°31'22", McMinn County, on left bank 2.5 miles southwest of Englewood, 2.1 miles above confluence with Middle Creek, and 2,000 feet downstream from road bridge.

DRAINAGE AREA. -- 37.8 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1945-61.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 7.51      | 80         | 14.0      | 20         | 75.5      |
| 99.1       | 7.95      | 70         | 18.0      | 10         | 116       |
| 99         | 8.07      | 60         | 22.9      | 5          | 175       |
| 98         | 8.52      | 50         | 29.7      | 2          | 300       |
| 95         | 9.42      | 40         | 40.0      | 1          | 445       |
| 90         | 11.0      | 30         | 55.1      | 0.5        | 643       |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>Consecutive |     | Recurrenc<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|--------------------|---------------------|-----|
| days)                 | 2   | 5                  | 10                  | 20  |
| 1                     | 9.3 | 7.7                | 7.1                 | 6.7 |
| 3                     | 9.4 | 7.8                | 7.2                 | 6.9 |
| 7                     | 9.6 | 7.9                | 7.4                 | 7.0 |
| 14                    | 10  | 8.1                | 7.5                 | 7.1 |
| 30                    | 11  | 8.9                | 8.1                 | 7.6 |
| 60                    | 13  | 10                 | 8.9                 | 8.2 |
| 90                    | 14  | 11                 | 9.8                 | 9.0 |

# 03565160 - MIDDLE CREEK BELOW HWY 39 NEAR ENGLEWOOD, TN

LOCATION.--Lat 35°25'16", long 84°31'16", McMinn County, on left bank
1.8 miles west of Englewood, 1.6 miles above junction with Chestuee
Creek and 0.5 mile below Highway 39 bridge.

DRAINAGE AREA. -- 32.7 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1945-61.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 7.52      | 80         | 13.6      | 20         | 72.2      |
| 99.1       | 7.97      | 70         | 17.5      | 10         | 109       |
| 99         | 8.08      | 60         | 22.6      | 5 .        | 145       |
| 98         | 8.48      | 50         | 28.8      | 2          | 222       |
| 95         | 9.53      | 40         | 38.4      | 1          | 330       |
| 90         | 11.1      | 30         | 51.9      | 0.5        | 488       |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 8.9 | 7.8                 | 7.4                 | 7.1 |
| 3                     | 9.1 | 7.8                 | 7.4                 | 7.1 |
| 7                     | 9.3 | 7.9                 | 7.5                 | 7.1 |
| 14                    | 9.6 | 8.2                 | 7.7                 | 7.4 |
| 30                    | 11  | 8.8                 | 8.1                 | 7.7 |
| 60                    | 12  | 9.7                 | 8.8                 | 8.2 |
| 90                    | 14  | 11                  | 9.3                 | 8.5 |

#### 03565250 - CHESTUEE CREEK AT DENTVILLE, TN

LOCATION.--Lat 35°16'58", long 84°34'32", McMinn County, on left bank at highway bridge at Dentville, 1.2 miles downstream from Big Foot Branch and 18.1 miles above mouth.

DRAINAGE AREA. -- 114 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1945-61.

REMARKS.--

 $\label{eq:flow-decomposition} FLOW \ \ DURATION$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 23.2      | 80         | 44.0      | 20         | 251       |
| 99.1       | 24.6      | 70         | 56.2      | 10         | 378       |
| 99         | 24.9      | 60         | 72.8      | 5          | 537       |
| 98         | 26.6      | 50         | 93.7      | 2          | 837       |
| 95         | 29.1      | 40         | 128       | 1          | 1,230     |
| 90         | 33.7      | 30         | 176       | 0.5        | 1,800     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |    |    | ce interval<br>years) |    |
|-----------------------|----|----|-----------------------|----|
| days)                 | 2  | 5  | 10                    | 20 |
| 1                     | 29 | 23 | 22                    | 20 |
| 3                     | 29 | 24 | 22                    | 21 |
| 7                     | 30 | 24 | 22                    | 21 |
| 14                    | 31 | 25 | 23                    | 21 |
| 30                    | 35 | 27 | 25                    | 23 |
| 60                    | 40 | 30 | 27                    | 25 |
| 90                    | 43 | 33 | 29                    | 26 |

#### 03565300 - SOUTH CHESTUEE CREEK NEAR BENTON, TN

LOCATION. -- Lat 35°10'02", long 84°42'59", Polk County, on downstream right wingwall of county highway bridge, 1,000 feet downstream from Climer Branch, 2.4 miles southwest of Benton Station, 2.8 miles north of Ocoee, and 3.6 miles west of Benton.

DRAINAGE AREA. -- 31.8 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1958-81.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 2.8       | 80         | 6.7       | 20         | 61        |
| 99.1       | 3.1       | 70         | 9.4       | 10         | 110       |
| 99         | 3.2       | 60         | 14        | 5          | 180       |
| 98         | 3.6       | 50         | 19        | 2          | 400       |
| 95         | 4.2       | 40         | 28        | 1          | 570       |
| 90         | 5.0       | 30         | 42        | 0.5        | 840       |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |      | Recurrence<br>(in ye |      |      |
|-----------------------|------|----------------------|------|------|
| days)                 | 2    | 5                    | 10   | 20   |
| 1                     | 3.80 | 2.85                 | 2.48 | 2.22 |
| 3                     | 3.95 | 2.94                 | 2.55 | 2.27 |
| 7                     | 4.17 | 3.12                 | 2.71 | 2.42 |
| 14                    | 4.42 | 3.30                 | 2.87 | 2.56 |
| 30                    | 5.14 | 3.77                 | 3.29 | 2.99 |
| 60                    | 6.48 | 4.60                 | 3.97 | 3.57 |
| 90                    | 7.46 | 5.17                 | 4.46 | 4.04 |

#### 03565500 - OOSTANAULA CREEK NEAR SANFORD, TN

LOCATION.--Lat 35°19'39", long 84°24'19", McMinn County, on right bank 20 feet downstream from highway bridge, 1.3 miles southeast of Sanford, 3.5 miles northeast of Calhoun, and at mile 5.7.

DRAINAGE AREA. -- 57.0 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1955-75.

REMARKS.--

 $\label{eq:flow_def} \textbf{Flow DURATION}$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 18        | 80         | 30        | 20         | 125       |
| 99.1       | 19        | 70         | 37        | 10         | 180       |
| 99         | 19        | 60         | 47        | 5          | 275       |
| 98         | 20        | 50         | 59        | 2          | 460       |
| 95         | 23        | 40         | 74        | 1          | 670       |
| 90         | 25        | 30         | 95        | 0.5        | 890       |

LOW FLOW

| Period<br>(consecutive |      |      | e interval<br>ears) |      |
|------------------------|------|------|---------------------|------|
| days)                  | 2    | 5    | 10                  | 20   |
| 1                      | 22.0 | 19.1 | 18.0                | 17.4 |
| 3                      | 22.4 | 19.3 | 18.2                | 17.5 |
| 7                      | 22.9 | 19.6 | 18.5                | 17.7 |
| 14                     | 23.6 | 20.2 | 19.0                | 18.2 |
| 30                     | 25.2 | 21.6 | 20.4                | 19.7 |
| 60                     | 27.4 | 23.2 | 21.8                | 21.0 |
| 90                     | 29.2 | 24.4 | 22.9                | 22.1 |

## 03566000 - HIWASSEE RIVER AT CHARLESTON, TN

LOCATION.--Lat 35°17'16", long 84°45'07", Bradley County, at Hiwassee Packing Plant; 250 feet downstream from old highway bridge, 250 feet upstream from Southern Railway bridge, 1,700 feet upstream from bridge on U.S. Highway 11 at Charleston, and at mile 18.9.

DRAINAGE AREA. -- 2,298 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1964-77.

REMARKS.--Some diversions above the station for industrial and municipal water supplies. Flow regulated by five reservoirs.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | e Discharge | Percentage | Discharge . | Percentage | Discharge |
|------------|-------------|------------|-------------|------------|-----------|
| 99.5       | 1,200       | 80         | 3,260       | 20         | 5,730     |
| 99.1       | 1,400       | 70         | 3,600       | 10         | 7,500     |
| 99         | 1,450       | 60         | 3,920       | 5          | 9,820     |
| 98         | 1,710       | 50         | 4,200       | 2          | 13,000    |
| 95         | 2,200       | 40         | 4,560       | 1          | 17,000    |
| 90         | 2,700       | 30         | 5,040       | 0.5        | 20,700    |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive | Recurrence interval (in years) |       |       |       |  |
|-----------------------|--------------------------------|-------|-------|-------|--|
| days)                 | 2                              | 5     | 10    | 20    |  |
| 1                     | 1,400                          | 870   | 680   | 540   |  |
| 3                     | 1,800                          | 1,200 | 9 60  | 810   |  |
| 7                     | 2,300                          | 1,600 | 1,300 | 1,100 |  |
| 14                    | 2,500                          | 1,800 | 1,600 | 1,400 |  |
| 30                    | 2,800                          | 2,300 | 2,000 | 1,800 |  |
| 60                    | 3,100                          | 2,600 | 2,400 | 2,200 |  |
| 90                    | 3,300                          | 2,800 | 2,600 | 2,500 |  |

#### 03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TN

LOCATION.--Lat 35°03'43", long 85°03'59", Hamilton County, on right bank at bridge on county road, 0.6 mile downstream from Southern Railway bridge, 0.85 mile south of post office at Ooltewah, and 1.65 miles above mouth of Little Wolftever Creek.

