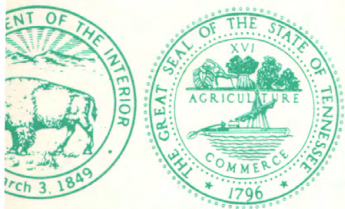
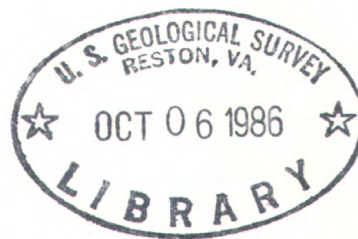


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1985



# Water Resources Data Tennessee Water Year 1985



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-85-1  
Prepared in cooperation with the Tennessee Department of  
Health and Environment, Office of Water Management; the  
Tennessee Valley Authority; and with other  
municipal, and Federal agencies



# CALENDAR FOR WATER YEAR 1985

1984

| O C T O B E R |    |    |    |    |    |    | N O V E M B E R |    |    |    |    |    |    | D E C E M B E R |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|
| S             | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  |
|               | 1  | 2  | 3  | 4  | 5  | 6  |                 |    |    |    | 1  | 2  | 3  |                 |    |    |    |    |    | 1  |
| 7             | 8  | 9  | 10 | 11 | 12 | 13 |                 |    |    |    |    |    |    | 2               | 3  | 4  | 5  | 6  | 7  | 8  |
| 14            | 15 | 16 | 17 | 18 | 19 | 20 | 4               | 5  | 6  | 7  | 8  | 9  | 10 | 9               | 10 | 11 | 12 | 13 | 14 | 15 |
| 21            | 22 | 23 | 24 | 25 | 26 | 27 | 11              | 12 | 13 | 14 | 15 | 16 | 17 | 16              | 17 | 18 | 19 | 20 | 21 | 22 |
| 28            | 29 | 30 | 31 |    |    |    | 18              | 19 | 20 | 21 | 22 | 23 | 24 | 23              | 24 | 25 | 26 | 27 | 28 | 29 |
|               |    |    |    |    |    |    | 25              | 26 | 27 | 28 | 29 | 30 |    | 30              | 31 |    |    |    |    |    |

1985

| J A N U A R Y |    |    |    |    |    |    | F E B R U A R Y |    |    |    |    |    |    | M A R C H |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| S             | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  | S         | M  | T  | W  | T  | F  | S  |
|               |    | 1  | 2  | 3  | 4  | 5  |                 |    |    |    |    | 1  | 2  |           |    |    |    |    | 1  | 2  |
| 6             | 7  | 8  | 9  | 10 | 11 | 12 |                 |    |    |    |    |    |    | 3         | 4  | 5  | 6  | 7  | 8  | 9  |
| 13            | 14 | 15 | 16 | 17 | 18 | 19 | 3               | 4  | 5  | 6  | 7  | 8  | 9  | 10        | 11 | 12 | 13 | 14 | 15 | 16 |
| 20            | 21 | 22 | 23 | 24 | 25 | 26 | 10              | 11 | 12 | 13 | 14 | 15 | 16 | 17        | 18 | 19 | 20 | 21 | 22 | 23 |
| 27            | 28 | 29 | 30 | 31 |    |    | 17              | 18 | 19 | 20 | 21 | 22 | 23 | 24        | 25 | 26 | 27 | 28 | 29 | 30 |
|               |    |    |    |    |    |    | 24              | 25 | 26 | 27 | 28 |    |    | 31        |    |    |    |    |    |    |

| A P R I L |    |    |    |    |    |    | M A Y |    |    |    |    |    |    | J U N E |    |    |    |    |    |    |
|-----------|----|----|----|----|----|----|-------|----|----|----|----|----|----|---------|----|----|----|----|----|----|
| S         | M  | T  | W  | T  | F  | S  | S     | M  | T  | W  | T  | F  | S  | S       | M  | T  | W  | T  | F  | S  |
|           |    | 1  | 2  | 3  | 4  | 5  |       |    |    |    | 1  | 2  | 3  |         |    |    |    |    |    | 1  |
| 7         | 8  | 9  | 10 | 11 | 12 | 13 |       |    |    |    |    |    |    | 2       | 3  | 4  | 5  | 6  | 7  | 8  |
| 14        | 15 | 16 | 17 | 18 | 19 | 20 | 5     | 6  | 7  | 8  | 9  | 10 | 11 | 9       | 10 | 11 | 12 | 13 | 14 | 15 |
| 21        | 22 | 23 | 24 | 25 | 26 | 27 | 12    | 13 | 14 | 15 | 16 | 17 | 18 | 16      | 17 | 18 | 19 | 20 | 21 | 22 |
| 28        | 29 | 30 |    |    |    |    | 19    | 20 | 21 | 22 | 23 | 24 | 25 | 23      | 24 | 25 | 26 | 27 | 28 | 29 |
|           |    |    |    |    |    |    | 26    | 27 | 28 | 29 | 30 | 31 |    | 30      |    |    |    |    |    |    |

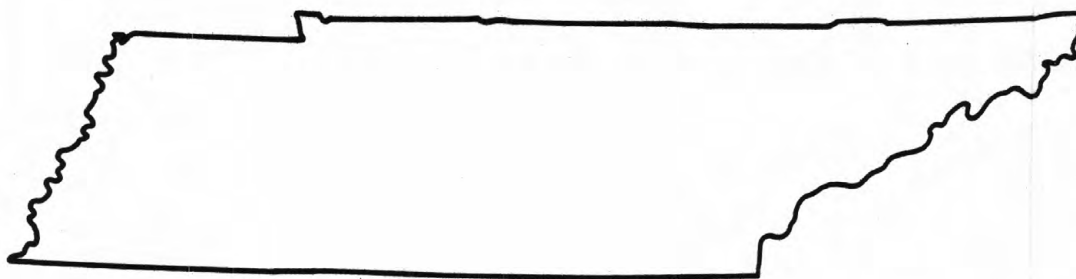
| J U L Y |    |    |    |    |    |    | A U G U S T |    |    |    |    |    |    | S E P T E M B E R |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|-------------|----|----|----|----|----|----|-------------------|----|----|----|----|----|----|
| S       | M  | T  | W  | T  | F  | S  | S           | M  | T  | W  | T  | F  | S  | S                 | M  | T  | W  | T  | F  | S  |
|         |    | 1  | 2  | 3  | 4  | 5  |             |    |    |    |    | 1  | 2  | 1                 | 2  | 3  | 4  | 5  | 6  | 7  |
| 7       | 8  | 9  | 10 | 11 | 12 | 13 |             |    |    |    |    |    |    | 8                 | 9  | 10 | 11 | 12 | 13 | 14 |
| 14      | 15 | 16 | 17 | 18 | 19 | 20 | 4           | 5  | 6  | 7  | 8  | 9  | 10 | 15                | 16 | 17 | 18 | 19 | 20 | 21 |
| 21      | 22 | 23 | 24 | 25 | 26 | 27 | 11          | 12 | 13 | 14 | 15 | 16 | 17 | 22                | 23 | 24 | 25 | 26 | 27 | 28 |
| 28      | 29 | 30 | 31 |    |    |    | 18          | 19 | 20 | 21 | 22 | 23 | 24 | 29                | 30 |    |    |    |    |    |
|         |    |    |    |    |    |    | 25          | 26 | 27 | 28 | 29 | 30 | 31 |                   |    |    |    |    |    |    |





# Water Resources Data Tennessee Water Year 1985

by J.F. Lowery, P.H. Counts, H.L. Edmiston and F.D. Edwards



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-85-1  
Prepared in cooperation with the Tennessee Department of  
Health and Environment, Office of Water Management;  
the Tennessee Valley Authority; and with other State,  
municipal, and Federal agencies.



UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, SECRETARY

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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District Chief, Water Resources Division  
U.S. Geological Survey  
A-413 Federal Building, U.S. Courthouse  
Nashville, Tennessee 37203

1986



## PREFACE

This volume of the annual hydrologic data report of Tennessee is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data were collected, computed, and processed from the subdistrict offices under the supervision of the following subdistrict chiefs:

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W. Harry Doyle, Jr., Memphis  
Delmer J. O'Connell, Nashville

The data were collected, computed, and processed by the following personnel:

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| D. E. Bazemore   | C. R. Gamble   | G. L. Jones    |
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| W. D. Canaan     | B. B. Hill     | G. B. Smith    |
| J. K. Carmichael | W. B. Hinchey  | R. C. Vear     |
| G. J. Englemeier | C. L. Hundley  |                |

This report was prepared in cooperation with the State of Tennessee and with other agencies under the general supervision of V. Jeff May, Data Management Section Chief; and L. R. Hayes, District Chief, Tennessee.



|   |  |  |   |                              |
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| 14.   |  |  |   |                              |
| 16. Abstract (Limit: 200 words)<br>Water resources data for the 1985 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 93 gaging stations; stage only records for 2 lake-gaging stations; elevation and contents for 28 lakes and reservoirs; water quality for 25 stations and 99 wells; and water levels for 32 observation wells. Also included are 91 crest-stage partial-record stations and 80 low-flow partial-record stations. Additional water data were collected at various stream and spring sites not involved in the systematic data collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee. |  |  |   |                              |
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[Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (t) water temperature, (s) sediment, (e) elevation or contents]

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## CUMBERLAND RIVER BASIN

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|------------------------------------|---------------------------|-----|
| <u>CARTER COUNTY</u>               |                           |     |
| Well 361738082132900               | Local number Ct:H-1.....  | 333 |
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| Well 353839089493500               | Local number Ld:F-4.....  | 339 |
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| Well 354357089271701               | Local number Ld:J-5.....  | 341 |
| Well 354552089455900               | Local number Ld:L-2.....  | 342 |
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| Well 353922083345600               | Local number Sv:E-2.....  | 346 |
| <u>SHELBY COUNTY</u>               |                           |     |
| Well 350514089553700               | Local number Sh:K-75..... | 347 |
| Well 351435090005200               | Local number Sh:O-1.....  | 348 |
| Well 351320089535800               | Local number Sh:P-1.....  | 349 |
| Well 350735089593300               | Local number Sh:P-76..... | 350 |
| Well 350900089482300               | Local number Sh:Q-1.....  | 351 |
| <u>CRITTENDEN COUNTY, ARKANSAS</u> |                           |     |
| Well 350958090173800               | Local number AR:C-1.....  | 352 |
| Well 350344090130000               | Local number AR:H-2.....  | 353 |
| Well 351349090062800               | Local number AR:O-1.....  | 354 |

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

|                          |                          |     |
|--------------------------|--------------------------|-----|
| <u>BRADLEY COUNTY</u>    |                          |     |
| Well 350503084505000     | Local number Br:E-1..... | 355 |
| <u>CANNON COUNTY</u>     |                          |     |
| Well 354823086104400     | Local number Cn:D-1..... | 355 |
| <u>DYER COUNTY</u>       |                          |     |
| Well 360200089280100     | Local number Dy:H-1..... | 356 |
| Well 360147089230700     | Local number Dy:H-7..... | 356 |
| <u>FAYETTE COUNTY</u>    |                          |     |
| Well 352226089330101     | Local number Fa:R-1..... | 357 |
| Well 352226089330102     | Local number Fa:R-2..... | 357 |
| <u>MADISON COUNTY</u>    |                          |     |
| Well 354223088380200     | Local number Md:N-1..... | 358 |
| <u>SHELBY COUNTY</u>     |                          |     |
| Well 352112089571200     | Local number Sh:U-1..... | 358 |
| Well 352112089571300     | Local number Sh:U-2..... | 359 |
| <u>WILLIAMSON COUNTY</u> |                          |     |
| Well 355505086541100     | Local number Wm:M-1..... | 359 |

## QUALITY OF GROUND WATER, 1984 WATER YEAR

|                        |                            |     |
|------------------------|----------------------------|-----|
| <u>CARROLL COUNTY</u>  |                            |     |
| Well 360747088310401   | Local number Cr:Q-7.....   | 360 |
| <u>GIBSON COUNTY</u>   |                            |     |
| Well 354920088541101   | Local number Gb:B-7.....   | 360 |
| Well 355853088564601   | Local number Gb:G-3.....   | 361 |
| Well 355516088453201   | Local number Gb:H-7.....   | 361 |
| <u>HARDEMAN COUNTY</u> |                            |     |
| Well 350258088532901   | Local number Hr:G-11.....  | 362 |
| <u>HENRY COUNTY</u>    |                            |     |
| Well 361804088194501   | Local number Hy:J-1.....   | 362 |
| Well 362642088200001   | Local number Hy:O-14.....  | 362 |
| <u>LAKE COUNTY</u>     |                            |     |
| Well 362243089280302   | Local number Lk:G-2.....   | 363 |
| <u>MCMINN COUNTY</u>   |                            |     |
| Well 352518084460801   | Local number Mm:F-11.....  | 363 |
| <u>MADISON COUNTY</u>  |                            |     |
| Well 353654088495701   | Local number Md:G-1.....   | 364 |
| Well 353642088490101   | Local number Md:G-278..... | 364 |
| Well 354001088495601   | Local number Md:M-564..... | 365 |

## QUALITY OF GROUND WATER, 1984 WATER YEAR--Continued

|                       |                            |     |
|-----------------------|----------------------------|-----|
| <u>MORGAN COUNTY</u>  |                            |     |
| Well 360753084432001  | Local number Mg:L-10.....  | 365 |
| <u>OBION COUNTY</u>   |                            |     |
| Well 361218089003801  | Local number Ob:D-7.....   | 366 |
| Well 361955089181101  | Local number Ob:G-4.....   | 366 |
| Well 362543089032102  | Local number Ob:O-4.....   | 367 |
| <u>ROANE COUNTY</u>   |                            |     |
| Well 354402084465001  | Local number Rn:L-27.....  | 367 |
| <u>SHELBY COUNTY</u>  |                            |     |
| Well 350540090061700  | Local number Sh:J-84.....  | 368 |
| Well 350114090071701  | Local number Sh:J-146..... | 368 |
| Well 350446090013500  | Local number Sh:J-154..... | 369 |
| Well 350518089554400  | Local number Sh:K-73.....  | 369 |
| Well 350218089511701  | Local number Sh:L-36.....  | 370 |
| Well 350908090014601  | Local number Sh:O-169..... | 371 |
| Well 350913090100801  | Local number Sh:O-207..... | 372 |
| Well 350930089574501  | Local number Sh:P-23.....  | 372 |
| Well 350857089591401  | Local number Sh:P-99.....  | 372 |
| Well 351440089572301  | Local number Sh:P-134..... | 373 |
| Well 351054089515302  | Local number Sh:Q-64.....  | 373 |
| Well 351703089575301  | Local number Sh:U-20.....  | 374 |
| <u>WEAKLEY COUNTY</u> |                            |     |
| Well 362032088504701  | Local number Wk:J-10.....  | 374 |
| Well 361709088423501  | Local number Wk:K-14.....  | 375 |

## QUALITY OF GROUND WATER, 1985 WATER YEAR

|                        |                              |     |
|------------------------|------------------------------|-----|
| <u>CARROLL COUNTY</u>  |                              |     |
| Well 360046088371501   | Local number Cr:M-2.....     | 376 |
| <u>CROCKETT COUNTY</u> |                              |     |
| Well 354232089051601   | Local number Ck:B-4.....     | 376 |
| Well 354703089070701   | Local number Ck:F-6.....     | 377 |
| Well 355437089144301   | Local number Ck:J-4.....     | 377 |
| <u>DYER COUNTY</u>     |                              |     |
| Well 355758089201001   | Local number Dy:D-5.....     | 378 |
| Well 360154089232501   | Local number Dy:H-41.....    | 378 |
| Well 360657089153101   | Local number Dy:J-44.....    | 379 |
| Well 361216089112802   | Local number Dy:P-3.....     | 379 |
| <u>FAYETTE COUNTY</u>  |                              |     |
| Well 350253089323901   | Local number Fa:G-3.....     | 380 |
| Well 351317089310601   | Local number Fa:M-14.....    | 380 |
| Well 351448089204601   | Local number Fa:O-36.....    | 381 |
| <u>HARDEMAN COUNTY</u> |                              |     |
| Well 350300089110901   | Local number Hr:E-3.....     | 381 |
| Well 351936089085801   | Local number Hr:N-4.....     | 382 |
| Well 351625089013801   | Local number Hr:O-8.....     | 382 |
| Well 352125088571001   | Local number Hr:P-5.....     | 383 |
| <u>HAYWOOD COUNTY</u>  |                              |     |
| Well 352734089240101   | Local number Ha:A-6.....     | 383 |
| Well 353523089154101   | Local number Ha:G-4.....     | 384 |
| <u>HOUSTON COUNTY</u>  |                              |     |
| Well 361849087455502   | Local number Hu:F-5.....     | 384 |
| <u>LAKE COUNTY</u>     |                              |     |
| Well 361530089290301   | Local number Lk:E-19.....    | 385 |
| <u>LAWRENCE COUNTY</u> |                              |     |
| Well 352614087182501   | Local number Ln:R-15.....    | 385 |
| <u>MORGAN COUNTY</u>   |                              |     |
| Well 360528084341401   | Local number Mg:F-4.....     | 386 |
| Well 360543084343101   | Local number Mg:F-5.....     | 386 |
| Well 360753084432001   | Local number Mg:L-10.....    | 386 |
| <u>OBION COUNTY</u>    |                              |     |
| Well 362024089094001   | Local number Ob:H-8.....     | 387 |
| <u>ROANE COUNTY</u>    |                              |     |
| Well 355447084184502   | Local number Rn:M-469-A..... | 387 |
| Well 355445084184304   | Local number Rn:M-5-439..... | 388 |
| Well 355447084184301   | Local number Rn:M-5-440..... | 388 |
| Well 355445084185503   | Local number Rn:M-5-458..... | 388 |
| Well 355447084184307   | Local number Rn:M-5-459..... | 389 |
| Well 355446084184301   | Local number Rn:M-5-460..... | 389 |
| Well 355445084184102   | Local number Rn:M-5-461..... | 389 |
| Well 355445084184103   | Local number Rn:M-5-462..... | 390 |
| Well 355445084184202   | Local number Rn:M-5-464..... | 390 |
| Well 355457084184503   | Local number Rn:M-5-470..... | 390 |
| Well 355456084184601   | Local number Rn:M-5-471..... | 391 |
| Well 355456084184501   | Local number Rn:M-5-472..... | 391 |

## QUALITY OF GROUND WATER, 1985 WATER YEAR--Continued

ROANE COUNTY--Continued

|                      |                              |     |
|----------------------|------------------------------|-----|
| Well 355453084183401 | Local number Rn:M-5-473..... | 391 |
| Well 355453084183402 | Local number Rn:M-5-474..... | 392 |
| Well 355453084183403 | Local number Rn:M-5-475..... | 392 |
| Well 355454084183401 | Local number Rn:M-5-476..... | 392 |
| Well 355421084193201 | Local number Rn:M-6-108..... | 393 |
| Well 355420084193301 | Local number Rn:M-6-109..... | 393 |

SCOTT COUNTY

|                      |                            |     |
|----------------------|----------------------------|-----|
| Well 362431084265701 | Local number Sc:K-102..... | 393 |
| Well 363005084315201 | Local number Sc:O-6.....   | 394 |

SHELBY COUNTY

|                      |                            |     |
|----------------------|----------------------------|-----|
| Well 350540090061700 | Local number Sh:J-84.....  | 394 |
| Well 350114090071701 | Local number Sh:J-146..... | 395 |
| Well 350446090013500 | Local number Sh:J-154..... | 395 |
| Well 350518089554400 | Local number Sh:K-73.....  | 396 |
| Well 350516089553801 | Local number Sh:K-74.....  | 396 |
| Well 350218089511701 | Local number Sh:L-36.....  | 396 |
| Well 350230089512301 | Local number Sh:L-37.....  | 397 |
| Well 350503089482201 | Local number Sh:L-83.....  | 397 |
| Well 350235089394701 | Local number Sh:M-36.....  | 397 |
| Well 350913090005801 | Local number Sh:O-223..... | 398 |
| Well 350917090012000 | Local number Sh:O-231..... | 398 |
| Well 350930089574501 | Local number Sh:P-23.....  | 398 |
| Well 351440089572301 | Local number Sh:P-134..... | 399 |
| Well 351109089512901 | Local number Sh:Q-40.....  | 399 |
| Well 351224089521501 | Local number Sh:Q-60.....  | 400 |
| Well 351324089504501 | Local number Sh:Q-81.....  | 400 |
| Well 351703089575301 | Local number Sh:U-20.....  | 401 |
| Well 352036089534501 | Local number Sh:U-41.....  | 401 |
| Well 352034089534501 | Local number Sh:U-54.....  | 402 |

TIPTON COUNTY

|                      |                           |     |
|----------------------|---------------------------|-----|
| Well 353346089385801 | Local number Tp:M-19..... | 402 |
| Well 353333089424701 | Local number Tp:M-20..... | 403 |

WEAKLEY COUNTY

|                      |                           |     |
|----------------------|---------------------------|-----|
| Well 360918088475801 | Local number Wk:E-15..... | 403 |
|----------------------|---------------------------|-----|

WILSON COUNTY

|                      |                           |     |
|----------------------|---------------------------|-----|
| Well 360548086083001 | Local number Wi:G-41..... | 404 |
| Well 360550086075701 | Local number Wi:G-44..... | 405 |



## INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, local, and Federal agencies, obtains a large amount of data pertaining to the water resources of Tennessee each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Tennessee."

This report consists of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains discharge records for 93 gaging stations; stage only at two gaging stations; stage and contents at 28 lakes and reservoirs; water quality for 25 stations and 99 wells; and water levels at 32 observation wells. Also included are data for 91 crest-stage partial-record stations, and 80 low-flow partial-record stations. Locations of these sites are shown on figures 5 and 6. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and miscellaneous analyses or as seepage investigations.

This series of annual reports for Tennessee began with the 1961 water year with a report that contained only data relating to the quantities of surface water. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several years concurrent with it, water-resources data for Tennessee were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report TN-85-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (615) 736-5424.

## COOPERATION

The U.S. Geological Survey and agencies of the State of Tennessee have had cooperative agreements for the systematic collection of streamflow records since 1918, for ground-water levels since 1946, and for water-quality records since 1960. Organizations that assisted in collecting data contained in this report through cooperative agreement with the Survey are:

Tennessee Department of Conservation, Charles A. Howell, III, Commissioner.  
 Tennessee Department of Health and Environment, James E. Word, Commissioner, through  
 Office of Water Management, Elmo Lunn, Director.  
 Tennessee Department of Transportation, Robert E. Farris, Commissioner, through Lewis Evans,  
 State Transportation Engineer and Ray Terrell, Executive Director Bureau of Planning and  
 Development and Clellon L. Loveall, Engineer Director Structures Division.  
 City of Franklin, Jeff Bethurum, Mayor.  
 City of Lawrenceburg, Ivan Johnston, Mayor.  
 City of Memphis, Richard C. Hackett, Mayor.  
 Lincoln County Utility Board, John R. O'Neal, Chairman.  
 Shelby County, William Morris, Mayor.  
 Metropolitan Government of Nashville and Davidson County, Richard H. Fulton, Mayor,  
 through Department of Public Works, Peter Heidenreich, Acting Director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, in collecting records for 20 gaging stations and 8 water-quality stations and by the Tennessee Valley Authority for 21 gaging stations. All data are published in this report.

The following organization also aided in collecting records for publication in this report:  
 Bowaters Southern Paper Corporation

Organizations that supplied data are acknowledged in station descriptions.

## SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Tennessee has an abundance of rivers, lakes, and streams. The largest of these, excluding the Mississippi River which forms the State's western boundary, are the Tennessee and Cumberland Rivers both of which are highly regulated. Natural runoff conditions are best represented in these basins as well as in the rest of Tennessee by data from gages on unregulated rivers and streams, such as Harpeth River near Kingston Springs (03434500) in the Cumberland Basin and Emory River at Oakdale (03540500) and Buffalo River near Lobelville (03604500) in the Tennessee Basin. Comparisons of monthly average and yearly average discharge for the 1985 water year and the base period 1951-80 are shown in figure 1 for these three gaging stations.

Mean annual streamflow in 1985 was below the long-term average across the State as shown in table 1. In the Cumberland River basin, runoff ranged from a low of 61 percent of the long-term average for Richland Creek at Charlotte Avenue at Nashville (03431700) to a high of 91 percent of the long-term average for Sulphur Fork Red River near Adams (03436000). At Tennessee River basin gages, runoff ranged from 41 percent of the long-term average at South Chestue Creek near Benton (03565300) to 88 percent at two Buffalo River gages (03604000 and 03604500). At gages in the Lower Mississippi River basin, runoff ranged from 75 percent of the long-term average for Beaver Creek at Huntingdon (07024300) to 109 percent at Obion River at Obion (07026000).

Although mean flow was below average, annual extreme flows were within historical extremes throughout the State. No significant floods occurred in Tennessee during the 1985 water year. The annual maximum discharge at most stations was less than the 2-year recurrence interval. Base flow varied throughout the State with some stations having flows less than the 20-year recurrence interval minimum base flow. The instantaneous maximum and minimum flows at selected long-term stations and the recurrence interval for each are given in table 1.

Table 1.--Mean annual, annual maximum, and annual minimum discharges and recurrence intervals for selected stations

| Station No.                   | Length of record (years) | Mean annual                    |                    | Annual maximum                 |                             | Annual minimum                 |                                   |
|-------------------------------|--------------------------|--------------------------------|--------------------|--------------------------------|-----------------------------|--------------------------------|-----------------------------------|
|                               |                          | Discharge (ft <sup>3</sup> /s) | Percent of average | Discharge (ft <sup>3</sup> /s) | Recurrence interval (years) | Discharge (ft <sup>3</sup> /s) | 1-Day recurrence interval (years) |
| CUMBERLAND RIVER BASIN        |                          |                                |                    |                                |                             |                                |                                   |
| 03414500                      | 43                       | 285                            | 67                 | 5,350                          | <2                          | 5.2                            | 5                                 |
| 03416000                      | 43                       | 120                            | 62                 | 3,360                          | <2                          | 6.2                            | 4                                 |
| 03421000                      | 61                       | 851                            | 73                 | 7,760                          | <2                          | 89                             | >2                                |
| 03426800                      | 23                       | 52.9                           | 77                 | 2,250                          | <2                          | 6.3                            | 3                                 |
| 03427500                      | 30                       | 381                            | 81                 | 13,800                         | <2                          | 7.7                            | 3                                 |
| 03428500                      | 20                       | 332                            | 75                 | 11,800                         | <2                          | 2.6                            | <20                               |
| 03431700                      | 21                       | 21.2                           | 61                 | 786                            | <2                          | 1.1                            | >2                                |
| 03431800                      | 24                       | 125                            | 86                 | 3,970                          | <2                          | 15                             | >2                                |
| 03433500                      | 65                       | 470                            | 80                 | 8,590                          | <2                          | 7.8                            | >2                                |
| 03434500                      | 61                       | 750                            | 75                 | 9,270                          | <2                          | 65                             | >2                                |
| 03436000                      | 47                       | 231                            | 91                 | 4,580                          | <2                          | 15                             | >2                                |
| 03436100                      | 24                       | 1,186                          | 87                 | 12,900                         | 2                           | 98                             | >2                                |
| TENNESSEE RIVER BASIN         |                          |                                |                    |                                |                             |                                |                                   |
| 03465500                      | 66                       | 920                            | 67                 | 10,000                         | <2                          | 133                            | <20                               |
| 03487550                      | 22                       | 25.6                           | 57                 | 864                            |                             | 2.2                            | <20                               |
| 03491000                      | 35                       | 28.1                           | 47                 | 1,950                          | <2                          | 2.3                            | 20                                |
| 03497300                      | 22                       | 184                            | 64                 | 9,740                          | 4                           | 37                             | 5                                 |
| 03528000                      | 67                       | 1,351                          | 64                 | 22,500                         | <2                          | 195                            | 2                                 |
| 03538250                      | 25                       | 108                            | 62                 | 2,650                          | 9                           | 5.2                            | <20                               |
| 03539800                      | 24                       | 776                            | 73                 | 12,700                         | <2                          | 6.5                            | 2                                 |
| 03540500                      | 58                       | 1,060                          | 72                 | 17,600                         | <2                          | 9.6                            | >2                                |
| 03543500                      | 51                       | 93.3                           | 48                 | 2,360                          | <2                          | 15                             | 5                                 |
| 03565300                      | 28                       | 21.3                           | 41                 | 1,550                          | <2                          | 2.6                            | 7                                 |
| 03565500                      | 31                       | 49.5                           | 52                 | 877                            | <2                          | 10                             | <20                               |
| 03566420                      | 21                       | 21.2                           | 63                 | 804                            | <2                          | 3.9                            | >2                                |
| 03567500                      | 55                       | 469                            | 67                 | 10,200                         | <2                          | 116                            | >2                                |
| 03571000                      | 65                       | 538                            | 72                 | 5,930                          | <2                          | 58                             | >2                                |
| 03578000                      | 34                       | 99.2                           | 71                 | 1,840                          | <2                          | 1.7                            | 5                                 |
| 03588400                      | 23                       | 60.0                           | 69                 | 1,080                          | <2                          | 15                             | 2                                 |
| 03588500                      | 60                       | 536                            | 82                 | 6,780                          | <2                          | 103                            | 2                                 |
| 03596000                      | 51                       | 127                            | 68                 | 3,290                          | <2                          | 15                             | 4                                 |
| 03600500                      | 32                       | 22.7                           | 79                 | 709                            | <2                          | 4.1                            | >2                                |
| 03602500                      | 60                       | 261                            | 82                 | 3,520                          | <2                          | 55                             | 5                                 |
| 03604000                      | 65                       | 670                            | 88                 | 5,530                          | <2                          | 180                            | >2                                |
| 03604500                      | 58                       | 1,054                          | 88                 | 5,870                          | <2                          | 336                            | >2                                |
| 03606500                      | 56                       | 245                            | 83                 | 1,910                          | <2                          | 64                             | >2                                |
| LOWER MISSISSIPPI RIVER BASIN |                          |                                |                    |                                |                             |                                |                                   |
| 07024300                      | 23                       | 87.5                           | 75                 | 1,330                          | <2                          | 20                             | 20                                |
| 07024500                      | 56                       | 455                            | 76                 | 3,690                          | <2                          | 124                            | >2                                |
| 07026000                      | 48                       | 2,979                          | 109                | 17,400                         | <2                          | 450                            | >2                                |
| 07029500                      | 56                       | 2,202                          | 90                 | 7,120                          | <2                          | 285                            | >2                                |
| 07030240                      | 16                       | 311                            | 85                 | 5,330                          | <2                          | 72                             | 4                                 |
| 07031650                      | 16                       | 858                            | 82                 | 8,470                          | <2                          | 278                            | >2                                |

Surface-water Quality

The Tennessee District collected water-quality data at 25 surface-water sites during the 1985 water year. Most of the sampling sites on major rivers are located downstream from impoundments. For example, seven of nine NASQAN sites in the State are located on regulated rivers. Impoundments can have a significant effect on water quality. For example, the detention time in storage moderates extreme constituent concentrations, and some parameters, such as suspended-sediment concentrations, are reduced as detention time increases.

At the main-stem stations on the Tennessee and Cumberland Rivers, observed dissolved-solids concentrations did not exceed 129 mg/L. Both streams contain calcium bicarbonate type water. Observed pH values ranged from 6.8 to 8.0 units and 7.1 to 8.5 units, respectively. Trace constituent concentrations were low; none exceeded Environmental Protection Agency criteria established for untreated water for public-water supplies. When compared to data from previous years, no significant differences were observed.

Dissolved-oxygen monitors are operated on the Cumberland River at Old Hickory Dam and below Cordell Hull Dam to aid in the evaluation of water quality. Observed dissolved-oxygen concentrations during the year ranged from 3.0 to 13.2 mg/L at Old Hickory Dam and from 4.8 to 12.4 mg/L below Cordell Hull Dam.

Because of the importance of the Big South Fork National River and Recreation Area in East Tennessee, the quality of water in the South Fork Cumberland River basin is monitored. Four monitoring sites are located within free-flowing reaches in the basin. Extremes for selected parameters in this basin are given below.

South Fork Cumberland River basin

| <u>Extremes for 1985 water year</u>      |         |               |         |                    |         | <u>Extremes for period 1976-85</u>       |         |               |         |                    |         |
|--|---------|---------------|---------|--------------------|---------|--|---------|---------------|---------|--------------------|---------|
| Specific conductance<br>(uS/cm at 25 °C) |         | pH<br>(units) |         | Sediment<br>(mg/L) |         | Specific conductance<br>(uS/cm at 25 °C) |         | pH<br>(units) |         | Sediment<br>(mg/L) |         |
| Maximum                                  | Minimum | Maximum       | Minimum | Maximum            | Minimum | Maximum                                  | Minimum | Maximum       | Minimum | Maximum            | Minimum |
| 896                                      | 40      | 8.3           | 5.6     | 1230               | 1       | 896                                      | 28      | 8.6           | 5.3     | 3190               | 1       |

Sediment

The suspended sediment transported by Tennessee streams consists mostly of silt and clay-sized material. Measured suspended-sand concentrations rarely exceed 25 percent of sampled concentrations even in the sand-bed channels of western Tennessee. Calculations for sand-bed channels indicate that unmeasured suspended-sediment load (zone between sediment sampler and bed) accounts for less than 10 percent of the total sediment load. Unmeasured load (the load not accounted for by the product of water discharge, measured suspended-sediment concentration, and a units conversion factor) has not been determined for middle and eastern Tennessee streams because the bed material is generally quite coarse and variable. However, unmeasured load in these streams is believed to be only a small percentage of total load.

Suspended-sediment transport curves show that when flow is less than about 1 (ft<sup>3</sup>/s)/mi<sup>2</sup>, western Tennessee streams have higher concentrations; but when flow exceeds about 10 (ft<sup>3</sup>/s)/mi<sup>2</sup>, concentrations in middle and eastern streams can equal or exceed those in western streams. The more efficient processes of delivering products of erosion to stream channels in middle and eastern Tennessee basins are responsible for the rapid increases in suspended-sediment concentrations with increasing flow.

Sediment yields for middle and eastern Tennessee basins generally are less than 800 (tons/mi<sup>2</sup>)/yr, however, heavily strip-mined basins can have yields from 1,000 to 3,000 (tons/mi<sup>2</sup>)/yr. Yields for the heavily agricultural and channelized basins of western Tennessee generally range from 700 to 1,000 (tons/mi<sup>2</sup>)/yr. Yields for the Hatchie River in western Tennessee are less than 200 (tons/mi<sup>2</sup>)/yr reflecting the lack of flood plain agriculture and channelization.

Ground-Water Levels

The fluctuation of ground-water levels in the State are summarized by representative hydrographs of four observation wells (fig. 2). The hydrographs for wells in Putnam and Hamilton Counties are indicative of conditions in the eastern half of the State, while those in Dickson and Lauderdale Counties reflect the conditions in the western half of the State.

In the eastern part of the State water levels in wells Hm:O-15 and Pm:C-1 declined after February with new record lows during the last part of the year. Water level in Hm:O-15 set new record lows during March through July. In Middle and West Tennessee, water levels in wells Di:F-19 and Ld:F-4 were above to near normal through the first part of the year. Water levels declined to new record lows at Di:F-19 during May through July and generally were below normal at Ld:F-4 during the last half of the year.



Hydrographs of the lowest daily water level for all the continuous-record stations are shown with the station description and water-level data in the body of the report. Those hydrographs show the water-level fluctuations for the specific wells. Water levels in wells located in Middle and East Tennessee generally respond quicker and with larger fluctuations in water level than the wells in the sand and gravel aquifers in West Tennessee. Most of the wells across the State had high water levels during December through March. The water levels declined from late spring through fall due to increased evapotranspiration and below-normal precipitation.

Water levels in some of the wells respond to pumping. The fluctuation due to pumping is often superimposed on the natural trends. The heavy use of ground water in Memphis has caused long-term declines in water levels in both confined and unconfined aquifers as shown by the water levels at index well Sh:Q-1 (fig. 3).

#### Ground-Water Quality

Water-quality data were collected from 60 wells in western Tennessee, ranging from 125 to 2,660 feet in depth. Concentrations of major and selected trace constituents were determined. Water-quality data for 42 of these wells provided new information concerning the Tertiary aquifers. In general, water from the Tertiary aquifers has low concentrations of most major constituents. The water ranged from 5 mg/L as  $\text{CaCO}_3$  (soft) to 280 mg/L as  $\text{CaCO}_3$  (very hard). Dissolved-solids concentrations ranged from 24 to 300 mg/L; iron concentrations ranged from less than 3 to 13,000 ug/L. Trace constituents in the water--in very low concentrations--included arsenic, barium, cadmium, chromium, copper, lead, mercury, strontium, and zinc.

# WATER RESOURCES DATA FOR TENNESSEE, 1985

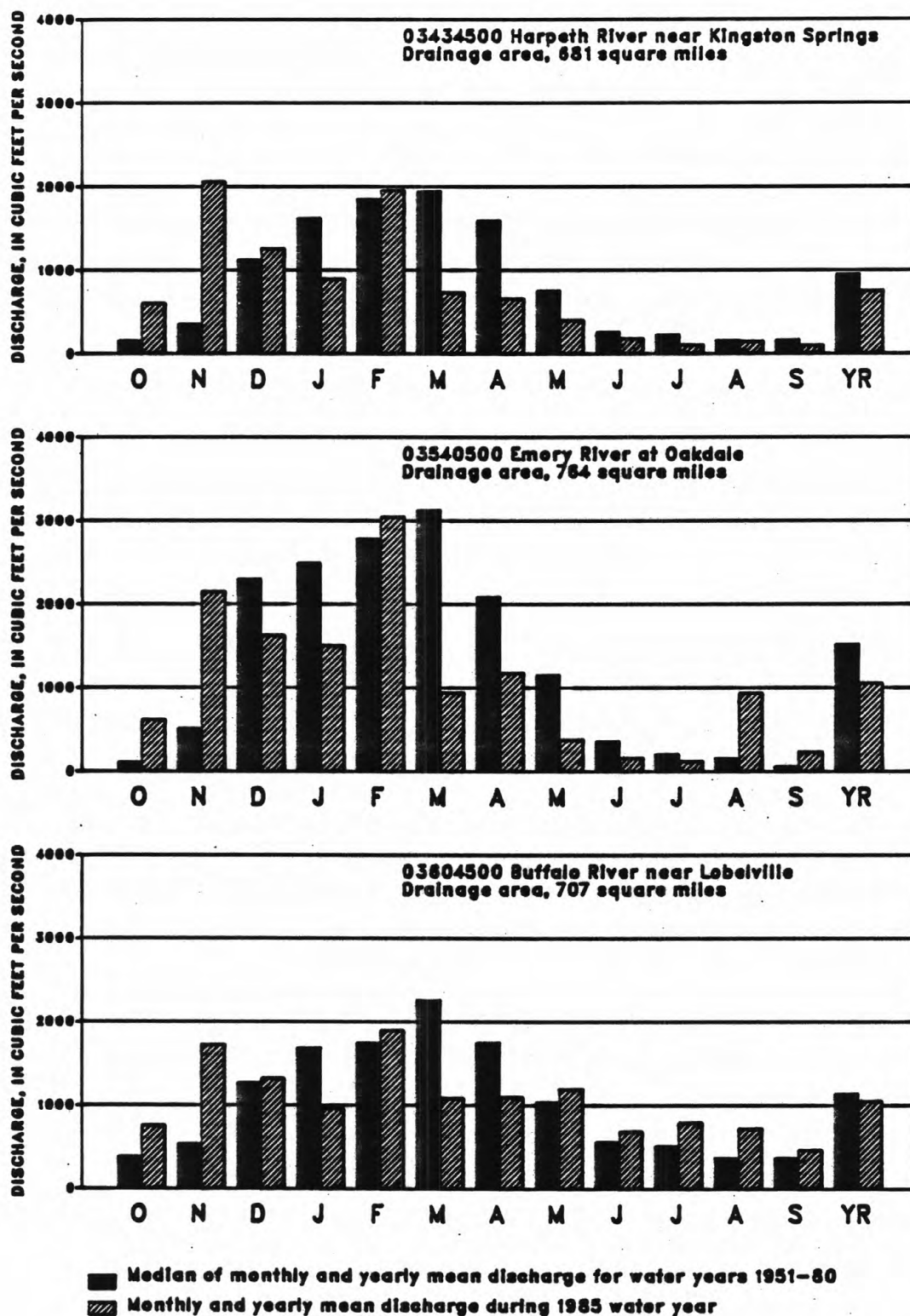
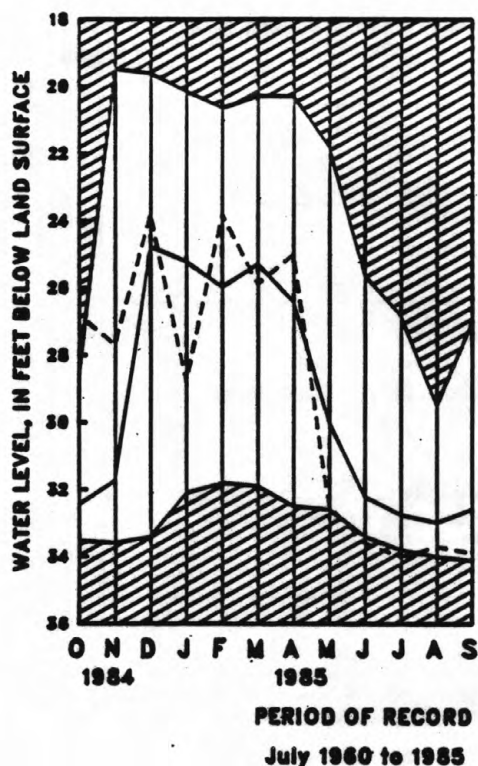


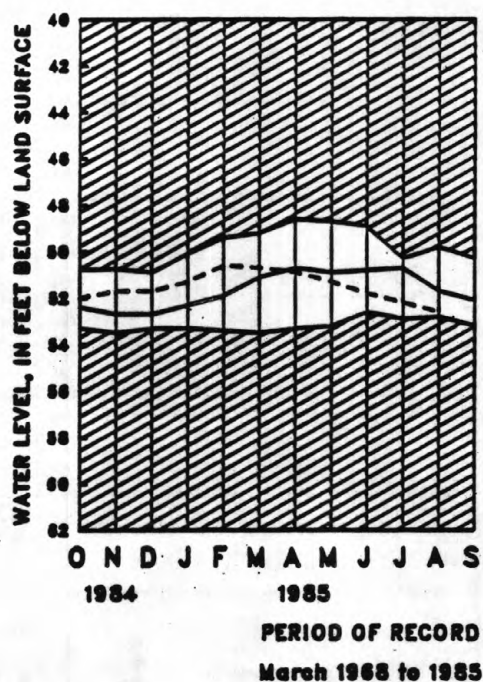
Figure 1.—Runoff during 1985 water year compared with median runoff for period 1951-80 for three representative gaging station.

## WATER RESOURCES DATA FOR TENNESSEE, 1985

DICKSON COUNTY DI:F-19



PUTNAM COUNTY PM:C-1



## HYDROGRAPH EXPLANATION

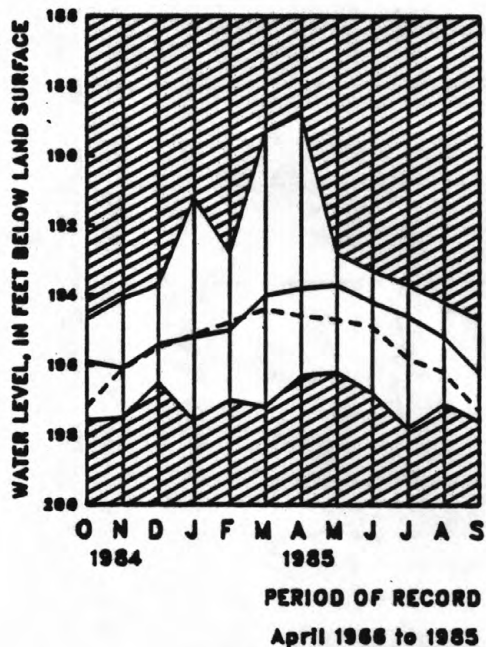
NOTE: ALL GROUND-WATER LEVELS SHOWN REPRESENT AN INSTANTANEOUS WATER LEVEL RECORDED ON THE 25TH DAY OR NEAR END OF MONTH

----- CURRENT WATER YEAR DATA

----- MEDIAN OF PREVIOUS RECORD

UNSHADED AREA SHOWS EXTREMES FOR LOWEST WATER LEVEL ON THE 25TH OR NEAR END OF MONTH FOR PERIOD OF RECORD, EXCLUDING CURRENT WATER YEAR

LAUDERDALE COUNTY LD:F-4



HAMILTON COUNTY HM:O-15

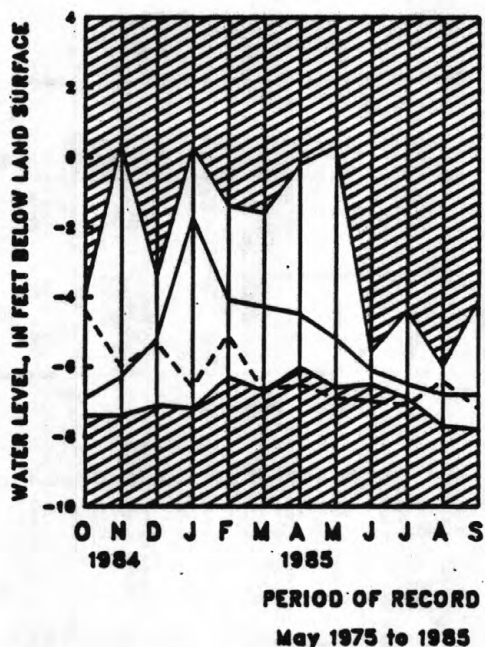
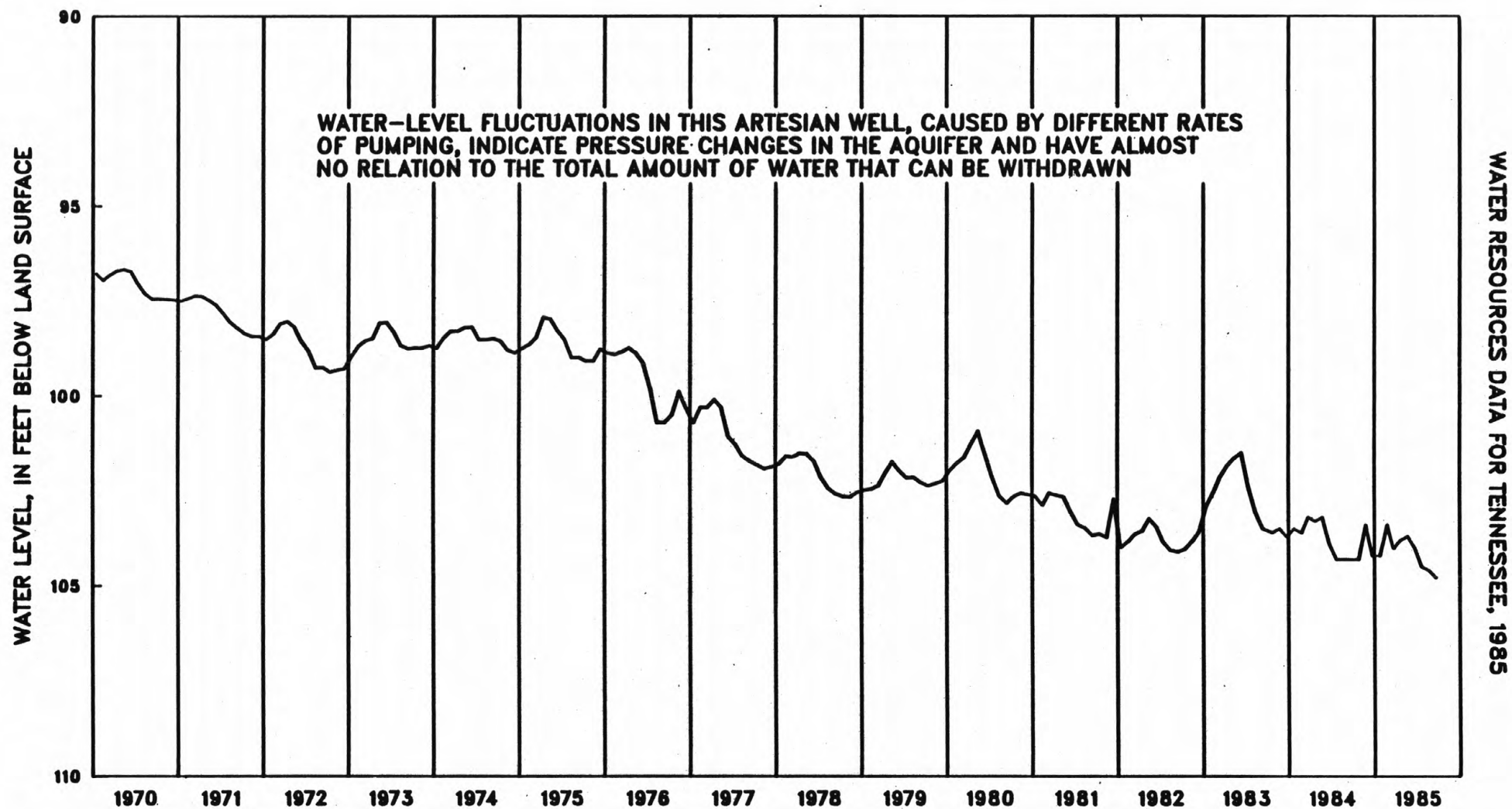


Figure 2.—Ground-water levels on the 25th of each month for the 1985 water year compared to the maximum, minimum, and median water levels on 25th of each month for the previous years of record.





**Figure 3.—Hydrograph of well SH:Q-1 showing long-term decline in the water level by calendar year.**

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

## EXPLANATION OF RECORDS

The surface-water and ground-water records published in this report are for the 1985 water year that began October 1, 1984, and ended September 30, 1985. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 3, 4, and 5. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

## Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

Each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete number for each station such as 03540500...., which appears just to the left of the station name, includes the 2-digit part number "03" plus the multi-digit downstream order number "540500...." This downstream numbering system is used in most cases; however, in some cases latitude and longitude numbers are assigned to hydrologic stations and partial-record stations as a means of identification (See Numbering System for Wells).

## Numbering system for wells

Downstream order station numbers are not assigned to wells. The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells within a 1-second grid. See figure 1 on the next page.

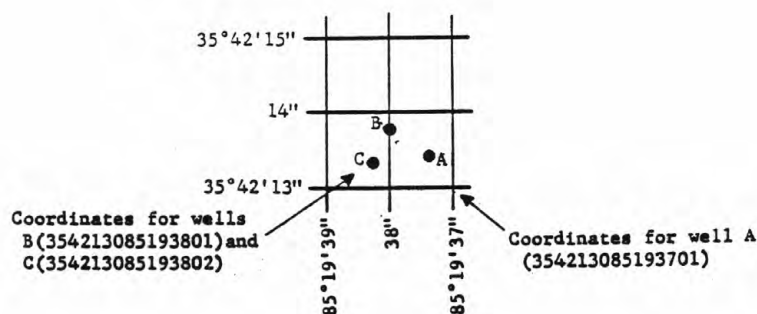


Figure 4.--System for numbering wells (latitude and longitude).

#### Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

#### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed from gage heights and rating tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are used in applying the gage heights to the rating tables. The shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth



or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and comparable records of discharge for other stations in the same or nearby basins.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed. If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

#### Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, description information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileage is that determined and used by the Geological Survey, Tennessee Valley Authority, or other agencies.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one whose location was such that records from it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**--Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see "Definition of terms"), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**--All periods of estimated daily-discharge record will either be identified by date for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.



COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value is computed as the arithmetic mean of the water-year mean discharges. It is not computed for stations having fewer than 5 complete water years of record or for stations where diversions, storage, or other water-use practices cause the value to be meaningless.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

#### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

#### Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures to more than 1,000 ft<sup>3</sup>/s.

The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

#### Other Data Available

Records of discharge, not published by the Geological Survey, are collected in Tennessee at several sites by the U.S. Army Corps of Engineers and Tennessee Valley Authority. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Tennessee District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

#### Records of Surface-Water Quality

Records of surface-water quality ordinarily are collected at or near stream-gaging stations. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

#### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

#### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

#### On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (NASQAN) (see definitions) are obtained from at least several verticals.



Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office whose address is given on the back of the title page of this report.

#### Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

#### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

#### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., and Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

#### Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.



**DRAINAGE AREA.**--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

**PERIOD OF RECORD.**--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

**INSTRUMENTATION.**--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

**REMARKS.**--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

**EXTREMES.**--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

**REVISIONS.**--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Users of U.S. Geological Survey water-quality data should be aware of this update procedure because corrections are not documented in the State data-report series.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

#### Remark Codes

The following remark codes may appear with the water-quality data in this report:

| <u>PRINTED OUTPUT</u> | <u>REMARK</u>  |
|-----------------------|--|
| E                     | Estimated value  |
| >                     | Actual value is known to be greater than the value shown   |
| <                     | Actual value is known to be less than the value shown  |
| K                     | Results based on colony count outside the acceptance range (non-ideal colony count)              |
| L                     | Biological organisms count less than 0.5 percent (organisms may be observed rather than counted) |
| D                     | Biological organism count equal to or greater than 15 percent (dominant)                         |
| &                     | Biological organism estimated as dominant  |

#### Records of Ground-Water Levels

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

#### Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is

given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

#### Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

**AQUIFER.**--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

**WELL CHARACTERISTICS.**--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

**INSTRUMENTATION.**--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

**DATUM.**--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929).

**REMARKS.**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that are also water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

**PERIOD OF RECORD.**--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

**EXTREMES FOR PERIOD OF RECORD.**--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table.

#### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

#### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood in the well casing where it would have been exposed to the atmosphere and to the material comprising the casings.

#### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

#### ACCESS TO WATSTORE DATA

The National Water Data STORAGE and Retrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist  
U.S. Geological Survey  
437 National Center  
Reston, Virginia 22092



## DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at  $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$  on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at  $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$  on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Bottom material in tables of data, refers to the chemical analysis of unconsolidated matter described as bed material and specifically includes anthropogenic matter in addition to natural solid material.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic feet per second per square mile [ $(\text{ft}^3/\text{s})/\text{mi}^2$ ] (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second ( $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day [ $(\text{ft}^3/\text{s})/\text{d}$ ] is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant or time.

Dissolved is that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each well.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram ( $\mu\text{g/g}$ ) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent sorbed per unit mass (gram) of sediment.

Micrograms per liter ( $\mu\text{g/L}$ ,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter ( $\text{MG/L}$ ,  $\text{mg/L}$ ) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

| <u>Classification</u> | <u>Size (mm)</u> | <u>Method of analysis</u> |
|-----------------------|------------------|---------------------------|
| Clay.....             | 0.00024 - 0.004  | Sedimentation             |
| Silt.....             | .004 - .062      | Sedimentation             |
| Sand.....             | .062 - 2.0       | Sedimentation or sieve    |
| Gravel.....           | 2.0 - 64.0       | Sieve                     |

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L)  $\times$  discharge ( $\text{ft}^3/\text{s}$ )  $\times$  0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the total quantity of sediment (suspended-sediment and bed-load) as measured by dry weight or volume, that passes a section during a specified period.



Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Thermograph is an instrument that continuously records variations of water temperature on a chart. The more general term "temperature recorder" is the term used in the table headings and refers to any instrument that records water temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended mixture and that the analytical method determined all of the constituent in the sample.)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."



Total load is the quantity of any individual constituent, as measured by dry mass or volume that passes through a section during a specified period. It is computed by multiplying the total stream discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

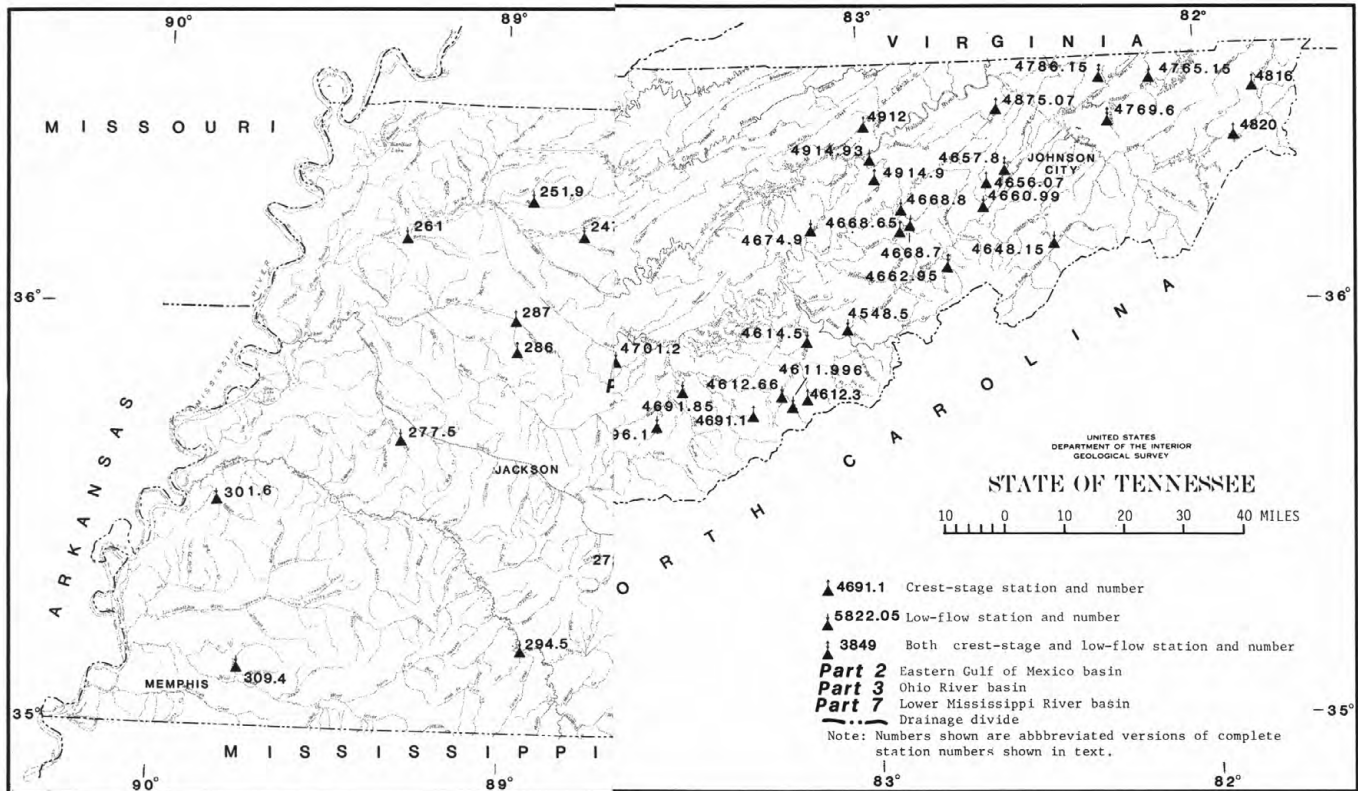
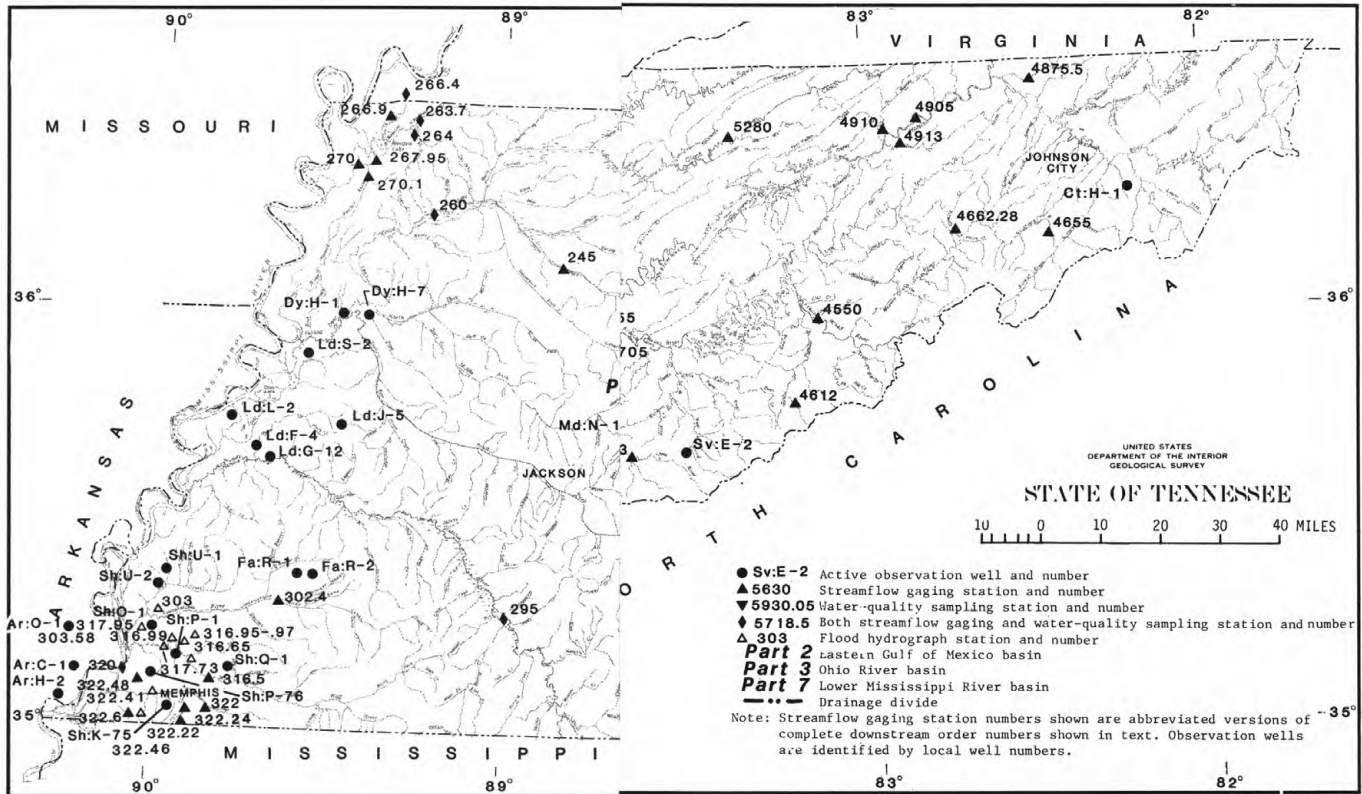
WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1976.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.







## CUMBERLAND RIVER BASIN

25

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN

LOCATION.--Lat 36°27'25", long 84°09'30", Campbell County, Hydrologic Unit 05130104, on left bank 5.6 mi west-southwest of Habersham, 4.6 mi north-northwest of LaFollette, and at mile 0.04.

DRAINAGE AREA.--1.07 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1981 to March 1984 (discontinued).

GAGE.--Water-stage recorder and trapezoidal flume. Datum of gage is 1,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

## REMARKS.--

Estimated daily discharges, water year 1982: Dec. 21, Jan. 12-19. Records poor.

Estimated daily discharges, water year 1983: Jan. 15-20. Records poor.

Estimated daily discharges, October 1983 to March 1984: Dec. 9-12, Dec. 28 to Jan. 3, 20-23, Feb. 7-9. Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174 ft<sup>3</sup>/s, Jan. 3, 1982, gage height, 3.64 ft; no flow several days each year.

## EXTREMES FOR CURRENT PERIOD.--

Water year 1982: Maximum discharge, 174 ft<sup>3</sup>/s, Jan. 3, gage height, 3.64 ft; minimum, no flow Oct. 17.

Water year 1983: Maximum discharge, 78 ft<sup>3</sup>/s, Feb. 2, gage height, 2.71 ft; minimum, no flow many days.

October 1983 to March 1984: Maximum discharge, 87 ft<sup>3</sup>/s, Feb. 11, gage height, 2.82 ft; minimum, no flow Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN    | FEB    | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|--------|-------|--------|--------|------|-------|-------|-------|-------|-------|-------|-------|
| 1           | .02   | 1.2    | 4.7   | 2.8    | 1.9    | 3.6  | .99   | 1.6   | 1.4   | .27   | 5.2   | 7.9   |       |
| 2           | .09   | .99    | 4.5   | 2.8    | 2.1    | 2.9  | .94   | 1.3   | .89   | .26   | 2.2   | 25    |       |
| 3           | .06   | .83    | 2.9   | 42     | 4.7    | 2.5  | 1.1   | 1.1   | .42   | .41   | 1.1   | 8.2   |       |
| 4           | .04   | .80    | 2.1   | 28     | 4.5    | 1.9  | .95   | .95   | 1.2   | 1.7   | .45   | 2.5   |       |
| 5           | .03   | .80    | 1.5   | 6.4    | 3.5    | 1.9  | .94   | .84   | 5.1   | .61   | .38   | 1.3   |       |
| 6           | .06   | .76    | 1.1   | 3.7    | 2.7    | 1.8  | 1.2   | .79   | 2.9   | .39   | .34   | .94   |       |
| 7           | .01   | .56    | 1.1   | 2.3    | 1.9    | 6.9  | 1.1   | .68   | 1.7   | .20   | .34   | .33   |       |
| 8           | .03   | .55    | 1.1   | 1.5    | 1.7    | 5.6  | 1.3   | .73   | 1.1   | .09   | .44   | .21   |       |
| 9           | .03   | .55    | .87   | 1.2    | 11     | 4.7  | 2.1   | .55   | .77   | .09   | .76   | .18   |       |
| 10          | .06   | .55    | .79   | 1.0    | 6.4    | 4.4  | 3.1   | .54   | .61   | .09   | .55   | .18   |       |
| 11          | .04   | .45    | .67   | .85    | 4.3    | 3.7  | 2.2   | .42   | .60   | .12   | .41   | .18   |       |
| 12          | .06   | .44    | .67   | .67    | 3.1    | 3.0  | 1.9   | .26   | .52   | .09   | .39   | .18   |       |
| 13          | .04   | .44    | .56   | .55    | 3.2    | 2.5  | 1.7   | .26   | .55   | .09   | .27   | .18   |       |
| 14          | .04   | .44    | .65   | .44    | 3.3    | 1.9  | 1.5   | .26   | .34   | .07   | .18   | .19   |       |
| 15          | .03   | .44    | .67   | .34    | 3.1    | 5.7  | 1.3   | .15   | .35   | .07   | .09   | .19   |       |
| 16          | .03   | .47    | .67   | .26    | 8.2    | 5.6  | 1.9   | .23   | .27   | .55   | .09   | .21   |       |
| 17          | .00   | .55    | .73   | .18    | 10     | 4.0  | 2.8   | .19   | .26   | .67   | .09   | .21   |       |
| 18          | .16   | .48    | .95   | .12    | 8.7    | 3.5  | 3.6   | .16   | .26   | .59   | .09   | .20   |       |
| 19          | .12   | .48    | 1.1   | .09    | 5.3    | 3.0  | 3.2   | .14   | .18   | .89   | .06   | .12   |       |
| 20          | .10   | .80    | 1.1   | .77    | 3.6    | 2.4  | 2.5   | .34   | .18   | 1.4   | .06   | .12   |       |
| 21          | .09   | .80    | 1.3   | 16     | 2.8    | 2.4  | 1.7   | .45   | .18   | .78   | .09   | .11   |       |
| 22          | .09   | .80    | 8.0   | 9.8    | 2.0    | 2.1  | 1.3   | .45   | .18   | 1.2   | .06   | .09   |       |
| 23          | .46   | .82    | 8.9   | 17     | 1.6    | 1.8  | 1.1   | 1.2   | .12   | 1.2   | .28   | .06   |       |
| 24          | .30   | 1.5    | 4.7   | 6.4    | 1.6    | 1.5  | .98   | .99   | .12   | .72   | .68   | .04   |       |
| 25          | .23   | 1.9    | 3.2   | 3.7    | 1.3    | 1.5  | 1.1   | .79   | .09   | .55   | .86   | .04   |       |
| 26          | 6.5   | 2.0    | 2.5   | 2.5    | .99    | 1.3  | 1.3   | .58   | .12   | .55   | .24   | .09   |       |
| 27          | 20    | 4.2    | 2.1   | 1.8    | 2.8    | 1.2  | 1.3   | .56   | .18   | .76   | .13   | .08   |       |
| 28          | 5.4   | 4.5    | 1.6   | 1.6    | 4.4    | 1.1  | 2.0   | 26    | .27   | 1.1   | .13   | .09   |       |
| 29          | 2.8   | 2.8    | 1.3   | 1.2    | ---    | 1.1  | 2.2   | 9.3   | .28   | 1.3   | .13   | .06   |       |
| 30          | 1.7   | 2.3    | 1.1   | 1.1    | ---    | 1.2  | 1.9   | 4.1   | .32   | .89   | .26   | .03   |       |
| 31          | 1.4   | ---    | 1.7   | 1.6    | ---    | 1.2  | ---   | 2.1   | ---   | 12    | .59   | ---   |       |
| TOTAL       | 40.02 | 34.20  | 64.83 | 158.67 | 110.69 | 87.9 | 51.20 | 58.01 | 21.46 | 29.70 | 16.94 | 49.21 |       |
| MEAN        | 1.29  | 1.14   | 2.09  | 5.12   | 3.95   | 2.84 | 1.71  | 1.87  | .72   | .96   | .55   | 1.64  |       |
| MAX         | 20    | 4.5    | 8.9   | 42     | 11     | 6.9  | 3.6   | 26    | 5.1   | 12    | 5.2   | 25    |       |
| MIN         | .00   | .44    | .56   | .09    | .99    | 1.1  | .94   | .14   | .09   | .07   | .06   | .03   |       |
| CFSM        | 1.21  | 1.07   | 1.95  | 4.79   | 3.69   | 2.65 | 1.60  | 1.75  | .67   | .90   | .51   | 1.53  |       |
| IN.         | 1.39  | 1.19   | 2.25  | 5.52   | 3.85   | 3.06 | 1.78  | 2.02  | .75   | 1.03  | .59   | 1.71  |       |
| WTR YR 1982 | TOTAL | 722.83 |       | MEAN   | 1.98   | MAX  | 42    | MIN   | .00   | CFSM  | 1.85  | IN.   | 25.13 |

## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC    | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP |       |
|-------------|-------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|-----|-------|
| 1           | .03   | .03    | 11     | 1.7   | 1.1   | 1.6   | 1.7   | 1.7   | .77   | .54  | .03  | .01 |       |
| 2           | .03   | .03    | 5.4    | 1.4   | 31    | 1.3   | 2.5   | 1.5   | .35   | .18  | .03  | .00 |       |
| 3           | .01   | .55    | 3.2    | 1.1   | 8.8   | 1.1   | 3.3   | 11    | .34   | .25  | .01  | .00 |       |
| 4           | .02   | .92    | 2.4    | .96   | 5.6   | 1.0   | 3.1   | 8.2   | 2.2   | .18  | .01  | .01 |       |
| 5           | .02   | .44    | 5.4    | .83   | 2.8   | .94   | 19    | 4.5   | 1.1   | 1.3  | .06  | .01 |       |
| 6           | .01   | .25    | 6.0    | .81   | 2.7   | 5.1   | 13    | 3.2   | .96   | .24  | .04  | .00 |       |
| 7           | .03   | .18    | 3.4    | .66   | 2.1   | 5.0   | 5.0   | 2.6   | 1.0   | .19  | .01  | .02 |       |
| 8           | .06   | .12    | 2.4    | .58   | 1.5   | 3.5   | 3.4   | 6.3   | .85   | .18  | .01  | .01 |       |
| 9           | .09   | .11    | 1.8    | 1.6   | 1.4   | 2.5   | 3.7   | 5.0   | .44   | .15  | .00  | .00 |       |
| 10          | .13   | .06    | 1.6    | 2.4   | 2.7   | 2.0   | 4.4   | 3.7   | .26   | .09  | .00  | .00 |       |
| 11          | .12   | .04    | 1.4    | 2.3   | 9.4   | 1.7   | 3.8   | 2.8   | .24   | .09  | .01  | .02 |       |
| 12          | .20   | .26    | 1.5    | 1.9   | 5.6   | 1.6   | 3.1   | 2.2   | .20   | .07  | .00  | .01 |       |
| 13          | .21   | .34    | 1.3    | 1.5   | 3.8   | 1.4   | 2.7   | 2.3   | .19   | .06  | .00  | .01 |       |
| 14          | .18   | .18    | 1.3    | 1.3   | 2.6   | 1.3   | 2.3   | 2.0   | .20   | .06  | .00  | .01 |       |
| 15          | .16   | .12    | 7.4    | 1.1   | 2.0   | 1.3   | 2.8   | 9.3   | .12   | .06  | .00  | .01 |       |
| 16          | .18   | .09    | 13     | .80   | 1.6   | 1.1   | 2.7   | 9.9   | .11   | .02  | .04  | .06 |       |
| 17          | .13   | .67    | 4.9    | .44   | 1.3   | 1.1   | 2.8   | 5.7   | .12   | .02  | .03  | .06 |       |
| 18          | .08   | 2.1    | 3.2    | .34   | 1.1   | 1.1   | 2.7   | 3.8   | .12   | .34  | .01  | .03 |       |
| 19          | .06   | 3.6    | 2.2    | .26   | .96   | 1.1   | 2.2   | 5.9   | .12   | .66  | .00  | .03 |       |
| 20          | .07   | 2.0    | 1.7    | .18   | .84   | 1.4   | 2.1   | 6.0   | .13   | .26  | .00  | .06 |       |
| 21          | .12   | 1.4    | 1.5    | 1.2   | .70   | 6.9   | 2.1   | 17    | .12   | .26  | .00  | .18 |       |
| 22          | .12   | 2.6    | 1.1    | 1.8   | .89   | 4.3   | 2.1   | 17    | .12   | .18  | .00  | .09 |       |
| 23          | .12   | 2.9    | 1.1    | 2.9   | 1.3   | 3.1   | 4.8   | 7.1   | .12   | .18  | .00  | .04 |       |
| 24          | .10   | 2.2    | 1.1    | 2.8   | 1.3   | 2.4   | 8.0   | 4.4   | .09   | .11  | .00  | .03 |       |
| 25          | .09   | 2.0    | .95    | 2.1   | 1.4   | 2.2   | 5.6   | 2.9   | .06   | .06  | .00  | .02 |       |
| 26          | .06   | 1.7    | 8.3    | 1.6   | 1.6   | 1.8   | 3.9   | 2.3   | .03   | .08  | .00  | .01 |       |
| 27          | .03   | 1.6    | 6.6    | 1.5   | 1.6   | 2.0   | 3.0   | 1.9   | .06   | .02  | .03  | .01 |       |
| 28          | .05   | 3.9    | 5.6    | 1.1   | 1.6   | 2.0   | 2.4   | 1.5   | .09   | .02  | .03  | .01 |       |
| 29          | .05   | 7.6    | 5.2    | .97   | ---   | 2.0   | 2.1   | 1.2   | .09   | .00  | .02  | .01 |       |
| 30          | .03   | 2.9    | 3.2    | 1.1   | ---   | 1.8   | 1.9   | 1.1   | .09   | .00  | .01  | .00 |       |
| 31          | .03   | ---    | 2.4    | 1.0   | ---   | 1.8   | ---   | 1.1   | ---   | .00  | .01  | --- |       |
| TOTAL       | 2.62  | 40.89  | 117.55 | 40.23 | 99.29 | 67.44 | 122.2 | 155.1 | 10.69 | 5.85 | .39  | .76 |       |
| MEAN        | .08   | 1.36   | 3.79   | 1.30  | 3.55  | 2.18  | 4.07  | 5.00  | .36   | .19  | .01  | .02 |       |
| MAX         | .21   | 7.6    | 13     | 2.9   | 31    | 6.9   | 19    | 17    | 2.2   | 1.3  | .06  | .18 |       |
| MIN         | .01   | .03    | .95    | .18   | .70   | .94   | 1.7   | 1.1   | .03   | .00  | .00  | .00 |       |
| CFSM        | .08   | 1.27   | 3.54   | 1.21  | 3.32  | 2.04  | 3.80  | 4.67  | .34   | .18  | .01  | .02 |       |
| IN.         | .09   | 1.42   | 4.09   | 1.40  | 3.45  | 2.34  | 4.25  | 5.39  | .37   | .20  | .01  | .03 |       |
| CAL YR 1982 | TOTAL | 744.84 |        | MEAN  | 2.04  | MAX   | 42    | MIN   | .01   | CFSM | 1.91 | IN. | 25.90 |
| WTR YR 1983 | TOTAL | 663.01 |        | MEAN  | 1.82  | MAX   | 31    | MIN   | .00   | CFSM | 1.70 | IN. | 23.05 |



## CUMBERLAND RIVER BASIN

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03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO MARCH 1984  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC  | JAN   | FEB    | MAR    | APR | MAY | JUN  | JUL  | AUG | SEP   |
|-------------|-------|--------|------|-------|--------|--------|-----|-----|------|------|-----|-------|
| 1           | .00   | .03    | 1.2  | 1.6   | 1.1    | 2.9    |     |     |      |      |     |       |
| 2           | .00   | .02    | 7.3  | 1.4   | .80    | 2.4    |     |     |      |      |     |       |
| 3           | .00   | .63    | 9.3  | 1.1   | .70    | 2.0    |     |     |      |      |     |       |
| 4           | .00   | 1.6    | 7.8  | 1.1   | .58    | 1.6    |     |     |      |      |     |       |
| 5           | .46   | .68    | 4.1  | 1.1   | .59    | 1.6    |     |     |      |      |     |       |
| 6           | .55   | .47    | 4.2  | 1.1   | .49    | 1.6    |     |     |      |      |     |       |
| 7           | .41   | .37    | 3.8  | 1.1   | .44    | 1.4    |     |     |      |      |     |       |
| 8           | .18   | .32    | 2.8  | 1.1   | .34    | 1.4    |     |     |      |      |     |       |
| 9           | .10   | .22    | 1.8  | 1.1   | .34    | 1.3    |     |     |      |      |     |       |
| 10          | .03   | .19    | 1.1  | 1.6   | .18    | 1.1    |     |     |      |      |     |       |
| 11          | .03   | .18    | 6.8  | 2.2   | 25     | 1.1    |     |     |      |      |     |       |
| 12          | .05   | .17    | 5.8  | 2.2   | 8.6    | .96    |     |     |      |      |     |       |
| 13          | 1.2   | .09    | 3.7  | 2.1   | 12     | 1.0    |     |     |      |      |     |       |
| 14          | .55   | .06    | 3.0  | 1.8   | 14     | .94    |     |     |      |      |     |       |
| 15          | .38   | 1.6    | 2.9  | 1.6   | 5.7    | .84    |     |     |      |      |     |       |
| 16          | .26   | 1.3    | 2.7  | 1.6   | 3.9    | 1.5    |     |     |      |      |     |       |
| 17          | .16   | .48    | 2.2  | 1.5   | 2.6    | 2.2    |     |     |      |      |     |       |
| 18          | .09   | .11    | 1.8  | 1.4   | 2.0    | 2.2    |     |     |      |      |     |       |
| 19          | .06   | .11    | 1.5  | 1.4   | 1.8    | 2.1    |     |     |      |      |     |       |
| 20          | .02   | .37    | 1.4  | .94   | 1.6    | 10     |     |     |      |      |     |       |
| 21          | .03   | 1.1    | 1.2  | .67   | 1.1    | 15     |     |     |      |      |     |       |
| 22          | .56   | .87    | 1.9  | .34   | 1.0    | 6.1    |     |     |      |      |     |       |
| 23          | 1.0   | .77    | 2.7  | .18   | 1.1    | 4.2    |     |     |      |      |     |       |
| 24          | .67   | 1.9    | 2.7  | 6.4   | 1.1    | 3.1    |     |     |      |      |     |       |
| 25          | .65   | 1.4    | 2.4  | 8.3   | 1.3    | 2.9    |     |     |      |      |     |       |
| 26          | .55   | 1.0    | 2.2  | 5.4   | 1.4    | 2.4    |     |     |      |      |     |       |
| 27          | .43   | 1.4    | 2.0  | 3.3   | 3.6    | 2.3    |     |     |      |      |     |       |
| 28          | .26   | 7.3    | 2.0  | 2.5   | 6.5    | 20     |     |     |      |      |     |       |
| 29          | .15   | 2.7    | 2.0  | 1.9   | 4.4    | 16     |     |     |      |      |     |       |
| 30          | .11   | 1.7    | 1.8  | 1.6   | ---    | 5.4    |     |     |      |      |     |       |
| 31          | .07   | ---    | 1.6  | 1.1   | ---    | 3.7    |     |     |      |      |     |       |
| TOTAL       | 9.01  | 29.14  | 97.7 | 60.73 | 104.26 | 121.24 |     |     |      |      |     |       |
| MEAN        | .29   | .97    | 3.15 | 1.96  | 3.50   | 3.91   |     |     |      |      |     |       |
| MAX         | 1.2   | 7.3    | 9.3  | 8.3   | 25     | 20     |     |     |      |      |     |       |
| MIN         | .00   | .02    | 1.1  | .18   | .18    | .84    |     |     |      |      |     |       |
| CFSM        | .27   | .91    | 2.94 | 1.83  | 3.36   | 3.65   |     |     |      |      |     |       |
| IN.         | .31   | 1.01   | 3.40 | 2.11  | 3.62   | 4.22   |     |     |      |      |     |       |
| CAL YR 1983 | TOTAL | 637.80 | MEAN | 1.75  | MAX    | 31     | MIN | .00 | CFSM | 1.64 | IN. | 22.17 |

## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--March 1981 to March 1984 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1981 to March 1984 (discontinued).