DRAINAGE AREA.--18.8 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1964-75.

REMARKS.--

 $\label{eq:flow_def} \textbf{Flow} \ \ \textbf{DURATION}$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 2.4       | 80         | 5.3       | 20         | 39        |
| 99.1       | 2.6       | 70         | 6.8       | 10         | 69        |
| 99         | 2.7       | 60         | 9.6       | 5          | 120       |
| 98         | 3.0       | 50         | 14        | 2          | 230       |
| 95         | 3.6       | 40         | 19        | 1          | 370       |
| 90         | 4.2       | 30         | 27        | 0.5        | 490       |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 3.1 | 2.4                 | 2.1                 | 1.7 |
| 3                     | 3.2 | 2.5                 | 2.2                 | 1.9 |
| 7                     | 3.3 | 2.6                 | 2.3                 | 2.0 |
| 14                    | 3.7 | 2.9                 | 2.5                 | 2.2 |
| 30                    | 4.1 | 3.2                 | 2.9                 | 2.5 |
| 60                    | 5.4 | 4.0                 | 3.5                 | 2.9 |
| 90                    | 6.1 | 4.4                 | 3.6                 | 3.3 |

### 03567500 - SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN

LOCATION.--Lat 35°00'50", long 85°12'27", Hamilton County, on right bank 0.3 mile upstream from bridge on U.S. Highway 11, 0.8 mile downstream from West Chickamauga Creek, 1.5 miles south of Chickamauga, 6 miles east of the city hall in Chattanooga, and at mile 12.4.

DRAINAGE AREA. -- 428 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1929-78.

REMARKS.--Some diurnal fluctuation at low flow caused by small mills upstream.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 82        | 80         | 155       | 20         | 820       |
| 99.1       | 89        | 70         | 190       | 10         | 1,500     |
| 99         | 91        | 60         | 230       | 5          | 2,600     |
| 98         | 97        | 50         | 300       | 2          | 4,400     |
| 95         | 110       | 40         | 410       | 1          | 6,500     |
| 90         | 130       | 30         | 560       | 0.5        | 9,300     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |     |      | ce interval<br>years) |      |
|-----------------------|-----|------|-----------------------|------|
| days)                 | 2   | 5    | 10                    | 20   |
| 1                     | 110 | 91.2 | 82.5                  | 75.7 |
| 3                     | 113 | 94.4 | 85.9                  | 79.4 |
| 7                     | 115 | 96.8 | 88.3                  | 81.8 |
| 14                    | 120 | 100  | 90.6                  | 83.5 |
| 30                    | 129 | 105  | 95.2                  | 87.5 |
| 60                    | 143 | 114  | 103                   | 95.1 |
| 90                    | 158 | 125  | 112                   | 103  |

## 03568000 - TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", lon~ 85°16'43", Hamilton County, on right bank at Rivermont Golf and Country Club, 0.5 mile downstream from South Chickamauga Creek, 3 miles downstream from Chickamauga Dam, 3.5 miles upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6.

DRAINAGE AREA. -- 21,400 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1875-1936.

REMARKS. -- Unregulated. See next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentag | ge Discharge | Percentage | Discharge | Percentage | Discharge |
|-----------|--------------|------------|-----------|------------|-----------|
| 99.5      | 5,450        | 80         | 13,700    | 20         | 53,800    |
| 99.1      | 6,190        | 70         | 18,000    | 10         | 78,000    |
| 99        | 6,310        | 60         | 22,100    | 5          | 109,000   |
| 98        | 7,090        | 50         | 27,000    | 2          | 159,000   |
| 95        | 8,400        | 40         | 33,800    | 1          | 192,000   |
| 90        | 10,000       | 30         | 41,800    | 0.5        | 222,000   |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period (consecutive | Recurrence interval (in years) |        |       |       |  |
|---------------------|--------------------------------|--------|-------|-------|--|
| days)               | 2                              | 5      | 10    | 20    |  |
| 1                   | 7,930                          | 6,110  | 5,330 | 4,770 |  |
| 3                   | 8,120                          | 6, 250 | 5,470 | 4,900 |  |
| 7                   | 8,380                          | 6,460  | 5,650 | 5,070 |  |
| 14                  | 8,880                          | 6,800  | 5,920 | 5,300 |  |
| 30                  | 9,780                          | 7,450  | 6,490 | 5,800 |  |
| 60                  | 11,400                         | 8,570  | 7,410 | 6,590 |  |
| 90                  | 13,100                         | 9,750  | 8,390 | 7,430 |  |

#### 03568000 - TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43", Hamilton County, on right bank at Rivermont Golf and Country Club, 0.5 mile downstream from South Chickamauga Creek, 3 miles downstream from Chickamauga Dam, 3.5 miles upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6.

DRAINAGE AREA. -- 21,400 mi<sup>2</sup> (approximately).

PERIOD OF RECORD. -- 1954-81.

REMARKS.--Since March 1936, flow regulated by increasing number of reservoirs above the station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percenta | ge Discharge | Percentage | Discharge | Percentage | Discharge |
|----------|--------------|------------|-----------|------------|-----------|
| 99.5     | 8,650        | 80         | 23,500    | 20         | 43,900    |
| 99.1     | 9,920        | 70         | 27,000    | 10         | 56,000    |
| 99       | 10,100       | 60         | 29,300    | 5          | 77,700    |
| 98       | 12,000       | 50         | 32,000    | 2          | 108,000   |
| 95       | 16,000       | 40         | 34,700    | 1          | 133,000   |
| 90       | 19,000       | 30         | 38,700    | 0.5        | 150,000   |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period consecutive |        |        | ence interval<br>n years) |        |
|--------------------|--------|--------|---------------------------|--------|
| days)              | 2      | 5      | 10                        | 20     |
| 1                  | 9,250  | 6,820  | 5,770                     | 5,010  |
| 3                  | 12,900 | 9,600  | 8,170                     | 7,140  |
| 7                  | 16,100 | 12,000 | 10,000                    | 8,620  |
| 14                 | 18,400 | 14,000 | 12,000                    | 10,500 |
| 30                 | 21,300 | 16,900 | 14,800                    | 13,100 |
| 60                 | 23,300 | 19,700 | 18,100                    | 16,800 |
| 90                 | 24,900 | 21,900 | 20,500                    | 19,400 |

## 03571000 - SEQUATCHIE RIVER NEAR WHITWELL, TN

LOCATION.--Lat 35°12'22", long 85°29'48", Marion County, on right bank 15 feet downstream from highway bridge, 1.5 miles east of Whitwell, 3 miles upstream from bridge on State Highway 27, 4.5 miles downstream from Griffith Creek, and at mile 25.1.

DRAINAGE AREA. -- 402 mi2 (includes 18 mi2 without surface drainage).

PERIOD OF RECORD. -- 1954-81.

REMARKS.--Prior to 1950 some diurnal fluctuation caused by small mills above station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 32        | 80         | 96        | 20         | 1,100     |
| 99.1       | 34        | 70         | 140       | 10         | 1,800     |
| 99         | 35        | 60         | 210       | 5          | 2,700     |
| 98 .       | 40        | 50         | 340       | 2          | 4,400     |
| 95         | 49        | 40         | 500       | 1          | 6,200     |
| 90         | 63        | 30         | 7 20      | 0.5        | 8,000     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period consecutive |      |      | e interval<br>ears) |      |
|--------------------|------|------|---------------------|------|
| days)              | 2    | 5    | 10                  | 20   |
| 1                  | 49.5 | 35.0 | 29.3                | 25.3 |
| 3                  | 50.7 | 36.3 | 30.7                | 26.7 |
| 7                  | 52.6 | 37.9 | 32.1                | 28.2 |
| 14                 | 55.4 | 39.3 | 33.2                | 28.9 |
| 30                 | 61.0 | 42.3 | 35.8                | 31.5 |
| 60                 | 72.6 | 48.8 | 41.1                | 36.2 |
| 90                 | 87.8 | 56.8 | 46.7                | 40.3 |

## 03571850 - TENNESSEE RIVER AT SOUTH PITTSBURG, TN

LOCATION.--Lat 35°00'41", long 85°41'51", Marion County, on right bank
150 feet upstream from South Pittsburg Ferry landing on Tennessee State
Highway 156, 0.5 mile downstream from Battle Creek, 0.5 mile east of
South Pittsburg, 4.6 miles downstream from Sequatchie River, 6.5 miles
downstream from Nickajack Dam, and at mile 418.2.