WATER TEMPERATURE: June 1981 to March 1984 (discontinued).

INSTRUMENTATION.--Two-parameter water-quality monitor. Sediment pumping sampler activated only during periods of high flow.

REMARKS.--Interruptions in the record were due to malfunctions of the instruments. Daily sediment data were collected periodically and during periods of high flow. No flow Oct. 17, 1981, many days July-October 1983.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 75 microsiemens, Aug. 16, 1983; minimum, 10 microsiemens, Feb. 9, 1982.

WATER TEMPERATURE: Maximum, 24.0°C, July 14, 1981; minimum, 0.0°C, several days during winter months each year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 368 mg/L, Feb. 11, 1984.

SEDIMENT LOADS: Maximum daily, 43 tons, Feb. 11, 1984.

EXTREMES FOR WATER YEAR 1982.--

SPECIFIC CONDUCTANCE: Maximum, 58 microsiemens, Oct. 18; minimum, 10 microsiemens, Feb. 9.

WATER TEMPERATURE: Maximum, 22.0°C, July 27; minimum, 0.0°C, several days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 159 mg/L, Sept. 2.

SEDIMENT LOADS: Maximum daily, 22 tons, Sept. 2.

EXTREMES FOR WATER YEAR 1983.--

SPECIFIC CONDUCTANCE: Maximum, 75 microsiemens, Aug. 16; minimum, 18 microsiemens, Feb. 11-15, May 4-6, 9, 10, 17, 22-25.

WATER TEMPERATURE: Maximum, 23.0°C, July 22-24; minimum, 0.0°C, Jan. 18-21.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 190 mg/L, Feb. 2.

SEDIMENT LOADS: Maximum daily, 16 tons, Feb. 2.

EXTREMES FOR OCTOBER 1983 TO MARCH 1984.--

SPECIFIC CONDUCTANCE: Maximum, 58 microsiemens, Oct. 5; minimum, 19 microsiemens, Feb. 13, 17.

WATER TEMPERATURE: Maximum, 16.5°C, Oct. 5; minimum, 0.0°C, several days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 368 mg/L, Feb. 11.

SEDIMENT LOADS: Maximum daily, 43 tons, Feb. 11.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 45      | 34  | 37   | 28       | 27  | 27   | 27       | 24  | 25   | 25      | 22  | 23   |
| 2     | 39      | 34  | 36   | 40       | 25  | 27   | 24       | 20  | 22   | 23      | 22  | 23   |
| 3     | 38      | 35  | 37   | 40       | 25  | 26   | 22       | 20  | 21   | 36      | 18  | 25   |
| 4     | 39      | 36  | 37   | 39       | 25  | 26   | 22       | 21  | 22   | 29      | 22  | 26   |
| 5     | 50      | 36  | 38   | 33       | 25  | 27   | 22       | 20  | 21   | 24      | 18  | 21   |
| 6     | 36      | 35  | 35   | 29       | 25  | 27   | 23       | 21  | 22   | 21      | 19  | 20   |
| 7     | 39      | 36  | 37   | 28       | 25  | 26   | 23       | 21  | 22   | 21      | 20  | 21   |
| 8     | 38      | 36  | 37   | 28       | 26  | 27   | 24       | 22  | 23   | 21      | 19  | 20   |
| 9     | 38      | 35  | 36   | 27       | 25  | 26   | 23       | 14  | 18   | 20      | 19  | 20   |
| 10    | 41      | 36  | 37   | 28       | 26  | 27   | 17       | 16  | 17   | 20      | 18  | 19   |
| 11    | 38      | 36  | 37   | 27       | 26  | 27   | 18       | 17  | 17   | 20      | 19  | 19   |
| 12    | 38      | 35  | 36   | 28       | 27  | 27   | 20       | 19  | 19   | 20      | 19  | 19   |
| 13    | 36      | 34  | 35   | 28       | 27  | 28   | 21       | 20  | 21   | 19      | 18  | 18   |
| 14    | 38      | 33  | 35   | 27       | 26  | 27   | 24       | 22  | 23   | 19      | 18  | 18   |
| 15    | 43      | 34  | 38   | 28       | 26  | 27   | 23       | 22  | 23   | 19      | 17  | 18   |
| 16    | 44      | 37  | 41   | 27       | 26  | 26   | 23       | 21  | 22   | 19      | 17  | 18   |
| 17    | ---     | --- | ---  | 27       | 25  | 26   | 24       | 22  | 23   | 18      | 16  | 17   |
| 18    | 58      | 34  | 38   | 28       | 26  | 27   | 23       | 20  | 21   | 19      | 17  | 18   |
| 19    | 35      | 32  | 33   | 28       | 26  | 27   | 20       | 19  | 20   | 20      | 17  | 19   |
| 20    | 33      | 32  | 32   | 31       | 28  | 29   | 20       | 19  | 19   | 19      | 17  | 18   |
| 21    | 33      | 31  | 32   | 29       | 27  | 28   | 20       | 18  | 19   | 25      | 17  | 18   |
| 22    | 35      | 32  | 33   | 28       | 26  | 27   | 20       | 18  | 19   | 19      | 16  | 17   |
| 23    | 36      | 30  | 33   | 28       | 26  | 27   | 19       | 17  | 18   | 20      | 16  | 17   |
| 24    | 31      | 28  | 29   | 29       | 27  | 28   | 19       | 17  | 19   | 19      | 17  | 18   |
| 25    | 29      | 27  | 28   | 26       | 24  | 25   | 20       | 18  | 19   | 19      | 18  | 18   |
| 26    | 30      | 21  | 25   | 24       | 23  | 23   | 20       | 19  | 20   | 19      | 18  | 18   |
| 27    | 37      | 21  | 27   | 29       | 22  | 26   | 21       | 19  | 20   | 19      | 18  | 19   |
| 28    | 30      | 24  | 27   | 27       | 25  | 26   | 21       | 20  | 20   | 19      | 18  | 19   |
| 29    | 30      | 28  | 29   | 26       | 24  | 25   | 22       | 21  | 21   | 20      | 18  | 19   |
| 30    | 42      | 28  | 29   | 26       | 24  | 25   | 22       | 21  | 21   | 20      | 19  | 20   |
| 31    | 40      | 28  | 29   | ---      | --- | ---  | 28       | 22  | 24   | 21      | 19  | 20   |
| MONTH | 58      | 21  | 34   | 40       | 22  | 27   | 28       | 14  | 21   | 36      | 16  | 19   |

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | --- | --- | 18    | 19  | 16  | 18    | 19  | 18  | 19   | 19  | 17  | 18   |
| 2        | --- | --- | 18    | 18  | 16  | 17    | 19  | 18  | 18   | 19  | 17  | 18   |
| 3        | 20  | 18  | 18    | 18  | 17  | 17    | 20  | 18  | 19   | 20  | 18  | 19   |
| 4        | 19  | 17  | 18    | 19  | 17  | 18    | 20  | 18  | 19   | 21  | 18  | 19   |
| 5        | 19  | 17  | 18    | 19  | 17  | 18    | 20  | 18  | 19   | 21  | 18  | 19   |
| 6        | 19  | 18  | 18    | 19  | 18  | 18    | 20  | 18  | 19   | 21  | 19  | 20   |
| 7        | 19  | 17  | 18    | 19  | 16  | 17    | 20  | 17  | 18   | 22  | 19  | 20   |
| 8        | 19  | 18  | 18    | 17  | 16  | 16    | 19  | 17  | 18   | 23  | 19  | 21   |
| 9        | 25  | 10  | 20    | 17  | 16  | 17    | 19  | 17  | 18   | 21  | 19  | 20   |
| 10       | 18  | 16  | 17    | 17  | 16  | 16    | 18  | 16  | 17   | 22  | 20  | 21   |
| 11       | 18  | 16  | 17    | 17  | 15  | 16    | 18  | 16  | 17   | 22  | 20  | 21   |
| 12       | 19  | 18  | 18    | 17  | 16  | 17    | 18  | 16  | 17   | 24  | 20  | 21   |
| 13       | 20  | 19  | 20    | 18  | 17  | 17    | 19  | 17  | 18   | 26  | 21  | 22   |
| 14       | 20  | 19  | 19    | 18  | 17  | 17    | 19  | 17  | 18   | 23  | 21  | 22   |
| 15       | 22  | 20  | 21    | 19  | 16  | 18    | 20  | 17  | 18   | 24  | 22  | 23   |
| 16       | 23  | 21  | 21    | 17  | 16  | 16    | 21  | 18  | 19   | 28  | 22  | 23   |
| 17       | 22  | 21  | 21    | 17  | 16  | 16    | 20  | 18  | 19   | 24  | 22  | 23   |
| 18       | 22  | 20  | 21    | 18  | 16  | 17    | 19  | 17  | 18   | 24  | 22  | 23   |
| 19       | 20  | 19  | 20    | 18  | 17  | 17    | 19  | 18  | 19   | 25  | 22  | 24   |
| 20       | 21  | 19  | 20    | 18  | 17  | 17    | 20  | 18  | 19   | 25  | 23  | 24   |
| 21       | 20  | 19  | 19    | 19  | 17  | 18    | 20  | 19  | 20   | 23  | 22  | 22   |
| 22       | 20  | 19  | 20    | 18  | 17  | 17    | 20  | 17  | 19   | 41  | 22  | 23   |
| 23       | 20  | 18  | 19    | 19  | 17  | 18    | 19  | 17  | 18   | 28  | 22  | 23   |
| 24       | 20  | 18  | 19    | 18  | 17  | 18    | 19  | 17  | 18   | 24  | 22  | 23   |
| 25       | 20  | 19  | 19    | 18  | 17  | 18    | 19  | 17  | 18   | 27  | 21  | 23   |
| 26       | 20  | 19  | 19    | 18  | 17  | 18    | 19  | 18  | 19   | 26  | 21  | 23   |
| 27       | 21  | 19  | 20    | 18  | 17  | 17    | 19  | 18  | 19   | 43  | 22  | 23   |
| 28       | 20  | 18  | 19    | 18  | 17  | 18    | 19  | 17  | 18   | 34  | 18  | 22   |
| 29       | --- | --- | ---   | 18  | 17  | 18    | 19  | 17  | 18   | 19  | 17  | 18   |
| 30       | --- | --- | ---   | 18  | 17  | 18    | 19  | 17  | 18   | 19  | 17  | 18   |
| 31       | --- | --- | ---   | 19  | 17  | 18    | --- | --- | ---  | 20  | 18  | 19   |
| MONTH    | 25  | 10  | 19    | 19  | 15  | 17    | 21  | 16  | 18   | 43  | 17  | 21   |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 21  | 19  | 20   | 32  | 28  | 29     | 24  | 22  | 22        | 42  | 27  | 32   |
| 2     | 21  | 20  | 20   | 31  | 29  | 29     | 24  | 22  | 23        | 40  | 23  | 28   |
| 3     | 22  | 20  | 21   | 31  | 27  | 29     | 25  | 23  | 24        | 24  | 23  | 23   |
| 4     | 22  | 19  | 21   | 28  | 24  | 26     | 36  | 24  | 26        | --- | --- | 25   |
| 5     | 21  | 17  | 18   | 30  | 27  | 28     | 27  | 25  | 26        | --- | --- | 25   |
| 6     | 19  | 17  | 18   | 30  | 28  | 29     | 27  | 26  | 27        | --- | --- | 25   |
| 7     | 20  | 18  | 19   | 31  | 29  | 30     | 28  | 27  | 27        | 25  | 24  | 25   |
| 8     | 21  | 19  | 20   | 31  | 29  | 30     | 31  | 27  | 28        | 26  | 24  | 25   |
| 9     | 22  | 20  | 21   | 31  | 30  | 31     | 30  | 27  | 28        | 26  | 25  | 25   |
| 10    | 23  | 21  | 22   | 31  | 29  | 30     | 38  | 27  | 29        | 27  | 25  | 26   |
| 11    | 23  | 22  | 22   | 32  | 30  | 30     | 38  | 28  | 31        | 28  | 26  | 27   |
| 12    | 24  | 22  | 23   | 31  | 29  | 30     | 37  | 28  | 29        | 29  | 27  | 28   |
| 13    | 24  | 23  | 24   | 31  | 30  | 30     | 29  | 28  | 28        | 30  | 28  | 29   |
| 14    | 24  | 23  | 24   | 33  | 30  | 31     | 29  | 28  | 29        | 30  | 28  | 29   |
| 15    | 25  | 24  | 24   | 33  | 31  | 32     | 49  | 28  | 30        | 30  | 29  | 29   |
| 16    | 25  | 24  | 24   | 36  | 29  | 32     | 46  | 30  | 34        | 30  | 29  | 29   |
| 17    | 25  | 24  | 24   | 30  | 28  | 29     | 47  | 30  | 34        | 29  | 28  | 29   |
| 18    | 26  | 24  | 25   | 30  | 29  | 29     | 42  | 29  | 32        | 30  | 28  | 29   |
| 19    | 26  | 25  | 25   | 31  | 27  | 30     | 31  | 29  | 30        | 30  | 28  | 29   |
| 20    | 26  | 25  | 25   | 28  | 26  | 26     | 31  | 30  | 30        | 29  | 28  | 29   |
| 21    | 27  | 25  | 25   | 33  | 25  | 27     | 33  | 30  | 31        | 29  | 28  | 28   |
| 22    | 27  | 26  | 26   | 31  | 26  | 28     | 31  | 30  | 30        | 28  | 27  | 28   |
| 23    | 27  | 26  | 26   | 29  | 28  | 28     | 32  | 27  | 30        | 28  | 27  | 28   |
| 24    | 31  | 25  | 26   | 33  | 27  | 28     | 30  | 27  | 29        | 28  | 27  | 28   |
| 25    | 28  | 26  | 27   | 29  | 27  | 28     | 30  | 29  | 29        | 30  | 28  | 29   |
| 26    | 29  | 28  | 28   | 31  | 28  | 29     | 29  | 28  | 29        | 29  | 28  | 23   |
| 27    | 34  | 28  | 28   | 31  | 27  | 29     | 30  | 28  | 29        | --- | --- | 28   |
| 28    | 29  | 26  | 29   | 29  | 27  | 28     | 31  | 30  | 30        | 29  | 28  | 28   |
| 29    | 28  | 26  | 26   | 27  | 26  | 27     | 31  | 30  | 30        | 29  | 28  | 28   |
| 30    | 29  | 27  | 28   | 28  | 26  | 27     | 32  | 31  | 31        | 30  | 28  | 29   |
| 31    | --- | --- | ---  | 35  | 22  | 26     | 31  | 30  | 31        | --- | --- | ---  |
| MONTH | 34  | 17  | 24   | 36  | 22  | 29     | 49  | 22  | 29        | 42  | 23  | 28   |



## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY      | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
|----------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER  |     |     | NOVEMBER |     |     | DECEMBER |     |     | JANUARY |     |     |      |
| 1        | 30  | 29  | 29       | 32  | 31  | 32       | --- | --- | 20      | 20  | 19  | 20   |
| 2        | 30  | 29  | 30       | 32  | 31  | 32       | --- | --- | 20      | 20  | 20  | 20   |
| 3        | 31  | 30  | 30       | 34  | 32  | 33       | --- | --- | 20      | 21  | 20  | 20   |
| 4        | 32  | 31  | 31       | 32  | 29  | 30       | --- | --- | 20      | 21  | 20  | 21   |
| 5        | 32  | 31  | 32       | --- | --- | 30       | --- | --- | 20      | 21  | 20  | 21   |
| 6        | 33  | 32  | 32       | --- | --- | 30       | 21  | 20  | 20      | 21  | 20  | 21   |
| 7        | 35  | 32  | 34       | --- | --- | 30       | 21  | 19  | 20      | 21  | 20  | 21   |
| 8        | 35  | 33  | 34       | 29  | 28  | 28       | 21  | 20  | 20      | 21  | 20  | 21   |
| 9        | 35  | 34  | 34       | 29  | 28  | 29       | 21  | 21  | 21      | 22  | 21  | 22   |
| 10       | 35  | 33  | 34       | 29  | 28  | 29       | 21  | 21  | 21      | 21  | 20  | 20   |
| 11       | 36  | 33  | 34       | 29  | 28  | 29       | 22  | 21  | 21      | 20  | 19  | 20   |
| 12       | 35  | 32  | 33       | 30  | 29  | 29       | 22  | 21  | 22      | 20  | 20  | 20   |
| 13       | 33  | 31  | 32       | 29  | 29  | 29       | 22  | 21  | 22      | 21  | 20  | 20   |
| 14       | 31  | 30  | 31       | --- | --- | 30       | 22  | 21  | 21      | 21  | 20  | 20   |
| 15       | 32  | 30  | 31       | --- | --- | 30       | 22  | 21  | 22      | 21  | 20  | 20   |
| 16       | 32  | 31  | 31       | --- | --- | 30       | 25  | 19  | 20      | 21  | 20  | 20   |
| 17       | 32  | 31  | 31       | --- | --- | 30       | 19  | 19  | 19      | 21  | 20  | 20   |
| 18       | 32  | 31  | 31       | 32  | 27  | 29       | 20  | 19  | 19      | 21  | 20  | 20   |
| 19       | 32  | 31  | 31       | 28  | 25  | 26       | 20  | 19  | 20      | 22  | 20  | 21   |
| 20       | 33  | 31  | 32       | 26  | 25  | 25       | 21  | 20  | 20      | 21  | 20  | 20   |
| 21       | 32  | 31  | 31       | 27  | 26  | 26       | 21  | 20  | 20      | 21  | 20  | 20   |
| 22       | 32  | 30  | 30       | 28  | 26  | 27       | 21  | 20  | 20      | 21  | 20  | 21   |
| 23       | 31  | 30  | 30       | 27  | 26  | 26       | 21  | 20  | 21      | 20  | 19  | 19   |
| 24       | 30  | 30  | 30       | --- | --- | 25       | 21  | 20  | 21      | 20  | 19  | 19   |
| 25       | 30  | 30  | 30       | --- | --- | 25       | 22  | 21  | 21      | 20  | 19  | 20   |
| 26       | 32  | 30  | 30       | --- | --- | 25       | 23  | 20  | 21      | 21  | 20  | 20   |
| 27       | 32  | 30  | 31       | 26  | 25  | 25       | 20  | 19  | 19      | 21  | 20  | 20   |
| 28       | 31  | 30  | 31       | 28  | 22  | 26       | 20  | 19  | 20      | 21  | 20  | 21   |
| 29       | 31  | 30  | 31       | 22  | 20  | 21       | 20  | 19  | 19      | 22  | 20  | 21   |
| 30       | 31  | 30  | 31       | --- | --- | 20       | 20  | 19  | 19      | 22  | 21  | 22   |
| 31       | 32  | 31  | 31       | --- | --- | ---      | 20  | 19  | 19      | 22  | 21  | 22   |
| MONTH    | 36  | 29  | 31       | --- | --- | 28       | 25  | 19  | 20      | 22  | 19  | 20   |
| DAY      | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
| FEBRUARY |     |     | MARCH    |     |     | APRIL    |     |     | MAY     |     |     |      |
| 1        | 22  | 21  | 21       | 21  | 20  | 20       | 23  | 22  | 23      | 22  | 20  | 21   |
| 2        | 26  | 21  | 24       | 21  | 20  | 20       | 25  | 23  | 24      | 22  | 21  | 22   |
| 3        | 23  | 22  | 23       | 21  | 20  | 21       | 24  | 23  | 23      | 23  | 19  | 21   |
| 4        | 23  | 22  | 23       | 22  | 20  | 21       | 25  | 23  | 24      | 19  | 18  | 19   |
| 5        | 24  | 22  | 23       | 22  | 21  | 21       | 25  | 20  | 23      | 19  | 18  | 19   |
| 6        | 24  | 23  | 23       | 24  | 21  | 22       | 21  | 19  | 20      | 20  | 18  | 19   |
| 7        | 24  | 23  | 24       | 22  | 20  | 21       | 20  | 19  | 20      | 22  | 19  | 20   |
| 8        | 24  | 24  | 24       | 22  | 21  | 21       | 20  | 20  | 20      | 25  | 19  | 20   |
| 9        | 24  | 20  | 22       | 22  | 21  | 22       | 20  | 19  | 20      | 19  | 18  | 19   |
| 10       | 21  | 20  | 20       | 22  | 22  | 22       | 20  | 19  | 19      | 20  | 18  | 19   |
| 11       | 20  | 18  | 18       | 23  | 22  | 22       | 20  | 19  | 19      | 20  | 19  | 19   |
| 12       | 19  | 18  | 18       | 23  | 22  | 22       | 20  | 19  | 19      | 21  | 19  | 20   |
| 13       | 19  | 18  | 18       | 23  | 22  | 22       | 20  | 19  | 20      | 22  | 20  | 21   |
| 14       | 19  | 18  | 19       | 23  | 22  | 23       | 22  | 20  | 20      | 22  | 21  | 21   |
| 15       | 20  | 18  | 19       | 24  | 22  | 23       | 22  | 20  | 21      | 22  | 19  | 21   |
| 16       | 20  | 19  | 19       | 24  | 23  | 23       | 21  | 19  | 20      | 21  | 19  | 19   |
| 17       | 20  | 19  | 19       | 24  | 23  | 24       | 21  | 19  | 20      | 19  | 18  | 19   |
| 18       | 20  | 19  | 20       | 24  | 23  | 24       | 21  | 20  | 20      | 23  | 19  | 20   |
| 19       | 20  | 19  | 20       | 26  | 23  | 24       | 21  | 20  | 21      | 24  | 19  | 22   |
| 20       | 21  | 19  | 20       | 25  | 22  | 23       | 21  | 20  | 21      | 21  | 19  | 19   |
| 21       | 21  | 20  | 20       | 25  | 19  | 20       | 21  | 20  | 20      | 21  | 19  | 20   |
| 22       | 21  | 20  | 20       | 20  | 19  | 19       | 21  | 20  | 20      | 26  | 18  | 19   |
| 23       | 21  | 20  | 21       | 21  | 20  | 20       | 22  | 20  | 21      | 25  | 18  | 19   |
| 24       | 21  | 20  | 21       | 21  | 20  | 20       | 20  | 19  | 19      | 24  | 18  | 20   |
| 25       | 21  | 20  | 20       | --- | --- | 20       | 20  | 19  | 19      | 20  | 18  | 19   |
| 26       | 20  | 19  | 20       | --- | --- | 20       | 20  | 19  | 19      | 20  | 19  | 20   |
| 27       | 20  | 19  | 20       | --- | --- | 20       | 21  | 19  | 20      | 24  | 20  | 20   |
| 28       | 21  | 19  | 20       | --- | --- | 20       | 21  | 19  | 20      | 36  | 20  | 21   |
| 29       | --- | --- | ---      | --- | --- | 20       | 22  | 20  | 21      | 26  | 20  | 22   |
| 30       | --- | --- | ---      | 23  | 21  | 22       | 22  | 20  | 21      | 25  | 21  | 22   |
| 31       | --- | --- | ---      | 23  | 22  | 22       | --- | --- | ---     | 26  | 21  | 23   |
| MONTH    | 26  | 18  | 21       | 26  | 19  | 21       | 25  | 19  | 21      | 36  | 18  | 20   |

## 03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MAX  | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
|       | JUNE |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 27   | 21  | 23   | 34   | 21  | 29   | ---    | --- | ---  | ---       | --- | ---  |
| 2     | 30   | 21  | 24   | 30   | 27  | 28   | ---    | --- | ---  | ---       | --- | ---  |
| 3     | 34   | 25  | 28   | 39   | 29  | 29   | ---    | --- | ---  | ---       | --- | ---  |
| 4     | 36   | 28  | 31   | 33   | 29  | 30   | ---    | --- | ---  | ---       | --- | ---  |
| 5     | 38   | 27  | 31   | 32   | 22  | 27   | 53     | 38  | 44   | ---       | --- | ---  |
| 6     | 33   | 27  | 29   | 29   | 27  | 28   | 39     | 37  | 38   | ---       | --- | ---  |
| 7     | 30   | 23  | 27   | 32   | 26  | 28   | 43     | 38  | 40   | ---       | --- | ---  |
| 8     | 29   | 22  | 24   | 29   | 27  | 28   | 61     | 40  | 45   | ---       | --- | ---  |
| 9     | 32   | 23  | 26   | 30   | 28  | 29   | ---    | --- | ---  | ---       | --- | ---  |
| 10    | 36   | 23  | 25   | 44   | 29  | 31   | ---    | --- | ---  | ---       | --- | ---  |
| 11    | 31   | 23  | 26   | 43   | 30  | 32   | ---    | --- | ---  | ---       | --- | ---  |
| 12    | 32   | 24  | 26   | 40   | 31  | 33   | ---    | --- | ---  | ---       | --- | ---  |
| 13    | 31   | 24  | 26   | 36   | 32  | 34   | ---    | --- | ---  | ---       | --- | ---  |
| 14    | 31   | 24  | 27   | 39   | 34  | 36   | ---    | --- | ---  | ---       | --- | ---  |
| 15    | 31   | 25  | 27   | 47   | 35  | 37   | ---    | --- | ---  | ---       | --- | ---  |
| 16    | 32   | 25  | 27   | 50   | 36  | 40   | 75     | 48  | 59   | ---       | --- | ---  |
| 17    | 35   | 27  | 29   | ---  | --- | 35   | 58     | 39  | 44   | ---       | --- | ---  |
| 18    | 28   | 26  | 27   | ---  | --- | 35   | 59     | 40  | 45   | ---       | --- | ---  |
| 19    | 27   | 26  | 26   | 36   | 27  | 30   | ---    | --- | ---  | ---       | --- | ---  |
| 20    | 32   | 25  | 28   | 32   | 30  | 31   | ---    | --- | ---  | ---       | --- | ---  |
| 21    | 32   | 24  | 27   | 33   | 30  | 32   | ---    | --- | ---  | ---       | --- | ---  |
| 22    | ---  | --- | 30   | 35   | 32  | 33   | ---    | --- | ---  | ---       | --- | ---  |
| 23    | ---  | --- | 30   | 40   | 34  | 35   | ---    | --- | ---  | 40        | 39  | 40   |
| 24    | ---  | --- | 30   | 52   | 35  | 39   | ---    | --- | ---  | 42        | 40  | 41   |
| 25    | ---  | --- | 35   | 51   | 37  | 42   | ---    | --- | ---  | 43        | 41  | 42   |
| 26    | ---  | --- | 35   | 40   | 35  | 36   | ---    | --- | ---  | 45        | 42  | 43   |
| 27    | 42   | 35  | 38   | 47   | 35  | 38   | ---    | --- | ---  | 46        | 43  | 44   |
| 28    | 54   | 29  | 39   | 60   | 38  | 46   | ---    | --- | ---  | 50        | 45  | 47   |
| 29    | 49   | 41  | 44   | ---  | --- | ---  | ---    | --- | ---  | 50        | 46  | 47   |
| 30    | 46   | 30  | 35   | ---  | --- | ---  | ---    | --- | ---  | ---       | --- | ---  |
| 31    | ---  | --- | ---  | ---  | --- | ---  | ---    | --- | ---  | ---       | --- | ---  |
| MONTH | 54   | 21  | 29   | 60   | 21  | 33   | ---    | --- | ---  | ---       | --- | ---  |

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | ---     | --- | ---  | 45       | 41  | 43   | 42       | 26  | 28   | 22      | 21  | 22   |
| 2     | ---     | --- | ---  | 45       | 42  | 43   | 41       | 24  | 30   | 23      | 22  | 22   |
| 3     | ---     | --- | ---  | 56       | 37  | 45   | 47       | 23  | 32   | 23      | 22  | 22   |
| 4     | ---     | --- | ---  | 55       | 36  | 44   | 45       | 22  | 30   | 23      | 22  | 23   |
| 5     | 58      | 38  | 45   | 37       | 35  | 36   | 23       | 22  | 22   | 24      | 22  | 23   |
| 6     | 43      | 42  | 43   | 37       | 36  | 37   | 23       | 22  | 23   | 24      | 23  | 23   |
| 7     | 44      | 42  | 43   | 38       | 36  | 37   | 23       | 22  | 23   | 24      | 23  | 23   |
| 8     | 45      | 43  | 44   | 38       | 37  | 38   | 23       | 22  | 23   | 24      | 23  | 23   |
| 9     | 46      | 43  | 45   | 39       | 37  | 38   | 24       | 23  | 23   | 25      | 23  | 23   |
| 10    | 48      | 45  | 46   | 39       | 38  | 39   | 24       | 23  | 24   | 25      | 24  | 24   |
| 11    | 49      | 47  | 48   | 39       | 38  | 38   | 25       | 22  | 24   | 25      | 23  | 23   |
| 12    | 51      | 48  | 49   | 39       | 37  | 38   | 23       | 22  | 22   | 23      | 22  | 23   |
| 13    | 50      | 36  | 39   | 38       | 37  | 38   | 23       | 22  | 22   | 23      | 23  | 23   |
| 14    | 40      | 36  | 38   | 39       | 37  | 38   | 23       | 22  | 23   | 23      | 23  | 23   |
| 15    | 40      | 38  | 39   | 38       | 33  | 35   | 23       | 22  | 23   | 24      | 23  | 23   |
| 16    | 40      | 39  | 40   | 33       | 32  | 32   | 23       | 22  | 23   | 24      | 23  | 23   |
| 17    | 42      | 40  | 41   | 33       | 32  | 33   | 23       | 23  | 23   | 24      | 23  | 23   |
| 18    | 43      | 41  | 42   | 34       | 32  | 33   | 24       | 23  | 23   | 24      | 23  | 23   |
| 19    | 45      | 43  | 44   | 34       | 33  | 34   | 24       | 23  | 23   | 25      | 23  | 24   |
| 20    | 50      | 44  | 45   | 34       | 33  | 34   | 24       | 23  | 23   | 24      | 23  | 24   |
| 21    | 58      | 47  | 52   | 34       | 32  | 33   | 24       | 23  | 24   | 24      | 24  | 24   |
| 22    | 47      | 45  | 46   | 33       | 31  | 32   | 25       | 23  | 24   | 25      | 24  | 25   |
| 23    | 45      | 38  | 40   | 33       | 32  | 32   | 23       | 22  | 22   | 25      | 23  | 24   |
| 24    | 40      | 39  | 39   | 32       | 29  | 31   | ---      | --- | ---  | 32      | 22  | 25   |
| 25    | 41      | 40  | 40   | 30       | 29  | 29   | ---      | --- | ---  | 22      | 21  | 21   |
| 26    | 41      | 40  | 40   | 30       | 29  | 30   | ---      | --- | ---  | 21      | 20  | 21   |
| 27    | 41      | 40  | 41   | 30       | 28  | 30   | ---      | --- | ---  | 21      | 20  | 21   |
| 28    | 41      | 40  | 41   | 30       | 26  | 27   | ---      | --- | ---  | 21      | 20  | 21   |
| 29    | 42      | 40  | 41   | 27       | 26  | 26   | ---      | --- | ---  | 22      | 21  | 21   |
| 30    | 43      | 41  | 42   | 27       | 26  | 27   | ---      | --- | ---  | 22      | 21  | 21   |
| 31    | 45      | 42  | 43   | ---      | --- | ---  | 22       | 21  | 22   | 22      | 21  | 22   |
| MONTH | 58      | 36  | 43   | 56       | 26  | 35   | ---      | --- | ---  | 32      | 20  | 23   |

## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
|       | FEBRUARY |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1     | 22       | 21  | 22   | 23    | 21  | 21   |       |     |      |     |     |      |
| 2     | 22       | 21  | 22   | 22    | 21  | 21   |       |     |      |     |     |      |
| 3     | 23       | 22  | 22   | 22    | 21  | 22   |       |     |      |     |     |      |
| 4     | 23       | 22  | 22   | 22    | 21  | 22   |       |     |      |     |     |      |
| 5     | 23       | 22  | 22   | ---   | --- | 20   |       |     |      |     |     |      |
| 6     | 23       | 22  | 22   | ---   | --- | 20   |       |     |      |     |     |      |
| 7     | 23       | 22  | 23   | 23    | 22  | 22   |       |     |      |     |     |      |
| 8     | 24       | 23  | 23   | 23    | 22  | 22   |       |     |      |     |     |      |
| 9     | 23       | 22  | 23   | 22    | 21  | 22   |       |     |      |     |     |      |
| 10    | 23       | 22  | 23   | 22    | 22  | 22   |       |     |      |     |     |      |
| 11    | 36       | 23  | 29   | 23    | 22  | 22   |       |     |      |     |     |      |
| 12    | 32       | 25  | 28   | 23    | 22  | 22   |       |     |      |     |     |      |
| 13    | 29       | 19  | 25   | 24    | 22  | 23   |       |     |      |     |     |      |
| 14    | 35       | 29  | 33   | 23    | 22  | 23   |       |     |      |     |     |      |
| 15    | 33       | 28  | 30   | 24    | 23  | 23   |       |     |      |     |     |      |
| 16    | 32       | 28  | 29   | 24    | 23  | 24   |       |     |      |     |     |      |
| 17    | 35       | 19  | 25   | 23    | 22  | 22   |       |     |      |     |     |      |
| 18    | 21       | 20  | 20   | 23    | 22  | 22   |       |     |      |     |     |      |
| 19    | 21       | 20  | 20   | 23    | 22  | 23   |       |     |      |     |     |      |
| 20    | 21       | 20  | 21   | 29    | 23  | 24   |       |     |      |     |     |      |
| 21    | 22       | 20  | 21   | 32    | 24  | 25   |       |     |      |     |     |      |
| 22    | 21       | 21  | 21   | 25    | 23  | 23   |       |     |      |     |     |      |
| 23    | 22       | 21  | 21   | 24    | 23  | 23   |       |     |      |     |     |      |
| 24    | 22       | 21  | 22   | 24    | 23  | 23   |       |     |      |     |     |      |
| 25    | 22       | 21  | 21   | 24    | 23  | 24   |       |     |      |     |     |      |
| 26    | 22       | 21  | 21   | 25    | 24  | 24   |       |     |      |     |     |      |
| 27    | 24       | 20  | 22   | 25    | 24  | 25   |       |     |      |     |     |      |
| 28    | 22       | 21  | 21   | 34    | 22  | 24   |       |     |      |     |     |      |
| 29    | 21       | 21  | 21   | 35    | 27  | 29   |       |     |      |     |     |      |
| 30    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| 31    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| MONTH | 327      | 19  | 23   | 35    | 4   | 23   |       |     |      |     |     |      |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 16.5    | 12.5 | 14.5 | 12.5     | 11.0 | 11.5 | 9.5      | 7.5 | 9.0  | 5.5     | 4.5 | 5.0  |
| 2     | 14.5    | 11.0 | 13.0 | 12.5     | 10.5 | 11.5 | 9.5      | 8.0 | 8.5  | 5.5     | 4.0 | 4.5  |
| 3     | 12.0    | 9.0  | 10.0 | 12.5     | 10.5 | 12.0 | 8.5      | 7.5 | 8.0  | 8.0     | 5.5 | 7.0  |
| 4     | 12.0    | 8.5  | 10.0 | 13.0     | 11.0 | 12.0 | 8.0      | 6.5 | 7.5  | 8.5     | 6.5 | 7.5  |
| 5     | 12.0    | 11.0 | 11.5 | 13.0     | 12.0 | 12.5 | 6.5      | 4.5 | 6.0  | 6.5     | 5.0 | 5.5  |
| 6     | 14.0    | 11.5 | 12.5 | 12.0     | 9.5  | 11.0 | 5.0      | 3.5 | 4.0  | 7.5     | 5.5 | 6.5  |
| 7     | 13.0    | 11.0 | 12.0 | 9.5      | 7.5  | 8.5  | 7.0      | 4.0 | 5.5  | 8.0     | 5.0 | 7.0  |
| 8     | 12.5    | 9.5  | 10.5 | 8.5      | 6.5  | 7.5  | 7.5      | 5.5 | 6.5  | 5.0     | 3.0 | 4.0  |
| 9     | 11.0    | 9.5  | 10.5 | 9.0      | 7.5  | 8.0  | 5.0      | 3.0 | 4.0  | 3.0     | 1.0 | 2.5  |
| 10    | 12.0    | 11.0 | 11.5 | 10.0     | 8.5  | 9.0  | 3.0      | 1.5 | 2.0  | 1.0     | .5  | .5   |
| 11    | 13.5    | 12.0 | 12.5 | 8.5      | 7.5  | 8.0  | 2.0      | 1.0 | 1.5  | .5      | .5  | .5   |
| 12    | 13.5    | 12.0 | 12.5 | 7.5      | 6.0  | 7.0  | 1.5      | .0  | 1.0  | .5      | .5  | .5   |
| 13    | 14.0    | 11.5 | 12.5 | 7.0      | 5.0  | 6.5  | 2.5      | .0  | 1.5  | .5      | .0  | .5   |
| 14    | 12.5    | 10.0 | 11.5 | 7.0      | 5.5  | 6.0  | 4.0      | 2.5 | 3.5  | .5      | .5  | .5   |
| 15    | 12.5    | 11.5 | 12.0 | 6.5      | 5.0  | 6.0  | 4.0      | 3.0 | 3.5  | .5      | .5  | .5   |
| 16    | 14.0    | 12.5 | 13.0 | 7.0      | 6.0  | 6.5  | 3.0      | 1.5 | 2.0  | .5      | .5  | .5   |
| 17    | ---     | ---  | ---  | 8.0      | 7.0  | 7.5  | 4.0      | 2.0 | 3.0  | .5      | .0  | .0   |
| 18    | 14.0    | 12.0 | 13.5 | 7.5      | 6.0  | 6.5  | 2.5      | .5  | 1.5  | .0      | .0  | .0   |
| 19    | 12.0    | 9.0  | 10.5 | 9.5      | 6.0  | 7.5  | .5       | .0  | .5   | .0      | .0  | .0   |
| 20    | 9.5     | 7.0  | 8.5  | 9.5      | 6.0  | 7.5  | .0       | .0  | .0   | .0      | .0  | .0   |
| 21    | 10.0    | 7.0  | 8.5  | 6.0      | 4.5  | 5.0  | .5       | .0  | .0   | 6.0     | .0  | 4.5  |
| 22    | 10.5    | 9.0  | 10.0 | 5.0      | 4.0  | 4.5  | 6.0      | .5  | 3.5  | 6.5     | 5.5 | 6.0  |
| 23    | 11.0    | 8.5  | 10.0 | 5.0      | 3.5  | 4.5  | 7.0      | 6.0 | 6.5  | 7.5     | 5.0 | 6.5  |
| 24    | 8.5     | 6.5  | 7.5  | 6.5      | 5.5  | 6.0  | 6.0      | 5.5 | 5.5  | 5.0     | 3.0 | 4.0  |
| 25    | 9.5     | 7.0  | 8.0  | 7.5      | 6.5  | 7.0  | 5.5      | 5.0 | 5.0  | 4.5     | 3.0 | 3.5  |
| 26    | 12.5    | 9.5  | 11.5 | 8.5      | 6.5  | 7.5  | 6.0      | 5.0 | 5.5  | 3.0     | .5  | 1.5  |
| 27    | 13.0    | 12.5 | 13.0 | 10.0     | 8.5  | 9.5  | 6.5      | 5.0 | 5.5  | 1.0     | .0  | .5   |
| 28    | 13.0    | 12.0 | 12.5 | 9.0      | 7.5  | 8.5  | 6.0      | 4.5 | 5.5  | 3.0     | 1.0 | 2.0  |
| 29    | 12.5    | 11.0 | 12.0 | 8.5      | 7.5  | 8.0  | 6.0      | 3.5 | 4.5  | 2.5     | .5  | 1.5  |
| 30    | 12.5    | 11.0 | 12.0 | 7.5      | 6.5  | 7.0  | 3.5      | 1.5 | 2.5  | 5.0     | 2.5 | 3.5  |
| 31    | 12.5    | 10.5 | 11.5 | ---      | ---  | ---  | 4.5      | 2.5 | 3.5  | 6.5     | 4.5 | 5.5  |
| MONTH | 16.5    | 6.5  | 11.5 | 13.0     | 3.5  | 8.0  | 9.5      | .0  | 4.0  | 8.5     | .0  | 3.0  |



03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY      | MAX | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | --- | --- | 5.5   | 7.0  | 5.5  | 6.5   | 12.0 | 8.0  | 10.0 | 12.5 | 10.0 | 11.0 |
| 2        | --- | --- | 5.0   | 7.5  | 4.5  | 6.0   | 9.5  | 7.0  | 8.5  | 13.0 | 10.5 | 11.5 |
| 3        | --- | --- | 5.0   | 8.0  | 6.5  | 7.0   | 13.0 | 9.0  | 10.5 | 13.5 | 10.0 | 12.0 |
| 4        | 6.0 | 4.5 | 5.0   | 9.0  | 7.0  | 8.0   | 11.0 | 7.0  | 9.0  | 14.0 | 10.0 | 12.0 |
| 5        | 6.0 | 4.5 | 5.0   | 8.5  | 5.5  | 7.0   | 9.5  | 7.5  | 8.5  | 14.5 | 10.5 | 12.5 |
| 6        | 5.5 | 2.0 | 3.5   | 6.5  | 5.5  | 6.0   | 9.0  | 4.0  | 6.0  | 14.5 | 12.0 | 13.5 |
| 7        | 2.0 | .0  | 1.0   | 6.0  | 4.5  | 5.0   | 6.5  | 3.0  | 5.0  | 14.0 | 13.0 | 13.5 |
| 8        | 3.0 | .5  | 2.0   | 5.5  | 3.5  | 4.5   | 5.5  | 4.0  | 5.0  | 14.5 | 12.5 | 13.0 |
| 9        | 5.5 | 3.0 | 4.5   | 7.5  | 5.0  | 6.0   | 6.5  | 5.5  | 6.0  | 14.0 | 10.5 | 12.5 |
| 10       | 4.0 | 3.0 | 3.5   | 8.0  | 5.5  | 6.5   | 8.5  | 5.0  | 6.5  | 15.0 | 11.0 | 13.0 |
| 11       | 4.5 | 3.0 | 3.5   | 8.5  | 6.0  | 7.5   | 9.0  | 5.0  | 7.0  | 15.0 | 11.5 | 13.0 |
| 12       | 3.5 | 2.5 | 3.0   | 10.5 | 7.5  | 9.0   | 10.5 | 6.0  | 8.5  | 15.5 | 11.5 | 13.5 |
| 13       | 3.5 | 2.5 | 3.0   | 10.0 | 8.0  | 9.5   | 11.0 | 9.0  | 9.5  | 16.0 | 12.5 | 14.5 |
| 14       | 4.0 | 2.0 | 3.0   | 8.0  | 6.5  | 7.0   | 12.5 | 9.5  | 10.5 | 16.5 | 13.5 | 15.0 |
| 15       | 5.5 | 3.5 | 4.5   | 9.0  | 7.0  | 8.0   | 14.0 | 9.0  | 11.5 | 17.0 | 14.5 | 16.0 |
| 16       | 7.0 | 5.5 | 6.5   | 11.0 | 8.5  | 9.5   | 14.0 | 11.0 | 12.5 | 17.0 | 14.5 | 15.5 |
| 17       | 8.0 | 7.0 | 7.5   | 12.0 | 9.5  | 10.5  | 13.0 | 10.5 | 12.0 | 17.0 | 14.5 | 15.5 |
| 18       | 8.5 | 7.5 | 8.0   | 12.0 | 9.0  | 10.5  | 12.0 | 8.5  | 10.0 | 16.5 | 14.5 | 15.5 |
| 19       | 8.0 | 6.5 | 7.5   | 13.0 | 10.5 | 11.5  | 11.0 | 9.5  | 10.0 | 16.5 | 15.0 | 16.0 |
| 20       | 7.5 | 5.5 | 6.5   | 14.0 | 11.5 | 12.5  | 13.0 | 10.0 | 11.5 | 16.0 | 15.0 | 15.5 |
| 21       | 7.5 | 6.0 | 6.5   | 12.5 | 10.5 | 12.0  | 12.0 | 9.5  | 11.0 | 17.0 | 15.0 | 16.0 |
| 22       | 6.0 | 5.0 | 5.5   | 10.5 | 8.0  | 9.0   | 11.0 | 8.5  | 9.5  | 17.0 | 15.0 | 16.0 |
| 23       | 7.0 | 4.0 | 5.5   | 9.5  | 6.5  | 8.0   | 11.5 | 6.5  | 9.0  | 16.5 | 15.5 | 16.0 |
| 24       | 9.5 | 6.5 | 8.0   | 10.0 | 6.5  | 8.5   | 12.0 | 6.5  | 9.0  | 16.5 | 15.0 | 16.0 |
| 25       | 8.0 | 4.5 | 5.5   | 11.5 | 8.0  | 9.5   | 9.5  | 8.5  | 9.0  | 16.5 | 15.0 | 16.0 |
| 26       | 4.5 | 3.5 | 4.0   | 8.5  | 5.5  | 6.5   | 12.5 | 9.5  | 11.0 | 17.5 | 15.5 | 16.5 |
| 27       | 5.5 | 3.5 | 4.5   | 6.5  | 3.5  | 4.5   | 11.5 | 10.5 | 11.0 | 18.0 | 16.0 | 16.5 |
| 28       | 6.5 | 5.5 | 6.0   | 6.5  | 2.0  | 4.0   | 12.0 | 9.0  | 10.5 | 16.5 | 14.5 | 15.5 |
| 29       | --- | --- | ---   | 7.5  | 3.0  | 5.5   | 12.0 | 8.5  | 10.5 | 15.5 | 14.0 | 15.0 |
| 30       | --- | --- | ---   | 11.0 | 6.0  | 8.5   | 13.0 | 10.0 | 11.5 | 17.0 | 15.0 | 16.0 |
| 31       | --- | --- | ---   | 13.5 | 9.5  | 11.0  | ---  | ---  | ---  | 17.5 | 16.0 | 16.5 |
| MONTH    | 9.5 | .0  | 5.0   | 14.0 | 2.0  | 8.0   | 14.0 | 3.0  | 9.5  | 18.0 | 10.0 | 14.5 |

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN   | MAX  | MIN  | MEAN      | MAX  | MIN  | MEAN |
|-------|------|------|------|------|------|--------|------|------|-----------|------|------|------|
| JUNE  |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |      |
| 1     | 17.0 | 16.0 | 16.5 | 20.0 | 18.0 | 19.0   | 18.5 | 17.5 | 18.0      | 19.0 | 18.0 | 18.5 |
| 2     | 16.5 | 14.5 | 15.5 | 19.5 | 16.5 | 18.0   | 18.5 | 17.0 | 18.0      | 18.0 | 17.5 | 17.5 |
| 3     | 16.0 | 14.5 | 15.5 | 21.0 | 18.0 | 19.0   | 19.0 | 17.0 | 18.0      | 17.5 | 17.0 | 17.5 |
| 4     | 16.0 | 15.0 | 15.5 | 19.5 | 18.0 | 19.0   | 20.0 | 18.0 | 19.0      | ---  | ---  | 17.0 |
| 5     | 15.0 | 14.5 | 15.0 | 20.5 | 18.5 | 19.5   | 19.5 | 19.0 | 19.5      | ---  | ---  | 17.0 |
| 6     | 15.0 | 13.5 | 14.5 | 21.0 | 19.0 | 20.0   | 21.0 | 19.0 | 20.0      | ---  | ---  | 16.5 |
| 7     | 15.5 | 13.5 | 14.5 | 21.0 | 19.5 | 20.5   | 21.0 | 19.5 | 20.0      | 17.0 | 15.5 | 16.5 |
| 8     | 16.0 | 14.5 | 15.5 | 21.0 | 19.5 | 20.0   | 20.5 | 19.5 | 20.0      | 17.0 | 15.0 | 16.5 |
| 9     | 17.0 | 15.5 | 16.5 | 21.0 | 19.5 | 20.0   | 20.0 | 20.0 | 20.0      | 17.5 | 16.0 | 16.5 |
| 10    | 17.5 | 16.5 | 17.0 | 21.0 | 19.5 | 20.5   | 21.0 | 19.0 | 20.0      | 17.5 | 16.0 | 17.0 |
| 11    | 17.5 | 15.0 | 16.5 | 21.0 | 20.0 | 20.5   | 20.0 | 18.5 | 19.5      | 17.5 | 16.0 | 17.0 |
| 12    | 16.5 | 15.0 | 16.0 | 21.0 | 20.0 | 20.5   | 19.5 | 18.5 | 19.0      | 18.0 | 17.0 | 17.5 |
| 13    | 17.0 | 16.0 | 16.5 | 20.5 | 18.5 | 19.5   | 18.5 | 16.5 | 17.5      | 18.5 | 17.5 | 18.0 |
| 14    | 17.5 | 15.0 | 16.0 | 21.0 | 18.5 | 19.5   | 18.5 | 16.0 | 17.5      | 19.5 | 18.0 | 18.5 |
| 15    | 17.5 | 14.5 | 16.0 | 21.0 | 19.0 | 20.0   | 19.0 | 16.5 | 18.0      | 19.5 | 18.5 | 19.0 |
| 16    | 18.0 | 16.5 | 17.0 | 20.0 | 19.5 | 19.5   | 19.0 | 18.5 | 18.5      | 19.5 | 18.5 | 19.0 |
| 17    | 18.0 | 16.5 | 17.0 | 20.5 | 19.5 | 20.0   | 19.5 | 18.5 | 19.0      | 19.0 | 17.5 | 18.0 |
| 18    | 18.5 | 16.0 | 17.0 | 21.0 | 19.5 | 20.0   | 20.0 | 18.5 | 19.0      | 18.0 | 16.5 | 17.5 |
| 19    | 17.5 | 16.0 | 17.0 | 21.0 | 20.0 | 20.5   | 19.0 | 17.0 | 18.5      | 17.5 | 17.0 | 17.5 |
| 20    | 17.5 | 16.0 | 17.0 | 20.5 | 19.0 | 20.0   | 19.5 | 17.5 | 18.5      | 17.0 | 15.5 | 16.0 |
| 21    | 17.5 | 15.0 | 16.0 | 21.0 | 19.0 | 20.0   | 20.0 | 18.0 | 19.0      | 16.0 | 14.5 | 15.0 |
| 22    | 18.0 | 16.5 | 17.5 | 20.5 | 19.5 | 20.0   | 18.5 | 16.0 | 17.5      | 14.5 | 12.5 | 13.5 |
| 23    | 18.0 | 16.5 | 17.0 | 20.0 | 19.0 | 19.5   | 18.5 | 16.5 | 17.5      | 13.0 | 11.0 | 12.0 |
| 24    | 18.0 | 15.0 | 16.5 | 20.5 | 19.0 | 20.0   | 19.0 | 18.0 | 18.5      | 12.5 | 11.5 | 12.0 |
| 25    | 18.0 | 15.5 | 17.0 | 21.5 | 19.5 | 20.5   | 19.5 | 18.0 | 19.0      | 13.0 | 12.5 | 13.0 |
| 26    | 19.0 | 17.0 | 18.0 | 21.5 | 20.0 | 20.5   | 18.5 | 16.5 | 17.5      | 14.0 | 13.0 | 13.5 |
| 27    | 19.0 | 17.5 | 18.5 | 22.0 | 20.0 | 21.0   | 18.5 | 17.5 | 13.0      | ---  | ---  | 13.5 |
| 28    | 19.5 | 18.0 | 18.5 | 21.5 | 20.0 | 20.5   | 19.5 | 18.5 | 19.0      | ---  | ---  | 13.5 |
| 29    | 19.5 | 18.5 | 19.0 | 20.5 | 19.5 | 20.0   | 19.0 | 17.5 | 18.5      | 14.0 | 12.0 | 13.5 |
| 30    | 20.0 | 18.0 | 19.0 | 20.5 | 19.5 | 20.0   | 19.0 | 18.0 | 18.5      | 14.5 | 13.0 | 13.5 |
| 31    | ---  | ---  | ---  | 20.0 | 18.0 | 19.0   | 19.0 | 18.5 | 18.5      | ---  | ---  | ---  |
| MONTH | 20.0 | 13.5 | 16.5 | 22.0 | 16.5 | 20.0   | 21.0 | 16.0 | 18.5      | 19.5 | 11.0 | 16.0 |

## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX | MIN | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|-----|-----|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |     |     |      |
| 1       | 15.0 | 13.5 | 14.0     | 12.5 | 10.0 | 11.0     | ---  | ---  | ---     | 7.0 | 5.5 | 6.5  |
| 2       | 15.0 | 13.5 | 14.5     | 13.5 | 11.0 | 12.0     | ---  | ---  | ---     | 7.0 | 6.0 | 6.5  |
| 3       | 15.5 | 14.0 | 15.0     | 13.0 | 12.0 | 13.0     | ---  | ---  | ---     | 6.0 | 4.0 | 5.5  |
| 4       | 16.5 | 15.0 | 15.5     | 12.0 | 8.0  | 10.0     | ---  | ---  | ---     | 4.0 | 2.5 | 3.5  |
| 5       | 16.5 | 15.5 | 16.0     | ---  | ---  | ---      | ---  | ---  | ---     | 4.0 | 2.5 | 3.5  |
| 6       | 17.0 | 15.5 | 16.0     | ---  | ---  | ---      | 11.5 | 10.0 | 11.0    | 5.0 | 3.5 | 4.0  |
| 7       | 16.5 | 16.0 | 16.5     | ---  | ---  | ---      | 10.0 | 8.5  | 9.5     | 6.0 | 4.0 | 5.0  |
| 8       | 17.5 | 16.5 | 17.0     | ---  | ---  | ---      | 9.5  | 8.0  | 8.5     | 5.5 | 3.5 | 4.5  |
| 9       | 18.0 | 17.0 | 17.5     | 7.0  | 5.0  | 6.0      | 8.5  | 6.5  | 7.5     | 6.5 | 5.0 | 5.5  |
| 10      | 18.5 | 17.5 | 18.0     | 7.5  | 5.5  | 6.5      | 7.5  | 5.5  | 6.5     | 7.5 | 6.0 | 7.0  |
| 11      | 18.0 | 16.5 | 17.5     | 8.5  | 6.5  | 7.5      | 7.5  | 5.5  | 7.0     | 7.0 | 5.0 | 6.0  |
| 12      | 16.5 | 14.5 | 15.0     | 11.0 | 8.5  | 10.0     | 5.5  | 3.0  | 4.5     | 5.0 | 3.5 | 4.0  |
| 13      | 14.5 | 13.5 | 14.5     | 9.0  | 6.0  | 7.0      | 3.0  | 1.5  | 2.5     | 4.0 | 2.5 | 3.5  |
| 14      | 13.5 | 12.5 | 13.0     | ---  | ---  | ---      | 4.0  | 2.5  | 3.0     | 5.0 | 3.0 | 4.0  |
| 15      | 13.0 | 10.5 | 12.0     | ---  | ---  | ---      | 8.5  | 4.0  | 5.5     | 4.5 | 2.5 | 3.5  |
| 16      | 12.5 | 11.0 | 12.0     | ---  | ---  | ---      | 8.5  | 7.5  | 8.0     | 2.5 | 1.5 | 2.0  |
| 17      | 11.0 | 9.0  | 10.0     | ---  | ---  | ---      | 7.5  | 5.5  | 7.0     | 2.0 | 1.5 | 1.5  |
| 18      | 11.0 | 9.5  | 10.0     | 9.5  | 6.5  | 8.0      | 6.0  | 5.0  | 5.5     | 1.5 | .0  | .5   |
| 19      | 11.5 | 9.5  | 10.5     | 11.0 | 9.5  | 10.5     | 7.0  | 6.0  | 6.5     | .0  | .0  | .0   |
| 20      | 12.0 | 11.0 | 11.5     | 11.5 | 10.5 | 11.0     | 6.5  | 5.5  | 6.0     | .5  | .0  | .0   |
| 21      | 11.5 | 10.0 | 11.0     | 12.0 | 11.0 | 11.5     | 5.5  | 4.0  | 5.0     | 1.5 | .0  | .5   |
| 22      | 10.0 | 9.0  | 9.5      | 12.5 | 11.5 | 12.0     | 5.5  | 3.5  | 4.5     | 4.0 | 1.5 | 3.0  |
| 23      | 9.0  | 7.0  | 8.0      | 13.0 | 11.5 | 12.5     | 7.0  | 5.5  | 6.5     | 5.0 | 4.0 | 4.5  |
| 24      | 8.0  | 6.5  | 7.5      | ---  | ---  | ---      | 8.5  | 6.0  | 7.5     | 4.5 | 4.0 | 4.5  |
| 25      | 8.5  | 7.5  | 8.0      | ---  | ---  | ---      | 10.5 | 8.5  | 9.5     | 4.0 | 4.0 | 4.0  |
| 26      | 8.0  | 6.0  | 7.0      | ---  | ---  | ---      | 11.0 | 10.5 | 10.5    | 5.0 | 3.5 | 4.0  |
| 27      | 8.0  | 5.5  | 7.0      | 9.5  | 9.0  | 9.0      | 11.5 | 10.5 | 11.0    | 4.5 | 3.5 | 4.0  |
| 28      | 8.5  | 6.0  | 7.0      | 11.5 | 9.5  | 10.5     | 11.5 | 10.5 | 11.0    | 4.5 | 3.5 | 4.0  |
| 29      | 9.0  | 6.5  | 8.0      | 11.5 | 10.0 | 11.0     | 10.5 | 7.5  | 9.0     | 5.0 | 2.5 | 4.0  |
| 30      | 11.0 | 9.0  | 10.0     | ---  | ---  | ---      | 7.5  | 6.0  | 6.5     | 6.5 | 5.0 | 5.5  |
| 31      | 12.0 | 9.5  | 10.5     | ---  | ---  | ---      | 7.5  | 6.0  | 6.5     | 5.5 | 4.0 | 4.5  |
| MONTH   | 18.5 | 5.5  | 12.0     | ---  | ---  | ---      | 11.5 | 1.5  | 7.0     | 7.5 | .0  | 4.0  |

| DAY      | MAX | MIN | MEAN  | MAX  | MIN | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|-----|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |     | APRIL |      |      | MAY  |      |      |      |
| 1        | 6.5 | 3.5 | 4.5   | 7.5  | 5.0 | 6.0   | 9.0  | 5.0  | 7.0  | 15.5 | 12.5 | 14.0 |
| 2        | 8.5 | 6.5 | 8.0   | 7.5  | 4.5 | 6.0   | 9.5  | 7.5  | 8.5  | 15.0 | 14.0 | 14.5 |
| 3        | 7.0 | 4.5 | 6.0   | 8.5  | 5.0 | 6.5   | 7.5  | 6.5  | 7.0  | 14.0 | 11.5 | 13.0 |
| 4        | 4.5 | 3.0 | 4.0   | 10.0 | 6.5 | 8.0   | 9.5  | 5.5  | 7.5  | 12.0 | 10.5 | 11.5 |
| 5        | 4.0 | 2.5 | 3.0   | 11.0 | 8.5 | 9.5   | 9.0  | 7.5  | 8.5  | 13.0 | 10.5 | 11.5 |
| 6        | 4.0 | 2.5 | 3.5   | 11.0 | 9.5 | 10.0  | 10.0 | 8.5  | 9.5  | 13.0 | 9.5  | 11.5 |
| 7        | 4.0 | 2.0 | 3.5   | 11.0 | 8.5 | 9.5   | 10.5 | 9.5  | 10.0 | 14.5 | 11.0 | 13.0 |
| 8        | 2.5 | .5  | 2.0   | 10.5 | 9.0 | 9.5   | 11.5 | 10.0 | 10.5 | 13.5 | 10.5 | 12.0 |
| 9        | 3.5 | 2.0 | 3.0   | 9.0  | 6.5 | 8.0   | 12.0 | 10.0 | 11.0 | 11.5 | 9.0  | 10.5 |
| 10       | 5.0 | 3.5 | 4.0   | 6.5  | 4.5 | 5.5   | 10.0 | 8.5  | 9.0  | 12.5 | 8.5  | 10.5 |
| 11       | 5.5 | 5.0 | 5.0   | 4.5  | 4.0 | 4.5   | 9.0  | 7.5  | 8.0  | 13.5 | 10.5 | 12.0 |
| 12       | 5.0 | 4.5 | 5.0   | 5.0  | 4.0 | 4.5   | 10.5 | 6.5  | 8.5  | 14.0 | 12.5 | 13.0 |
| 13       | 5.5 | 4.5 | 5.0   | 6.5  | 2.5 | 4.5   | 11.0 | 8.5  | 10.0 | 14.0 | 13.0 | 13.5 |
| 14       | 5.0 | 4.0 | 4.5   | 8.5  | 4.5 | 6.5   | 12.0 | 10.5 | 11.0 | 14.5 | 12.5 | 13.5 |
| 15       | 5.5 | 3.0 | 4.0   | 9.0  | 5.5 | 7.5   | 11.0 | 7.5  | 9.0  | 14.0 | 13.0 | 13.5 |
| 16       | 5.5 | 3.0 | 4.5   | 10.0 | 7.0 | 8.5   | 9.5  | 6.5  | 8.0  | 13.0 | 11.0 | 12.0 |
| 17       | 5.5 | 3.5 | 4.5   | 9.5  | 8.5 | 9.0   | 9.5  | 7.0  | 8.0  | 12.0 | 10.0 | 11.0 |
| 18       | 5.0 | 3.0 | 4.0   | 10.0 | 8.5 | 9.0   | 7.5  | 5.5  | 6.5  | 12.5 | 10.5 | 11.5 |
| 19       | 5.5 | 3.0 | 4.5   | 9.5  | 7.5 | 8.5   | 6.5  | 4.5  | 5.5  | 13.0 | 12.0 | 12.5 |
| 20       | 6.0 | 3.0 | 4.5   | 8.5  | 6.5 | 7.5   | 8.0  | 4.0  | 5.5  | 13.0 | 12.5 | 12.5 |
| 21       | 6.5 | 3.5 | 5.0   | 8.5  | 6.0 | 7.0   | 9.0  | 4.0  | 6.5  | 13.0 | 12.5 | 12.5 |
| 22       | 6.5 | 5.0 | 6.0   | 6.0  | 5.0 | 5.5   | 8.0  | 6.0  | 7.0  | 13.5 | 12.5 | 13.0 |
| 23       | 7.5 | 6.0 | 7.0   | 6.5  | 4.0 | 5.0   | 8.5  | 7.5  | 8.0  | 13.5 | 12.5 | 13.0 |
| 24       | 7.0 | 6.0 | 7.0   | ---  | --- | ---   | 8.5  | 8.0  | 8.5  | 13.5 | 12.0 | 12.5 |
| 25       | 6.0 | 3.5 | 5.0   | ---  | --- | ---   | ---  | ---  | 9.0  | 13.0 | 10.5 | 12.0 |
| 26       | 4.0 | 2.5 | 3.0   | ---  | --- | ---   | 12.0 | 7.5  | 9.5  | 13.5 | 11.5 | 12.5 |
| 27       | 4.5 | 2.0 | 3.5   | ---  | --- | ---   | 13.0 | 8.0  | 10.5 | 12.5 | 10.0 | 11.5 |
| 28       | 6.5 | 4.0 | 5.0   | ---  | --- | ---   | 13.5 | 9.5  | 11.5 | 12.5 | 11.0 | 11.5 |
| 29       | --- | --- | ---   | ---  | --- | ---   | 13.5 | 11.0 | 12.5 | 14.0 | 12.5 | 13.0 |
| 30       | --- | --- | ---   | 7.5  | 5.0 | 6.5   | 14.0 | 12.0 | 13.0 | 14.0 | 12.0 | 13.0 |
| 31       | --- | --- | ---   | 7.5  | 6.0 | 7.0   | ---  | ---  | ---  | 13.5 | 12.0 | 12.5 |
| MONTH    | 8.5 | .5  | 4.5   | ---  | --- | ---   | 14.0 | 4.0  | 9.0  | 16.5 | 8.5  | 12.5 |

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 13.5 | 11.5 | 12.5 | 20.5 | 19.0 | 19.5 | 20.5   | 19.5 | 20.0 | ---       | ---  | ---  |
| 2     | 13.5 | 10.5 | 12.0 | 20.5 | 19.0 | 19.5 | 20.5   | 20.0 | 20.0 | ---       | ---  | ---  |
| 3     | 14.5 | 12.5 | 13.5 | 21.5 | 19.0 | 20.0 | 20.5   | 20.0 | 20.5 | ---       | ---  | ---  |
| 4     | 15.0 | 14.0 | 14.5 | 21.5 | 19.0 | 20.0 | 21.0   | 20.0 | 20.5 | ---       | ---  | ---  |
| 5     | 15.5 | 13.0 | 14.5 | 20.5 | 19.0 | 19.5 | 21.5   | 20.5 | 21.0 | ---       | ---  | ---  |
| 6     | 15.0 | 14.0 | 14.5 | 19.0 | 17.5 | 18.5 | 21.5   | 20.5 | 21.0 | ---       | ---  | ---  |
| 7     | 15.0 | 13.5 | 14.5 | 18.5 | 15.5 | 17.0 | 21.5   | 20.5 | 21.0 | ---       | ---  | ---  |
| 8     | 14.5 | 12.0 | 13.5 | 18.5 | 15.5 | 17.0 | 21.0   | 20.0 | 20.5 | ---       | ---  | ---  |
| 9     | 15.0 | 12.5 | 14.0 | 18.5 | 16.0 | 17.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 10    | 15.5 | 13.0 | 14.5 | 18.5 | 16.0 | 17.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 11    | 16.0 | 13.5 | 15.0 | 20.0 | 17.5 | 18.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 12    | 16.5 | 14.0 | 15.5 | 20.0 | 18.0 | 19.0 | ---    | ---  | ---  | ---       | ---  | ---  |
| 13    | 16.5 | 14.0 | 15.5 | 20.5 | 19.0 | 19.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 14    | 16.5 | 14.0 | 15.5 | 21.0 | 19.5 | 20.0 | ---    | ---  | ---  | ---       | ---  | ---  |
| 15    | 16.5 | 14.0 | 15.5 | 21.5 | 20.0 | 20.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 16    | 17.0 | 15.0 | 16.0 | 22.0 | 20.0 | 21.0 | 20.0   | 18.5 | 19.5 | ---       | ---  | ---  |
| 17    | 17.5 | 16.0 | 17.0 | ---  | ---  | 20.5 | 19.5   | 18.5 | 19.0 | ---       | ---  | ---  |
| 18    | 17.5 | 16.5 | 17.0 | ---  | ---  | 20.5 | 20.0   | 19.0 | 19.5 | ---       | ---  | ---  |
| 19    | 17.5 | 16.5 | 17.0 | 21.0 | 19.5 | 20.0 | ---    | ---  | ---  | ---       | ---  | ---  |
| 20    | 18.0 | 16.5 | 17.0 | 22.0 | 20.0 | 21.0 | ---    | ---  | ---  | ---       | ---  | ---  |
| 21    | 18.5 | 16.5 | 17.0 | 22.0 | 20.0 | 21.0 | ---    | ---  | ---  | ---       | ---  | ---  |
| 22    | ---  | ---  | ---  | 23.0 | 21.0 | 21.5 | ---    | ---  | ---  | ---       | ---  | ---  |
| 23    | ---  | ---  | ---  | 23.0 | 21.0 | 22.0 | ---    | ---  | ---  | 12.5      | 11.0 | 12.0 |
| 24    | ---  | ---  | ---  | 23.0 | 21.5 | 22.0 | ---    | ---  | ---  | 12.0      | 8.5  | 10.0 |
| 25    | ---  | ---  | ---  | 22.5 | 21.5 | 22.0 | ---    | ---  | ---  | 12.0      | 9.0  | 10.5 |
| 26    | ---  | ---  | ---  | 22.0 | 20.5 | 21.0 | ---    | ---  | ---  | 13.0      | 11.5 | 12.0 |
| 27    | 20.0 | 19.0 | 19.5 | 21.0 | 19.0 | 20.0 | 22.0   | 21.0 | 21.5 | 13.5      | 11.5 | 12.5 |
| 28    | 20.5 | 19.0 | 19.5 | 21.0 | 19.5 | 20.0 | 21.5   | 20.5 | 21.0 | 13.5      | 11.5 | 12.5 |
| 29    | 21.0 | 19.0 | 20.0 | ---  | ---  | ---  | 21.5   | 20.5 | 21.0 | 13.5      | 12.0 | 13.0 |
| 30    | 21.0 | 19.0 | 20.0 | ---  | ---  | ---  | 20.5   | 19.0 | 19.5 | ---       | ---  | ---  |
| 31    | ---  | ---  | ---  | ---  | ---  | ---  | 20.0   | 19.0 | 19.5 | ---       | ---  | ---  |
| MONTH | 21.0 | 10.5 | 16.0 | 23.0 | 15.5 | 20.0 | ---    | ---  | ---  | ---       | ---  | ---  |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | ---     | ---  | ---  | 11.5     | 8.5  | 10.0 | 6.5      | 4.5 | 6.0  | 1.5     | .5  | 1.0  |
| 2     | ---     | ---  | ---  | 12.0     | 9.0  | 10.5 | 8.5      | 3.5 | 5.0  | 2.0     | 1.5 | 1.5  |
| 3     | ---     | ---  | ---  | 13.0     | 11.5 | 12.0 | 9.5      | 8.5 | 9.0  | 2.0     | 1.0 | 1.5  |
| 4     | ---     | ---  | ---  | 13.0     | 9.0  | 11.5 | 10.0     | 9.5 | 10.0 | 2.0     | 1.0 | 1.5  |
| 5     | 16.5    | 15.0 | 15.5 | 9.0      | 7.5  | 8.0  | 9.5      | 8.0 | 9.0  | 3.0     | 2.0 | 2.5  |
| 6     | 15.5    | 13.0 | 14.5 | 8.0      | 6.0  | 7.0  | 10.5     | 7.5 | 9.5  | 3.5     | 2.5 | 3.0  |
| 7     | 14.0    | 11.0 | 12.5 | 8.5      | 6.5  | 7.5  | 7.5      | 6.0 | 6.5  | 3.0     | 2.0 | 2.5  |
| 8     | 13.0    | 11.0 | 12.0 | 8.5      | 6.0  | 7.5  | 7.0      | 5.5 | 6.5  | 3.0     | 1.5 | 2.0  |
| 9     | 13.5    | 11.0 | 12.0 | 9.0      | 6.0  | 7.5  | 7.0      | 5.0 | 6.0  | 3.5     | 1.5 | 2.5  |
| 10    | 13.5    | 11.0 | 12.0 | 10.0     | 8.5  | 9.0  | 8.5      | 7.0 | 8.0  | 4.0     | 1.5 | 3.0  |
| 11    | 13.5    | 12.0 | 12.5 | 8.5      | 6.5  | 7.5  | 9.0      | 7.5 | 8.0  | 1.5     | .5  | 1.5  |
| 12    | 14.5    | 13.5 | 14.0 | 6.5      | 5.0  | 6.0  | 9.5      | 8.5 | 9.0  | 1.5     | .0  | 1.0  |
| 13    | 15.0    | 11.5 | 13.5 | 5.5      | 4.5  | 5.0  | 9.0      | 7.5 | 8.5  | 2.5     | 1.5 | 2.0  |
| 14    | 11.5    | 9.5  | 10.5 | 5.5      | 3.0  | 4.5  | 8.5      | 8.0 | 8.0  | 3.0     | 2.0 | 2.5  |
| 15    | 11.0    | 8.5  | 10.0 | 8.0      | 5.5  | 7.5  | 8.0      | 6.5 | 7.0  | 2.5     | 2.0 | 2.0  |
| 16    | 11.5    | 8.5  | 10.0 | 7.5      | 6.0  | 7.0  | 6.5      | 5.5 | 6.0  | 2.5     | 2.0 | 2.5  |
| 17    | 12.5    | 10.5 | 11.5 | 6.5      | 5.5  | 6.0  | 6.0      | 4.5 | 5.0  | 3.0     | 2.0 | 2.5  |
| 18    | 13.5    | 11.5 | 12.5 | 7.0      | 4.5  | 6.0  | 5.0      | 3.0 | 4.0  | 2.0     | .0  | 1.0  |
| 19    | 14.5    | 13.0 | 13.5 | 8.0      | 6.0  | 7.0  | 4.0      | 2.5 | 3.0  | 1.0     | .0  | .0   |
| 20    | 15.0    | 13.5 | 14.0 | 9.0      | 7.5  | 8.5  | 3.0      | 2.0 | 2.5  | .0      | .0  | .0   |
| 21    | 14.5    | 14.0 | 14.5 | 8.0      | 6.5  | 7.0  | 5.0      | 3.0 | 4.0  | .0      | .0  | .0   |
| 22    | 14.0    | 13.0 | 13.5 | 8.0      | 6.0  | 7.0  | 6.0      | 3.5 | 5.0  | .0      | .0  | .0   |
| 23    | 13.5    | 13.0 | 13.5 | 10.0     | 7.5  | 8.5  | 4.0      | 3.0 | 3.0  | .0      | .0  | .0   |
| 24    | 13.5    | 12.5 | 13.0 | 10.0     | 7.5  | 9.0  | ---      | --- | ---  | 3.5     | .0  | 1.0  |
| 25    | 13.0    | 12.0 | 13.0 | 7.5      | 6.0  | 6.5  | ---      | --- | ---  | 5.0     | 3.5 | 4.0  |
| 26    | 12.0    | 10.0 | 11.0 | 6.5      | 5.0  | 6.0  | ---      | --- | ---  | 4.5     | 3.5 | 4.0  |
| 27    | 11.0    | 9.0  | 9.5  | 8.0      | 5.0  | 6.0  | ---      | --- | ---  | 4.5     | 3.5 | 4.0  |
| 28    | 10.5    | 7.5  | 9.0  | 10.0     | 8.0  | 9.5  | ---      | --- | ---  | 4.5     | 3.5 | 4.0  |
| 29    | 11.5    | 8.5  | 10.0 | 8.5      | 6.0  | 7.0  | ---      | --- | ---  | 4.5     | 3.0 | 4.0  |
| 30    | 11.5    | 9.0  | 10.0 | 6.0      | 4.5  | 5.5  | ---      | --- | ---  | 4.5     | 2.5 | 3.5  |
| 31    | 11.0    | 9.0  | 10.0 | ---      | ---  | ---  | .5       | .0  | .5   | 2.5     | 1.5 | 2.0  |
| MONTH | 16.5    | 7.5  | 12.0 | 13.0     | 3.0  | 7.5  | ---      | --- | ---  | 5.0     | .0  | 2.0  |



## CUMBERLAND RIVER BASIN

03403718 CRABAPPLE BRANCH NEAR LA FOLLETTE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
|       | FEBRUARY |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1     | 2.5      | 1.0 | 1.5  | 4.0   | 2.0 | 3.0  |       |     |      |     |     |      |
| 2     | 3.0      | 1.0 | 2.0  | 6.0   | 3.5 | 4.5  |       |     |      |     |     |      |
| 3     | 5.0      | 3.0 | 4.0  | 5.5   | 3.0 | 4.5  |       |     |      |     |     |      |
| 4     | 4.5      | 2.5 | 3.5  | 5.0   | 3.0 | 4.0  |       |     |      |     |     |      |
| 5     | 3.5      | .0  | 2.5  | ---   | --- | 4.0  |       |     |      |     |     |      |
| 6     | .5       | .0  | .0   | ---   | --- | 4.5  |       |     |      |     |     |      |
| 7     | .0       | .0  | .0   | 5.0   | 3.0 | 4.5  |       |     |      |     |     |      |
| 8     | .5       | .0  | .0   | 5.0   | 2.5 | 3.5  |       |     |      |     |     |      |
| 9     | .5       | .0  | .0   | 3.0   | 1.5 | 2.0  |       |     |      |     |     |      |
| 10    | 1.0      | .0  | .5   | 3.0   | 1.0 | 2.0  |       |     |      |     |     |      |
| 11    | 6.5      | 1.0 | 4.5  | 4.0   | 2.0 | 2.5  |       |     |      |     |     |      |
| 12    | 7.5      | 5.5 | 6.5  | 3.5   | 1.5 | 2.5  |       |     |      |     |     |      |
| 13    | 8.0      | 7.0 | 7.5  | 5.0   | 3.5 | 4.5  |       |     |      |     |     |      |
| 14    | 8.0      | 6.5 | 7.0  | 7.5   | 4.0 | 5.5  |       |     |      |     |     |      |
| 15    | 7.5      | 5.5 | 6.5  | 9.0   | 4.5 | 6.5  |       |     |      |     |     |      |
| 16    | 7.5      | 5.5 | 6.5  | 9.0   | 7.5 | 8.0  |       |     |      |     |     |      |
| 17    | 8.0      | 6.5 | 7.0  | 8.0   | 7.0 | 7.5  |       |     |      |     |     |      |
| 18    | 7.5      | 5.0 | 6.5  | 10.5  | 7.5 | 9.0  |       |     |      |     |     |      |
| 19    | 9.0      | 7.0 | 8.0  | 11.0  | 7.5 | 9.5  |       |     |      |     |     |      |
| 20    | 7.5      | 5.5 | 6.5  | 10.0  | 8.0 | 9.5  |       |     |      |     |     |      |
| 21    | 6.5      | 4.5 | 5.5  | 8.0   | 6.5 | 7.0  |       |     |      |     |     |      |
| 22    | 6.0      | 3.0 | 5.0  | 7.5   | 6.5 | 7.0  |       |     |      |     |     |      |
| 23    | 7.0      | 5.5 | 6.0  | 8.5   | 5.5 | 6.5  |       |     |      |     |     |      |
| 24    | 7.5      | 4.5 | 6.0  | 9.0   | 5.5 | 7.0  |       |     |      |     |     |      |
| 25    | 6.0      | 4.5 | 5.5  | 10.0  | 7.5 | 8.5  |       |     |      |     |     |      |
| 26    | 5.5      | 3.5 | 4.5  | 8.5   | 7.5 | 8.0  |       |     |      |     |     |      |
| 27    | 7.0      | 4.5 | 6.0  | 10.0  | 7.0 | 8.5  |       |     |      |     |     |      |
| 28    | 7.0      | 4.0 | 5.5  | 10.0  | 8.5 | 9.5  |       |     |      |     |     |      |
| 29    | 4.0      | 3.0 | 3.5  | 8.5   | 7.5 | 8.0  |       |     |      |     |     |      |
| 30    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| 31    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| MONTH | 9.0      | .0  | 4.5  | 11.0  | 1.0 | 6.0  |       |     |      |     |     |      |

03403718 CRABAPPLE BRANCH NEAR LA POLLETTE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO MARCH 1984

| DATE                        | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | DATE  | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | DATE  | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-----------------------------|----------------------------|--------------------------------------|-------------------------------------|-------|----------------------------|--------------------------------------|-------------------------------------|-------|----------------------------|--------------------------------------|-------------------------------------|
| 1982 WATER YEAR:            |                            |                                      |                                     |       |                            |                                      |                                     |       |                            |                                      |                                     |
| OCT                         |                            |                                      |                                     | APR   |                            |                                      |                                     | MAY   |                            |                                      |                                     |
| 7...                        | .01                        | 32                                   | .00                                 | 25... | 1.1                        | 12                                   | .04                                 | 22... | .45                        | 11                                   | .01                                 |
| 19...                       | .12                        | 42                                   | .01                                 | 26... | 1.3                        | 11                                   | .04                                 | JUN   |                            |                                      |                                     |
| 27...                       | 20                         | 100                                  | 9.7                                 | 27... | 1.3                        | 10                                   | .04                                 | 10... | .61                        | 53                                   | .09                                 |
| MAR                         |                            |                                      |                                     | 28... | 2.0                        | 16                                   | .09                                 | 16... | .27                        | 31                                   | .02                                 |
| 1...                        | 3.6                        | 9                                    | .09                                 | 29... | 2.2                        | 8                                    | .05                                 | 29... | .28                        | 34                                   | .03                                 |
| 9...                        | 4.7                        | 26                                   | .33                                 | 30... | 1.9                        | 24                                   | .12                                 | JUL   |                            |                                      |                                     |
| 16...                       | 5.6                        | 20                                   | .30                                 | MAY   |                            |                                      |                                     | 23... | 1.2                        | 38                                   | .12                                 |
| 25...                       | 1.5                        | 56                                   | .23                                 | 1...  | 1.6                        | 11                                   | .05                                 | 29... | 1.3                        | 14                                   | .05                                 |
| APR                         |                            |                                      |                                     | 2...  | 1.3                        | 12                                   | .04                                 | 31... | 12                         | 170                                  | 8.4                                 |
| 2...                        | .94                        | 39                                   | .10                                 | 3...  | 1.1                        | 11                                   | .03                                 | AUG   |                            |                                      |                                     |
| 16...                       | 1.9                        | 44                                   | .23                                 | 12... | .26                        | 18                                   | .01                                 | 26... | .24                        | 11                                   | .00                                 |
| 17...                       | 2.8                        | 34                                   | .26                                 | 13... | .26                        | 12                                   | .00                                 | 31... | .59                        | 11                                   | .02                                 |
| 18...                       | 3.6                        | 30                                   | .29                                 | 14... | .26                        | 15                                   | .01                                 | SEP   |                            |                                      |                                     |
| 19...                       | 3.2                        | 28                                   | .24                                 | 15... | .15                        | 15                                   | .00                                 | 1...  | 7.9                        | 102                                  | 4.6                                 |
| 20...                       | 2.5                        | 38                                   | .26                                 | 16... | .23                        | 15                                   | .00                                 | 2...  | 25                         | 159                                  | 22                                  |
| 21...                       | 1.7                        | 78                                   | .36                                 | 17... | .19                        | 30                                   | .02                                 | 8...  | .21                        | 4                                    | .00                                 |
| 22...                       | 1.3                        | 44                                   | .15                                 | 18... | .16                        | 8                                    | .00                                 | 13... | .18                        | 8                                    | .00                                 |
| 23...                       | 1.1                        | 12                                   | .04                                 | 19... | .14                        | 17                                   | .00                                 | 23... | .06                        | 7                                    | .00                                 |
| 24...                       | .98                        | 9                                    | .02                                 |       |                            |                                      |                                     |       |                            |                                      |                                     |
| 1983 WATER YEAR:            |                            |                                      |                                     |       |                            |                                      |                                     |       |                            |                                      |                                     |
| OCT                         |                            |                                      |                                     | DEC   |                            |                                      |                                     | APR   |                            |                                      |                                     |
| 7...                        | .03                        | 5                                    | .00                                 | 12... | 1.5                        | 9                                    | .04                                 | 5...  | 19                         | 130                                  | 6.7                                 |
| 13...                       | .21                        | 6                                    | .00                                 | 23... | 1.1                        | 8                                    | .02                                 | 26... | 3.9                        | 11                                   | .12                                 |
| 21...                       | .12                        | 6                                    | .00                                 | 24... | 1.1                        | 4                                    | .01                                 | MAY   |                            |                                      |                                     |
| NOV                         |                            |                                      |                                     | 25... | .95                        | 6                                    | .02                                 | 3...  | 11                         | 99                                   | 2.9                                 |
| 24...                       | 2.2                        | 10                                   | .06                                 | 26... | 8.3                        | 70                                   | 1.6                                 | 4...  | 8.2                        | 26                                   | .58                                 |
| 25...                       | 2.0                        | 16                                   | .09                                 | 27... | 6.6                        | 30                                   | .53                                 | 5...  | 4.5                        | 26                                   | .32                                 |
| 26...                       | 1.7                        | 7                                    | .03                                 | 28... | 5.6                        | 12                                   | .18                                 | 8...  | 6.3                        | 41                                   | .70                                 |
| 27...                       | 1.6                        | 8                                    | .03                                 | 29... | 5.2                        | 13                                   | .18                                 | 9...  | 5.0                        | 12                                   | .16                                 |
| 28...                       | 3.9                        | 28                                   | .29                                 | 30... | 3.2                        | 10                                   | .09                                 | 15... | 9.3                        | 108                                  | 2.7                                 |
| 29...                       | 7.6                        | 39                                   | .80                                 | 31... | 2.4                        | 7                                    | .05                                 | 17... | 5.7                        | 15                                   | .23                                 |
| 30...                       | 2.9                        | 18                                   | .14                                 | JAN   |                            |                                      |                                     | 19... | 5.9                        | 34                                   | .54                                 |
| DEC                         |                            |                                      |                                     | 1...  | 1.7                        | 6                                    | .03                                 | 25... | 2.9                        | 16                                   | .13                                 |
| 1...                        | 11                         | 61                                   | 1.8                                 | 2...  | 1.4                        | 8                                    | .03                                 | JUN   |                            |                                      |                                     |
| 2...                        | 5.4                        | 24                                   | .35                                 | 3...  | 1.1                        | 8                                    | .02                                 | 2...  | .35                        | 10                                   | .00                                 |
| 3...                        | 3.2                        | 28                                   | .24                                 | 4...  | .96                        | 5                                    | .01                                 | 10... | .26                        | 13                                   | .00                                 |
| 4...                        | 2.4                        | 28                                   | .18                                 | 5...  | .83                        | 5                                    | .01                                 | JUL   |                            |                                      |                                     |
| 5...                        | 5.4                        | 52                                   | .76                                 | FEB   |                            |                                      |                                     | 6...  | .24                        | 33                                   | .02                                 |
| 6...                        | 6.0                        | 14                                   | .23                                 | 2...  | 31                         | 190                                  | 16                                  | 19... | .66                        | 22                                   | .04                                 |
| 7...                        | 3.4                        | 24                                   | .22                                 | 11... | 9.4                        | 62                                   | 1.6                                 | AUG   |                            |                                      |                                     |
| 8...                        | 2.4                        | 12                                   | .08                                 | MAR   |                            |                                      |                                     | 18... | .01                        | 6                                    | .00                                 |
| 9...                        | 1.8                        | 11                                   | .05                                 | 10... | 2.0                        | 1                                    | .00                                 | SEP   |                            |                                      |                                     |
| 10...                       | 1.6                        | 11                                   | .05                                 | 21... | 6.9                        | 39                                   | .73                                 | 13... | .01                        | 12                                   | .00                                 |
| 11...                       | 1.4                        | 9                                    | .03                                 |       |                            |                                      |                                     |       |                            |                                      |                                     |
| OCTOBER 1983 TO MARCH 1984: |                            |                                      |                                     |       |                            |                                      |                                     |       |                            |                                      |                                     |
| NOV                         |                            |                                      |                                     | DEC   |                            |                                      |                                     | FEB   |                            |                                      |                                     |
| 3...                        | .63                        | 29                                   | .05                                 | 3...  | 9.3                        | 47                                   | 1.1                                 | 13... | 12                         | 142                                  | 7.5                                 |
| 18...                       | .11                        | 10                                   | .00                                 | JAN   |                            |                                      |                                     | MAR   |                            |                                      |                                     |
| 28...                       | 7.3                        | 77                                   | 1.8                                 | 24... | 6.4                        | 60                                   | 1.0                                 | 20... | 10                         | 163                                  | 12                                  |
| 29...                       | 2.7                        | 55                                   | .40                                 | FEB   |                            |                                      |                                     | 21... | 15                         | 90                                   | 4.1                                 |
| DEC                         |                            |                                      |                                     | 9...  | .34                        | 2                                    | .00                                 | 28... | 20                         | 212                                  | 13                                  |
| 2...                        | 7.3                        | 154                                  | 6.2                                 | 11... | 25                         | 368                                  | 43                                  |       |                            |                                      |                                     |

## CUMBERLAND RIVER BASIN

03407875 BILLS BRANCH NEAR HEMBREE, TN

LOCATION.--Lat 36°12'39", long 84°24'19", Scott County, Hydrologic Unit 05130104, on right bank 1.5 mi southeast of Hembree, 5.1 mi west of Stainville, 4.1 mi northwest of Braytown, and at mile 0.7.