DRAINAGE AREA. -- 22,640 mi<sup>2</sup> (approximately).

PERIOD OF RECORD. -- 1954-81.

REMARKS.--Since March 1936, flow regulated by increasing number of reservoirs above the station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentag | ge Discharge | Percentage | Discharge | Percentage | Discharge |
|-----------|--------------|------------|-----------|------------|-----------|
| 99.5      | 9,630        | 80         | 25,500    | 20         | 47,900    |
| 99.1      | 11,200       | · 70       | 29,000    | 10         | 64,000    |
| 99        | 11,600       | 60         | 31,600    | 5          | 88,800    |
| 98        | 14,000       | 50         | 35,000    | 2          | 122,000   |
| 95        | 18,000       | 40         | 38,200    | 1          | 150,000   |
| 90        | 21,000       | 30         | 42,200    | 0.5        | 175,000   |

LOW FLOW

| Period<br>consecutive | Recurrence interval (in years) |        |        |        |  |  |
|-----------------------|--------------------------------|--------|--------|--------|--|--|
| days)                 | 2                              | 5      | 10     | 20     |  |  |
| 1                     | 10,800                         | 7,510  | 6,100  | 5,080  |  |  |
| 3                     | 14,600                         | 11,100 | 9,610  | 8,540  |  |  |
| 7                     | 18,000                         | 13,700 | 11,800 | 10,400 |  |  |
| 14                    | 19,900                         | 15,400 | 13,500 | 12,000 |  |  |
| 30                    | 22,400                         | 18,000 | 16,000 | 14,500 |  |  |
| 60                    | 24,700                         | 21,300 | 19,900 | 19,000 |  |  |
| 90                    | 26,600                         | 23,300 | 21,900 | 21,000 |  |  |

## 03578000 - ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, on right bank at downstream side of bridge on U.S. Highway 41, 1.1 miles southeast of Pelham, 1.8 miles upstream from Caldwell Creek, and at mile 194.2.

DRAINAGE AREA. -- 65.6 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1952-82.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 1.5       | 80         | 8.4       | 20         | 190       |
| 99.1       | 1.7       | 70         | 17        | 10         | 3 30      |
| 99         | 1.7       | 60         | 32        | 5          | 550       |
| 98         | 2.0       | 50         | 55        | 2          | 9 50      |
| 95         | 2.6       | 40         | 87        | 1          | 1,300     |
| 90         | 4.2       | 30         | 130       | 0.5        | 1,900     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period consecutive | -    | Recurrence<br>(in ye |      |      |
|--------------------|------|----------------------|------|------|
| days)              | 2    | 5                    | 10   | 20   |
| 1                  | 3.03 | 1.75                 | 1.31 | 1.04 |
| 3                  | 3.13 | 1.81                 | 1.36 | 1.08 |
| 7                  | 3.32 | 1.91                 | 1.44 | 1.14 |
| 14                 | 3.68 | 2.10                 | 1.57 | 1.24 |
| 30                 | 4.58 | 2.53                 | 1.86 | 1.45 |
| 60                 | 6.64 | 2.97                 | 2.00 | 1.47 |
| 90                 | 8.87 | 3.80                 | 2.51 | 1.81 |

# 03578500 - BRADLEY CREEK NEAR PRAIRIE PLAINS, TN

LOCATION.--Lat 35°21'21", long 85°58'45", Coffee County, on left bank 165 feet downstream from highway bridge, 1.1 miles northwest of Prairie Plains, and 3.6 miles upstream from mouth.

DRAINAGE AREA. -- 41.3 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1952-59.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge    | Percentage | Discharge |
|------------|-----------|------------|--------------|------------|-----------|
| 99.5       | 3.21      | 80         | 7.34         | 20         | 84.8      |
| 99.1       | 3.30      | 70         | 10.3         | 10         | 145       |
| 99         | 3.32      | 60         | 15.4         | 5          | 233       |
| 98         | 3.56      | 50         | 23.5         | 2          | 429       |
| 95         | 4.10      | 40         | 39.5         | 1          | 670       |
| 90         | 4.76      | 30         | 57 <b>.7</b> | 0.5        | 9 90      |

LOW FLOW

| Period<br>(consecutive |       | Recurrence<br>(in y | e interval<br>ears) |     |
|------------------------|-------|---------------------|---------------------|-----|
| days)                  | 2     | 5                   | 10                  | 20  |
| 1                      | 7 • 2 | 4.5                 | 3.2                 | 2.2 |
| 3                      | 7.5   | 5.0                 | 3.8                 | 3.0 |
| 7                      | 7.8   | 5.6                 | 4.4                 | 3.6 |
| 14                     |       |                     |                     |     |
| 30                     |       |                     |                     |     |
| 60                     |       |                     |                     |     |
| 90                     |       |                     |                     |     |

#### 03579100 - ELK RIVER NEAR ESTILL SPRINGS, TN

LOCATION.--Lat 35°17'08", long 86°06'20", Franklin County, on left bank 8 feet downstream and 8 feet shoreward from corner of bridge on Corn Mill Road, 1.7 miles northeast of Estill Springs, 2.7 miles downstream from Elk River Dam, 4.0 miles upstream from bridge on U.S. Highway 41-A and at mile 167.3.

DRAINAGE AREA. -- 275 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1922-52.

REMARKS.--Unregulated. See next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 29.3      | 80         | 69.3      | 20         | 679       |
| 99.1       | 36.2      | 70         | 101       | 10         | 1,130     |
| 99         | 37.4      | 60         | 147       | 5          | 1,720     |
| 98         | 42.5      | 50         | 220       | 2          | 2,740     |
| 95         | 49.5      | 40         | 322       | 1          | 3,710     |
| 90         | 55.3      | 30         | 466       | 0.5        | 4,900     |
|            |           |            |           |            |           |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>consecutive |      |               | e interval<br>ears) |      |
|-----------------------|------|---------------|---------------------|------|
| days)                 | 2    | 5             | 10                  | 20   |
| 1                     | 48.9 | 32.5          | 24.1                | 12.0 |
| 3                     | 51.3 | 36.5          | 28.8                | 18.0 |
| 7                     | 52.8 | 39.2          | 32.4                | 22.0 |
| 14                    | 53.9 | 42.4          | 37.0                | 30.0 |
| 30                    | 57.0 | 46.1          | 41.9                | 37.0 |
| 60                    | 64.9 | 49.6          | 44.2                | 40.7 |
| 90                    | 76.8 | 55 <b>.</b> 7 | 48.4                | 43.7 |

# 03579100 - ELK RIVER NEAR ESTILL SPRINGS, TN

LOCATION.--Lat 35°17'08", long 86°06'20", Franklin County, on left bank 8 feet downstream and 8 feet shoreward from corner of bridge on Corn Mill Road, 1.7 miles northeast of Estill Springs, 2.7 miles downstream from Elk River Dam, 4.0 miles upstream from bridge on U.S. Highway 41-A, and at mile 167.3.

DRAINAGE AREA. -- 275 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1953-81.

REMARKS. -- Flow regulated by Woods Reservoir 2.7 miles upstream.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 23.2      | 80         | 65.9      | 20         | 682       |
| 99.1       | 25.1      | 70         | 97.1      | 10         | 1,100     |
| 99         | 25.4      | 60         | 142       | 5          | 1,760     |
| 98         | 28.9      | 50         | 230       | 2          | 3,000     |
| 95         | 35.0      | 40         | 336       | 1          | 4,100     |
| 90         | 44.0      | 30         | 460       | 0.5        | 5,450     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |      |      | e interval<br>ears) |      |
|-----------------------|------|------|---------------------|------|
| days)                 | 2    | 5    | 10                  | 20   |
| 1                     | 29.3 | 22.1 | 19.3                | 17.4 |
| 3                     | 30.9 | 23.1 | 20.0                | 17.9 |
| 7                     | 32.3 | 24.4 | 21.5                | 19.6 |
| 14                    | 36.5 | 27.1 | 23.8                | 21.7 |
| 30                    | 43.6 | 31.0 | 26.5                | 23.5 |
| 60                    | 63.6 | 41.5 | 33.8                | 28.7 |
| 90                    | 78.9 | 53.5 | 45.0                | 39.6 |

# 03580300 - BOILING FORK CREEK ABOVE WINCHESTER, TN

LOCATION.--Lat 35°11'14", long 86°05'42", Franklin County, on left bank, on downstream end of left pier of county road bridge, 0.65 mile upstream from Louisville & Nashville Railroad bridge, 1.0 mile east of Winchester, 2.3 miles upstream from mouth of Wagner Creek, and 5.2 miles above mouth.