DRAINAGE AREA.--0.67 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1975 to September 1983 (discontinued).

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1980 to September 1983 (discontinued).

WATER TEMPERATURE: August 1980 to September 1983 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1983 (discontinued).

INSTRUMENTATION.--Two-parameter water-quality monitor and sediment pumping sampler.

REMARKS.--Interruptions in the record were due to malfunctions of the instruments. No flow Aug. 2, 18-19, 21-23, Sept. 2-20, 27-30, 1983.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 307 microsiemens, May 13, 1981; minimum, 113 microsiemens, March 30, 1981.

WATER TEMPERATURE: Maximum, 24.0°C, Aug. 8, 9, 1980; minimum, 0.0°C, several days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,780 mg/L, July 24, 1981; minimum daily mean, 0 mg/L, many days in 1983.

SEDIMENT LOADS: Maximum daily, 176 tons, May 21, 1983; minimum daily, 0 ton, many days each year.

## EXTREMES FOR WATER YEAR 1982.--

SPECIFIC CONDUCTANCE: Maximum, not determined, Oct. 18; minimum, not determined, Oct. 26.

WATER TEMPERATURE: Maximum, not determined; minimum, 0.0°C, several days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1710 mg/L, Sept. 2; minimum daily mean, 4 mg/L, May 12.

SEDIMENT LOADS: Maximum daily, 73 tons, Jan. 3, 21; minimum daily, 0 ton, many days.

## EXTREMES FOR WATER YEAR 1983.--

SPECIFIC CONDUCTANCE: Maximum, not determined, June 4; minimum, not determined, May 19.

WATER TEMPERATURE: Maximum, 23°C, July 24, Aug. 8, 22-24; minimum, 0.0°C, Jan. 18-20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,370 mg/L, Apr. 5; minimum daily mean, 0 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 176 tons, May 21; minimum daily, 0 ton, many days.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

| DAY  | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1    | 202 | 159 | 149 | 162 | 148 | 173 | 193 | 172 | 175 | --- | --- | 199 |
| 2    | 172 | 169 | 148 | 157 | 152 | 175 | 195 | 176 | --- | --- | --- | 163 |
| 3    | 174 | 174 | 142 | --- | 152 | 179 | 196 | 181 | --- | --- | --- | 152 |
| 4    | 176 | 183 | 137 | --- | 147 | 184 | 198 | 183 | --- | --- | --- | 162 |
| 5    | 193 | 187 | 152 | --- | 149 | 190 | 199 | 184 | --- | --- | --- | 170 |
| 6    | 191 | 189 | 159 | --- | 152 | 190 | 198 | 187 | --- | --- | --- | 178 |
| 7    | 194 | 191 | --- | --- | 144 | 155 | 200 | 189 | --- | --- | --- | 185 |
| 8    | 200 | 192 | --- | --- | 136 | 159 | 195 | 190 | --- | --- | --- | 192 |
| 9    | 204 | 194 | --- | --- | 128 | 161 | 185 | 193 | --- | --- | --- | 195 |
| 10   | 208 | 196 | --- | --- | 136 | 167 | 183 | 195 | --- | --- | --- | 200 |
| 11   | 212 | 198 | --- | --- | 143 | 166 | 179 | 197 | --- | --- | --- | 201 |
| 12   | 215 | 200 | 186 | --- | 149 | 170 | 179 | 201 | --- | --- | --- | 206 |
| 13   | 215 | 202 | 189 | --- | 159 | 181 | 180 | 206 | --- | --- | --- | 207 |
| 14   | 230 | 200 | 190 | --- | 155 | 178 | 182 | 209 | --- | --- | --- | 209 |
| 15   | 247 | 201 | 187 | --- | 158 | 150 | 182 | 213 | --- | --- | --- | 211 |
| 16   | 266 | 200 | 188 | --- | 150 | 146 | 179 | 211 | --- | --- | --- | 213 |
| 17   | 283 | 201 | 186 | --- | 143 | 157 | 175 | 213 | --- | --- | --- | 214 |
| 18   | 236 | 197 | 168 | --- | 145 | 165 | 170 | 219 | --- | --- | --- | 215 |
| 19   | 223 | 193 | 164 | 169 | 150 | 172 | 165 | 222 | --- | 157 | --- | 216 |
| 20   | 211 | 174 | 164 | 164 | 150 | 180 | 160 | 223 | --- | 170 | --- | 218 |
| 21   | 215 | 159 | 156 | 139 | 143 | 183 | 166 | 222 | --- | 175 | --- | 219 |
| 22   | 215 | 152 | 144 | 163 | 155 | 183 | 172 | 224 | --- | 175 | --- | 218 |
| 23   | 172 | 154 | 141 | 138 | 169 | 181 | 178 | 220 | --- | 179 | --- | 221 |
| 24   | 131 | 169 | 151 | 158 | 183 | 183 | 181 | 202 | --- | 183 | --- | 222 |
| 25   | 129 | 142 | 156 | 169 | 197 | 184 | 181 | 220 | --- | --- | --- | 218 |
| 26   | 113 | 139 | 159 | 132 | 198 | 187 | 175 | 213 | --- | --- | 225 | 224 |
| 27   | 116 | 136 | 153 | 121 | 192 | 189 | 160 | 203 | --- | --- | 220 | 242 |
| 28   | 121 | 138 | 147 | 119 | 180 | 190 | 153 | 169 | --- | --- | 212 | 241 |
| 29   | 123 | 143 | 170 | 119 | --- | 190 | 159 | 152 | --- | --- | 212 | 233 |
| 30   | 135 | 130 | 146 | 139 | --- | 192 | 166 | 166 | --- | --- | 213 | 227 |
| 31   | 147 | --- | 171 | 144 | --- | 193 | --- | 175 | --- | --- | 198 | --- |
| MEAN | 189 | 175 | 162 | --- | 156 | 176 | 179 | 198 | --- | --- | --- | 206 |

## CUMBERLAND RIVER BASIN

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03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

| DAY  | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1    | 227 | 254 | 133 | --- | 187 | 186 | 203 | 189 | 209 | --- | 224 | 225 |
| 2    | 227 | 255 | 140 | --- | 136 | --- | 170 | 192 | 209 | --- | --- | --- |
| 3    | 228 | 231 | 169 | --- | 171 | --- | 156 | 143 | 210 | --- | 219 | --- |
| 4    | 229 | 213 | 177 | --- | 179 | --- | 165 | 143 | 187 | --- | 207 | --- |
| 5    | 230 | 195 | 157 | --- | 184 | --- | 141 | 155 | 192 | --- | 203 | --- |
| 6    | 231 | 201 | 165 | --- | 188 | --- | 128 | 165 | 173 | --- | 207 | --- |
| 7    | 230 | 207 | 171 | --- | 193 | --- | 117 | 174 | 161 | --- | 217 | --- |
| 8    | 232 | 210 | 176 | --- | 193 | --- | 123 | 129 | 164 | --- | 213 | --- |
| 9    | 234 | 213 | 183 | --- | 194 | 174 | 122 | 145 | 182 | --- | 214 | --- |
| 10   | 234 | 217 | 192 | --- | 173 | 177 | 154 | 154 | 199 | --- | 212 | --- |
| 11   | 234 | 222 | 193 | 216 | 155 | 182 | 166 | 168 | 198 | --- | 197 | --- |
| 12   | 229 | 203 | 192 | 209 | 169 | 186 | 182 | 174 | 197 | 216 | 210 | --- |
| 13   | 240 | 172 | 193 | 211 | 177 | 190 | 188 | 163 | 195 | 216 | 244 | --- |
| 14   | 244 | 173 | 190 | 206 | 182 | 190 | 191 | 146 | 200 | 216 | 232 | --- |
| 15   | 244 | 177 | 168 | 203 | 186 | 191 | 147 | 159 | 200 | 208 | 220 | --- |
| 16   | 243 | 183 | 166 | 201 | 190 | 192 | 158 | 159 | 201 | 202 | 223 | --- |
| 17   | 244 | 186 | 180 | 200 | 191 | 192 | 164 | 159 | 205 | 206 | 224 | --- |
| 18   | 245 | 161 | 186 | 201 | 193 | 193 | 171 | 164 | 206 | 203 | --- | --- |
| 19   | 245 | 149 | 193 | 206 | 195 | 195 | 176 | 119 | 205 | 201 | --- | --- |
| 20   | 239 | 160 | 198 | 203 | 197 | 188 | 180 | 139 | 197 | 202 | 224 | --- |
| 21   | 249 | 167 | 201 | 199 | 200 | 143 | 179 | 126 | --- | 198 | --- | 206 |
| 22   | 249 | 162 | 201 | 205 | 198 | 162 | 179 | 121 | --- | 210 | --- | 232 |
| 23   | 249 | 160 | 196 | 194 | 197 | 172 | 166 | 133 | --- | 212 | --- | 230 |
| 24   | 249 | 154 | --- | 188 | 195 | 177 | 150 | 152 | --- | 213 | 210 | 228 |
| 25   | 255 | 163 | --- | 186 | 192 | 182 | 153 | 166 | --- | 207 | 224 | 231 |
| 26   | 260 | 172 | --- | 185 | 189 | 186 | 161 | 175 | --- | 213 | 236 | 235 |
| 27   | 258 | 179 | --- | 187 | 187 | 188 | 169 | 186 | --- | 215 | 232 | --- |
| 28   | 252 | 156 | --- | 189 | 186 | 189 | 175 | 193 | --- | 216 | 228 | --- |
| 29   | 250 | 146 | --- | 192 | --- | 186 | 179 | 195 | --- | --- | 227 | --- |
| 30   | 253 | 173 | --- | 194 | --- | 186 | 185 | 205 | --- | --- | 226 | --- |
| 31   | 255 | --- | --- | 193 | --- | 188 | --- | 214 | --- | --- | 229 | --- |
| MEAN | 242 | 187 | --- | --- | 185 | --- | 163 | 161 | --- | --- | --- | --- |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 16.0    | 13.0 | 14.5 | 13.5     | 11.5 | 12.5 | 10.5     | 9.0 | 9.5  | 5.5     | 3.5 | 5.0  |
| 2     | 15.0    | 11.0 | 13.0 | 13.5     | 11.0 | 12.0 | 9.5      | 7.5 | 8.0  | 5.5     | 2.5 | 4.0  |
| 3     | 11.5    | 9.0  | 10.5 | 13.5     | 11.5 | 12.0 | 8.0      | 7.0 | 7.5  | 9.0     | 5.5 | 7.5  |
| 4     | 12.5    | 9.0  | 10.5 | 13.5     | 11.5 | 12.5 | 7.5      | 6.5 | 7.0  | 9.5     | 4.5 | 7.5  |
| 5     | 13.5    | 11.5 | 12.5 | 13.5     | 12.5 | 13.0 | 6.5      | 4.5 | 5.5  | 5.0     | 3.5 | 4.5  |
| 6     | 15.5    | 13.0 | 14.0 | 12.5     | 10.0 | 11.5 | 5.5      | 4.0 | 4.5  | 8.5     | 5.0 | 6.5  |
| 7     | 13.5    | 11.5 | 12.5 | 10.0     | 8.0  | 9.0  | 8.0      | 5.0 | 6.5  | 9.0     | 4.5 | 7.5  |
| 8     | 12.0    | 10.0 | 11.0 | 9.5      | 7.0  | 8.0  | 8.0      | 5.5 | 7.0  | 4.5     | 1.0 | 3.0  |
| 9     | 12.5    | 10.0 | 11.0 | 10.5     | 8.0  | 9.0  | 5.5      | 4.0 | 4.5  | 2.5     | .5  | 1.0  |
| 10    | 13.5    | 12.0 | 13.0 | 11.0     | 9.0  | 9.5  | 4.0      | 3.0 | 3.5  | .5      | .0  | .5   |
| 11    | 15.0    | 13.0 | 13.5 | 9.5      | 8.0  | 8.5  | 3.0      | 2.0 | 2.5  | .5      | .0  | .0   |
| 12    | 15.0    | 13.0 | 13.5 | 8.5      | 6.5  | 7.5  | 2.5      | 1.5 | 2.0  | .5      | .0  | .0   |
| 13    | 14.5    | 12.0 | 13.0 | 8.5      | 6.0  | 7.0  | 4.0      | 1.5 | 2.5  | 1.0     | .0  | 1.0  |
| 14    | 12.5    | 10.5 | 11.5 | 8.0      | 6.0  | 7.0  | 5.0      | 4.0 | 4.5  | 1.5     | 1.0 | 1.0  |
| 15    | 13.5    | 12.0 | 12.5 | 8.0      | 5.5  | 7.0  | 5.0      | 3.5 | 4.5  | 2.0     | 1.0 | 1.5  |
| 16    | 14.5    | 12.5 | 13.5 | 8.5      | 7.0  | 7.5  | 3.5      | 2.5 | 3.0  | 2.0     | .0  | 1.5  |
| 17    | 14.5    | 12.0 | 13.5 | 9.5      | 8.0  | 8.5  | 4.5      | 3.0 | 3.5  | .5      | .0  | .5   |
| 18    | 14.5    | 12.5 | 14.0 | 8.5      | 6.5  | 7.5  | 3.0      | 1.0 | 2.0  | 1.0     | .5  | .5   |
| 19    | 12.5    | 9.5  | 11.0 | 11.5     | 7.5  | 9.5  | 1.0      | .5  | 1.0  | 4.5     | .5  | 2.0  |
| 20    | 10.5    | 7.5  | 9.0  | 11.0     | 6.5  | 8.0  | 1.0      | .0  | .5   | 7.0     | 3.0 | 5.0  |
| 21    | 12.0    | 8.5  | 10.0 | 6.5      | 5.0  | 5.5  | 1.5      | .0  | 1.0  | 8.0     | 6.5 | 7.5  |
| 22    | 12.5    | 10.0 | 11.5 | 5.0      | 3.5  | 4.5  | 8.0      | 1.5 | 4.5  | 8.0     | 6.5 | 7.5  |
| 23    | 12.5    | 10.0 | 11.5 | 6.0      | 3.5  | 5.0  | 8.5      | 5.0 | 6.5  | 8.0     | 4.0 | 7.0  |
| 24    | 10.0    | 8.0  | 9.0  | 7.0      | 6.0  | 6.5  | 5.0      | 4.5 | 4.5  | 4.0     | 2.0 | 3.0  |
| 25    | 11.5    | 8.5  | 10.5 | 7.5      | 6.5  | 7.0  | 5.0      | 4.0 | 4.5  | 4.5     | 2.0 | 3.0  |
| 26    | 14.0    | 11.5 | 13.0 | 9.0      | 7.5  | 8.0  | 5.5      | 4.5 | 5.0  | 2.0     | .0  | .5   |
| 27    | 13.5    | 12.0 | 13.0 | 11.0     | 9.0  | 10.0 | 6.0      | 4.5 | 5.5  | 1.0     | .0  | .5   |
| 28    | 13.0    | 11.5 | 12.0 | 9.0      | 7.0  | 8.0  | 6.5      | 4.5 | 5.5  | 2.5     | 1.0 | 2.0  |
| 29    | 13.0    | 11.0 | 12.0 | 8.0      | 7.0  | 7.5  | 6.0      | 3.5 | 4.5  | 3.0     | .5  | 1.5  |
| 30    | 13.0    | 11.0 | 12.0 | 9.0      | 7.0  | 7.5  | 3.0      | 2.0 | 2.5  | 6.0     | 3.0 | 5.0  |
| 31    | 13.0    | 10.5 | 11.5 | ---      | ---  | ---  | 5.5      | 2.5 | 4.0  | 8.5     | 4.0 | 7.0  |
| MONTH | 16.0    | 7.5  | 12.0 | 13.5     | 3.5  | 8.5  | 10.5     | .0  | 4.5  | 9.5     | .0  | 3.5  |



## CUMBERLAND RIVER BASIN

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY      | MAX | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 4.5 | 3.0 | 3.5   | 7.5  | 5.5  | 6.5   | 12.0 | 8.0  | 10.0 | 12.5 | 9.5  | 11.0 |
| 2        | 6.5 | 3.0 | 4.5   | 8.0  | 4.5  | 6.5   | 11.0 | 7.5  | 9.0  | 13.0 | 10.5 | 11.5 |
| 3        | 7.5 | 6.5 | 7.0   | 8.0  | 6.5  | 7.5   | 13.0 | 9.0  | 11.0 | 13.5 | 10.0 | 12.0 |
| 4        | 6.5 | 4.0 | 4.5   | 9.0  | 7.0  | 8.0   | 11.0 | 7.5  | 9.0  | 14.0 | 10.0 | 12.0 |
| 5        | 7.0 | 3.5 | 5.0   | 9.0  | 5.5  | 7.0   | 10.0 | 8.0  | 9.0  | 14.5 | 10.5 | 12.5 |
| 6        | 5.5 | .5  | 3.0   | 7.0  | 5.0  | 6.0   | 9.5  | 5.0  | 6.5  | 14.5 | 12.0 | 13.5 |
| 7        | 2.0 | .0  | 1.0   | 6.0  | 3.5  | 4.0   | 8.0  | 3.5  | 5.5  | 13.5 | 12.5 | 13.0 |
| 8        | 3.0 | .0  | 1.5   | 5.0  | 2.5  | 3.5   | 7.0  | 5.5  | 6.0  | 13.5 | 12.0 | 12.5 |
| 9        | 6.0 | 2.5 | 4.5   | 7.5  | 4.5  | 5.5   | 7.0  | 5.5  | 6.5  | 14.0 | 10.5 | 12.5 |
| 10       | 2.5 | 1.5 | 2.0   | 7.5  | 5.0  | 6.5   | 9.0  | 4.5  | 6.5  | 14.5 | 11.0 | 13.0 |
| 11       | 3.5 | 1.5 | 2.5   | 9.0  | 7.0  | 8.0   | 9.5  | 4.5  | 7.0  | 15.0 | 11.5 | 13.5 |
| 12       | 4.0 | 2.0 | 3.0   | 11.0 | 8.0  | 9.5   | 11.5 | 6.0  | 8.5  | 15.5 | 11.5 | 13.5 |
| 13       | 3.5 | 2.0 | 3.0   | 11.0 | 8.0  | 10.0  | 11.0 | 9.0  | 9.5  | 15.5 | 12.5 | 14.0 |
| 14       | 4.0 | 1.0 | 2.5   | 8.0  | 7.0  | 7.5   | 13.0 | 9.5  | 11.0 | 16.5 | 13.5 | 15.0 |
| 15       | 7.5 | 4.0 | 6.0   | 11.0 | 7.5  | 9.5   | 14.5 | 9.0  | 11.5 | 17.0 | 14.0 | 15.5 |
| 16       | 8.5 | 7.0 | 8.0   | 12.0 | 10.5 | 11.5  | 14.5 | 11.5 | 13.0 | 16.5 | 14.0 | 15.5 |
| 17       | 9.0 | 7.5 | 8.5   | 13.5 | 11.0 | 12.0  | ---  | ---  | 13.0 | 17.0 | 14.0 | 15.5 |
| 18       | 9.0 | 8.0 | 8.5   | 13.5 | 10.0 | 11.5  | ---  | ---  | 13.0 | 16.0 | 14.0 | 15.0 |
| 19       | 8.5 | 5.0 | 6.5   | 14.5 | 11.0 | 12.5  | ---  | ---  | 13.0 | 16.5 | 14.5 | 15.5 |
| 20       | 6.5 | 3.5 | 5.0   | 14.0 | 12.5 | 13.0  | 13.5 | 11.5 | 12.5 | 16.0 | 14.5 | 15.5 |
| 21       | 5.5 | 4.0 | 5.0   | 13.0 | 10.5 | 12.0  | 12.0 | 9.5  | 11.0 | 17.0 | 14.5 | 16.0 |
| 22       | --- | --- | 5.0   | 10.5 | 8.0  | 9.0   | 11.5 | 8.5  | 9.5  | 17.0 | 14.5 | 15.5 |
| 23       | --- | --- | 5.0   | 10.0 | 6.5  | 8.0   | 11.5 | 7.0  | 9.0  | 17.0 | 15.0 | 16.0 |
| 24       | --- | --- | 5.0   | 11.0 | 7.0  | 9.0   | 12.0 | 7.0  | 9.5  | 16.5 | 15.0 | 16.0 |
| 25       | 6.0 | 4.5 | 5.0   | 11.5 | 8.5  | 10.0  | 10.5 | 9.0  | 10.0 | 16.5 | 14.5 | 15.5 |
| 26       | 5.5 | 4.0 | 4.5   | 8.5  | 5.5  | 7.0   | 13.0 | 10.0 | 11.5 | 17.5 | 15.5 | 16.0 |
| 27       | 6.0 | 4.5 | 5.0   | 7.0  | 4.5  | 5.0   | 12.0 | 10.5 | 11.0 | 17.5 | 15.5 | 16.5 |
| 28       | 6.0 | 5.5 | 6.0   | 7.5  | 3.0  | 5.0   | 12.0 | 9.0  | 10.5 | 17.0 | 16.0 | 16.0 |
| 29       | --- | --- | ---   | 7.5  | 4.0  | 6.0   | 12.5 | 9.0  | 10.5 | 18.0 | 15.5 | 16.5 |
| 30       | --- | --- | ---   | 11.0 | 7.0  | 9.0   | 13.0 | 10.5 | 11.5 | 18.5 | 17.0 | 17.5 |
| 31       | --- | --- | ---   | 13.5 | 10.0 | 11.0  | ---  | ---  | ---  | 18.5 | 16.5 | 17.5 |
| MONTH    | 9.0 | .0  | 4.5   | 14.5 | 2.5  | 8.5   | 14.5 | 3.5  | 10.0 | 18.5 | 9.5  | 14.5 |

| DAY   | MAX | MIN | MEAN | MAX  | MIN  | MEAN   | MAX  | MIN  | MEAN      | MAX  | MIN  | MEAN |
|-------|-----|-----|------|------|------|--------|------|------|-----------|------|------|------|
| JUNE  |     |     | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |      |
| 1     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 20.0 | 18.5 | 19.0 |
| 2     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 19.0 | 18.5 | 18.5 |
| 3     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 18.5 | 17.0 | 18.0 |
| 4     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | ---  | ---  | ---  |
| 5     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | ---  | ---  | ---  |
| 6     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | ---  | ---  | ---  |
| 7     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | ---  | ---  | ---  |
| 8     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 17.5 | 15.5 | 16.5 |
| 9     | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 17.5 | 16.0 | 17.0 |
| 10    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 17.5 | 16.0 | 17.0 |
| 11    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 17.5 | 16.0 | 17.0 |
| 12    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 18.5 | 17.0 | 17.5 |
| 13    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 18.5 | 18.0 | 18.0 |
| 14    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 20.0 | 18.0 | 18.5 |
| 15    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 19.5 | 18.0 | 18.5 |
| 16    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 20.0 | 18.0 | 19.0 |
| 17    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 19.0 | 17.5 | 18.0 |
| 18    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 19.0 | 16.5 | 17.5 |
| 19    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 18.0 | 16.5 | 17.5 |
| 20    | --- | --- | ---  | 20.5 | 19.0 | 19.5   | ---  | ---  | ---       | 16.5 | 15.0 | 16.0 |
| 21    | --- | --- | ---  | 21.0 | 19.0 | 20.0   | ---  | ---  | ---       | 15.5 | 13.5 | 15.0 |
| 22    | --- | --- | ---  | 20.5 | 19.0 | 19.5   | ---  | ---  | ---       | 13.5 | 10.5 | 13.0 |
| 23    | --- | --- | ---  | 20.0 | 18.5 | 19.5   | ---  | ---  | ---       | 13.5 | 11.0 | 12.0 |
| 24    | --- | --- | ---  | 21.0 | 19.0 | 20.0   | ---  | ---  | ---       | 13.5 | 11.0 | 12.5 |
| 25    | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 14.0 | 12.5 | 13.0 |
| 26    | --- | --- | ---  | ---  | ---  | ---    | 19.5 | 17.0 | 18.5      | 14.5 | 12.5 | 13.5 |
| 27    | --- | --- | ---  | ---  | ---  | ---    | 21.0 | 18.0 | 19.5      | ---  | ---  | 13.5 |
| 28    | --- | --- | ---  | ---  | ---  | ---    | 20.0 | 18.5 | 19.0      | 15.0 | 12.5 | 13.5 |
| 29    | --- | --- | ---  | ---  | ---  | ---    | 20.0 | 17.5 | 18.5      | 15.0 | 12.5 | 14.0 |
| 30    | --- | --- | ---  | ---  | ---  | ---    | 19.5 | 18.0 | 19.0      | 15.5 | 13.5 | 14.5 |
| 31    | --- | --- | ---  | ---  | ---  | ---    | 19.0 | 18.5 | 19.0      | ---  | ---  | ---  |
| MONTH | --- | --- | ---  | ---  | ---  | ---    | ---  | ---  | ---       | 20.0 | 10.5 | 16.0 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY      | MAX  | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN | MEAN |
|----------|------|------|------|----------|------|------|----------|------|------|---------|-----|------|
| OCTOBER  |      |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |     |      |
| 1        | 15.5 | 14.0 | 14.5 | 14.0     | 11.0 | 12.5 | 13.0     | 11.5 | 12.5 | ---     | --- | ---  |
| 2        | 16.0 | 14.0 | 14.5 | 15.0     | 12.5 | 13.5 | 14.0     | 12.5 | 13.5 | ---     | --- | ---  |
| 3        | 16.5 | 13.5 | 15.0 | 14.0     | 12.0 | 13.5 | 14.0     | 13.5 | 13.5 | ---     | --- | ---  |
| 4        | 17.0 | 15.0 | 16.0 | 13.5     | 8.0  | 11.5 | 14.5     | 13.5 | 14.0 | ---     | --- | ---  |
| 5        | 17.0 | 15.5 | 16.0 | 8.0      | 6.5  | 7.0  | 14.5     | 11.0 | 13.0 | ---     | --- | ---  |
| 6        | 17.5 | 15.5 | 16.5 | 7.0      | 5.0  | 6.0  | ---      | ---  | ---  | ---     | --- | ---  |
| 7        | 17.5 | 16.0 | 16.5 | 7.0      | 5.0  | 6.0  | 9.0      | 8.0  | 8.5  | ---     | --- | ---  |
| 8        | 18.5 | 16.5 | 17.0 | 8.0      | 5.0  | 6.5  | 9.0      | 7.0  | 8.0  | ---     | --- | ---  |
| 9        | 19.0 | 17.0 | 18.0 | 8.5      | 5.5  | 7.0  | 8.0      | 6.5  | 7.5  | ---     | --- | ---  |
| 10       | 19.5 | 17.5 | 18.0 | 8.5      | 6.0  | 7.5  | 8.0      | 5.5  | 7.0  | ---     | --- | ---  |
| 11       | 18.0 | 15.0 | 17.0 | 10.5     | 8.0  | 9.5  | 8.0      | 5.0  | 7.5  | 7.0     | 4.0 | 5.5  |
| 12       | 15.5 | 13.5 | 14.5 | 12.5     | 9.0  | 11.0 | 5.5      | 3.0  | 4.5  | 4.0     | 2.5 | 3.0  |
| 13       | 14.5 | 14.0 | 14.5 | 9.0      | 6.0  | 7.5  | 3.5      | 2.0  | 3.0  | 3.0     | 1.5 | 2.5  |
| 14       | 14.0 | 12.0 | 13.0 | 7.5      | 6.0  | 7.0  | 5.5      | 3.0  | 4.0  | 4.5     | 2.0 | 3.0  |
| 15       | 13.0 | 11.0 | 12.0 | 6.5      | 5.0  | 6.0  | 9.5      | 5.5  | 7.5  | 4.0     | 2.0 | 3.0  |
| 16       | 12.5 | 10.5 | 12.0 | 6.5      | 4.5  | 5.5  | 9.0      | 5.5  | 6.5  | 2.0     | 1.0 | 1.5  |
| 17       | 11.0 | 8.5  | 10.0 | 8.5      | 6.5  | 7.5  | 5.5      | 4.5  | 5.5  | 2.0     | 1.0 | 1.5  |
| 18       | 12.0 | 9.0  | 10.5 | 10.5     | 8.5  | 9.5  | 5.5      | 3.5  | 4.5  | 1.0     | .0  | .0   |
| 19       | 12.0 | 9.5  | 10.5 | 11.5     | 10.5 | 11.0 | 6.5      | 5.5  | 6.0  | .0      | .0  | .0   |
| 20       | 13.0 | 11.5 | 12.5 | 12.5     | 11.0 | 11.5 | 6.0      | 5.0  | 5.5  | 1.0     | .0  | .5   |
| 21       | 12.0 | 10.0 | 11.0 | 13.0     | 12.0 | 12.5 | 5.5      | 4.0  | 5.0  | 3.0     | .5  | 2.0  |
| 22       | 10.0 | 8.5  | 9.5  | 13.0     | 12.0 | 12.5 | 6.0      | 3.5  | 4.5  | 4.5     | 3.0 | 3.5  |
| 23       | 9.0  | 7.0  | 8.0  | 13.5     | 12.0 | 13.0 | 7.0      | 6.0  | 6.5  | 4.0     | 3.5 | 4.0  |
| 24       | 9.0  | 6.5  | 7.5  | 13.0     | 7.5  | 10.0 | ---      | ---  | ---  | 3.5     | 3.0 | 3.0  |
| 25       | 9.5  | 7.5  | 8.5  | 8.5      | 6.0  | 7.5  | ---      | ---  | ---  | 3.0     | 3.0 | 3.0  |
| 26       | 8.5  | 6.0  | 7.0  | 10.0     | 8.0  | 9.0  | ---      | ---  | ---  | 3.0     | 2.5 | 2.5  |
| 27       | 8.5  | 5.5  | 7.0  | 10.5     | 9.5  | 10.0 | ---      | ---  | ---  | 4.5     | 3.0 | 3.5  |
| 28       | 8.5  | 6.0  | 7.5  | 12.0     | 10.5 | 11.5 | ---      | ---  | ---  | 4.0     | 3.0 | 3.5  |
| 29       | 10.0 | 7.5  | 9.0  | 12.0     | 9.5  | 10.5 | ---      | ---  | ---  | 5.0     | 2.5 | 4.0  |
| 30       | 12.0 | 9.5  | 10.5 | 11.5     | 9.5  | 10.5 | ---      | ---  | ---  | 6.5     | 4.5 | 5.5  |
| 31       | 12.5 | 10.0 | 11.0 | ---      | ---  | ---  | ---      | ---  | ---  | 5.5     | 4.0 | 4.5  |
| MONTH    | 19.5 | 5.5  | 12.5 | 15.0     | 4.5  | 9.5  | ---      | ---  | ---  | ---     | --- | ---  |
| DAY      | MAX  | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN | MEAN |
| FEBRUARY |      |      |      | MARCH    |      |      | APRIL    |      |      | MAY     |     |      |
| 1        | 7.5  | 4.0  | 5.5  | 7.5      | 4.5  | 6.0  | 9.0      | 5.0  | 7.0  |         |     |      |
| 2        | 9.0  | 5.5  | 7.5  | ---      | ---  | ---  | 8.5      | 6.5  | 7.5  |         |     |      |
| 3        | 5.5  | 3.0  | 4.0  | ---      | ---  | ---  | 6.5      | 5.5  | 6.0  |         |     |      |
| 4        | 3.0  | 2.0  | 2.5  | ---      | ---  | ---  | 9.0      | 4.5  | 6.5  |         |     |      |
| 5        | 3.0  | 1.5  | 2.0  | ---      | ---  | ---  | 8.5      | 7.5  | 8.0  |         |     |      |
| 6        | 4.0  | 2.5  | 3.0  | ---      | ---  | ---  | ---      | ---  | ---  |         |     |      |
| 7        | 4.0  | 1.5  | 3.0  | ---      | ---  | ---  | ---      | ---  | ---  |         |     |      |
| 8        | 3.0  | 1.0  | 2.0  | ---      | ---  | ---  | ---      | ---  | ---  |         |     |      |
| 9        | 3.5  | 2.0  | 3.0  | ---      | ---  | ---  | ---      | ---  | ---  |         |     |      |
| 10       | 4.5  | 3.5  | 4.0  | 6.0      | 4.0  | 4.5  | ---      | ---  | ---  |         |     |      |
| 11       | 4.5  | 4.0  | 4.5  | 4.0      | 3.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 12       | 4.5  | 3.5  | 4.0  | 4.5      | 3.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 13       | 5.0  | 3.0  | 4.0  | 6.0      | 2.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 14       | 5.0  | 3.0  | 4.0  | 8.5      | 4.0  | 6.5  | ---      | ---  | ---  |         |     |      |
| 15       | 5.0  | 2.0  | 3.5  | 9.0      | 5.5  | 7.5  | ---      | ---  | ---  |         |     |      |
| 16       | 5.5  | 2.5  | 4.0  | 10.0     | 7.0  | 8.5  | ---      | ---  | ---  |         |     |      |
| 17       | 5.5  | 3.5  | 4.5  | 9.5      | 8.0  | 8.5  | ---      | ---  | ---  |         |     |      |
| 18       | 5.5  | 2.5  | 4.0  | 9.5      | 8.0  | 8.5  | ---      | ---  | ---  |         |     |      |
| 19       | 5.5  | 3.0  | 4.0  | 9.0      | 7.0  | 8.0  | ---      | ---  | ---  |         |     |      |
| 20       | 6.5  | 3.5  | 5.0  | 9.0      | 6.5  | 7.5  | ---      | ---  | ---  |         |     |      |
| 21       | 7.0  | 4.0  | 5.5  | 8.5      | 4.0  | 5.5  | ---      | ---  | ---  |         |     |      |
| 22       | 6.5  | 5.0  | 6.0  | 5.0      | 3.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 23       | 8.0  | 6.0  | 6.5  | 5.5      | 3.0  | 5.0  | ---      | ---  | ---  |         |     |      |
| 24       | 7.0  | 6.0  | 6.5  | 4.5      | 3.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 25       | 6.0  | 3.0  | 4.0  | 6.0      | 2.5  | 4.0  | ---      | ---  | ---  |         |     |      |
| 26       | 4.0  | 2.0  | 2.5  | 6.5      | 3.0  | 4.5  | ---      | ---  | ---  |         |     |      |
| 27       | 4.5  | 1.5  | 3.0  | 9.0      | 5.5  | 7.0  | ---      | ---  | ---  |         |     |      |
| 28       | 6.0  | 3.5  | 4.5  | 6.5      | 5.0  | 5.5  | ---      | ---  | ---  |         |     |      |
| 29       | ---  | ---  | ---  | 6.0      | 4.0  | 5.0  | ---      | ---  | ---  |         |     |      |
| 30       | ---  | ---  | ---  | 7.0      | 4.0  | 5.5  | ---      | ---  | ---  |         |     |      |
| 31       | ---  | ---  | ---  | 7.0      | 5.5  | 6.5  | ---      | ---  | ---  |         |     |      |
| MONTH    | 9.0  | 1.0  | 4.0  | ---      | ---  | ---  | ---      | ---  | ---  |         |     |      |

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

## CUMBERLAND RIVER BASIN

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03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
| OCTOBER |                            |                                 | NOVEMBER                            |                            |                                 | DECEMBER                            |                            |                                 |                                     |
| 1       | .04                        | 6                               | .00                                 | .61                        | 15                              | .02                                 | 6.7                        | 65                              | 1.2                                 |
| 2       | .04                        | 10                              | .00                                 | .47                        | 16                              | .02                                 | 4.7                        | 21                              | .27                                 |
| 3       | .04                        | 20                              | .00                                 | .40                        | 16                              | .02                                 | 2.6                        | 18                              | .13                                 |
| 4       | .04                        | 30                              | .00                                 | .36                        | 16                              | .02                                 | 1.7                        | 16                              | .07                                 |
| 5       | .04                        | 32                              | .00                                 | .34                        | 16                              | .01                                 | 1.2                        | 14                              | .05                                 |
| 6       | .04                        | 40                              | .00                                 | .34                        | 16                              | .01                                 | .94                        | 11                              | .03                                 |
| 7       | .04                        | 20                              | .00                                 | .29                        | 17                              | .01                                 | .84                        | 10                              | .02                                 |
| 8       | .04                        | 20                              | .00                                 | .28                        | 17                              | .01                                 | .75                        | 6                               | .01                                 |
| 9       | .04                        | 20                              | .00                                 | .24                        | 17                              | .01                                 | .58                        | 10                              | .02                                 |
| 10      | .04                        | 20                              | .00                                 | .23                        | 17                              | .01                                 | .46                        | 10                              | .01                                 |
| 11      | .04                        | 20                              | .00                                 | .24                        | 16                              | .01                                 | .40                        | 10                              | .01                                 |
| 12      | .04                        | 20                              | .00                                 | .24                        | 15                              | .00                                 | .39                        | 10                              | .01                                 |
| 13      | .04                        | 152                             | .02                                 | .24                        | 14                              | .00                                 | .34                        | 10                              | .00                                 |
| 14      | .04                        | 20                              | .00                                 | .24                        | 13                              | .00                                 | .73                        | 10                              | .02                                 |
| 15      | .04                        | 20                              | .00                                 | .24                        | 12                              | .00                                 | .69                        | 10                              | .02                                 |
| 16      | .04                        | 20                              | .00                                 | .27                        | 11                              | .00                                 | .70                        | 10                              | .02                                 |
| 17      | .24                        | 20                              | .01                                 | .38                        | 11                              | .01                                 | 1.2                        | 20                              | .06                                 |
| 18      | 1.2                        | 100                             | .32                                 | .34                        | 10                              | .00                                 | 1.4                        | 10                              | .04                                 |
| 19      | .24                        | 29                              | .02                                 | .36                        | 10                              | .00                                 | 1.2                        | 10                              | .03                                 |
| 20      | .17                        | 20                              | .00                                 | .48                        | 10                              | .01                                 | .98                        | 10                              | .03                                 |
| 21      | .14                        | 20                              | .00                                 | .41                        | 10                              | .01                                 | 1.0                        | 30                              | .08                                 |
| 22      | .13                        | 20                              | .00                                 | .40                        | 10                              | .01                                 | 8.9                        | 130                             | 3.1                                 |
| 23      | 2.1                        | 200                             | 1.1                                 | .39                        | 30                              | .03                                 | 8.0                        | 40                              | .86                                 |
| 24      | 1.2                        | 50                              | .16                                 | 1.4                        | 25                              | .09                                 | 3.8                        | 10                              | .10                                 |
| 25      | 1.6                        | 30                              | .13                                 | 1.8                        | 23                              | .11                                 | 2.5                        | 10                              | .07                                 |
| 26      | 9.2                        | 170                             | 4.2                                 | 1.6                        | 20                              | .09                                 | 1.9                        | 10                              | .05                                 |
| 27      | 11                         | 59                              | 1.8                                 | 7.6                        | 103                             | 2.1                                 | 1.5                        | 10                              | .04                                 |
| 28      | 3.6                        | 35                              | .34                                 | 5.1                        | 27                              | .37                                 | 1.2                        | 10                              | .03                                 |
| 29      | 2.0                        | 30                              | .16                                 | 2.6                        | 19                              | .13                                 | .95                        | 10                              | .03                                 |
| 30      | 1.2                        | 25                              | .08                                 | 2.2                        | 50                              | .30                                 | .80                        | 10                              | .02                                 |
| 31      | .76                        | 20                              | .04                                 | ---                        | ---                             | ---                                 | 2.5                        | 50                              | .34                                 |
| TOTAL   | 35.42                      | ---                             | 8.38                                | 30.09                      | ---                             | 3.41                                | 61.55                      | ---                             | 6.77                                |
| JANUARY |                            |                                 | FEBRUARY                            |                            |                                 | MARCH                               |                            |                                 |                                     |
| 1       | 3.1                        | 30                              | .25                                 | 5.3                        | 80                              | 1.1                                 | 2.6                        | 40                              | .28                                 |
| 2       | 2.5                        | 20                              | .14                                 | 3.4                        | 100                             | .92                                 | 2.0                        | 19                              | .10                                 |
| 3       | 27                         | 1000                            | 73                                  | 4.8                        | 50                              | .65                                 | 1.6                        | 10                              | .04                                 |
| 4       | 21                         | 1200                            | 68                                  | 3.3                        | 30                              | .27                                 | 1.3                        | 10                              | .04                                 |
| 5       | 4.4                        | 150                             | 1.8                                 | 2.3                        | 12                              | .07                                 | 1.3                        | 40                              | .14                                 |
| 6       | 2.8                        | 60                              | .45                                 | 2.0                        | 10                              | .05                                 | 1.5                        | 20                              | .08                                 |
| 7       | 2.0                        | 40                              | .22                                 | 1.4                        | 10                              | .04                                 | 5.0                        | 10                              | .14                                 |
| 8       | 1.3                        | 20                              | .07                                 | 1.2                        | 10                              | .03                                 | 3.4                        | 10                              | .09                                 |
| 9       | 1.0                        | 10                              | .03                                 | 9.7                        | 645                             | 17                                  | 2.4                        | 10                              | .06                                 |
| 10      | .61                        | 10                              | .02                                 | 4.0                        | 80                              | .86                                 | 1.9                        | 10                              | .05                                 |
| 11      | .40                        | 10                              | .01                                 | 2.4                        | 40                              | .26                                 | 1.6                        | 10                              | .04                                 |
| 12      | .40                        | 10                              | .01                                 | 1.9                        | 20                              | .10                                 | 1.5                        | 10                              | .04                                 |
| 13      | .40                        | 10                              | .01                                 | 2.1                        | 10                              | .06                                 | 1.6                        | 10                              | .04                                 |
| 14      | .40                        | 10                              | .01                                 | 1.9                        | 10                              | .05                                 | 1.5                        | 10                              | .04                                 |
| 15      | .40                        | 10                              | .01                                 | 1.7                        | 40                              | .18                                 | 8.3                        | 125                             | 2.8                                 |
| 16      | .39                        | 10                              | .01                                 | 6.5                        | 261                             | 4.6                                 | 4.8                        | 30                              | .39                                 |
| 17      | .36                        | 10                              | .00                                 | 7.5                        | 102                             | 2.1                                 | 2.8                        | 20                              | .15                                 |
| 18      | .34                        | 10                              | .00                                 | 4.2                        | 50                              | .57                                 | 2.0                        | 10                              | .05                                 |
| 19      | 3.7                        | 10                              | .10                                 | 2.6                        | 30                              | .21                                 | 1.4                        | 30                              | .11                                 |
| 20      | 3.5                        | 50                              | .47                                 | 1.9                        | 10                              | .05                                 | 1.1                        | 10                              | .03                                 |
| 21      | 18                         | 1500                            | 73                                  | 1.7                        | 10                              | .05                                 | 1.6                        | 30                              | .13                                 |
| 22      | 11                         | 350                             | 10                                  | 1.6                        | 10                              | .04                                 | 1.0                        | 10                              | .03                                 |
| 23      | 20                         | 900                             | 49                                  | 1.5                        | 10                              | .04                                 | .65                        | 15                              | .03                                 |
| 24      | 8.2                        | 75                              | 1.7                                 | 1.4                        | 10                              | .04                                 | .63                        | 8                               | .01                                 |
| 25      | 2.9                        | 40                              | .31                                 | 1.1                        | 28                              | .08                                 | .66                        | 10                              | .02                                 |
| 26      | 1.4                        | 20                              | .08                                 | .94                        | 10                              | .03                                 | .61                        | 10                              | .02                                 |
| 27      | .92                        | 10                              | .02                                 | 3.7                        | 100                             | 1.0                                 | .59                        | 10                              | .02                                 |
| 28      | .87                        | 10                              | .02                                 | 3.6                        | 80                              | .78                                 | .59                        | 10                              | .02                                 |
| 29      | .80                        | 10                              | .02                                 | ---                        | ---                             | ---                                 | .59                        | 10                              | .02                                 |
| 30      | .79                        | 10                              | .02                                 | ---                        | ---                             | ---                                 | .58                        | 10                              | .02                                 |
| 31      | 6.4                        | 800                             | 14                                  | ---                        | ---                             | ---                                 | .62                        | 10                              | .02                                 |
| TOTAL   | 147.28                     | ---                             | 292.78                              | 85.64                      | ---                             | 31.23                               | 57.72                      | ---                             | 5.05                                |



03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY                         | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-----------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
| APRIL                       |                            |                                 |                                     |                            |                                 |                                     |                            |                                 |                                     |
| 1                           | .61                        | 14                              | .02                                 | 1.4                        | 15                              | .06                                 | 1.6                        | 125                             | .54                                 |
| 2                           | .66                        | 10                              | .02                                 | 1.2                        | 12                              | .04                                 | .77                        | 20                              | .04                                 |
| 3                           | .80                        | 60                              | .13                                 | .92                        | 12                              | .03                                 | .54                        | 10                              | .01                                 |
| 4                           | .61                        | 10                              | .02                                 | .74                        | 8                               | .02                                 | .86                        | 31                              | .07                                 |
| 5                           | .64                        | 10                              | .02                                 | .72                        | 18                              | .03                                 | 1.1                        | 25                              | .07                                 |
| 6                           | .64                        | 8                               | .01                                 | .62                        | 10                              | .02                                 | .62                        | 20                              | .03                                 |
| 7                           | .52                        | 8                               | .01                                 | .59                        | 14                              | .02                                 | .44                        | 20                              | .02                                 |
| 8                           | .64                        | 11                              | .02                                 | .64                        | 12                              | .02                                 | .38                        | 17                              | .02                                 |
| 9                           | .71                        | 18                              | .03                                 | .54                        | 11                              | .02                                 | .32                        | 10                              | .00                                 |
| 10                          | .66                        | 10                              | .02                                 | .42                        | 7                               | .00                                 | .26                        | 10                              | .00                                 |
| 11                          | .66                        | 10                              | .02                                 | .33                        | 8                               | .00                                 | .21                        | 10                              | .00                                 |
| 12                          | .64                        | 10                              | .02                                 | .32                        | 4                               | .00                                 | .17                        | 10                              | .00                                 |
| 13                          | .63                        | 10                              | .02                                 | .32                        | 10                              | .00                                 | .14                        | 10                              | .00                                 |
| 14                          | .60                        | 10                              | .02                                 | .31                        | 10                              | .00                                 | .12                        | 10                              | .00                                 |
| 15                          | .64                        | 20                              | .03                                 | .31                        | 10                              | .00                                 | .34                        | 75                              | .07                                 |
| 16                          | 1.0                        | 10                              | .03                                 | .30                        | 10                              | .00                                 | 2.5                        | 300                             | 2.0                                 |
| 17                          | 4.8                        | 135                             | 1.7                                 | .30                        | 10                              | .00                                 | 1.6                        | 140                             | .60                                 |
| 18                          | 3.6                        | 22                              | .21                                 | .28                        | 10                              | .00                                 | .51                        | 120                             | .17                                 |
| 19                          | 1.6                        | 30                              | .13                                 | .27                        | 10                              | .00                                 | .39                        | 50                              | .05                                 |
| 20                          | 1.8                        | 41                              | .20                                 | .33                        | 10                              | .00                                 | .31                        | 40                              | .03                                 |
| 21                          | 1.3                        | 70                              | .25                                 | .38                        | 40                              | .04                                 | .22                        | 30                              | .02                                 |
| 22                          | 1.1                        | 59                              | .18                                 | .50                        | 55                              | .07                                 | .24                        | 20                              | .01                                 |
| 23                          | .86                        | 12                              | .03                                 | 1.4                        | 140                             | .53                                 | .20                        | 10                              | .00                                 |
| 24                          | .64                        | 15                              | .03                                 | 2.0                        | 90                              | .49                                 | .17                        | 10                              | .00                                 |
| 25                          | 1.0                        | 14                              | .04                                 | 1.8                        | 24                              | .12                                 | .15                        | 10                              | .00                                 |
| 26                          | 1.5                        | 75                              | .30                                 | 1.0                        | 24                              | .06                                 | .15                        | 10                              | .00                                 |
| 27                          | 2.8                        | 74                              | .56                                 | 1.4                        | 117                             | .44                                 | .14                        | 10                              | .00                                 |
| 28                          | 2.7                        | 48                              | .35                                 | 6.1                        | 195                             | 3.2                                 | .14                        | 20                              | .00                                 |
| 29                          | 2.1                        | 16                              | .09                                 | 4.2                        | 40                              | .45                                 | .24                        | 20                              | .01                                 |
| 30                          | 1.8                        | 13                              | .06                                 | 1.9                        | 30                              | .15                                 | .14                        | 10                              | .00                                 |
| 31                          | ---                        | ---                             | ---                                 | 1.1                        | 20                              | .06                                 | ---                        | ---                             | ---                                 |
| TOTAL                       | 38.26                      | ---                             | 4.57                                | 32.64                      | ---                             | 5.87                                | 14.97                      | ---                             | 3.76                                |
| JULY                        |                            |                                 |                                     |                            |                                 |                                     |                            |                                 |                                     |
| 1                           | .12                        | 10                              | .00                                 | 2.8                        | 31                              | .23                                 | 1.8                        | 418                             | 2.0                                 |
| 2                           | .10                        | 10                              | .00                                 | 1.5                        | 30                              | .12                                 | 9.9                        | 1710                            | 46                                  |
| 3                           | .14                        | 70                              | .03                                 | .72                        | 30                              | .06                                 | 3.6                        | 100                             | .97                                 |
| 4                           | .31                        | 40                              | .03                                 | .45                        | 48                              | .06                                 | 1.6                        | 40                              | .17                                 |
| 5                           | .14                        | 10                              | .00                                 | .34                        | 10                              | .00                                 | .72                        | 20                              | .04                                 |
| 6                           | .12                        | 10                              | .00                                 | .26                        | 10                              | .00                                 | .46                        | 10                              | .01                                 |
| 7                           | .10                        | 12                              | .00                                 | .20                        | 10                              | .00                                 | .24                        | 86                              | .06                                 |
| 8                           | .15                        | 10                              | .00                                 | .22                        | 10                              | .00                                 | .22                        | 50                              | .03                                 |
| 9                           | .22                        | 10                              | .00                                 | .25                        | 10                              | .00                                 | .20                        | 40                              | .02                                 |
| 10                          | .30                        | 40                              | .03                                 | .17                        | 9                               | .00                                 | .19                        | 40                              | .02                                 |
| 11                          | .45                        | 80                              | .10                                 | .13                        | 10                              | .00                                 | .17                        | 40                              | .02                                 |
| 12                          | .45                        | 80                              | .10                                 | .10                        | 10                              | .00                                 | .16                        | 40                              | .02                                 |
| 13                          | .30                        | 80                              | .06                                 | .08                        | 10                              | .00                                 | .14                        | 40                              | .02                                 |
| 14                          | .58                        | 50                              | .08                                 | .08                        | 10                              | .00                                 | .13                        | 40                              | .01                                 |
| 15                          | .34                        | 30                              | .03                                 | .06                        | 10                              | .00                                 | .12                        | 168                             | .05                                 |
| 16                          | 1.1                        | 754                             | 2.2                                 | .13                        | 10                              | .00                                 | .12                        | 40                              | .01                                 |
| 17                          | 2.3                        | 150                             | .93                                 | .14                        | 10                              | .00                                 | .11                        | 40                              | .01                                 |
| 18                          | 1.0                        | 40                              | .11                                 | .13                        | 10                              | .00                                 | .10                        | 40                              | .01                                 |
| 19                          | 1.7                        | 218                             | 1.0                                 | .11                        | 10                              | .00                                 | .09                        | 40                              | .00                                 |
| 20                          | .80                        | 100                             | .22                                 | .09                        | 18                              | .00                                 | .08                        | 40                              | .00                                 |
| 21                          | .42                        | 40                              | .05                                 | .09                        | 10                              | .00                                 | .07                        | 40                              | .00                                 |
| 22                          | .59                        | 55                              | .09                                 | .09                        | 10                              | .00                                 | .07                        | 95                              | .02                                 |
| 23                          | .42                        | 40                              | .05                                 | .08                        | 10                              | .00                                 | .06                        | 40                              | .00                                 |
| 24                          | .31                        | 30                              | .03                                 | .51                        | 252                             | .35                                 | .06                        | 40                              | .00                                 |
| 25                          | .22                        | 30                              | .02                                 | .20                        | 7                               | .00                                 | .06                        | 40                              | .00                                 |
| 26                          | .16                        | 30                              | .01                                 | .12                        | 10                              | .00                                 | .09                        | 20                              | .00                                 |
| 27                          | .12                        | 30                              | .00                                 | .12                        | 10                              | .00                                 | .29                        | 20                              | .02                                 |
| 28                          | .12                        | 29                              | .00                                 | .09                        | 10                              | .00                                 | .12                        | 20                              | .00                                 |
| 29                          | .11                        | 30                              | .00                                 | .09                        | 10                              | .00                                 | .12                        | 20                              | .00                                 |
| 30                          | .10                        | 30                              | .00                                 | .09                        | 10                              | .00                                 | .11                        | 20                              | .00                                 |
| 31                          | 6.8                        | 699                             | 13                                  | .81                        | 88                              | .19                                 | ---                        | ---                             | ---                                 |
| TOTAL                       | 20.09                      | ---                             | 18.17                               | 10.25                      | ---                             | 1.01                                | 21.20                      | ---                             | 49.51                               |
| TOTAL LOAD FOR YEAR: 430.51 |                            |                                 |                                     |                            |                                 |                                     |                            |                                 |                                     |

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      | NOVEMBER                            |                            |                                      | DECEMBER                            |                            |                                      |                                     |
| 1       | .09                        | 5                                    | .00                                 | .08                        | 5                                    | .00                                 | 17                         | 154                                  | 7.6                                 |
| 2       | .09                        | 5                                    | .00                                 | .06                        | 5                                    | .00                                 | 6.5                        | 55                                   | .97                                 |
| 3       | .08                        | 5                                    | .00                                 | 2.1                        | 320                                  | 2.6                                 | 3.6                        | 30                                   | .29                                 |
| 4       | .09                        | 5                                    | .00                                 | 2.9                        | 69                                   | .75                                 | 2.7                        | 20                                   | .15                                 |
| 5       | .06                        | 5                                    | .00                                 | .87                        | 10                                   | .02                                 | 8.7                        | 94                                   | 2.8                                 |
| 6       | .05                        | 3                                    | .00                                 | .48                        | 10                                   | .01                                 | 6.3                        | 46                                   | .78                                 |
| 7       | .07                        | 5                                    | .00                                 | .32                        | 10                                   | .00                                 | 2.8                        | 35                                   | .26                                 |
| 8       | .12                        | 5                                    | .00                                 | .24                        | 10                                   | .00                                 | 2.5                        | 19                                   | .13                                 |
| 9       | .16                        | 5                                    | .00                                 | .24                        | 10                                   | .00                                 | 1.4                        | 118                                  | .45                                 |
| 10      | .20                        | 5                                    | .00                                 | .19                        | 6                                    | .00                                 | 1.1                        | 50                                   | .15                                 |
| 11      | .25                        | 10                                   | .00                                 | .16                        | 10                                   | .00                                 | 1.4                        | 100                                  | .38                                 |
| 12      | .32                        | 10                                   | .00                                 | 2.0                        | 154                                  | 1.5                                 | 1.9                        | 50                                   | .26                                 |
| 13      | .35                        | 12                                   | .01                                 | 1.5                        | 10                                   | .04                                 | 1.7                        | 50                                   | .23                                 |
| 14      | .29                        | 10                                   | .00                                 | .95                        | 10                                   | .03                                 | 1.7                        | 50                                   | .23                                 |
| 15      | .26                        | 10                                   | .00                                 | .65                        | 10                                   | .02                                 | 13                         | 569                                  | 51                                  |
| 16      | .21                        | 10                                   | .00                                 | .45                        | 10                                   | .01                                 | 13                         | 106                                  | 5.5                                 |
| 17      | .16                        | 10                                   | .00                                 | 1.4                        | 24                                   | .09                                 | 4.3                        | 20                                   | .23                                 |
| 18      | .13                        | 20                                   | .00                                 | 5.5                        | 41                                   | .61                                 | 2.9                        | 20                                   | .16                                 |
| 19      | .11                        | 20                                   | .00                                 | 4.4                        | 21                                   | .25                                 | 2.4                        | 20                                   | .13                                 |
| 20      | .06                        | 51                                   | .00                                 | 2.4                        | 10                                   | .06                                 | 1.9                        | 20                                   | .10                                 |
| 21      | .03                        | 20                                   | .00                                 | 1.8                        | 10                                   | .05                                 | 1.6                        | 47                                   | .20                                 |
| 22      | .03                        | 10                                   | .00                                 | 3.5                        | 30                                   | .28                                 | 1.5                        | 40                                   | .16                                 |
| 23      | .02                        | 10                                   | .00                                 | 3.1                        | 20                                   | .17                                 | 2.5                        | 50                                   | .34                                 |
| 24      | .02                        | 5                                    | .00                                 | 5.5                        | 21                                   | .31                                 | 2.2                        | 20                                   | .12                                 |
| 25      | .04                        | 5                                    | .00                                 | 3.0                        | 20                                   | .16                                 | 3.8                        | 63                                   | 1.5                                 |
| 26      | .04                        | 5                                    | .00                                 | 2.0                        | 20                                   | .11                                 | 7.0                        | 102                                  | 2.4                                 |
| 27      | .04                        | 5                                    | .00                                 | 2.1                        | 30                                   | .17                                 | 6.6                        | 41                                   | .73                                 |
| 28      | .05                        | 1                                    | .00                                 | 13                         | 294                                  | 18                                  | 13                         | 100                                  | 5.4                                 |
| 29      | .06                        | 5                                    | .00                                 | 11                         | 81                                   | 2.8                                 | 6.2                        | 18                                   | .30                                 |
| 30      | .07                        | 5                                    | .00                                 | 4.0                        | 54                                   | .58                                 | 3.3                        | 20                                   | .18                                 |
| 31      | .09                        | 5                                    | .00                                 | ---                        | ---                                  | ---                                 | 2.2                        | 10                                   | .06                                 |
| TOTAL   | 3.64                       | ---                                  | 0.01                                | 75.89                      | ---                                  | 28.62                               | 146.7                      | ---                                  | 83.19                               |
| JANUARY |                            |                                      | FEBRUARY                            |                            |                                      | MARCH                               |                            |                                      |                                     |
| 1       | 1.7                        | 10                                   | .05                                 | 1.6                        | 100                                  | 2.6                                 | 1.2                        | 10                                   | .03                                 |
| 2       | 1.4                        | 17                                   | .06                                 | 20                         | 700                                  | 75                                  | 1.1                        | 10                                   | .03                                 |
| 3       | 1.1                        | 30                                   | .09                                 | 4.9                        | 22                                   | .29                                 | 1.0                        | 10                                   | .03                                 |
| 4       | .97                        | 33                                   | .09                                 | 3.4                        | 20                                   | .18                                 | .94                        | 10                                   | .03                                 |
| 5       | .86                        | 6                                    | .01                                 | 2.6                        | 20                                   | .14                                 | 1.0                        | 20                                   | .05                                 |
| 6       | .79                        | 13                                   | .03                                 | 2.9                        | 10                                   | .08                                 | 17                         | 839                                  | 75                                  |
| 7       | .70                        | 9                                    | .02                                 | 2.6                        | 10                                   | .07                                 | 5.5                        | 34                                   | .50                                 |
| 8       | .61                        | 10                                   | .02                                 | 2.3                        | 11                                   | .07                                 | 4.0                        | 20                                   | .22                                 |
| 9       | .92                        | 92                                   | .23                                 | 1.9                        | 10                                   | .05                                 | 2.9                        | 25                                   | .20                                 |
| 10      | .94                        | 16                                   | .04                                 | 6.6                        | 94                                   | 2.4                                 | 2.3                        | 36                                   | .22                                 |
| 11      | .94                        | 34                                   | .09                                 | 9.3                        | 39                                   | .98                                 | 2.0                        | 30                                   | .16                                 |
| 12      | .95                        | 20                                   | .05                                 | 5.0                        | 10                                   | .14                                 | 1.7                        | 30                                   | .14                                 |
| 13      | .87                        | 20                                   | .05                                 | 3.8                        | 10                                   | .10                                 | 1.4                        | 20                                   | .08                                 |
| 14      | .92                        | 20                                   | .05                                 | 2.9                        | 10                                   | .08                                 | 1.3                        | 20                                   | .07                                 |
| 15      | 1.0                        | 20                                   | .05                                 | 2.1                        | 10                                   | .06                                 | 1.2                        | 20                                   | .06                                 |
| 16      | .87                        | 10                                   | .02                                 | 1.8                        | 10                                   | .05                                 | 1.1                        | 20                                   | .06                                 |
| 17      | .86                        | 10                                   | .02                                 | 1.5                        | 10                                   | .04                                 | 1.0                        | 10                                   | .03                                 |
| 18      | .63                        | 8                                    | .01                                 | 1.2                        | 10                                   | .03                                 | 1.0                        | 10                                   | .03                                 |
| 19      | .49                        | 10                                   | .01                                 | 1.1                        | 10                                   | .03                                 | .86                        | 10                                   | .02                                 |
| 20      | .50                        | 10                                   | .01                                 | .93                        | 10                                   | .03                                 | 3.4                        | 112                                  | 3.0                                 |
| 21      | 1.0                        | 40                                   | .11                                 | .82                        | 10                                   | .02                                 | 6.8                        | 57                                   | 1.2                                 |
| 22      | 1.5                        | 40                                   | .16                                 | 1.2                        | 20                                   | .06                                 | 3.9                        | 30                                   | .32                                 |
| 23      | 1.5                        | 30                                   | .12                                 | 1.3                        | 20                                   | .07                                 | 2.9                        | 22                                   | .17                                 |
| 24      | 1.4                        | 30                                   | .11                                 | 1.4                        | 10                                   | .04                                 | 2.3                        | 20                                   | .12                                 |
| 25      | 1.3                        | 30                                   | .11                                 | 1.4                        | 7                                    | .03                                 | 1.7                        | 10                                   | .05                                 |
| 26      | 1.1                        | 30                                   | .09                                 | 1.3                        | 10                                   | .04                                 | 1.4                        | 10                                   | .04                                 |
| 27      | 1.1                        | 20                                   | .06                                 | 1.2                        | 10                                   | .03                                 | 2.3                        | 30                                   | .19                                 |
| 28      | 1.0                        | 10                                   | .03                                 | 1.2                        | 10                                   | .03                                 | 2.1                        | 20                                   | .11                                 |
| 29      | .92                        | 10                                   | .02                                 | ---                        | ---                                  | ---                                 | 1.9                        | 10                                   | .05                                 |
| 30      | 1.4                        | 40                                   | .15                                 | ---                        | ---                                  | ---                                 | 1.7                        | 10                                   | .05                                 |
| 31      | 1.2                        | 30                                   | .10                                 | ---                        | ---                                  | ---                                 | 1.6                        | 10                                   | .04                                 |
| TOTAL   | 31.44                      | ---                                  | 2.06                                | 88.25                      | ---                                  | 82.74                               | 80.50                      | ---                                  | 82.30                               |

## CUMBERLAND RIVER BASIN

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 1.9                        | 10                                   | .05                                 | 1.3                        | 20                                   | .07                                 | .65                        | 50                                   | .09                                 |
| 2     | 6.0                        | 133                                  | 2.8                                 | 1.2                        | 20                                   | .06                                 | .52                        | 30                                   | .04                                 |
| 3     | 5.0                        | 40                                   | .54                                 | 7.9                        | 350                                  | 14                                  | .40                        | 20                                   | .02                                 |
| 4     | 3.5                        | 20                                   | .19                                 | 5.4                        | 42                                   | .61                                 | 2.5                        | 130                                  | .88                                 |
| 5     | 27                         | 1370                                 | 172                                 | 3.3                        | 30                                   | .27                                 | 1.0                        | 60                                   | .16                                 |
| 6     | 9.9                        | 104                                  | 2.8                                 | 2.3                        | 20                                   | .12                                 | 1.8                        | 130                                  | .63                                 |
| 7     | 4.8                        | 95                                   | 1.2                                 | 1.7                        | 20                                   | .09                                 | 1.6                        | 60                                   | .26                                 |
| 8     | 3.3                        | 80                                   | .71                                 | 11                         | 571                                  | 30                                  | 1.1                        | 30                                   | .09                                 |
| 9     | 6.5                        | 111                                  | 2.4                                 | 4.8                        | 40                                   | .52                                 | .72                        | 13                                   | .03                                 |
| 10    | 3.9                        | 20                                   | .21                                 | 3.0                        | 33                                   | .27                                 | .51                        | 20                                   | .03                                 |
| 11    | 2.9                        | 20                                   | .16                                 | 2.1                        | 30                                   | .17                                 | .37                        | 20                                   | .02                                 |
| 12    | 2.2                        | 20                                   | .12                                 | 1.7                        | 20                                   | .09                                 | .30                        | 20                                   | .02                                 |
| 13    | 1.9                        | 20                                   | .10                                 | 5.2                        | 228                                  | 14                                  | .28                        | 20                                   | .02                                 |
| 14    | 3.2                        | 61                                   | 1.6                                 | 5.3                        | 39                                   | .56                                 | .24                        | 20                                   | .01                                 |
| 15    | 7.0                        | 70                                   | 1.8                                 | 3.6                        | 22                                   | .21                                 | .24                        | 20                                   | .01                                 |
| 16    | 3.9                        | 30                                   | .32                                 | 4.8                        | 42                                   | .54                                 | .22                        | 20                                   | .01                                 |
| 17    | 2.8                        | 20                                   | .15                                 | 3.3                        | 24                                   | .21                                 | .22                        | 35                                   | .02                                 |
| 18    | 2.4                        | 20                                   | .13                                 | 2.1                        | 20                                   | .11                                 | .27                        | 20                                   | .01                                 |
| 19    | 1.8                        | 20                                   | .10                                 | 16                         | 576                                  | 48                                  | .24                        | 10                                   | .00                                 |
| 20    | 1.5                        | 20                                   | .08                                 | 4.8                        | 35                                   | .45                                 | .24                        | 10                                   | .00                                 |
| 21    | 1.3                        | 20                                   | .07                                 | 34                         | 1280                                 | 176                                 | .24                        | 6                                    | .00                                 |
| 22    | 1.4                        | 20                                   | .08                                 | 20                         | 633                                  | 31                                  | .22                        | 10                                   | .00                                 |
| 23    | 4.5                        | 99                                   | 2.1                                 | 9.2                        | 690                                  | 17                                  | .18                        | 10                                   | .00                                 |
| 24    | 6.0                        | 30                                   | .49                                 | 5.2                        | 297                                  | 4.2                                 | .15                        | 10                                   | .00                                 |
| 25    | 4.3                        | 20                                   | .23                                 | 3.4                        | 190                                  | 1.7                                 | .13                        | 10                                   | .00                                 |
| 26    | 3.0                        | 138                                  | 1.1                                 | 2.4                        | 120                                  | .78                                 | .12                        | 10                                   | .00                                 |
| 27    | 2.3                        | 20                                   | .12                                 | 1.8                        | 54                                   | .26                                 | .19                        | 33                                   | .02                                 |
| 28    | 2.0                        | 20                                   | .11                                 | 1.5                        | 30                                   | .12                                 | .55                        | 30                                   | .04                                 |
| 29    | 1.7                        | 20                                   | .09                                 | 1.7                        | 100                                  | .46                                 | .19                        | 20                                   | .01                                 |
| 30    | 1.5                        | 20                                   | .08                                 | 1.4                        | 100                                  | .38                                 | .20                        | 10                                   | .00                                 |
| 31    | ---                        | ---                                  | ---                                 | 1.0                        | 70                                   | .19                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 129.4                      | ---                                  | 191.93                              | 172.4                      | ---                                  | 342.44                              | 15.59                      | ---                                  | 2.42                                |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | .21                        | 30                                   | .02                                 | .04                        | 1                                    | .00                                 | .01                        | 5                                    | .00                                 |
| 2     | .35                        | 10                                   | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 3     | .22                        | 10                                   | .00                                 | .01                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 4     | .16                        | 10                                   | .00                                 | .05                        | 10                                   | .00                                 | .00                        | 0                                    | .00                                 |
| 5     | .21                        | 10                                   | .00                                 | .07                        | 10                                   | .00                                 | .00                        | 0                                    | .00                                 |
| 6     | .13                        | 10                                   | .00                                 | .08                        | 10                                   | .00                                 | .00                        | 0                                    | .00                                 |
| 7     | .09                        | 10                                   | .00                                 | .05                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 8     | .07                        | 10                                   | .00                                 | .05                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 9     | .07                        | 10                                   | .00                                 | .04                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 10    | .06                        | 10                                   | .00                                 | .04                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 11    | .06                        | 10                                   | .00                                 | 1.1                        | 291                                  | 7.1                                 | .00                        | 0                                    | .00                                 |
| 12    | .06                        | 10                                   | .00                                 | .58                        | 45                                   | .07                                 | .00                        | 0                                    | .00                                 |
| 13    | .03                        | 10                                   | .00                                 | .16                        | 20                                   | .00                                 | .00                        | 0                                    | .00                                 |
| 14    | .03                        | 10                                   | .00                                 | .12                        | 10                                   | .00                                 | .00                        | 0                                    | .00                                 |
| 15    | .11                        | 30                                   | .00                                 | .07                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 16    | .20                        | 10                                   | .00                                 | .02                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 17    | .19                        | 10                                   | .00                                 | .02                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 18    | .19                        | 40                                   | .02                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 19    | .63                        | 162                                  | .93                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 20    | 1.3                        | 292                                  | 7.1                                 | .02                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 21    | .58                        | 69                                   | .11                                 | .00                        | 0                                    | .00                                 | .32                        | 50                                   | .04                                 |
| 22    | .40                        | 30                                   | .03                                 | .00                        | 0                                    | .00                                 | .26                        | 20                                   | .01                                 |
| 23    | .40                        | 10                                   | .01                                 | .00                        | 5                                    | .00                                 | .26                        | 10                                   | .00                                 |
| 24    | .40                        | 10                                   | .01                                 | .10                        | 20                                   | .00                                 | .25                        | 10                                   | .00                                 |
| 25    | .47                        | 20                                   | .03                                 | .27                        | 5                                    | .00                                 | .17                        | 5                                    | .00                                 |
| 26    | .40                        | 10                                   | .01                                 | .17                        | 5                                    | .00                                 | .01                        | 5                                    | .00                                 |
| 27    | .29                        | 10                                   | .00                                 | .14                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 28    | .29                        | 10                                   | .00                                 | .11                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 29    | .19                        | 10                                   | .00                                 | .05                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 30    | .12                        | 10                                   | .00                                 | .02                        | 5                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 31    | .06                        | 10                                   | .00                                 | .02                        | 5                                    | .00                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 7.97                       | ---                                  | 8.27                                | 3.40                       | ---                                  | 7.17                                | 1.28                       | ---                                  | 0.05                                |

TOTAL LOAD FOR YEAR: 831.20

## CUMBERLAND RIVER BASIN

47

361341084253900 SHACK CREEK AT HEMBREE (034078755), TN

LOCATION.--Lat 36°13'41", long 84°25'39", Scott County, Hydrologic Unit 05130104, on left bank 0.4 mi west of Hembree, 4.1 mi southeast of Lone Mountain, and 5.8 mi northwest of Braytown.