DRAINAGE AREA. -- 55.9 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1962-70.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 3.70      | 80         | 8.60      | 20         | 114       |
| 99.1       | 3.78      | 70         | 13.6      | 10         | 196       |
| 99         | 3.80      | 60         | 22.8      | 5          | 304       |
| 98         | 4.01      | 50         | 34.4      | 2          | 570       |
| 95         | 4.70      | 40         | 53.0      | 1          | 760       |
| 90         | 5.81      | 30         | 78.5      | 0.5        | 1,100     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|--------------------|-----|---------------------|---------------------|-----|
| days)              | 2   | 5                   | 10                  | 20  |
| 1                  | 2.3 | 1.2                 | 1.0                 | 0.8 |
| 3                  | 2.5 | 1.3                 | 1.0                 | .9  |
| 7                  | 2.7 | 1.4                 | 1.1                 | 1.0 |
| 14                 |     |                     |                     |     |
| 30                 |     |                     |                     |     |
| 60                 |     |                     |                     |     |
| 90                 |     |                     |                     |     |

#### 03582000 - ELK RIVER ABOVE FAYETTEVILLE, TN

LOCATION. -- Lat 35°08'04", long 86°32'23", Lincoln County, on right bank 100 feet downstream from highway bridge, 1.75 miles southeast of Fayetteville, 4 miles upstream from Norris Creek, and at mile 93.9.

DRAINAGE AREA. -- 827 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1935-52.

REMARKS.--Prior to August 1949, diurnal fluctuations at low flow caused by powerplants upstream.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 150       | 80         | 246       | 20         | 1,930     |
| 99.1       | 152       | 70         | 320       | 10         | 3,200     |
| 99         | 153       | 60         | 433       | 5          | 4,920     |
| 98         | 158       | 50         | 6 20      | 2          | 8,200     |
| 95         | 180       | 40         | 930       | 1          | 11,000    |
| 90         | 200       | 30         | 1,350     | 0.5        | 14,300    |

LOW FLOW

| Period<br>consecutive | Recurrence interval<br>(in years) |     |     |     |  |
|-----------------------|-----------------------------------|-----|-----|-----|--|
| days)                 | 2                                 | 5   | 10  | 20  |  |
| 1                     | 170                               | 150 | 140 | 140 |  |
| 3                     | 170                               | 150 | 140 | 140 |  |
| 7                     | 170                               | 150 | 150 | 140 |  |
| 14                    | 180                               | 160 | 150 | 140 |  |
| 30                    | 190                               | 160 | 150 | 150 |  |
| 60                    | 2 20                              | 180 | 160 | 150 |  |
| 90                    | 250                               | 200 | 180 | 180 |  |

#### 03582000 - ELK RIVER ABOVE FAYETTEVILLE, TN

LOCATION.--Lat 35°08'04", long 86°32'23", Lincoln County, on right bank 100 feet downstream from highway bridge, 1.75 miles southeast of Fayetteville, 4 miles upstream from Norris Creek, and at mile 93.9.

DRAINAGE AREA. -- 827 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1972-81.

REMARKS.--Flow regulated by Woods Reservoir (since 1952), and Tims Ford Lake since December 1970.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 132       | 80         | 414       | 20         | 2,640     |
| 99.1       | 144       | 70         | 510       | 10         | 3,800     |
| 99         | 147       | 60         | 694       | 5          | 4,850     |
| 98         | 167       | 50         | 1,000     | 2          | 6,990     |
| 95         | 220       | 40         | 1,430     | 1          | 9,200     |
| 90         | 300       | 30         | 1,980     | 0.5        | 12,000    |

LOW FLOW

| Period consecutive |     |     | ce interval<br>years) |     |
|--------------------|-----|-----|-----------------------|-----|
| days)              | 2   | 5   | 10                    | 20  |
| 1                  | 150 | 110 | 95                    | 82  |
| 3                  | 180 | 140 | 120                   | 110 |
| 7                  | 250 | 190 | 170                   | 150 |
| 14                 | 310 | 240 | 210                   | 190 |
| 30                 | 360 | 300 | 270                   | 240 |
| 60                 | 400 | 350 | 340                   | 340 |
| 90                 | 470 | 400 | 380                   | 370 |

#### 03582500 - ELK RIVER NEAR FAYETTEVILLE, TN

LOCATION. -- Lat 35°08'10", long 86°35'15", Lincoln County, at old dam and powerhouse of Tennessee Electric Power Co., 2 miles southwest of Fayetteville, and at mile 88.4.

DRAINAGE AREA. -- 897 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1926-34.

REMARKS. -- Diurnal fluctuations caused by powerplants above stations.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 102       | 80         | 290       | 20         | 2,020     |
| 99.1       | 108       | 70         | 409       | 10         | 3,430     |
| 99         | 110       | . 60       | 573       | 5          | 5,390     |
| 98         | 129       | 50         | 774       | 2          | 9,370     |
| 95         | 171       | 40         | 1,050     | 1          | 14,000    |
| 90         | 207       | 30         | 1,430     | 0.5        | 20,000    |

LOW FLOW

| Period<br>consecutive |     |     | ce interval<br>years) |    |
|-----------------------|-----|-----|-----------------------|----|
| days)                 | 2   | 5   | 10                    | 20 |
| 1                     | 160 | 110 | 94                    | 78 |
| 3                     | 170 | 120 | 100                   | 85 |
| 7                     | 180 | 130 | 110                   | 92 |
| 14                    |     |     |                       |    |
| 30                    |     |     |                       |    |
| 60                    |     |     |                       |    |
| 90                    |     |     |                       |    |

#### 03583000 - BRADSHAW CREEK AT FRANKEWING, TN

LOCATION.--Lat 35°11'31", long 86°50'43", Giles County, on downstream side of second pier from right abutment of bridge on U.S. Highway 64, 0.4 mile east of Frankewing, 2.2 miles downstream from Little Bradshaw Creek, and 10.5 miles east of Pulaski.

DRAINAGE AREA. -- 36.5 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1955-61; 1966-68.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0         | 80         | 2.77      | 20         | 65.5      |
| 99.1       | 0         | 70         | 5.57      | 10         | 129       |
| 99         | 0         | 60         | 10.0      | 5          | 235       |
| 98         | .02       | 50         | 17.2      | 2          | 482       |
| 95         | •21       | 40         | 26.9      | 1          | 820       |
| 90         | .72       | 30         | 40.5      | 0.5        | 1,200     |

LOW FLOW

| Period<br>(consecutive | Recurrence interval (in years) |   |    |    |  |
|------------------------|--------------------------------|---|----|----|--|
| days)                  | 2                              | 5 | 10 | 20 |  |
| 1                      | 0                              | 0 | 0  | 0  |  |
| 3                      | 0                              | 0 | 0  | 0  |  |
| 7                      | 0                              | 0 | 0  | 0  |  |
| 14                     |                                |   |    |    |  |
| 30                     |                                |   |    |    |  |
| 60                     |                                |   |    |    |  |
| 90                     |                                |   |    |    |  |

#### 03583300 - RICHLAND CREEK NEAR CORNERSVILLE, TN

LOCATION.--Lat 35°19'10", long 86°52'20", Marshall County, on left bank, on downstream end of pier of bridge on U.S. Highway 31A, 0.1 mile downstream from Corn Creek, 1.7 miles downstream from Louisville & Nashville Railroad bridge, 2.0 miles downstream from Town Creek, and 3.4 miles southwest of Cornersville.

DRAINAGE AREA. -- 47.5 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1962-68.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.81      | 80         | 3.82      | 20         | 82.3      |
| 99.1       | .86       | 70         | 7.01      | 10         | 165       |
| 99         | .87       | 60         | 11.3      | 5          | 354       |
| 98         | 1.01      | 50         | 18.3      | 2          | 725       |
| 95         | 1.25      | 40         | 29.9      | 1          | 1,140     |
| 90         | 1.88      | 30         | 49.7      | 0.5        | 1,590     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>(consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|------------------------|-----|---------------------|---------------------|-----|
| days)                  | 2   | 5                   | 10                  | 20  |
| 1                      | 0.6 | 0.2                 | 0.2                 | 0.1 |
| 3                      | .6  | .3                  | . 2                 | . 2 |
| 7                      | • 7 | .3                  | • 2                 | . 2 |
| 14                     |     |                     | •                   |     |
| 30                     |     |                     |                     |     |
| 60                     |     |                     |                     |     |
| 90                     |     |                     |                     |     |

#### 03583500 - WEAKLEY CREEK NEAR BODENHAM, TN

LOCATION.--Lat 35°15'08", long 87°10'08", Giles County, on right downstream bank at wingwall of highway bridge, 1.6 miles northwest of Bodenham, 1.6 miles downstream from Muckle Creek, 4.9 miles upstream from mouth, and 8.7 miles northwest of Pulaski.

DRAINAGE AREA. -- 24.4 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1956-61; 1966-68.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 4.50      | 80         | 8.06      | 20         | 49.6      |
| 99.1       | 4.62      | 70         | 10.6      | 10         | 78.3      |
| 99         | 4.66      | 60         | 13.1      | 5          | 121       |
| 98         | 4.98      | 50         | 16.8      | 2          | 223       |
| 95         | 5.55      | 40         | 22.6      | 1          | 320       |
| 90         | 6.20      | 30         | 32.2      | 0.5        | 450       |

LOW FLOW

| Period consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|--------------------|-----|---------------------|---------------------|-----|
| days)              | 2   | 5                   | 10                  | 20  |
| 1                  | 5.2 | 4.0                 | 3.3                 | 3.0 |
| 3                  | 5.3 | 4.3                 | 3.6                 | 3.1 |
| 7                  | 5.4 | 4.4                 | 3.9                 | 3.5 |
| 14                 |     |                     |                     |     |
| 30                 |     |                     |                     |     |
| 60                 |     |                     |                     |     |
| 90                 |     |                     |                     |     |

# 03584000 - RICHLAND CREEK NEAR PULASKI, TN

LOCATION.--Lat 35°12'51", long 87°06'05", Giles County, on right bank 1,200 feet upstream from bridge on U.S. Highway 64, 1 mile downstream from Weakley Creek, 4 miles west of Pulaski, and at mile 30.1.

DRAINAGE AREA. -- 366 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1935-75

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 18.0      | 80         | 61.8      | 20         | 771       |
| 99.1       | 19.8      | 70         | 91.5      | 10         | 1,410     |
| 99         | 20.3      | 60         | 131       | 5          | 2,350     |
| 98         | 24.3      | 50         | 195       | 2          | 4,340     |
| 95         | 31.4      | 40         | 3 04      | 1          | 6,000     |
| 90         | 41.1      | 30         | 485       | 0.5        | 8,770     |

LOW FLOW

| Period<br>consecutive |      |      | e interval<br>ears) |      |
|-----------------------|------|------|---------------------|------|
| days)                 | 2    | 5    | 10                  | 20   |
| 1                     | 24.5 | 16.9 | 14.3                | 12.7 |
| 3                     | 25.3 | 17.4 | 14.7                | 13.0 |
| 7                     | 27.2 | 18.5 | 15.6                | 13.7 |
| 14                    | 30.7 | 20.8 | 17.4                | 15.1 |
| 30                    | 39.2 | 26.1 | 21.4                | 18.4 |
| 60                    | 54.9 | 34.7 | 27.6                | 22.9 |
| 90                    | 66.1 | 42.9 | 35.0                | 29.8 |

# 03584500 - ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, on right bank 50 feet upstream from highway bridge, 1.1 miles downstream from Richland Creek, 3.2 miles east of Prospect, 5.4 miles upstream from Ford Creek, 7.9 miles upstream from Tennessee-Alabama State line, and at mile 41.5.

DRAINAGE AREA. -- 1,784 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1905-07; 1920-52.

REMARKS .-- Unregulated. See next page for present characteritics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 150       | 80         | 445       | 20         | 4,020     |
| 99.1       | 175       | 70         | 6 40      | 10         | 7,200     |
| 99         | 180       | 60         | 940       | 5          | 11,900    |
| 98         | 200       | 50         | 1,400     | 2          | 19,800    |
| 95         | 240       | 40         | 1,920     | 1          | 24,900    |
| 90         | 290       | 30         | 2,710     | 0.5        | 31,000    |

LOW FLOW

| Period<br>(consecutive | Recurrence interval (in years) |      |     |      |  |
|------------------------|--------------------------------|------|-----|------|--|
| days)                  | 2                              | 5    | 10  | 20   |  |
| 1                      | 236                            | 171  | 141 | 118  |  |
| 3                      | 247                            | 182  | 152 | 130  |  |
| 7                      | 258                            | 190  | 161 | 139  |  |
| 14                     | 274                            | 200  | 168 | 144  |  |
| 30                     | 313                            | 2 21 | 183 | 157  |  |
| 60                     | 397                            | 264  | 215 | 182  |  |
| 90                     | 492                            | 323  | 262 | 2 21 |  |

#### 03584500 - ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, on right bank 50 feet upstream from highway bridge, 1.1 miles downstream from Richland Creek, 3.2 miles east of Prospect, 5.4 miles upstream from Ford Creek, 7.9 miles upstream from Tennessee-Alabama State line, and at mile 41.5.

DRAINAGE AREA. -- 1,784 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1972-81.

REMARKS.--Flow regulated by Woods Reservoir (since May 1952), and by Tims Ford Lake since December 1970.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 260       | 80         | 733       | 20         | 5,000     |
| 99.1       | 288       | 70         | 1,000     | 10         | 7,600     |
| 99         | 294       | 60         | 1,460     | 5          | 12,100    |
| 98         | 347       | 50         | 2,100     | 2          | 19,500    |
| 95         | 430       | 40         | 2,790     | 1          | 25,500    |
| 90         | 5 20      | 30         | 3,670     | 0.5        | 32,000    |

LOW FLOW

| Period (consecutive | Recurrence interval (in years) |     |      |     |  |
|---------------------|--------------------------------|-----|------|-----|--|
| days)               | 2                              | 5   | 10   | 20  |  |
| 1                   | 260                            | 200 | 180  | 170 |  |
| 3                   | 3 30                           | 270 | 250  | 240 |  |
| 7                   | 410                            | 350 | 330  | 320 |  |
| 14                  | 500                            | 410 | 3 70 | 340 |  |
| 30                  | 550                            | 440 | 400  | 370 |  |
| 60                  | 6 40                           | 570 | 450  | 410 |  |
| 90                  | 800                            | 610 | 530  | 470 |  |

# 03588000 - SHOAL CREEK AT LAWRENCEBURG, TN

LOCATION.--Lat 35°14'31", long 87°21'14", Lawrence County, on left bank at downstream side of highway bridge, 1,500 feet upstream from Crowson Creek, 1,800 feet downstream from Little Shoal Creek, 1.1 miles west of the courthouse in Lawrenceburg, and at mile 55.6.

DRAINAGE AREA. -- 55.5 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1933-34, 1968-81.

REMARKS.--About 5 ft<sup>3</sup>/s is diverted by the City of Lawrenceburg above the gage for water supply. No adjustments have been made for that diversion.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 20        | 80         | 35        | 20         | 120       |
| 99.1       | 20        | 70         | 41        | 10         | 180       |
| 99         | 21        | 60         | 49        | 5          | 320       |
| 98         | 22        | 50         | 59        | 2          | 6 50      |
| 95         | 25        | 40         | 72        | 1          | 1,100     |
| 90         | 29        | 30         | 89        | 0.5        | 1,400     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive | Recurrence interval (in years) |    |    |    |  |
|-----------------------|--------------------------------|----|----|----|--|
| days)                 | 2                              | 5  | 10 | 20 |  |
| 1                     | 23                             | 20 | 19 | 17 |  |
| 3                     | 24                             | 21 | 19 | 18 |  |
| 7                     | 25                             | 22 | 21 | 20 |  |
| 14                    | 27                             | 23 | 21 | 20 |  |
| 30                    | 29                             | 25 | 23 | 22 |  |
| 60                    | 32                             | 27 | 24 | 23 |  |
| 90                    | 36                             | 29 | 27 | 25 |  |

# 03588400 - CHISHOLM CREEK AT WESTPOINT, TN

LOCATION.--Lat 35°08'04", long 87°31'45", Lawrence County, on downstream side of left pier of county road bridge 0.3 mile northeast of Westpoint, and 1.2 miles above mouth.

DRAINAGE AREA. -- 43.0 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1963-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 11        | 80         | 23        | 20         | 96        |
| 99.1       | 12        | 70         | 28        | 10         | 170       |
| 99         | 12        | 60         | 33        | 5          | 280       |
| 98         | 13        | 50         | 41        | 2          | 500       |
| 95         | 15        | 40         | 53        | 1          | 760       |
| 90         | 18        | 30         | 71        | 0.5        | 1,200     |

LOW FLOW

| Period consecutive |    |    | ce interval<br>years) |     |
|--------------------|----|----|-----------------------|-----|
| days)              | 2  | 5  | 10                    | 20  |
| 1                  | 16 | 12 | 9.8                   | 8.6 |
| 3                  | 16 | 12 | 9.9                   | 8.7 |
| 7                  | 16 | 12 | 10                    | 9.1 |
| 14                 | 17 | 13 | 11                    | 10  |
| 30                 | 20 | 15 | 12                    | 11  |
| 60                 | 21 | 16 | 14                    | 12  |
| 90                 | 24 | 18 | 16                    | 14  |

#### 03588500 - SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, on downstream side near center of bridge on county road, 400 feet downstream from Holly Creek, 1,350 feet upstream from Louisville & Nashville Railroad bridge, 1,350 feet northeast of post office at Iron City, and at mile 22.0.