DRAINAGE AREA.--5.08 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1982 to March 1984 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,370 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: March 28-31. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft<sup>3</sup>/s, May 21, 1983 gage height, 7.90 ft; minimum discharge, 0.09 ft<sup>3</sup>/s, Oct. 4, 1983.

EXTREMES FOR CURRENT PERIOD.--October 1983 to March 1984: Maximum discharge, 681 ft<sup>3</sup>/s, Dec. 2, gage height, 6.42 ft; minimum discharge, 0.09 ft<sup>3</sup>/s, Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO MARCH 1984  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN   | FEB   | MAR   | APR | MAY | JUN  | JUL  | AUG | SEP   |
|-------------|-------|---------|-------|-------|-------|-------|-----|-----|------|------|-----|-------|
| 1           | .18   | .96     | 7.9   | 8.7   | 5.7   | 14    |     |     |      |      |     |       |
| 2           | .18   | .89     | 144   | 7.3   | 5.3   | 13    |     |     |      |      |     |       |
| 3           | .15   | .89     | 97    | 6.2   | 5.3   | 11    |     |     |      |      |     |       |
| 4           | .11   | 4.6     | 82    | 5.6   | 4.8   | 9.9   |     |     |      |      |     |       |
| 5           | 2.2   | 2.0     | 32    | 6.0   | 4.5   | 11    |     |     |      |      |     |       |
| 6           | .52   | 1.4     | 26    | 5.9   | 4.6   | 12    |     |     |      |      |     |       |
| 7           | .33   | 1.2     | 17    | 4.9   | 5.7   | 10    |     |     |      |      |     |       |
| 8           | .26   | 1.2     | 14    | 4.2   | 7.2   | 9.6   |     |     |      |      |     |       |
| 9           | .24   | 1.2     | 9.7   | 4.0   | 6.5   | 7.9   |     |     |      |      |     |       |
| 10          | .24   | 1.6     | 7.6   | 11    | 14    | 6.7   |     |     |      |      |     |       |
| 11          | .23   | 2.1     | 45    | 10    | 49    | 6.5   |     |     |      |      |     |       |
| 12          | .80   | 2.1     | 38    | 8.5   | 35    | 6.2   |     |     |      |      |     |       |
| 13          | 31    | 1.6     | 22    | 7.8   | 124   | 14    |     |     |      |      |     |       |
| 14          | 3.1   | 1.4     | 27    | 7.3   | 81    | 12    |     |     |      |      |     |       |
| 15          | 1.4   | 19      | 22    | 6.6   | 33    | 10    |     |     |      |      |     |       |
| 16          | 1.1   | 8.8     | 15    | 6.5   | 19    | 20    |     |     |      |      |     |       |
| 17          | .95   | 5.1     | 11    | 5.3   | 14    | 17    |     |     |      |      |     |       |
| 18          | .75   | 3.7     | 8.2   | 4.9   | 11    | 15    |     |     |      |      |     |       |
| 19          | .76   | 2.6     | 6.9   | 3.3   | 9.9   | 12    |     |     |      |      |     |       |
| 20          | .75   | 25      | 5.9   | 3.9   | 7.6   | 113   |     |     |      |      |     |       |
| 21          | .85   | 14      | 5.6   | 5.2   | 6.9   | 102   |     |     |      |      |     |       |
| 22          | 1.3   | 7.1     | 24    | 7.2   | 6.2   | 31    |     |     |      |      |     |       |
| 23          | 16    | 12      | 16    | 7.3   | 6.6   | 21    |     |     |      |      |     |       |
| 24          | 4.6   | 26      | 9.2   | 135   | 6.1   | 15    |     |     |      |      |     |       |
| 25          | 4.9   | 11      | 6.6   | 41    | 6.0   | 16    |     |     |      |      |     |       |
| 26          | 3.1   | 6.5     | 6.5   | 21    | 4.9   | 13    |     |     |      |      |     |       |
| 27          | 2.1   | 25      | 7.0   | 16    | 30    | 13    |     |     |      |      |     |       |
| 28          | 1.4   | 102     | 79    | 12    | 46    | 150   |     |     |      |      |     |       |
| 29          | 1.3   | 23      | 33    | 10    | 22    | 120   |     |     |      |      |     |       |
| 30          | 1.1   | 12      | 16    | 7.9   | ---   | 55    |     |     |      |      |     |       |
| 31          | 1.1   | ---     | 10    | 6.4   | ---   | 30    |     |     |      |      |     |       |
| TOTAL       | 83.00 | 325.94  | 851.1 | 396.9 | 581.8 | 896.8 |     |     |      |      |     |       |
| MEAN        | 2.68  | 10.9    | 27.5  | 12.8  | 20.1  | 28.9  |     |     |      |      |     |       |
| MAX         | 31    | 102     | 144   | 135   | 124   | 150   |     |     |      |      |     |       |
| MIN         | .11   | .89     | 5.6   | 3.3   | 4.5   | 6.2   |     |     |      |      |     |       |
| CFSM        | .53   | 2.15    | 5.41  | 2.52  | 3.96  | 5.69  |     |     |      |      |     |       |
| IN.         | .61   | 2.39    | 6.23  | 2.91  | 4.26  | 6.57  |     |     |      |      |     |       |
| CAL YR 1983 | TOTAL | 4938.88 | MEAN  | 13.5  | MAX   | 391   | MIN | .11 | CFSM | 2.66 | IN. | 36.17 |



## CUMBERLAND RIVER BASIN

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1982 to March 1984 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1982 to March 1984 (discontinued).

WATER TEMPERATURE: April 1982 to March 1984 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: April 1982 to March 1984 (discontinued).

INSTRUMENTATION.--Two-parameter water-quality monitor and sediment pumping sampler.

REMARKS.--Interruptions in the record were due to malfunctions of the instruments. Although the following tables are representative of conditions at the site, releases from impoundments upstream of the gage may have affected natural water-quality conditions.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 543 microsiemens, Sept. 23, 1982; minimum, 104 microsiemens, July 16, 1982.

WATER TEMPERATURE: Maximum, 27.5°C, July 21, 1982, July 22, 24, 1983; minimum, 0.0°C, on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,450 mg/L, July 23, 1982, due to construction work upstream; minimum daily mean, 1 mg/L, several days in 1984.

SEDIMENT LOADS: Maximum daily, 3,810 tons May 21, 1983; minimum daily, 0 ton, several days in 1983, 1984.

EXTREMES FOR APRIL TO SEPTEMBER 1982.--

SPECIFIC CONDUCTANCE: Maximum, 543 microsiemens, Sept. 23; minimum, 104 microsiemens, July 16.

WATER TEMPERATURE: Maximum, 27.5°C, July 21; minimum, 6.0°C, April 23, 24.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,450 mg/L, July 23, due to construction work upstream; minimum daily mean, 9 mg/L, May 10.

SEDIMENT LOADS: Maximum daily, 2,070 tons, Sept. 2; minimum daily, .01 ton, Aug. 22.

EXTREMES FOR WATER YEAR 1983.--

SPECIFIC CONDUCTANCE: Maximum, 517 microsiemens, Feb. 6; minimum, 119 microsiemens, May 13.

WATER TEMPERATURE: Maximum, 27.5°C, July 22, 24; minimum, 0.0°C, Jan. 16, 18-21, Feb. 8.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,000 mg/L May 21; minimum daily mean, 3 mg/L Sept. 23, 24.

SEDIMENT LOADS: Maximum daily, 3,810 tons May 21; minimum daily, 0 ton, several days.

EXTREMES FOR OCTOBER 1983 TO MARCH 1984.--

SPECIFIC CONDUCTANCE: Maximum, 438 microsiemens, Nov. 3; minimum, 156 microsiemens, Dec. 2.

WATER TEMPERATURE: Maximum, 19.0°C, Oct. 5; minimum, 0.0°C, many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 910 mg/L, Feb. 13; minimum daily mean, 1 mg/L, several days.

SEDIMENT LOADS: Maximum daily, 1,010 tons, Dec. 2; minimum daily, 0 ton, several days.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
|       | FEBRUARY |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1     |          |     |      |       |     |      | ---   | --- | ---  | 206 | 201 | 203  |
| 2     |          |     |      |       |     |      | ---   | --- | ---  | 213 | 202 | 209  |
| 3     |          |     |      |       |     |      | ---   | --- | ---  | 221 | 212 | 216  |
| 4     |          |     |      |       |     |      | ---   | --- | ---  | 226 | 218 | 222  |
| 5     |          |     |      |       |     |      | ---   | --- | ---  | 230 | 223 | 226  |
| 6     |          |     |      |       |     |      | ---   | --- | ---  | 232 | 226 | 229  |
| 7     |          |     |      |       |     |      | ---   | --- | ---  | 235 | 230 | 233  |
| 8     |          |     |      |       |     |      | ---   | --- | ---  | 249 | 236 | 246  |
| 9     |          |     |      |       |     |      | ---   | --- | ---  | 252 | 246 | 249  |
| 10    |          |     |      |       |     |      | ---   | --- | ---  | 258 | 250 | 253  |
| 11    |          |     |      |       |     |      | ---   | --- | ---  | 263 | 255 | 260  |
| 12    |          |     |      |       |     |      | 230   | 216 | 220  | 264 | 260 | 261  |
| 13    |          |     |      |       |     |      | 224   | 219 | 221  | 261 | 255 | 258  |
| 14    |          |     |      |       |     |      | 234   | 229 | 231  | 265 | 257 | 260  |
| 15    |          |     |      |       |     |      | ---   | --- | ---  | 265 | 258 | 261  |
| 16    |          |     |      |       |     |      | ---   | --- | ---  | 269 | 257 | 259  |
| 17    |          |     |      |       |     |      | ---   | --- | ---  | 261 | 205 | 250  |
| 18    |          |     |      |       |     |      | 191   | 183 | 186  | 282 | 244 | 270  |
| 19    |          |     |      |       |     |      | 189   | 184 | 186  | 296 | 279 | 286  |
| 20    |          |     |      |       |     |      | 197   | 188 | 193  | 299 | 266 | 287  |
| 21    |          |     |      |       |     |      | 202   | 196 | 199  | 312 | 272 | 301  |
| 22    |          |     |      |       |     |      | 204   | 198 | 200  | 315 | 275 | 301  |
| 23    |          |     |      |       |     |      | 205   | 198 | 201  | 293 | 278 | 287  |
| 24    |          |     |      |       |     |      | 220   | 200 | 205  | 287 | 210 | 276  |
| 25    |          |     |      |       |     |      | 224   | 201 | 212  | 211 | 194 | 199  |
| 26    |          |     |      |       |     |      | 229   | 205 | 222  | 213 | 204 | 208  |
| 27    |          |     |      |       |     |      | 229   | 210 | 220  | 240 | 175 | 216  |
| 28    |          |     |      |       |     |      | 212   | 199 | 205  | 212 | 136 | 184  |
| 29    |          |     |      |       |     |      | 198   | 195 | 196  | 191 | 164 | 177  |
| 30    |          |     |      |       |     |      | 202   | 198 | 200  | 217 | 191 | 206  |
| 31    |          |     |      |       |     |      | ---   | --- | ---  | 238 | 222 | 231  |
| MONTH |          |     |      |       |     |      | ---   | --- | ---  | 315 | 136 | 243  |

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX  | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
|       | JUNE |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 254  | 215 | 243  | 323  | 316 | 319  | 255    | 242 | 250  | 381       | 227 | 299  |
| 2     | 254  | 246 | 250  | 320  | 313 | 316  | 313    | 253 | 271  | 332       | 145 | 273  |
| 3     | 254  | 246 | 250  | 318  | 194 | 291  | 305    | 273 | 281  | 216       | 194 | 204  |
| 4     | 257  | 234 | 248  | 317  | 236 | 296  | 284    | 270 | 277  | 259       | 218 | 227  |
| 5     | 256  | 240 | 248  | 324  | 310 | 315  | 284    | 276 | 280  | 286       | 236 | 259  |
| 6     | 247  | 242 | 244  | 326  | 313 | 317  | ---    | --- | ---  | 302       | 268 | 278  |
| 7     | 251  | 244 | 247  | 318  | 305 | 313  | ---    | --- | ---  | 328       | 281 | 304  |
| 8     | 260  | 251 | 256  | 312  | 185 | 285  | ---    | --- | ---  | 322       | 309 | 313  |
| 9     | 305  | 261 | 281  | 297  | 283 | 290  | ---    | --- | ---  | 338       | 312 | 322  |
| 10    | 313  | 286 | 301  | 300  | 131 | 273  | ---    | --- | ---  | 333       | 304 | 311  |
| 11    | 311  | 305 | 308  | 285  | 228 | 258  | 320    | 300 | 311  | 325       | 298 | 307  |
| 12    | 312  | 294 | 301  | 279  | 258 | 262  | 317    | 301 | 309  | 316       | 311 | 315  |
| 13    | 307  | 297 | 304  | 259  | 247 | 252  | 309    | 306 | 308  | 337       | 300 | 315  |
| 14    | 307  | 301 | 303  | 267  | 255 | 261  | 325    | 298 | 307  | 350       | 338 | 345  |
| 15    | 303  | 141 | 283  | 272  | 262 | 266  | 307    | 305 | 306  | 353       | 337 | 345  |
| 16    | 272  | 209 | 245  | 278  | 104 | 236  | 319    | 280 | 300  | 356       | 346 | 352  |
| 17    | 275  | 252 | 266  | 243  | 199 | 226  | 324    | 308 | 311  | 350       | 313 | 333  |
| 18    | 298  | 279 | 288  | 265  | 245 | 256  | 320    | 310 | 311  | 341       | 307 | 311  |
| 19    | 300  | 293 | 297  | 273  | 234 | 262  | 319    | 310 | 311  | 311       | 306 | 307  |
| 20    | 307  | 297 | 301  | 290  | 270 | 279  | 312    | 297 | 302  | 311       | 303 | 305  |
| 21    | 306  | 296 | 301  | 291  | 275 | 286  | 314    | 296 | 303  | 349       | 307 | 329  |
| 22    | 307  | 287 | 300  | 290  | 182 | 258  | 316    | 308 | 311  | 347       | 332 | 340  |
| 23    | 312  | 304 | 308  | 316  | 253 | 275  | 315    | 205 | 294  | 543       | 326 | 390  |
| 24    | 336  | 306 | 310  | 354  | 309 | 330  | 380    | 202 | 314  | 525       | 357 | 434  |
| 25    | 315  | 308 | 310  | 342  | 307 | 323  | 324    | 302 | 313  | 451       | 310 | 358  |
| 26    | 309  | 278 | 299  | 334  | 320 | 325  | 320    | 311 | 314  | 338       | 288 | 327  |
| 27    | 314  | 300 | 309  | 321  | 293 | 310  | 319    | 311 | 313  | 476       | 300 | 363  |
| 28    | 317  | 262 | 310  | 312  | 220 | 283  | 319    | 301 | 308  | 472       | 351 | 383  |
| 29    | 323  | 262 | 307  | 304  | 299 | 301  | 326    | 311 | 315  | 379       | 350 | 357  |
| 30    | 324  | 319 | 321  | 317  | 266 | 297  | 313    | 307 | 311  | 369       | 344 | 352  |
| 31    | ---  | --- | ---  | 279  | 196 | 249  | 309    | 221 | 257  | ---       | --- | ---  |
| MONTH | 336  | 141 | 285  | 354  | 104 | 284  | 380    | 202 | 300  | 543       | 145 | 322  |

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 352     | 345 | 348  | 357      | 343 | 345  | 260      | 182 | 224  | 275     | 266 | 271  |
| 2     | 355     | 351 | 352  | 345      | 341 | 343  | 272      | 259 | 267  | 286     | 276 | 279  |
| 3     | 353     | 348 | 351  | 343      | 249 | 297  | 275      | 269 | 267  | 291     | 287 | 291  |
| 4     | 355     | 350 | 352  | 295      | 265 | 271  | 279      | 272 | 277  | ---     | --- | ---  |
| 5     | 353     | 351 | 352  | 276      | 272 | 274  | 281      | 266 | 275  | ---     | --- | ---  |
| 6     | 357     | 352 | 354  | 282      | 280 | 282  | 266      | 258 | 263  | ---     | --- | ---  |
| 7     | 355     | 334 | 345  | 310      | 288 | 293  | 264      | 258 | 262  | ---     | --- | ---  |
| 8     | 355     | 338 | 348  | 314      | 293 | 295  | 268      | 266 | 268  | ---     | --- | ---  |
| 9     | 355     | 353 | 354  | 328      | 298 | 312  | 274      | 221 | 258  | ---     | --- | ---  |
| 10    | 361     | 347 | 353  | 312      | 306 | 308  | 226      | 222 | 223  | 296     | 267 | 284  |
| 11    | 358     | 352 | 355  | 321      | 312 | 315  | 290      | 223 | 234  | 284     | 251 | 274  |
| 12    | 354     | 265 | 336  | 325      | 207 | 293  | 297      | 230 | 274  | 275     | 252 | 271  |
| 13    | 345     | 283 | 330  | 270      | 258 | 262  | 290      | 227 | 271  | 281     | 271 | 275  |
| 14    | 346     | 339 | 342  | 260      | 257 | 258  | 283      | 217 | 271  | 277     | 257 | 272  |
| 15    | 341     | 338 | 339  | 269      | 261 | 264  | 230      | 179 | 211  | 274     | 258 | 269  |
| 16    | 348     | 341 | 345  | 271      | 268 | 269  | 268      | 186 | 223  | 271     | 254 | 268  |
| 17    | 346     | 344 | 345  | 272      | 224 | 256  | 273      | 212 | 228  | 269     | 259 | 266  |
| 18    | 346     | 342 | 344  | 232      | 158 | 201  | 304      | 238 | 262  | 282     | 245 | 266  |
| 19    | 349     | 340 | 345  | 192      | 188 | 189  | 322      | 261 | 283  | 289     | 239 | 266  |
| 20    | 350     | 314 | 337  | 208      | 180 | 202  | 283      | 274 | 280  | 273     | 249 | 268  |
| 21    | 349     | 330 | 346  | 190      | 184 | 185  | 274      | 272 | 273  | 271     | 240 | 257  |
| 22    | 348     | 345 | 347  | 233      | 189 | 198  | 277      | 275 | 276  | 269     | 262 | 265  |
| 23    | 351     | 345 | 347  | 242      | 205 | 226  | 278      | 261 | 270  | 262     | 252 | 256  |
| 24    | 351     | 349 | 350  | 242      | 214 | 229  | 265      | 253 | 260  | 251     | 243 | 246  |
| 25    | 351     | 348 | 350  | 230      | 212 | 224  | 261      | 210 | 234  | 242     | 230 | 241  |
| 26    | 351     | 347 | 349  | 279      | 224 | 238  | 237      | 184 | 207  | 245     | 239 | 241  |
| 27    | 349     | 346 | 348  | 265      | 249 | 258  | 201      | 164 | 189  | 252     | 246 | 248  |
| 28    | 350     | 346 | 348  | 252      | 197 | 225  | 233      | 179 | 210  | 259     | 252 | 255  |
| 29    | 349     | 347 | 348  | 192      | 187 | 190  | 230      | 196 | 210  | 263     | 255 | 259  |
| 30    | 349     | 346 | 348  | 192      | 182 | 188  | 254      | 231 | 243  | 293     | 262 | 284  |
| 31    | 347     | 344 | 346  | ---      | --- | ---  | 265      | 252 | 259  | 287     | 270 | 278  |
| MONTH | 361     | 265 | 347  | 357      | 158 | 256  | 322      | 164 | 250  | ---     | --- | ---  |

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY      | MAX | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
| FEBRUARY |     |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1        | 271 | 214 | 261  | 266   | 261 | 263  | 251   | 216 | 245  | 265 | 247 | 260  |
| 2        | 213 | 155 | 170  | ---   | --- | ---  | 249   | 178 | 208  | --- | --- | ---  |
| 3        | 192 | 178 | 184  | ---   | --- | ---  | 198   | 173 | 189  | --- | --- | ---  |
| 4        | 217 | 186 | 209  | ---   | --- | ---  | 204   | 184 | 198  | 198 | 195 | 196  |
| 5        | 228 | 217 | 222  | ---   | --- | ---  | 205   | 125 | 159  | 217 | 198 | 206  |
| 6        | 517 | 224 | 235  | ---   | --- | ---  | 197   | 151 | 179  | 239 | 217 | 233  |
| 7        | 241 | 226 | 234  | ---   | --- | ---  | 214   | 195 | 207  | 245 | 235 | 241  |
| 8        | 229 | 221 | 225  | ---   | --- | ---  | 234   | 217 | 227  | 234 | 148 | 184  |
| 9        | 247 | 227 | 236  | ---   | --- | ---  | 238   | 189 | 224  | 190 | 177 | 182  |
| 10       | 279 | 242 | 260  | 257   | 251 | 253  | 213   | 203 | 210  | 207 | 190 | 196  |
| 11       | 243 | 209 | 218  | 265   | 257 | 260  | 219   | 214 | 217  | 221 | 207 | 215  |
| 12       | 219 | 209 | 213  | 279   | 265 | 270  | 228   | 221 | 225  | 229 | 217 | 220  |
| 13       | 231 | 220 | 226  | 282   | 274 | 278  | 237   | 231 | 234  | 252 | 119 | 232  |
| 14       | 244 | 233 | 239  | 286   | 278 | 280  | 263   | 194 | 240  | 221 | 205 | 208  |
| 15       | 253 | 245 | 250  | 282   | 276 | 279  | 228   | 192 | 203  | 229 | 210 | 218  |
| 16       | 262 | 254 | 256  | 323   | 279 | 280  | 205   | 197 | 201  | 238 | 219 | 227  |
| 17       | 272 | 263 | 265  | 286   | 277 | 282  | 220   | 209 | 215  | 219 | 215 | 216  |
| 18       | 281 | 273 | 276  | 296   | 282 | 285  | 240   | 215 | 229  | 223 | 216 | 220  |
| 19       | 281 | 278 | 280  | 305   | 297 | 303  | 249   | 238 | 243  | 225 | 157 | 182  |
| 20       | 285 | 280 | 284  | 300   | 207 | 280  | 251   | 230 | 244  | 182 | 159 | 166  |
| 21       | 292 | 286 | 290  | 235   | 206 | 210  | 245   | 242 | 243  | 204 | 120 | 157  |
| 22       | 302 | 256 | 289  | 215   | 205 | 210  | 250   | 241 | 245  | 202 | 144 | 167  |
| 23       | 303 | 291 | 295  | 223   | 214 | 219  | 253   | 211 | 237  | 197 | 176 | 185  |
| 24       | 309 | 279 | 297  | 232   | 223 | 228  | 236   | 187 | 209  | 238 | 197 | 209  |
| 25       | 301 | 283 | 290  | 242   | 232 | 234  | 194   | 187 | 190  | 235 | 220 | 227  |
| 26       | 283 | 268 | 274  | 252   | 241 | 245  | 206   | 194 | 201  | 242 | 237 | 240  |
| 27       | 268 | 263 | 266  | 271   | 233 | 258  | 215   | 206 | 212  | 254 | 244 | 250  |
| 28       | 269 | 261 | 264  | 257   | 249 | 253  | 223   | 215 | 219  | 266 | 256 | 262  |
| 29       | --- | --- | ---  | 249   | 246 | 248  | 248   | 223 | 235  | 287 | 224 | 267  |
| 30       | --- | --- | ---  | 248   | 243 | 245  | 254   | 248 | 251  | 289 | 283 | 285  |
| 31       | --- | --- | ---  | 246   | 242 | 244  | ---   | --- | ---  | 289 | 286 | 288  |
| MONTH    | 517 | 155 | 250  | ---   | --- | ---  | 263   | 125 | 218  | 289 | 119 | 219  |

| DAY   | MAX | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|-----|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| JUNE  |     |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 295 | 289 | 292  | ---  | --- | ---  | ---    | --- | ---  | 397       | 373 | 389  |
| 2     | 301 | 294 | 298  | ---  | --- | ---  | 390    | 386 | 387  | 396       | 388 | 392  |
| 3     | --- | --- | ---  | ---  | --- | ---  | 395    | 390 | 392  | 399       | 394 | 397  |
| 4     | --- | --- | ---  | ---  | --- | ---  | 392    | 326 | 373  | ---       | --- | ---  |
| 5     | --- | --- | ---  | ---  | --- | ---  | 371    | 338 | 361  | ---       | --- | ---  |
| 6     | --- | --- | ---  | ---  | --- | ---  | 384    | 372 | 378  | ---       | --- | ---  |
| 7     | 271 | 265 | 268  | ---  | --- | ---  | 416    | 341 | 385  | 380       | 369 | 376  |
| 8     | 272 | 264 | 268  | ---  | --- | ---  | 410    | 341 | 389  | 378       | 371 | 375  |
| 9     | 285 | 273 | 279  | ---  | --- | ---  | 409    | 402 | 406  | 373       | 363 | 368  |
| 10    | 291 | 285 | 289  | ---  | --- | ---  | 407    | 402 | 405  | 364       | 354 | 357  |
| 11    | 297 | 290 | 293  | ---  | --- | ---  | 406    | 164 | 368  | 355       | 169 | 308  |
| 12    | 291 | 286 | 289  | ---  | --- | ---  | 371    | 282 | 339  | 323       | 285 | 311  |
| 13    | 293 | 286 | 289  | ---  | --- | ---  | 373    | 362 | 367  | 331       | 288 | 318  |
| 14    | 316 | 291 | 305  | ---  | --- | ---  | 373    | 367 | 370  | 331       | 323 | 329  |
| 15    | 314 | 305 | 310  | ---  | --- | ---  | 379    | 373 | 376  | 325       | 316 | 320  |
| 16    | 306 | 303 | 305  | ---  | --- | ---  | 386    | 378 | 379  | 318       | 316 | 317  |
| 17    | 309 | 280 | 301  | ---  | --- | ---  | 389    | 380 | 384  | 324       | 316 | 317  |
| 18    | 332 | 295 | 315  | ---  | --- | ---  | 403    | 388 | 397  | 370       | 326 | 359  |
| 19    | 337 | 323 | 327  | 317  | 303 | 313  | 409    | 400 | 404  | 380       | 367 | 373  |
| 20    | 344 | 309 | 328  | 321  | 125 | 277  | 414    | 405 | 409  | 398       | 361 | 389  |
| 21    | 332 | 297 | 316  | 304  | 220 | 281  | 413    | 407 | 409  | 376       | 260 | 327  |
| 22    | 335 | 324 | 330  | 326  | 298 | 312  | 411    | 403 | 408  | 380       | 343 | 358  |
| 23    | 359 | 332 | 336  | 354  | 326 | 341  | 406    | 399 | 404  | 409       | 336 | 371  |
| 24    | 351 | 335 | 339  | 369  | 212 | 360  | 403    | 397 | 399  | 416       | 357 | 391  |
| 25    | 346 | 336 | 341  | 341  | 212 | 296  | 398    | 393 | 397  | 429       | 380 | 410  |
| 26    | 346 | 341 | 343  | 355  | 341 | 346  | 397    | 387 | 395  | 442       | 392 | 419  |
| 27    | 345 | 232 | 331  | 363  | 350 | 357  | 399    | 368 | 392  | 437       | 404 | 420  |
| 28    | 317 | 236 | 298  | 367  | 359 | 361  | 394    | 373 | 386  | ---       | --- | ---  |
| 29    | 320 | 313 | 314  | 375  | 360 | 365  | 394    | 386 | 391  | ---       | --- | ---  |
| 30    | --- | --- | ---  | 383  | 368 | 372  | 394    | 382 | 388  | ---       | --- | ---  |
| 31    | --- | --- | ---  | 382  | 378 | 379  | 392    | 388 | 390  | ---       | --- | ---  |
| MONTH | 359 | 232 | 308  | ---  | --- | ---  | 416    | 164 | 388  | ---       | --- | ---  |

## CUMBERLAND RIVER BASIN

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361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|----------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER  |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | ---      | --- | ---  | 424      | 414 | 417  | 329      | 299 | 311  | 312     | 231 | 237  |
| 2     | ---      | --- | ---  | 435      | 416 | 420  | 303      | 156 | 251  | 252     | 242 | 247  |
| 3     | 418      | 408 | 410  | 438      | 409 | 423  | 213      | 168 | 200  | 319     | 252 | 258  |
| 4     | 410      | 398 | 404  | 418      | 373 | 401  | 220      | 200 | 209  | 266     | 262 | 265  |
| 5     | 400      | 218 | 334  | 414      | 413 | 413  | 242      | 220 | 232  | 275     | 262 | 271  |
| 6     | 380      | 352 | 367  | 416      | 414 | 415  | 272      | 237 | 257  | 278     | 275 | 276  |
| 7     | 400      | 382 | 389  | 418      | 392 | 416  | 302      | 273 | 295  | 282     | 278 | 280  |
| 8     | 408      | 401 | 404  | 424      | 418 | 420  | 332      | 288 | 300  | 285     | 282 | 284  |
| 9     | 414      | 407 | 410  | 426      | 423 | 425  | 288      | 262 | 281  | 289     | 285 | 287  |
| 10    | 419      | 401 | 416  | 426      | 400 | 417  | 286      | 281 | 285  | 290     | 268 | 284  |
| 11    | 420      | 411 | 416  | 419      | 400 | 411  | 287      | 223 | 256  | 280     | 256 | 264  |
| 12    | 415      | 362 | 385  | 419      | 412 | 415  | 232      | 224 | 227  | 256     | 248 | 252  |
| 13    | 381      | 213 | 318  | 412      | 405 | 407  | 260      | 242 | 248  | 258     | 250 | 252  |
| 14    | 367      | 359 | 363  | 408      | 362 | 401  | 296      | 261 | 284  | 252     | 249 | 251  |
| 15    | 374      | 368 | 370  | 352      | 270 | 338  | 287      | 254 | 272  | 250     | 246 | 248  |
| 16    | ---      | --- | ---  | 354      | 343 | 350  | 257      | 251 | 254  | 250     | 242 | 246  |
| 17    | ---      | --- | ---  | 356      | 353 | 355  | 267      | 258 | 263  | 255     | 247 | 250  |
| 18    | 435      | 403 | 415  | 365      | 356 | 360  | 276      | 268 | 273  | 256     | 243 | 251  |
| 19    | 417      | 414 | 416  | 371      | 364 | 368  | 327      | 277 | 281  | 258     | 243 | 254  |
| 20    | 418      | 416 | 417  | 371      | 258 | 318  | 297      | 281 | 291  | 276     | 235 | 252  |
| 21    | 417      | 384 | 405  | 288      | 276 | 282  | 303      | 290 | 299  | 273     | 240 | 259  |
| 22    | 398      | 369 | 392  | 308      | 295 | 302  | 333      | 266 | 299  | 270     | 254 | 262  |
| 23    | 381      | 309 | 364  | 313      | 280 | 305  | 266      | 247 | 251  | 264     | 254 | 260  |
| 24    | 395      | 368 | 383  | 309      | 268 | 284  | 248      | 235 | 240  | 261     | 172 | 187  |
| 25    | 420      | 381 | 398  | 344      | 307 | 321  | 253      | 238 | 245  | 210     | 189 | 202  |
| 26    | 403      | 400 | 401  | 348      | 323 | 334  | 250      | 245 | 248  | 227     | 210 | 218  |
| 27    | 403      | 401 | 402  | 374      | 235 | 326  | 251      | 243 | 247  | 238     | 226 | 233  |
| 28    | 407      | 403 | 404  | 252      | 181 | 227  | 257      | 187 | 208  | 248     | 237 | 243  |
| 29    | 409      | 402 | 406  | 291      | 241 | 275  | 204      | 195 | 199  | 259     | 247 | 254  |
| 30    | 414      | 408 | 411  | 323      | 291 | 323  | 218      | 200 | 209  | 267     | 259 | 263  |
| 31    | 420      | 393 | 415  | ---      | --- | ---  | 232      | 217 | 225  | 277     | 267 | 272  |
| MONTH | 435      | 213 | 393  | 438      | 181 | 362  | 333      | 156 | 256  | 319     | 172 | 254  |
| DAY   | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|       | FEBRUARY |     |      | MARCH    |     |      | APRIL    |     |      | MAY     |     |      |
| 1     | 280      | 275 | 278  | 226      | 208 | 216  |          |     |      |         |     |      |
| 2     | 345      | 279 | 290  | 234      | 224 | 229  |          |     |      |         |     |      |
| 3     | 289      | 275 | 284  | 241      | 233 | 239  |          |     |      |         |     |      |
| 4     | 285      | 284 | 285  | 250      | 240 | 245  |          |     |      |         |     |      |
| 5     | 286      | 275 | 283  | 266      | 245 | 257  |          |     |      |         |     |      |
| 6     | 294      | 266 | 284  | 278      | 264 | 271  |          |     |      |         |     |      |
| 7     | 316      | 284 | 298  | 265      | 254 | 260  |          |     |      |         |     |      |
| 8     | 311      | 301 | 304  | 256      | 252 | 254  |          |     |      |         |     |      |
| 9     | 305      | 290 | 298  | 257      | 252 | 254  |          |     |      |         |     |      |
| 10    | 292      | 266 | 278  | 259      | 254 | 257  |          |     |      |         |     |      |
| 11    | 275      | 207 | 236  | 262      | 259 | 260  |          |     |      |         |     |      |
| 12    | 210      | 205 | 208  | 267      | 262 | 264  |          |     |      |         |     |      |
| 13    | 211      | 166 | 185  | 288      | 229 | 270  |          |     |      |         |     |      |
| 14    | 196      | 169 | 181  | 269      | 248 | 257  |          |     |      |         |     |      |
| 15    | 217      | 196 | 209  | 248      | 241 | 244  |          |     |      |         |     |      |
| 16    | 232      | 217 | 225  | 277      | 222 | 258  |          |     |      |         |     |      |
| 17    | 263      | 233 | 246  | 250      | 231 | 236  |          |     |      |         |     |      |
| 18    | 259      | 255 | 257  | 234      | 228 | 231  |          |     |      |         |     |      |
| 19    | 268      | 260 | 263  | 239      | 231 | 235  |          |     |      |         |     |      |
| 20    | 274      | 270 | 272  | 248      | 160 | 207  |          |     |      |         |     |      |
| 21    | 280      | 279 | 280  | 188      | 164 | 175  |          |     |      |         |     |      |
| 22    | 303      | 282 | 284  | 197      | 191 | 194  |          |     |      |         |     |      |
| 23    | 289      | 280 | 285  | 229      | 221 | 226  |          |     |      |         |     |      |
| 24    | 291      | 280 | 289  | 238      | 230 | 234  |          |     |      |         |     |      |
| 25    | 298      | 288 | 292  | 261      | 229 | 249  |          |     |      |         |     |      |
| 26    | 294      | 291 | 293  | 254      | 248 | 251  |          |     |      |         |     |      |
| 27    | 293      | 159 | 219  | 252      | 231 | 245  |          |     |      |         |     |      |
| 28    | 211      | 191 | 197  | ---      | --- | ---  |          |     |      |         |     |      |
| 29    | 211      | 194 | 203  | ---      | --- | ---  |          |     |      |         |     |      |
| 30    | ---      | --- | ---  | ---      | --- | ---  |          |     |      |         |     |      |
| 31    | ---      | --- | ---  | ---      | --- | ---  |          |     |      |         |     |      |
| MONTH | 345      | 159 | 259  | 288      | 160 | 241  |          |     |      |         |     |      |



## CUMBERLAND RIVER BASIN

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MAX      | MIN  | MEAN | MAX   | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|----------|------|------|-------|------|------|--------|------|------|-----------|------|------|
|       | FEBRUARY |      |      | MARCH |      |      | APRIL  |      |      | MAY       |      |      |
| 1     |          |      |      |       |      |      | ---    | ---  | ---  | 15.0      | 10.0 | 12.5 |
| 2     |          |      |      |       |      |      | ---    | ---  | ---  | 16.0      | 11.0 | 13.0 |
| 3     |          |      |      |       |      |      | ---    | ---  | ---  | 19.0      | 10.5 | 14.0 |
| 4     |          |      |      |       |      |      | ---    | ---  | ---  | 19.5      | 10.0 | 14.0 |
| 5     |          |      |      |       |      |      | ---    | ---  | ---  | 19.5      | 10.5 | 14.5 |
| 6     |          |      |      |       |      |      | ---    | ---  | ---  | 19.0      | 12.5 | 15.5 |
| 7     |          |      |      |       |      |      | ---    | ---  | ---  | 16.0      | 14.0 | 15.0 |
| 8     |          |      |      |       |      |      | ---    | ---  | ---  | 18.0      | 13.0 | 14.5 |
| 9     |          |      |      |       |      |      | ---    | ---  | ---  | 18.0      | 10.5 | 14.0 |
| 10    |          |      |      |       |      |      | ---    | ---  | ---  | 21.0      | 11.0 | 15.0 |
| 11    |          |      |      |       |      |      | ---    | ---  | ---  | 21.5      | 12.0 | 16.0 |
| 12    |          |      |      |       |      |      | ---    | ---  | ---  | 22.0      | 12.0 | 16.5 |
| 13    |          |      |      |       |      |      | 13.5   | 10.0 | 11.0 | 21.0      | 13.0 | 17.0 |
| 14    |          |      |      |       |      |      | 16.0   | 10.5 | 12.5 | 22.0      | 14.5 | 17.5 |
| 15    |          |      |      |       |      |      | ---    | ---  | ---  | 22.0      | 15.0 | 18.5 |
| 16    |          |      |      |       |      |      | ---    | ---  | ---  | 21.0      | 15.0 | 18.0 |
| 17    |          |      |      |       |      |      | ---    | ---  | ---  | 22.0      | 15.5 | 18.0 |
| 18    |          |      |      |       |      |      | 15.5   | 8.5  | 11.5 | 20.5      | 15.5 | 17.5 |
| 19    |          |      |      |       |      |      | 12.5   | 10.0 | 11.0 | 21.0      | 15.5 | 18.0 |
| 20    |          |      |      |       |      |      | 17.0   | 10.5 | 13.0 | 18.5      | 16.0 | 17.0 |
| 21    |          |      |      |       |      |      | 15.0   | 9.5  | 12.5 | 22.0      | 15.5 | 18.0 |
| 22    |          |      |      |       |      |      | 14.5   | 8.0  | 10.5 | 21.5      | 15.5 | 18.0 |
| 23    |          |      |      |       |      |      | 15.5   | 6.0  | 10.0 | 20.0      | 16.0 | 17.5 |
| 24    |          |      |      |       |      |      | 16.0   | 6.0  | 10.5 | 19.5      | 16.0 | 17.5 |
| 25    |          |      |      |       |      |      | 11.5   | 9.0  | 10.5 | 19.5      | 15.0 | 16.5 |
| 26    |          |      |      |       |      |      | 16.5   | 10.5 | 12.5 | 20.0      | 16.0 | 17.5 |
| 27    |          |      |      |       |      |      | 13.5   | 11.0 | 12.0 | 21.5      | 16.0 | 18.0 |
| 28    |          |      |      |       |      |      | 16.5   | 9.0  | 12.0 | 19.0      | 16.0 | 17.0 |
| 29    |          |      |      |       |      |      | 16.0   | 9.0  | 12.0 | 20.0      | 15.5 | 17.5 |
| 30    |          |      |      |       |      |      | 16.5   | 11.0 | 13.5 | 22.0      | 17.5 | 19.0 |
| 31    |          |      |      |       |      |      | ---    | ---  | ---  | 22.0      | 17.5 | 19.5 |
| MONTH |          |      |      |       |      |      | ---    | ---  | ---  | 22.0      | 10.0 | 16.5 |
| DAY   | MAX      | MIN  | MEAN | MAX   | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|       | JUNE     |      |      | JULY  |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 20.0     | 17.0 | 18.5 | 25.0  | 18.0 | 21.0 | 23.0   | 19.0 | 20.5 | 21.5      | 19.5 | 20.5 |
| 2     | 21.5     | 15.0 | 18.0 | 24.5  | 17.0 | 20.5 | 22.5   | 18.0 | 19.5 | 20.0      | 18.5 | 19.0 |
| 3     | 19.5     | 15.5 | 17.5 | 25.0  | 19.0 | 20.0 | 24.0   | 18.0 | 20.5 | 20.5      | 17.5 | 19.0 |
| 4     | 18.5     | 15.5 | 16.5 | 24.5  | 19.0 | 21.0 | 25.5   | 20.0 | 22.0 | 20.0      | 15.0 | 17.0 |
| 5     | 18.5     | 15.5 | 17.0 | 26.0  | 19.0 | 22.0 | 22.0   | 20.0 | 21.0 | 20.5      | 14.0 | 17.0 |
| 6     | 20.5     | 14.5 | 17.0 | 26.0  | 19.5 | 22.5 | ---    | ---  | ---  | 20.5      | 15.5 | 17.5 |
| 7     | 20.5     | 14.0 | 17.0 | 26.5  | 20.0 | 23.0 | ---    | ---  | ---  | 21.5      | 15.5 | 18.0 |
| 8     | 21.5     | 15.0 | 18.0 | 23.5  | 20.0 | 21.0 | ---    | ---  | ---  | 20.5      | 16.0 | 18.0 |
| 9     | 23.5     | 17.0 | 19.5 | 23.5  | 19.0 | 21.0 | ---    | ---  | ---  | 21.5      | 16.5 | 18.5 |
| 10    | 21.5     | 18.0 | 19.0 | 25.5  | 20.0 | 22.0 | ---    | ---  | ---  | 21.5      | 16.5 | 18.5 |
| 11    | 23.0     | 15.5 | 18.5 | 22.5  | 20.0 | 21.0 | 25.0   | 20.5 | 23.0 | 19.5      | 17.0 | 18.0 |
| 12    | 19.5     | 15.5 | 17.5 | 24.5  | 19.5 | 21.5 | 24.0   | 19.5 | 21.0 | 21.0      | 17.0 | 19.0 |
| 13    | 21.5     | 17.0 | 18.5 | 23.0  | 17.5 | 20.0 | 20.5   | 17.0 | 18.5 | 20.0      | 18.5 | 19.0 |
| 14    | 22.5     | 15.5 | 18.5 | 24.0  | 18.0 | 20.5 | 24.5   | 17.5 | 20.0 | 23.5      | 18.5 | 20.0 |
| 15    | 23.5     | 15.0 | 18.5 | 24.5  | 19.0 | 21.5 | 23.0   | 18.0 | 20.0 | 23.5      | 18.5 | 20.5 |
| 16    | 21.0     | 17.5 | 18.5 | 25.0  | 19.5 | 21.0 | 21.0   | 20.0 | 20.5 | 23.0      | 19.0 | 20.5 |
| 17    | 20.5     | 17.0 | 18.0 | 23.5  | 19.5 | 21.5 | 22.5   | 19.5 | 21.0 | 23.0      | 17.5 | 19.5 |
| 18    | 22.5     | 16.5 | 19.0 | 22.5  | 20.0 | 21.5 | 25.0   | 19.5 | 21.5 | 21.0      | 17.0 | 19.0 |
| 19    | 21.0     | 16.0 | 18.0 | 23.5  | 20.0 | 21.5 | 24.5   | 18.0 | 20.5 | 20.5      | 17.0 | 18.5 |
| 20    | 23.0     | 16.0 | 19.0 | 26.0  | 20.0 | 22.0 | 23.5   | 18.0 | 20.5 | 18.5      | 15.5 | 16.5 |
| 21    | 23.0     | 14.5 | 18.5 | 27.5  | 20.5 | 23.0 | 24.5   | 19.5 | 21.0 | 15.5      | 13.5 | 15.0 |
| 22    | 21.0     | 17.0 | 18.5 | 24.0  | 20.5 | 21.5 | 23.0   | 16.5 | 19.5 | 14.0      | 11.0 | 12.5 |
| 23    | 22.5     | 17.0 | 19.0 | 24.5  | 19.5 | 21.0 | 23.0   | 17.0 | 19.5 | 16.5      | 10.5 | 12.5 |
| 24    | 23.5     | 15.0 | 18.5 | 26.5  | 20.0 | 22.5 | 21.5   | 16.5 | 20.0 | 14.0      | 11.0 | 12.5 |
| 25    | 24.0     | 15.5 | 19.0 | 26.5  | 21.0 | 23.0 | 24.5   | 19.5 | 21.5 | 14.5      | 12.5 | 13.5 |
| 26    | 23.5     | 18.0 | 20.5 | 24.5  | 21.0 | 22.5 | 24.5   | 17.5 | 20.0 | 16.0      | 13.0 | 14.0 |
| 27    | 22.5     | 19.0 | 20.5 | 25.0  | 20.5 | 22.5 | 23.0   | 18.5 | 20.5 | 16.5      | 12.5 | 14.0 |
| 28    | 24.0     | 19.0 | 20.5 | 25.0  | 21.5 | 23.0 | 24.0   | 19.5 | 21.5 | 18.0      | 13.0 | 15.0 |
| 29    | 23.0     | 19.0 | 20.5 | 24.0  | 21.5 | 22.5 | 22.5   | 18.0 | 20.0 | 18.0      | 12.5 | 15.0 |
| 30    | 24.5     | 19.0 | 21.0 | 24.5  | 21.5 | 22.5 | 21.5   | 19.0 | 20.5 | 18.5      | 14.0 | 15.5 |
| 31    | ---      | ---  | ---  | 22.0  | 20.0 | 21.0 | 20.5   | 19.5 | 20.0 | ---       | ---  | ---  |
| MONTH | 24.5     | 14.0 | 18.5 | 27.5  | 17.0 | 21.5 | 25.5   | 16.5 | 20.5 | 23.5      | 10.5 | 17.0 |

## CUMBERLAND RIVER BASIN

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361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX | MIN | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|-----|-----|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |     |     |      |
| 1       | 19.5 | 14.5 | 16.5     | 16.0 | 11.0 | 13.0     | 13.5 | 12.0 | 12.5    | 7.5 | 5.0 | 6.5  |
| 2       | 19.5 | 14.5 | 16.5     | 16.5 | 12.5 | 14.0     | 15.5 | 13.0 | 14.0    | 8.0 | 6.0 | 7.0  |
| 3       | 19.0 | 14.0 | 16.5     | 15.0 | 12.5 | 14.0     | 15.5 | 14.0 | 14.5    | 6.0 | 4.5 | 5.5  |
| 4       | 19.0 | 16.0 | 17.5     | 12.5 | 6.5  | 10.0     | 16.0 | 14.0 | 15.0    | --- | --- | ---  |
| 5       | 20.5 | 16.5 | 18.0     | 7.5  | 4.5  | 6.0      | 15.0 | 11.5 | 14.0    | --- | --- | ---  |
| 6       | 21.0 | 16.5 | 18.0     | 7.0  | 3.0  | 5.0      | 11.5 | 9.5  | 10.5    | --- | --- | ---  |
| 7       | 18.5 | 17.0 | 17.5     | 8.5  | 3.0  | 5.0      | 10.0 | 7.5  | 8.5     | --- | --- | ---  |
| 8       | 20.5 | 17.5 | 19.0     | 9.5  | 3.5  | 6.0      | 9.5  | 7.5  | 9.0     | --- | --- | ---  |
| 9       | 21.5 | 18.5 | 19.5     | 10.5 | 4.0  | 6.5      | 8.0  | 6.0  | 7.5     | --- | --- | ---  |
| 10      | 22.0 | 18.5 | 20.0     | 10.5 | 4.5  | 7.0      | 8.0  | 4.5  | 6.5     | 8.5 | 6.5 | 7.5  |
| 11      | 20.5 | 16.0 | 18.5     | 11.5 | 7.0  | 9.0      | 8.0  | 4.5  | 7.5     | 7.5 | 3.5 | 6.0  |
| 12      | 16.0 | 13.5 | 15.0     | 13.5 | 9.0  | 12.0     | 4.5  | 2.0  | 3.5     | 3.5 | 1.5 | 2.5  |
| 13      | 15.0 | 14.0 | 14.5     | 9.0  | 5.0  | 7.0      | 3.0  | .5   | 2.0     | 3.5 | .5  | 2.0  |
| 14      | 15.5 | 12.0 | 13.5     | 7.5  | 4.5  | 6.0      | 5.0  | 2.5  | 3.5     | 5.5 | 1.0 | 3.0  |
| 15      | 15.5 | 9.5  | 12.0     | 7.5  | 4.0  | 5.5      | 9.5  | 5.0  | 8.0     | 4.5 | 1.5 | 2.5  |
| 16      | 14.5 | 10.5 | 12.0     | 7.0  | 2.0  | 4.5      | 9.5  | 6.0  | 7.5     | 2.5 | .0  | 1.0  |
| 17      | 12.5 | 7.0  | 9.5      | 9.0  | 5.5  | 7.5      | 6.5  | 4.0  | 5.5     | 2.5 | .5  | 1.0  |
| 18      | 13.5 | 8.5  | 10.5     | 11.0 | 9.0  | 10.5     | 6.0  | 3.0  | 4.5     | .5  | .0  | .0   |
| 19      | 14.0 | 8.0  | 10.5     | 12.5 | 10.5 | 11.5     | 7.0  | 5.5  | 6.0     | .0  | .0  | .0   |
| 20      | 14.5 | 12.0 | 13.0     | 13.5 | 12.0 | 12.5     | 6.5  | 5.0  | 5.5     | .5  | .0  | .0   |
| 21      | 13.5 | 10.0 | 11.5     | 14.5 | 13.0 | 13.5     | 6.0  | 3.5  | 4.5     | 3.5 | .0  | 1.5  |
| 22      | 12.0 | 8.0  | 9.5      | 13.5 | 12.5 | 13.0     | 6.5  | 2.5  | 4.5     | 5.5 | 3.5 | 4.5  |
| 23      | 11.0 | 5.0  | 7.5      | 14.5 | 12.5 | 13.5     | 8.5  | 6.5  | 7.5     | 5.0 | 4.0 | 5.0  |
| 24      | 10.0 | 4.5  | 7.0      | 13.5 | 7.5  | 11.0     | 11.0 | 7.0  | 9.5     | 4.0 | 3.5 | 3.5  |
| 25      | 10.5 | 7.0  | 8.5      | 9.5  | 6.0  | 7.5      | 14.0 | 11.0 | 12.5    | 4.0 | 3.0 | 3.5  |
| 26      | 10.0 | 4.0  | 7.0      | 10.5 | 8.0  | 9.5      | 12.5 | 12.0 | 12.0    | 5.0 | 2.0 | 3.5  |
| 27      | 10.0 | 4.0  | 6.5      | 11.5 | 10.0 | 10.5     | 13.5 | 12.0 | 12.5    | 6.5 | 3.0 | 4.0  |
| 28      | 10.5 | 4.5  | 7.0      | 12.5 | 11.0 | 12.0     | 13.0 | 10.5 | 12.5    | 6.0 | 3.0 | 4.0  |
| 29      | 12.0 | 6.5  | 9.0      | 12.5 | 9.5  | 11.0     | 10.5 | 6.0  | 8.5     | 7.5 | 1.5 | 4.5  |
| 30      | 14.5 | 10.0 | 11.5     | 12.0 | 9.0  | 10.5     | 7.0  | 4.5  | 5.5     | 8.0 | 5.0 | 6.5  |
| 31      | 15.0 | 9.5  | 12.0     | ---  | ---  | ---      | 7.5  | 5.0  | 6.0     | 7.0 | 3.5 | 5.0  |
| MONTH   | 22.0 | 4.0  | 13.0     | 16.5 | 2.0  | 9.5      | 16.0 | .5   | 8.5     | --- | --- | ---  |

| DAY      | MAX  | MIN | MEAN  | MAX  | MIN | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|-----|-------|------|-----|-------|------|------|------|------|------|------|
| FEBRUARY |      |     | MARCH |      |     | APRIL |      |      | MAY  |      |      |      |
| 1        | 8.5  | 3.5 | 5.5   | 10.5 | 5.0 | 7.0   | 12.0 | 4.5  | 8.0  | 20.5 | 14.0 | 16.5 |
| 2        | 9.0  | 6.5 | 8.0   | ---  | --- | ---   | 9.5  | 6.5  | 8.5  | ---  | ---  | ---  |
| 3        | 6.5  | 3.0 | 4.5   | ---  | --- | ---   | 6.5  | 5.5  | 6.0  | ---  | ---  | ---  |
| 4        | 4.0  | 1.5 | 3.0   | ---  | --- | ---   | 12.5 | 4.0  | 8.0  | 15.5 | 11.0 | 13.5 |
| 5        | 4.0  | 1.0 | 2.5   | ---  | --- | ---   | 9.5  | 8.0  | 9.0  | 17.0 | 10.5 | 13.0 |
| 6        | 4.5  | 2.0 | 3.5   | ---  | --- | ---   | 12.5 | 9.0  | 10.5 | 17.5 | 9.5  | 13.0 |
| 7        | 4.0  | 1.5 | 3.0   | ---  | --- | ---   | 12.5 | 10.5 | 11.5 | 19.5 | 12.0 | 15.0 |
| 8        | 4.0  | .0  | 1.5   | ---  | --- | ---   | 13.0 | 11.5 | 12.0 | 15.0 | 10.5 | 13.0 |
| 9        | 4.5  | 2.0 | 3.5   | ---  | --- | ---   | 13.5 | 9.5  | 12.0 | 15.0 | 9.0  | 11.5 |
| 10       | 5.0  | 4.0 | 5.0   | 6.0  | 4.0 | 5.0   | 10.0 | 7.5  | 9.0  | 17.0 | 8.5  | 12.5 |
| 11       | 5.0  | 4.5 | 4.5   | 4.0  | 3.5 | 4.0   | 11.0 | 6.5  | 8.0  | 18.0 | 11.0 | 14.0 |
| 12       | 6.0  | 4.0 | 4.5   | 6.0  | 3.0 | 4.0   | 14.5 | 5.0  | 9.5  | 16.0 | 13.5 | 15.0 |
| 13       | 6.5  | 3.5 | 5.0   | 9.0  | 1.5 | 4.5   | 14.0 | 9.5  | 11.5 | 19.0 | 14.0 | 15.5 |
| 14       | 7.0  | 3.5 | 4.5   | 12.5 | 4.0 | 7.5   | 13.5 | 11.0 | 12.0 | 17.5 | 13.5 | 15.0 |
| 15       | 6.5  | 1.5 | 4.0   | 13.0 | 5.5 | 9.0   | 11.0 | 7.0  | 9.0  | 15.5 | 15.0 | 15.0 |
| 16       | 7.0  | 2.0 | 4.0   | 13.5 | 7.0 | 10.0  | 12.5 | 5.5  | 8.5  | 15.0 | 11.5 | 13.5 |
| 17       | 7.5  | 3.0 | 4.5   | 11.5 | 9.0 | 10.0  | 12.5 | 6.5  | 8.5  | 16.0 | 10.0 | 12.5 |
| 18       | 7.5  | 2.0 | 4.5   | 11.0 | 9.0 | 10.0  | 7.5  | 4.0  | 5.5  | 15.5 | 11.0 | 13.0 |
| 19       | 8.0  | 2.5 | 4.5   | 12.0 | 7.5 | 9.0   | 9.5  | 3.0  | 5.5  | 14.5 | 13.5 | 14.0 |
| 20       | 9.0  | 2.5 | 5.0   | 10.0 | 6.0 | 8.0   | 11.1 | 3.0  | 6.0  | 15.0 | 14.0 | 14.5 |
| 21       | 9.5  | 3.5 | 6.0   | 9.5  | 4.5 | 6.5   | 13.0 | 3.5  | 7.5  | 15.0 | 14.0 | 14.0 |
| 22       | 7.5  | 5.5 | 6.5   | 7.0  | 3.5 | 5.0   | 8.5  | 6.0  | 7.5  | 16.5 | 14.0 | 15.0 |
| 23       | 10.0 | 6.5 | 8.0   | 8.5  | 2.5 | 5.0   | 9.5  | 8.0  | 9.0  | 16.0 | 14.0 | 15.0 |
| 24       | 8.0  | 6.0 | 7.5   | 6.0  | 3.5 | 4.5   | 9.5  | 8.0  | 8.5  | 17.0 | 12.5 | 14.5 |
| 25       | 6.0  | 2.5 | 4.5   | 9.5  | 2.0 | 4.5   | 13.5 | 6.0  | 9.0  | 17.0 | 11.0 | 13.5 |
| 26       | 5.5  | 1.0 | 3.0   | 8.0  | 2.5 | 5.5   | 16.0 | 6.5  | 10.5 | 17.5 | 12.0 | 14.0 |
| 27       | 6.5  | .5  | 3.0   | 11.5 | 6.5 | 8.5   | 18.0 | 8.0  | 12.5 | 17.0 | 10.0 | 13.0 |
| 28       | 8.5  | 3.5 | 6.0   | 7.5  | 5.0 | 5.5   | 18.0 | 9.5  | 13.5 | 15.0 | 12.0 | 13.5 |
| 29       | ---  | --- | ---   | 7.0  | 4.0 | 5.5   | 17.0 | 11.5 | 14.0 | 17.5 | 13.5 | 15.5 |
| 30       | ---  | --- | ---   | 9.5  | 4.0 | 6.5   | 19.5 | 13.0 | 15.0 | 18.0 | 12.5 | 14.5 |
| 31       | ---  | --- | ---   | 8.5  | 6.0 | 7.0   | ---  | ---  | ---  | 17.5 | 13.5 | 16.0 |
| MONTH    | 10.0 | .0  | 4.5   | ---  | --- | ---   | 19.5 | 3.0  | 9.5  | 20.5 | 8.5  | 14.0 |

## CUMBERLAND RIVER BASIN

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 18.5 | 12.0 | 14.5 | ---  | ---  | ---  | ---    | ---  | ---  | 24.5      | 20.0 | 21.5 |
| 2     | 19.0 | 11.0 | 14.5 | ---  | ---  | ---  | 24.5   | 20.5 | 22.0 | 22.0      | 20.0 | 21.0 |
| 3     | 15.0 | 11.5 | 13.0 | ---  | ---  | ---  | 25.0   | 21.0 | 23.0 | 22.5      | 19.5 | 21.0 |
| 4     | ---  | ---  | ---  | ---  | ---  | ---  | 24.0   | 21.0 | 22.0 | ---       | ---  | ---  |
| 5     | ---  | ---  | ---  | ---  | ---  | ---  | 25.5   | 20.0 | 22.5 | ---       | ---  | ---  |
| 6     | ---  | ---  | ---  | ---  | ---  | ---  | 25.5   | 20.5 | 23.0 | ---       | ---  | ---  |
| 7     | 16.5 | 14.5 | 15.5 | ---  | ---  | ---  | 25.5   | 20.5 | 22.5 | 24.0      | 22.0 | 23.0 |
| 8     | 19.5 | 12.5 | 15.5 | ---  | ---  | ---  | 25.5   | 21.0 | 23.0 | 25.0      | 21.5 | 22.5 |
| 9     | 18.5 | 13.0 | 15.5 | ---  | ---  | ---  | 25.0   | 20.0 | 22.5 | 25.5      | 19.5 | 21.5 |
| 10    | 20.0 | 14.0 | 16.5 | ---  | ---  | ---  | 25.0   | 19.5 | 22.0 | 23.5      | 18.5 | 21.0 |
| 11    | 21.5 | 14.5 | 17.5 | ---  | ---  | ---  | 25.0   | 20.5 | 22.5 | 22.5      | 19.5 | 20.5 |
| 12    | 22.0 | 14.5 | 18.0 | ---  | ---  | ---  | 22.5   | 19.0 | 21.0 | 22.5      | 20.0 | 21.0 |
| 13    | 22.5 | 14.5 | 18.0 | ---  | ---  | ---  | 23.0   | 17.5 | 20.0 | 22.5      | 20.0 | 21.0 |
| 14    | 22.5 | 14.5 | 18.0 | ---  | ---  | ---  | 21.5   | 16.5 | 19.0 | 21.5      | 17.0 | 19.0 |
| 15    | 21.0 | 14.5 | 17.5 | ---  | ---  | ---  | 21.5   | 17.5 | 19.5 | 19.5      | 14.5 | 17.0 |
| 16    | 21.0 | 15.5 | 18.0 | ---  | ---  | ---  | 21.0   | 19.0 | 20.0 | 19.5      | 16.0 | 17.5 |
| 17    | 21.5 | 17.0 | 19.0 | ---  | ---  | ---  | 23.0   | 19.0 | 20.5 | 22.5      | 17.5 | 19.0 |
| 18    | 19.5 | 17.5 | 18.5 | ---  | ---  | ---  | 24.5   | 19.5 | 21.5 | 22.0      | 17.0 | 19.0 |
| 19    | 22.0 | 17.5 | 19.0 | 26.5 | 23.0 | 25.0 | 25.0   | 20.0 | 22.5 | 22.0      | 17.5 | 19.5 |
| 20    | 21.5 | 17.5 | 19.0 | 26.5 | 21.5 | 23.0 | 26.5   | 21.0 | 23.5 | 20.5      | 19.0 | 20.0 |
| 21    | 24.0 | 17.5 | 20.0 | 27.0 | 20.5 | 23.0 | 26.0   | 21.5 | 23.5 | 20.0      | 13.5 | 17.0 |
| 22    | 23.5 | 17.0 | 20.0 | 27.5 | 21.5 | 24.0 | 26.0   | 21.0 | 23.5 | 15.0      | 11.0 | 13.0 |
| 23    | 25.0 | 18.0 | 21.0 | 27.0 | 22.0 | 24.5 | 25.5   | 22.0 | 23.5 | 14.5      | 10.5 | 12.0 |
| 24    | 25.5 | 18.0 | 21.5 | 27.5 | 22.0 | 24.5 | 26.5   | 22.0 | 23.5 | 14.0      | 8.5  | 11.0 |
| 25    | 24.5 | 18.0 | 21.5 | 23.0 | 21.5 | 22.0 | 25.5   | 22.0 | 23.5 | 14.0      | 9.5  | 12.0 |
| 26    | 24.0 | 19.5 | 22.0 | 25.5 | 20.5 | 22.5 | 25.5   | 22.0 | 23.5 | 16.0      | 12.5 | 14.0 |
| 27    | 23.5 | 19.5 | 21.5 | 25.0 | 19.0 | 21.5 | 25.0   | 21.5 | 23.0 | 16.5      | 12.5 | 14.0 |
| 28    | 24.5 | 19.5 | 22.0 | 25.5 | 19.5 | 22.0 | 24.5   | 21.0 | 22.5 | ---       | ---  | ---  |
| 29    | ---  | ---  | ---  | 24.0 | 19.0 | 21.5 | 25.5   | 21.5 | 23.0 | ---       | ---  | ---  |
| 30    | ---  | ---  | ---  | 25.0 | 18.5 | 21.0 | 25.0   | 19.5 | 21.5 | ---       | ---  | ---  |
| 31    | ---  | ---  | ---  | ---  | ---  | ---  | 22.5   | 19.0 | 21.0 | ---       | ---  | ---  |
| MONTH | 25.5 | 11.0 | 18.5 | ---  | ---  | ---  | 26.5   | 16.5 | 22.0 | ---       | ---  | ---  |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | ---     | ---  | ---  | 13.5     | 9.0  | 11.0 | 7.0      | 4.5 | 6.0  | 1.0     | .0  | .5   |
| 2     | ---     | ---  | ---  | 14.0     | 9.5  | 11.5 | 9.5      | 3.0 | 5.5  | 2.0     | 1.0 | 1.5  |
| 3     | 16.5    | 12.5 | 15.0 | 15.0     | 13.0 | 14.0 | 11.5     | 9.5 | 10.5 | 2.0     | .0  | 1.0  |
| 4     | 17.5    | 13.5 | 15.5 | 14.5     | 8.5  | 12.5 | 11.5     | 9.5 | 10.5 | 2.5     | .0  | 1.5  |
| 5     | 19.0    | 15.5 | 17.0 | 9.5      | 5.5  | 7.0  | 11.0     | 8.0 | 9.5  | 4.0     | 2.0 | 3.0  |
| 6     | 17.0    | 13.5 | 15.0 | 9.5      | 4.5  | 6.5  | 11.5     | 6.5 | 10.0 | 5.0     | 2.5 | 4.0  |
| 7     | 16.0    | 11.5 | 13.5 | 10.0     | 5.5  | 7.5  | 6.0      | 4.5 | 5.5  | 3.5     | 1.5 | 2.5  |
| 8     | 15.5    | 11.5 | 13.5 | 10.5     | 5.0  | 7.5  | 12.5     | 4.0 | 5.5  | 4.0     | .5  | 2.0  |
| 9     | 16.0    | 12.0 | 13.5 | 11.0     | 5.5  | 8.0  | 7.5      | 4.0 | 5.5  | 5.5     | 1.0 | 3.0  |
| 10    | 16.0    | 12.0 | 13.5 | 11.0     | 8.0  | 10.0 | 10.0     | 7.0 | 8.5  | 5.0     | 1.5 | 3.5  |
| 11    | 15.5    | 12.5 | 14.0 | 8.0      | 6.0  | 7.0  | 13.5     | 8.0 | 9.0  | 1.5     | .0  | 1.0  |
| 12    | 16.5    | 14.5 | 15.5 | 7.0      | 4.5  | 5.0  | 10.0     | 9.5 | 9.5  | .0      | .0  | .0   |
| 13    | 16.5    | 11.5 | 14.5 | 7.5      | 4.5  | 5.0  | 9.5      | 7.5 | 8.5  | 3.5     | 1.0 | 2.5  |
| 14    | 14.0    | 9.5  | 11.0 | 7.5      | 2.5  | 5.0  | 8.5      | 7.0 | 8.0  | 3.5     | 2.0 | 3.0  |
| 15    | 10.5    | 8.5  | 9.5  | 10.0     | 7.5  | 9.0  | 7.0      | 5.5 | 6.5  | 3.0     | 1.5 | 2.5  |
| 16    | ---     | ---  | ---  | 8.0      | 6.0  | 7.0  | 5.5      | 4.5 | 5.0  | 3.5     | 1.5 | 2.5  |
| 17    | ---     | ---  | ---  | 8.0      | 5.5  | 6.5  | 5.0      | 3.0 | 4.0  | 4.0     | 2.0 | 2.5  |
| 18    | 15.5    | 12.0 | 14.0 | 9.0      | 4.0  | 6.5  | 5.0      | 2.0 | 3.5  | 2.0     | .0  | 1.5  |
| 19    | 17.5    | 14.5 | 15.5 | 11.0     | 7.5  | 9.0  | 4.0      | 2.0 | 3.0  | 1.0     | .0  | .0   |
| 20    | 17.5    | 15.0 | 16.0 | 11.5     | 9.0  | 10.5 | 3.5      | 1.5 | 2.5  | .0      | .0  | .0   |
| 21    | 16.0    | 15.5 | 16.0 | 9.5      | 7.5  | 8.0  | 7.0      | 3.5 | 5.5  | .0      | .0  | .0   |
| 22    | 15.5    | 14.5 | 15.0 | 10.5     | 6.5  | 8.5  | 7.5      | 3.0 | 6.0  | .0      | .0  | .0   |
| 23    | 15.0    | 14.0 | 14.5 | 12.5     | 8.5  | 11.0 | 4.0      | 2.0 | 3.0  | .0      | .0  | .0   |
| 24    | 14.0    | 13.0 | 13.5 | 12.0     | 7.5  | 10.5 | 2.0      | .0  | .5   | 5.0     | .0  | 4.0  |
| 25    | 14.0    | 12.0 | 13.0 | 8.0      | 5.5  | 6.5  | .0       | .0  | .0   | 5.5     | 3.5 | 4.5  |
| 26    | 13.0    | 9.5  | 11.0 | 8.0      | 4.5  | 6.0  | .0       | .0  | .0   | 5.5     | 2.0 | 3.5  |
| 27    | 12.5    | 8.0  | 9.5  | 12.0     | 5.0  | 8.0  | .5       | .0  | .0   | 5.5     | 2.5 | 4.0  |
| 28    | 12.5    | 6.0  | 9.0  | 12.5     | 8.0  | 11.0 | 4.5      | .0  | 2.5  | 4.5     | 2.5 | 4.0  |
| 29    | 14.0    | 8.5  | 10.5 | 8.0      | 5.0  | 6.5  | 3.5      | .5  | 2.0  | 5.5     | 2.5 | 4.0  |
| 30    | 14.0    | 9.0  | 11.0 | 6.5      | 4.0  | 6.5  | .5       | .0  | .0   | 4.5     | 1.0 | 3.0  |
| 31    | 13.5    | 9.0  | 11.0 | ---      | ---  | ---  | .0       | .0  | .0   | 2.5     | .5  | 1.0  |
| MONTH | 19.0    | 6.0  | 13.5 | 15.0     | 2.5  | 8.5  | 13.5     | .0  | 5.0  | 5.5     | .0  | 2.0  |

## CUMBERLAND RIVER BASIN

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361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
|       | FEBRUARY |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1     | 3.5      | .0  | 1.5  | 5.0   | .5  | 2.5  |       |     |      |     |     |      |
| 2     | 4.5      | .0  | 2.0  | 7.0   | 2.5 | 4.5  |       |     |      |     |     |      |
| 3     | 5.0      | 3.5 | 4.0  | 7.5   | 2.5 | 5.0  |       |     |      |     |     |      |
| 4     | 5.5      | 2.5 | 3.5  | 6.5   | 2.5 | 4.5  |       |     |      |     |     |      |
| 5     | 3.5      | .0  | 2.0  | 9.0   | 6.5 | 7.5  |       |     |      |     |     |      |
| 6     | .0       | .0  | .0   | 6.5   | 3.5 | 5.0  |       |     |      |     |     |      |
| 7     | .0       | .0  | .0   | 7.0   | 2.5 | 4.0  |       |     |      |     |     |      |
| 8     | .0       | .0  | .0   | 7.0   | 2.5 | 4.0  |       |     |      |     |     |      |
| 9     | .5       | .0  | .0   | 5.5   | 1.0 | 2.5  |       |     |      |     |     |      |
| 10    | 5.0      | .0  | 2.0  | 4.0   | .5  | 2.5  |       |     |      |     |     |      |
| 11    | 6.5      | 5.0 | 6.0  | 5.5   | 1.5 | 3.0  |       |     |      |     |     |      |
| 12    | 9.5      | 5.5 | 7.5  | 4.5   | .5  | 3.0  |       |     |      |     |     |      |
| 13    | 9.0      | 8.0 | 9.0  | 8.0   | 4.5 | 6.0  |       |     |      |     |     |      |
| 14    | 9.0      | 6.0 | 7.5  | 11.0  | 4.5 | 7.0  |       |     |      |     |     |      |
| 15    | 9.0      | 4.5 | 6.5  | 13.0  | 4.5 | 8.5  |       |     |      |     |     |      |
| 16    | 9.0      | 5.0 | 7.0  | 11.0  | 9.0 | 10.0 |       |     |      |     |     |      |
| 17    | 10.0     | 6.5 | 8.0  | 9.5   | 8.0 | 9.0  |       |     |      |     |     |      |
| 18    | 9.5      | 5.0 | 7.0  | 13.5  | 9.0 | 10.5 |       |     |      |     |     |      |
| 19    | 10.0     | 8.0 | 8.5  | 15.0  | 8.5 | 11.0 |       |     |      |     |     |      |
| 20    | 8.0      | 6.0 | 6.5  | 12.0  | 7.5 | 10.5 |       |     |      |     |     |      |
| 21    | 8.0      | 4.0 | 6.0  | 7.5   | 5.5 | 6.0  |       |     |      |     |     |      |
| 22    | 7.0      | 2.0 | 5.0  | 6.0   | 5.5 | 6.0  |       |     |      |     |     |      |
| 23    | 8.5      | 5.5 | 6.5  | 10.5  | 4.5 | 7.0  |       |     |      |     |     |      |
| 24    | 9.0      | 4.0 | 6.0  | 11.5  | 5.0 | 8.0  |       |     |      |     |     |      |
| 25    | 7.0      | 4.0 | 5.5  | 11.0  | 8.0 | 9.5  |       |     |      |     |     |      |
| 26    | 7.0      | 2.0 | 4.5  | 10.0  | 8.0 | 8.5  |       |     |      |     |     |      |
| 27    | 8.5      | 3.5 | 6.5  | ---   | --- | ---  |       |     |      |     |     |      |
| 28    | 7.5      | 2.5 | 4.5  | ---   | --- | ---  |       |     |      |     |     |      |
| 29    | 4.0      | 1.0 | 2.5  | ---   | --- | ---  |       |     |      |     |     |      |
| 30    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| 31    | ---      | --- | ---  | ---   | --- | ---  |       |     |      |     |     |      |
| MONTH | 10.0     | .0  | 4.5  | 15.0  | .5  | 6.5  |       |     |      |     |     |      |



## CUMBERLAND RIVER BASIN

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | ---                        | ---                                  | ---                                 | 6.2                        | 18                                   | .30                                 | 11                         | 180                                  | 5.3                                 |
| 2     | ---                        | ---                                  | ---                                 | 5.9                        | 24                                   | .38                                 | 6.1                        | 45                                   | .74                                 |
| 3     | ---                        | ---                                  | ---                                 | 4.9                        | 31                                   | .41                                 | 4.4                        | 33                                   | .39                                 |
| 4     | ---                        | ---                                  | ---                                 | 4.1                        | 17                                   | .19                                 | 9.8                        | 248                                  | 6.6                                 |
| 5     | ---                        | ---                                  | ---                                 | 3.7                        | 15                                   | .15                                 | 12                         | 82                                   | 2.7                                 |
| 6     | ---                        | ---                                  | ---                                 | 3.3                        | 21                                   | .19                                 | 7.2                        | 33                                   | .64                                 |
| 7     | ---                        | ---                                  | ---                                 | 3.1                        | 14                                   | .12                                 | 5.1                        | 26                                   | .36                                 |
| 8     | ---                        | ---                                  | ---                                 | 3.9                        | 22                                   | .23                                 | 4.3                        | 19                                   | .22                                 |
| 9     | ---                        | ---                                  | ---                                 | 2.7                        | 11                                   | .08                                 | 3.8                        | 23                                   | .24                                 |
| 10    | ---                        | ---                                  | ---                                 | 2.5                        | 9                                    | .06                                 | 4.0                        | 136                                  | 1.5                                 |
| 11    | ---                        | ---                                  | ---                                 | 2.3                        | 16                                   | .10                                 | 2.8                        | 22                                   | .17                                 |
| 12    | ---                        | ---                                  | ---                                 | 2.2                        | 14                                   | .08                                 | 2.5                        | 20                                   | .14                                 |
| 13    | ---                        | ---                                  | ---                                 | 2.0                        | 12                                   | .06                                 | 2.2                        | 20                                   | .12                                 |
| 14    | ---                        | ---                                  | ---                                 | 1.8                        | 14                                   | .07                                 | 1.9                        | 20                                   | .10                                 |
| 15    | ---                        | ---                                  | ---                                 | 1.7                        | 18                                   | .08                                 | 5.0                        | 913                                  | 12                                  |
| 16    | ---                        | ---                                  | ---                                 | 1.6                        | 19                                   | .08                                 | 14                         | 1420                                 | 54                                  |
| 17    | 36                         | 506                                  | 49                                  | 3.8                        | 532                                  | 5.5                                 | 7.4                        | 60                                   | 1.2                                 |
| 18    | 26                         | 70                                   | 4.9                                 | 2.7                        | 110                                  | .80                                 | 4.0                        | 57                                   | .62                                 |
| 19    | 17                         | 50                                   | 2.3                                 | 2.2                        | 26                                   | .15                                 | 2.8                        | 29                                   | .22                                 |
| 20    | 12                         | 40                                   | 1.3                                 | 4.9                        | 358                                  | 4.7                                 | 2.2                        | 16                                   | .10                                 |
| 21    | 8.7                        | 25                                   | .59                                 | 5.2                        | 425                                  | 6.0                                 | 1.9                        | 15                                   | .08                                 |
| 22    | 6.3                        | 13                                   | .22                                 | 9.2                        | 849                                  | 21                                  | 3.9                        | 420                                  | 4.4                                 |
| 23    | 5.2                        | 10                                   | .14                                 | 20                         | 562                                  | 30                                  | 2.1                        | 120                                  | .68                                 |
| 24    | 4.4                        | 11                                   | .13                                 | 22                         | 2380                                 | 141                                 | 1.6                        | 20                                   | .09                                 |
| 25    | 6.1                        | 65                                   | 1.1                                 | 22                         | 418                                  | 25                                  | 1.3                        | 15                                   | .05                                 |
| 26    | 8.8                        | 102                                  | 2.4                                 | 8.9                        | 180                                  | 4.3                                 | 1.4                        | 15                                   | .06                                 |
| 27    | 13                         | 55                                   | 1.9                                 | 13                         | 1900                                 | 67                                  | 1.3                        | 17                                   | .06                                 |
| 28    | 12                         | 27                                   | .87                                 | 77                         | 1590                                 | 331                                 | 1.7                        | 400                                  | 1.8                                 |
| 29    | 9.7                        | 20                                   | .52                                 | 38                         | 190                                  | 19                                  | 2.6                        | 110                                  | .77                                 |
| 30    | 8.0                        | 28                                   | .60                                 | 16                         | 90                                   | 3.9                                 | 1.5                        | 25                                   | .10                                 |
| 31    | ---                        | ---                                  | ---                                 | 9.4                        | 80                                   | 2.0                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 173.2                      | ---                                  | 65.97                               | 306.2                      | ---                                  | 663.93                              | 131.8                      | ---                                  | 95.45                               |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 1.1                        | 20                                   | .06                                 | 13                         | 360                                  | 13                                  | 16                         | 2350                                 | 102                                 |
| 2     | .86                        | 20                                   | .05                                 | 5.6                        | 150                                  | 2.3                                 | 123                        | 6240                                 | 2070                                |
| 3     | 3.3                        | 804                                  | 7.2                                 | 3.3                        | 100                                  | .89                                 | 26                         | 144                                  | 10                                  |
| 4     | 5.8                        | 600                                  | 9.4                                 | 2.3                        | 100                                  | .62                                 | 9.8                        | 55                                   | 1.5                                 |
| 5     | 2.0                        | 20                                   | .11                                 | 1.8                        | 102                                  | .50                                 | 5.1                        | 60                                   | .83                                 |
| 6     | 1.4                        | 20                                   | .08                                 | 1.8                        | 90                                   | .44                                 | 3.6                        | 60                                   | .58                                 |
| 7     | 1.1                        | 23                                   | .07                                 | 1.4                        | 80                                   | .30                                 | 2.7                        | 80                                   | .58                                 |
| 8     | 3.0                        | 645                                  | 5.2                                 | 1.5                        | 70                                   | .28                                 | 2.3                        | 41                                   | .25                                 |
| 9     | 1.9                        | 86                                   | .44                                 | 1.9                        | 60                                   | .31                                 | 1.9                        | 239                                  | 1.2                                 |
| 10    | 4.5                        | 881                                  | 11                                  | 1.4                        | 50                                   | .19                                 | 1.5                        | 53                                   | .21                                 |
| 11    | 4.7                        | 420                                  | 5.3                                 | 1.2                        | 44                                   | .14                                 | 1.5                        | 38                                   | .15                                 |
| 12    | 4.0                        | 90                                   | .97                                 | .95                        | 75                                   | .19                                 | 1.6                        | 32                                   | .14                                 |
| 13    | 2.0                        | 48                                   | .26                                 | .77                        | 75                                   | .16                                 | 2.0                        | 47                                   | .25                                 |
| 14    | 1.5                        | 32                                   | .13                                 | .69                        | 75                                   | .14                                 | 1.9                        | 26                                   | .13                                 |
| 15    | 1.1                        | 30                                   | .09                                 | .69                        | 75                                   | .14                                 | 1.6                        | 25                                   | .11                                 |
| 16    | 6.1                        | 1380                                 | 23                                  | 1.3                        | 75                                   | .26                                 | 1.4                        | 24                                   | .09                                 |
| 17    | 3.0                        | 190                                  | 1.5                                 | 1.2                        | 75                                   | .24                                 | 1.2                        | 16                                   | .05                                 |
| 18    | 1.9                        | 82                                   | .42                                 | .95                        | 75                                   | .19                                 | 1.1                        | 14                                   | .04                                 |
| 19    | 3.2                        | 517                                  | 4.5                                 | .69                        | 75                                   | .14                                 | 1.0                        | 17                                   | .05                                 |
| 20    | 2.0                        | 60                                   | .32                                 | .56                        | 94                                   | .14                                 | .86                        | 12                                   | .03                                 |
| 21    | 1.4                        | 52                                   | .20                                 | .50                        | 21                                   | .03                                 | .86                        | 12                                   | .03                                 |
| 22    | 5.5                        | 1850                                 | 27                                  | .41                        | 10                                   | .01                                 | .82                        | 10                                   | .02                                 |
| 23    | 3.9                        | 7450                                 | 78                                  | 1.5                        | 580                                  | 2.3                                 | 1.0                        | 745                                  | 2.0                                 |
| 24    | 2.0                        | 1900                                 | 10                                  | 6.0                        | 1190                                 | 19                                  | .84                        | 242                                  | .55                                 |
| 25    | 1.7                        | 282                                  | 1.3                                 | 2.3                        | 57                                   | .35                                 | 1.2                        | 72                                   | .23                                 |
| 26    | 1.4                        | 169                                  | .64                                 | 1.2                        | 104                                  | .34                                 | 1.6                        | 84                                   | .36                                 |
| 27    | 1.0                        | 138                                  | .37                                 | .86                        | 20                                   | .05                                 | 2.0                        | 272                                  | 1.5                                 |
| 28    | 1.6                        | 436                                  | 1.9                                 | .77                        | 16                                   | .03                                 | 1.2                        | 70                                   | .23                                 |
| 29    | 1.3                        | 300                                  | 1.1                                 | .62                        | 15                                   | .03                                 | .98                        | 80                                   | .21                                 |
| 30    | 1.5                        | 529                                  | 2.1                                 | .56                        | 12                                   | .02                                 | .86                        | 554                                  | 1.3                                 |
| 31    | 47                         | 5690                                 | 722                                 | 18                         | 2150                                 | 104                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 122.76                     | ---                                  | 914.71                              | 75.72                      | ---                                  | 146.73                              | 217.42                     | ---                                  | 2194.62                             |