DRAINAGE AREA. -- 348 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1926-81.

REMARKS.--Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 77        | 80         | 160       | 20         | 790       |
| 99.1       | 82        | 70         | 190       | 10         | 1,300     |
| 99         | 83        | 60         | 240       | 5          | 2,100     |
| 98         | 95        | 50         | 310       | 2          | 3,700     |
| 95         | 110       | 40         | 410       | 1          | 5,500     |
| 90         | 130       | 30         | 5 60      | 0.5        | 7,500     |
| 90         | 130       | 30         | 5 60      | 0.5        | 7,500     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>Consecutive |     |      | ce interval<br>years) |      |
|-----------------------|-----|------|-----------------------|------|
| days)                 | 2   | 5    | 10                    | 20   |
| 1                     | 105 | 80.7 | 69.7                  | 61.3 |
| 3                     | 108 | 84.9 | 74.1                  | 66.0 |
| 7                     | 113 | 89.6 | 79.0                  | 71.0 |
| 14                    | 120 | 94.8 | 83.7                  | 75.4 |
| 30                    | 133 | 104  | 92.1                  | 83.3 |
| 60                    | 147 | 114  | 102                   | 93.3 |
| 90                    | 162 | 126  | 112                   | 103  |

# 03593300 - SNAKE CREEK NEAR ADAMSVILLE, TN

LOCATION.--Lat 35°13'11", long 88°25'36", McNairy County, on left bank at bridge on U.S. Highway 64, 1.7 miles downstream from Little Snake Creek and 2.3 miles southwest of Adamsville.

DRAINAGE AREA. -- 49.4 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-59.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0         | 80         | 4.21      | 20         | 70.4      |
| 99.1       | .30       | 70         | 6.77      | 10         | 137       |
| 99         | .40       | 60         | 10.5      | 5          | 284       |
| 98         | .65       | 50         | 16.3      | 2          | 658       |
| 95         | 1.30      | 40         | 24.4      | 1          | 1,000     |
| 90         | 2.24      | 30         | 41.7      | 0.5        | 1,400     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 1.4 | 0.5                 | 0.2                 | 0.0 |
| 3                     | 1.5 | • 5                 | .2                  | . 1 |
| 7                     | 1.7 | .6                  | .3                  | .1  |
| 14                    | 2.0 | .7                  | .3                  | .1  |
| 30                    | 3.0 | •9                  | • 4                 | . 2 |
| 60                    | 4.3 | 1.8                 | 1.2                 | .8  |
| 90                    | 5.8 | 2.7                 | 1.9                 | 1.4 |

#### 03593500 - TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'36", Hardin County, on left bank pier of bridge on U.S. Highway 64 at Savannah, 16.8 miles downstream from Pickwick Landing Dam, and at mile 189.9.

DRAINAGE AREA. -- 33, 140 mi<sup>2</sup> (approximately).

PERIOD OF RECORD. -- 1946-81.

REMARKS.--Increasing regulation since 1936 as reservoirs have been built above station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentag | ge Discharge | Percentage | Discharge | Percentage | Discharge |
|-----------|--------------|------------|-----------|------------|-----------|
| 99.5      | 11,000       | 80         | 30,300    | 20         | 72,400    |
| 99.1      | 13,000       | 70         | 35,000    | 10         | 110,000   |
| 99        | 13,500       | 60         | 38,900    | 5          | 154,000   |
| 98        | 16,400       | 50         | 44,000    | 2          | 215,000   |
| 95        | 21,000       | 40         | 49,800    | 1          | 263,000   |
| 90        | 25,000       | 30         | 57,700    | 0.5        | 290,000   |

LOW FLOW Lowest average flow in cubic feet per second.

| Period<br>consecutive | Recurrence interval(in years) |        |        |        |  |
|-----------------------|-------------------------------|--------|--------|--------|--|
| days)                 | 2                             | 5      | 10     | 20     |  |
| 1                     | 14,000                        | 9,200  | 6,200  | 4,000  |  |
| 3                     | 19,300                        | 13,600 | 10,700 | 7,000  |  |
| 7                     | 23,400                        | 17,000 | 13,700 | 9,800  |  |
| 14                    | 25,600                        | 18,800 | 15,200 | 12,300 |  |
| 30                    | 27,500                        | 22,100 | 19,400 | 17,200 |  |
| 60                    | 30,800                        | 25,800 | 23,500 | 21,700 |  |
| 90                    | 32,300                        | 27,300 | 24,900 | 23,100 |  |

# 03593800 - HORSE CREEK NEAR SAVANNAH, TN

LOCATION.--Lat 35°10'37", long 88°12'34", Hardin County, on right bank at bridge on county road, 1.2 miles northeast of Maddox and 4 miles southeast of Savannah.

DRAINAGE AREA. -- 104 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1940-70.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 22.6      | 80         | 47.4      | 20         | 184       |
| 99.1       | 23.9      | 70         | 54.4      | 10         | 281       |
| 99         | 24.3      | 60         | 63.2      | 5          | 431       |
| 98         | 26.4      | 50         | 77.1      | 2          | 787       |
| 95         | 31.9      | 40         | 97.6      | 1          | 1,230     |
| 90         | 38.5      | 30         | 132       | 0.5        | 1,900     |

LOW FLOW

| Period (consecutive |      |      | e interval<br>ears) |      |
|---------------------|------|------|---------------------|------|
| days)               | 2    | 5    | 10                  | 20   |
| 1                   | 34.7 | 27.1 | 23.7                | 21.0 |
| 3                   | 35.1 | 27.6 | 24.1                | 21.5 |
| 7                   | 35.9 | 28.1 | 24.5                | 21.7 |
| 14                  | 36.9 | 28.9 | 25.2                | 22.4 |
| 30                  | 39.5 | 31.0 | 27.0                | 24.0 |
| 60                  | 43.4 | 34.7 | 30.8                | 27.8 |
| 90                  | 46.4 | 37.2 | 33.0                | 29.8 |

# 03594040 - TURKEY CREEK NEAR SAVANNAH, TN

LOCATION.--Lat 35°13'45", long 88°11'38", Hardin County, on left bank at bridge on U.S. Highway 64, and 3.2 miles east of Savannah.

DRAINAGE AREA. -- 53.7 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-59.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Pe | rcentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|----|----------|-----------|------------|-----------|------------|-----------|
|    | 99.5     | 3.50      | 80         | 16.0      | 20         | 104       |
| •  | 99.1     | 4.68      | 70         | 20.7      | 10         | 173       |
|    | 99       | 4.78      | 60         | 26.1      | 5          | 278       |
|    | 98       | 5.72      | 50         | 34.0      | 2          | 505       |
|    | 95       | 7.79      | 40         | 48.1      | 1          | 717       |
|    | 90       | 11.3      | 30         | 70.0      | 0.5        | 1,000     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>Consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 9.7 | 4.6                 | 2.8                 | 2.2 |
| 3                     | 10  | 4.9                 | 3.0                 | 2.5 |
| 7                     | 11  | 5.2                 | 3.3                 | 2.6 |
| 14                    | 11  | 5.5                 | 4.3                 | 3.8 |
| 30                    | 12  | 7.0                 | 5.9                 | 4.7 |
| 60                    | 14  | 8.0                 | 7.0                 | 6.3 |
| 90                    | 16  | 10                  | 8.7                 | 7.4 |

# 03594058 - WHITE OAK CREEK NEAR MILLEDGEVILLE, TN

LOCATION.--Lat 35°22'26", long 88°22'54", McNairy County, on left bank of White Oak Creek Drainage Ditch, 1 mile west of Milledgeville.

DRAINAGE AREA. -- 46.1 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-59.

REMARKS.--

 $\label{eq:flow-decomposition} \textbf{Flow DURATION}$  Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.74      | 80         | 6.68      | 20         | 80.4      |
| 99.1       | .90       | 70         | - 9.49    | 10         | 151       |
| 99         | •95       | 60         | 13.5      | 5          | 276       |
| 98         | 1.18      | 50         | 19.4      | 2          | 7 60      |
| 95         | 2.14      | 40         | 30.4      | 1          | 1,160     |
| 90         | 3.73      | 30         | 49.4      | 0.5        | 1,580     |

LOW FLOW

| Period<br>Consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 2.3 | 0.9                 | 0.4                 | 0.0 |
| 3                     | 2.5 | 1.0                 | •4                  | .1  |
| 7                     | 3.1 | 1.2                 | .6                  | .4  |
| 14                    | 3.4 | 1.4                 | .8                  | •5  |
| 30                    | 4.0 | 1.9                 | 1.2                 | .8  |
| 60                    | 6.7 | 3.8                 | 2.8                 | 2.2 |
| 90                    | 8.3 | 5.3                 | 4.3                 | 3.7 |

# 03594120 - MIDDLETON CREEK NEAR MILLEDGEVILLE, TN

LOCATION.--Lat 35°24'59", long 88°21'40", Hardin County, on right bank 1,600 feet downstream from Big Hurricane Creek and 3.2 miles north of Milledgeville.