## CUMBERLAND RIVER BASIN

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361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      | NOVEMBER                            |                            |                                      | DECEMBER                            |                            |                                      |                                     |
| 1       | .77                        | 96                                   | .20                                 | .62                        | 26                                   | .04                                 | 97                         | 1320                                 | 467                                 |
| 2       | .77                        | 36                                   | .07                                 | .62                        | 9                                    | .02                                 | 37                         | 135                                  | 13                                  |
| 3       | .62                        | 30                                   | .05                                 | 13                         | 441                                  | 22                                  | 23                         | 64                                   | 4.0                                 |
| 4       | .62                        | 26                                   | .04                                 | 19                         | 273                                  | 17                                  | 17                         | 40                                   | 1.8                                 |
| 5       | .62                        | 22                                   | .04                                 | 5.4                        | 30                                   | .44                                 | 41                         | 436                                  | 80                                  |
| 6       | .62                        | 16                                   | .03                                 | 2.9                        | 20                                   | .16                                 | 30                         | 90                                   | 7.3                                 |
| 7       | .86                        | 27                                   | .06                                 | 2.2                        | 20                                   | .12                                 | 21                         | 54                                   | 3.1                                 |
| 8       | .95                        | 19                                   | .05                                 | 1.9                        | 20                                   | .10                                 | 12                         | 28                                   | .91                                 |
| 9       | .86                        | 20                                   | .05                                 | 1.8                        | 20                                   | .10                                 | 9.9                        | 15                                   | .40                                 |
| 10      | .86                        | 23                                   | .05                                 | 1.7                        | 20                                   | .09                                 | 7.9                        | 7                                    | .15                                 |
| 11      | .86                        | 15                                   | .03                                 | 1.5                        | 20                                   | .08                                 | 10                         | 72                                   | 1.9                                 |
| 12      | 1.7                        | 111                                  | 2.1                                 | 11                         | 183                                  | 14                                  | 14                         | 39                                   | 1.5                                 |
| 13      | 3.7                        | 131                                  | 1.3                                 | 8.4                        | 30                                   | .68                                 | 11                         | 116                                  | 3.4                                 |
| 14      | 1.4                        | 32                                   | .12                                 | 5.1                        | 20                                   | .28                                 | 10                         | 18                                   | .49                                 |
| 15      | .86                        | 11                                   | .03                                 | 4.0                        | 20                                   | .22                                 | 73                         | 992                                  | 615                                 |
| 16      | .77                        | 10                                   | .02                                 | 3.6                        | 20                                   | .19                                 | 77                         | 628                                  | 191                                 |
| 17      | .62                        | 12                                   | .02                                 | 9.8                        | 74                                   | 2.6                                 | 31                         | 250                                  | 21                                  |
| 18      | .56                        | 11                                   | .02                                 | 29                         | 74                                   | 5.8                                 | 21                         | 200                                  | 11                                  |
| 19      | .56                        | 11                                   | .02                                 | 23                         | 41                                   | 2.5                                 | 20                         | 125                                  | 6.8                                 |
| 20      | 1.2                        | 17                                   | .06                                 | 14                         | 40                                   | 1.5                                 | 17                         | 96                                   | 4.4                                 |
| 21      | 1.3                        | 14                                   | .05                                 | 11                         | 30                                   | .89                                 | 14                         | 54                                   | 2.0                                 |
| 22      | .77                        | 9                                    | .02                                 | 29                         | 130                                  | 10                                  | 12                         | 34                                   | 1.1                                 |
| 23      | .62                        | 10                                   | .02                                 | 25                         | 60                                   | 4.1                                 | 19                         | 99                                   | 5.1                                 |
| 24      | .56                        | 10                                   | .02                                 | 38                         | 265                                  | 27                                  | 16                         | 40                                   | 1.7                                 |
| 25      | .62                        | 7                                    | .01                                 | 21                         | 55                                   | 3.1                                 | 20                         | 560                                  | 82                                  |
| 26      | .56                        | 8                                    | .01                                 | 14                         | 38                                   | 1.4                                 | 113                        | 893                                  | 328                                 |
| 27      | .56                        | 9                                    | .01                                 | 16                         | 78                                   | 3.4                                 | 42                         | 105                                  | 12                                  |
| 28      | .56                        | 5                                    | .00                                 | 40                         | 506                                  | 79                                  | 62                         | 628                                  | 119                                 |
| 29      | .56                        | 9                                    | .01                                 | 42                         | 210                                  | 24                                  | 34                         | 70                                   | 6.4                                 |
| 30      | .62                        | 9                                    | .02                                 | 23                         | 59                                   | 3.7                                 | 21                         | 132                                  | 7.5                                 |
| 31      | .62                        | 10                                   | .02                                 | ---                        | ---                                  | ---                                 | 17                         | 69                                   | 3.2                                 |
| TOTAL   | 27.13                      | ---                                  | 4.55                                | 417.54                     | ---                                  | 224.51                              | 949.8                      | ---                                  | 2002.15                             |
| JANUARY |                            |                                      | FEBRUARY                            |                            |                                      | MARCH                               |                            |                                      |                                     |
| 1       | 13                         | 33                                   | 1.2                                 | 9.2                        | 156                                  | 18                                  | 7.3                        | 20                                   | .39                                 |
| 2       | 11                         | 34                                   | 1.0                                 | 137                        | 1540                                 | 945                                 | 6.5                        | 12                                   | .21                                 |
| 3       | 9.2                        | 29                                   | .72                                 | 38                         | 114                                  | 12                                  | 6.0                        | 18                                   | .29                                 |
| 4       | 6.0                        | 19                                   | .31                                 | 22                         | 35                                   | 2.1                                 | 5.5                        | 19                                   | .28                                 |
| 5       | 5.5                        | 9                                    | .13                                 | 15                         | 140                                  | 5.7                                 | 5.1                        | 21                                   | .29                                 |
| 6       | 5.1                        | 10                                   | .14                                 | 16                         | 39                                   | 1.7                                 | 173                        | 1540                                 | 2020                                |
| 7       | 4.7                        | 8                                    | .10                                 | 17                         | 38                                   | 1.7                                 | 36                         | 96                                   | 9.3                                 |
| 8       | 4.4                        | 9                                    | .11                                 | 13                         | 18                                   | .63                                 | 23                         | 67                                   | 4.2                                 |
| 9       | 13                         | 102                                  | 3.6                                 | 12                         | 20                                   | .65                                 | 17                         | 23                                   | 1.1                                 |
| 10      | 8.4                        | 21                                   | .48                                 | 26                         | 180                                  | 13                                  | 13                         | 64                                   | 2.2                                 |
| 11      | 7.7                        | 15                                   | .31                                 | 43                         | 138                                  | 16                                  | 11                         | 25                                   | .74                                 |
| 12      | 7.0                        | 10                                   | .19                                 | 28                         | 48                                   | 3.6                                 | 9.2                        | 32                                   | .79                                 |
| 13      | 6.2                        | 8                                    | .13                                 | 20                         | 29                                   | 1.6                                 | 8.8                        | 28                                   | .67                                 |
| 14      | 6.3                        | 6                                    | .10                                 | 16                         | 21                                   | .91                                 | 8.9                        | 40                                   | .96                                 |
| 15      | 6.4                        | 7                                    | .12                                 | 12                         | 21                                   | .68                                 | 7.9                        | 15                                   | .32                                 |
| 16      | 5.3                        | 17                                   | .24                                 | 10                         | 43                                   | 1.2                                 | 7.0                        | 18                                   | .34                                 |
| 17      | 5.2                        | 9                                    | .13                                 | 8.4                        | 14                                   | .32                                 | 6.8                        | 18                                   | .33                                 |
| 18      | 3.9                        | 5                                    | .05                                 | 7.0                        | 11                                   | .21                                 | 7.0                        | 15                                   | .28                                 |
| 19      | 4.0                        | 7                                    | .08                                 | 6.3                        | 10                                   | .17                                 | 7.3                        | 30                                   | .59                                 |
| 20      | 4.0                        | 8                                    | .09                                 | 5.4                        | 12                                   | .17                                 | 22                         | 364                                  | 72                                  |
| 21      | 7.8                        | 27                                   | .57                                 | 5.1                        | 10                                   | .14                                 | 42                         | 193                                  | 29                                  |
| 22      | 11                         | 34                                   | 1.0                                 | 7.8                        | 55                                   | 1.2                                 | 22                         | 36                                   | 2.1                                 |
| 23      | 11                         | 15                                   | .45                                 | 8.7                        | 24                                   | .56                                 | 16                         | 49                                   | 2.1                                 |
| 24      | 8.9                        | 12                                   | .29                                 | 10                         | 77                                   | 2.1                                 | 13                         | 17                                   | .60                                 |
| 25      | 7.4                        | 7                                    | .14                                 | 10                         | 26                                   | .70                                 | 11                         | 14                                   | .42                                 |
| 26      | 6.4                        | 7                                    | .12                                 | 7.8                        | 14                                   | .29                                 | 9.0                        | 19                                   | .46                                 |
| 27      | 6.0                        | 7                                    | .11                                 | 7.4                        | 11                                   | .22                                 | 14                         | 118                                  | 4.46                                |
| 28      | 5.5                        | 8                                    | .12                                 | 7.7                        | 15                                   | .31                                 | 12                         | 34                                   | 1.10                                |
| 29      | 5.3                        | 7                                    | .10                                 | ---                        | ---                                  | ---                                 | 9.8                        | 16                                   | .42                                 |
| 30      | 11                         | 132                                  | 3.9                                 | ---                        | ---                                  | ---                                 | 8.7                        | 24                                   | .56                                 |
| 31      | 8.6                        | 12                                   | .28                                 | ---                        | ---                                  | ---                                 | 6.9                        | 31                                   | .58                                 |
| TOTAL   | 225.2                      | ---                                  | 16.31                               | 525.8                      | ---                                  | 1030.86                             | 552.7                      | ---                                  | 2157.08                             |

## CUMBERLAND RIVER BASIN

361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 5.9                        | 63                                   | 1.0                                 | 7.1                        | 25                                   | .48                                 | 4.7                        | 13                                   | .16                                 |
| 2     | 37                         | 306                                  | 55                                  | 5.5                        | 15                                   | .22                                 | 4.0                        | 14                                   | .15                                 |
| 3     | 30                         | 86                                   | 7.0                                 | 43                         | 899                                  | 223                                 | 3.9                        | 14                                   | .15                                 |
| 4     | 20                         | 43                                   | 2.3                                 | 33                         | 76                                   | 6.8                                 | 25                         | 756                                  | 102                                 |
| 5     | 291                        | 1610                                 | 2160                                | 18                         | 31                                   | 1.5                                 | 8.6                        | 55                                   | 1.3                                 |
| 6     | 69                         | 320                                  | 60                                  | 13                         | 21                                   | .74                                 | 13                         | 144                                  | 5.1                                 |
| 7     | 32                         | 129                                  | 11                                  | 11                         | 18                                   | .53                                 | 9.4                        | 38                                   | .96                                 |
| 8     | 24                         | 135                                  | 8.7                                 | 59                         | 740                                  | 223                                 | 6.8                        | 19                                   | .35                                 |
| 9     | 47                         | 500                                  | 111                                 | 24                         | 30                                   | 1.9                                 | 5.4                        | 16                                   | .23                                 |
| 10    | 32                         | 100                                  | 8.6                                 | 16                         | 20                                   | .86                                 | 4.7                        | 15                                   | .19                                 |
| 11    | 22                         | 50                                   | 3.0                                 | 13                         | 20                                   | .70                                 | 4.1                        | 14                                   | .15                                 |
| 12    | 17                         | 50                                   | 2.3                                 | 9.9                        | 20                                   | .53                                 | 3.5                        | 9                                    | .09                                 |
| 13    | 15                         | 50                                   | 2.0                                 | 46                         | 834                                  | 461                                 | 3.0                        | 12                                   | .10                                 |
| 14    | 20                         | 146                                  | 20                                  | 32                         | 400                                  | 35                                  | 2.8                        | 7                                    | .05                                 |
| 15    | 45                         | 366                                  | 60                                  | 22                         | 100                                  | 5.9                                 | 2.4                        | 8                                    | .05                                 |
| 16    | 25                         | 114                                  | 7.7                                 | 32                         | 200                                  | 17                                  | 2.3                        | 7                                    | .04                                 |
| 17    | 19                         | 41                                   | 2.1                                 | 20                         | 81                                   | 4.4                                 | 2.5                        | 8                                    | .05                                 |
| 18    | 17                         | 36                                   | 1.7                                 | 16                         | 47                                   | 2.0                                 | 2.9                        | 11                                   | .09                                 |
| 19    | 13                         | 46                                   | 1.6                                 | 75                         | 942                                  | 338                                 | 2.5                        | 8                                    | .05                                 |
| 20    | 14                         | 86                                   | 3.3                                 | 34                         | 100                                  | 9.2                                 | 3.1                        | 31                                   | .26                                 |
| 21    | 12                         | 85                                   | 2.8                                 | 391                        | 3000                                 | 3810                                | 3.0                        | 14                                   | .11                                 |
| 22    | 11                         | 108                                  | 3.2                                 | 119                        | 1000                                 | 363                                 | 2.3                        | 12                                   | .07                                 |
| 23    | 19                         | 313                                  | 45                                  | 39                         | 600                                  | 63                                  | 2.1                        | 9                                    | .05                                 |
| 24    | 52                         | 278                                  | 39                                  | 21                         | 268                                  | 15                                  | 1.8                        | 11                                   | .05                                 |
| 25    | 30                         | 82                                   | 6.6                                 | 15                         | 136                                  | 5.5                                 | 1.7                        | 10                                   | .05                                 |
| 26    | 18                         | 45                                   | 2.2                                 | 12                         | 80                                   | 2.6                                 | 1.7                        | 12                                   | .06                                 |
| 27    | 14                         | 31                                   | 1.2                                 | 8.6                        | 33                                   | .77                                 | 3.1                        | 48                                   | .40                                 |
| 28    | 11                         | 22                                   | .65                                 | 7.3                        | 30                                   | .59                                 | 3.7                        | 52                                   | .52                                 |
| 29    | 9.7                        | 73                                   | 1.9                                 | 9.0                        | 65                                   | 1.6                                 | 1.5                        | 10                                   | .04                                 |
| 30    | 7.7                        | 20                                   | .42                                 | 7.7                        | 40                                   | .83                                 | 1.7                        | 400                                  | 1.8                                 |
| 31    | ---                        | ---                                  | ---                                 | 5.5                        | 27                                   | .40                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 979.3                      | ---                                  | 2631.27                             | 1164.6                     | ---                                  | 5596.05                             | 137.2                      | ---                                  | 114.67                              |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 1.8                        | 1600                                 | 7.8                                 | .77                        | 13                                   | .03                                 | .32                        | 13                                   | .01                                 |
| 2     | 3.4                        | 2770                                 | 100                                 | .72                        | 12                                   | .02                                 | .37                        | 13                                   | .01                                 |
| 3     | 2.3                        | 1380                                 | 8.6                                 | .66                        | 14                                   | .02                                 | .37                        | 35                                   | .03                                 |
| 4     | 1.7                        | 35                                   | .16                                 | 1.4                        | 62                                   | .23                                 | .37                        | 15                                   | .01                                 |
| 5     | 2.0                        | 30                                   | .16                                 | 1.1                        | 31                                   | .09                                 | .34                        | 34                                   | .03                                 |
| 6     | 1.5                        | 20                                   | .08                                 | .74                        | 12                                   | .02                                 | .28                        | 30                                   | .02                                 |
| 7     | 1.3                        | 11                                   | .04                                 | 1.3                        | 152                                  | 1.9                                 | .21                        | 20                                   | .01                                 |
| 8     | .95                        | 10                                   | .03                                 | 1.7                        | 147                                  | 1.1                                 | .21                        | 20                                   | .01                                 |
| 9     | .77                        | 17                                   | .04                                 | .74                        | 14                                   | .03                                 | .18                        | 10                                   | .00                                 |
| 10    | .69                        | 11                                   | .02                                 | .57                        | 11                                   | .02                                 | .15                        | 10                                   | .00                                 |
| 11    | .69                        | 10                                   | .02                                 | 8.0                        | 560                                  | 81                                  | .64                        | 76                                   | .45                                 |
| 12    | .69                        | 10                                   | .02                                 | 4.9                        | 500                                  | 6.6                                 | .33                        | 40                                   | .04                                 |
| 13    | .69                        | 12                                   | .02                                 | 1.4                        | 200                                  | .76                                 | .26                        | 20                                   | .01                                 |
| 14    | .69                        | 8                                    | .01                                 | .85                        | 50                                   | .11                                 | .24                        | 20                                   | .01                                 |
| 15    | .62                        | 8                                    | .01                                 | .70                        | 20                                   | .04                                 | .17                        | 10                                   | .00                                 |
| 16    | .55                        | 10                                   | .01                                 | .64                        | 9                                    | .02                                 | .16                        | 10                                   | .00                                 |
| 17    | .50                        | 13                                   | .02                                 | .68                        | 12                                   | .02                                 | .16                        | 10                                   | .00                                 |
| 18    | .45                        | 16                                   | .02                                 | .69                        | 11                                   | .02                                 | .22                        | 10                                   | .00                                 |
| 19    | 1.0                        | 29                                   | .08                                 | .62                        | 10                                   | .02                                 | .25                        | 10                                   | .00                                 |
| 20    | 5.5                        | 635                                  | 29                                  | .56                        | 6                                    | .00                                 | .28                        | 10                                   | .00                                 |
| 21    | 2.8                        | 54                                   | .41                                 | .53                        | 10                                   | .01                                 | 3.2                        | 162                                  | 2.6                                 |
| 22    | 1.4                        | 11                                   | .04                                 | .50                        | 8                                    | .01                                 | .50                        | 20                                   | .03                                 |
| 23    | 1.1                        | 11                                   | .03                                 | .46                        | 8                                    | .00                                 | .31                        | 3                                    | .00                                 |
| 24    | 1.5                        | 135                                  | 2.0                                 | .40                        | 8                                    | .00                                 | .31                        | 3                                    | .00                                 |
| 25    | 8.1                        | 569                                  | 17                                  | .40                        | 11                                   | .01                                 | .25                        | 10                                   | .00                                 |
| 26    | 2.8                        | 35                                   | .26                                 | .33                        | 10                                   | .00                                 | .25                        | 10                                   | .00                                 |
| 27    | 1.6                        | 20                                   | .09                                 | .40                        | 11                                   | .01                                 | .22                        | 10                                   | .00                                 |
| 28    | 1.1                        | 16                                   | .05                                 | .51                        | 7                                    | .00                                 | .22                        | 10                                   | .00                                 |
| 29    | .97                        | 16                                   | .04                                 | .39                        | 10                                   | .01                                 | .22                        | 10                                   | .00                                 |
| 30    | .89                        | 16                                   | .04                                 | .29                        | 10                                   | .00                                 | .18                        | 10                                   | .00                                 |
| 31    | .77                        | 14                                   | .03                                 | .30                        | 11                                   | .00                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 50.02                      | ---                                  | 166.13                              | 32.85                      | ---                                  | 92.10                               | 11.17                      | ---                                  | 3.27                                |

TOTAL LOAD FOR YEAR: 14038.95

## CUMBERLAND RIVER BASIN

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361341084253900 - SHACK CREEK AT HEMBREE (034078755), TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      |                                     | NOVEMBER                   |                                      |                                     | DECEMBER                   |                                      |                                     |
| 1       | .18                        | 10                                   | .00                                 | .96                        | 2                                    | .00                                 | 7.9                        | 10                                   | .21                                 |
| 2       | .18                        | 10                                   | .00                                 | .89                        | 18                                   | .04                                 | 144                        | 838                                  | 1010                                |
| 3       | .15                        | 10                                   | .00                                 | .89                        | 20                                   | .05                                 | 97                         | 300                                  | 79                                  |
| 4       | .11                        | 10                                   | .00                                 | 4.6                        | 78                                   | .97                                 | 82                         | 200                                  | 44                                  |
| 5       | 2.2                        | 322                                  | 5.6                                 | 2.0                        | 11                                   | .06                                 | 32                         | 59                                   | 5.1                                 |
| 6       | .52                        | 30                                   | .04                                 | 1.4                        | 5                                    | .02                                 | 26                         | 72                                   | 5.1                                 |
| 7       | .33                        | 10                                   | .00                                 | 1.2                        | 4                                    | .01                                 | 17                         | 12                                   | .55                                 |
| 8       | .26                        | 10                                   | .00                                 | 1.2                        | 2                                    | .00                                 | 14                         | 33                                   | 1.2                                 |
| 9       | .24                        | 10                                   | .00                                 | 1.2                        | 5                                    | .02                                 | 9.7                        | 15                                   | .39                                 |
| 10      | .24                        | 10                                   | .00                                 | 1.6                        | 4                                    | .02                                 | 7.6                        | 11                                   | .23                                 |
| 11      | .23                        | 10                                   | .00                                 | 2.1                        | 6                                    | .03                                 | 45                         | 224                                  | 64                                  |
| 12      | .80                        | 22                                   | .05                                 | 2.1                        | 4                                    | .02                                 | 38                         | 66                                   | 6.8                                 |
| 13      | 31                         | 732                                  | 200                                 | 1.6                        | 3                                    | .01                                 | 22                         | 20                                   | 1.2                                 |
| 14      | 3.1                        | 26                                   | .22                                 | 1.4                        | 2                                    | .00                                 | 27                         | 110                                  | 8.0                                 |
| 15      | 1.4                        | 10                                   | .04                                 | 19                         | 190                                  | 15                                  | 22                         | 22                                   | 1.3                                 |
| 16      | 1.1                        | 10                                   | .03                                 | 8.8                        | 20                                   | .48                                 | 15                         | 13                                   | .53                                 |
| 17      | .95                        | 10                                   | .03                                 | 5.1                        | 10                                   | .14                                 | 11                         | 9                                    | .27                                 |
| 18      | .75                        | 5                                    | .01                                 | 3.7                        | 10                                   | .10                                 | 8.2                        | 4                                    | .09                                 |
| 19      | .76                        | 5                                    | .01                                 | 2.6                        | 10                                   | .07                                 | 6.9                        | 6                                    | .11                                 |
| 20      | .75                        | 5                                    | .01                                 | 25                         | 300                                  | 35                                  | 5.9                        | 4                                    | .06                                 |
| 21      | .85                        | 8                                    | .02                                 | 14                         | 100                                  | 3.8                                 | 5.6                        | 2                                    | .03                                 |
| 22      | 1.3                        | 7                                    | .02                                 | 7.1                        | 10                                   | .19                                 | 24                         | 94                                   | 8.0                                 |
| 23      | 16                         | 123                                  | 9.0                                 | 12                         | 55                                   | 1.8                                 | 16                         | 11                                   | .48                                 |
| 24      | 4.6                        | 9                                    | .11                                 | 26                         | 60                                   | 4.2                                 | 9.2                        | 7                                    | .17                                 |
| 25      | 4.9                        | 15                                   | .20                                 | 11                         | 20                                   | .59                                 | 6.6                        | 5                                    | .09                                 |
| 26      | 3.1                        | 8                                    | .07                                 | 6.5                        | 10                                   | .18                                 | 6.5                        | 5                                    | .09                                 |
| 27      | 2.1                        | 6                                    | .03                                 | 25                         | 250                                  | 31                                  | 7.0                        | 10                                   | .19                                 |
| 28      | 1.4                        | 1                                    | .00                                 | 102                        | 600                                  | 328                                 | 79                         | 150                                  | 57                                  |
| 29      | 1.3                        | 7                                    | .02                                 | 23                         | 80                                   | 5.0                                 | 33                         | 50                                   | 4.5                                 |
| 30      | 1.1                        | 3                                    | .00                                 | 12                         | 20                                   | .65                                 | 16                         | 40                                   | 1.7                                 |
| 31      | 1.1                        | 23                                   | .07                                 | ---                        | ---                                  | ---                                 | 10                         | 10                                   | .27                                 |
| TOTAL   | 83.00                      | ---                                  | 215.58                              | 325.94                     | ---                                  | 427.45                              | 851.1                      | ---                                  | 1300.66                             |
| JANUARY |                            |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
| 1       | 8.7                        | 10                                   | .23                                 | 5.7                        | 5                                    | .08                                 | 14                         | 32                                   | 1.2                                 |
| 2       | 7.3                        | 10                                   | .20                                 | 5.3                        | 5                                    | .07                                 | 13                         | 25                                   | .88                                 |
| 3       | 6.2                        | 5                                    | .08                                 | 5.3                        | 5                                    | .07                                 | 11                         | 25                                   | .74                                 |
| 4       | 5.6                        | 5                                    | .08                                 | 4.8                        | 5                                    | .06                                 | 9.9                        | 25                                   | .67                                 |
| 5       | 6.0                        | 1                                    | .02                                 | 4.5                        | 5                                    | .06                                 | 11                         | 27                                   | .80                                 |
| 6       | 5.9                        | 1                                    | .02                                 | 4.6                        | 5                                    | .06                                 | 12                         | 12                                   | .39                                 |
| 7       | 4.9                        | 1                                    | .01                                 | 5.7                        | 10                                   | .15                                 | 10                         | 5                                    | .14                                 |
| 8       | 4.2                        | 5                                    | .06                                 | 7.2                        | 8                                    | .16                                 | 9.6                        | 20                                   | .52                                 |
| 9       | 4.0                        | 5                                    | .05                                 | 6.5                        | 1                                    | .02                                 | 7.9                        | 1                                    | .02                                 |
| 10      | 11                         | 100                                  | 3.0                                 | 14                         | 95                                   | 6.5                                 | 6.7                        | 3                                    | .05                                 |
| 11      | 10                         | 10                                   | .27                                 | 49                         | 240                                  | 36                                  | 6.5                        | 2                                    | .04                                 |
| 12      | 8.5                        | 5                                    | .11                                 | 35                         | 45                                   | 4.3                                 | 6.2                        | 8                                    | .13                                 |
| 13      | 7.8                        | 4                                    | .08                                 | 124                        | 910                                  | 449                                 | 14                         | 80                                   | 3.0                                 |
| 14      | 7.3                        | 5                                    | .10                                 | 81                         | 200                                  | 44                                  | 12                         | 1                                    | .03                                 |
| 15      | 6.6                        | 5                                    | .09                                 | 33                         | 31                                   | 2.8                                 | 10                         | 6                                    | .16                                 |
| 16      | 6.5                        | 2                                    | .04                                 | 19                         | 17                                   | .87                                 | 20                         | 65                                   | 3.5                                 |
| 17      | 5.3                        | 5                                    | .07                                 | 14                         | 11                                   | .42                                 | 17                         | 10                                   | .46                                 |
| 18      | 4.9                        | 5                                    | .07                                 | 11                         | 6                                    | .18                                 | 15                         | 19                                   | .77                                 |
| 19      | 3.3                        | 5                                    | .04                                 | 9.9                        | 9                                    | .24                                 | 12                         | 9                                    | .29                                 |
| 20      | 3.9                        | 5                                    | .05                                 | 7.6                        | 10                                   | .21                                 | 113                        | 866                                  | 500                                 |
| 21      | 5.2                        | 5                                    | .07                                 | 6.9                        | 5                                    | .09                                 | 102                        | 150                                  | 41                                  |
| 22      | 7.2                        | 5                                    | .10                                 | 6.2                        | 11                                   | .18                                 | 31                         | 85                                   | 7.1                                 |
| 23      | 7.3                        | 10                                   | .20                                 | 6.6                        | 6                                    | .11                                 | 21                         | 52                                   | 2.9                                 |
| 24      | 135                        | 500                                  | 280                                 | 6.1                        | 5                                    | .08                                 | 15                         | 35                                   | 1.4                                 |
| 25      | 41                         | 40                                   | 4.4                                 | 6.0                        | 4                                    | .06                                 | 16                         | 106                                  | 4.6                                 |
| 26      | 21                         | 20                                   | 1.1                                 | 4.9                        | 4                                    | .05                                 | 13                         | 29                                   | 1.0                                 |
| 27      | 16                         | 10                                   | .43                                 | 30                         | 133                                  | 15                                  | 13                         | 22                                   | .77                                 |
| 28      | 12                         | 5                                    | .16                                 | 46                         | 53                                   | 9.4                                 | ---                        | ---                                  | ---                                 |
| 29      | 10                         | 5                                    | .14                                 | 22                         | 39                                   | 2.3                                 | ---                        | ---                                  | ---                                 |
| 30      | 7.9                        | 5                                    | .11                                 | ---                        | ---                                  | ---                                 | ---                        | ---                                  | ---                                 |
| 31      | 6.4                        | 5                                    | .09                                 | ---                        | ---                                  | ---                                 | ---                        | ---                                  | ---                                 |
| TOTAL   | 396.9                      | ---                                  | 291.47                              | 581.8                      | ---                                  | 572.52                              | 541.8                      | ---                                  | 572.56                              |



## CUMBERLAND RIVER BASIN

03407908 NEW RIVER AT CORDELL, TN

LOCATION.--Lat 36°20'10", long 84°27'06", Scott County, Hydrologic Unit 05130104, on right bank at Cordell Bridge, 3.4 mi south of Winona, and at mile 24.9.

DRAINAGE AREA.--198 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1975 to April 1977 (discharge measurements only); May 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft, above National Geodetic Vertical Datum, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 16, 21, 22, 24-27, Feb. 8-21. Records fair.

AVERAGE DISCHARGE.--8 years, 463 ft<sup>3</sup>/s, 31.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft<sup>3</sup>/s Mar. 21, 1980, gage height, 24.58 ft; minimum, 1.8 ft<sup>3</sup>/s Oct. 17, 1980, gage height, 1.72 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 19 | 0845 | *9,990                            | *14.06              | Aug. 17 | 1430 | 8,450                             | 12.44               |

Minimum discharge, 7.9 ft<sup>3</sup>/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC   | JAN   | FEB   | MAR  | APR   | MAY  | JUN  | JUL  | AUG   | SEP  |       |
|-------------|--------|----------|-------|-------|-------|------|-------|------|------|------|-------|------|-------|
| 1           | 9.2    | 52       | 538   | 687   | 4150  | 346  | 664   | 109  | 42   | 77   | 746   | 253  |       |
| 2           | 11     | 55       | 409   | 1290  | 2190  | 321  | 498   | 115  | 44   | 128  | 583   | 180  |       |
| 3           | 13     | 80       | 372   | 1150  | 1110  | 280  | 409   | 271  | 65   | 94   | 295   | 141  |       |
| 4           | 12     | 69       | 300   | 1570  | 698   | 254  | 350   | 182  | 59   | 85   | 187   | 117  |       |
| 5           | 10     | 72       | 266   | 1330  | 996   | 279  | 311   | 142  | 94   | 77   | 135   | 102  |       |
| 6           | 9.2    | 80       | 359   | 871   | 1850  | 234  | 2070  | 121  | 203  | 52   | 113   | 213  |       |
| 7           | 8.4    | 72       | 332   | 610   | 1200  | 212  | 1130  | 113  | 320  | 46   | 118   | 519  |       |
| 8           | 19     | 64       | 328   | 448   | 800   | 214  | 738   | 106  | 566  | 39   | 130   | 182  |       |
| 9           | 205    | 59       | 305   | 355   | 600   | 451  | 515   | 98   | 230  | 32   | 115   | 132  |       |
| 10          | 58     | 175      | 292   | 311   | 480   | 441  | 411   | 89   | 144  | 30   | 87    | 109  |       |
| 11          | 30     | 1570     | 264   | 291   | 430   | 413  | 351   | 83   | 234  | 565  | 87    | 103  |       |
| 12          | 22     | 583      | 236   | 240   | 1000  | 411  | 304   | 77   | 438  | 177  | 72    | 86   |       |
| 13          | 18     | 316      | 220   | 200   | 800   | 352  | 274   | 72   | 327  | 295  | 54    | 71   |       |
| 14          | 15     | 222      | 197   | 201   | 700   | 326  | 262   | 68   | 189  | 198  | 73    | 58   |       |
| 15          | 15     | 177      | 174   | 189   | 600   | 292  | 561   | 58   | 133  | 265  | 76    | 50   |       |
| 16          | 14     | 243      | 162   | 153   | 500   | 258  | 1010  | 54   | 106  | 256  | 68    | 45   |       |
| 17          | 14     | 217      | 156   | 187   | 420   | 241  | 726   | 62   | 90   | 156  | 3970  | 42   |       |
| 18          | 17     | 203      | 149   | 179   | 400   | 218  | 531   | 100  | 193  | 106  | 1790  | 38   |       |
| 19          | 24     | 4670     | 148   | 167   | 550   | 193  | 421   | 81   | 162  | 79   | 661   | 35   |       |
| 20          | 134    | 1420     | 158   | 151   | 750   | 181  | 354   | 60   | 109  | 60   | 417   | 32   |       |
| 21          | 125    | 633      | 274   | 156   | 700   | 172  | 304   | 60   | 83   | 52   | 445   | 30   |       |
| 22          | 112    | 395      | 687   | 165   | 654   | 193  | 252   | 72   | 66   | 99   | 237   | 29   |       |
| 23          | 745    | 301      | 661   | 159   | 670   | 209  | 215   | 75   | 57   | 96   | 168   | 29   |       |
| 24          | 907    | 244      | 531   | 151   | 580   | 297  | 198   | 75   | 55   | 67   | 554   | 52   |       |
| 25          | 293    | 204      | 1590  | 148   | 476   | 357  | 177   | 88   | 56   | 95   | 1190  | 70   |       |
| 26          | 173    | 173      | 1150  | 126   | 521   | 336  | 154   | 77   | 58   | 370  | 2370  | 47   |       |
| 27          | 121    | 153      | 726   | 123   | 435   | 323  | 143   | 60   | 48   | 463  | 1050  | 79   |       |
| 28          | 97     | 1610     | 510   | 124   | 375   | 319  | 144   | 51   | 43   | 390  | 528   | 59   |       |
| 29          | 83     | 1200     | 403   | 122   | ---   | 300  | 148   | 48   | 38   | 285  | 334   | 41   |       |
| 30          | 76     | 674      | 333   | 118   | ---   | 264  | 124   | 48   | 35   | 274  | 266   | 33   |       |
| 31          | 63     | ---      | 579   | 617   | ---   | 331  | ---   | 43   | ---  | 410  | 423   | ---  |       |
| TOTAL       | 3452.8 | 15986    | 12809 | 12589 | 24635 | 9018 | 13749 | 2758 | 4287 | 5418 | 17342 | 2977 |       |
| MEAN        | 111    | 533      | 413   | 406   | 880   | 291  | 458   | 89.0 | 143  | 175  | 559   | 99.2 |       |
| MAX         | 907    | 4670     | 1590  | 1570  | 4150  | 451  | 2070  | 271  | 566  | 565  | 3970  | 519  |       |
| MIN         | 8.4    | 52       | 148   | 118   | 375   | 172  | 124   | 43   | 35   | 30   | 54    | 29   |       |
| CFSM        | .56    | 2.69     | 2.09  | 2.05  | 4.44  | 1.47 | 2.31  | .45  | .72  | .88  | 2.82  | .50  |       |
| IN.         | .65    | 3.00     | 2.41  | 2.37  | 4.63  | 1.69 | 2.58  | .52  | .81  | 1.02 | 3.26  | .56  |       |
| CAL YR 1984 | TOTAL  | 174186.0 |       | MEAN  | 476   | MAX  | 11700 | MIN  | 8.2  | CFSM | 2.40  | IN.  | 32.73 |
| WTR YR 1985 | TOTAL  | 125020.8 |       | MEAN  | 343   | MAX  | 4670  | MIN  | 8.4  | CFSM | 1.73  | IN.  | 23.49 |

## CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN

LOCATION.--Lat 36°23'08", long 84°33'17", Scott County, Hydrologic Unit 05130104, on left bank at town of New River, 700 ft downstream from Phillips Creek, 1,000 ft downstream from bridge on U. S. Highway 27, 1.7 mi downstream from Brimstone Creek, and at mile 8.6.

DRAINAGE AREA.--382 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Gage-height records collected in this vicinity 1908-52 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 1436: Drainage area. WRD TN-73: 1939(M), 1951(M), 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--51 years, 739 ft<sup>3</sup>/s, 26.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft<sup>3</sup>/s May 27, 1973, gage height, 37.91 ft, from high water mark in gage well, from rating curve extended above 27,000 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow; no flow part of each day Aug. 12-15, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 41.2 ft, discharge, 74,700 ft<sup>3</sup>/s, estimated, based on field survey at old U. S. Weather Bureau gage, 1,200 ft upstream at datum 3.41 ft higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Nov. 19 | 1230 | *13,700                           | *16.00              | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 9.2 ft<sup>3</sup>/s Oct. 1, gage height 1.62 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG   | SEP  |       |
|-------------|--------|----------|-------|-------|-------|-------|-------|------|------|------|-------|------|-------|
| 1           | 9.4    | 97       | 1020  | 1670  | 6640  | 581   | 1030  | 172  | 74   | 36   | 1130  | 446  |       |
| 2           | 9.8    | 94       | 784   | 2580  | 4040  | 547   | 869   | 194  | 69   | 94   | 1240  | 294  |       |
| 3           | 10     | 118      | 688   | 1950  | 1790  | 480   | 748   | 532  | 98   | 105  | 532   | 216  |       |
| 4           | 16     | 119      | 548   | 2450  | 1210  | 432   | 641   | 383  | 118  | 87   | 322   | 171  |       |
| 5           | 16     | 121      | 459   | 2160  | 1370  | 466   | 553   | 274  | 85   | 88   | 222   | 142  |       |
| 6           | 13     | 132      | 620   | 1500  | 3010  | 412   | 1910  | 221  | 284  | 75   | 169   | 150  |       |
| 7           | 11     | 121      | 604   | 1150  | 2020  | 354   | 1390  | 219  | 266  | 72   | 194   | 528  |       |
| 8           | 33     | 107      | 568   | 901   | 1330  | 350   | 1060  | 216  | 680  | 56   | 227   | 265  |       |
| 9           | 246    | 99       | 533   | 718   | 1010  | 812   | 855   | 177  | 349  | 46   | 217   | 173  |       |
| 10          | 135    | 189      | 493   | 607   | 874   | 908   | 714   | 157  | 213  | 38   | 156   | 140  |       |
| 11          | 67     | 1750     | 458   | 578   | 829   | 829   | 616   | 145  | 208  | 367  | 118   | 136  |       |
| 12          | 44     | 920      | 393   | 478   | 1940  | 804   | 533   | 146  | 405  | 267  | 114   | 124  |       |
| 13          | 32     | 528      | 362   | 403   | 1550  | 695   | 468   | 205  | 491  | 236  | 92    | 97   |       |
| 14          | 24     | 357      | 325   | 381   | 1180  | 617   | 446   | 161  | 274  | 227  | 80    | 82   |       |
| 15          | 21     | 282      | 288   | 364   | 990   | 552   | 650   | 130  | 185  | 252  | 104   | 71   |       |
| 16          | 19     | 330      | 262   | 291   | 804   | 475   | 1320  | 111  | 139  | 331  | 99    | 63   |       |
| 17          | 19     | 322      | 249   | 344   | 797   | 437   | 1100  | 131  | 117  | 210  | 3940  | 59   |       |
| 18          | 20     | 314      | 241   | 364   | 795   | 394   | 884   | 209  | 138  | 134  | 2870  | 55   |       |
| 19          | 22     | 7060     | 273   | 335   | 1090  | 344   | 730   | 170  | 218  | 97   | 989   | 51   |       |
| 20          | 388    | 2250     | 295   | 284   | 1460  | 316   | 606   | 126  | 143  | 77   | 581   | 47   |       |
| 21          | 255    | 1080     | 468   | 221   | 1350  | 300   | 510   | 121  | 106  | 70   | 679   | 42   |       |
| 22          | 172    | 725      | 981   | 237   | 1240  | 328   | 427   | 150  | 86   | 184  | 381   | 40   |       |
| 23          | 762    | 534      | 1140  | 259   | 1220  | 362   | 362   | 207  | 74   | 183  | 277   | 39   |       |
| 24          | 1550   | 422      | 954   | 255   | 1080  | 524   | 327   | 218  | 68   | 120  | 240   | 54   |       |
| 25          | 568    | 347      | 2380  | 274   | 910   | 673   | 299   | 273  | 64   | 94   | 1330  | 88   |       |
| 26          | 308    | 295      | 1850  | 249   | 864   | 655   | 257   | 220  | 65   | 470  | 2190  | 258  |       |
| 27          | 210    | 255      | 1250  | 202   | 752   | 623   | 234   | 161  | 59   | 1460 | 1290  | 260  |       |
| 28          | 160    | 2840     | 940   | 221   | 641   | 596   | 250   | 125  | 49   | 929  | 742   | 146  |       |
| 29          | 136    | 2070     | 756   | 224   | ---   | 557   | 235   | 108  | 43   | 475  | 478   | 93   |       |
| 30          | 128    | 1210     | 629   | 214   | ---   | 487   | 205   | 97   | 36   | 328  | 369   | 72   |       |
| 31          | 115    | ---      | 1150  | 690   | ---   | 526   | ---   | 85   | ---  | 457  | 767   | ---  |       |
| TOTAL       | 5519.2 | 25088    | 21961 | 22554 | 42786 | 16436 | 20229 | 5844 | 5204 | 7665 | 22139 | 4402 |       |
| MEAN        | 178    | 836      | 708   | 728   | 1528  | 530   | 674   | 189  | 173  | 247  | 714   | 147  |       |
| MAX         | 1550   | 7060     | 2380  | 2580  | 6640  | 908   | 1910  | 532  | 680  | 1460 | 3940  | 528  |       |
| MIN         | 9.4    | 94       | 241   | 202   | 641   | 300   | 205   | 85   | 36   | 36   | 80    | 39   |       |
| CFSM        | .47    | 2.19     | 1.85  | 1.91  | 4.00  | 1.39  | 1.76  | .49  | .45  | .65  | 1.87  | .38  |       |
| IN.         | .54    | 2.44     | 2.14  | 2.20  | 4.17  | 1.60  | 1.97  | .57  | .51  | .75  | 2.16  | .43  |       |
| CAL YR 1984 | TOTAL  | 298581.3 |       | MEAN  | 816   | MAX   | 25000 | MIN  | 7.3  | CFSM | 2.14  | IN.  | 29.08 |
| WTR YR 1985 | TOTAL  | 199827.2 |       | MEAN  | 547   | MAX   | 7060  | MIN  | 9.4  | CFSM | 1.43  | IN.  | 19.46 |

## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1975 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.

pH: October 1976 to current year.

WATER TEMPERATURE: October 1976 to current year.

DISSOLVED OXYGEN: October 1976 to current year.

TURBIDITY: December 1976 to current year.

OXIDATION-REDUCTION POTENTIAL: December 1976 to September 1977.

SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Five parameter water-quality monitor and sediment pumping sampler since Oct. 21, 1976.

REMARKS.--Interruptions in the record were due to malfunction of the instruments.

## EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 896 microsiemens, July 11, 1985; minimum, 44 microsiemens, Apr. 4, 1977.

pH: 8.6 units, May 16, 1983; minimum, 5.3 units, Nov. 17, 1978.

WATER TEMPERATURE: Maximum, 32.5°C, July 16, 1980, minimum, 0.0°C, Jan. 1, 2, 13, 17, 19, Feb. 6, 1977, Dec. 21, 22, 1981, Jan. 19, Dec. 24, 30, 1983, Feb. 8, 1984.

DISSOLVED OXYGEN: Maximum, 14.4 mg/L, Dec. 6, 1976; minimum, 5.6 mg/L, July 26, 1977.

TURBIDITY: Maximum, 3,000 JTU, Sept. 2, 1982; minimum, 0 JTU, several days 1982-85.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,190 mg/L, Aug. 8, 1981; minimum daily mean, 1 mg/L, on many days in 1976, Apr. 18, 1984.

SEDIMENT LOADS: Maximum daily, 262,000 tons, Apr. 5, 1977; minimum daily, 0.00 ton, Oct. 21-24, 27, 1980.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 896 microsiemens, July 11; minimum, 130 microsiemens, Nov. 19.

pH: Maximum, 8.3 units, Aug. 12; minimum, 6.6 units, Oct. 10.

WATER TEMPERATURE: Maximum, 28.0°C, Aug. 14; minimum recorded, 0.5°C, Feb. 16, but may have been lower during period of missing record Jan. 14 to Feb. 15.

DISSOLVED OXYGEN: Maximum, 13.3 mg/L, April 10, but may have been higher during period of missing record Jan. 14 to Feb. 15; minimum, 5.9 mg/L, Oct. 20.

TURBIDITY: Maximum, 1,700 JTU, Nov. 19; minimum, 0 JTU, many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1230 mg/L, Nov. 19; minimum daily mean, 3 mg/L, Dec. 12, 17.

SEDIMENT LOADS: Maximum daily, 34,400 tons, Nov. 19; minimum daily, 0.59 ton, Oct. 19.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | ---     | --- | ---  | 330      | 318 | 323  | 178      | 164 | 171  | 188     | 152 | 173  |
| 2     | 510     | 506 | 508  | 342      | 328 | 332  | 194      | 178 | 187  | 160     | 144 | 154  |
| 3     | 512     | 504 | 508  | 340      | 334 | 338  | 202      | 192 | 197  | 160     | 152 | 156  |
| 4     | 514     | 510 | 511  | 346      | 338 | 343  | 210      | 200 | 205  | 162     | 152 | 158  |
| 5     | 514     | 502 | 510  | 362      | 346 | 355  | 218      | 210 | 214  | 162     | 156 | 159  |
| 6     | 506     | 494 | 504  | 370      | 362 | 367  | 222      | 214 | 217  | 164     | 156 | 160  |
| 7     | 498     | 492 | 495  | 378      | 368 | 372  | 234      | 222 | 228  | 174     | 164 | 169  |
| 8     | 494     | 438 | 472  | 384      | 376 | 379  | 238      | 226 | 232  | 184     | 172 | 179  |
| 9     | 472     | 452 | 464  | 386      | 380 | 383  | 234      | 218 | 224  | 194     | 184 | 189  |
| 10    | 634     | 448 | 556  | 386      | 348 | 378  | 222      | 212 | 216  | 206     | 194 | 199  |
| 11    | 624     | 556 | 582  | 344      | 214 | 288  | 220      | 216 | 218  | 212     | 204 | 208  |
| 12    | 558     | 548 | 554  | 212      | 196 | 201  | 230      | 218 | 224  | 222     | 210 | 216  |
| 13    | 552     | 546 | 549  | 208      | 198 | 203  | 238      | 228 | 232  | 228     | 220 | 224  |
| 14    | 552     | 544 | 548  | 220      | 210 | 214  | 240      | 236 | 238  | ---     | --- | ---  |
| 15    | 554     | 548 | 551  | 240      | 218 | 231  | 248      | 240 | 244  | ---     | --- | ---  |
| 16    | 558     | 552 | 556  | 248      | 232 | 239  | 256      | 244 | 250  | ---     | --- | ---  |
| 17    | 558     | 552 | 556  | 260      | 248 | 256  | 260      | 254 | 257  | ---     | --- | ---  |
| 18    | 554     | 540 | 547  | 270      | 256 | 264  | 266      | 260 | 263  | ---     | --- | ---  |
| 19    | 542     | 518 | 537  | 236      | 130 | 182  | 270      | 264 | 267  | ---     | --- | ---  |
| 20    | 524     | 420 | 497  | 164      | 138 | 148  | 274      | 266 | 270  | ---     | --- | ---  |
| 21    | 498     | 410 | 468  | 180      | 164 | 172  | 272      | 252 | 261  | ---     | --- | ---  |
| 22    | 404     | 356 | 372  | 196      | 180 | 188  | 256      | 246 | 251  | ---     | --- | ---  |
| 23    | 400     | 370 | 382  | 208      | 196 | 202  | 254      | 206 | 230  | ---     | --- | ---  |
| 24    | 380     | 244 | 277  | 222      | 208 | 215  | 202      | 176 | 190  | ---     | --- | ---  |
| 25    | 260     | 246 | 255  | 230      | 222 | 226  | 180      | 160 | 171  | ---     | --- | ---  |
| 26    | 268     | 260 | 264  | 246      | 232 | 237  | 160      | 150 | 155  | ---     | --- | ---  |
| 27    | 276     | 262 | 269  | 256      | 244 | 250  | 164      | 154 | 158  | ---     | --- | ---  |
| 28    | 286     | 272 | 279  | 250      | 156 | 192  | 176      | 164 | 170  | ---     | --- | ---  |
| 29    | 296     | 284 | 290  | 164      | 148 | 154  | 186      | 172 | 181  | ---     | --- | ---  |
| 30    | 308     | 294 | 301  | 162      | 152 | 157  | 210      | 188 | 194  | ---     | --- | ---  |
| 31    | 320     | 310 | 313  | ---      | --- | ---  | 218      | 186 | 199  | ---     | --- | ---  |
| MONTH | 634     | 244 | 449  | 386      | 130 | 260  | 274      | 150 | 217  | ---     | --- | ---  |

## CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | --- | --- | ---   | 228 | 220 | 224   | 214 | 196 | 204  | 270 | 258 | 264  |
| 2        | --- | --- | ---   | 226 | 220 | 223   | 218 | 190 | 208  | 276 | 252 | 268  |
| 3        | --- | --- | ---   | 226 | 222 | 224   | 190 | 180 | 184  | 270 | 250 | 259  |
| 4        | --- | --- | ---   | 230 | 222 | 227   | 184 | 180 | 183  | 258 | 248 | 253  |
| 5        | --- | --- | ---   | 234 | 228 | 231   | 188 | 184 | 186  | 274 | 258 | 265  |
| 6        | --- | --- | ---   | 236 | 230 | 234   | 210 | 166 | 193  | 288 | 274 | 282  |
| 7        | --- | --- | ---   | 242 | 234 | 239   | 164 | 154 | 156  | 286 | 264 | 275  |
| 8        | --- | --- | ---   | 246 | 240 | 244   | 164 | 156 | 160  | 262 | 252 | 256  |
| 9        | --- | --- | ---   | 242 | 218 | 233   | 174 | 164 | 169  | 262 | 254 | 258  |
| 10       | --- | --- | ---   | 218 | 196 | 208   | 178 | 172 | 176  | 264 | 254 | 258  |
| 11       | --- | --- | ---   | 198 | 184 | 190   | 182 | 178 | 180  | 274 | 264 | 269  |
| 12       | --- | --- | ---   | 184 | 180 | 182   | 190 | 184 | 186  | 296 | 270 | 277  |
| 13       | --- | --- | ---   | 192 | 180 | 186   | 198 | 188 | 193  | 294 | 278 | 287  |
| 14       | --- | --- | ---   | 198 | 188 | 194   | 204 | 196 | 200  | 298 | 284 | 290  |
| 15       | --- | --- | ---   | 202 | 196 | 199   | 210 | 200 | 204  | 288 | 260 | 274  |
| 16       | 184 | 178 | 181   | 208 | 198 | 205   | 212 | 202 | 207  | 288 | 268 | 279  |
| 17       | 192 | 184 | 188   | 214 | 208 | 210   | 202 | 170 | 178  | 288 | 282 | 286  |
| 18       | 198 | 188 | 193   | 218 | 210 | 214   | 172 | 166 | 168  | 296 | 286 | 290  |
| 19       | 198 | 192 | 196   | 222 | 214 | 218   | 178 | 170 | 174  | 300 | 290 | 295  |
| 20       | 178 | 172 | 175   | 226 | 218 | 223   | 186 | 174 | 180  | 302 | 296 | 299  |
| 21       | 178 | 164 | 171   | 230 | 224 | 227   | 194 | 186 | 189  | 310 | 296 | 305  |
| 22       | 172 | 166 | 169   | 234 | 224 | 230   | 202 | 192 | 197  | 310 | 296 | 305  |
| 23       | 182 | 172 | 177   | 240 | 230 | 236   | 212 | 200 | 205  | 308 | 302 | 305  |
| 24       | 188 | 180 | 184   | 242 | 236 | 239   | 216 | 208 | 213  | 308 | 290 | 298  |
| 25       | 194 | 188 | 190   | 242 | 234 | 238   | 224 | 216 | 221  | 292 | 274 | 283  |
| 26       | 204 | 192 | 198   | 232 | 220 | 226   | 232 | 222 | 228  | 280 | 268 | 276  |
| 27       | 214 | 202 | 208   | 222 | 206 | 213   | 240 | 232 | 236  | 270 | 262 | 265  |
| 28       | 224 | 214 | 219   | 214 | 200 | 206   | 248 | 236 | 244  | 270 | 266 | 268  |
| 29       | --- | --- | ---   | 202 | 196 | 199   | 256 | 244 | 251  | 274 | 268 | 271  |
| 30       | --- | --- | ---   | 200 | 196 | 198   | 258 | 252 | 256  | 288 | 272 | 280  |
| 31       | --- | --- | ---   | 204 | 198 | 200   | --- | --- | ---  | 296 | 286 | 291  |
| MONTH    | --- | --- | ---   | 246 | 180 | 217   | 258 | 154 | 198  | 310 | 248 | 278  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 302 | 294 | 299  | 360 | 348 | 353    | 270 | 172 | 242       | --- | --- | ---  |
| 2     | 312 | 300 | 306  | 382 | 358 | 369    | 190 | 176 | 180       | --- | --- | ---  |
| 3     | 320 | 302 | 313  | 396 | 382 | 389    | 200 | 176 | 190       | --- | --- | ---  |
| 4     | 330 | 318 | 325  | 422 | 396 | 411    | 214 | 202 | 208       | --- | --- | ---  |
| 5     | 330 | 318 | 325  | 442 | 418 | 430    | 226 | 210 | 219       | 264 | 250 | 257  |
| 6     | 346 | 330 | 341  | 456 | 442 | 448    | 232 | 224 | 229       | 276 | 260 | 268  |
| 7     | 384 | 344 | 359  | 478 | 452 | 464    | 242 | 234 | 238       | 320 | 274 | 301  |
| 8     | 396 | 342 | 370  | 530 | 478 | 496    | 256 | 240 | 249       | 370 | 282 | 339  |
| 9     | 350 | 302 | 327  | 548 | 528 | 539    | 262 | 248 | 256       | 272 | 196 | 218  |
| 10    | 302 | 272 | 284  | 544 | 478 | 512    | 276 | 260 | 268       | 214 | 196 | 205  |
| 11    | 276 | 264 | 268  | 896 | 392 | 498    | 290 | 274 | 284       | 236 | 214 | 225  |
| 12    | 290 | 264 | 274  | 390 | 304 | 356    | 308 | 292 | 300       | 254 | 236 | 245  |
| 13    | 324 | 284 | 302  | 350 | 298 | 317    | 312 | 306 | 310       | 280 | 252 | 267  |
| 14    | 292 | 282 | 286  | 354 | 276 | 319    | 324 | 314 | 317       | 310 | 284 | 300  |
| 15    | 286 | 272 | 279  | --- | --- | ---    | 330 | 320 | 324       | 306 | 296 | 300  |
| 16    | 272 | 266 | 270  | --- | --- | ---    | 334 | 326 | 331       | 310 | 298 | 303  |
| 17    | 272 | 268 | 270  | --- | --- | ---    | 330 | 152 | 252       | 322 | 310 | 315  |
| 18    | 282 | 270 | 274  | --- | --- | ---    | 168 | 146 | 157       | 326 | 318 | 321  |
| 19    | 302 | 278 | 290  | --- | --- | ---    | 188 | 170 | 179       | 336 | 322 | 329  |
| 20    | 320 | 300 | 308  | --- | --- | ---    | 206 | 188 | 197       | 344 | 334 | 339  |
| 21    | 346 | 320 | 334  | --- | --- | ---    | 232 | 206 | 217       | 352 | 342 | 346  |
| 22    | 380 | 346 | 364  | --- | --- | ---    | 244 | 208 | 232       | 358 | 348 | 353  |
| 23    | 400 | 376 | 390  | --- | --- | ---    | 212 | 196 | 204       | 362 | 354 | 357  |
| 24    | 400 | 372 | 388  | --- | --- | ---    | 232 | 212 | 221       | 366 | 356 | 360  |
| 25    | 366 | 332 | 350  | --- | --- | ---    | 280 | 192 | 226       | 378 | 364 | 371  |
| 26    | 336 | 328 | 330  | 324 | 222 | 284    | 210 | 166 | 192       | 380 | 314 | 348  |
| 27    | 336 | 328 | 332  | 286 | 182 | 243    | 176 | 164 | 169       | 338 | 282 | 323  |
| 28    | 340 | 332 | 336  | 208 | 172 | 194    | 198 | 178 | 186       | 350 | 274 | 314  |
| 29    | 346 | 336 | 341  | 234 | 208 | 222    | 212 | 198 | 204       | 344 | 318 | 328  |
| 30    | 352 | 340 | 348  | 254 | 236 | 245    | 226 | 210 | 217       | 346 | 320 | 332  |
| 31    | --- | --- | ---  | 262 | 248 | 255    | 220 | 200 | 213       | --- | --- | ---  |
| MONTH | 400 | 264 | 319  | --- | --- | ---    | 334 | 146 | 233       | 380 | 196 | 306  |



## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN      | MAX | MIN      | MAX | MIN     | MAX | MIN      | MAX | MIN   | MAX | MIN |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |     |
| 1       | --- | ---      | 7.6 | 7.4      | 7.3 | 7.2     | 7.2 | 7.0      | --- | ---   | 7.4 | 7.4 |
| 2       | 7.6 | 7.5      | 7.6 | 7.5      | 7.3 | 7.3     | 7.1 | 7.0      | --- | ---   | 7.4 | 7.4 |
| 3       | 7.6 | 7.6      | 7.7 | 7.5      | 7.3 | 7.3     | 7.2 | 7.1      | --- | ---   | 7.4 | 7.4 |
| 4       | 7.6 | 7.6      | 7.9 | 7.6      | 7.4 | 7.3     | 7.2 | 7.1      | --- | ---   | 7.5 | 7.4 |
| 5       | 7.6 | 7.6      | 7.8 | 7.6      | 7.4 | 7.4     | 7.2 | 7.2      | --- | ---   | 7.4 | 7.4 |
| 6       | 7.6 | 7.5      | 8.0 | 7.6      | 7.5 | 7.4     | 7.2 | 7.2      | --- | ---   | 7.4 | 7.4 |
| 7       | 7.6 | 7.5      | 8.1 | 7.7      | 7.5 | 7.4     | 7.2 | 7.2      | --- | ---   | 7.5 | 7.4 |
| 8       | 7.6 | 7.5      | 8.0 | 7.8      | 7.5 | 7.5     | 7.3 | 7.2      | --- | ---   | 7.5 | 7.4 |
| 9       | 7.5 | 7.3      | 8.0 | 7.8      | 7.5 | 7.5     | 7.3 | 7.3      | --- | ---   | 7.4 | 7.3 |
| 10      | 7.4 | 6.6      | 7.9 | 7.6      | 7.5 | 7.4     | 7.3 | 7.3      | --- | ---   | 7.4 | 7.3 |
| 11      | 7.3 | 6.7      | 7.5 | 7.2      | 7.4 | 7.4     | 7.4 | 7.3      | --- | ---   | 7.4 | 7.3 |
| 12      | 7.4 | 7.3      | 7.4 | 7.4      | 7.4 | 7.4     | 7.4 | 7.4      | --- | ---   | 7.3 | 7.3 |
| 13      | 7.4 | 7.4      | 7.5 | 7.4      | 7.4 | 7.4     | 7.4 | 7.4      | --- | ---   | 7.4 | 7.3 |
| 14      | 7.4 | 7.4      | 7.5 | 7.5      | 7.4 | 7.4     | --- | ---      | --- | ---   | 7.4 | 7.3 |
| 15      | 7.4 | 7.4      | 7.6 | 7.4      | 7.4 | 7.4     | --- | ---      | --- | ---   | 7.4 | 7.4 |
| 16      | 7.4 | 7.3      | 7.6 | 7.6      | 7.4 | 7.4     | --- | ---      | 7.3 | 7.3   | 7.5 | 7.4 |
| 17      | 7.4 | 7.4      | 7.6 | 7.6      | 7.4 | 7.4     | --- | ---      | 7.4 | 7.3   | 7.5 | 7.4 |
| 18      | 7.4 | 7.4      | 7.7 | 7.6      | 7.4 | 7.4     | --- | ---      | 7.4 | 7.4   | 7.5 | 7.4 |
| 19      | 7.4 | 7.3      | 7.5 | 7.0      | 7.4 | 7.4     | --- | ---      | 7.4 | 7.3   | 7.5 | 7.5 |
| 20      | 7.4 | 7.1      | 7.2 | 7.1      | 7.4 | 7.4     | --- | ---      | 7.3 | 7.2   | 7.5 | 7.5 |
| 21      | 7.3 | 6.7      | 7.3 | 7.2      | 7.4 | 7.4     | --- | ---      | 7.3 | 7.2   | 7.5 | 7.4 |
| 22      | 7.2 | 6.9      | 7.4 | 7.3      | 7.4 | 7.4     | --- | ---      | 7.2 | 7.2   | 7.5 | 7.4 |
| 23      | 7.4 | 7.2      | 7.4 | 7.4      | 7.4 | 7.4     | --- | ---      | 7.2 | 7.2   | 7.5 | 7.4 |
| 24      | 7.3 | 7.1      | 7.5 | 7.4      | 7.4 | 7.3     | --- | ---      | 7.3 | 7.2   | 7.6 | 7.4 |
| 25      | 7.3 | 7.3      | 7.5 | 7.5      | 7.4 | 7.1     | --- | ---      | 7.3 | 7.3   | 7.5 | 7.4 |
| 26      | 7.4 | 7.3      | 7.5 | 7.4      | 7.2 | 7.2     | --- | ---      | 7.3 | 7.2   | 7.6 | 7.4 |
| 27      | 7.4 | 7.3      | 7.5 | 7.4      | 7.2 | 7.2     | --- | ---      | 7.4 | 7.3   | 7.6 | 7.4 |
| 28      | 7.4 | 7.3      | 7.5 | 7.1      | 7.2 | 7.2     | --- | ---      | 7.4 | 7.4   | 7.5 | 7.3 |
| 29      | 7.5 | 7.3      | 7.2 | 7.1      | 7.3 | 7.2     | --- | ---      | --- | ---   | 7.6 | 7.4 |
| 30      | 7.5 | 7.3      | 7.2 | 7.2      | 7.3 | 7.2     | --- | ---      | --- | ---   | 7.6 | 7.3 |
| 31      | 7.6 | 7.3      | --- | ---      | 7.3 | 7.1     | --- | ---      | --- | ---   | 7.6 | 7.3 |
| MONTH   | 7.6 | 6.6      | 8.1 | 7.0      | 7.5 | 7.1     | --- | ---      | --- | ---   | 7.6 | 7.3 |

| DAY   | MAX | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
| 1     | 7.4 | 7.3 | 7.7 | 7.4  | 7.5 | 7.3  | 7.5 | 7.4    | 7.5 | 7.0       | --- | --- |
| 2     | 7.5 | 7.4 | 7.7 | 7.4  | 7.4 | 7.3  | 7.4 | 7.3    | 7.4 | 7.1       | --- | --- |
| 3     | 7.5 | 7.4 | 7.5 | 7.4  | 7.4 | 7.3  | 7.6 | 7.4    | 7.4 | 7.4       | --- | --- |
| 4     | 7.6 | 7.3 | 7.5 | 7.4  | 7.4 | 7.2  | 7.6 | 7.5    | 7.5 | 7.4       | --- | --- |
| 5     | 7.5 | 7.4 | 7.5 | 7.5  | 7.4 | 7.2  | 7.6 | 7.5    | 7.5 | 7.4       | 7.5 | 7.4 |
| 6     | 7.8 | 7.3 | 7.6 | 7.5  | 7.3 | 7.2  | 7.6 | 7.5    | 7.6 | 7.4       | 7.6 | 7.4 |
| 7     | 7.4 | 7.3 | 7.6 | 7.4  | 7.4 | 7.3  | 7.6 | 7.5    | 7.5 | 7.4       | 7.7 | 7.5 |
| 8     | 7.4 | 7.3 | 7.4 | 7.4  | 7.5 | 7.4  | 7.6 | 7.5    | 7.5 | 7.4       | 7.7 | 7.6 |
| 9     | 7.4 | 7.3 | 7.5 | 7.4  | 7.6 | 7.5  | 7.6 | 7.5    | 7.6 | 7.4       | 7.6 | 7.4 |
| 10    | 7.4 | 7.4 | 7.5 | 7.4  | 7.5 | 7.4  | 7.6 | 7.6    | 8.0 | 7.4       | 7.4 | 7.4 |
| 11    | 7.4 | 7.4 | 7.6 | 7.4  | 7.4 | 7.3  | 7.6 | 7.3    | 8.2 | 7.5       | 7.5 | 7.4 |
| 12    | 7.5 | 7.3 | 7.7 | 7.4  | 7.5 | 7.4  | 7.5 | 7.3    | 8.3 | 7.6       | 7.5 | 7.4 |
| 13    | 7.4 | 7.3 | 7.5 | 7.4  | 7.5 | 7.5  | 7.5 | 7.3    | 8.0 | 7.7       | 7.6 | 7.5 |
| 14    | 7.5 | 7.3 | 7.5 | 7.3  | 7.5 | 7.5  | 7.5 | 7.4    | 7.9 | 7.8       | 7.6 | 7.6 |
| 15    | 7.5 | 7.3 | 7.4 | 7.3  | 7.5 | 7.4  | --- | ---    | 7.8 | 7.6       | 7.7 | 7.6 |
| 16    | 7.4 | 7.3 | 7.3 | 7.3  | 7.5 | 7.4  | --- | ---    | 7.7 | 7.6       | 7.7 | 7.6 |
| 17    | 7.4 | 7.3 | 7.4 | 7.3  | 7.5 | 7.3  | --- | ---    | 7.6 | 7.2       | 7.8 | 7.7 |
| 18    | 7.4 | 7.3 | 7.4 | 7.3  | 7.5 | 7.3  | --- | ---    | 7.2 | 7.2       | 7.7 | 7.7 |
| 19    | 7.5 | 7.3 | 7.5 | 7.4  | 7.5 | 7.3  | --- | ---    | 7.3 | 7.2       | 7.8 | 7.7 |
| 20    | 7.5 | 7.3 | 7.5 | 7.4  | 7.7 | 7.4  | --- | ---    | 7.4 | 7.3       | 7.8 | 7.7 |
| 21    | 7.5 | 7.3 | 7.5 | 7.4  | 7.9 | 7.5  | --- | ---    | 7.5 | 7.4       | 7.8 | 7.7 |
| 22    | 7.6 | 7.3 | 7.6 | 7.4  | 7.8 | 7.5  | --- | ---    | 7.5 | 7.4       | 7.8 | 7.7 |
| 23    | 7.6 | 7.3 | 7.6 | 7.3  | 7.8 | 7.6  | --- | ---    | 7.4 | 7.4       | 7.7 | 7.7 |
| 24    | 7.5 | 7.4 | 7.4 | 7.3  | 7.8 | 7.6  | --- | ---    | 7.4 | 7.4       | 7.7 | 7.6 |
| 25    | 7.5 | 7.4 | 7.5 | 7.3  | 7.7 | 7.5  | --- | ---    | 7.6 | 7.4       | 7.7 | 7.6 |
| 26    | 7.6 | 7.4 | 7.5 | 7.4  | 7.6 | 7.5  | 7.6 | 7.2    | 7.5 | 7.4       | 7.7 | 7.5 |
| 27    | 7.6 | 7.3 | 7.6 | 7.3  | 7.6 | 7.5  | 7.4 | 7.0    | 7.4 | 7.4       | 7.5 | 7.4 |
| 28    | 7.4 | 7.3 | 7.6 | 7.3  | 7.6 | 7.5  | 7.3 | 7.0    | 7.5 | 7.4       | 7.5 | 7.4 |
| 29    | 7.5 | 7.4 | 7.5 | 7.3  | 7.5 | 7.5  | 7.4 | 7.3    | 7.5 | 7.5       | 7.5 | 7.5 |
| 30    | 7.6 | 7.4 | 7.6 | 7.3  | 7.5 | 7.5  | 7.4 | 7.4    | 7.5 | 7.5       | 7.5 | 7.4 |
| 31    | --- | --- | 7.5 | 7.4  | --- | ---  | 7.5 | 7.4    | 7.5 | 7.4       | --- | --- |
| MONTH | 7.8 | 7.3 | 7.7 | 7.3  | 7.9 | 7.2  | --- | ---    | 8.3 | 7.0       | 7.8 | 7.4 |

## CUMBERLAND RIVER BASIN

65

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|----------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER  |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1        | ---  | ---  | ---      | 19.0 | 17.5 | 18.5     | 7.0  | 6.5  | 6.5     | 13.5 | 13.0 | 13.5 |
| 2        | 16.0 | 14.5 | 15.5     | 18.5 | 16.5 | 17.5     | 7.5  | 6.5  | 7.0     | 12.5 | 10.0 | 11.0 |
| 3        | 16.5 | 14.0 | 15.5     | 16.5 | 15.5 | 16.0     | 8.0  | 7.5  | 7.5     | 9.5  | 8.0  | 8.5  |
| 4        | 17.5 | 15.0 | 16.0     | 15.5 | 15.5 | 15.5     | 7.5  | 6.0  | 6.5     | 8.0  | 8.0  | 8.0  |
| 5        | 18.0 | 15.5 | 17.0     | 16.0 | 15.0 | 15.5     | 6.0  | 6.0  | 6.0     | 7.5  | 6.0  | 7.0  |
| 6        | 17.5 | 16.0 | 17.0     | 15.0 | 13.5 | 14.0     | 6.0  | 4.0  | 5.0     | 6.0  | 5.0  | 5.5  |
| 7        | 17.5 | 16.5 | 17.0     | 13.0 | 12.0 | 13.0     | 4.0  | 2.5  | 3.0     | 5.5  | 5.5  | 5.5  |
| 8        | 17.0 | 17.0 | 17.0     | 12.0 | 11.0 | 11.5     | 2.5  | 2.0  | 2.0     | 5.5  | 5.0  | 5.5  |
| 9        | 17.5 | 16.5 | 17.0     | 11.5 | 11.0 | 11.0     | 2.5  | 2.0  | 2.0     | 5.0  | 4.5  | 5.0  |
| 10       | 18.0 | 17.0 | 17.5     | 11.5 | 11.0 | 11.0     | 4.5  | 3.0  | 3.5     | 5.0  | 4.5  | 4.5  |
| 11       | 19.0 | 17.0 | 18.0     | 11.5 | 10.5 | 11.0     | 6.0  | 4.5  | 5.5     | 5.0  | 4.0  | 4.5  |
| 12       | 19.0 | 18.0 | 18.5     | 10.5 | 9.0  | 9.5      | 7.5  | 6.0  | 7.0     | 4.0  | 3.0  | 3.5  |
| 13       | 19.0 | 18.0 | 18.5     | 8.5  | 7.5  | 8.0      | 9.5  | 7.5  | 8.5     | 3.0  | 2.0  | 2.5  |
| 14       | 19.5 | 18.0 | 19.0     | 7.0  | 6.5  | 7.0      | 10.5 | 9.5  | 10.0    | ---  | ---  | ---  |
| 15       | 19.0 | 18.0 | 18.5     | 7.0  | 7.0  | 7.0      | 11.0 | 10.0 | 10.5    | ---  | ---  | ---  |
| 16       | 20.0 | 18.0 | 19.0     | 8.0  | 7.0  | 7.5      | 11.0 | 10.0 | 10.5    | ---  | ---  | ---  |
| 17       | 20.0 | 19.0 | 19.5     | 7.0  | 6.5  | 6.5      | 11.5 | 10.5 | 11.5    | ---  | ---  | ---  |
| 18       | 20.5 | 19.0 | 19.5     | 8.0  | 6.5  | 7.0      | 12.5 | 11.5 | 12.0    | ---  | ---  | ---  |
| 19       | 20.0 | 19.0 | 19.5     | 11.5 | 8.0  | 10.0     | 12.5 | 12.0 | 12.5    | ---  | ---  | ---  |
| 20       | 20.0 | 19.0 | 19.5     | 9.0  | 8.0  | 7.5      | 12.5 | 12.5 | 12.5    | ---  | ---  | ---  |
| 21       | 20.0 | 19.5 | 19.5     | 7.5  | 6.0  | 6.5      | 13.0 | 12.5 | 12.5    | ---  | ---  | ---  |
| 22       | 19.5 | 19.5 | 19.5     | 5.5  | 4.5  | 5.0      | 13.0 | 11.5 | 12.5    | ---  | ---  | ---  |
| 23       | 19.5 | 17.5 | 18.5     | 4.5  | 4.0  | 4.0      | 11.0 | 8.5  | 10.0    | ---  | ---  | ---  |
| 24       | 17.5 | 17.0 | 17.0     | 4.5  | 3.5  | 4.0      | 8.5  | 7.5  | 8.0     | ---  | ---  | ---  |
| 25       | 17.5 | 17.0 | 17.5     | 4.5  | 3.5  | 4.0      | 9.0  | 8.0  | 8.5     | ---  | ---  | ---  |
| 26       | 18.0 | 17.5 | 18.0     | 5.0  | 4.0  | 4.5      | 8.5  | 7.0  | 7.5     | ---  | ---  | ---  |
| 27       | 18.5 | 18.0 | 18.0     | 7.0  | 5.0  | 6.0      | 8.5  | 7.0  | 7.5     | ---  | ---  | ---  |
| 28       | 19.0 | 18.0 | 18.5     | 9.5  | 7.0  | 9.0      | 10.5 | 8.5  | 9.5     | ---  | ---  | ---  |
| 29       | 19.0 | 18.0 | 18.5     | 8.5  | 7.0  | 7.5      | 12.0 | 10.5 | 11.5    | ---  | ---  | ---  |
| 30       | 19.5 | 18.0 | 18.5     | 6.5  | 6.0  | 6.5      | 12.5 | 12.0 | 12.0    | ---  | ---  | ---  |
| 31       | 19.5 | 18.0 | 18.5     | ---  | ---  | ---      | 13.5 | 12.5 | 13.0    | ---  | ---  | ---  |
| MONTH    | 20.5 | 14.0 | 18.0     | 19.0 | 3.5  | 9.5      | 13.5 | 2.0  | 8.5     | ---  | ---  | ---  |
| DAY      | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
| FEBRUARY |      |      | MARCH    |      |      | APRIL    |      |      | MAY     |      |      |      |
| 1        | ---  | ---  | ---      | 8.5  | 7.5  | 8.0      | 15.0 | 13.5 | 14.5    | 20.0 | 19.5 | 20.0 |
| 2        | ---  | ---  | ---      | 8.0  | 7.5  | 8.0      | 13.5 | 11.5 | 12.0    | 19.5 | 18.5 | 19.0 |
| 3        | ---  | ---  | ---      | 8.5  | 7.5  | 8.0      | 12.0 | 11.0 | 11.5    | 18.5 | 17.0 | 17.5 |
| 4        | ---  | ---  | ---      | 10.5 | 8.5  | 9.5      | 13.5 | 11.5 | 12.5    | 17.5 | 16.0 | 16.5 |
| 5        | ---  | ---  | ---      | 11.5 | 10.5 | 11.0     | 14.5 | 13.5 | 14.0    | 18.0 | 16.5 | 17.0 |
| 6        | ---  | ---  | ---      | 10.5 | 9.5  | 10.0     | 14.0 | 11.5 | 13.0    | 18.5 | 17.5 | 18.0 |
| 7        | ---  | ---  | ---      | 9.5  | 8.5  | 9.0      | 11.5 | 10.0 | 10.5    | 18.5 | 18.0 | 18.0 |
| 8        | ---  | ---  | ---      | 10.0 | 9.5  | 9.5      | 10.0 | 9.0  | 9.0     | 18.5 | 17.5 | 18.0 |
| 9        | ---  | ---  | ---      | 11.0 | 10.0 | 10.5     | 9.0  | 8.0  | 8.5     | 18.0 | 17.5 | 17.5 |
| 10       | ---  | ---  | ---      | 10.0 | 9.5  | 9.5      | 9.5  | 8.0  | 9.0     | 18.5 | 17.0 | 17.5 |
| 11       | ---  | ---  | ---      | 10.5 | 9.5  | 9.5      | 11.0 | 9.5  | 10.5    | 19.5 | 17.5 | 18.5 |
| 12       | ---  | ---  | ---      | 11.0 | 10.5 | 11.0     | 12.5 | 11.0 | 11.5    | 20.0 | 18.5 | 19.0 |
| 13       | ---  | ---  | ---      | 10.5 | 10.0 | 10.5     | 13.5 | 12.0 | 13.0    | 21.0 | 19.0 | 20.0 |
| 14       | ---  | ---  | ---      | 10.0 | 9.0  | 10.0     | 15.0 | 13.0 | 14.0    | 22.0 | 20.0 | 21.0 |
| 15       | ---  | ---  | ---      | 9.5  | 8.5  | 9.0      | 15.5 | 14.5 | 15.0    | 23.0 | 20.5 | 21.5 |
| 16       | 1.5  | .5   | 1.0      | 9.5  | 8.5  | 9.0      | 15.0 | 14.0 | 14.5    | 22.0 | 20.5 | 21.5 |
| 17       | 2.5  | 1.5  | 2.0      | 9.5  | 8.0  | 9.0      | 16.0 | 14.0 | 15.0    | 21.0 | 19.5 | 20.0 |
| 18       | 3.0  | 2.5  | 3.0      | 9.0  | 8.0  | 8.5      | 16.5 | 15.0 | 16.0    | 19.5 | 18.5 | 19.0 |
| 19       | 4.0  | 3.0  | 3.5      | 9.0  | 7.5  | 8.0      | 18.0 | 16.0 | 17.0    | 19.5 | 18.0 | 19.0 |
| 20       | 5.0  | 4.0  | 5.0      | 9.5  | 8.0  | 9.0      | 18.5 | 17.5 | 18.0    | 19.5 | 18.0 | 19.0 |
| 21       | 6.0  | 4.5  | 5.5      | 9.5  | 9.5  | 9.5      | 19.0 | 17.5 | 18.0    | 20.5 | 18.5 | 19.5 |
| 22       | 7.5  | 6.0  | 6.5      | 9.5  | 9.5  | 9.5      | 19.0 | 17.5 | 18.5    | 21.0 | 19.5 | 20.0 |
| 23       | 9.5  | 7.5  | 8.5      | 10.0 | 9.5  | 9.5      | 19.0 | 18.0 | 18.5    | 20.0 | 19.5 | 20.0 |
| 24       | 10.5 | 9.5  | 10.0     | 10.0 | 9.5  | 10.0     | 18.5 | 18.0 | 18.5    | 19.5 | 18.0 | 19.0 |
| 25       | 10.5 | 10.5 | 10.5     | 10.0 | 9.5  | 9.5      | 19.0 | 18.0 | 18.5    | 18.5 | 17.5 | 18.0 |
| 26       | 11.0 | 10.0 | 10.5     | 10.0 | 8.5  | 9.5      | 19.5 | 18.0 | 19.0    | 19.5 | 17.5 | 18.5 |
| 27       | 10.5 | 10.0 | 10.5     | 11.0 | 10.0 | 10.5     | 19.5 | 19.0 | 19.0    | 20.5 | 18.5 | 19.5 |
| 28       | 9.5  | 8.5  | 9.0      | 13.0 | 11.0 | 12.0     | 19.5 | 18.5 | 19.0    | 20.5 | 19.5 | 20.0 |
| 29       | ---  | ---  | ---      | 14.5 | 13.0 | 14.0     | 20.5 | 19.0 | 19.5    | 21.5 | 19.5 | 20.5 |
| 30       | ---  | ---  | ---      | 16.5 | 14.5 | 15.5     | 20.5 | 19.5 | 20.0    | 23.0 | 20.0 | 21.5 |
| 31       | ---  | ---  | ---      | 16.5 | 15.5 | 16.0     | ---  | ---  | ---     | 23.5 | 21.5 | 22.5 |
| MONTH    | ---  | ---  | ---      | 16.5 | 7.5  | 10.0     | 20.5 | 8.0  | 15.0    | 23.5 | 16.0 | 19.0 |

## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 25.0 | 22.5 | 23.5 | 25.0 | 23.5 | 24.5 | 24.0   | 22.0 | 23.5 | ---       | ---  | ---  |
| 2     | 25.5 | 23.0 | 24.0 | 24.5 | 23.0 | 24.0 | 22.0   | 21.5 | 21.5 | ---       | ---  | ---  |
| 3     | 26.0 | 23.0 | 24.5 | 25.0 | 23.0 | 24.0 | 22.0   | 21.0 | 21.5 | ---       | ---  | ---  |
| 4     | 26.5 | 24.5 | 25.5 | 24.5 | 23.5 | 24.0 | 22.5   | 21.5 | 22.0 | ---       | ---  | ---  |
| 5     | 27.0 | 24.5 | 25.5 | 24.5 | 23.5 | 24.0 | 22.5   | 22.0 | 22.0 | 25.0      | 23.0 | 24.0 |
| 6     | 25.0 | 24.5 | 24.5 | 24.5 | 23.5 | 24.0 | 22.5   | 22.0 | 22.0 | 25.0      | 23.5 | 24.0 |
| 7     | 24.5 | 23.5 | 24.0 | 25.5 | 23.5 | 24.5 | 22.5   | 22.0 | 22.0 | 24.5      | 23.5 | 24.0 |
| 8     | 23.5 | 22.0 | 22.5 | 26.0 | 23.5 | 24.5 | 23.5   | 22.0 | 22.5 | 24.5      | 23.5 | 24.0 |
| 9     | 22.5 | 21.0 | 22.0 | 26.5 | 24.0 | 25.0 | 24.5   | 22.5 | 23.5 | 24.5      | 23.5 | 24.0 |
| 10    | 23.5 | 22.0 | 23.0 | 27.5 | 25.0 | 26.5 | 26.0   | 24.0 | 24.5 | 25.0      | 24.0 | 24.5 |
| 11    | 24.5 | 23.0 | 23.5 | 27.0 | 25.5 | 26.0 | 26.5   | 24.5 | 25.5 | 25.0      | 24.0 | 24.5 |
| 12    | 24.0 | 22.5 | 23.0 | 26.5 | 25.5 | 26.0 | 27.5   | 25.0 | 26.0 | 23.5      | 22.5 | 23.0 |
| 13    | 22.0 | 20.5 | 21.0 | 26.0 | 24.5 | 25.0 | 26.5   | 25.5 | 26.5 | 22.0      | 21.0 | 22.0 |
| 14    | 20.5 | 19.5 | 20.0 | 25.0 | 24.0 | 24.5 | 28.0   | 26.0 | 27.0 | 21.0      | 20.0 | 20.5 |
| 15    | 20.5 | 19.5 | 20.0 | ---  | ---  | ---  | 27.0   | 26.0 | 26.5 | 20.0      | 19.0 | 19.5 |
| 16    | 22.0 | 20.0 | 21.0 | ---  | ---  | ---  | 26.5   | 25.5 | 26.0 | 20.5      | 18.5 | 19.0 |
| 17    | 22.5 | 20.5 | 21.5 | ---  | ---  | ---  | 25.5   | 19.5 | 22.5 | 20.0      | 18.0 | 19.0 |
| 18    | 23.5 | 21.5 | 22.5 | ---  | ---  | ---  | 20.5   | 19.5 | 20.0 | 20.5      | 18.0 | 19.0 |
| 19    | 23.0 | 22.5 | 23.0 | ---  | ---  | ---  | 22.0   | 20.5 | 21.5 | 20.5      | 18.5 | 19.5 |
| 20    | 23.0 | 21.5 | 22.5 | ---  | ---  | ---  | 22.5   | 22.0 | 22.0 | 21.0      | 18.5 | 19.5 |
| 21    | 23.5 | 21.0 | 22.0 | ---  | ---  | ---  | 22.0   | 21.5 | 22.0 | 21.0      | 18.5 | 20.0 |
| 22    | 23.0 | 21.0 | 22.0 | ---  | ---  | ---  | 22.0   | 21.5 | 21.5 | 21.5      | 19.0 | 20.0 |
| 23    | 24.0 | 22.0 | 23.0 | ---  | ---  | ---  | 21.5   | 21.0 | 21.5 | 20.5      | 19.5 | 20.0 |
| 24    | 25.5 | 22.5 | 23.5 | ---  | ---  | ---  | 21.0   | 21.0 | 21.0 | 20.0      | 19.5 | 19.5 |
| 25    | 26.0 | 23.5 | 24.5 | ---  | ---  | ---  | 21.0   | 19.5 | 20.0 | 20.0      | 18.5 | 19.0 |
| 26    | 26.5 | 24.0 | 25.5 | 24.5 | 23.0 | 24.0 | 19.5   | 19.0 | 19.5 | 19.5      | 18.0 | 18.5 |
| 27    | 27.0 | 25.0 | 26.0 | 23.0 | 21.5 | 22.5 | 20.5   | 19.0 | 19.5 | 18.0      | 16.5 | 17.5 |
| 28    | 26.5 | 25.0 | 25.5 | 21.5 | 21.0 | 21.5 | 21.0   | 20.0 | 20.5 | 17.5      | 16.0 | 17.0 |
| 29    | 26.0 | 24.5 | 25.5 | 22.5 | 21.5 | 22.0 | 21.5   | 20.5 | 21.0 | 17.5      | 16.0 | 16.5 |
| 30    | 26.0 | 24.5 | 25.0 | 23.5 | 22.5 | 23.0 | 22.0   | 21.5 | 21.5 | 18.0      | 16.0 | 17.0 |
| 31    | ---  | ---  | ---  | 24.0 | 23.0 | 23.5 | 21.5   | 20.5 | 21.0 | ---       | ---  | ---  |
| MONTH | 27.0 | 19.5 | 23.5 | ---  | ---  | ---  | 28.0   | 19.0 | 22.5 | 25.0      | 16.0 | 20.5 |

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|---------|-----|------|----------|------|------|----------|------|------|---------|------|------|
|       | OCTOBER |     |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | ---     | --- | ---  | 8.7      | 7.9  | 8.4  | 11.4     | 11.4 | 11.4 | 10.0    | 9.7  | 9.9  |
| 2     | 8.6     | 8.3 | 8.5  | 8.8      | 8.1  | 8.4  | 11.4     | 11.3 | 11.4 | 10.5    | 9.7  | 10.1 |
| 3     | 8.7     | 8.4 | 8.5  | 9.0      | 8.4  | 8.7  | 11.4     | 11.2 | 11.3 | 10.8    | 10.0 | 10.6 |
| 4     | 8.7     | 8.3 | 8.5  | 9.5      | 8.6  | 9.0  | 11.7     | 11.3 | 11.5 | 10.7    | 10.3 | 10.6 |
| 5     | 8.5     | 8.2 | 8.3  | 9.2      | 8.6  | 8.9  | 11.8     | 11.7 | 11.7 | 11.3    | 10.5 | 11.0 |
| 6     | 8.4     | 7.6 | 8.1  | 9.7      | 8.7  | 9.2  | 12.1     | 11.8 | 11.9 | 11.6    | 11.3 | 11.4 |
| 7     | 8.3     | 7.3 | 8.0  | 10.1     | 9.1  | 9.6  | 12.6     | 12.1 | 12.4 | 11.4    | 11.0 | 11.4 |
| 8     | 8.3     | 7.9 | 8.1  | 10.4     | 9.6  | 10.0 | 12.7     | 12.6 | 12.7 | 11.4    | 11.3 | 11.4 |
| 9     | 8.0     | 7.1 | 7.6  | 10.3     | 10.2 | 10.3 | 12.8     | 12.8 | 12.8 | 11.6    | 11.4 | 11.5 |
| 10    | 8.1     | 7.5 | 7.8  | 10.3     | 9.6  | 10.1 | 12.8     | 12.2 | 12.5 | 11.6    | 11.5 | 11.6 |
| 11    | 8.1     | 7.8 | 7.9  | 9.5      | 9.2  | 9.4  | 12.2     | 11.7 | 11.9 | 11.6    | 11.4 | 11.5 |
| 12    | 8.1     | 7.7 | 7.9  | 10.1     | 9.5  | 9.8  | 11.7     | 11.4 | 11.6 | 11.9    | 11.6 | 11.8 |
| 13    | 7.9     | 7.5 | 7.7  | 10.8     | 10.1 | 10.4 | 11.4     | 10.9 | 11.2 | 12.2    | 12.0 | 12.0 |
| 14    | 7.9     | 7.5 | 7.7  | 11.1     | 10.8 | 11.0 | 10.9     | 10.7 | 10.8 | ---     | ---  | ---  |
| 15    | 7.7     | 7.2 | 7.4  | 11.2     | 11.1 | 11.1 | 10.7     | 10.5 | 10.6 | ---     | ---  | ---  |
| 16    | 7.6     | 7.2 | 7.3  | 11.2     | 11.0 | 11.1 | 10.6     | 10.5 | 10.5 | ---     | ---  | ---  |
| 17    | 7.6     | 7.2 | 7.4  | 11.2     | 10.9 | 11.1 | 10.5     | 10.3 | 10.4 | ---     | ---  | ---  |
| 18    | 7.3     | 7.0 | 7.2  | 11.1     | 10.6 | 11.0 | 10.3     | 10.0 | 10.2 | ---     | ---  | ---  |
| 19    | 7.2     | 6.9 | 7.1  | ---      | ---  | ---  | 10.1     | 9.9  | 10.0 | ---     | ---  | ---  |
| 20    | 7.1     | 5.9 | 6.8  | ---      | ---  | ---  | 10.0     | 9.9  | 9.9  | ---     | ---  | ---  |
| 21    | 7.3     | 7.1 | 7.2  | ---      | ---  | ---  | 10.0     | 9.8  | 9.9  | ---     | ---  | ---  |
| 22    | 7.3     | 7.0 | 7.1  | ---      | ---  | ---  | 10.1     | 9.7  | 9.9  | ---     | ---  | ---  |
| 23    | 7.9     | 6.3 | 7.3  | ---      | ---  | ---  | 10.9     | 10.1 | 10.5 | ---     | ---  | ---  |
| 24    | 8.3     | 7.2 | 8.0  | ---      | ---  | ---  | 11.1     | 10.8 | 11.0 | ---     | ---  | ---  |
| 25    | 8.3     | 8.3 | 8.3  | ---      | ---  | ---  | 11.0     | 10.6 | 10.8 | ---     | ---  | ---  |
| 26    | 8.3     | 8.1 | 8.3  | ---      | ---  | ---  | 11.6     | 11.0 | 11.3 | ---     | ---  | ---  |
| 27    | 8.3     | 8.1 | 8.2  | 12.0     | 11.6 | 11.8 | 11.5     | 10.6 | 11.3 | ---     | ---  | ---  |
| 28    | 8.2     | 7.9 | 8.1  | 11.5     | 10.3 | 10.7 | 11.2     | 10.6 | 10.9 | ---     | ---  | ---  |
| 29    | 8.4     | 7.8 | 8.0  | 11.2     | 10.4 | 10.9 | 10.6     | 10.3 | 10.5 | ---     | ---  | ---  |
| 30    | 8.5     | 7.8 | 8.1  | 11.4     | 11.1 | 11.3 | 10.3     | 10.2 | 10.2 | ---     | ---  | ---  |
| 31    | 8.8     | 7.8 | 8.3  | ---      | ---  | ---  | 10.2     | 10.0 | 10.1 | ---     | ---  | ---  |
| MONTH | 8.8     | 5.9 | 7.8  | ---      | ---  | ---  | 12.8     | 9.7  | 11.1 | ---     | ---  | ---  |

## CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN | MAX   | MIN  | MEAN | MAX   | MIN  | MEAN | MAX | MIN | MEAN |
|----------|------|------|------|-------|------|------|-------|------|------|-----|-----|------|
| FEBRUARY |      |      |      | MARCH |      |      | APRIL |      |      | MAY |     |      |
| 1        | ---  | ---  | ---  | 11.7  | 11.6 | 11.7 | 9.4   | 8.0  | 8.7  | 8.7 | 8.4 | 8.6  |
| 2        | ---  | ---  | ---  | ---   | ---  | ---  | 10.7  | 9.1  | 10.0 | 9.0 | 8.6 | 8.8  |
| 3        | ---  | ---  | ---  | ---   | ---  | ---  | 11.5  | 10.4 | 11.0 | 8.8 | 8.4 | 8.6  |
| 4        | ---  | ---  | ---  | ---   | ---  | ---  | 10.9  | 10.4 | 10.7 | 9.6 | 8.4 | 8.9  |
| 5        | ---  | ---  | ---  | ---   | ---  | ---  | 10.3  | 9.4  | 10.0 | 9.7 | 9.0 | 9.4  |
| 6        | ---  | ---  | ---  | ---   | ---  | ---  | 10.3  | 9.0  | 9.7  | 9.6 | 9.0 | 9.4  |
| 7        | ---  | ---  | ---  | ---   | ---  | ---  | 11.2  | 10.1 | 10.8 | 9.5 | 9.2 | 9.3  |
| 8        | ---  | ---  | ---  | 11.2  | 10.3 | 10.9 | 12.7  | 11.1 | 11.9 | 9.5 | 9.1 | 9.3  |
| 9        | ---  | ---  | ---  | 10.4  | 8.9  | 9.6  | 13.2  | 12.2 | 12.7 | 9.5 | 9.0 | 9.2  |
| 10       | ---  | ---  | ---  | 10.3  | 8.7  | 9.4  | 13.3  | 12.6 | 12.9 | 9.8 | 9.3 | 9.6  |
| 11       | ---  | ---  | ---  | 10.8  | 10.3 | 10.5 | 12.7  | 11.9 | 12.5 | 9.8 | 9.5 | 9.6  |
| 12       | ---  | ---  | ---  | 10.7  | 9.1  | 9.7  | 11.9  | 11.3 | 11.7 | 9.6 | 9.2 | 9.4  |
| 13       | ---  | ---  | ---  | 10.7  | 9.1  | 9.8  | 11.1  | 10.6 | 10.9 | 9.3 | 9.0 | 9.1  |
| 14       | ---  | ---  | ---  | 10.4  | 9.8  | 10.1 | 10.5  | 9.9  | 10.3 | 9.0 | 8.6 | 8.8  |
| 15       | ---  | ---  | ---  | 11.2  | 9.6  | 10.3 | 9.9   | 9.5  | 9.7  | 8.7 | 8.3 | 8.6  |
| 16       | 12.8 | 12.4 | 12.6 | 11.8  | 10.7 | 11.2 | 10.1  | 9.3  | 9.6  | 8.3 | 7.9 | 8.1  |
| 17       | 12.6 | 12.5 | 12.6 | 11.7  | 11.2 | 11.5 | 10.2  | 9.3  | 9.7  | 7.9 | 7.7 | 7.8  |
| 18       | 12.7 | 12.6 | 12.6 | 11.7  | 10.9 | 11.3 | 10.0  | 8.9  | 9.6  | 8.4 | 7.7 | 7.9  |
| 19       | 12.8 | 12.6 | 12.7 | 12.5  | 11.3 | 11.9 | 9.4   | 8.8  | 9.1  | 8.6 | 8.1 | 8.4  |
| 20       | 12.5 | 11.2 | 11.6 | 12.4  | 11.5 | 12.0 | 9.1   | 8.4  | 8.8  | 8.8 | 8.3 | 8.6  |
| 21       | ---  | ---  | ---  | 11.8  | 10.4 | 11.3 | 9.0   | 8.4  | 8.7  | 9.1 | 8.7 | 8.9  |
| 22       | ---  | ---  | ---  | 11.6  | 11.3 | 11.5 | 9.0   | 8.4  | 8.7  | 9.1 | 8.9 | 9.0  |
| 23       | ---  | ---  | ---  | 11.5  | 11.0 | 11.3 | 9.0   | 8.4  | 8.7  | 8.9 | 8.6 | 8.7  |
| 24       | ---  | ---  | ---  | 11.4  | 10.4 | 10.9 | 9.2   | 8.8  | 9.0  | 8.8 | 8.5 | 8.6  |
| 25       | ---  | ---  | ---  | 11.5  | 10.3 | 11.0 | 9.1   | 8.6  | 8.9  | 9.2 | 8.7 | 8.9  |
| 26       | ---  | ---  | ---  | 12.2  | 10.8 | 11.5 | 9.0   | 8.4  | 8.8  | 9.2 | 8.7 | 9.0  |
| 27       | 12.1 | 11.6 | 11.8 | 11.9  | 11.5 | 11.7 | 8.9   | 8.7  | 8.8  | 9.4 | 8.9 | 9.2  |
| 28       | 12.2 | 11.6 | 11.9 | 11.5  | 10.7 | 11.1 | 8.9   | 8.7  | 8.8  | 9.3 | 8.9 | 9.1  |
| 29       | ---  | ---  | ---  | 10.5  | 9.8  | 10.1 | 8.8   | 8.5  | 8.7  | 9.1 | 8.8 | 8.9  |
| 30       | ---  | ---  | ---  | 9.6   | 9.1  | 9.3  | 8.8   | 8.1  | 8.4  | 8.7 | 8.2 | 8.5  |
| 31       | ---  | ---  | ---  | 9.3   | 8.1  | 8.7  | ---   | ---  | ---  | 8.5 | 8.2 | 8.3  |
| MONTH    | ---  | ---  | ---  | ---   | ---  | ---  | 13.3  | 8.0  | 9.9  | 9.8 | 7.7 | 8.9  |

| DAY   | MAX | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|-----|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| JUNE  |     |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 8.2 | 7.6 | 7.8  | 7.1  | 6.8 | 6.9  | 7.4    | 7.2 | 7.3  | ---       | --- | ---  |
| 2     | 7.9 | 7.5 | 7.7  | 7.2  | 6.9 | 7.0  | 7.8    | 7.5 | 7.7  | ---       | --- | ---  |
| 3     | 8.3 | 7.2 | 7.5  | 7.5  | 7.1 | 7.3  | 7.9    | 7.6 | 7.7  | ---       | --- | ---  |
| 4     | 7.2 | 6.9 | 7.1  | 7.7  | 7.4 | 7.6  | 7.8    | 7.6 | 7.7  | ---       | --- | ---  |
| 5     | 7.3 | 6.9 | 7.0  | 7.8  | 7.5 | 7.6  | 7.8    | 7.6 | 7.7  | 7.3       | 7.1 | 7.2  |
| 6     | 7.1 | 6.8 | 6.9  | 7.9  | 7.6 | 7.7  | 8.0    | 7.4 | 7.7  | 7.2       | 7.0 | 7.1  |
| 7     | 7.4 | 7.0 | 7.2  | 7.9  | 7.6 | 7.7  | 7.5    | 7.2 | 7.4  | 7.3       | 7.1 | 7.2  |
| 8     | 7.7 | 7.4 | 7.5  | 7.9  | 7.6 | 7.8  | 7.4    | 7.2 | 7.3  | 8.2       | 7.2 | 7.5  |
| 9     | 8.0 | 7.7 | 7.9  | 7.9  | 7.7 | 7.9  | 7.5    | 7.2 | 7.4  | 7.6       | 7.1 | 7.3  |
| 10    | 8.0 | 7.5 | 7.7  | 8.0  | 7.3 | 7.7  | 7.5    | 7.2 | 7.4  | 7.7       | 7.1 | 7.3  |
| 11    | 7.7 | 7.2 | 7.4  | 7.3  | 6.8 | 7.0  | 7.5    | 7.1 | 7.3  | 7.4       | 7.1 | 7.3  |
| 12    | 7.4 | 7.0 | 7.2  | 7.0  | 6.8 | 6.9  | 7.4    | 7.1 | 7.2  | 7.7       | 7.5 | 7.5  |
| 13    | 7.3 | 7.0 | 7.1  | 7.1  | 6.7 | 6.9  | 7.2    | 7.0 | 7.1  | 8.1       | 7.7 | 7.9  |
| 14    | 7.3 | 6.6 | 7.0  | 7.2  | 6.9 | 7.1  | 7.2    | 6.8 | 7.0  | 8.5       | 8.0 | 8.2  |
| 15    | 7.4 | 7.1 | 7.2  | ---  | --- | ---  | 7.0    | 6.8 | 6.9  | 8.4       | 7.9 | 8.2  |
| 16    | 7.8 | 7.4 | 7.6  | ---  | --- | ---  | 6.8    | 6.7 | 6.8  | 8.4       | 7.9 | 8.2  |
| 17    | 7.7 | 7.5 | 7.6  | ---  | --- | ---  | 7.5    | 6.8 | 7.1  | 8.8       | 8.0 | 8.4  |
| 18    | 7.6 | 7.2 | 7.5  | ---  | --- | ---  | 7.8    | 7.5 | 7.6  | 9.0       | 8.0 | 8.5  |
| 19    | 7.4 | 7.0 | 7.2  | ---  | --- | ---  | 8.1    | 7.8 | 8.0  | 8.6       | 7.9 | 8.3  |
| 20    | 7.2 | 6.8 | 7.1  | ---  | --- | ---  | 8.2    | 8.1 | 8.1  | 8.6       | 7.8 | 8.3  |
| 21    | 7.5 | 6.7 | 7.1  | ---  | --- | ---  | 8.4    | 8.2 | 8.3  | 8.6       | 7.9 | 8.3  |
| 22    | 7.7 | 7.0 | 7.4  | ---  | --- | ---  | 8.3    | 6.9 | 8.0  | 8.5       | 7.9 | 8.2  |
| 23    | 7.7 | 7.4 | 7.5  | ---  | --- | ---  | 7.9    | 7.8 | 7.9  | 8.7       | 8.2 | 8.5  |
| 24    | 7.5 | 7.2 | 7.3  | ---  | --- | ---  | 8.3    | 7.9 | 8.1  | 8.8       | 8.4 | 8.6  |
| 25    | 7.2 | 6.9 | 7.0  | ---  | --- | ---  | 8.9    | 8.3 | 8.6  | 8.8       | 8.0 | 8.4  |
| 26    | 7.0 | 6.8 | 6.9  | 7.4  | 6.7 | 6.9  | 9.0    | 8.6 | 8.8  | 8.6       | 8.1 | 8.4  |
| 27    | 6.8 | 6.5 | 6.6  | 6.9  | 6.7 | 6.8  | 9.4    | 8.7 | 8.9  | 8.9       | 8.6 | 8.8  |
| 28    | 6.7 | 6.5 | 6.6  | 7.0  | 6.8 | 6.9  | 8.9    | 8.7 | 8.8  | 9.1       | 8.1 | 8.6  |
| 29    | 6.8 | 6.6 | 6.7  | 7.0  | 6.8 | 6.9  | 8.9    | 8.5 | 8.7  | 8.7       | 8.0 | 8.3  |
| 30    | 6.9 | 6.5 | 6.7  | 7.1  | 6.8 | 7.0  | 9.4    | 8.4 | 8.6  | 8.6       | 7.9 | 8.3  |
| 31    | --- | --- | ---  | 7.3  | 6.9 | 7.1  | 8.7    | 8.2 | 8.4  | ---       | --- | ---  |
| MONTH | 8.3 | 6.5 | 7.2  | ---  | --- | ---  | 9.4    | 6.7 | 7.8  | 9.1       | 7.0 | 8.0  |



## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN      | MAX  | MIN      | MAX | MIN     | MAX | MIN      | MAX | MIN   | MAX | MIN |
|---------|-----|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER |     | NOVEMBER |      | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |     |
| 1       | --- | ---      | 55   | 35       | 70  | 10      | 230 | 85       | --- | ---   | 35  | 25  |
| 2       | 50  | 5        | 40   | 35       | 55  | 10      | 400 | 90       | --- | ---   | 40  | 20  |
| 3       | 50  | 25       | 50   | 40       | 85  | 9       | 80  | 55       | --- | ---   | 40  | 6   |
| 4       | 50  | 10       | 45   | 25       | 40  | 3       | 100 | 65       | --- | ---   | 45  | 6   |
| 5       | 35  | 5        | 55   | 40       | 50  | 9       | 120 | 80       | --- | ---   | 50  | 35  |
| 6       | 45  | 20       | 50   | 40       | 55  | 10      | 95  | 65       | --- | ---   | 40  | 10  |
| 7       | 50  | 30       | 60   | 50       | 85  | 25      | 85  | 70       | --- | ---   | 55  | 3   |
| 8       | 60  | 5        | 55   | 50       | 110 | 25      | 85  | 60       | --- | ---   | 10  | 0   |
| 9       | 50  | 15       | 90   | 55       | 130 | 35      | 80  | 70       | --- | ---   | 30  | 3   |
| 10      | 65  | 5        | 120  | 65       | 110 | 25      | 85  | 75       | --- | ---   | 35  | 20  |
| 11      | 75  | 25       | 460  | 130      | 85  | 20      | 95  | 80       | --- | ---   | 25  | 9   |
| 12      | 70  | 50       | 330  | 120      | 55  | 10      | 100 | 85       | --- | ---   | 25  | 0   |
| 13      | 70  | 55       | 140  | 110      | 50  | 9       | 100 | 85       | --- | ---   | 6   | 0   |
| 14      | 70  | 45       | 160  | 100      | 65  | 6       | --- | ---      | --- | ---   | 9   | 0   |
| 15      | 75  | 45       | 190  | 20       | 35  | 3       | --- | ---      | --- | ---   | 6   | 0   |
| 16      | 65  | 45       | 95   | 10       | 80  | 9       | --- | ---      | --- | ---   | 6   | 0   |
| 17      | 65  | 6        | 50   | 10       | 35  | 9       | --- | ---      | --- | ---   | 6   | 0   |
| 18      | 45  | 30       | 70   | 10       | 25  | 3       | --- | ---      | --- | ---   | 10  | 3   |
| 19      | 45  | 35       | 1700 | 95       | 25  | 9       | --- | ---      | --- | ---   | 9   | 3   |
| 20      | 240 | 45       | ---  | ---      | 50  | 3       | --- | ---      | 110 | 60    | 20  | 0   |
| 21      | 110 | 60       | 110  | 25       | 25  | 9       | --- | ---      | 110 | 55    | 40  | 3   |
| 22      | 95  | 55       | 65   | 10       | 55  | 20      | --- | ---      | 110 | 50    | 15  | 6   |
| 23      | 390 | 55       | 80   | 6        | 95  | 50      | --- | ---      | 100 | 55    | 30  | 6   |
| 24      | 500 | 250      | 60   | 20       | 110 | 25      | --- | ---      | 85  | 55    | 20  | 0   |
| 25      | 240 | 85       | 55   | 15       | 270 | 65      | --- | ---      | 85  | 50    | 25  | 9   |
| 26      | 85  | 55       | 55   | 10       | 160 | 60      | --- | ---      | 75  | 65    | 25  | 20  |
| 27      | 65  | 55       | 40   | 6        | 85  | 40      | --- | ---      | 80  | 65    | 35  | 6   |
| 28      | 80  | 50       | 320  | 25       | 60  | 35      | --- | ---      | 80  | 30    | 40  | 15  |
| 29      | 60  | 50       | 180  | 40       | 50  | 35      | --- | ---      | --- | ---   | 20  | 0   |
| 30      | 60  | 35       | 60   | 20       | 55  | 35      | --- | ---      | --- | ---   | 10  | 0   |
| 31      | 60  | 40       | ---  | ---      | 100 | 40      | --- | ---      | --- | ---   | 25  | 0   |
| MONTH   | 500 | 5        | 1700 | 6        | 270 | 3       | --- | ---      | --- | ---   | 55  | 0   |

| DAY   | MAX  | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
|-------|------|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL |      | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
| 1     | 90   | 25  | 35  | 10   | 50  | 35   | 20  | 0      | 900 | 25        | --- | --- |
| 2     | 80   | 35  | 180 | 20   | 45  | 25   | 25  | 6      | 490 | 110       | --- | --- |
| 3     | 30   | 6   | 130 | 70   | 100 | 6    | 20  | 0      | 110 | 40        | --- | --- |
| 4     | 20   | 9   | 130 | 35   | 25  | 0    | 20  | 0      | 40  | 25        | --- | --- |
| 5     | 20   | 9   | 40  | 20   | 35  | 0    | 35  | 0      | 30  | 20        | 35  | 20  |
| 6     | 1000 | 15  | 45  | 20   | 50  | 9    | 25  | 6      | 25  | 15        | 30  | 20  |
| 7     | 470  | 40  | 35  | 15   | 65  | 10   | 35  | 9      | 25  | 15        | 75  | 25  |
| 8     | 50   | 35  | 45  | 25   | 200 | 20   | 35  | 6      | 25  | 15        | 250 | 30  |
| 9     | 40   | 25  | 40  | 15   | 170 | 110  | 35  | 9      | 25  | 15        | 370 | 180 |
| 10    | 35   | 20  | 35  | 15   | 150 | 70   | 95  | 20     | 15  | 9         | 160 | 50  |
| 11    | 35   | 9   | 35  | 15   | 110 | 25   | 20  | 3      | 15  | 7         | 50  | 30  |
| 12    | 40   | 25  | 220 | 15   | 85  | 10   | 650 | 25     | 10  | 6         | 55  | 25  |
| 13    | 50   | 30  | 80  | 10   | 240 | 55   | 750 | 420    | 9   | 6         | 30  | 20  |
| 14    | 50   | 35  | 50  | 15   | 170 | 85   | 410 | 330    | 9   | 6         | 25  | 15  |
| 15    | 95   | 40  | 50  | 30   | 110 | 60   | --- | ---    | 10  | 6         | 20  | 15  |
| 16    | 150  | 95  | 50  | 20   | 60  | 25   | --- | ---    | 10  | 6         | 20  | 10  |
| 17    | 150  | 100 | 50  | 30   | 65  | 9    | --- | ---    | 850 | 8         | 15  | 10  |
| 18    | 110  | 0   | 50  | 30   | 25  | 0    | --- | ---    | 650 | 80        | 20  | 10  |
| 19    | 10   | 0   | 55  | 35   | 15  | 0    | --- | ---    | 80  | 25        | 15  | 15  |
| 20    | 9    | 0   | 65  | 40   | 25  | 0    | --- | ---    | 35  | 20        | 20  | 15  |
| 21    | 9    | 0   | 50  | 15   | 20  | 0    | --- | ---    | 25  | 15        | 20  | 10  |
| 22    | 25   | 0   | 170 | 25   | 15  | 0    | --- | ---    | 270 | 20        | 15  | 10  |
| 23    | 30   | 3   | 270 | 15   | 20  | 0    | --- | ---    | 310 | 50        | 15  | 10  |
| 24    | 25   | 6   | 140 | 30   | 20  | 0    | --- | ---    | 50  | 20        | 20  | 10  |
| 25    | 40   | 10  | 60  | 30   | 35  | 3    | --- | ---    | 490 | 25        | 20  | 15  |
| 26    | 45   | 15  | 160 | 30   | 30  | 0    | --- | ---    | 600 | 90        | 140 | 15  |
| 27    | 20   | 10  | 40  | 30   | 6   | 0    | --- | ---    | 330 | 50        | 65  | 40  |
| 28    | 20   | 0   | 40  | 20   | 10  | 0    | --- | ---    | 60  | 25        | 65  | 20  |
| 29    | 40   | 3   | 25  | 20   | 20  | 0    | --- | ---    | 25  | 15        | 25  | 20  |
| 30    | 30   | 15  | 25  | 6    | 15  | 6    | --- | ---    | 50  | 10        | 25  | 20  |
| 31    | ---  | --- | 55  | 0    | --- | ---  | --- | ---    | 90  | 45        | --- | --- |
| MONTH | 1000 | 0   | 270 | 0    | 240 | 0    | --- | ---    | 900 | 6         | 370 | 10  |

## CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      | NOVEMBER                            |                            |                                      | DECEMBER                            |                            |                                      |                                     |
| 1       | 9.4                        | 100                                  | 2.5                                 | 97                         | 21                                   | 5.5                                 | 1020                       | 34                                   | 94                                  |
| 2       | 9.8                        | 170                                  | 4.5                                 | 94                         | 18                                   | 4.6                                 | 784                        | 28                                   | 59                                  |
| 3       | 10                         | 102                                  | 2.8                                 | 118                        | 13                                   | 4.1                                 | 688                        | 23                                   | 43                                  |
| 4       | 16                         | 101                                  | 4.4                                 | 119                        | 15                                   | 4.8                                 | 548                        | 16                                   | 24                                  |
| 5       | 16                         | 114                                  | 4.9                                 | 121                        | 14                                   | 4.6                                 | 459                        | 15                                   | 19                                  |
| 6       | 13                         | 122                                  | 4.3                                 | 132                        | 16                                   | 5.7                                 | 620                        | 18                                   | 30                                  |
| 7       | 11                         | 48                                   | 1.4                                 | 121                        | 17                                   | 5.6                                 | 604                        | 20                                   | 33                                  |
| 8       | 33                         | 66                                   | 5.9                                 | 107                        | 20                                   | 5.8                                 | 568                        | 20                                   | 31                                  |
| 9       | 246                        | 46                                   | 31                                  | 99                         | 11                                   | 2.9                                 | 533                        | 12                                   | 17                                  |
| 10      | 135                        | 28                                   | 10                                  | 189                        | 16                                   | 8.2                                 | 493                        | 16                                   | 21                                  |
| 11      | 67                         | 27                                   | 4.9                                 | 1750                       | 274                                  | 1390                                | 458                        | 10                                   | 12                                  |
| 12      | 44                         | 26                                   | 3.1                                 | 920                        | 105                                  | 284                                 | 393                        | 3                                    | 3.2                                 |
| 13      | 32                         | 28                                   | 2.4                                 | 528                        | 30                                   | 43                                  | 362                        | 6                                    | 5.9                                 |
| 14      | 24                         | 15                                   | .97                                 | 357                        | 14                                   | 13                                  | 325                        | 5                                    | 4.4                                 |
| 15      | 21                         | 27                                   | 1.5                                 | 282                        | 11                                   | 8.4                                 | 288                        | 5                                    | 3.9                                 |
| 16      | 19                         | 22                                   | 1.1                                 | 330                        | 15                                   | 13                                  | 262                        | 12                                   | 8.5                                 |
| 17      | 19                         | 16                                   | .82                                 | 322                        | 14                                   | 12                                  | 249                        | 3                                    | 2.0                                 |
| 18      | 20                         | 15                                   | .81                                 | 314                        | 16                                   | 14                                  | 241                        | 41                                   | 27                                  |
| 19      | 22                         | 10                                   | .59                                 | 7060                       | 1230                                 | 34400                               | 273                        | 8                                    | 5.9                                 |
| 20      | 388                        | 65                                   | 68                                  | 2250                       | 315                                  | 1910                                | 295                        | 6                                    | 4.8                                 |
| 21      | 255                        | 28                                   | 19                                  | 1080                       | 92                                   | 268                                 | 468                        | 22                                   | 28                                  |
| 22      | 172                        | 45                                   | 21                                  | 725                        | 60                                   | 117                                 | 981                        | 40                                   | 106                                 |
| 23      | 762                        | 110                                  | 361                                 | 534                        | 35                                   | 50                                  | 1140                       | 64                                   | 197                                 |
| 24      | 1550                       | 328                                  | 1510                                | 422                        | 35                                   | 40                                  | 954                        | 33                                   | 85                                  |
| 25      | 568                        | 82                                   | 126                                 | 347                        | 31                                   | 29                                  | 2380                       | 174                                  | 1220                                |
| 26      | 308                        | 28                                   | 23                                  | 295                        | 35                                   | 28                                  | 1850                       | 91                                   | 464                                 |
| 27      | 210                        | 29                                   | 16                                  | 255                        | 27                                   | 19                                  | 1250                       | 33                                   | 111                                 |
| 28      | 160                        | 21                                   | 9.1                                 | 2840                       | 312                                  | 3170                                | 940                        | 16                                   | 41                                  |
| 29      | 136                        | 23                                   | 8.4                                 | 2070                       | 110                                  | 682                                 | 756                        | 18                                   | 37                                  |
| 30      | 128                        | 15                                   | 5.2                                 | 1210                       | 58                                   | 189                                 | 629                        | 12                                   | 20                                  |
| 31      | 115                        | 22                                   | 6.8                                 | ---                        | ---                                  | ---                                 | 1150                       | 43                                   | 158                                 |
| TOTAL   | 5519.2                     | ---                                  | 2261.39                             | 25088                      | ---                                  | 42731.2                             | 21961                      | ---                                  | 2915.6                              |
| JANUARY |                            |                                      | FEBRUARY                            |                            |                                      | MARCH                               |                            |                                      |                                     |
| 1       | 1670                       | 76                                   | 362                                 | 6640                       | 1000                                 | 20000                               | 581                        | 27                                   | 42                                  |
| 2       | 2580                       | 170                                  | 1210                                | 4040                       | 500                                  | 6000                                | 547                        | 17                                   | 25                                  |
| 3       | 1950                       | 80                                   | 421                                 | 1790                       | 200                                  | 967                                 | 480                        | 15                                   | 19                                  |
| 4       | 2450                       | 116                                  | 767                                 | 1210                       | 150                                  | 490                                 | 432                        | 16                                   | 19                                  |
| 5       | 2160                       | 72                                   | 420                                 | 1370                       | 180                                  | 666                                 | 466                        | 16                                   | 20                                  |
| 6       | 1500                       | 32                                   | 130                                 | 3010                       | 300                                  | 2440                                | 412                        | 20                                   | 22                                  |
| 7       | 1150                       | 17                                   | 53                                  | 2020                       | 200                                  | 1090                                | 354                        | 22                                   | 21                                  |
| 8       | 901                        | 15                                   | 36                                  | 1330                       | 150                                  | 539                                 | 350                        | 21                                   | 20                                  |
| 9       | 718                        | 16                                   | 31                                  | 1010                       | 150                                  | 409                                 | 812                        | 40                                   | 88                                  |
| 10      | 607                        | 16                                   | 26                                  | 874                        | 130                                  | 307                                 | 908                        | 52                                   | 127                                 |
| 11      | 578                        | 9                                    | 14                                  | 829                        | 150                                  | 336                                 | 829                        | 33                                   | 74                                  |
| 12      | 478                        | 8                                    | 10                                  | 1940                       | 300                                  | 1570                                | 804                        | 27                                   | 59                                  |
| 13      | 403                        | 20                                   | 22                                  | 1550                       | 200                                  | 837                                 | 695                        | 50                                   | 94                                  |
| 14      | 381                        | 20                                   | 21                                  | 1180                       | 180                                  | 573                                 | 617                        | 21                                   | 35                                  |
| 15      | 364                        | 20                                   | 20                                  | 990                        | 164                                  | 438                                 | 552                        | 16                                   | 24                                  |
| 16      | 291                        | 20                                   | 16                                  | 804                        | 134                                  | 291                                 | 475                        | 16                                   | 21                                  |
| 17      | 344                        | 20                                   | 19                                  | 797                        | 110                                  | 237                                 | 437                        | 11                                   | 13                                  |
| 18      | 364                        | 20                                   | 20                                  | 795                        | 75                                   | 161                                 | 394                        | 12                                   | 13                                  |
| 19      | 335                        | 20                                   | 18                                  | 1090                       | 90                                   | 265                                 | 344                        | 17                                   | 16                                  |
| 20      | 284                        | 20                                   | 15                                  | 1460                       | 50                                   | 197                                 | 316                        | 13                                   | 11                                  |
| 21      | 221                        | 20                                   | 12                                  | 1350                       | 44                                   | 160                                 | 300                        | 16                                   | 13                                  |
| 22      | 237                        | 20                                   | 13                                  | 1240                       | 39                                   | 131                                 | 328                        | 15                                   | 13                                  |
| 23      | 259                        | 20                                   | 14                                  | 1220                       | 46                                   | 152                                 | 362                        | 10                                   | 9.8                                 |
| 24      | 255                        | 20                                   | 14                                  | 1080                       | 35                                   | 102                                 | 524                        | 26                                   | 37                                  |
| 25      | 274                        | 20                                   | 15                                  | 910                        | 34                                   | 84                                  | 673                        | 22                                   | 40                                  |
| 26      | 249                        | 20                                   | 13                                  | 864                        | 33                                   | 77                                  | 655                        | 35                                   | 62                                  |
| 27      | 202                        | 20                                   | 11                                  | 752                        | 32                                   | 65                                  | 623                        | 24                                   | 40                                  |
| 28      | 221                        | 20                                   | 12                                  | 641                        | 32                                   | 55                                  | 596                        | 74                                   | 119                                 |
| 29      | 224                        | 20                                   | 12                                  | ---                        | ---                                  | ---                                 | 557                        | 11                                   | 17                                  |
| 30      | 214                        | 20                                   | 12                                  | ---                        | ---                                  | ---                                 | 487                        | 16                                   | 21                                  |
| 31      | 690                        | 30                                   | 56                                  | ---                        | ---                                  | ---                                 | 526                        | 23                                   | 33                                  |
| TOTAL   | 22554                      | ---                                  | 3815                                | 42786                      | ---                                  | 38639                               | 16436                      | ---                                  | 1167.8                              |

## CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 1030                       | 41                                   | 114                                 | 172                        | 14                                   | 6.5                                 | 74                         | 12                                   | 2.4                                 |
| 2     | 869                        | 38                                   | 89                                  | 194                        | 37                                   | 28                                  | 69                         | 10                                   | 1.9                                 |
| 3     | 748                        | 20                                   | 40                                  | 532                        | 80                                   | 115                                 | 98                         | 18                                   | 4.8                                 |
| 4     | 641                        | 15                                   | 26                                  | 383                        | 58                                   | 60                                  | 118                        | 19                                   | 6.1                                 |
| 5     | 553                        | 15                                   | 22                                  | 274                        | 30                                   | 22                                  | 85                         | 20                                   | 4.6                                 |
| 6     | 1910                       | 392                                  | 2310                                | 221                        | 19                                   | 11                                  | 284                        | 23                                   | 18                                  |
| 7     | 1390                       | 85                                   | 329                                 | 219                        | 21                                   | 12                                  | 266                        | 23                                   | 17                                  |
| 8     | 1060                       | 41                                   | 117                                 | 216                        | 17                                   | 9.9                                 | 680                        | 70                                   | 129                                 |
| 9     | 855                        | 23                                   | 53                                  | 177                        | 19                                   | 9.1                                 | 349                        | 97                                   | 91                                  |
| 10    | 714                        | 18                                   | 35                                  | 157                        | 18                                   | 7.6                                 | 213                        | 48                                   | 28                                  |
| 11    | 616                        | 20                                   | 33                                  | 145                        | 16                                   | 6.3                                 | 208                        | 36                                   | 20                                  |
| 12    | 533                        | 20                                   | 29                                  | 146                        | 23                                   | 9.1                                 | 405                        | 40                                   | 44                                  |
| 13    | 468                        | 20                                   | 25                                  | 205                        | 17                                   | 9.4                                 | 491                        | 80                                   | 106                                 |
| 14    | 446                        | 20                                   | 24                                  | 161                        | 22                                   | 9.6                                 | 274                        | 54                                   | 40                                  |
| 15    | 650                        | 20                                   | 35                                  | 130                        | 27                                   | 9.5                                 | 185                        | 31                                   | 15                                  |
| 16    | 1320                       | 50                                   | 178                                 | 111                        | 17                                   | 5.1                                 | 139                        | 39                                   | 15                                  |
| 17    | 1100                       | 34                                   | 101                                 | 131                        | 18                                   | 6.4                                 | 117                        | 25                                   | 7.9                                 |
| 18    | 884                        | 26                                   | 62                                  | 209                        | 18                                   | 10                                  | 138                        | 20                                   | 7.5                                 |
| 19    | 730                        | 20                                   | 39                                  | 170                        | 19                                   | 8.7                                 | 218                        | 27                                   | 16                                  |
| 20    | 606                        | 20                                   | 33                                  | 126                        | 14                                   | 4.8                                 | 143                        | 25                                   | 9.7                                 |
| 21    | 510                        | 21                                   | 29                                  | 121                        | 12                                   | 3.9                                 | 106                        | 21                                   | 6.0                                 |
| 22    | 427                        | 20                                   | 23                                  | 150                        | 12                                   | 4.9                                 | 86                         | 74                                   | 17                                  |
| 23    | 362                        | 20                                   | 20                                  | 207                        | 14                                   | 7.8                                 | 74                         | 24                                   | 4.8                                 |
| 24    | 327                        | 17                                   | 15                                  | 218                        | 15                                   | 8.8                                 | 68                         | 16                                   | 2.9                                 |
| 25    | 299                        | 15                                   | 12                                  | 273                        | 17                                   | 13                                  | 64                         | 15                                   | 2.6                                 |
| 26    | 257                        | 18                                   | 12                                  | 220                        | 14                                   | 8.3                                 | 65                         | 17                                   | 3.0                                 |
| 27    | 234                        | 20                                   | 13                                  | 161                        | 10                                   | 4.3                                 | 59                         | 15                                   | 2.4                                 |
| 28    | 250                        | 22                                   | 15                                  | 125                        | 10                                   | 3.4                                 | 49                         | 14                                   | 1.9                                 |
| 29    | 235                        | 20                                   | 13                                  | 108                        | 10                                   | 2.9                                 | 43                         | 14                                   | 1.6                                 |
| 30    | 205                        | 22                                   | 12                                  | 97                         | 12                                   | 3.1                                 | 36                         | 13                                   | 1.3                                 |
| 31    | ---                        | ---                                  | ---                                 | 85                         | 10                                   | 2.3                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 20229                      | ---                                  | 3858                                | 5844                       | ---                                  | 422.7                               | 5204                       | ---                                  | 627.4                               |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 36                         | 11                                   | 1.1                                 | 1130                       | 436                                  | 2480                                | 446                        | 80                                   | 96                                  |
| 2     | 94                         | 16                                   | 4.1                                 | 1240                       | 466                                  | 1820                                | 294                        | 60                                   | 48                                  |
| 3     | 105                        | 16                                   | 4.5                                 | 532                        | 100                                  | 144                                 | 216                        | 50                                   | 29                                  |
| 4     | 87                         | 14                                   | 3.3                                 | 322                        | 43                                   | 37                                  | 171                        | 187                                  | 86                                  |
| 5     | 88                         | 14                                   | 3.3                                 | 222                        | 33                                   | 20                                  | 142                        | 48                                   | 18                                  |
| 6     | 75                         | 16                                   | 3.2                                 | 169                        | 30                                   | 14                                  | 150                        | 52                                   | 21                                  |
| 7     | 72                         | 15                                   | 2.9                                 | 194                        | 26                                   | 14                                  | 528                        | 65                                   | 93                                  |
| 8     | 56                         | 14                                   | 2.1                                 | 227                        | 40                                   | 25                                  | 265                        | 50                                   | 36                                  |
| 9     | 46                         | 15                                   | 1.9                                 | 217                        | 26                                   | 15                                  | 173                        | 313                                  | 146                                 |
| 10    | 38                         | 15                                   | 1.5                                 | 156                        | 22                                   | 9.3                                 | 140                        | 95                                   | 36                                  |
| 11    | 367                        | 25                                   | 32                                  | 118                        | 24                                   | 7.6                                 | 136                        | 50                                   | 18                                  |
| 12    | 267                        | 200                                  | 144                                 | 114                        | 13                                   | 4.0                                 | 124                        | 68                                   | 23                                  |
| 13    | 236                        | 306                                  | 195                                 | 92                         | 16                                   | 4.0                                 | 97                         | 32                                   | 8.4                                 |
| 14    | 227                        | 200                                  | 123                                 | 80                         | 19                                   | 4.1                                 | 82                         | 32                                   | 7.1                                 |
| 15    | 252                        | 154                                  | 105                                 | 104                        | 17                                   | 4.8                                 | 71                         | 31                                   | 5.9                                 |
| 16    | 331                        | 117                                  | 105                                 | 99                         | 17                                   | 4.5                                 | 63                         | 24                                   | 4.1                                 |
| 17    | 210                        | 98                                   | 56                                  | 3940                       | 1010                                 | 23100                               | 59                         | 21                                   | 3.3                                 |
| 18    | 134                        | 54                                   | 20                                  | 2870                       | 546                                  | 5840                                | 55                         | 21                                   | 3.1                                 |
| 19    | 97                         | 68                                   | 18                                  | 989                        | 82                                   | 232                                 | 51                         | 21                                   | 2.9                                 |
| 20    | 77                         | 53                                   | 11                                  | 581                        | 57                                   | 89                                  | 47                         | 21                                   | 2.7                                 |
| 21    | 70                         | 33                                   | 6.2                                 | 679                        | 36                                   | 67                                  | 42                         | 21                                   | 2.4                                 |
| 22    | 184                        | 172                                  | 85                                  | 381                        | 69                                   | 71                                  | 40                         | 21                                   | 2.3                                 |
| 23    | 183                        | 91                                   | 45                                  | 277                        | 206                                  | 154                                 | 39                         | 21                                   | 2.2                                 |
| 24    | 120                        | 66                                   | 21                                  | 240                        | 44                                   | 29                                  | 54                         | 20                                   | 2.9                                 |
| 25    | 94                         | 44                                   | 11                                  | 1330                       | 200                                  | 750                                 | 88                         | 23                                   | 5.5                                 |
| 26    | 470                        | 287                                  | 516                                 | 2190                       | 750                                  | 5000                                | 258                        | 53                                   | 37                                  |
| 27    | 1460                       | 483                                  | 2120                                | 1290                       | 181                                  | 679                                 | 260                        | 50                                   | 35                                  |
| 28    | 929                        | 404                                  | 1170                                | 742                        | 62                                   | 124                                 | 146                        | 45                                   | 18                                  |
| 29    | 475                        | 127                                  | 163                                 | 478                        | 31                                   | 40                                  | 93                         | 25                                   | 6.3                                 |
| 30    | 328                        | 59                                   | 52                                  | 369                        | 35                                   | 35                                  | 72                         | 27                                   | 5.2                                 |
| 31    | 457                        | 62                                   | 78                                  | 767                        | 109                                  | 226                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 7665                       | ---                                  | 5104.1                              | 22139                      | ---                                  | 41043.3                             | 4402                       | ---                                  | 804.3                               |

TOTAL LOAD FOR YEAR: 143389.79

03409500 CLEAR FORK NEAR ROBBINS, TN

LOCATION.--Lat 36°23'18", long 84°37'49", Scott County, Hydrologic Unit 05130104, on right bank 300 ft downstream from Burnt Mill Bridge, 3.3 mi northwest of Robbins, and at mile 3.7.

DRAINAGE AREA.--272 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to September 1971, July 1975 to current year. Published as Clear Fork River near Robbins, October 1951 to September 1954.

REVISED RECORDS.--WSP 1306: 1931(M), 1936-37(M), 1943-44(M). WSP 1436: Drainage area. WSP 1910: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,081.46 ft, Sandy Hook datum. Prior to Aug. 10, 1940, nonrecording gage at site 300 ft upstream at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 21-27. Records good.

AVERAGE DISCHARGE.--51 years (water years 1931-71, 1976-85), 474 ft<sup>3</sup>/s, 23.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft<sup>3</sup>/s Feb. 3, 1939, gage height, 18.5 ft from floodmarks, site and datum then in use, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft<sup>3</sup>/s Sept. 19-21, 1932; minimum gage height observed, 0.28 ft Oct. 1-3, 1936, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929 reached a stage of 22.1 ft, former site and datum, from information by local residents, and flood of May 27, 1973, reached a stage of 18.92 ft, present site and datum, from floodmark; discharge 35,700 ft<sup>3</sup>/s, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 18.5 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 1100 | *6,450                            | *8.96               |      |      |                                   |                     |

Minimum discharge, 3.4 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG   | SEP  |       |
|-------------|--------|----------|-------|-------|-------|-------|-------|------|------|------|-------|------|-------|
| 1           | 3.6    | 159      | 1070  | 2140  | 3310  | 344   | 575   | 103  | 68   | 13   | 61    | 232  |       |
| 2           | 4.1    | 155      | 806   | 3540  | 2730  | 325   | 476   | 154  | 59   | 13   | 208   | 154  |       |
| 3           | 4.7    | 180      | 654   | 2060  | 1370  | 293   | 412   | 321  | 70   | 59   | 157   | 112  |       |
| 4           | 5.7    | 168      | 509   | 2260  | 912   | 269   | 361   | 287  | 65   | 62   | 92    | 88   |       |
| 5           | 5.8    | 169      | 421   | 1860  | 893   | 288   | 320   | 198  | 59   | 43   | 60    | 74   |       |
| 6           | 5.5    | 174      | 545   | 1310  | 1740  | 291   | 431   | 157  | 67   | 27   | 44    | 93   |       |
| 7           | 5.0    | 155      | 530   | 997   | 1440  | 240   | 411   | 147  | 99   | 21   | 37    | 85   |       |
| 8           | 10     | 133      | 456   | 759   | 990   | 234   | 399   | 140  | 98   | 17   | 39    | 69   |       |
| 9           | 36     | 119      | 421   | 588   | 728   | 502   | 368   | 130  | 107  | 15   | 47    | 56   |       |
| 10          | 69     | 143      | 394   | 497   | 651   | 629   | 327   | 114  | 79   | 14   | 45    | 49   |       |
| 11          | 36     | 868      | 365   | 483   | 686   | 549   | 297   | 105  | 72   | 14   | 36    | 43   |       |
| 12          | 23     | 632      | 320   | 414   | 1740  | 521   | 267   | 112  | 89   | 13   | 29    | 38   |       |
| 13          | 31     | 391      | 293   | 348   | 1360  | 452   | 242   | 319  | 105  | 14   | 24    | 36   |       |
| 14          | 23     | 284      | 262   | 324   | 991   | 389   | 228   | 388  | 85   | 15   | 154   | 32   |       |
| 15          | 17     | 236      | 229   | 305   | 786   | 352   | 292   | 254  | 63   | 15   | 212   | 27   |       |
| 16          | 13     | 319      | 207   | 244   | 579   | 308   | 605   | 168  | 49   | 39   | 105   | 24   |       |
| 17          | 12     | 316      | 196   | 301   | 600   | 282   | 486   | 144  | 40   | 27   | 2240  | 21   |       |
| 18          | 11     | 297      | 190   | 347   | 581   | 255   | 401   | 164  | 36   | 23   | 2050  | 19   |       |
| 19          | 11     | 4410     | 220   | 329   | 766   | 224   | 341   | 145  | 35   | 16   | 704   | 18   |       |
| 20          | 493    | 2230     | 249   | 311   | 995   | 205   | 296   | 125  | 37   | 12   | 385   | 17   |       |
| 21          | 413    | 1110     | 360   | 300   | 913   | 195   | 258   | 266  | 34   | 11   | 293   | 15   |       |
| 22          | 293    | 714      | 614   | 250   | 802   | 226   | 222   | 243  | 29   | 34   | 237   | 14   |       |
| 23          | 794    | 518      | 644   | 200   | 716   | 288   | 193   | 367  | 24   | 124  | 158   | 14   |       |
| 24          | 2730   | 407      | 581   | 200   | 639   | 353   | 175   | 337  | 21   | 71   | 165   | 14   |       |
| 25          | 884    | 332      | 1700  | 200   | 559   | 463   | 163   | 312  | 18   | 41   | 488   | 14   |       |
| 26          | 454    | 279      | 1470  | 200   | 516   | 414   | 144   | 232  | 23   | 38   | 1870  | 99   |       |
| 27          | 288    | 238      | 995   | 200   | 459   | 376   | 134   | 163  | 21   | 93   | 781   | 439  |       |
| 28          | 213    | 2840     | 730   | 207   | 383   | 356   | 140   | 125  | 18   | 184  | 420   | 171  |       |
| 29          | 194    | 2320     | 575   | 205   | ---   | 335   | 136   | 107  | 14   | 124  | 267   | 98   |       |
| 30          | 220    | 1280     | 494   | 194   | ---   | 301   | 118   | 93   | 14   | 75   | 196   | 68   |       |
| 31          | 201    | ---      | 1280  | 546   | ---   | 323   | ---   | 80   | ---  | 59   | 248   | ---  |       |
| TOTAL       | 7503.4 | 21576    | 17780 | 22119 | 28835 | 10582 | 9218  | 6000 | 1598 | 1326 | 11852 | 2233 |       |
| MEAN        | 242    | 719      | 574   | 714   | 1030  | 341   | 307   | 194  | 53.3 | 42.8 | 382   | 74.4 |       |
| MAX         | 2730   | 4410     | 1700  | 3540  | 3310  | 629   | 605   | 388  | 107  | 184  | 2240  | 439  |       |
| MIN         | 3.6    | 119      | 190   | 194   | 383   | 195   | 118   | 80   | 14   | 11   | 24    | 14   |       |
| CFSM        | .89    | 2.64     | 2.11  | 2.63  | 3.79  | 1.25  | 1.13  | .71  | .20  | .16  | 1.40  | .27  |       |
| IN.         | 1.03   | 2.95     | 2.43  | 3.03  | 3.94  | 1.45  | 1.26  | .82  | .22  | .18  | 1.62  | .31  |       |
| CAL YR 1984 | TOTAL  | 226173.9 |       | MEAN  | 618   | MAX   | 18200 | MIN  | 2.8  | CFSM | 2.27  | IN.  | 30.93 |
| WTR YR 1985 | TOTAL  | 140622.4 |       | MEAN  | 385   | MAX   | 4410  | MIN  | 3.6  | CFSM | 1.42  | IN.  | 19.23 |



## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1977-82, October 1983 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1983 to current year.

pH: October 1983 to current year.

WATER TEMPERATURE: October 1983 to current year.

DISSOLVED OXYGEN: October 1983 to current year.

TURBIDITY: October 1983 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Five parameter water-quality monitor and sediment pumping sampler since Oct. 1, 1983.

REMARKS.--Interruptions in the record were due to malfunction of the instruments.

## EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 254 microsiemens, July 29, 1984; minimum, 28 microsiemens, May 8, 1984.

pH: Maximum, 8.1 units, Sept. 11, 1984, July 20, 1985; minimum, 5.2 units, April 6, 1977.

WATER TEMPERATURE: Maximum observed, 34.0°C, July 16, 1980; minimum, 0.5°C, many days.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L Dec. 25, 26, 30, 31, 1983, Jan. 20, 21, 1984; minimum, 6.3 mg/L July 14, 15, 1985.

TURBIDITY: Maximum, 370 JTU, May 6, 1984; minimum, 0 JTU, many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 353 mg/L, May 7, 1984; minimum daily mean, 1 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 16,900 tons, May 7, 1984; minimum daily, 0.03 tons, Sept. 25, 29, 30, Oct. 4, 1984.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 204 microsiemens, July 19; minimum, 40 microsiemens, Nov. 19.

pH: Maximum, 8.1 units, July 20; minimum 6.5 units, several days.

WATER TEMPERATURE: Maximum, 31.0°C, July 12, 20, 21; minimum, 0.5°C, many days.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Feb. 9; minimum, 6.3 mg/L, July 14, 15.

TURBIDITY: Maximum, 240 JTU, Sept. 30; minimum, 0 JTU, many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 165 mg/L, Nov. 19; minimum daily mean, 1 mg/L, several days.

SEDIMENT LOADS: Maximum daily, 2,140 tons, Nov. 19; minimum daily, 0.03 tons, Oct. 4.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER |     |     | NOVEMBER |     |     | DECEMBER |     |     | JANUARY |     |     |      |
| 1       | 100 | 98  | 99       | 70  | 66  | 69       | 52  | 48  | 50      | 56  | 44  | 50   |
| 2       | 102 | 98  | 101      | 72  | 70  | 71       | 55  | 49  | 52      | 46  | 42  | 45   |
| 3       | 102 | 100 | 101      | 72  | 70  | 71       | 53  | 51  | 51      | 42  | 42  | 42   |
| 4       | 106 | 102 | 103      | 72  | 68  | 70       | 51  | 51  | 51      | 45  | 43  | 45   |
| 5       | 108 | 104 | 105      | 72  | 70  | 71       | 53  | 51  | 52      | 45  | 43  | 43   |
| 6       | 110 | 106 | 108      | 74  | 72  | 72       | 53  | 51  | 52      | 44  | 42  | 44   |
| 7       | 114 | 110 | 111      | 72  | 70  | 71       | 53  | 51  | 51      | 44  | 42  | 43   |
| 8       | 114 | 102 | 111      | 68  | 66  | 67       | 53  | 53  | 53      | 45  | 45  | 45   |
| 9       | 114 | 106 | 111      | 72  | 68  | 69       | 53  | 51  | 51      | 45  | 45  | 45   |
| 10      | 104 | 100 | 102      | 72  | 64  | 67       | 53  | 51  | 52      | 47  | 45  | 46   |
| 11      | 128 | 100 | 109      | 76  | 58  | 64       | 54  | 52  | 54      | 50  | 48  | 48   |
| 12      | 152 | 130 | 139      | 56  | 46  | 52       | 56  | 54  | 55      | 48  | 48  | 48   |
| 13      | 168 | 152 | 159      | 52  | 48  | 50       | 62  | 56  | 56      | 51  | 49  | 50   |
| 14      | 168 | 162 | 165      | 56  | 50  | 51       | 58  | 56  | 58      | 51  | 49  | 50   |
| 15      | 164 | 154 | 158      | 58  | 52  | 55       | 60  | 58  | 59      | 52  | 52  | 52   |
| 16      | 160 | 154 | 156      | 60  | 58  | 60       | 62  | 60  | 60      | 52  | 52  | 52   |
| 17      | 172 | 158 | 164      | 58  | 56  | 57       | 62  | 60  | 60      | 52  | 50  | 52   |
| 18      | 176 | 172 | 174      | 60  | 58  | 59       | 66  | 60  | 63      | 53  | 53  | 53   |
| 19      | 176 | 160 | 171      | 58  | 40  | 47       | 66  | 64  | 64      | 55  | 53  | 53   |
| 20      | 166 | 74  | 126      | 44  | 42  | 43       | 67  | 63  | 65      | 58  | 54  | 56   |
| 21      | 88  | 74  | 82       | 44  | 42  | 43       | 65  | 63  | 64      | 58  | 56  | 58   |
| 22      | 80  | 74  | 76       | 44  | 42  | 44       | 65  | 61  | 62      | 59  | 55  | 57   |
| 23      | 76  | 58  | 70       | 46  | 42  | 44       | 65  | 61  | 62      | 57  | 55  | 56   |
| 24      | 56  | 50  | 54       | 48  | 46  | 46       | 63  | 53  | 57      | 57  | 55  | 56   |
| 25      | 56  | 54  | 55       | 50  | 46  | 48       | 55  | 49  | 52      | 56  | 56  | 56   |
| 26      | 58  | 56  | 58       | 50  | 48  | 48       | 51  | 47  | 48      | 56  | 56  | 56   |
| 27      | 64  | 58  | 60       | 58  | 50  | 55       | 47  | 47  | 47      | 57  | 55  | 57   |
| 28      | 68  | 60  | 65       | 58  | 46  | 54       | 53  | 47  | 48      | 57  | 55  | 57   |
| 29      | 68  | 66  | 67       | 52  | 46  | 48       | 52  | 50  | 51      | 58  | 56  | 58   |
| 30      | 70  | 68  | 69       | 50  | 46  | 47       | 52  | 50  | 51      | 58  | 56  | 57   |
| 31      | 70  | 66  | 67       | --- | --- | ---      | 54  | 50  | 52      | 58  | 56  | 58   |
| MONTH   | 176 | 50  | 106      | 76  | 40  | 57       | 67  | 47  | 55      | 59  | 42  | 51   |

## CUMBERLAND RIVER BASIN

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03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 57  | 51  | 54    | 59  | 55  | 57    | 62  | 58  | 60   | 64  | 64  | 64   |
| 2        | 51  | 49  | 50    | 58  | 56  | 57    | 60  | 56  | 59   | 76  | 64  | 65   |
| 3        | 49  | 47  | 49    | 58  | 56  | 56    | 60  | 56  | 57   | 74  | 54  | 57   |
| 4        | 49  | 49  | 49    | 59  | 55  | 56    | 58  | 56  | 56   | 62  | 58  | 61   |
| 5        | 52  | 48  | 50    | 61  | 55  | 57    | 58  | 56  | 57   | 64  | 60  | 63   |
| 6        | 54  | 50  | 52    | 56  | 54  | 55    | 60  | 56  | 57   | 64  | 62  | 63   |
| 7        | 50  | 46  | 49    | 54  | 54  | 54    | 58  | 56  | 56   | 62  | 58  | 60   |
| 8        | 48  | 46  | 47    | 55  | 55  | 55    | 56  | 54  | 56   | 58  | 58  | 58   |
| 9        | 47  | 45  | 46    | 55  | 55  | 55    | 56  | 52  | 54   | 60  | 58  | 58   |
| 10       | 49  | 47  | 48    | 56  | 52  | 54    | 54  | 52  | 53   | 60  | 58  | 58   |
| 11       | 51  | 47  | 48    | 54  | 52  | 54    | 54  | 54  | 54   | 62  | 58  | 60   |
| 12       | 51  | 47  | 49    | 52  | 52  | 52    | 56  | 54  | 55   | 62  | 60  | 61   |
| 13       | 46  | 44  | 45    | 53  | 51  | 51    | 58  | 56  | 57   | 70  | 56  | 63   |
| 14       | 46  | 44  | 45    | 51  | 51  | 51    | 60  | 58  | 59   | 72  | 54  | 61   |
| 15       | 47  | 45  | 45    | 52  | 52  | 52    | 62  | 60  | 62   | 64  | 58  | 61   |
| 16       | 47  | 45  | 46    | 52  | 52  | 52    | 62  | 60  | 60   | 62  | 60  | 62   |
| 17       | 50  | 48  | 48    | 54  | 52  | 52    | 64  | 60  | 63   | 62  | 60  | 61   |
| 18       | 50  | 50  | 50    | 55  | 53  | 54    | 64  | 62  | 63   | 62  | 60  | 60   |
| 19       | 59  | 53  | 54    | 55  | 53  | 54    | 61  | 59  | 60   | 62  | 60  | 61   |
| 20       | 60  | 56  | 57    | 56  | 56  | 56    | 60  | 60  | 60   | 66  | 62  | 63   |
| 21       | 58  | 54  | 56    | 58  | 56  | 57    | 62  | 60  | 61   | 70  | 62  | 66   |
| 22       | 57  | 55  | 55    | 58  | 56  | 56    | 63  | 61  | 62   | 64  | 60  | 62   |
| 23       | 57  | 55  | 56    | 58  | 56  | 57    | 64  | 62  | 62   | 60  | 52  | 56   |
| 24       | 64  | 58  | 60    | 58  | 56  | 57    | 63  | 61  | 62   | 54  | 50  | 52   |
| 25       | 65  | 57  | 61    | 58  | 56  | 58    | 64  | 60  | 63   | 56  | 52  | 53   |
| 26       | 59  | 57  | 58    | 58  | 56  | 57    | 65  | 61  | 63   | 62  | 56  | 59   |
| 27       | 64  | 58  | 60    | 58  | 56  | 56    | 65  | 65  | 65   | 64  | 60  | 61   |
| 28       | 64  | 56  | 59    | 56  | 56  | 56    | 66  | 64  | 64   | 64  | 62  | 63   |
| 29       | --- | --- | ---   | 58  | 56  | 57    | 67  | 65  | 66   | 66  | 64  | 65   |
| 30       | --- | --- | ---   | 66  | 58  | 63    | 66  | 64  | 65   | 69  | 65  | 67   |
| 31       | --- | --- | ---   | 66  | 62  | 63    | --- | --- | ---  | 68  | 66  | 68   |
| MONTH    | 65  | 44  | 52    | 66  | 51  | 56    | 67  | 52  | 60   | 76  | 50  | 61   |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 73  | 67  | 69   | 89  | 87  | 88     | 87  | 83  | 86        | 69  | 67  | 68   |
| 2     | 75  | 69  | 72   | 92  | 84  | 87     | 97  | 85  | 90        | 76  | 68  | 73   |
| 3     | 74  | 70  | 73   | 108 | 84  | 95     | 92  | 82  | 85        | 80  | 76  | 78   |
| 4     | 75  | 71  | 74   | 106 | 72  | 87     | 89  | 85  | 87        | 80  | 78  | 78   |
| 5     | 86  | 72  | 76   | 72  | 66  | 71     | 90  | 88  | 89        | 80  | 76  | 79   |
| 6     | 77  | 73  | 73   | 69  | 65  | 66     | 90  | 88  | 89        | 82  | 78  | 80   |
| 7     | 74  | 70  | 71   | 71  | 65  | 68     | 89  | 87  | 88        | 82  | 78  | 80   |
| 8     | 97  | 69  | 85   | 75  | 65  | 70     | 96  | 90  | 92        | 84  | 80  | 81   |
| 9     | 97  | 89  | 94   | 75  | 69  | 72     | 98  | 92  | 96        | 85  | 81  | 84   |
| 10    | 100 | 90  | 95   | 78  | 70  | 74     | 102 | 96  | 100       | 89  | 83  | 86   |
| 11    | 99  | 93  | 97   | 82  | 72  | 77     | 108 | 100 | 104       | 91  | 87  | 89   |
| 12    | 94  | 84  | 89   | 86  | 78  | 82     | 110 | 104 | 106       | 89  | 85  | 87   |
| 13    | 83  | 69  | 74   | 109 | 85  | 94     | 106 | 102 | 104       | 87  | 83  | 85   |
| 14    | 68  | 64  | 66   | 111 | 97  | 104    | 110 | 88  | 101       | 87  | 83  | 84   |
| 15    | 65  | 63  | 64   | 115 | 103 | 109    | 86  | 70  | 76        | 87  | 81  | 84   |
| 16    | 71  | 65  | 68   | 113 | 105 | 109    | 90  | 82  | 89        | 90  | 82  | 86   |
| 17    | 74  | 68  | 72   | 160 | 106 | 124    | 90  | 52  | 68        | 92  | 84  | 87   |
| 18    | 79  | 73  | 75   | 186 | 156 | 169    | 64  | 62  | 62        | 92  | 84  | 87   |
| 19    | 78  | 74  | 76   | 204 | 182 | 191    | 66  | 62  | 64        | 94  | 86  | 89   |
| 20    | 79  | 73  | 75   | 202 | 182 | 191    | 68  | 64  | 66        | 94  | 86  | 90   |
| 21    | 77  | 71  | 73   | 199 | 163 | 186    | 72  | 66  | 69        | 94  | 88  | 91   |
| 22    | 72  | 70  | 71   | 181 | 161 | 174    | 70  | 68  | 68        | 96  | 88  | 91   |
| 23    | 76  | 70  | 72   | 157 | 113 | 138    | 72  | 68  | 69        | 93  | 89  | 91   |
| 24    | 79  | 73  | 76   | 159 | 117 | 142    | 76  | 72  | 73        | 95  | 91  | 92   |
| 25    | 85  | 75  | 80   | 122 | 116 | 118    | 78  | 62  | 72        | 97  | 87  | 92   |
| 26    | 90  | 82  | 86   | 120 | 84  | 115    | 67  | 47  | 55        | 109 | 81  | 90   |
| 27    | 96  | 88  | 92   | 113 | 93  | 103    | 55  | 53  | 55        | 149 | 75  | 93   |
| 28    | 97  | 91  | 93   | 92  | 82  | 86     | 59  | 55  | 57        | 75  | 73  | 74   |
| 29    | 95  | 87  | 91   | 84  | 80  | 83     | 63  | 59  | 60        | 75  | 73  | 74   |
| 30    | 93  | 85  | 89   | 79  | 75  | 77     | 65  | 61  | 63        | 78  | 74  | 76   |
| 31    | --- | --- | ---  | 84  | 76  | 80     | 69  | 65  | 68        | --- | --- | ---  |
| MONTH | 100 | 63  | 79   | 204 | 65  | 107    | 110 | 47  | 79        | 149 | 67  | 84   |

## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-----------|-----|
|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH     |     |
| 1     | 7.4     | 7.1 | 7.2      | 7.0 | 6.7      | 6.6 | 6.8     | 6.5 | 6.8      | 6.5 | 7.0       | 6.9 |
| 2     | 7.4     | 7.2 | 7.2      | 7.0 | 6.8      | 6.7 | 6.6     | 6.6 | 6.5      | 6.5 | 7.1       | 6.9 |
| 3     | 7.4     | 7.2 | 7.2      | 7.1 | 6.8      | 6.7 | 6.6     | 6.6 | 6.6      | 6.5 | 7.1       | 6.9 |
| 4     | 7.4     | 7.1 | 7.2      | 7.1 | 6.9      | 6.7 | 6.7     | 6.6 | 6.6      | 6.6 | 7.1       | 7.0 |
| 5     | 7.4     | 7.1 | 7.3      | 7.1 | 6.9      | 6.8 | 6.7     | 6.7 | 6.6      | 6.6 | 7.1       | 6.9 |
| 6     | 7.4     | 7.1 | 7.3      | 7.2 | 6.9      | 6.8 | 6.7     | 6.7 | 6.7      | 6.6 | 7.2       | 7.0 |
| 7     | 7.4     | 7.1 | 7.2      | 7.1 | 6.9      | 6.8 | 6.8     | 6.7 | 6.6      | 6.6 | 7.2       | 7.0 |
| 8     | 7.4     | 7.1 | 7.2      | 7.2 | 6.9      | 6.8 | 6.8     | 6.7 | 6.6      | 6.6 | 7.1       | 7.0 |
| 9     | 7.3     | 7.2 | 7.2      | 7.2 | 6.9      | 6.8 | 6.8     | 6.7 | 6.7      | 6.6 | 7.2       | 7.0 |
| 10    | 7.2     | 7.2 | 7.2      | 7.1 | 6.9      | 6.8 | 6.8     | 6.8 | 6.7      | 6.6 | 7.1       | 7.0 |
| 11    | 7.3     | 7.2 | 7.1      | 7.0 | 6.9      | 6.8 | 6.9     | 6.8 | 6.7      | 6.7 | 7.1       | 7.0 |
| 12    | 7.3     | 7.2 | 7.0      | 6.9 | 6.9      | 6.8 | 6.9     | 6.8 | 6.8      | 6.6 | 7.1       | 6.9 |
| 13    | 7.3     | 7.3 | 7.0      | 6.9 | 7.0      | 6.8 | 6.9     | 6.8 | 6.6      | 6.6 | 7.1       | 6.9 |
| 14    | 7.4     | 7.3 | 7.1      | 7.0 | 7.0      | 6.8 | 6.9     | 6.9 | 6.7      | 6.6 | 7.1       | 6.9 |
| 15    | 7.4     | 7.3 | 7.0      | 7.0 | 7.0      | 6.8 | 6.9     | 6.9 | 6.8      | 6.7 | 7.2       | 7.0 |
| 16    | 7.3     | 7.2 | 7.1      | 7.0 | 7.0      | 6.8 | 6.9     | 6.9 | 6.8      | 6.8 | 7.2       | 7.0 |
| 17    | 7.4     | 7.3 | 7.1      | 7.0 | 7.0      | 6.9 | 6.9     | 6.9 | 6.8      | 6.8 | 7.2       | 7.0 |
| 18    | 7.4     | 7.3 | 7.1      | 7.0 | 7.0      | 6.8 | 6.9     | 6.9 | 6.8      | 6.8 | 7.2       | 7.0 |
| 19    | 7.4     | 7.3 | 7.0      | 6.5 | 6.9      | 6.8 | 6.9     | 6.9 | 6.9      | 6.8 | 7.2       | 7.1 |
| 20    | 7.3     | 7.0 | 6.6      | 6.5 | 7.0      | 6.9 | 6.9     | 6.9 | 6.9      | 6.8 | 7.2       | 7.0 |
| 21    | 7.1     | 6.9 | 6.7      | 6.6 | 7.0      | 6.9 | 6.9     | 6.9 | 6.9      | 6.8 | 7.2       | 7.0 |
| 22    | 6.9     | 6.9 | 6.7      | 6.7 | 7.0      | 6.9 | 6.9     | 6.9 | 6.9      | 6.8 | 7.2       | 7.1 |
| 23    | 6.9     | 6.7 | 6.8      | 6.7 | 7.0      | 6.9 | 6.9     | 6.9 | 6.9      | 6.8 | 7.2       | 7.1 |
| 24    | 6.7     | 6.5 | 6.8      | 6.8 | 7.0      | 6.9 | 6.9     | 6.9 | 6.9      | 6.8 | 7.3       | 7.1 |
| 25    | 6.7     | 6.6 | 6.9      | 6.8 | 6.9      | 6.7 | 6.9     | 6.9 | 6.9      | 6.8 | 7.3       | 7.0 |
| 26    | 6.8     | 6.7 | 6.9      | 6.8 | 6.8      | 6.7 | 6.9     | 6.9 | 7.0      | 6.8 | 7.3       | 7.0 |
| 27    | 6.9     | 6.7 | 6.9      | 6.8 | 6.8      | 6.7 | 6.9     | 6.9 | 7.0      | 6.8 | 7.3       | 7.0 |
| 28    | 6.9     | 6.8 | 6.9      | 6.5 | 6.8      | 6.7 | 6.9     | 6.9 | 7.0      | 6.9 | 7.3       | 7.0 |
| 29    | 7.0     | 6.8 | 6.6      | 6.5 | 6.8      | 6.7 | 6.9     | 6.9 | ---      | --- | 7.3       | 7.0 |
| 30    | 7.1     | 7.0 | 6.6      | 6.6 | 6.8      | 6.7 | 6.9     | 6.9 | ---      | --- | 7.3       | 6.9 |
| 31    | 7.1     | 7.0 | ---      | --- | 6.8      | 6.7 | 6.9     | 6.8 | ---      | --- | 7.2       | 6.9 |
| MONTH | 7.4     | 6.5 | 7.3      | 6.5 | 7.0      | 6.6 | 6.9     | 6.5 | 7.0      | 6.5 | 7.3       | 6.9 |
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
|       | APRIL   |     | MAY      |     | JUNE     |     | JULY    |     | AUGUST   |     | SEPTEMBER |     |
| 1     | 7.3     | 7.0 | 7.1      | 7.1 | 7.2      | 7.1 | 7.6     | 7.1 | 7.3      | 7.1 | 7.5       | 7.2 |
| 2     | 7.4     | 7.0 | 7.5      | 7.0 | 7.2      | 7.0 | 7.7     | 7.1 | 7.5      | 7.1 | 7.5       | 7.2 |
| 3     | 7.4     | 7.0 | 7.5      | 7.1 | 7.2      | 7.0 | 7.4     | 7.1 | 7.6      | 7.2 | 7.4       | 7.2 |
| 4     | 7.3     | 7.0 | 7.4      | 7.2 | 7.2      | 7.0 | 7.3     | 7.2 | 7.5      | 7.3 | 7.4       | 7.2 |
| 5     | 7.3     | 7.0 | 7.4      | 7.2 | 7.5      | 7.0 | 7.3     | 7.2 | 7.5      | 7.2 | 7.4       | 7.2 |
| 6     | 7.4     | 7.0 | 7.4      | 7.2 | 7.1      | 7.0 | 7.5     | 7.1 | 7.6      | 7.2 | 7.4       | 7.2 |
| 7     | 7.3     | 7.0 | 7.3      | 7.1 | 7.1      | 7.0 | 7.5     | 7.1 | 7.4      | 7.1 | 7.4       | 7.2 |
| 8     | 7.3     | 7.1 | 7.3      | 7.1 | 7.3      | 7.1 | 7.5     | 7.1 | 7.5      | 7.1 | 7.5       | 7.2 |
| 9     | 7.4     | 7.1 | 7.3      | 7.1 | 7.4      | 7.2 | 7.5     | 7.0 | 7.4      | 7.2 | 7.5       | 7.2 |
| 10    | 7.3     | 7.1 | 7.3      | 7.2 | 7.4      | 7.2 | 7.6     | 7.0 | 7.5      | 7.2 | 7.5       | 7.2 |
| 11    | 7.3     | 7.1 | 7.3      | 7.2 | 7.3      | 7.2 | 7.6     | 7.0 | 7.6      | 7.2 | 7.6       | 7.2 |
| 12    | 7.3     | 7.1 | 7.3      | 7.1 | 7.2      | 7.1 | 7.6     | 7.0 | 7.6      | 7.2 | 7.6       | 7.2 |
| 13    | 7.3     | 7.0 | 7.3      | 7.1 | 7.3      | 7.2 | 7.6     | 7.1 | 7.6      | 7.1 | 7.7       | 7.2 |
| 14    | 7.3     | 7.0 | 7.1      | 7.0 | 7.4      | 7.3 | 7.4     | 7.1 | 7.8      | 7.1 | 7.9       | 7.3 |
| 15    | 7.3     | 7.0 | 7.2      | 7.0 | 7.4      | 7.2 | 7.4     | 7.1 | 7.1      | 6.9 | 7.9       | 7.3 |
| 16    | 7.3     | 7.0 | 7.2      | 7.0 | 7.4      | 7.2 | 7.2     | 7.1 | 7.1      | 7.0 | 7.8       | 7.4 |
| 17    | 7.4     | 7.0 | 7.2      | 7.0 | 7.5      | 7.2 | 7.5     | 7.2 | 7.1      | 6.7 | 7.8       | 7.4 |
| 18    | 7.4     | 7.0 | 7.4      | 7.1 | 7.5      | 7.2 | 7.7     | 7.5 | 6.9      | 6.8 | 7.9       | 7.4 |
| 19    | 7.4     | 7.0 | 7.4      | 7.1 | 7.7      | 7.2 | 8.0     | 7.5 | 7.0      | 6.8 | 7.9       | 7.4 |
| 20    | 7.3     | 7.0 | 7.3      | 7.2 | 7.6      | 7.2 | 8.1     | 7.6 | 7.0      | 6.9 | 7.9       | 7.4 |
| 21    | 7.3     | 7.0 | 7.4      | 7.1 | 7.7      | 7.2 | 8.0     | 7.5 | 7.2      | 6.9 | 7.9       | 7.4 |
| 22    | 7.3     | 7.0 | 7.3      | 7.1 | 7.7      | 7.2 | 7.6     | 7.4 | 7.4      | 7.0 | 7.9       | 7.4 |
| 23    | 7.2     | 7.0 | 7.2      | 7.1 | 7.7      | 7.2 | 7.5     | 7.3 | 7.3      | 7.1 | 7.7       | 7.3 |
| 24    | 7.3     | 7.0 | 7.3      | 7.1 | 7.9      | 7.2 | 7.5     | 7.3 | 7.3      | 7.2 | 7.7       | 7.3 |
| 25    | 7.3     | 7.1 | 7.4      | 7.1 | 8.0      | 7.2 | 7.4     | 7.3 | 7.9      | 7.2 | 7.6       | 7.3 |
| 26    | 7.3     | 7.1 | 7.4      | 7.1 | 7.8      | 7.2 | 7.5     | 7.2 | 7.2      | 6.9 | 7.6       | 7.3 |
| 27    | 7.2     | 7.1 | 7.3      | 7.1 | 7.9      | 7.2 | 7.3     | 7.2 | 7.2      | 7.0 | 7.7       | 7.3 |
| 28    | 7.2     | 7.1 | 7.2      | 7.1 | 8.0      | 7.2 | 7.3     | 7.2 | 7.3      | 7.0 | 7.4       | 7.3 |
| 29    | 7.3     | 7.2 | 7.3      | 7.1 | 8.0      | 7.1 | 7.4     | 7.2 | 7.3      | 7.1 | 7.4       | 7.3 |
| 30    | 7.3     | 7.2 | 7.3      | 7.1 | 7.9      | 7.1 | 7.3     | 7.2 | 7.3      | 7.1 | 7.6       | 7.3 |
| 31    | ---     | --- | 7.2      | 7.1 | ---      | --- | 7.4     | 7.2 | 7.5      | 7.1 | ---       | --- |
| MONTH | 7.4     | 7.0 | 7.5      | 7.0 | 8.0      | 7.0 | 8.1     | 7.0 | 7.9      | 6.7 | 7.9       | 7.2 |

## CUMBERLAND RIVER BASIN

75

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 19.0 | 14.5 | 16.0     | 17.0 | 16.5 | 17.0     | 7.0  | 6.5  | 7.0     | 13.0 | 12.0 | 12.5 |
| 2       | 20.0 | 13.5 | 16.0     | 17.0 | 15.5 | 16.5     | 7.0  | 6.5  | 6.5     | 12.0 | 9.5  | 10.5 |
| 3       | 19.5 | 13.0 | 16.0     | 15.5 | 14.0 | 14.5     | 7.5  | 7.0  | 7.5     | 9.5  | 8.0  | 8.5  |
| 4       | 20.0 | 14.5 | 17.0     | 14.0 | 14.0 | 14.0     | 7.0  | 5.5  | 6.0     | 8.0  | 7.5  | 8.0  |
| 5       | 20.5 | 15.5 | 17.5     | 14.5 | 14.0 | 14.5     | 5.5  | 5.0  | 5.5     | 7.5  | 6.0  | 7.0  |
| 6       | 19.5 | 16.0 | 17.5     | 14.0 | 12.0 | 13.0     | 5.0  | 3.5  | 4.5     | 6.0  | 5.5  | 5.5  |
| 7       | 18.5 | 16.5 | 17.5     | 11.5 | 10.0 | 10.5     | 3.5  | 2.0  | 2.5     | 5.5  | 5.5  | 5.5  |
| 8       | 18.0 | 17.0 | 17.5     | 10.0 | 9.0  | 9.5      | 2.0  | 1.5  | 2.0     | 5.5  | 5.5  | 5.5  |
| 9       | 17.5 | 17.0 | 17.0     | 10.5 | 9.0  | 10.0     | 3.0  | 2.0  | 2.0     | 5.0  | 4.5  | 5.0  |
| 10      | 18.5 | 17.0 | 17.5     | 10.5 | 10.0 | 10.5     | 5.0  | 3.0  | 4.0     | 4.5  | 4.5  | 4.5  |
| 11      | 19.5 | 17.5 | 18.5     | 10.5 | 10.0 | 10.0     | 6.0  | 5.0  | 5.5     | 5.0  | 4.0  | 4.5  |
| 12      | 19.5 | 17.5 | 18.5     | 10.0 | 8.5  | 9.5      | 7.0  | 6.0  | 6.5     | 4.0  | 3.0  | 3.5  |
| 13      | 19.5 | 18.0 | 18.5     | 8.5  | 7.0  | 7.5      | 8.5  | 7.0  | 8.0     | 2.5  | 1.5  | 2.0  |
| 14      | 20.0 | 18.0 | 18.5     | 7.0  | 6.0  | 6.5      | 9.5  | 8.5  | 9.0     | 1.5  | 1.0  | 1.0  |
| 15      | 20.0 | 17.5 | 18.5     | 7.0  | 6.0  | 6.5      | 9.5  | 9.0  | 9.5     | 1.0  | .5   | 1.0  |
| 16      | 21.0 | 17.5 | 19.0     | 7.5  | 6.5  | 7.0      | 9.5  | 9.0  | 9.5     | .5   | .5   | .5   |
| 17      | 20.0 | 18.5 | 19.0     | 6.5  | 5.5  | 6.0      | 10.5 | 9.5  | 10.0    | 1.0  | .5   | .5   |
| 18      | 21.0 | 19.0 | 19.5     | 7.5  | 6.0  | 6.5      | 11.0 | 10.5 | 11.0    | 1.5  | .5   | 1.0  |
| 19      | 21.0 | 18.5 | 19.5     | 10.5 | 8.0  | 9.5      | 11.5 | 11.0 | 11.0    | 2.0  | 1.5  | 1.5  |
| 20      | 19.5 | 18.5 | 19.0     | 10.0 | 7.5  | 9.0      | 11.5 | 11.5 | 11.5    | 1.5  | .5   | .5   |
| 21      | 19.0 | 18.5 | 19.0     | 7.5  | 6.0  | 6.5      | 12.0 | 11.5 | 12.0    | .5   | .5   | .5   |
| 22      | 19.0 | 18.5 | 18.5     | 6.0  | 5.0  | 5.0      | 12.0 | 10.0 | 11.0    | .5   | .5   | .5   |
| 23      | 18.5 | 17.0 | 18.0     | 4.5  | 4.0  | 4.5      | 9.5  | 7.5  | 8.5     | .5   | .5   | .5   |
| 24      | 17.0 | 16.5 | 17.0     | 4.0  | 3.5  | 4.0      | 8.0  | 7.0  | 7.5     | .5   | .5   | .5   |
| 25      | 18.0 | 17.0 | 17.5     | 4.5  | 3.5  | 4.0      | 8.0  | 7.5  | 8.0     | .5   | .5   | .5   |
| 26      | 18.0 | 17.0 | 17.5     | 5.0  | 4.0  | 4.5      | 7.5  | 6.5  | 7.0     | 1.0  | .5   | .5   |
| 27      | 18.0 | 17.0 | 17.5     | 7.5  | 5.0  | 6.5      | 8.0  | 7.0  | 7.5     | .5   | .5   | .5   |
| 28      | 18.0 | 17.5 | 17.5     | 9.5  | 8.0  | 8.5      | 10.0 | 8.5  | 9.5     | .5   | .5   | .5   |
| 29      | 18.0 | 17.5 | 17.5     | 8.5  | 7.0  | 7.5      | 10.5 | 10.0 | 10.5    | .5   | .5   | .5   |
| 30      | 17.5 | 17.0 | 17.5     | 7.0  | 6.5  | 6.5      | 11.0 | 10.5 | 11.0    | .5   | .5   | .5   |
| 31      | 17.5 | 16.5 | 17.0     | ---  | ---  | ---      | 12.0 | 11.0 | 11.5    | .5   | .5   | .5   |
| MONTH   | 21.0 | 13.0 | 18.0     | 17.0 | 3.5  | 9.0      | 12.0 | 1.5  | 8.0     | 13.0 | .5   | 3.0  |

| DAY      | MAX | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 3.0 | .5  | 2.0   | 7.5  | 6.5  | 7.0   | 14.0 | 12.5 | 13.0 | 20.0 | 19.0 | 19.0 |
| 2        | 2.5 | 1.5 | 2.0   | 8.0  | 7.0  | 7.5   | 12.5 | 11.0 | 12.0 | 19.0 | 18.0 | 18.5 |
| 3        | 1.5 | 1.0 | 1.5   | 8.0  | 6.5  | 7.5   | 12.0 | 10.0 | 11.0 | 17.5 | 16.0 | 16.5 |
| 4        | 2.0 | 1.0 | 1.5   | 10.5 | 8.0  | 9.0   | 13.5 | 11.0 | 12.0 | 17.0 | 15.0 | 16.0 |
| 5        | 3.5 | 2.0 | 3.0   | 10.5 | 9.5  | 10.0  | 14.0 | 13.0 | 13.5 | 17.5 | 16.0 | 17.0 |
| 6        | 4.0 | 2.5 | 3.5   | 10.0 | 8.0  | 9.0   | 13.5 | 12.0 | 13.0 | 18.5 | 17.0 | 18.0 |
| 7        | 3.0 | 1.0 | 2.0   | 8.5  | 7.5  | 8.0   | 13.0 | 10.5 | 11.5 | 18.5 | 17.5 | 18.0 |
| 8        | 1.5 | .5  | 1.0   | 8.5  | 8.5  | 8.5   | 10.5 | 9.5  | 10.0 | 17.5 | 16.5 | 17.0 |
| 9        | 1.0 | .5  | 1.0   | 10.0 | 9.0  | 9.0   | 9.5  | 8.0  | 9.0  | 17.5 | 17.0 | 17.0 |
| 10       | 2.5 | 1.0 | 2.0   | 9.0  | 8.0  | 8.5   | 9.5  | 7.5  | 9.0  | 17.5 | 16.5 | 17.0 |
| 11       | 3.0 | 2.5 | 3.0   | 10.0 | 8.5  | 9.0   | 10.5 | 9.0  | 10.0 | 19.0 | 17.0 | 18.0 |
| 12       | 2.5 | 1.0 | 2.0   | 11.0 | 9.5  | 10.0  | 12.0 | 10.0 | 11.0 | 19.5 | 18.5 | 19.0 |
| 13       | 2.0 | 1.0 | 1.5   | 10.0 | 9.0  | 9.5   | 13.0 | 11.5 | 12.5 | 19.5 | 18.0 | 18.5 |
| 14       | 2.0 | 1.0 | 1.5   | 9.5  | 8.5  | 9.0   | 14.5 | 13.0 | 13.5 | 19.0 | 18.0 | 18.5 |
| 15       | 1.5 | 1.0 | 1.0   | 9.0  | 7.5  | 8.0   | 15.0 | 14.5 | 15.0 | 20.5 | 18.0 | 19.5 |
| 16       | 1.0 | .5  | .5    | 8.5  | 7.5  | 8.0   | 15.5 | 14.0 | 14.5 | 20.5 | 19.0 | 19.5 |
| 17       | 2.5 | 1.0 | 2.0   | 9.0  | 7.5  | 8.0   | 16.0 | 14.0 | 15.0 | 19.0 | 18.0 | 18.5 |
| 18       | 2.5 | 2.0 | 2.0   | 8.5  | 7.0  | 8.0   | 17.0 | 14.5 | 16.0 | 18.5 | 17.0 | 18.0 |
| 19       | 3.5 | 2.5 | 3.0   | 8.0  | 6.5  | 7.5   | 17.5 | 15.5 | 16.5 | 19.0 | 17.0 | 18.5 |
| 20       | 4.5 | 3.5 | 4.0   | 9.0  | 7.5  | 8.5   | 18.0 | 16.0 | 17.0 | 19.0 | 18.0 | 18.5 |
| 21       | 5.0 | 3.5 | 4.5   | 9.0  | 8.5  | 9.0   | 18.5 | 16.5 | 17.5 | 18.5 | 17.5 | 18.0 |
| 22       | 6.5 | 5.0 | 5.5   | 8.5  | 8.5  | 8.5   | 19.0 | 17.0 | 18.0 | 18.5 | 17.5 | 18.0 |
| 23       | 8.0 | 6.5 | 7.5   | 9.5  | 8.5  | 9.0   | 18.5 | 17.5 | 18.0 | 18.0 | 16.0 | 17.0 |
| 24       | 9.5 | 8.0 | 8.5   | 9.5  | 9.0  | 9.5   | 18.0 | 17.5 | 17.5 | 16.5 | 15.5 | 16.0 |
| 25       | 9.5 | 9.0 | 9.0   | 10.0 | 8.5  | 9.5   | 19.0 | 17.0 | 18.0 | 17.5 | 15.5 | 16.5 |
| 26       | 9.5 | 9.0 | 9.5   | 10.0 | 8.0  | 9.0   | 19.0 | 17.0 | 18.0 | 18.5 | 16.5 | 17.5 |
| 27       | 9.5 | 9.0 | 9.5   | 10.5 | 9.0  | 9.5   | 19.0 | 18.5 | 18.5 | 19.5 | 17.5 | 18.5 |
| 28       | 9.0 | 7.5 | 8.0   | 11.5 | 10.5 | 11.0  | 19.0 | 18.0 | 18.5 | 19.5 | 19.0 | 19.5 |
| 29       | --- | --- | ---   | 13.0 | 11.0 | 12.0  | 20.0 | 18.5 | 19.5 | 20.5 | 19.0 | 20.0 |
| 30       | --- | --- | ---   | 14.5 | 12.5 | 13.5  | 20.0 | 18.5 | 19.5 | 22.0 | 20.0 | 21.0 |
| 31       | --- | --- | ---   | 14.5 | 14.0 | 14.5  | ---  | ---  | ---  | 22.5 | 21.5 | 22.0 |
| MONTH    | 9.5 | .5  | 3.5   | 14.5 | 6.5  | 9.0   | 20.0 | 7.5  | 14.5 | 22.5 | 15.0 | 18.0 |



## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 24.5 | 22.0 | 23.0 | 26.0 | 24.5 | 25.0 | 26.5   | 25.5 | 26.0 | 22.0      | 20.5 | 21.5 |
| 2     | 25.5 | 23.0 | 24.0 | 27.5 | 23.5 | 25.0 | 25.5   | 24.0 | 24.5 | 23.0      | 21.5 | 22.5 |
| 3     | 25.5 | 23.5 | 24.5 | 25.0 | 23.0 | 24.0 | 24.0   | 23.0 | 23.5 | 24.0      | 22.0 | 23.0 |
| 4     | 26.5 | 24.0 | 25.5 | 26.0 | 24.5 | 24.5 | 24.5   | 23.5 | 24.0 | 24.5      | 22.5 | 23.5 |
| 5     | 27.0 | 24.5 | 25.5 | 26.0 | 24.0 | 25.0 | 24.0   | 23.5 | 23.5 | 24.5      | 22.5 | 23.5 |
| 6     | 25.0 | 24.5 | 25.0 | 26.5 | 24.5 | 25.0 | 24.5   | 23.0 | 23.5 | 24.0      | 23.0 | 23.5 |
| 7     | 24.0 | 23.0 | 23.5 | 28.0 | 24.0 | 25.5 | 24.0   | 23.5 | 23.5 | 25.0      | 23.0 | 24.0 |
| 8     | 24.0 | 22.5 | 23.0 | 29.0 | 24.5 | 26.5 | 25.5   | 23.0 | 24.0 | 26.0      | 24.0 | 25.0 |
| 9     | 25.0 | 22.5 | 24.0 | 28.5 | 25.0 | 26.5 | 26.5   | 24.0 | 25.0 | 26.5      | 24.5 | 25.0 |
| 10    | 26.5 | 24.0 | 25.0 | 30.0 | 26.0 | 27.5 | 27.5   | 25.0 | 26.0 | 26.5      | 24.5 | 25.0 |
| 11    | 26.0 | 24.5 | 25.0 | 30.5 | 26.0 | 28.0 | 28.5   | 25.5 | 27.0 | 26.0      | 24.5 | 25.0 |
| 12    | 25.0 | 22.5 | 24.0 | 31.0 | 26.5 | 28.5 | 29.5   | 26.5 | 27.5 | 25.0      | 22.5 | 24.0 |
| 13    | 22.5 | 20.5 | 21.0 | 29.5 | 27.0 | 27.5 | 28.5   | 27.0 | 27.5 | 24.0      | 20.5 | 22.0 |
| 14    | 22.0 | 19.5 | 20.5 | 30.0 | 26.5 | 28.0 | 28.0   | 26.0 | 26.5 | 22.5      | 19.5 | 21.0 |
| 15    | 22.0 | 20.5 | 21.0 | 28.5 | 26.5 | 27.0 | 26.0   | 24.0 | 24.5 | 21.5      | 19.0 | 20.0 |
| 16    | 23.5 | 21.0 | 22.0 | 28.5 | 26.0 | 27.0 | 24.5   | 23.5 | 24.0 | 22.5      | 18.5 | 20.0 |
| 17    | 24.0 | 22.0 | 23.0 | 29.0 | 25.5 | 27.0 | 23.5   | 20.0 | 21.0 | 22.5      | 18.0 | 20.0 |
| 18    | 25.0 | 22.5 | 23.5 | 28.5 | 25.5 | 27.0 | 21.5   | 20.0 | 20.5 | 22.5      | 18.0 | 20.0 |
| 19    | 24.5 | 22.5 | 23.5 | 30.0 | 26.0 | 27.5 | 22.5   | 20.5 | 21.5 | 23.0      | 18.5 | 20.0 |
| 20    | 25.0 | 22.0 | 23.0 | 31.0 | 26.5 | 28.5 | 22.0   | 21.0 | 21.5 | 23.0      | 19.0 | 20.5 |
| 21    | 25.5 | 22.0 | 23.5 | 31.0 | 27.0 | 28.5 | 22.0   | 21.0 | 21.5 | 23.5      | 19.0 | 21.0 |
| 22    | 24.0 | 22.0 | 23.0 | 28.5 | 27.0 | 27.5 | 22.0   | 21.0 | 21.5 | 23.5      | 19.5 | 21.0 |
| 23    | 26.0 | 22.0 | 24.0 | 27.0 | 26.0 | 26.5 | 22.0   | 21.0 | 21.5 | 22.0      | 19.5 | 20.5 |
| 24    | 27.0 | 23.0 | 24.5 | 26.5 | 25.0 | 25.5 | 21.0   | 20.5 | 21.0 | 22.5      | 19.5 | 20.5 |
| 25    | 28.0 | 23.5 | 25.5 | 27.0 | 25.0 | 25.5 | 20.5   | 20.0 | 20.0 | 23.0      | 18.5 | 20.5 |
| 26    | 28.0 | 25.0 | 26.5 | 25.0 | 24.5 | 24.5 | 19.5   | 19.0 | 19.5 | 20.0      | 18.0 | 19.5 |
| 27    | 29.0 | 25.5 | 27.0 | 24.5 | 23.0 | 24.0 | 20.0   | 19.0 | 19.5 | 17.5      | 16.0 | 16.5 |
| 28    | 28.5 | 25.0 | 26.5 | 23.5 | 22.5 | 23.0 | 21.5   | 19.5 | 20.5 | 16.5      | 15.5 | 16.0 |
| 29    | 28.5 | 24.5 | 26.0 | 24.5 | 23.0 | 24.0 | 22.0   | 20.5 | 21.0 | 17.0      | 15.5 | 16.0 |
| 30    | 28.0 | 24.0 | 26.0 | 25.5 | 24.0 | 24.5 | 22.0   | 21.0 | 21.5 | 17.5      | 15.5 | 16.5 |
| 31    | ---  | ---  | ---  | 27.0 | 25.0 | 26.0 | 22.0   | 20.5 | 21.0 | ---       | ---  | ---  |
| MONTH | 29.0 | 19.5 | 24.0 | 31.0 | 22.5 | 26.0 | 29.5   | 19.0 | 23.0 | 26.5      | 15.5 | 21.0 |

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|---------|-----|------|----------|------|------|----------|------|------|---------|------|------|
|       | OCTOBER |     |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | 9.2     | 7.8 | 8.4  | 9.5      | 9.1  | 9.3  | 11.9     | 11.7 | 11.7 | 10.3    | 10.1 | 10.1 |
| 2     | 9.3     | 8.1 | 8.6  | 9.5      | 9.1  | 9.3  | 12.0     | 11.6 | 11.8 | 11.0    | 10.4 | 10.7 |
| 3     | 9.3     | 8.1 | 8.7  | 10.0     | 9.5  | 9.8  | 11.8     | 11.5 | 11.7 | 11.3    | 11.0 | 11.2 |
| 4     | 9.1     | 8.1 | 8.5  | 9.9      | 9.7  | 9.8  | 12.3     | 11.7 | 12.0 | 11.4    | 11.3 | 11.3 |
| 5     | 9.3     | 8.1 | 8.6  | 9.9      | 9.6  | 9.8  | 12.3     | 12.1 | 12.2 | 11.9    | 11.5 | 11.7 |
| 6     | 9.4     | 8.2 | 8.7  | 10.4     | 9.8  | 10.1 | 12.6     | 12.1 | 12.3 | 12.3    | 11.7 | 12.1 |
| 7     | 9.3     | 8.2 | 8.6  | 11.0     | 10.4 | 10.7 | 13.2     | 12.6 | 13.0 | 12.2    | 12.0 | 12.1 |
| 8     | 9.1     | 8.1 | 8.5  | 11.2     | 10.9 | 11.1 | 13.4     | 13.1 | 13.2 | 12.3    | 12.0 | 12.1 |
| 9     | 8.8     | 8.3 | 8.5  | 11.1     | 10.9 | 11.0 | 13.2     | 12.9 | 13.1 | 12.6    | 12.2 | 12.4 |
| 10    | 8.7     | 8.4 | 8.6  | 10.9     | 10.6 | 10.7 | 12.8     | 12.3 | 12.6 | 12.5    | 12.3 | 12.4 |
| 11    | 8.7     | 8.3 | 8.5  | 10.7     | 10.5 | 10.7 | 12.3     | 11.9 | 12.1 | 12.6    | 12.3 | 12.4 |
| 12    | 8.6     | 8.1 | 8.3  | 11.2     | 10.8 | 11.0 | 12.0     | 11.6 | 11.8 | 13.0    | 12.6 | 12.8 |
| 13    | 8.4     | 8.0 | 8.2  | 11.8     | 11.2 | 11.6 | 11.7     | 11.3 | 11.5 | 13.4    | 12.9 | 13.2 |
| 14    | 8.5     | 8.0 | 8.2  | 12.1     | 11.7 | 11.9 | 11.4     | 11.1 | 11.3 | 13.4    | 13.2 | 13.3 |
| 15    | 8.3     | 7.9 | 8.1  | 12.1     | 11.8 | 11.9 | 11.4     | 11.0 | 11.2 | 13.7    | 13.3 | 13.5 |
| 16    | 8.3     | 7.8 | 8.0  | 11.9     | 11.7 | 11.8 | 11.4     | 11.0 | 11.2 | 13.7    | 13.5 | 13.6 |
| 17    | 8.6     | 7.8 | 8.1  | 12.3     | 11.8 | 12.1 | 11.1     | 10.8 | 11.0 | 13.5    | 13.3 | 13.4 |
| 18    | 8.6     | 8.0 | 8.2  | 12.1     | 11.5 | 11.9 | 10.8     | 10.5 | 10.7 | 13.4    | 13.2 | 13.3 |
| 19    | 9.1     | 8.4 | 8.7  | 11.4     | 10.5 | 10.9 | 10.6     | 10.3 | 10.5 | 13.3    | 13.1 | 13.2 |
| 20    | 9.3     | 8.5 | 9.0  | 11.6     | 10.9 | 11.2 | 10.6     | 10.3 | 10.4 | 13.8    | 13.1 | 13.5 |
| 21    | 9.5     | 9.2 | 9.4  | 12.1     | 11.1 | 11.9 | 10.5     | 10.1 | 10.3 | 13.8    | 13.7 | 13.8 |
| 22    | 10.1    | 9.5 | 10.0 | 12.5     | 12.1 | 12.4 | 10.8     | 10.1 | 10.6 | 13.7    | 13.6 | 13.6 |
| 23    | 10.6    | 9.4 | 10.4 | 12.8     | 12.4 | 12.6 | 11.5     | 10.8 | 11.3 | 13.6    | 13.5 | 13.5 |
| 24    | 9.7     | 9.0 | 9.3  | 12.8     | 12.5 | 12.7 | 11.7     | 11.4 | 11.5 | 13.5    | 13.4 | 13.5 |
| 25    | 9.0     | 8.6 | 8.8  | 12.8     | 12.5 | 12.7 | 11.6     | 11.4 | 11.5 | 13.5    | 13.3 | 13.4 |
| 26    | 9.2     | 8.7 | 9.0  | 12.6     | 12.3 | 12.5 | 12.0     | 11.6 | 11.8 | 13.7    | 13.5 | 13.6 |
| 27    | 9.5     | 8.9 | 9.2  | 12.3     | 11.6 | 12.1 | 11.9     | 11.4 | 11.7 | 13.7    | 13.5 | 13.6 |
| 28    | 9.3     | 8.9 | 9.1  | 11.5     | 11.0 | 11.1 | 11.4     | 10.8 | 11.2 | 13.5    | 13.4 | 13.4 |
| 29    | 9.4     | 8.9 | 9.1  | 11.6     | 11.1 | 11.4 | 11.0     | 10.6 | 10.8 | 13.5    | 13.4 | 13.5 |
| 30    | 9.4     | 9.0 | 9.2  | 11.7     | 11.6 | 11.7 | 10.7     | 10.5 | 10.6 | 13.6    | 13.4 | 13.5 |
| 31    | 9.5     | 9.1 | 9.3  | ---      | ---  | ---  | 10.6     | 10.2 | 10.4 | 13.5    | 13.4 | 13.5 |
| MONTH | 10.6    | 7.8 | 8.8  | 12.8     | 9.1  | 11.3 | 13.4     | 10.1 | 11.5 | 13.8    | 10.1 | 12.8 |

## CUMBERLAND RIVER BASIN

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03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|-----|-----|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |     |     |      |
| 1        | 13.4 | 12.8 | 13.1  | 12.1 | 11.5 | 11.8  | 10.6 | 9.6  | 10.1 | 8.7 | 8.4 | 8.6  |
| 2        | 13.5 | 13.0 | 13.2  | 12.0 | 11.6 | 11.8  | 11.0 | 10.0 | 10.5 | 8.9 | 8.5 | 8.7  |
| 3        | 13.7 | 13.5 | 13.6  | 12.0 | 11.4 | 11.7  | 11.1 | 10.3 | 10.7 | 9.4 | 8.6 | 9.1  |
| 4        | 13.7 | 13.3 | 13.5  | 11.4 | 10.7 | 11.2  | 10.8 | 10.0 | 10.4 | 9.8 | 9.2 | 9.5  |
| 5        | 13.3 | 12.8 | 13.0  | 11.1 | 10.5 | 10.8  | 10.3 | 9.7  | 10.0 | 9.7 | 9.0 | 9.3  |
| 6        | 13.2 | 12.8 | 12.9  | 11.7 | 10.8 | 11.3  | 10.6 | 9.7  | 10.1 | 9.4 | 8.9 | 9.1  |
| 7        | 13.9 | 13.2 | 13.5  | 11.9 | 11.3 | 11.6  | 10.9 | 10.0 | 10.5 | 9.0 | 8.7 | 8.9  |
| 8        | 14.0 | 13.8 | 13.9  | 11.6 | 11.2 | 11.4  | 11.5 | 10.7 | 11.1 | 9.5 | 8.8 | 9.1  |
| 9        | 14.1 | 13.8 | 13.9  | 11.5 | 11.1 | 11.2  | 11.8 | 11.0 | 11.4 | 9.4 | 8.9 | 9.2  |
| 10       | 13.9 | 13.3 | 13.5  | 11.6 | 11.1 | 11.3  | 11.8 | 11.1 | 11.5 | 9.4 | 9.0 | 9.2  |
| 11       | 13.7 | 13.2 | 13.4  | 11.4 | 10.8 | 11.1  | 11.5 | 10.9 | 11.2 | 9.3 | 8.9 | 9.0  |
| 12       | 13.6 | 13.0 | 13.3  | 11.1 | 10.7 | 10.9  | 11.2 | 10.6 | 10.9 | 8.9 | 8.4 | 8.6  |
| 13       | 13.8 | 13.5 | 13.6  | 11.4 | 10.7 | 11.0  | 10.7 | 10.2 | 10.5 | 9.0 | 8.2 | 8.6  |
| 14       | 13.8 | 13.6 | 13.7  | 11.3 | 10.8 | 11.1  | 10.4 | 9.8  | 10.1 | 8.7 | 8.4 | 8.6  |
| 15       | 13.9 | 13.6 | 13.8  | 11.8 | 11.2 | 11.5  | 10.0 | 9.3  | 9.6  | 9.0 | 8.4 | 8.7  |
| 16       | 14.0 | 13.7 | 13.9  | 11.8 | 11.2 | 11.5  | 10.1 | 9.4  | 9.7  | 8.9 | 8.2 | 8.5  |
| 17       | 13.8 | 13.4 | 13.6  | 11.7 | 11.2 | 11.4  | 10.2 | 9.3  | 9.8  | 8.9 | 8.4 | 8.6  |
| 18       | 13.7 | 13.3 | 13.5  | 11.9 | 11.1 | 11.5  | 10.0 | 9.2  | 9.6  | 9.3 | 8.7 | 9.0  |
| 19       | 13.3 | 13.0 | 13.2  | 12.0 | 11.4 | 11.7  | 9.8  | 8.9  | 9.3  | 9.3 | 8.7 | 9.0  |
| 20       | 13.2 | 12.8 | 13.0  | 11.7 | 11.2 | 11.5  | 9.6  | 8.7  | 9.1  | 9.1 | 8.6 | 8.8  |
| 21       | 13.0 | 12.5 | 12.8  | 11.4 | 10.9 | 11.1  | 9.6  | 8.7  | 9.1  | 8.8 | 8.6 | 8.7  |
| 22       | 12.7 | 12.1 | 12.5  | 11.3 | 10.9 | 11.1  | 9.4  | 8.6  | 9.0  | 9.0 | 8.6 | 8.8  |
| 23       | 12.2 | 11.6 | 12.0  | 11.4 | 10.9 | 11.1  | 9.2  | 8.5  | 8.9  | 9.2 | 8.7 | 9.0  |
| 24       | 11.6 | 11.2 | 11.4  | 11.3 | 10.8 | 11.0  | 9.3  | 8.7  | 9.0  | 9.6 | 9.2 | 9.4  |
| 25       | 11.5 | 11.2 | 11.3  | 11.5 | 10.8 | 11.1  | 9.3  | 8.7  | 9.0  | 9.7 | 9.2 | 9.4  |
| 26       | 11.6 | 11.2 | 11.3  | 11.7 | 10.9 | 11.3  | 9.2  | 8.6  | 8.9  | 9.5 | 8.9 | 9.2  |
| 27       | 11.6 | 11.1 | 11.4  | 11.4 | 10.8 | 11.1  | 8.8  | 8.4  | 8.6  | 9.1 | 8.6 | 8.9  |
| 28       | 11.9 | 11.2 | 11.6  | 11.0 | 10.5 | 10.7  | 9.0  | 8.4  | 8.7  | 8.8 | 8.4 | 8.6  |
| 29       | ---  | ---  | ---   | 10.8 | 10.1 | 10.5  | 9.0  | 8.4  | 8.7  | 8.9 | 8.3 | 8.6  |
| 30       | ---  | ---  | ---   | 10.4 | 9.7  | 10.1  | 9.1  | 8.3  | 8.7  | 8.8 | 8.4 | 8.6  |
| 31       | ---  | ---  | ---   | 10.0 | 9.4  | 9.7   | ---  | ---  | ---  | 8.5 | 8.0 | 8.2  |
| MONTH    | 14.1 | 11.1 | 13.0  | 12.1 | 9.4  | 11.2  | 11.8 | 8.3  | 9.8  | 9.8 | 8.0 | 8.9  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 8.3 | 7.9 | 8.1  | 8.4 | 6.6 | 7.4    | 7.9 | 7.4 | 7.6       | 9.3 | 8.3 | 8.8  |
| 2     | 8.1 | 7.6 | 7.9  | 8.5 | 6.6 | 7.4    | 8.4 | 7.3 | 7.8       | 9.0 | 8.3 | 8.6  |
| 3     | 7.9 | 7.4 | 7.7  | 7.9 | 6.6 | 7.3    | 8.7 | 7.7 | 8.2       | 8.6 | 8.1 | 8.4  |
| 4     | 7.8 | 7.3 | 7.5  | 7.8 | 7.5 | 7.7    | 8.3 | 7.8 | 8.1       | 8.4 | 8.0 | 8.2  |
| 5     | 7.7 | 7.1 | 7.4  | 8.0 | 7.5 | 7.7    | 8.3 | 7.7 | 8.0       | 8.5 | 8.0 | 8.2  |
| 6     | 7.5 | 7.2 | 7.4  | 8.4 | 7.2 | 7.8    | 8.6 | 7.7 | 8.1       | 8.4 | 7.9 | 8.2  |
| 7     | 7.9 | 7.3 | 7.5  | 8.3 | 7.1 | 7.7    | 8.4 | 7.3 | 7.9       | 8.5 | 8.1 | 8.3  |
| 8     | 8.2 | 7.7 | 7.9  | 8.2 | 6.9 | 7.6    | 8.5 | 7.3 | 7.9       | 8.3 | 7.9 | 8.1  |
| 9     | 8.3 | 7.8 | 8.0  | 8.1 | 6.8 | 7.4    | 8.3 | 7.7 | 8.0       | 8.3 | 7.7 | 8.0  |
| 10    | 8.0 | 7.6 | 7.8  | 8.2 | 6.7 | 7.3    | 8.1 | 7.5 | 7.8       | 8.3 | 7.6 | 7.9  |
| 11    | 7.6 | 7.2 | 7.4  | 8.2 | 6.6 | 7.3    | 8.1 | 7.3 | 7.6       | 8.4 | 7.4 | 7.8  |
| 12    | 7.7 | 7.1 | 7.4  | 8.2 | 6.6 | 7.2    | 8.1 | 7.0 | 7.5       | 8.5 | 7.4 | 7.8  |
| 13    | 8.8 | 7.8 | 8.3  | 8.0 | 6.5 | 6.9    | 8.2 | 6.6 | 7.3       | 8.9 | 7.5 | 8.2  |
| 14    | 8.9 | 8.5 | 8.7  | 7.6 | 6.3 | 6.9    | 7.5 | 6.8 | 7.2       | 9.3 | 8.1 | 8.7  |
| 15    | 8.8 | 8.5 | 8.6  | 7.7 | 6.3 | 6.9    | 7.9 | 7.2 | 7.6       | 9.6 | 8.4 | 8.9  |
| 16    | 8.8 | 8.2 | 8.5  | 7.2 | 6.5 | 6.9    | 7.7 | 7.4 | 7.6       | 9.6 | 8.6 | 9.0  |
| 17    | 8.7 | 7.8 | 8.2  | 7.9 | 7.0 | 7.4    | 8.7 | 7.6 | 8.2       | 9.6 | 8.6 | 9.0  |
| 18    | 8.5 | 7.6 | 8.1  | 8.1 | 7.1 | 7.5    | 8.8 | 8.2 | 8.5       | 9.4 | 8.3 | 8.9  |
| 19    | 8.4 | 7.2 | 7.9  | 8.4 | 7.0 | 7.6    | 8.4 | 8.1 | 8.3       | 9.4 | 8.2 | 8.7  |
| 20    | 8.3 | 7.3 | 7.8  | 8.5 | 6.7 | 7.5    | 8.6 | 8.1 | 8.4       | 9.3 | 8.1 | 8.6  |
| 21    | 8.5 | 7.6 | 8.0  | 8.3 | 6.7 | 7.3    | 8.7 | 8.3 | 8.5       | 9.3 | 8.1 | 8.5  |
| 22    | 8.6 | 7.5 | 8.0  | 7.2 | 6.5 | 6.9    | 9.1 | 8.2 | 8.6       | 9.2 | 8.0 | 8.5  |
| 23    | 8.6 | 7.4 | 7.9  | 7.5 | 6.6 | 7.0    | 8.8 | 8.3 | 8.6       | 9.1 | 7.8 | 8.3  |
| 24    | 8.7 | 7.1 | 7.9  | 7.3 | 7.0 | 7.1    | 8.7 | 8.5 | 8.6       | 9.0 | 7.7 | 8.2  |
| 25    | 8.7 | 6.9 | 7.7  | 7.4 | 7.0 | 7.2    | 9.0 | 8.5 | 8.8       | 8.8 | 7.6 | 8.1  |
| 26    | 8.3 | 6.9 | 7.5  | 7.8 | 6.8 | 7.2    | 9.1 | 8.9 | 9.0       | 8.7 | 7.7 | 8.2  |
| 27    | 8.4 | 6.8 | 7.5  | 7.6 | 6.9 | 7.3    | 9.3 | 9.0 | 9.1       | 9.0 | 8.8 | 9.0  |
| 28    | 8.5 | 6.7 | 7.5  | 8.2 | 7.5 | 7.9    | 9.4 | 8.8 | 9.1       | 9.5 | 9.0 | 9.3  |
| 29    | 8.5 | 6.6 | 7.5  | 8.4 | 7.8 | 8.1    | 9.2 | 8.6 | 8.9       | 9.4 | 9.2 | 9.3  |
| 30    | 8.6 | 6.7 | 7.5  | 8.3 | 7.8 | 8.0    | 9.0 | 8.3 | 8.6       | 9.4 | 9.1 | 9.3  |
| 31    | --- | --- | ---  | 8.2 | 7.6 | 7.9    | 9.2 | 8.4 | 8.8       | --- | --- | ---  |
| MONTH | 8.9 | 6.6 | 7.8  | 8.5 | 6.3 | 7.4    | 9.4 | 6.6 | 8.2       | 9.6 | 7.4 | 8.5  |

## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN      | MAX | MIN      | MAX | MIN     | MAX | MIN      | MAX | MIN   | MAX | MIN |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |     |
| 1       | 6   | 4        | 4   | 1        | 20  | 10      | 100 | 10       | 70  | 25    | 4   | 3   |
| 2       | 6   | 4        | 4   | 2        | 15  | 9       | 100 | 25       | 40  | 20    | 4   | 2   |
| 3       | 6   | 4        | 7   | 4        | 10  | 8       | 20  | 15       | 25  | 20    | 6   | 2   |
| 4       | 5   | 2        | 7   | 6        | 15  | 8       | 20  | 15       | 20  | 15    | 3   | 0   |
| 5       | 4   | 2        | 7   | 6        | 15  | 10      | 20  | 15       | 20  | 15    | 3   | 0   |
| 6       | 3   | 1        | 8   | 6        | 15  | 10      | 15  | 15       | 20  | 15    | 7   | 2   |
| 7       | 3   | 1        | 9   | 6        | 15  | 15      | 15  | 10       | 20  | 15    | 7   | 5   |
| 8       | 65  | 1        | 10  | 8        | 15  | 10      | 15  | 10       | 15  | 15    | 9   | 4   |
| 9       | 8   | 3        | 10  | 7        | 15  | 9       | 15  | 10       | 15  | 15    | 8   | 6   |
| 10      | 6   | 3        | 10  | 6        | 9   | 6       | 15  | 10       | 15  | 10    | 10  | 6   |
| 11      | 3   | 2        | 35  | 10       | 8   | 6       | 15  | 10       | 25  | 10    | 9   | 4   |
| 12      | 3   | 1        | 25  | 15       | 7   | 5       | 15  | 10       | 30  | 20    | 6   | 3   |
| 13      | 3   | 1        | 20  | 15       | 6   | 3       | 15  | 15       | 20  | 15    | 10  | 3   |
| 14      | 2   | 1        | 20  | 15       | 4   | 2       | 15  | 15       | 15  | 15    | 6   | 4   |
| 15      | 3   | 1        | 15  | 0        | 6   | 1       | 15  | 15       | 15  | 15    | 8   | 5   |
| 16      | 3   | 0        | 6   | 4        | 4   | 2       | 15  | 15       | 15  | 15    | 7   | 5   |
| 17      | 3   | 0        | 5   | 3        | 3   | 1       | 15  | 15       | 15  | 10    | 7   | 5   |
| 18      | 1   | 0        | 15  | 0        | 5   | 1       | 15  | 10       | 15  | 10    | 7   | 5   |
| 19      | 40  | 0        | 95  | 30       | 3   | 2       | 15  | 10       | 10  | 10    | 7   | 4   |
| 20      | 120 | 4        | 30  | 3        | 4   | 3       | 15  | 10       | 15  | 9     | 6   | 3   |
| 21      | 45  | 25       | 2   | 0        | 7   | 4       | 20  | 20       | 10  | 8     | 6   | 3   |
| 22      | 25  | 20       | 3   | 0        | 9   | 5       | 20  | 15       | 8   | 5     | 6   | 4   |
| 23      | 40  | 20       | 4   | 1        | 10  | 9       | 15  | 15       | 6   | 3     | 7   | 5   |
| 24      | 65  | 20       | 5   | 1        | 35  | 8       | 15  | 10       | 6   | 3     | 10  | 6   |
| 25      | 15  | 8        | 7   | 4        | 50  | 20      | 15  | 10       | 5   | 3     | 9   | 7   |
| 26      | 15  | 9        | 7   | 4        | 40  | 15      | 15  | 10       | 5   | 3     | 9   | 6   |
| 27      | 95  | 3        | 8   | 3        | 15  | 9       | 15  | 15       | 4   | 2     | 6   | 4   |
| 28      | 5   | 3        | 55  | 7        | 10  | 5       | 15  | 15       | 6   | 2     | 6   | 2   |
| 29      | 4   | 1        | 35  | 15       | 6   | 4       | 15  | 10       | --- | ---   | 3   | 1   |
| 30      | 3   | 1        | 15  | 10       | 6   | 4       | 15  | 10       | --- | ---   | 2   | 0   |
| 31      | 3   | 1        | --- | ---      | 20  | 5       | 25  | 10       | --- | ---   | 3   | 0   |
| MONTH   | 120 | 0        | 95  | 0        | 50  | 1       | 100 | 10       | 70  | 2     | 10  | 0   |

| DAY   | MAX | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
| 1     | 6   | 2   | 3   | 1    | 2   | 0    | 1   | 0      | .9  | 0         | 25  | 20  |
| 2     | 9   | 5   | 75  | 0    | 3   | 0    | 3   | 0      | 6   | 1         | 30  | 10  |
| 3     | 7   | 3   | 85  | 10   | 5   | 0    | 3   | 0      | 6   | 3         | 15  | 9   |
| 4     | 4   | 1   | 10  | 6    | 3   | 0    | 15  | 1      | 6   | 4         | 10  | 7   |
| 5     | 8   | 0   | 8   | 5    | 70  | 0    | 7   | 2      | 6   | 1         | 10  | 8   |
| 6     | 6   | 3   | 7   | 4    | 10  | 1    | 20  | 0      | 2   | 0         | 10  | 9   |
| 7     | 9   | 6   | 15  | 4    | 45  | 3    | 3   | 0      | 2   | 0         | 10  | 7   |
| 8     | 10  | 7   | 7   | 6    | 4   | 2    | 3   | 0      | 3   | 1         | 10  | 5   |
| 9     | 9   | 7   | 7   | 4    | 3   | 0    | 2   | 0      | 2   | 0         | 7   | 5   |
| 10    | 9   | 6   | 7   | 5    | 2   | 0    | 4   | 0      | 2   | 0         | 9   | 6   |
| 11    | 6   | 3   | 6   | 4    | 9   | 0    | 5   | 2      | 6   | 1         | 9   | 7   |
| 12    | 5   | 1   | 5   | 4    | 10  | 7    | 4   | 0      | 8   | 5         | 10  | 8   |
| 13    | 3   | 0   | 25  | 6    | 15  | 4    | 55  | 0      | 8   | 0         | 15  | 9   |
| 14    | 2   | 0   | 80  | 15   | 4   | 0    | 3   | 0      | 170 | 0         | 15  | 10  |
| 15    | 3   | 0   | 45  | 15   | 3   | 0    | 6   | 0      | 10  | 1         | 15  | 15  |
| 16    | 3   | 1   | 15  | 7    | 2   | 0    | 3   | 0      | 9   | 5         | 15  | 15  |
| 17    | 6   | 2   | 10  | 6    | 2   | 0    | 4   | 0      | 210 | 9         | 15  | 15  |
| 18    | 6   | 2   | 10  | 7    | 2   | 0    | 3   | 1      | 60  | 20        | 15  | 2   |
| 19    | 6   | 2   | 9   | 4    | 3   | 0    | 3   | 0      | 15  | 6         | 6   | 2   |
| 20    | 4   | 1   | 20  | 4    | 3   | 0    | 3   | 1      | 6   | 5         | 5   | 2   |
| 21    | 3   | 1   | 130 | 10   | 3   | 0    | 140 | 1      | 6   | 3         | 5   | 3   |
| 22    | 3   | 0   | 30  | 15   | 3   | 0    | 30  | 0      | 6   | 3         | 7   | 3   |
| 23    | 3   | 0   | 30  | 15   | 5   | 0    | 40  | 8      | 6   | 3         | 15  | 6   |
| 24    | 2   | 0   | 15  | 10   | 2   | 0    | 50  | 10     | 10  | 3         | 15  | 10  |
| 25    | 2   | 0   | 15  | 8    | 3   | 0    | 45  | 20     | 100 | 10        | 25  | 4   |
| 26    | 3   | 0   | 9   | 6    | 3   | 1    | 25  | 15     | 230 | 60        | 210 | 4   |
| 27    | 3   | 0   | 9   | 5    | 3   | 0    | 65  | 15     | 85  | 50        | 200 | 50  |
| 28    | 1   | 0   | 6   | 4    | 3   | 0    | 25  | 6      | 45  | 20        | 90  | 40  |
| 29    | 2   | 0   | 6   | 2    | 3   | 0    | 6   | 2      | 20  | 15        | 50  | 25  |
| 30    | 3   | 0   | 4   | 1    | 3   | 0    | 5   | 1      | 25  | 15        | 240 | 25  |
| 31    | --- | --- | 3   | 1    | --- | ---  | 3   | 0      | 25  | 20        | --- | --- |
| MONTH | 10  | 0   | 130 | 0    | 70  | 0    | 140 | 0      | 230 | 0         | 240 | 2   |

## CUMBERLAND RIVER BASIN

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03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      |                                     | NOVEMBER                   |                                      |                                     | DECEMBER                   |                                      |                                     |
| 1       | 3.6                        | 4                                    | .04                                 | 159                        | 11                                   | 4.7                                 | 1070                       | 17                                   | 49                                  |
| 2       | 4.1                        | 6                                    | .07                                 | 155                        | 6                                    | 2.5                                 | 806                        | 13                                   | 28                                  |
| 3       | 4.7                        | 10                                   | .13                                 | 180                        | 11                                   | 5.3                                 | 654                        | 12                                   | 21                                  |
| 4       | 5.7                        | 2                                    | .03                                 | 168                        | 4                                    | 1.8                                 | 509                        | 10                                   | 14                                  |
| 5       | 5.8                        | 4                                    | .06                                 | 169                        | 7                                    | 3.2                                 | 421                        | 9                                    | 10                                  |
| 6       | 5.5                        | 5                                    | .07                                 | 174                        | 6                                    | 2.8                                 | 545                        | 12                                   | 18                                  |
| 7       | 5                          | 7                                    | .09                                 | 155                        | 3                                    | 1.3                                 | 530                        | 8                                    | 11                                  |
| 8       | 10                         | 4                                    | .11                                 | 133                        | 4                                    | 1.4                                 | 456                        | 11                                   | 14                                  |
| 9       | 36                         | 8                                    | .78                                 | 119                        | 3                                    | .96                                 | 421                        | 5                                    | 5.7                                 |
| 10      | 69                         | 6                                    | 1.1                                 | 143                        | 6                                    | 2.3                                 | 394                        | 7                                    | 7.4                                 |
| 11      | 36                         | 7                                    | .68                                 | 868                        | 24                                   | 62                                  | 365                        | 4                                    | 3.9                                 |
| 12      | 23                         | 3                                    | .19                                 | 632                        | 14                                   | 24                                  | 320                        | 4                                    | 3.5                                 |
| 13      | 31                         | 10                                   | .84                                 | 391                        | 8                                    | 8.4                                 | 293                        | 8                                    | 6.3                                 |
| 14      | 23                         | 8                                    | .50                                 | 284                        | 5                                    | 3.8                                 | 262                        | 4                                    | 2.8                                 |
| 15      | 17                         | 6                                    | .28                                 | 236                        | 8                                    | 5.1                                 | 229                        | 6                                    | 3.7                                 |
| 16      | 13                         | 9                                    | .32                                 | 319                        | 7                                    | 6.0                                 | 207                        | 7                                    | 3.9                                 |
| 17      | 12                         | 4                                    | .13                                 | 316                        | 5                                    | 4.3                                 | 196                        | 6                                    | 3.2                                 |
| 18      | 11                         | 5                                    | .15                                 | 297                        | 10                                   | 8.0                                 | 190                        | 6                                    | 3.1                                 |
| 19      | 11                         | 4                                    | .12                                 | 4410                       | 165                                  | 2140                                | 220                        | 4                                    | 2.4                                 |
| 20      | 493                        | 72                                   | 148                                 | 2230                       | 40                                   | 271                                 | 249                        | 2                                    | 1.3                                 |
| 21      | 413                        | 44                                   | 52                                  | 1110                       | 11                                   | 33                                  | 360                        | 3                                    | 2.9                                 |
| 22      | 293                        | 36                                   | 28                                  | 714                        | 6                                    | 12                                  | 614                        | 8                                    | 13                                  |
| 23      | 794                        | 59                                   | 309                                 | 518                        | 4                                    | 5.6                                 | 644                        | 4                                    | 7.0                                 |
| 24      | 2730                       | 119                                  | 1080                                | 407                        | 10                                   | 11                                  | 581                        | 5                                    | 7.8                                 |
| 25      | 884                        | 22                                   | 53                                  | 332                        | 12                                   | 11                                  | 1700                       | 59                                   | 297                                 |
| 26      | 454                        | 10                                   | 12                                  | 279                        | 18                                   | 14                                  | 1470                       | 25                                   | 104                                 |
| 27      | 288                        | 8                                    | 6.2                                 | 238                        | 6                                    | 3.9                                 | 995                        | 5                                    | 13                                  |
| 28      | 213                        | 8                                    | 4.6                                 | 2840                       | 71                                   | 705                                 | 730                        | 4                                    | 7.9                                 |
| 29      | 194                        | 8                                    | 4.2                                 | 2320                       | 31                                   | 207                                 | 575                        | 6                                    | 9.3                                 |
| 30      | 220                        | 7                                    | 4.2                                 | 1280                       | 23                                   | 79                                  | 494                        | 1                                    | 1.3                                 |
| 31      | 201                        | 8                                    | 4.3                                 | ---                        | ---                                  | ---                                 | 1280                       | 14                                   | 59                                  |
| TOTAL   | 7503.4                     | ---                                  | 1711.19                             | 21576                      | ---                                  | 3640.36                             | 17780                      | ---                                  | 734.4                               |
| JANUARY |                            |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
| 1       | 2140                       | 52                                   | 379                                 | 3310                       | 131                                  | 1310                                | 344                        | 7                                    | 6.5                                 |
| 2       | 3540                       | 106                                  | 1100                                | 2730                       | 44                                   | 358                                 | 325                        | 4                                    | 3.5                                 |
| 3       | 2060                       | 32                                   | 178                                 | 1370                       | 10                                   | 37                                  | 293                        | 6                                    | 4.7                                 |
| 4       | 2260                       | 19                                   | 116                                 | 912                        | 5                                    | 12                                  | 269                        | 7                                    | 5.1                                 |
| 5       | 1860                       | 16                                   | 80                                  | 893                        | 4                                    | 9.6                                 | 288                        | 7                                    | 5.4                                 |
| 6       | 1310                       | 11                                   | 39                                  | 1740                       | 21                                   | 99                                  | 291                        | 5                                    | 3.9                                 |
| 7       | 997                        | 12                                   | 32                                  | 1440                       | 6                                    | 23                                  | 240                        | 4                                    | 2.6                                 |
| 8       | 759                        | 7                                    | 14                                  | 990                        | 4                                    | 11                                  | 234                        | 3                                    | 1.9                                 |
| 9       | 588                        | 6                                    | 9.5                                 | 728                        | 7                                    | 14                                  | 502                        | 10                                   | 14                                  |
| 10      | 497                        | 5                                    | 6.7                                 | 651                        | 3                                    | 5.3                                 | 629                        | 5                                    | 8.5                                 |
| 11      | 483                        | 3                                    | 3.9                                 | 686                        | 5                                    | 9.3                                 | 549                        | 4                                    | 5.9                                 |
| 12      | 414                        | 5                                    | 5.6                                 | 1740                       | 19                                   | 89                                  | 521                        | 5                                    | 7.0                                 |
| 13      | 348                        | 8                                    | 7.5                                 | 1360                       | 8                                    | 29                                  | 452                        | 5                                    | 6.1                                 |
| 14      | 324                        | 3                                    | 2.6                                 | 991                        | 6                                    | 16                                  | 389                        | 6                                    | 6.3                                 |
| 15      | 305                        | 4                                    | 3.3                                 | 786                        | 9                                    | 19                                  | 352                        | 2                                    | 1.9                                 |
| 16      | 244                        | 4                                    | 2.6                                 | 579                        | 7                                    | 11                                  | 308                        | 2                                    | 1.7                                 |
| 17      | 301                        | 4                                    | 3.3                                 | 600                        | 8                                    | 13                                  | 282                        | 3                                    | 2.3                                 |
| 18      | 347                        | 4                                    | 3.7                                 | 581                        | 11                                   | 17                                  | 255                        | 2                                    | 1.4                                 |
| 19      | 329                        | 4                                    | 3.6                                 | 766                        | 8                                    | 17                                  | 224                        | 2                                    | 1.2                                 |
| 20      | 311                        | 5                                    | 4.2                                 | 995                        | 8                                    | 21                                  | 205                        | 5                                    | 2.8                                 |
| 21      | 300                        | 5                                    | 4.1                                 | 913                        | 7                                    | 17                                  | 195                        | 3                                    | 1.6                                 |
| 22      | 250                        | 4                                    | 2.7                                 | 802                        | 7                                    | 15                                  | 226                        | 4                                    | 2.4                                 |
| 23      | 200                        | 9                                    | 4.9                                 | 716                        | 8                                    | 15                                  | 288                        | 3                                    | 2.3                                 |
| 24      | 200                        | 7                                    | 3.8                                 | 639                        | 8                                    | 14                                  | 353                        | 3                                    | 2.9                                 |
| 25      | 200                        | 4                                    | 2.2                                 | 559                        | 8                                    | 12                                  | 463                        | 3                                    | 3.8                                 |
| 26      | 200                        | 9                                    | 4.9                                 | 516                        | 12                                   | 17                                  | 414                        | 2                                    | 2.2                                 |
| 27      | 200                        | 16                                   | 8.6                                 | 459                        | 8                                    | 9.9                                 | 376                        | 2                                    | 2.0                                 |
| 28      | 207                        | 5                                    | 2.8                                 | 383                        | 9                                    | 9.3                                 | 356                        | 20                                   | 19                                  |
| 29      | 205                        | 5                                    | 2.8                                 | ---                        | ---                                  | ---                                 | 335                        | 3                                    | 2.7                                 |
| 30      | 194                        | 1                                    | .52                                 | ---                        | ---                                  | ---                                 | 301                        | 1                                    | .81                                 |
| 31      | 546                        | 8                                    | 17                                  | ---                        | ---                                  | ---                                 | 323                        | 6                                    | 5.2                                 |
| TOTAL   | 22119                      | ---                                  | 2048.82                             | 28835                      | ---                                  | 2229.4                              | 10582                      | ---                                  | 137.61                              |



## CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 575                        | 7                                    | 11                                  | 103                        | 5                                    | 1.4                                 | 68                         | 10                                   | 1.8                                 |
| 2     | 476                        | 5                                    | 6.4                                 | 154                        | 28                                   | 23                                  | 59                         | 9                                    | 1.4                                 |
| 3     | 412                        | 6                                    | 6.7                                 | 321                        | 47                                   | 40                                  | 70                         | 11                                   | 2.1                                 |
| 4     | 361                        | 5                                    | 4.9                                 | 287                        | 9                                    | 7.0                                 | 65                         | 8                                    | 1.4                                 |
| 5     | 320                        | 6                                    | 5.2                                 | 198                        | 10                                   | 5.3                                 | 59                         | 35                                   | 5.6                                 |
| 6     | 431                        | 6                                    | 7.0                                 | 157                        | 6                                    | 2.5                                 | 67                         | 13                                   | 2.4                                 |
| 7     | 411                        | 10                                   | 11                                  | 147                        | 10                                   | 4.0                                 | 99                         | 12                                   | 3.2                                 |
| 8     | 399                        | 4                                    | 4.3                                 | 140                        | 6                                    | 2.3                                 | 98                         | 8                                    | 2.1                                 |
| 9     | 368                        | 4                                    | 4.0                                 | 130                        | 6                                    | 2.1                                 | 107                        | 12                                   | 3.5                                 |
| 10    | 327                        | 4                                    | 3.5                                 | 114                        | 5                                    | 1.5                                 | 79                         | 8                                    | 1.7                                 |
| 11    | 297                        | 3                                    | 2.4                                 | 105                        | 12                                   | 3.4                                 | 72                         | 12                                   | 2.3                                 |
| 12    | 267                        | 3                                    | 2.2                                 | 112                        | 10                                   | 3.0                                 | 89                         | 12                                   | 2.9                                 |
| 13    | 242                        | 3                                    | 2.0                                 | 319                        | 32                                   | 28                                  | 105                        | 12                                   | 3.4                                 |
| 14    | 228                        | 6                                    | 3.7                                 | 388                        | 39                                   | 40                                  | 85                         | 8                                    | 1.8                                 |
| 15    | 292                        | 5                                    | 3.9                                 | 254                        | 29                                   | 20                                  | 63                         | 5                                    | .85                                 |
| 16    | 605                        | 6                                    | 9.8                                 | 168                        | 19                                   | 8.6                                 | 49                         | 6                                    | .79                                 |
| 17    | 486                        | 5                                    | 6.6                                 | 144                        | 8                                    | 3.1                                 | 40                         | 6                                    | .65                                 |
| 18    | 401                        | 8                                    | 8.7                                 | 164                        | 12                                   | 5.3                                 | 36                         | 4                                    | .39                                 |
| 19    | 341                        | 7                                    | 6.4                                 | 145                        | 11                                   | 4.3                                 | 35                         | 7                                    | .66                                 |
| 20    | 296                        | 8                                    | 6.4                                 | 125                        | 7                                    | 2.4                                 | 37                         | 9                                    | .90                                 |
| 21    | 258                        | 6                                    | 4.2                                 | 266                        | 22                                   | 16                                  | 34                         | 11                                   | 1.0                                 |
| 22    | 222                        | 7                                    | 4.2                                 | 243                        | 33                                   | 22                                  | 29                         | 13                                   | 1.0                                 |
| 23    | 193                        | 6                                    | 3.1                                 | 367                        | 26                                   | 26                                  | 24                         | 12                                   | .78                                 |
| 24    | 175                        | 9                                    | 4.3                                 | 337                        | 13                                   | 12                                  | 21                         | 16                                   | .91                                 |
| 25    | 163                        | 9                                    | 4.0                                 | 312                        | 9                                    | 7.6                                 | 18                         | 14                                   | .68                                 |
| 26    | 144                        | 6                                    | 2.3                                 | 232                        | 8                                    | 5.0                                 | 23                         | 9                                    | .56                                 |
| 27    | 134                        | 7                                    | 2.5                                 | 163                        | 8                                    | 3.5                                 | 21                         | 8                                    | .45                                 |
| 28    | 140                        | 6                                    | 2.3                                 | 125                        | 8                                    | 2.7                                 | 18                         | 14                                   | .68                                 |
| 29    | 136                        | 5                                    | 1.8                                 | 107                        | 5                                    | 1.4                                 | 14                         | 8                                    | .30                                 |
| 30    | 118                        | 4                                    | 1.3                                 | 93                         | 6                                    | 1.5                                 | 14                         | 8                                    | .30                                 |
| 31    | ---                        | ---                                  | ---                                 | 80                         | 7                                    | 1.5                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 9218                       | ---                                  | 146.1                               | 6000                       | ---                                  | 306.4                               | 1598                       | ---                                  | 46.50                               |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 13                         | 7                                    | .25                                 | 61                         | 7                                    | 1.2                                 | 232                        | 8                                    | 5.0                                 |
| 2     | 13                         | 7                                    | .25                                 | 208                        | 10                                   | 6.4                                 | 154                        | 9                                    | 3.7                                 |
| 3     | 59                         | 8                                    | 1.3                                 | 157                        | 10                                   | 4.2                                 | 112                        | 5                                    | 1.5                                 |
| 4     | 62                         | 10                                   | 1.7                                 | 92                         | 8                                    | 2.0                                 | 88                         | 4                                    | .95                                 |
| 5     | 43                         | 5                                    | .58                                 | 60                         | 6                                    | .97                                 | 74                         | 4                                    | .80                                 |
| 6     | 27                         | 8                                    | .58                                 | 44                         | 5                                    | .59                                 | 93                         | 4                                    | 1.0                                 |
| 7     | 21                         | 11                                   | .62                                 | 37                         | 5                                    | .50                                 | 85                         | 3                                    | .69                                 |
| 8     | 17                         | 10                                   | .46                                 | 39                         | 6                                    | .63                                 | 69                         | 2                                    | .37                                 |
| 9     | 15                         | 5                                    | .20                                 | 47                         | 5                                    | .63                                 | 56                         | 2                                    | .30                                 |
| 10    | 14                         | 4                                    | .15                                 | 45                         | 4                                    | .49                                 | 49                         | 4                                    | .53                                 |
| 11    | 14                         | 3                                    | .11                                 | 36                         | 6                                    | .58                                 | 43                         | 2                                    | .23                                 |
| 12    | 13                         | 2                                    | .07                                 | 29                         | 6                                    | .47                                 | 38                         | 3                                    | .31                                 |
| 13    | 14                         | 22                                   | .83                                 | 24                         | 7                                    | .45                                 | 36                         | 2                                    | .19                                 |
| 14    | 15                         | 4                                    | .16                                 | 154                        | 14                                   | 8.5                                 | 32                         | 2                                    | .17                                 |
| 15    | 15                         | 6                                    | .24                                 | 212                        | 15                                   | 8.6                                 | 27                         | 2                                    | .15                                 |
| 16    | 39                         | 10                                   | 1.1                                 | 105                        | 8                                    | 2.3                                 | 24                         | 1                                    | .06                                 |
| 17    | 27                         | 7                                    | .51                                 | 2240                       | 155                                  | 1420                                | 21                         | 1                                    | .06                                 |
| 18    | 23                         | 5                                    | .31                                 | 2050                       | 72                                   | 453                                 | 19                         | 6                                    | .31                                 |
| 19    | 16                         | 4                                    | .17                                 | 704                        | 21                                   | 41                                  | 18                         | 1                                    | .05                                 |
| 20    | 12                         | 2                                    | .06                                 | 385                        | 14                                   | 15                                  | 17                         | 1                                    | .05                                 |
| 21    | 11                         | 5                                    | .15                                 | 293                        | 14                                   | 11                                  | 15                         | 1                                    | .04                                 |
| 22    | 34                         | 10                                   | .91                                 | 237                        | 17                                   | 11                                  | 14                         | 2                                    | .08                                 |
| 23    | 124                        | 30                                   | 10                                  | 158                        | 5                                    | 2.1                                 | 14                         | 1                                    | .04                                 |
| 24    | 71                         | 25                                   | 4.8                                 | 165                        | 7                                    | 3.3                                 | 14                         | 2                                    | .08                                 |
| 25    | 41                         | 23                                   | 2.5                                 | 488                        | 39                                   | 60                                  | 14                         | 1                                    | .04                                 |
| 26    | 38                         | 15                                   | 1.5                                 | 1870                       | 130                                  | 694                                 | 99                         | 24                                   | 13                                  |
| 27    | 93                         | 25                                   | 6.2                                 | 781                        | 29                                   | 64                                  | 439                        | 54                                   | 64                                  |
| 28    | 184                        | 23                                   | 12                                  | 420                        | 12                                   | 14                                  | 171                        | 18                                   | 8.3                                 |
| 29    | 124                        | 11                                   | 3.7                                 | 267                        | 6                                    | 4.3                                 | 98                         | 10                                   | 2.6                                 |
| 30    | 75                         | 9                                    | 1.8                                 | 196                        | 8                                    | 4.2                                 | 68                         | 7                                    | 1.3                                 |
| 31    | 59                         | 10                                   | 1.6                                 | 248                        | 8                                    | 5.4                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 1326                       | ---                                  | 54.81                               | 11852                      | ---                                  | 2840.81                             | 2233                       | ---                                  | 105.90                              |

TOTAL LOAD FOR YEAR: 14002.30

## CUMBERLAND RIVER BASIN

81

03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN

LOCATION.--Lat 36°28'38", long 84°40'09", Scott County, Hydrologic Unit 05130104, on left bank at bridge on State Route 297, 1.0 mile above Anderson Branch, 1.3 miles below North White Oak Creek, 10.1 miles southwest of Oneida, and at mile 70.1.

DRAINAGE AREA.--806 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Occasional discharge measurements, water years 1961-62, 1979-80.

GAGE.--Water stage recorder. Datum of gage is 862.79 ft, Sandy Hook datum.

REMARKS.--Estimated daily discharges: Jan. 21-27 and Sept. 6-30. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,100 ft<sup>3</sup>/s May 7, 1984, gage height, 31.22 ft; minimum discharge, 19 ft<sup>3</sup>/s Sept. 23-26, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) |
|---|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Nov. 19   | 1500 | *20,900                        | *19.22           | No other peak greater than base discharge. |      |                                |                  |
| Minimum discharge, 24 ft <sup>3</sup> /s, Oct. 1-3. |      |                                |                  |  |      |                                |                  |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL   | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| 1           | 27    | 323    | 2560  | 4790  | 10700 | 1200  | 1820  | 339   | 217  | 82    | 1160  | 938  |       |
| 2           | 24    | 313    | 1920  | 7590  | 8690  | 1130  | 1660  | 495   | 192  | 80    | 2220  | 606  |       |
| 3           | 24    | 347    | 1590  | 4670  | 3970  | 1040  | 1430  | 1340  | 233  | 158   | 1010  | 439  |       |
| 4           | 26    | 364    | 1300  | 5460  | 2750  | 936   | 1250  | 1110  | 267  | 197   | 583   | 343  |       |
| 5           | 27    | 356    | 1100  | 4720  | 2640  | 970   | 1110  | 731   | 221  | 163   | 388   | 342  |       |
| 6           | 29    | 360    | 1300  | 3500  | 5330  | 963   | 2390  | 562   | 303  | 151   | 294   | 316  |       |
| 7           | 31    | 338    | 1400  | 2720  | 4230  | 797   | 2340  | 504   | 476  | 127   | 264   | 330  |       |
| 8           | 85    | 323    | 1220  | 2050  | 3010  | 756   | 1810  | 502   | 805  | 115   | 330   | 600  |       |
| 9           | 185   | 290    | 1170  | 1620  | 2200  | 1420  | 1520  | 429   | 623  | 98    | 310   | 400  |       |
| 10          | 304   | 340    | 1110  | 1370  | 1910  | 1890  | 1300  | 368   | 392  | 88    | 264   | 270  |       |
| 11          | 167   | 2460   | 1060  | 1330  | 1830  | 1680  | 1160  | 336   | 355  | 121   | 209   | 230  |       |
| 12          | 114   | 2050   | 932   | 1180  | 4120  | 1610  | 1050  | 504   | 912  | 471   | 176   | 200  |       |
| 13          | 93    | 1200   | 846   | 1030  | 3650  | 1450  | 934   | 1280  | 1020 | 233   | 158   | 180  |       |
| 14          | 89    | 842    | 754   | 950   | 2780  | 1270  | 874   | 1180  | 615  | 322   | 159   | 160  |       |
| 15          | 70    | 648    | 658   | 902   | 2200  | 1160  | 999   | 730   | 407  | 264   | 373   | 135  |       |
| 16          | 52    | 752    | 586   | 708   | 1700  | 1040  | 2220  | 487   | 309  | 457   | 274   | 120  |       |
| 17          | 54    | 864    | 548   | 824   | 1670  | 950   | 1930  | 438   | 256  | 325   | 5270  | 110  |       |
| 18          | 49    | 733    | 532   | 982   | 1640  | 854   | 1560  | 559   | 253  | 218   | 6850  | 100  |       |
| 19          | 56    | 11900  | 620   | 916   | 2160  | 747   | 1310  | 505   | 303  | 164   | 2370  | 95   |       |
| 20          | 742   | 6040   | 713   | 819   | 3150  | 674   | 1140  | 389   | 272  | 129   | 1330  | 90   |       |
| 21          | 937   | 2870   | 1030  | 660   | 3000  | 645   | 982   | 457   | 213  | 112   | 1470  | 85   |       |
| 22          | 563   | 1790   | 1880  | 640   | 2680  | 710   | 829   | 513   | 176  | 190   | 1020  | 80   |       |
| 23          | 1410  | 1320   | 2280  | 630   | 2520  | 860   | 706   | 841   | 152  | 334   | 663   | 75   |       |
| 24          | 4940  | 1080   | 1870  | 620   | 2230  | 1050  | 624   | 895   | 137  | 272   | 557   | 75   |       |
| 25          | 1810  | 893    | 4360  | 600   | 1880  | 1410  | 571   | 960   | 127  | 187   | 1790  | 80   |       |
| 26          | 980   | 742    | 3970  | 580   | 1700  | 1340  | 501   | 744   | 119  | 418   | 3980  | 130  |       |
| 27          | 617   | 634    | 2860  | 550   | 1530  | 1250  | 455   | 527   | 118  | 3150  | 2680  | 750  |       |
| 28          | 453   | 5590   | 2030  | 578   | 1320  | 1200  | 477   | 396   | 112  | 2090  | 1460  | 500  |       |
| 29          | 408   | 5680   | 1610  | 580   | ---   | 1140  | 459   | 337   | 97   | 968   | 969   | 320  |       |
| 30          | 423   | 3200   | 1380  | 549   | ---   | 1030  | 399   | 291   | 89   | 587   | 684   | 220  |       |
| 31          | 399   | ---    | 2710  | 1330  | ---   | 1050  | ---   | 249   | ---  | 556   | 1100  | ---  |       |
| TOTAL       | 15188 | 54642  | 47899 | 55448 | 87190 | 34222 | 35810 | 18998 | 9771 | 12827 | 40365 | 8319 |       |
| MEAN        | 490   | 1821   | 1545  | 1789  | 3114  | 1104  | 1194  | 613   | 326  | 414   | 1302  | 277  |       |
| MAX         | 4940  | 11900  | 4360  | 7590  | 10700 | 1890  | 2390  | 1340  | 1020 | 3150  | 6850  | 938  |       |
| MIN         | 24    | 290    | 532   | 549   | 1320  | 645   | 399   | 249   | 89   | 80    | 158   | 75   |       |
| CFSM        | .61   | 2.26   | 1.92  | 2.22  | 3.86  | 1.37  | 1.48  | .76   | .40  | .51   | 1.62  | .34  |       |
| IN.         | .70   | 2.52   | 2.21  | 2.56  | 4.02  | 1.58  | 1.65  | .88   | .45  | .59   | 1.86  | .38  |       |
| CAL YR 1984 | TOTAL | 635280 |       | MEAN  | 1736  | MAX   | 49300 | MIN   | 20   | CFSM  | 2.15  | IN.  | 29.32 |
| WTR YR 1985 | TOTAL | 420679 |       | MEAN  | 1153  | MAX   | 11900 | MIN   | 24   | CFSM  | 1.43  | IN.  | 19.42 |

## CUMBERLAND RIVER BASIN

03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to July 1980, February 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | SEDI-<br>MENT,<br>SUS-<br>PENDED<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDED<br>(T/DAY) |
|-------|------|---|---|--------------------------------|-----------------------------|-------------------------------------|--|--|
| OCT   |      |   |   |                                |                             |                                     |  |  |
| 05... | 0915 | 25  | 212   | 7.3                            | 15.5                        | 9.1                                 | 5  | .34  |
| 10... | 1320 | 298   | 358   | 6.9                            | 18.0                        | 9.3                                 | 19   | 15   |
| 15... | 1200 | 66  | 305   | 7.1                            | 19.0                        | 9.0                                 | 5  | .89  |
| 24... | 1410 | 4500  | 160   | 6.7                            | 16.5                        | 9.6                                 | 190  | 2310   |
| 31... | 1050 | 415   | 145   | 6.8                            | 17.5                        | 9.4                                 | 5  | 5.6  |
| NOV   |      |   |   |                                |                             |                                     |  |  |
| 06... | 1500 | 366   | 172   | 7.6                            | 14.0                        | 11.0                                | 2  | 2.0  |
| 14... | 1315 | 795   | 141   | 7.3                            | 7.0                         | 12.1                                | 7  | 15   |
| 27... | 1430 | 707   | 140   | 7.6                            | 6.5                         | 12.5                                | 2  | 3.8  |
| DEC   |      |   |   |                                |                             |                                     |  |  |
| 03... | 1130 | 1600  | 120   | 7.5                            | 7.0                         | 11.8                                | 6  | 26   |
| 12... | 1000 | 938   | 135   | 7.4                            | 5.5                         | 12.4                                | 1  | 2.5  |
| 18... | 1045 | 538   | 155   | 7.5                            | 11.0                        | 11.0                                | 2  | 2.9  |
| JAN   |      |   |   |                                |                             |                                     |  |  |
| 02... | 0915 | 8730  | 82  | 7.0                            | 11.0                        | 10.8                                | 124  | 2920   |
| 09... | 1230 | 1560  | 114   | 7.3                            | 4.0                         | 13.0                                | 3  | 13   |
| 15... | 1030 | 886   | 134   | 7.1                            | 1.0                         | 14.3                                | 2  | 4.8  |
| 24... | 1115 | 620   | 140   | 7.3                            | .0                          | 14.3                                | 12   | 23   |
| 30... | 1045 | 543   | 150   | 7.3                            | .0                          | 14.4                                | 40   | 59   |
| FEB   |      |   |   |                                |                             |                                     |  |  |
| 11... | 1530 | 1770  | 112   | 7.0                            | 2.0                         | 13.5                                | 4  | 19   |
| 20... | 1200 | 3230  | 120   | 7.2                            | 3.0                         | 13.7                                | 12   | 105  |
| 28... | 1115 | 1300  | 142   | 7.3                            | 8.0                         | 11.8                                | 5  | 18   |
| MAR   |      |   |   |                                |                             |                                     |  |  |
| 05... | 1445 | 968   | 143   | 7.5                            | 10.0                        | 11.4                                | 2  | 5.2  |
| 14... | 1000 | 1280  | 122   | 7.3                            | 9.5                         | 11.6                                | 3  | 10   |
| 18... | 1045 | 864   | 132   | 7.4                            | 8.5                         | 11.4                                | 9  | 21   |
| 25... | 1130 | 1410  | 145   | 7.5                            | 9.0                         | 11.7                                | 6  | 23   |
| APR   |      |   |   |                                |                             |                                     |  |  |
| 05... | 1230 | 1080  | 125   | 7.5                            | 13.5                        | 10.2                                | 3  | 8.7  |
| 12... | 1345 | 1030  | 120   | 7.2                            | 14.0                        | 11.6                                | 3  | 8.3  |
| 16... | 1400 | 2290  | 155   | 7.4                            | 14.5                        | 11.0                                | 21   | 130  |
| 23... | 1315 | 701   | 135   | 7.5                            | 19.0                        | 9.4                                 | 3  | 5.7  |
| MAY   |      |   |   |                                |                             |                                     |  |  |
| 02... | 1315 | 352   | 170   | 7.3                            | 19.5                        | 9.0                                 | 1  | .95  |
| 06... | 1430 | 543   | 144   | 7.5                            | 18.0                        | 9.6                                 | 5  | 7.3  |
| 14... | 1430 | 1150  | 92  | 7.2                            | 19.0                        | 9.2                                 | 22   | 68   |
| 21... | 1320 | 496   | 150   | 7.3                            | 19.5                        | 9.0                                 | 3  | 4.0  |
| 28... | 1315 | 385   | 140   | 7.5                            | 20.0                        | 8.8                                 | 3  | 3.1  |
| JUN   |      |   |   |                                |                             |                                     |  |  |
| 05... | 1330 | 210   | 190   | 7.6                            | 26.5                        | 7.8                                 | 4  | 2.3  |
| 19... | 1600 | 346   | 115   | 7.8                            | 23.5                        | 9.0                                 | 7  | 6.5  |
| 25... | 1500 | 126   | 193   | 7.7                            | 25.5                        | 8.3                                 | 2  | .79  |
| JUL   |      |   |   |                                |                             |                                     |  |  |
| 09... | 1200 | 98  | 255   | 7.6                            | 26.0                        | 8.0                                 | 32   | 8.5  |
| 17... | 1000 | 339   | 240   | 7.5                            | 25.0                        | 7.9                                 | 85   | 78   |
| 25... | 0930 | 193   | 210   | 7.5                            | 26.0                        | 7.6                                 | 11   | 5.7  |
| 30... | 1030 | 604   | 152   | 7.2                            | 23.0                        | 7.9                                 | 54   | 88   |
| AUG   |      |   |   |                                |                             |                                     |  |  |
| 05... | 1130 | 392   | 157   | 7.5                            | 23.0                        | 8.2                                 | 31   | 33   |
| 16... | 1400 | 271   | 130   | 7.8                            | 26.5                        | 8.0                                 | 8  | 5.9  |
| 23... | 1515 | 620   | 150   | 7.7                            | 23.0                        | 8.6                                 | 11   | 18   |
| 27... | 1230 | 2480  | 130   | 7.5                            | 21.5                        | 9.2                                 | 202  | 1350   |
| SEP   |      |   |   |                                |                             |                                     |  |  |
| 06... | 1330 | 316   | 155   | 7.5                            | 23.5                        | 8.2                                 | 8  | 6.2  |
| 17... | 1400 | 110   | 174   | --                             | 20.5                        | 8.8                                 | --   | --   |

## CUMBERLAND RIVER BASIN

83

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY

LOCATION.--Lat 36°37'37", long 84°32'00", McCreary County, Hydrologic Unit 05130104, on right bank 1,000 ft below confluence of Bear Creek, 400 ft upstream from Salt Branch, 5.5 mi southwest of Stearns, and at mile 49.6. Records include flow of Bear Creek.