DRAINAGE AREA. -- 45.5 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-59.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0.40      | 80         | 7.83      | 20         | 65.3      |
| 99.1       | • 79      | 70         | 11.2      | 10         | 129       |
| 99         | • 90      | 60         | 15.1      | 5          | -260      |
| 98         | 1.60      | 50         | 20.2      | 2          | 636       |
| 95         | 2.79      | 40         | 29.8      | 1          | 959       |
| 90         | 4.53      | 30         | 44.0      | 0.5        | 1,450     |

LOW FLOW

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 3.1 | 1.0                 | 0.5                 | 0.2 |
| 3                     | 3.3 | 1.1                 | •5                  | .2  |
| 7                     | 3.9 | 1.4                 | .8                  | .3  |
| 14                    | 4.5 | 1.8                 | 1.0                 | .3  |
| 30                    | 5.5 | 2.4                 | 1.5                 | .6  |
| 60                    | 7.3 | 3.8                 | 2.7                 | 2.0 |
| 90                    | 9.8 | 5.5                 | 4.0                 | 3.1 |

#### 03594160 - INDIAN CREEK NEAR CERRO GORDO, TN

LOCATION.--Lat 35°18'25", long 88°07'31", Hardin County, on left bank 3.5 miles east of Cerro Gordo, 1,800 feet below the mouth of Smith Fork, at steel bridge known as "Upper Bridge."

DRAINAGE AREA. -- 201 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-59.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 12.0      | 80         | 53.2      | 20         | 478       |
| 99.1       | 15.9      | 70         | 70.4      | 10         | 7 50      |
| 99         | 16.4      | 60         | 96.7      | 5          | 1,190     |
| 98         | 21.4      | 50         | 138       | 2          | 2,070     |
| 95         | 29.4      | 40         | 206       | 1          | 3,150     |
| 90         | 37.6      | 30         | 317       | 0.5        | 4,270     |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>(consecutive |    |    | ce interval<br>years) |     |
|------------------------|----|----|-----------------------|-----|
| days)                  | 2  | 5  | 10                    | 20  |
| 1                      | 27 | 15 | 11                    | 8.4 |
| 3                      | 28 | 15 | 11                    | 8.4 |
| 7                      | 28 | 16 | 11                    | 8.7 |
| 14                     | 30 | 17 | 13                    | 9.8 |
| 30                     | 35 | 21 | 16                    | 13  |
| 60                     | 43 | 28 | 23                    | 19  |
| 90                     | 51 | 33 | 27                    | 23  |

# 03594415 - BEECH RIVER NEAR LEXINGTON, TN

LOCATION.--Lat 35°39'34", long 88°25'01", Henderson County, on left bank at downstream side of bridge on State Highway 20, 1.5 miles west of the courthouse in Lexington.

DRAINAGE AREA. -- 15.9 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1953-63.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 6.78      | 80         | 9,69      | 20         | 20.3      |
| 99.1       | 6.94      | 70         | 10.9      | 10         | 32.2      |
| 99         | 6.97      | 60         | 12.2      | 5          | 60.1      |
| 98         | 7.37      | 50         | 13.3      | 2          | 160       |
| 95 .       | 7.97      | 40         | 14.6      | 1          | 250       |
| 90         | 8.62      | 30         | 16.7      | 0.5        | 354       |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 7.9 | 7.3                 | 6.6                 | 6.3 |
| 3                     | 8.0 | 7.3                 | 6.9                 | 6.6 |
| 7                     | 8.2 | 7.6                 | 7.2                 | 7.0 |
| 14                    | 8.5 | 7.8                 | 7.4                 | 7.1 |
| 30                    | 9.0 | 8.1                 | 7.6                 | 7.3 |
| 60                    | 9.6 | 8.5                 | 8.0                 | 7.6 |
| 90                    | 11  | 9.1                 | 8.3                 | 7.7 |

# 03594430 - HARMON CREEK NEAR LEXINGTON, TN

LOCATION.--Lat 35°38'16", long 88°21'15", Henderson County, on left bank at bridge on State Highway 20, 2 miles east of Lexington.

DRAINAGE AREA. -- 6.87 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1953-70.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 2.99 *    | 80         | 4.80      | 20         | 11.0      |
| 99.1       | 3.15      | 70         | 5.38      | 10         | 17.0      |
| 99         | 3.19      | 60         | 5.99      | 5          | 30.4      |
| 98         | 3.47      | 50         | 6.71      | 2          | 58.8      |
| 95         | 3.89      | 40         | 7.60      | 1          | 100       |
| 90         | 4.21      | . 30       | 8.83      | 0.5        | 140       |

| Period<br>(consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|------------------------|-----|---------------------|---------------------|-----|
| days)                  | 2   | 5                   | 10                  | 20  |
| 1                      | 3.5 | 3.2                 | 3.0                 | 2.8 |
| 3                      | 3.6 | 3.2                 | 3.0                 | 2.9 |
| 7                      | 3.7 | 3.3                 | 3.1                 | 3.0 |
| 14                     | 3.9 | 3.5                 | 3.3                 | 3.1 |
| 30                     | 4.3 | 3.8                 | 3.6                 | 3.3 |
| 60                     | 4.8 | 4.1                 | 3.8                 | 3.6 |
| 90                     | 5.3 | 4.4                 | 4.0                 | 3.7 |

# 03594445 - BEECH RIVER NEAR CHESTERFIELD, TN

LOCATION.--Lat 35°37'26", long 88°16'22", Henderson County, on right bank at bridge on Chesterfield-Middleburg Road, 1 mile south of Chesterfield.

DRAINAGE AREA. -- 115 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1941-54, 1961-63.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 24.1      | 80         | 47.3      | 20         | 2 04      |
| 99.1       | 24.6      | 70         | 62.0      | 10         | 400       |
| 99         | 24.8      | 60         | 75.2      | 5          | 780       |
| 98         | 26.1      | 50         | 94.0      | 2          | 1,260     |
| 95         | 30.0      | 40         | 116       | 1          | 1,700     |
| 90         | 34.0      | 30         | 146       | 0.5        | 2,470     |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>consecutive |    |    | ce interval<br>years) |    |
|-----------------------|----|----|-----------------------|----|
| days)                 | 2  | 5  | 10                    | 20 |
| 1                     | 34 | 23 | 19                    | 17 |
| 3                     | 34 | 24 | 20                    | 18 |
| 7                     | 36 | 25 | 21                    | 18 |
| 14                    | 38 | 26 | 22                    | 19 |
| 30                    | 41 | 28 | 24                    | 21 |
| 60                    | 47 | 32 | 27                    | 23 |
| 90                    | 54 | 36 | 30                    | 26 |

# 03594480 - TURKEY CREEK NEAR DECATURVILLE, TN

LOCATION.--Lat 35°34'30", long 88°08'20", Decatur County, on right bank l air mile upstream from bridge on Middleburg Road, 1.2 miles southeast of Camp Ground Church, and 1.3 miles west of Decaturville.

DRAINAGE AREA. -- 8.40 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1953-73.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0         | 80         | 0.30      | 20         | 9.36      |
| 99.1       | 0         | 70         | •64       | 10         | 18.0      |
| 99         | 0         | 60         | 1.08      | 5          | 37.1      |
| 98         | 0         | 50         | 1.84      | 2          | 80.3      |
| 95         | 0         | 40         | 3.50      | 1          | 130       |
| 90         | .06       | 30         | 5.85      | 0.5        | 201       |

LOW FLOW
Lowest average flow in cubic feet per second.

| Period<br>(consecutive |      | Recurrence<br>(in ye |    |    |
|------------------------|------|----------------------|----|----|
| days)                  | 2    | 5                    | 10 | 20 |
| 1                      | 0    | 0                    | 0  | 0  |
| 3                      | 0    | 0                    | 0  | 0  |
| 7                      | 0    | 0                    | 0  | 0  |
| 14                     | 0    | 0                    | 0  | 0  |
| 30                     | .10  | 0                    | 0  | 0  |
| 60                     | •20  | 0                    | 0  | 0  |
| 90                     | . 34 | .10                  | 0  | 0  |

#### 03596000 - DUCK RIVER BELOW MANCHESTER, TN

LOCATION.--Lat 35°28'15", long 86°07'18", Coffee County, on right bank 50 feet downstream from Powers Bridge, 2 miles southwest of Manchester, 3.25 miles downstream from Little Duck River, 7 miles upstream from Crumpton Creek, and at mile 265.4.

DRAINAGE AREA. -- 107 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1935-81.

REMARKS. --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 13        | 80         | 28        | 20         | 215       |
| 99.1       | 15        | 70         | 34        | 10         | 380       |
| 99         | 15        | 60 .       | 45        | 5          | 650       |
| 98         | 18        | 50         | 64        | 2          | 1,270     |
| 95         | 20        | 40         | 95        | 1          | 1,870     |
| 90         | 23        | 30         | 144       | 0.5        | 2,850     |

LOW FLOW

| Period<br>consecutive |      |      | e interval<br>ears) |      |
|-----------------------|------|------|---------------------|------|
| days)                 | 2    | 5    | 10                  | 20   |
| 1                     | 17.6 | 13.5 | 11.7                | 10.4 |
| 3                     | 18.3 | 14.0 | 12.1                | 10.7 |
| 7                     | 19.2 | 14.7 | 12.7                | 11.2 |
| 14                    | 20.5 | 15.8 | 13.7                | 12.1 |
| 30                    | 22.6 | 17.9 | 15.9                | 14.4 |
| 60                    | 25.4 | 20.0 | 17.8                | 16.4 |
| 90                    | 28.6 | 22.2 | 19.8                | 18.2 |

# 03596500 - DUCK RIVER AT NORMANDY, TN

LOCATION.--Lat 35°27'26", long 86°15'25", Bedford County, on right bank 50 feet downstream from county road bridge, 0.5 mile north of Normandy, 1.7 miles downstream from Normandy Dam, 3.5 miles from L & N Railroad bridge, 7.5 miles upstream from Garrison Fork, and at mile 246.9.

DRAINAGE AREA. -- 208 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1922-31, 1973-75.

REMARKS . --

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 41.8      | 80         | 81.8      | 20         | . 517     |
| 99.1       | 43.3      | 70         | 103       | 10         | 879       |
| 99         | 43.7      | 60         | 134       | 5          | 1,340     |
| 98         | 47.7      | 50 ·       | 182       | 2          | 2,490     |
| 95         | 57.0      | 40         | 254       | 1          | 3,860     |
| 90         | 64.7      | 30         | 355       | 0.5        | 5,580     |

LOW FLOW

| Period consecutive |    |    | ce interval<br>years) |    |
|--------------------|----|----|-----------------------|----|
| days)              | 2  | 5  | 10                    | 20 |
| 1                  | 61 | 52 | 48                    | 45 |
| 3                  | 61 | 52 | 48                    | 45 |
| 7                  | 61 | 52 | 48                    | 45 |
| 14                 | 63 | 53 | 49                    | 45 |
| 30                 | 70 | 58 | 52                    | 48 |
| 60                 | 77 | 62 | 54                    | 49 |
| 90                 | 87 | 67 | 58                    | 50 |

#### 03597000 - GARRISON FORK AT FAIRFIELD, TN

LOCATION.--Lat 35°33'59", long 86°17'00", Bedford County, near left bank on downstream side of center pier of highway bridge, 0.1 mile east of Fairfield, 0.6 mile downstream from Noah Fork, and 4.5 miles northeast of Wartrace.

DRAINAGE AREA. -- 66.3 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1954-58; 1966-68.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 1.61      | 80         | 9.92      | 20         | 107       |
| 99.1       | 1.77      | 70         | 15.3      | 10         | 206       |
| 99         | 1.82      | 60         | 22.7      | 5          | 395       |
| 98         | 2.24      | 50         | 32.7      | 2          | 7 70      |
| 95         | 4.29      | 40         | 48.3      | 1          | 1,490     |
| 90         | 6.21      | 30         | 72.2      | 0.5        | 2,100     |

LOW FLOW

| Period<br>consecutive |     | Recurrence<br>(in y | e interval<br>ears) |     |
|-----------------------|-----|---------------------|---------------------|-----|
| days)                 | 2   | 5                   | 10                  | 20  |
| 1                     | 3.3 | 1.3                 | 0.7                 | 0.3 |
| 3                     | 4.0 | 2.1                 | 1.5                 | 1.0 |
| 7                     | 4.5 | 2.5                 | 1.6                 | 1.5 |
| 14                    |     |                     |                     |     |
| 30                    |     |                     |                     |     |
| 60                    |     |                     |                     |     |
| 90                    |     |                     |                     |     |

#### 03597500 - WARTRACE CREEK AT BELL BUCKLE, TN

LOCATION.--Lat 35°35'16", long 86°20'22", Bedford County, on downstream right bank wingwall of bridge on State Highway 82, 0.2 mile downstream from Kelly Creek, 0.9 mile east of Bell Buckle, 4.0 miles northeast of Fairfield, and 7.7 miles upstream from mouth.

DRAINAGE AREA. -- 16.3 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1954-61; 1966-75.

REMARKS. --

FLOW DURATION

per second, which was equaled or exceeded for percentage

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 0         | 80         | 0.57      | 20         | 29.0      |
| 99.1       | 0         | 70         | 1.63      | 10         | 60.7      |
| 99         | 0         | 60         | 3.64      | 5          | 118       |
| 98         | 0         | 50         | 6.47      | 2          | 239       |
| 95         | •03       | 40         | 11.0      | 1          | 410       |
| 90         | .15       | 30         | 17.3      | 0.5        | 640       |

LOW FLOW

| Period consecutive |     | Recurrence<br>(in y |    |    |
|--------------------|-----|---------------------|----|----|
| days)              | 2   | 5                   | 10 | 20 |
| 1                  | 0   | 0                   | 0  | 0  |
| 3                  | 0   | 0                   | 0  | 0  |
| 7                  | 0   | 0                   | 0  | 0  |
| 14                 | .1  | 0                   | 0  | 0  |
| 30                 | .3  | .1                  | 0  | 0  |
| 60                 | 1.2 | •3                  | .1 | 0  |
| 90                 | 1.8 | • 4                 | .1 | 0  |

# 03598000 - DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, on right bank 150 feet downstream from Sims Bridge, 2.1 miles upstream from Sugar Creek, 2.2 miles west of Shelbyville, 2.9 miles downstream from Flat Creek, and at mile 216.2.

DRAINAGE AREA. -- 481 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1935-47.

REMARKS. -- Prior to 1948 diurnal fluctuation caused by powerplant upstream.

 $\label{eq:flow_DURATION} \textbf{Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.}$ 

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 42.4      | 80         | 105       | 20         | 868       |
| 99.1       | 47.7      | 70         | 130       | 10         | 1,500     |
| 99         | 48.5      | 60         | 183       | 5          | 2,880     |
| 98         | 57.0      | 50         | 2 60      | 2          | 5,500     |
| 95         | 70.0      | 40         | 392       | 1          | 6,800     |
| 90         | 83.0      | 30         | 5 80      | 0.5        | 10,000    |

LOW FLOW

Lowest average flow in cubic feet per second.

| Period<br>Consecutive |     |    | ce interval<br>years) |    |
|-----------------------|-----|----|-----------------------|----|
| days)                 | 2   | 5  | 10                    | 20 |
| 1                     | 46  | 25 | 20                    | 16 |
| 3                     | 63  | 50 | 43                    | 38 |
| 7                     | 68  | 58 | 52                    | 48 |
| 14                    | 74  | 62 | 56                    | 51 |
| 30                    | 82  | 67 | 59                    | 53 |
| 60                    | 99  | 77 | 65                    | 56 |
| 90                    | 120 | 92 | 80                    | 71 |

# 03598000 - DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, on right bank 150 feet downstream from Sims Bridge, 2.1 miles upstream from Sugar Creek, 2.2 miles west of Shelbyville, 2.9 miles downstream from Flat Creek, and at mile 216.2.

DRAINAGE AREA. -- 481 mi<sup>2</sup>.

PERIOD OF RECORD. -- 1949-76.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

| Percentage | Discharge | Percentage | Discharge | Percentage | Discharge |
|------------|-----------|------------|-----------|------------|-----------|
| 99.5       | 59.0      | 80         | 129       | 20         | 1,130     |
| 99.1       | 65.0      | · 70       | 170       | 10         | 1,900     |
| 99         | 66.5      | 60         | 226       | 5          | 3,130     |
| 98         | 71.1      | 50         | 3 30      | 2          | 5,640     |
| 95         | 81.0      | 40         | 500       | 1          | 9,200     |
| 90         | 97.0      | 30         | 735       | 0.5        | 13,000    |

| Period<br>(consecutive | Recurrence interval (in years) |      |      |      |  |  |
|------------------------|--------------------------------|------|------|------|--|--|
| days)                  | 2                              | 5    | 10   | 20   |  |  |
| 1                      | 81.5                           | 66.1 | 58.6 | 52.7 |  |  |
| 3                      | 82.7                           | 67.2 | 59.6 | 53.8 |  |  |
| 7                      | 85.3                           | 68.8 | 60.8 | 54.5 |  |  |
| 14                     | 89.8                           | 72.2 | 63.6 | 56.9 |  |  |
| 30                     | 100                            | 79.7 | 70.6 | 63.8 |  |  |
| 60                     | 118                            | 89.1 | 77.9 | 70.3 |  |  |
| 90                     | 138                            | 98.0 | 83.8 | 74.5 |  |  |