DRAINAGE AREA.--954 mi<sup>2</sup>, includes that of Bear Creek.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1942 to current year.

REVISED RECORDS.--WSP 1113: 1946(M). WSP 1436: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 763.83 ft above National Geodetic Vertical Datum of 1929; prior to Oct. 1, 1980 at site 1,000 ft upstream at datum 0.98 ft higher.

REMARKS.--Estimated daily discharges: Jan. 13, 14, 24, and 26-31. Records good.

AVERAGE DISCHARGE.--43 years, 1,781 ft<sup>3</sup>/s, 25.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,200 ft<sup>3</sup>/s May 28, 1973, gage height, 46.29 ft present datum, from floodmarks; minimum discharge, 11 ft<sup>3</sup>/s Oct. 4, 1948, Sept. 17, 18, 19, 20, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1929, reached a stage of 52.9 ft from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 22,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 1900 | *22,000                           | *20.56              |      |      |                                   |                     |

Minimum discharge, 34 ft<sup>3</sup>/s Oct. 1, 6, gage height, 0.99 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1           | 37    | 430    | 2910  | 5150  | 9440  | 1350  | 1910  | 434   | 291   | 93    | 1640  | 1160 |       |
| 2           | 41    | 393    | 2300  | 9270  | 11200 | 1250  | 2000  | 540   | 259   | 90    | 2760  | 764  |       |
| 3           | 40    | 410    | 1890  | 5990  | 4980  | 1140  | 1700  | 1760  | 280   | 95    | 1380  | 560  |       |
| 4           | 40    | 439    | 1560  | 6290  | 3160  | 1030  | 1470  | 1510  | 316   | 196   | 804   | 452  |       |
| 5           | 37    | 439    | 1290  | 6070  | 2760  | 1050  | 1260  | 1000  | 299   | 190   | 543   | 460  |       |
| 6           | 35    | 432    | 1390  | 4310  | 5500  | 1060  | 2000  | 756   | 284   | 172   | 403   | 391  |       |
| 7           | 35    | 414    | 1620  | 3260  | 5170  | 917   | 2700  | 732   | 517   | 157   | 331   | 410  |       |
| 8           | 67    | 374    | 1400  | 2560  | 3480  | 861   | 2040  | 735   | 651   | 128   | 364   | 692  |       |
| 9           | 169   | 344    | 1340  | 2030  | 2570  | 1390  | 1740  | 623   | 818   | 116   | 376   | 419  |       |
| 10          | 321   | 408    | 1270  | 1690  | 2210  | 2240  | 1470  | 525   | 527   | 102   | 336   | 315  |       |
| 11          | 246   | 1940   | 1200  | 1550  | 2080  | 2020  | 1280  | 477   | 460   | 88    | 263   | 259  |       |
| 12          | 151   | 2500   | 1080  | 1390  | 4320  | 1890  | 1150  | 788   | 821   | 327   | 212   | 233  |       |
| 13          | 113   | 1420   | 980   | 1200  | 4450  | 1740  | 1020  | 1900  | 1150  | 313   | 189   | 215  |       |
| 14          | 94    | 970    | 889   | 1100  | 3250  | 1490  | 951   | 1760  | 813   | 328   | 168   | 179  |       |
| 15          | 89    | 775    | 796   | 1030  | 2610  | 1340  | 997   | 1120  | 550   | 286   | 303   | 156  |       |
| 16          | 76    | 790    | 725   | 876   | 2090  | 1180  | 2020  | 752   | 416   | 460   | 374   | 142  |       |
| 17          | 70    | 926    | 681   | 922   | 1940  | 1060  | 2150  | 661   | 334   | 423   | 3060  | 128  |       |
| 18          | 66    | 947    | 670   | 1060  | 1880  | 970   | 1770  | 754   | 320   | 279   | 9400  | 119  |       |
| 19          | 66    | 13000  | 762   | 1050  | 2280  | 866   | 1460  | 719   | 309   | 200   | 3030  | 112  |       |
| 20          | 497   | 8500   | 976   | 953   | 3330  | 785   | 1240  | 573   | 362   | 151   | 1760  | 106  |       |
| 21          | 1370  | 3460   | 1240  | 798   | 3360  | 743   | 1070  | 538   | 277   | 125   | 1870  | 100  |       |
| 22          | 787   | 2210   | 2080  | 835   | 3120  | 796   | 927   | 651   | 219   | 145   | 1370  | 94   |       |
| 23          | 1010  | 1630   | 2700  | 925   | 2960  | 926   | 802   | 932   | 189   | 271   | 891   | 88   |       |
| 24          | 5420  | 1260   | 2300  | 880   | 2660  | 1070  | 718   | 1080  | 167   | 359   | 729   | 89   |       |
| 25          | 2390  | 1050   | 4180  | 865   | 2260  | 1540  | 667   | 1200  | 150   | 257   | 1550  | 94   |       |
| 26          | 1220  | 898    | 5020  | 800   | 1970  | 1560  | 597   | 1010  | 139   | 246   | 3750  | 155  |       |
| 27          | 791   | 787    | 3370  | 750   | 1810  | 1450  | 537   | 745   | 133   | 3300  | 3300  | 822  |       |
| 28          | 595   | 4990   | 2510  | 700   | 1530  | 1360  | 551   | 565   | 130   | 3180  | 1790  | 612  |       |
| 29          | 513   | 7440   | 2010  | 670   | ---   | 1280  | 548   | 472   | 117   | 1300  | 1150  | 366  |       |
| 30          | 535   | 3800   | 1700  | 650   | ---   | 1160  | 492   | 402   | 102   | 765   | 842   | 249  |       |
| 31          | 509   | ---    | 2440  | 1500  | ---   | 1170  | ---   | 336   | ---   | 558   | 1080  | ---  |       |
| TOTAL       | 17430 | 63376  | 55279 | 67124 | 98370 | 38684 | 39237 | 26050 | 11400 | 14700 | 46018 | 9941 |       |
| MEAN        | 562   | 2113   | 1783  | 2165  | 3513  | 1248  | 1308  | 840   | 380   | 474   | 1484  | 331  |       |
| MAX         | 5420  | 13000  | 5020  | 9270  | 11200 | 2240  | 2700  | 1900  | 1150  | 3300  | 9400  | 1160 |       |
| MIN         | 35    | 344    | 670   | 650   | 1530  | 743   | 492   | 336   | 102   | 88    | 168   | 88   |       |
| CFSM        | .59   | 2.21   | 1.87  | 2.27  | 3.68  | 1.31  | 1.37  | .88   | .40   | .50   | 1.56  | .35  |       |
| IN.         | .68   | 2.47   | 2.16  | 2.62  | 3.84  | 1.51  | 1.53  | 1.02  | .44   | .57   | 1.79  | .39  |       |
| CAL YR 1984 | TOTAL | 734843 |       | MEAN  | 2008  | MAX   | 53800 | MIN   | 27    | CFSM  | 2.10  | IN.  | 28.65 |
| WTR YR 1985 | TOTAL | 487609 |       | MEAN  | 1336  | MAX   | 13000 | MIN   | 35    | CFSM  | 1.40  | IN.  | 19.01 |



## CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-72, 1979 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1980 to current year.

pH: May 1980 to current year.

WATER TEMPERATURE: May 1980 to current year.

DISSOLVED OXYGEN: May 1980 to current year.

TURBIDITY: May 1980 to current year.

SUSPENDED SEDIMENT DISCHARGE: May 1980 to current year.

INSTRUMENTATION.--Five parameter water quality monitor and sediment pumping sampler since May 1980.

REMARKS.--Miscellaneous samples prior to 1979. Interruptions in daily record were due to malfunctions of the instruments.

## EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 434 microsiemens, July 17, 1985; minimum, 40 microsiemens, May 7, 1984.

pH: Maximum, 7.9 units, June 13, 1984, Sept. 17-21, 1985; minimum, 5.2 units, May 19, Nov. 24, 1980.

WATER TEMPERATURE: Maximum, 33.0°C, July 17, 1980; minimum, 0.0°C, Dec. 25-27, 1983.

DISSOLVED OXYGEN: Maximum, 14.3 mg/L, Dec. 21, 1981, Jan. 1, 2, 1984; minimum, 4.5 mg/L, May 22, 1980, Aug. 17, 1985.

TURBIDITY: Maximum, &gt;1,000 JTU, Aug. 1, 1982; minimum, 0 JTU, many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,980 mg/L, Aug. 9, 1981; minimum daily mean, 1 mg/L, Jan. 29, 31, 1983, Feb. 25, Mar. 9, 11, 14, 15, 1984.

SEDIMENT LOADS: Maximum daily, 200,000 tons, Sept. 2, 1982; minimum daily, 0.48 tons, Oct. 23, 1980.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 434 microsiemens, July 17; minimum, 64 microsiemens, May 14.

pH: Maximum, 7.9 units, Sept. 17-21; minimum, 5.6 units, May 12.

WATER TEMPERATURE: Maximum, 29.5°C, July 11, 21; minimum, 0.5°C, Jan. 20-23.

DISSOLVED OXYGEN: Maximum, 14.0 mg/L, Feb. 10; minimum, 4.5 mg/L, Aug. 17.

TURBIDITY: Maximum, 950 JTU, Aug. 1; minimum, 0 JTU, several days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,080 mg/L, Nov. 19; minimum daily mean, 3 mg/L, Oct. 18.

SEDIMENT LOADS: Maximum daily, 50,000 tons, Nov. 19; minimum daily, 0.53 tons, Oct. 18.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 253     | 243 | 247  | 140      | 136 | 138  | 80       | 78  | 79   | 95      | 87  | 91   |
| 2     | 254     | 244 | 248  | 138      | 134 | 135  | 86       | 82  | 85   | 89      | 83  | 84   |
| 3     | 262     | 246 | 253  | 134      | 128 | 130  | 94       | 88  | 90   | 86      | 82  | 84   |
| 4     | 266     | 252 | 258  | 128      | 126 | 128  | 108      | 94  | 99   | 92      | 86  | 88   |
| 5     | 268     | 256 | 260  | ---      | --- | ---  | 122      | 104 | 111  | 101     | 89  | 96   |
| 6     | 270     | 258 | 262  | ---      | --- | ---  | 108      | 104 | 106  | 103     | 97  | 100  |
| 7     | 272     | 264 | 267  | ---      | --- | ---  | 110      | 104 | 106  | 104     | 94  | 98   |
| 8     | 268     | 252 | 260  | ---      | --- | ---  | 114      | 108 | 111  | 103     | 93  | 97   |
| 9     | 260     | 246 | 251  | ---      | --- | ---  | 116      | 112 | 115  | 109     | 101 | 105  |
| 10    | 246     | 216 | 234  | ---      | --- | ---  | 124      | 118 | 121  | 118     | 106 | 109  |
| 11    | 216     | 208 | 210  | ---      | --- | ---  | 128      | 122 | 125  | 133     | 103 | 109  |
| 12    | 206     | 196 | 201  | ---      | --- | ---  | 126      | 124 | 125  | 110     | 102 | 105  |
| 13    | 204     | 196 | 199  | ---      | --- | ---  | 128      | 97  | 113  | 114     | 106 | 109  |
| 14    | 204     | 196 | 199  | ---      | --- | ---  | 103      | 77  | 84   | 119     | 103 | 109  |
| 15    | 202     | 194 | 199  | ---      | --- | ---  | 88       | 78  | 83   | 114     | 106 | 110  |
| 16    | 202     | 194 | 198  | 133      | 85  | 96   | 90       | 84  | 88   | 144     | 106 | 111  |
| 17    | 201     | 197 | 199  | 90       | 72  | 82   | 97       | 89  | 92   | 131     | 107 | 114  |
| 18    | 206     | 200 | 202  | 85       | 67  | 74   | 97       | 89  | 93   | 118     | 108 | 114  |
| 19    | 207     | 201 | 204  | ---      | --- | ---  | 97       | 87  | 92   | 118     | 110 | 113  |
| 20    | 272     | 202 | 238  | ---      | --- | ---  | 94       | 86  | 89   | 123     | 109 | 115  |
| 21    | 279     | 217 | 253  | ---      | --- | ---  | 118      | 84  | 90   | 122     | 112 | 118  |
| 22    | 266     | 224 | 254  | 80       | 70  | 75   | 101      | 85  | 89   | 122     | 116 | 124  |
| 23    | 257     | 167 | 219  | 81       | 71  | 75   | 109      | 87  | 97   | 139     | 117 | 131  |
| 24    | 184     | 160 | 167  | 78       | 74  | 76   | 107      | 97  | 102  | ---     | --- | ---  |
| 25    | 167     | 133 | 145  | 81       | 75  | 78   | 96       | 76  | 85   | ---     | --- | ---  |
| 26    | 134     | 128 | 131  | 140      | 92  | 114  | 84       | 78  | 81   | ---     | --- | ---  |
| 27    | 133     | 129 | 131  | 115      | 103 | 110  | 81       | 75  | 78   | ---     | --- | ---  |
| 28    | 136     | 132 | 134  | 122      | 94  | 108  | 81       | 75  | 78   | ---     | --- | ---  |
| 29    | 141     | 135 | 137  | 116      | 84  | 105  | 84       | 80  | 82   | ---     | --- | ---  |
| 30    | 140     | 138 | 139  | 88       | 76  | 81   | 90       | 84  | 87   | ---     | --- | ---  |
| 31    | 138     | 136 | 138  | ---      | --- | ---  | 90       | 88  | 89   | 134     | 116 | 130  |
| MONTH | 279     | 128 | 208  | ---      | --- | ---  | 128      | 75  | 96   | ---     | --- | ---  |

## 03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 125 | 107 | 116   | 126 | 122 | 124   | 120 | 116 | 117  | 140 | 138 | 139  |
| 2        | 121 | 99  | 104   | 132 | 126 | 129   | 130 | 114 | 123  | 140 | 128 | 138  |
| 3        | 124 | 96  | 104   | 134 | 130 | 132   | 134 | 128 | 131  | 132 | 114 | 124  |
| 4        | 125 | 99  | 108   | 136 | 132 | 134   | 138 | 130 | 134  | 126 | 98  | 105  |
| 5        | 124 | 98  | 106   | 134 | 130 | 132   | 130 | 118 | 123  | 134 | 106 | 122  |
| 6        | 128 | 100 | 116   | 134 | 130 | 131   | 120 | 114 | 116  | 134 | 126 | 130  |
| 7        | 141 | 101 | 114   | 134 | 130 | 132   | 170 | 118 | 151  | 128 | 122 | 124  |
| 8        | 126 | 98  | 110   | 138 | 134 | 136   | 164 | 124 | 146  | 120 | 112 | 114  |
| 9        | 117 | 95  | 102   | 134 | 122 | 129   | 124 | 118 | 121  | 122 | 116 | 118  |
| 10       | 119 | 95  | 99    | 140 | 124 | 131   | 120 | 116 | 118  | 128 | 122 | 126  |
| 11       | 122 | 96  | 102   | 140 | 128 | 135   | 120 | 116 | 118  | 132 | 126 | 130  |
| 12       | 117 | 95  | 100   | 130 | 120 | 124   | 120 | 118 | 119  | 164 | 122 | 133  |
| 13       | 133 | 105 | 112   | 120 | 112 | 116   | 120 | 118 | 120  | 120 | 92  | 106  |
| 14       | 122 | 94  | 100   | 114 | 112 | 112   | 122 | 118 | 120  | 112 | 64  | 76   |
| 15       | 107 | 89  | 94    | 112 | 110 | 111   | 122 | 120 | 121  | 84  | 76  | 80   |
| 16       | 120 | 90  | 99    | 116 | 112 | 114   | 132 | 120 | 125  | 82  | 76  | 80   |
| 17       | 116 | 96  | 106   | 118 | 116 | 117   | 152 | 134 | 147  | 84  | 80  | 81   |
| 18       | 111 | 97  | 103   | 118 | 118 | 118   | 152 | 142 | 149  | 88  | 84  | 85   |
| 19       | 110 | 104 | 107   | 120 | 118 | 119   | 142 | 124 | 131  | 96  | 88  | 92   |
| 20       | 111 | 103 | 108   | 124 | 118 | 121   | 126 | 120 | 122  | 98  | 96  | 96   |
| 21       | 113 | 107 | 110   | 126 | 124 | 125   | 120 | 120 | 120  | 108 | 96  | 100  |
| 22       | 110 | 100 | 104   | 126 | 122 | 124   | 122 | 120 | 120  | 130 | 108 | 120  |
| 23       | 100 | 98  | 99    | 124 | 122 | 123   | 124 | 120 | 122  | 134 | 128 | 133  |
| 24       | 106 | 98  | 104   | 126 | 122 | 123   | 126 | 122 | 125  | 130 | 110 | 116  |
| 25       | 112 | 108 | 110   | 124 | 122 | 123   | 128 | 126 | 126  | 114 | 104 | 110  |
| 26       | 114 | 112 | 113   | 134 | 124 | 131   | 130 | 128 | 129  | 108 | 106 | 106  |
| 27       | 118 | 114 | 116   | 138 | 136 | 136   | 134 | 130 | 131  | 110 | 106 | 108  |
| 28       | 122 | 118 | 121   | 136 | 132 | 135   | 134 | 132 | 133  | 120 | 112 | 115  |
| 29       | --- | --- | ---   | 134 | 130 | 132   | 138 | 134 | 136  | 120 | 118 | 119  |
| 30       | --- | --- | ---   | 128 | 126 | 128   | 140 | 136 | 139  | 122 | 120 | 120  |
| 31       | --- | --- | ---   | 128 | 122 | 124   | --- | --- | ---  | 122 | 118 | 120  |
| MONTH    | 141 | 89  | 107   | 140 | 110 | 126   | 170 | 114 | 128  | 164 | 64  | 112  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 121 | 119 | 120  | 182 | 178 | 180    | 160 | 86  | 122       | 130 | 120 | 127  |
| 2     | 123 | 121 | 122  | 180 | 178 | 179    | 192 | 98  | 152       | 156 | 132 | 146  |
| 3     | 124 | 118 | 121  | 179 | 175 | 176    | 195 | 147 | 164       | 156 | 148 | 152  |
| 4     | 120 | 114 | 116  | 174 | 170 | 173    | 147 | 139 | 143       | 148 | 142 | 146  |
| 5     | 117 | 113 | 114  | 172 | 170 | 171    | 137 | 133 | 135       | 142 | 138 | 139  |
| 6     | 119 | 115 | 117  | 179 | 171 | 174    | 136 | 134 | 135       | 138 | 132 | 135  |
| 7     | 122 | 116 | 120  | 188 | 178 | 182    | 136 | 132 | 134       | 138 | 134 | 136  |
| 8     | 138 | 114 | 119  | 194 | 188 | 191    | 138 | 134 | 136       | 140 | 136 | 139  |
| 9     | 205 | 141 | 169  | 199 | 193 | 196    | 144 | 136 | 140       | 140 | 136 | 137  |
| 10    | 225 | 205 | 215  | 199 | 195 | 197    | 148 | 144 | 146       | 148 | 140 | 144  |
| 11    | 280 | 224 | 252  | 194 | 192 | 193    | 154 | 148 | 151       | 176 | 150 | 161  |
| 12    | 288 | 240 | 276  | 210 | 190 | 196    | 156 | 152 | 154       | 200 | 178 | 190  |
| 13    | 235 | 143 | 190  | 212 | 202 | 209    | 158 | 156 | 157       | 212 | 202 | 207  |
| 14    | 139 | 113 | 120  | 224 | 202 | 210    | 164 | 158 | 161       | 214 | 212 | 213  |
| 15    | 156 | 124 | 140  | 244 | 226 | 236    | 174 | 164 | 169       | 216 | 214 | 214  |
| 16    | 170 | 156 | 165  | 380 | 246 | 291    | 180 | 174 | 177       | 218 | 216 | 217  |
| 17    | 173 | 169 | 172  | 434 | 388 | 417    | 178 | 112 | 158       | 218 | 216 | 218  |
| 18    | 175 | 171 | 173  | 386 | 310 | 342    | 178 | 108 | 129       | 222 | 220 | 220  |
| 19    | 174 | 172 | 173  | 308 | 270 | 286    | 110 | 106 | 108       | 222 | 218 | 220  |
| 20    | 170 | 158 | 165  | 268 | 256 | 260    | 112 | 106 | 109       | 218 | 206 | 212  |
| 21    | 159 | 157 | 158  | 256 | 250 | 255    | 108 | 96  | 101       | 206 | 188 | 197  |
| 22    | 159 | 157 | 159  | 252 | 242 | 246    | 102 | 96  | 100       | 188 | 172 | 181  |
| 23    | 160 | 154 | 157  | 244 | 224 | 233    | 120 | 102 | 113       | 172 | 160 | 166  |
| 24    | 154 | 148 | 150  | 234 | 222 | 229    | 122 | 118 | 121       | 162 | 156 | 158  |
| 25    | 153 | 149 | 151  | 232 | 224 | 226    | 130 | 118 | 123       | 158 | 152 | 154  |
| 26    | 163 | 153 | 159  | 224 | 214 | 219    | 190 | 104 | 143       | 202 | 150 | 167  |
| 27    | 174 | 164 | 169  | 245 | 129 | 177    | 142 | 108 | 134       | 168 | 148 | 154  |
| 28    | 182 | 174 | 178  | 147 | 113 | 124    | 136 | 116 | 122       | 202 | 166 | 186  |
| 29    | 183 | 181 | 181  | 151 | 125 | 137    | 120 | 116 | 118       | 222 | 204 | 215  |
| 30    | 183 | 181 | 182  | 126 | 122 | 124    | 122 | 120 | 121       | 224 | 214 | 222  |
| 31    | --- | --- | ---  | 130 | 124 | 127    | 122 | 116 | 119       | --- | --- | ---  |
| MONTH | 288 | 113 | 160  | 434 | 113 | 211    | 195 | 86  | 135       | 224 | 120 | 176  |

## CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-----------|-----|
|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH     |     |
| 1     | 7.6     | 7.4 | 7.2      | 7.1 | 6.9      | 6.8 | 7.1     | 6.9 | 7.1      | 7.0 | 7.2       | 7.1 |
| 2     | 7.6     | 7.5 | 7.2      | 7.1 | 6.9      | 6.9 | 6.9     | 6.8 | 7.0      | 6.9 | 7.2       | 7.1 |
| 3     | 7.6     | 7.5 | 7.3      | 7.2 | 6.9      | 6.9 | 6.9     | 6.8 | 6.9      | 6.9 | 7.2       | 7.2 |
| 4     | 7.6     | 7.5 | 7.3      | 7.2 | 7.0      | 6.9 | 6.9     | 6.8 | 7.0      | 6.9 | 7.2       | 7.2 |
| 5     | 7.6     | 7.5 | ---      | --- | 7.0      | 7.0 | 7.0     | 6.9 | 7.0      | 6.9 | 7.2       | 7.1 |
| 6     | 7.6     | 7.5 | ---      | --- | 7.0      | 7.0 | 7.0     | 7.0 | 7.1      | 6.9 | 7.2       | 7.2 |
| 7     | 7.6     | 7.5 | ---      | --- | 7.1      | 7.0 | 7.0     | 7.0 | 7.1      | 7.0 | 7.2       | 7.2 |
| 8     | 7.5     | 7.1 | ---      | --- | 7.2      | 7.1 | 7.0     | 7.0 | 7.0      | 7.0 | 7.2       | 7.2 |
| 9     | 7.4     | 7.2 | ---      | --- | 7.2      | 7.2 | 7.1     | 7.0 | 7.0      | 7.0 | 7.2       | 7.1 |
| 10    | 7.4     | 7.4 | ---      | --- | 7.2      | 7.2 | 7.1     | 7.0 | 7.1      | 7.0 | 7.3       | 7.2 |
| 11    | 7.4     | 7.3 | ---      | --- | 7.2      | 7.2 | 7.1     | 7.0 | 7.0      | 6.9 | 7.3       | 7.2 |
| 12    | 7.4     | 7.3 | ---      | --- | 7.2      | 7.2 | 7.1     | 7.1 | 7.1      | 6.9 | 7.2       | 7.2 |
| 13    | 7.4     | 7.3 | ---      | --- | 7.2      | 7.2 | 7.1     | 7.1 | 7.1      | 7.1 | 7.2       | 7.2 |
| 14    | 7.4     | 7.3 | ---      | --- | 7.2      | 7.2 | 7.2     | 7.1 | 7.1      | 7.0 | 7.2       | 7.2 |
| 15    | 7.4     | 7.3 | ---      | --- | 7.2      | 7.2 | 7.2     | 7.1 | 7.0      | 7.0 | 7.2       | 7.2 |
| 16    | 7.4     | 7.3 | 7.2      | 7.1 | 7.3      | 7.2 | 7.2     | 7.2 | 7.1      | 7.0 | 7.3       | 7.2 |
| 17    | 7.4     | 7.3 | 7.2      | 7.1 | 7.3      | 7.2 | 7.2     | 7.2 | 7.1      | 7.1 | 7.3       | 7.2 |
| 18    | 7.4     | 7.3 | 7.2      | 6.7 | 7.2      | 7.2 | 7.2     | 7.2 | 7.1      | 7.0 | 7.3       | 7.3 |
| 19    | 7.4     | 7.2 | ---      | --- | 7.2      | 7.1 | 7.2     | 7.2 | 7.1      | 7.0 | 7.3       | 7.3 |
| 20    | 7.2     | 6.6 | ---      | --- | 7.1      | 7.1 | 7.3     | 7.2 | 7.1      | 7.0 | 7.3       | 7.3 |
| 21    | 7.3     | 7.2 | ---      | --- | 7.1      | 7.1 | 7.2     | 7.2 | 7.1      | 7.0 | 7.3       | 7.3 |
| 22    | 7.3     | 7.2 | 6.8      | 6.7 | 7.2      | 7.1 | 7.2     | 7.2 | 7.1      | 7.0 | 7.4       | 7.3 |
| 23    | 7.3     | 6.8 | 6.9      | 6.8 | 7.2      | 7.2 | 7.2     | 7.2 | 7.0      | 7.0 | 7.4       | 7.4 |
| 24    | 7.1     | 6.9 | 6.9      | 6.9 | 7.3      | 7.2 | ---     | --- | 7.0      | 7.0 | 7.4       | 7.3 |
| 25    | 7.0     | 6.9 | 7.0      | 6.9 | 7.2      | 7.1 | ---     | --- | 7.0      | 7.0 | 7.4       | 7.4 |
| 26    | 7.0     | 7.0 | 7.0      | 7.0 | 7.2      | 7.1 | ---     | --- | 7.0      | 7.0 | 7.5       | 7.4 |
| 27    | 7.1     | 7.0 | 7.0      | 7.0 | 7.1      | 7.0 | ---     | --- | 7.1      | 7.0 | 7.5       | 7.4 |
| 28    | 7.1     | 7.0 | 7.0      | 6.3 | 7.1      | 7.0 | ---     | --- | 7.1      | 7.1 | 7.5       | 7.4 |
| 29    | 7.1     | 7.0 | 6.9      | 6.8 | 7.1      | 7.0 | ---     | --- | ---      | --- | 7.4       | 7.4 |
| 30    | 7.1     | 7.0 | 6.8      | 6.8 | 7.1      | 7.0 | ---     | --- | ---      | --- | 7.5       | 7.4 |
| 31    | 7.1     | 7.0 | ---      | --- | 7.0      | 6.9 | 7.0     | 6.9 | ---      | --- | 7.4       | 7.3 |
| MONTH | 7.6     | 6.6 | ---      | --- | 7.3      | 6.8 | ---     | --- | 7.1      | 6.9 | 7.5       | 7.1 |
| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX       | MIN |
|       | APRIL   |     | MAY      |     | JUNE     |     | JULY    |     | AUGUST   |     | SEPTEMBER |     |
| 1     | 7.4     | 7.3 | 7.4      | 7.3 | 7.4      | 7.2 | 7.5     | 7.3 | 7.1      | 5.9 | 7.4       | 7.3 |
| 2     | 7.5     | 7.4 | 7.3      | 7.1 | 7.4      | 7.2 | 7.5     | 7.3 | 7.3      | 6.8 | 7.5       | 7.3 |
| 3     | 7.5     | 7.4 | 7.3      | 7.1 | 7.2      | 7.1 | 7.5     | 7.3 | 7.3      | 7.1 | 7.5       | 7.4 |
| 4     | 7.5     | 7.4 | 7.3      | 7.2 | 7.2      | 7.1 | 7.4     | 7.3 | 7.1      | 7.1 | 7.5       | 7.3 |
| 5     | 7.5     | 7.4 | 7.4      | 7.2 | 7.1      | 7.0 | 7.4     | 7.3 | 7.2      | 7.1 | 7.5       | 7.3 |
| 6     | 7.5     | 7.4 | 7.4      | 7.3 | 7.1      | 7.0 | 7.5     | 7.3 | 7.2      | 7.2 | 7.6       | 7.3 |
| 7     | 7.5     | 7.4 | 7.4      | 7.3 | 7.1      | 7.1 | 7.5     | 7.3 | 7.3      | 7.2 | 7.6       | 7.3 |
| 8     | 7.6     | 7.4 | 7.3      | 7.2 | 7.2      | 7.1 | 7.5     | 7.3 | 7.3      | 7.2 | 7.6       | 7.4 |
| 9     | 7.4     | 7.4 | 7.4      | 7.3 | 7.3      | 7.1 | 7.5     | 7.3 | 7.4      | 7.2 | 7.6       | 7.4 |
| 10    | 7.4     | 7.4 | 7.4      | 7.3 | 7.4      | 7.3 | 7.5     | 7.3 | 7.5      | 7.3 | 7.6       | 7.4 |
| 11    | 7.5     | 7.4 | 7.4      | 7.3 | 7.5      | 7.3 | 7.6     | 7.3 | 7.6      | 7.3 | 7.6       | 7.4 |
| 12    | 7.4     | 7.4 | 7.4      | 5.6 | 7.4      | 7.2 | 7.5     | 7.3 | 7.7      | 7.3 | 7.7       | 7.5 |
| 13    | 7.4     | 7.4 | 7.2      | 7.1 | 7.4      | 7.3 | 7.5     | 7.3 | 7.6      | 7.3 | 7.8       | 7.6 |
| 14    | 7.4     | 7.4 | 7.2      | 7.0 | 7.3      | 7.2 | 7.5     | 7.3 | 7.7      | 7.3 | 7.8       | 7.6 |
| 15    | 7.4     | 7.4 | 7.1      | 7.0 | 7.4      | 7.2 | 7.5     | 7.4 | 7.6      | 7.3 | 7.8       | 7.6 |
| 16    | 7.4     | 7.3 | 7.1      | 6.9 | 7.5      | 7.3 | 7.6     | 7.4 | 7.5      | 7.3 | 7.8       | 7.7 |
| 17    | 7.5     | 7.4 | 7.1      | 7.0 | 7.5      | 7.4 | 7.7     | 7.5 | 7.3      | 6.8 | 7.9       | 7.7 |
| 18    | 7.5     | 7.4 | 7.1      | 7.0 | 7.5      | 7.4 | 7.7     | 7.6 | 7.0      | 6.8 | 7.9       | 7.7 |
| 19    | 7.4     | 7.4 | 7.2      | 7.1 | 7.5      | 7.4 | 7.6     | 7.5 | 6.9      | 6.9 | 7.9       | 7.7 |
| 20    | 7.4     | 7.4 | 7.3      | 7.1 | 7.6      | 7.4 | 7.6     | 7.5 | 7.1      | 6.9 | 7.9       | 7.7 |
| 21    | 7.4     | 7.3 | 7.3      | 7.1 | 7.6      | 7.4 | 7.7     | 7.5 | 7.1      | 7.0 | 7.9       | 7.7 |
| 22    | 7.4     | 7.3 | 7.3      | 7.2 | 7.5      | 7.4 | 7.6     | 7.4 | 7.2      | 7.1 | 7.8       | 7.6 |
| 23    | 7.4     | 7.3 | 7.2      | 7.1 | 7.5      | 7.4 | 7.6     | 7.4 | 7.3      | 7.2 | 7.7       | 7.6 |
| 24    | 7.4     | 7.3 | 7.2      | 7.1 | 7.5      | 7.3 | 7.6     | 7.5 | 7.3      | 7.2 | 7.7       | 7.5 |
| 25    | 7.4     | 7.3 | 7.2      | 7.1 | 7.5      | 7.3 | 7.6     | 7.5 | 7.3      | 6.9 | 7.7       | 7.5 |
| 26    | 7.4     | 7.3 | 7.3      | 7.2 | 7.5      | 7.3 | 7.5     | 7.3 | 7.5      | 7.0 | 7.6       | 6.8 |
| 27    | 7.4     | 7.3 | 7.3      | 7.2 | 7.5      | 7.3 | 7.3     | 6.3 | 7.4      | 7.3 | 7.5       | 7.1 |
| 28    | 7.4     | 7.3 | 7.3      | 7.2 | 7.5      | 7.3 | 7.1     | 7.0 | 7.4      | 7.3 | 7.6       | 7.4 |
| 29    | 7.4     | 7.3 | 7.4      | 7.2 | 7.5      | 7.3 | 7.2     | 7.1 | 7.3      | 7.3 | 7.7       | 7.6 |
| 30    | 7.4     | 7.3 | 7.4      | 7.2 | 7.5      | 7.3 | 7.1     | 7.0 | 7.3      | 7.2 | 7.7       | 7.6 |
| 31    | ---     | --- | 7.4      | 7.2 | ---      | --- | 7.1     | 7.1 | 7.3      | 7.2 | ---       | --- |
| MONTH | 7.6     | 7.3 | 7.4      | 5.6 | 7.6      | 7.0 | 7.7     | 6.3 | 7.7      | 5.9 | 7.9       | 6.8 |

## CUMBERLAND RIVER BASIN

87

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 18.0 | 16.5 | 17.0     | 19.0 | 18.0 | 18.5     | 7.5  | 7.0  | 7.0     | 12.5 | 12.0 | 12.5 |
| 2       | 18.0 | 16.0 | 17.0     | 18.5 | 17.5 | 18.0     | 7.5  | 7.0  | 7.0     | 12.5 | 11.0 | 11.5 |
| 3       | 18.0 | 15.5 | 17.0     | 17.0 | 16.5 | 16.5     | 7.5  | 7.0  | 7.5     | 10.5 | 9.0  | 9.5  |
| 4       | 19.0 | 16.5 | 17.5     | 16.5 | 16.5 | 16.5     | 7.0  | 6.5  | 7.0     | 9.0  | 8.0  | 8.5  |
| 5       | 19.5 | 17.5 | 18.5     | ---  | ---  | ---      | 6.5  | 6.0  | 6.5     | 7.5  | 7.0  | 7.5  |
| 6       | 19.0 | 17.5 | 18.5     | ---  | ---  | ---      | 6.0  | 5.0  | 5.5     | 7.0  | 6.0  | 6.5  |
| 7       | 19.0 | 18.0 | 18.5     | ---  | ---  | ---      | 5.0  | 4.0  | 4.5     | 6.0  | 5.5  | 5.5  |
| 8       | 18.5 | 18.0 | 18.5     | ---  | ---  | ---      | 4.0  | 3.0  | 3.5     | 5.5  | 5.5  | 5.5  |
| 9       | 18.5 | 18.0 | 18.0     | ---  | ---  | ---      | 3.0  | 3.0  | 3.0     | 5.5  | 5.0  | 5.0  |
| 10      | 18.5 | 18.0 | 18.5     | ---  | ---  | ---      | 4.0  | 3.0  | 3.5     | 5.0  | 4.5  | 4.5  |
| 11      | 19.0 | 18.0 | 18.5     | ---  | ---  | ---      | 4.5  | 4.0  | 4.5     | 4.5  | 4.5  | 4.5  |
| 12      | 19.0 | 18.0 | 18.5     | ---  | ---  | ---      | 6.0  | 4.5  | 5.0     | 4.5  | 3.5  | 4.0  |
| 13      | 20.0 | 18.5 | 19.0     | ---  | ---  | ---      | 7.0  | 6.0  | 6.5     | 3.5  | 3.0  | 3.5  |
| 14      | 20.0 | 18.5 | 19.5     | ---  | ---  | ---      | 8.0  | 7.0  | 7.5     | 3.0  | 2.5  | 3.0  |
| 15      | 20.0 | 19.0 | 19.5     | ---  | ---  | ---      | 9.0  | 8.0  | 8.5     | 2.5  | 2.0  | 2.5  |
| 16      | 21.0 | 19.0 | 20.0     | 8.5  | 7.5  | 8.0      | 9.5  | 9.0  | 9.0     | 2.0  | 1.5  | 1.5  |
| 17      | 20.5 | 19.5 | 20.0     | 7.5  | 7.0  | 7.5      | 10.5 | 9.5  | 10.0    | 2.0  | 1.5  | 1.5  |
| 18      | 21.0 | 19.5 | 20.0     | 8.0  | 7.0  | 7.0      | 10.5 | 10.5 | 10.5    | 1.5  | 1.5  | 1.5  |
| 19      | 21.0 | 20.0 | 20.5     | ---  | ---  | ---      | 11.0 | 10.5 | 10.5    | 2.0  | 1.5  | 1.5  |
| 20      | 20.5 | 19.0 | 20.0     | ---  | ---  | ---      | 11.0 | 11.0 | 11.0    | 1.5  | .5   | 1.0  |
| 21      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 12.0 | 11.0 | 11.5    | .5   | .5   | .5   |
| 22      | 20.0 | 19.5 | 19.5     | 6.5  | 6.0  | 6.5      | 12.0 | 11.5 | 11.5    | 1.0  | .5   | .5   |
| 23      | 19.5 | 18.0 | 18.5     | 6.0  | 5.0  | 5.5      | 11.5 | 10.0 | 10.5    | 1.0  | .5   | 1.0  |
| 24      | 18.0 | 17.0 | 17.5     | 5.0  | 5.0  | 5.0      | 10.0 | 9.0  | 9.5     | ---  | ---  | ---  |
| 25      | 18.0 | 17.0 | 17.5     | 5.0  | 4.5  | 4.5      | 9.0  | 8.0  | 8.5     | ---  | ---  | ---  |
| 26      | 18.0 | 17.5 | 17.5     | 5.0  | 4.5  | 5.0      | 8.0  | 7.5  | 7.5     | ---  | ---  | ---  |
| 27      | 18.5 | 17.5 | 18.0     | 6.0  | 5.0  | 5.5      | 8.0  | 7.5  | 7.5     | ---  | ---  | ---  |
| 28      | 18.5 | 18.0 | 18.0     | 8.5  | 6.5  | 7.5      | 8.5  | 8.0  | 8.0     | ---  | ---  | ---  |
| 29      | 19.0 | 18.0 | 18.5     | 9.0  | 8.0  | 8.5      | 10.0 | 9.0  | 9.0     | ---  | ---  | ---  |
| 30      | 19.0 | 18.5 | 18.5     | 8.0  | 7.5  | 7.5      | 10.5 | 10.0 | 10.5    | ---  | ---  | ---  |
| 31      | 19.0 | 18.0 | 18.5     | ---  | ---  | ---      | 12.0 | 10.5 | 11.5    | 1.0  | 1.0  | 1.0  |
| MONTH   | 21.0 | 15.5 | 18.5     | ---  | ---  | ---      | 12.0 | 3.0  | 8.0     | ---  | ---  | ---  |

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 2.0  | 1.0  | 1.0   | 9.0  | 8.5  | 9.0   | 15.0 | 14.0 | 14.5 | 21.0 | 20.0 | 20.5 |
| 2        | 3.0  | 2.0  | 3.0   | 9.0  | 8.5  | 8.5   | 14.5 | 13.5 | 14.0 | 20.0 | 19.0 | 20.0 |
| 3        | 2.5  | 2.0  | 2.5   | 9.0  | 8.0  | 8.5   | 14.0 | 13.0 | 13.5 | 19.0 | 18.0 | 18.5 |
| 4        | 2.5  | 2.0  | 2.0   | 10.0 | 8.5  | 9.5   | 14.0 | 13.0 | 13.5 | 18.0 | 17.0 | 17.5 |
| 5        | 3.0  | 2.5  | 2.5   | 10.5 | 9.5  | 10.0  | 14.5 | 14.0 | 14.5 | 18.0 | 17.0 | 17.5 |
| 6        | 4.0  | 3.0  | 3.5   | 10.0 | 9.5  | 10.0  | 14.5 | 14.0 | 14.5 | 19.0 | 17.0 | 18.0 |
| 7        | 4.0  | 3.5  | 4.0   | 10.0 | 9.0  | 9.5   | 14.5 | 13.5 | 14.0 | 18.5 | 18.0 | 18.0 |
| 8        | 3.0  | 2.5  | 3.0   | 10.0 | 9.5  | 10.0  | 13.0 | 12.0 | 12.5 | 18.5 | 17.5 | 18.0 |
| 9        | 2.5  | 2.0  | 2.0   | 10.5 | 9.5  | 10.0  | 12.0 | 11.0 | 11.5 | 19.0 | 17.5 | 18.0 |
| 10       | 2.5  | 2.0  | 2.0   | 10.0 | 9.5  | 10.0  | 11.5 | 11.0 | 11.5 | 19.0 | 18.0 | 18.5 |
| 11       | 3.0  | 2.5  | 2.5   | 10.5 | 10.0 | 10.0  | 11.5 | 11.0 | 11.5 | 19.5 | 18.0 | 19.0 |
| 12       | 3.0  | 3.0  | 3.0   | 11.0 | 10.5 | 10.5  | 12.5 | 11.0 | 11.5 | 19.5 | 18.0 | 19.0 |
| 13       | 3.0  | 2.5  | 2.5   | 10.5 | 10.0 | 10.5  | 13.0 | 12.0 | 12.5 | 19.0 | 18.0 | 18.5 |
| 14       | 2.5  | 2.0  | 2.5   | 10.5 | 10.0 | 10.5  | 14.0 | 13.0 | 13.5 | 19.0 | 18.0 | 18.5 |
| 15       | 2.5  | 2.0  | 2.0   | 10.5 | 9.5  | 10.0  | 14.5 | 14.0 | 14.0 | 20.5 | 19.0 | 19.5 |
| 16       | 2.5  | 1.5  | 2.0   | 10.0 | 9.5  | 10.0  | 15.5 | 14.5 | 15.0 | 20.0 | 19.5 | 19.5 |
| 17       | 3.5  | 2.5  | 3.0   | 10.5 | 9.5  | 10.0  | 16.5 | 15.5 | 16.0 | 19.5 | 19.0 | 19.0 |
| 18       | 3.5  | 3.0  | 3.0   | 10.0 | 9.0  | 9.5   | 17.0 | 16.0 | 16.5 | 19.5 | 18.0 | 19.0 |
| 19       | 4.0  | 3.5  | 3.5   | 10.5 | 9.0  | 9.5   | 17.5 | 16.5 | 17.0 | 20.0 | 18.0 | 19.0 |
| 20       | 4.5  | 3.5  | 4.0   | 11.0 | 9.5  | 10.0  | 18.5 | 17.0 | 17.5 | 20.0 | 18.5 | 19.5 |
| 21       | 5.5  | 4.5  | 5.0   | 10.5 | 10.0 | 10.0  | 19.0 | 17.5 | 18.0 | 20.0 | 19.0 | 19.5 |
| 22       | 6.5  | 5.5  | 6.0   | 10.0 | 9.5  | 9.5   | 19.5 | 18.0 | 19.0 | 20.5 | 19.5 | 20.0 |
| 23       | 8.0  | 6.5  | 7.0   | 10.0 | 9.5  | 10.0  | 19.5 | 19.0 | 19.0 | 20.0 | 19.0 | 19.5 |
| 24       | 9.0  | 8.0  | 8.5   | 10.5 | 10.0 | 10.0  | 19.5 | 18.5 | 19.0 | 19.0 | 18.5 | 18.5 |
| 25       | 9.5  | 9.0  | 9.5   | 10.0 | 10.0 | 10.0  | 20.0 | 18.5 | 19.0 | 19.0 | 18.0 | 18.0 |
| 26       | 10.0 | 9.5  | 10.0  | 10.5 | 9.5  | 10.0  | 20.5 | 18.5 | 19.5 | 19.0 | 17.5 | 18.5 |
| 27       | 10.5 | 10.0 | 10.0  | 10.5 | 10.0 | 10.5  | 19.5 | 19.0 | 19.5 | 20.0 | 18.0 | 19.0 |
| 28       | 10.0 | 9.5  | 9.5   | 12.0 | 10.5 | 11.0  | 20.0 | 19.0 | 19.5 | 20.0 | 19.0 | 19.5 |
| 29       | ---  | ---  | ---   | 12.5 | 11.5 | 12.0  | 21.0 | 19.5 | 20.0 | 21.0 | 19.5 | 20.5 |
| 30       | ---  | ---  | ---   | 14.5 | 12.5 | 13.5  | 21.0 | 19.5 | 20.5 | 22.0 | 20.0 | 21.0 |
| 31       | ---  | ---  | ---   | 15.0 | 14.5 | 14.5  | ---  | ---  | ---  | 22.5 | 21.5 | 22.0 |
| MONTH    | 10.5 | 1.0  | 4.5   | 15.0 | 8.0  | 10.0  | 21.0 | 11.0 | 15.5 | 22.5 | 17.0 | 19.0 |



## CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN   | MAX  | MIN  | MEAN      | MAX  | MIN  | MEAN |
|-------|------|------|------|------|------|--------|------|------|-----------|------|------|------|
| JUNE  |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |      |
| 1     | 24.5 | 22.0 | 23.0 | 26.5 | 26.0 | 26.0   | 25.0 | 23.0 | 23.5      | 23.0 | 22.0 | 22.5 |
| 2     | 24.5 | 23.0 | 23.5 | 27.0 | 25.0 | 26.0   | 24.5 | 23.0 | 24.0      | 24.0 | 22.5 | 23.0 |
| 3     | 25.0 | 23.5 | 24.5 | 27.5 | 25.0 | 26.0   | 24.0 | 23.0 | 23.5      | 24.5 | 23.0 | 23.5 |
| 4     | 25.5 | 24.0 | 25.0 | 27.0 | 25.5 | 26.0   | 24.0 | 23.0 | 23.5      | 24.5 | 23.5 | 24.0 |
| 5     | 26.0 | 24.5 | 25.0 | 26.5 | 25.5 | 26.0   | 24.0 | 23.0 | 23.5      | 25.0 | 23.5 | 24.0 |
| 6     | 25.0 | 24.5 | 25.0 | 26.5 | 25.5 | 26.0   | 24.0 | 23.5 | 23.5      | 25.0 | 24.0 | 24.5 |
| 7     | 25.5 | 24.5 | 25.0 | 27.5 | 25.5 | 26.0   | 24.0 | 23.5 | 23.5      | 26.0 | 24.0 | 25.0 |
| 8     | 25.5 | 24.0 | 25.0 | 28.0 | 25.5 | 26.5   | 25.0 | 23.5 | 24.0      | 26.0 | 24.5 | 25.5 |
| 9     | 26.0 | 24.5 | 25.0 | 28.0 | 26.0 | 27.0   | 25.5 | 24.0 | 25.0      | 26.5 | 25.0 | 25.5 |
| 10    | 26.5 | 25.0 | 25.5 | 29.0 | 26.5 | 27.5   | 26.5 | 25.0 | 25.5      | 27.0 | 25.5 | 26.0 |
| 11    | 26.5 | 25.0 | 25.5 | 29.5 | 27.0 | 28.0   | 27.0 | 25.0 | 26.0      | 26.5 | 25.5 | 26.0 |
| 12    | 25.5 | 24.0 | 25.0 | 28.5 | 27.5 | 28.0   | 28.0 | 25.5 | 27.0      | 26.0 | 24.5 | 25.0 |
| 13    | 23.5 | 22.0 | 23.0 | 28.5 | 27.5 | 28.0   | 27.5 | 26.5 | 27.0      | 24.5 | 23.5 | 24.0 |
| 14    | 22.0 | 21.0 | 21.5 | 28.0 | 27.0 | 27.5   | 28.5 | 26.5 | 27.5      | 23.5 | 22.0 | 23.0 |
| 15    | 22.0 | 20.5 | 21.5 | 28.0 | 27.0 | 27.5   | 28.0 | 27.0 | 27.5      | 22.5 | 21.0 | 22.0 |
| 16    | 23.0 | 21.5 | 22.0 | 28.5 | 27.0 | 27.5   | 27.0 | 26.5 | 26.5      | 23.0 | 21.0 | 22.0 |
| 17    | 23.5 | 22.0 | 22.5 | 28.5 | 26.5 | 27.5   | 26.5 | 23.0 | 25.0      | 23.0 | 21.0 | 22.0 |
| 18    | 24.5 | 22.5 | 23.5 | 28.0 | 26.5 | 27.0   | 22.5 | 21.0 | 21.5      | 23.0 | 21.0 | 22.0 |
| 19    | 24.0 | 23.0 | 23.5 | 28.0 | 26.5 | 27.5   | 22.5 | 21.5 | 22.0      | 23.0 | 21.0 | 22.0 |
| 20    | 24.0 | 22.5 | 23.0 | 28.5 | 27.0 | 27.5   | 22.5 | 22.0 | 22.5      | 23.5 | 21.0 | 22.0 |
| 21    | 24.5 | 22.5 | 23.5 | 29.5 | 27.0 | 28.0   | 22.5 | 22.0 | 22.5      | 23.0 | 21.5 | 22.0 |
| 22    | 24.0 | 23.0 | 23.5 | 29.0 | 27.5 | 28.0   | 22.5 | 21.5 | 22.0      | 23.5 | 21.5 | 22.5 |
| 23    | 25.5 | 23.0 | 24.5 | 28.5 | 27.5 | 28.0   | 22.0 | 22.0 | 22.0      | 22.5 | 21.5 | 22.0 |
| 24    | 26.5 | 24.5 | 25.0 | 28.5 | 27.5 | 28.0   | 22.0 | 21.5 | 22.0      | 23.0 | 21.5 | 22.0 |
| 25    | 27.5 | 25.0 | 26.0 | 28.5 | 27.0 | 27.5   | 22.0 | 21.5 | 21.5      | 22.5 | 20.0 | 21.0 |
| 26    | 28.0 | 25.5 | 26.5 | 28.0 | 27.0 | 27.5   | 21.5 | 20.5 | 21.0      | 21.5 | 20.0 | 21.0 |
| 27    | 28.5 | 26.0 | 27.0 | 27.0 | 22.0 | 25.0   | 21.0 | 20.5 | 20.5      | 20.5 | 19.5 | 20.0 |
| 28    | 28.0 | 26.0 | 27.0 | 22.5 | 21.5 | 22.0   | 21.0 | 20.0 | 20.5      | 20.0 | 19.0 | 19.5 |
| 29    | 28.0 | 26.0 | 27.0 | 23.0 | 22.0 | 22.5   | 22.0 | 21.0 | 21.5      | 19.5 | 18.5 | 19.0 |
| 30    | 28.0 | 25.5 | 27.0 | 24.5 | 23.0 | 23.5   | 22.5 | 21.5 | 22.0      | 19.5 | 18.0 | 19.0 |
| 31    | ---  | ---  | ---  | 25.0 | 24.0 | 24.5   | 22.5 | 21.5 | 22.0      | ---  | ---  | ---  |
| MONTH | 28.5 | 20.5 | 24.5 | 29.5 | 21.5 | 26.5   | 28.5 | 20.0 | 23.5      | 27.0 | 18.0 | 22.5 |

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|---------|-----|-----|------|----------|------|------|----------|------|------|---------|------|------|
| OCTOBER |     |     |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1       | 9.3 | 8.7 | 9.0  | 9.1      | 8.8  | 8.9  | 11.6     | 11.3 | 11.5 | 10.1    | 9.8  | 9.9  |
| 2       | 9.4 | 8.9 | 9.1  | 9.2      | 8.8  | 9.0  | 11.6     | 11.5 | 11.6 | 10.4    | 10.0 | 10.2 |
| 3       | 9.5 | 9.0 | 9.2  | 9.5      | 9.1  | 9.3  | 11.6     | 11.4 | 11.5 | 11.0    | 10.5 | 10.7 |
| 4       | 9.4 | 9.0 | 9.2  | 9.5      | 9.2  | 9.3  | 11.7     | 10.6 | 11.6 | 11.2    | 11.0 | 11.1 |
| 5       | 9.3 | 8.9 | 9.1  | ---      | ---  | ---  | 11.8     | 11.7 | 11.8 | 11.7    | 11.3 | 11.5 |
| 6       | 9.2 | 8.9 | 9.0  | ---      | ---  | ---  | 12.1     | 11.8 | 11.9 | 11.9    | 11.7 | 11.8 |
| 7       | 9.1 | 8.8 | 8.9  | ---      | ---  | ---  | 12.5     | 12.1 | 12.3 | 12.1    | 12.0 | 12.0 |
| 8       | 8.9 | 8.3 | 8.8  | ---      | ---  | ---  | 12.8     | 12.5 | 12.7 | 12.2    | 12.1 | 12.2 |
| 9       | 8.9 | 8.7 | 8.8  | ---      | ---  | ---  | 12.9     | 12.8 | 12.8 | 12.4    | 12.1 | 12.3 |
| 10      | 8.9 | 8.8 | 8.8  | ---      | ---  | ---  | 12.9     | 12.6 | 12.8 | 12.5    | 12.4 | 12.5 |
| 11      | 8.9 | 8.8 | 8.8  | ---      | ---  | ---  | 12.6     | 12.3 | 12.5 | 12.6    | 12.4 | 12.5 |
| 12      | 8.9 | 8.6 | 8.7  | ---      | ---  | ---  | 12.3     | 11.9 | 12.1 | 12.8    | 12.6 | 12.7 |
| 13      | 8.8 | 8.5 | 8.6  | ---      | ---  | ---  | 12.0     | 11.7 | 11.9 | 13.0    | 12.8 | 12.9 |
| 14      | 8.7 | 8.4 | 8.6  | ---      | ---  | ---  | 11.7     | 11.4 | 11.6 | 13.1    | 13.0 | 13.0 |
| 15      | 8.7 | 8.3 | 8.5  | ---      | ---  | ---  | 11.4     | 11.2 | 11.3 | 13.3    | 13.0 | 13.2 |
| 16      | 8.7 | 8.3 | 8.5  | 11.9     | 11.6 | 11.8 | 11.3     | 11.0 | 11.1 | 13.5    | 13.2 | 13.4 |
| 17      | 8.6 | 8.2 | 8.4  | 12.0     | 11.8 | 11.9 | 11.0     | 10.5 | 10.9 | 13.5    | 13.2 | 13.4 |
| 18      | 8.6 | 8.2 | 8.3  | 12.0     | 11.6 | 11.9 | 10.8     | 10.6 | 10.7 | 13.5    | 13.4 | 13.4 |
| 19      | 8.5 | 8.1 | 8.3  | ---      | ---  | ---  | 10.6     | 10.5 | 10.5 | 13.4    | 13.3 | 13.4 |
| 20      | 8.5 | 8.0 | 8.3  | ---      | ---  | ---  | 10.5     | 10.3 | 10.4 | 13.7    | 13.3 | 13.5 |
| 21      | 8.3 | 7.7 | 8.1  | ---      | ---  | ---  | 10.3     | 10.1 | 10.2 | 13.9    | 13.7 | 13.8 |
| 22      | 8.3 | 8.1 | 8.2  | 12.1     | 11.8 | 12.0 | 10.3     | 10.1 | 10.2 | 13.9    | 13.8 | 13.8 |
| 23      | 8.6 | 8.2 | 8.4  | 12.3     | 12.0 | 12.2 | 10.6     | 10.3 | 10.5 | 13.9    | 13.7 | 13.8 |
| 24      | 8.5 | 7.0 | 7.5  | 12.4     | 12.3 | 12.3 | 10.9     | 10.7 | 10.8 | ---     | ---  | ---  |
| 25      | 8.5 | 6.9 | 7.9  | 12.5     | 12.4 | 12.5 | 11.6     | 10.9 | 11.2 | ---     | ---  | ---  |
| 26      | 9.0 | 8.0 | 8.6  | 12.5     | 12.4 | 12.5 | 11.6     | 11.5 | 11.6 | ---     | ---  | ---  |
| 27      | 9.0 | 8.8 | 8.8  | 12.4     | 12.1 | 12.3 | 11.6     | 11.5 | 11.6 | ---     | ---  | ---  |
| 28      | 8.8 | 8.6 | 8.8  | 12.1     | 11.3 | 11.7 | 11.5     | 11.2 | 11.4 | ---     | ---  | ---  |
| 29      | 8.9 | 8.7 | 8.8  | 11.4     | 11.2 | 11.3 | 11.2     | 10.7 | 11.0 | ---     | ---  | ---  |
| 30      | 8.9 | 8.7 | 8.8  | 11.4     | 11.0 | 11.3 | 10.7     | 10.5 | 10.6 | ---     | ---  | ---  |
| 31      | 9.0 | 8.8 | 8.9  | ---      | ---  | ---  | 10.4     | 10.1 | 10.3 | 13.8    | 13.7 | 13.8 |
| MONTH   | 9.5 | 6.9 | 8.6  | ---      | ---  | ---  | 12.9     | 10.1 | 11.4 | ---     | ---  | ---  |

## CUMBERLAND RIVER BASIN

89

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN | MEAN | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|-------|------|-----|------|-----|-----|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |     | MAY  |     |     |      |
| 1        | 13.9 | 13.5 | 13.7  | 11.3 | 11.0 | 11.2  | 9.9  | 9.1 | 9.3  | 8.6 | 8.3 | 8.4  |
| 2        | 13.4 | 13.1 | 13.3  | 11.4 | 11.3 | 11.3  | 9.8  | 9.3 | 9.5  | 8.5 | 8.2 | 8.3  |
| 3        | 13.7 | 13.4 | 13.6  | 11.5 | 11.4 | 11.4  | 9.5  | 9.1 | 9.3  | 8.8 | 8.5 | 8.7  |
| 4        | 13.8 | 13.7 | 13.8  | 11.3 | 10.9 | 11.2  | 9.7  | 9.1 | 9.5  | 9.1 | 8.8 | 9.0  |
| 5        | 13.8 | 13.3 | 13.6  | 11.1 | 10.9 | 11.0  | 9.5  | 9.1 | 9.2  | 9.2 | 9.0 | 9.1  |
| 6        | 13.3 | 13.0 | 13.2  | 11.1 | 11.0 | 11.0  | 9.8  | 9.1 | 9.3  | 9.2 | 9.0 | 9.1  |
| 7        | 13.3 | 13.0 | 13.2  | 11.2 | 11.0 | 11.1  | 9.5  | 9.1 | 9.3  | 9.2 | 8.9 | 9.0  |
| 8        | 13.6 | 13.4 | 13.5  | 11.2 | 11.1 | 11.1  | 9.5  | 9.2 | 9.3  | 9.3 | 9.0 | 9.1  |
| 9        | 13.9 | 13.7 | 13.8  | 11.2 | 11.1 | 11.2  | 9.8  | 9.4 | 9.6  | 9.3 | 9.0 | 9.1  |
| 10       | 14.0 | 13.7 | 13.9  | 11.3 | 11.0 | 11.2  | 9.9  | 9.6 | 9.7  | 9.2 | 9.0 | 9.1  |
| 11       | 13.8 | 13.0 | 13.5  | 11.1 | 10.8 | 11.0  | 10.2 | 9.6 | 10.0 | 9.1 | 8.9 | 9.0  |
| 12       | 13.1 | 13.0 | 13.0  | 10.9 | 10.7 | 10.8  | 10.2 | 9.8 | 10.0 | 9.1 | 8.1 | 8.8  |
| 13       | 13.3 | 13.2 | 13.2  | 11.0 | 10.7 | 10.9  | 10.0 | 9.7 | 9.9  | 9.1 | 8.7 | 8.9  |
| 14       | 13.4 | 13.3 | 13.3  | 11.0 | 10.7 | 10.9  | 9.7  | 9.0 | 9.4  | 8.9 | 8.7 | 8.8  |
| 15       | 13.5 | 13.3 | 13.4  | 11.2 | 11.0 | 11.1  | 10.4 | 8.9 | 9.7  | 8.8 | 8.6 | 8.7  |
| 16       | 13.6 | 13.0 | 13.4  | 11.3 | 11.1 | 11.2  | 10.2 | 9.7 | 10.1 | 8.8 | 8.6 | 8.7  |
| 17       | 13.2 | 12.7 | 13.0  | 11.4 | 10.6 | 11.0  | 9.7  | 9.5 | 9.6  | 8.9 | 8.6 | 8.7  |
| 18       | 13.2 | 12.9 | 13.0  | 11.5 | 11.1 | 11.3  | 9.8  | 9.4 | 9.6  | 9.1 | 8.7 | 8.9  |
| 19       | 13.0 | 12.8 | 12.9  | 11.4 | 10.9 | 11.2  | 9.6  | 9.4 | 9.5  | 9.1 | 8.9 | 9.0  |
| 20       | 13.0 | 12.6 | 12.8  | 11.5 | 10.9 | 11.2  | 9.5  | 9.3 | 9.4  | 9.1 | 8.8 | 9.0  |
| 21       | 12.7 | 12.4 | 12.6  | 11.5 | 10.9 | 11.2  | 9.4  | 9.1 | 9.3  | 9.1 | 8.8 | 9.0  |
| 22       | 12.5 | 12.1 | 12.4  | 11.4 | 11.0 | 11.3  | 9.3  | 9.0 | 9.2  | 8.9 | 8.6 | 8.8  |
| 23       | 12.1 | 11.6 | 11.9  | 11.3 | 11.1 | 11.2  | 9.1  | 8.8 | 9.0  | 8.7 | 8.5 | 8.6  |
| 24       | 11.6 | 11.1 | 11.4  | 11.2 | 11.1 | 11.2  | 9.0  | 8.8 | 8.9  | 8.7 | 8.6 | 8.7  |
| 25       | 11.1 | 10.9 | 11.0  | 11.4 | 11.2 | 11.3  | 9.1  | 8.8 | 8.9  | 9.0 | 8.7 | 8.9  |
| 26       | 11.0 | 10.8 | 10.9  | 11.5 | 11.2 | 11.3  | 9.1  | 8.7 | 8.9  | 9.2 | 9.0 | 9.1  |
| 27       | 11.0 | 10.8 | 10.9  | 11.4 | 10.7 | 11.3  | 8.9  | 8.6 | 8.7  | 9.0 | 8.8 | 8.9  |
| 28       | 11.1 | 10.9 | 11.0  | 11.2 | 10.9 | 11.0  | 8.9  | 8.6 | 8.7  | 8.9 | 8.6 | 8.7  |
| 29       | ---  | ---  | ---   | 10.9 | 10.7 | 10.8  | 8.8  | 8.5 | 8.6  | 8.9 | 8.4 | 8.6  |
| 30       | ---  | ---  | ---   | 10.7 | 9.5  | 10.2  | 8.7  | 8.4 | 8.5  | 9.0 | 8.3 | 8.7  |
| 31       | ---  | ---  | ---   | 9.5  | 9.2  | 9.4   | ---  | --- | ---  | 8.8 | 8.3 | 8.6  |
| MONTH    | 14.0 | 10.8 | 12.8  | 11.5 | 9.2  | 11.1  | 10.4 | 8.4 | 9.3  | 9.3 | 8.1 | 8.8  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 8.7 | 8.2 | 8.4  | 7.8 | 7.1 | 7.4    | 8.3 | 7.6 | 7.9       | 8.4 | 8.3 | 8.3  |
| 2     | 8.5 | 8.0 | 8.3  | 8.0 | 7.2 | 7.5    | 8.1 | 7.7 | 7.9       | 8.5 | 8.2 | 8.3  |
| 3     | 8.4 | 7.9 | 8.1  | 8.0 | 7.3 | 7.6    | 8.0 | 7.8 | 7.9       | 8.5 | 7.9 | 8.2  |
| 4     | 8.1 | 7.7 | 7.9  | 7.8 | 7.3 | 7.6    | 7.9 | 7.7 | 7.8       | 8.5 | 8.0 | 8.2  |
| 5     | 7.9 | 7.6 | 7.7  | 7.8 | 7.3 | 7.5    | 7.9 | 7.7 | 7.8       | 8.6 | 7.9 | 8.2  |
| 6     | 7.8 | 7.4 | 7.6  | 7.9 | 7.2 | 7.6    | 7.8 | 7.7 | 7.8       | 8.5 | 7.8 | 8.1  |
| 7     | 7.7 | 7.4 | 7.6  | 7.9 | 7.4 | 7.6    | 8.0 | 7.7 | 7.9       | 8.5 | 7.9 | 8.1  |
| 8     | 7.8 | 7.4 | 7.6  | 8.0 | 7.3 | 7.6    | 8.0 | 7.9 | 8.0       | 8.1 | 7.7 | 7.8  |
| 9     | 7.6 | 7.4 | 7.5  | 7.8 | 7.2 | 7.5    | 8.1 | 7.8 | 7.9       | 8.1 | 7.5 | 7.8  |
| 10    | 7.7 | 7.4 | 7.5  | 7.7 | 7.0 | 7.3    | 8.1 | 7.7 | 7.8       | 8.0 | 7.5 | 7.7  |
| 11    | 7.7 | 7.3 | 7.5  | 7.6 | 6.9 | 7.2    | 8.2 | 7.5 | 7.8       | 7.9 | 7.4 | 7.6  |
| 12    | 7.5 | 7.2 | 7.4  | 7.2 | 6.8 | 7.0    | 8.1 | 7.2 | 7.6       | 7.9 | 7.4 | 7.6  |
| 13    | 7.8 | 7.4 | 7.7  | 7.3 | 6.8 | 7.0    | 7.8 | 7.1 | 7.4       | 8.1 | 7.5 | 7.8  |
| 14    | 8.3 | 7.9 | 8.1  | 7.4 | 6.9 | 7.1    | 7.7 | 6.9 | 7.3       | 8.3 | 7.7 | 8.0  |
| 15    | 8.3 | 8.0 | 8.2  | 7.4 | 6.9 | 7.1    | 7.3 | 6.7 | 7.0       | 8.4 | 7.9 | 8.1  |
| 16    | 8.4 | 8.0 | 8.2  | 7.5 | 7.0 | 7.2    | 7.1 | 6.5 | 6.8       | 8.7 | 8.1 | 8.3  |
| 17    | 8.3 | 7.9 | 8.1  | 7.7 | 7.2 | 7.4    | 7.3 | 4.5 | 6.5       | 8.7 | 8.2 | 8.4  |
| 18    | 8.3 | 7.9 | 8.1  | 7.8 | 7.2 | 7.5    | 6.8 | 4.9 | 6.2       | 8.7 | 8.2 | 8.4  |
| 19    | 8.3 | 7.8 | 8.1  | 7.7 | 7.2 | 7.4    | 6.8 | 6.3 | 6.7       | 8.7 | 8.2 | 8.4  |
| 20    | 8.6 | 7.9 | 8.3  | 7.5 | 7.0 | 7.2    | 7.6 | 6.7 | 7.3       | 8.5 | 8.0 | 8.2  |
| 21    | 8.6 | 8.1 | 8.3  | 7.7 | 7.0 | 7.3    | 8.0 | 7.3 | 7.7       | 8.3 | 7.8 | 8.0  |
| 22    | 8.4 | 8.0 | 8.2  | 7.6 | 7.0 | 7.2    | 8.5 | 7.4 | 8.3       | 8.1 | 7.6 | 7.8  |
| 23    | 8.4 | 7.9 | 8.1  | 7.4 | 6.9 | 7.1    | 8.5 | 8.3 | 8.4       | 7.9 | 7.4 | 7.6  |
| 24    | 8.2 | 7.7 | 7.9  | 7.5 | 7.0 | 7.2    | 8.6 | 8.3 | 8.4       | 7.8 | 7.2 | 7.5  |
| 25    | 8.1 | 7.5 | 7.8  | 7.6 | 7.1 | 7.3    | 8.5 | 8.3 | 8.4       | 7.7 | 7.3 | 7.5  |
| 26    | 7.9 | 7.3 | 7.6  | 7.4 | 7.0 | 7.2    | 8.9 | 8.2 | 8.4       | 7.5 | 6.7 | 7.1  |
| 27    | 7.8 | 7.2 | 7.4  | 8.1 | 7.1 | 7.5    | 9.0 | 8.8 | 8.9       | 7.0 | 6.6 | 6.8  |
| 28    | 7.8 | 7.1 | 7.4  | 8.4 | 8.1 | 8.3    | 8.9 | 8.7 | 8.8       | 7.3 | 7.0 | 7.2  |
| 29    | 7.8 | 7.1 | 7.4  | 8.2 | 8.0 | 8.1    | 8.7 | 8.4 | 8.6       | 7.5 | 7.3 | 7.4  |
| 30    | 7.9 | 7.1 | 7.4  | 8.0 | 7.6 | 7.9    | 8.5 | 8.3 | 8.4       | 7.6 | 7.3 | 7.4  |
| 31    | --- | --- | ---  | 7.8 | 7.6 | 7.7    | 8.5 | 8.3 | 8.4       | --- | --- | ---  |
| MONTH | 8.7 | 7.1 | 7.9  | 8.4 | 6.8 | 7.4    | 9.0 | 4.5 | 7.8       | 8.7 | 6.6 | 7.9  |

## CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN      | MAX | MIN      | MAX | MIN     | MAX | MIN      | MAX | MIN   | MAX | MIN |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |     |
| 1       | 4   | 3        | 7   | 4        | 15  | 9       | 30  | 6        | 160 | 10    | 9   | 8   |
| 2       | 4   | 3        | 6   | 4        | 10  | 9       | 60  | 25       | 210 | 50    | 9   | 6   |
| 3       | 6   | 3        | 5   | 3        | 9   | 6       | 60  | 15       | 50  | 20    | 6   | 6   |
| 4       | 7   | 5        | 4   | 3        | 7   | 6       | 15  | 10       | 20  | 10    | 6   | 5   |
| 5       | 7   | 2        | --- | ---      | 6   | 5       | 15  | 10       | 15  | 10    | 7   | 6   |
| 6       | 5   | 3        | --- | ---      | 6   | 5       | 15  | 10       | 20  | 10    | 6   | 5   |
| 7       | 5   | 3        | --- | ---      | 6   | 5       | 10  | 10       | 25  | 15    | 6   | 5   |
| 8       | 25  | 5        | --- | ---      | 9   | 4       | 10  | 6        | 15  | 10    | 6   | 6   |
| 9       | 10  | 5        | --- | ---      | 5   | 4       | 7   | 6        | 10  | 8     | 6   | 4   |
| 10      | 5   | 4        | --- | ---      | 6   | 4       | 7   | 6        | 10  | 9     | 10  | 6   |
| 11      | 5   | 3        | --- | ---      | 4   | 4       | 7   | 6        | 9   | 7     | 10  | 10  |
| 12      | 4   | 3        | --- | ---      | 4   | 4       | 7   | 6        | 15  | 9     | 10  | 8   |
| 13      | 4   | 3        | --- | ---      | 5   | 4       | 8   | 5        | 35  | 15    | 8   | 6   |
| 14      | 4   | 3        | --- | ---      | 7   | 3       | 8   | 5        | 30  | 10    | 7   | 5   |
| 15      | 4   | 3        | --- | ---      | 4   | 2       | 7   | 4        | 10  | 7     | 7   | 5   |
| 16      | 6   | 3        | 10  | 5        | 3   | 2       | 5   | 4        | 9   | 6     | 7   | 5   |
| 17      | 7   | 3        | 6   | 4        | 3   | 2       | 6   | 5        | 9   | 7     | 8   | 6   |
| 18      | 4   | 2        | 130 | 4        | 4   | 2       | 7   | 4        | 9   | 7     | 8   | 5   |
| 19      | 7   | 4        | --- | ---      | 3   | 2       | 5   | 4        | 7   | 6     | 6   | 5   |
| 20      | 45  | 10       | --- | ---      | 4   | 3       | 5   | 5        | 8   | 7     | 6   | 5   |
| 21      | 25  | 10       | --- | ---      | 4   | 2       | 6   | 5        | 9   | 8     | 5   | 5   |
| 22      | 20  | 10       | 25  | 15       | 4   | 2       | 6   | 3        | 10  | 8     | 7   | 5   |
| 23      | 65  | 10       | 20  | 10       | 7   | 4       | 4   | 4        | 8   | 8     | 7   | 5   |
| 24      | 140 | 65       | 10  | 7        | 9   | 7       | --- | ---      | 10  | 8     | 7   | 6   |
| 25      | 80  | 50       | 7   | 6        | 30  | 9       | --- | ---      | 10  | 9     | 7   | 7   |
| 26      | 55  | 25       | 7   | 5        | 60  | 25      | --- | ---      | 10  | 7     | 8   | 6   |
| 27      | 30  | 15       | 7   | 5        | 40  | 10      | --- | ---      | 8   | 6     | 7   | 6   |
| 28      | 15  | 10       | 55  | 5        | 10  | 6       | --- | ---      | 9   | 7     | 6   | 6   |
| 29      | 10  | 7        | 85  | 35       | 7   | 3       | --- | ---      | --- | ---   | 7   | 5   |
| 30      | 8   | 6        | 40  | 15       | 4   | 3       | --- | ---      | --- | ---   | 6   | 5   |
| 31      | 7   | 4        | --- | ---      | 5   | 3       | 15  | 9        | --- | ---   | --- | --- |
| MONTH   | 140 | 2        | --- | ---      | 60  | 2       | --- | ---      | 210 | 6     | 10  | 4   |

| DAY   | MAX | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
| 1     | --- | --- | 8   | 8    | 4   | 2    | 2   | 1      | 950 | 45        | 20  | 10  |
| 2     | --- | --- | 8   | 8    | 5   | 2    | 2   | 1      | 110 | 45        | 15  | 10  |
| 3     | --- | --- | 25  | 8    | 7   | 3    | 2   | 1      | 410 | 110       | 15  | 10  |
| 4     | --- | --- | 20  | 10   | 20  | 1    | 3   | 2      | 240 | 90        | 15  | 9   |
| 5     | --- | --- | 20  | 15   | 3   | 1    | 20  | 2      | 120 | 50        | 9   | 6   |
| 6     | --- | --- | 15  | 8    | 3   | 1    | 2   | 0      | 55  | 35        | 7   | 4   |
| 7     | --- | --- | 10  | 7    | 3   | 2    | 2   | 1      | 35  | 25        | 5   | 3   |
| 8     | --- | --- | 10  | 5    | 25  | 3    | 15  | 0      | 30  | 20        | 7   | 4   |
| 9     | --- | --- | 5   | 2    | 35  | 2    | 2   | 0      | 25  | 15        | 5   | 2   |
| 10    | --- | --- | 2   | 1    | 3   | 2    | 2   | 1      | 20  | 10        | 3   | 2   |
| 11    | --- | --- | 2   | 1    | 4   | 2    | 2   | 0      | 10  | 7         | 2   | 1   |
| 12    | --- | --- | 800 | 2    | 20  | 4    | 2   | 1      | 8   | 4         | 2   | 1   |
| 13    | --- | --- | 65  | 10   | 15  | 4    | 5   | 1      | 6   | 4         | 3   | 1   |
| 14    | --- | --- | 55  | 10   | 15  | 15   | 4   | 1      | 6   | 3         | 1   | 0   |
| 15    | --- | --- | 20  | 10   | 15  | 7    | 3   | 1      | 6   | 3         | 1   | 0   |
| 16    | --- | --- | 10  | 6    | 20  | 8    | 3   | 1      | 5   | 3         | 2   | 0   |
| 17    | --- | --- | 6   | 4    | 30  | 1    | 3   | 2      | 230 | 3         | 3   | 0   |
| 18    | 9   | 8   | 6   | 4    | 4   | 4    | 3   | 1      | 800 | 190       | 6   | 1   |
| 19    | 8   | 8   | 5   | 4    | 25  | 2    | 7   | 3      | 290 | 70        | 5   | 2   |
| 20    | 9   | 8   | 4   | 2    | 15  | 1    | 10  | 7      | 70  | 30        | 7   | 1   |
| 21    | 8   | 8   | 3   | 2    | 3   | 2    | 10  | 8      | 170 | 20        | 3   | 1   |
| 22    | 9   | 8   | 3   | 2    | 3   | 1    | 8   | 6      | 30  | 20        | 3   | 2   |
| 23    | 8   | 8   | 4   | 2    | 3   | 1    | 7   | 6      | 20  | 10        | 4   | 2   |
| 24    | 8   | 8   | 9   | 3    | 2   | 1    | 6   | 5      | 10  | 9         | 4   | 3   |
| 25    | 8   | 8   | 10  | 6    | 2   | 1    | 5   | 3      | 220 | 9         | 3   | 2   |
| 26    | 8   | 8   | 6   | 5    | 3   | 0    | 4   | 2      | 240 | 55        | 9   | 2   |
| 27    | 8   | 8   | 5   | 3    | 2   | 1    | 850 | 2      | 270 | 120       | 10  | 4   |
| 28    | 8   | 8   | 4   | 1    | 2   | 0    | 170 | 95     | 250 | 85        | 4   | 2   |
| 29    | 8   | 8   | 3   | 1    | 2   | 1    | 230 | 110    | 80  | 30        | 6   | 3   |
| 30    | 8   | 8   | 3   | 1    | 2   | 1    | 190 | 100    | 30  | 20        | 7   | 4   |
| 31    | --- | --- | 3   | 1    | --- | ---  | 110 | 55     | 20  | 15        | --- | --- |
| MONTH | --- | --- | 800 | 1    | 35  | 0    | 850 | 0      | 950 | 3         | 20  | 0   |

## CUMBERLAND RIVER BASIN

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03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      |                                     | NOVEMBER                   |                                      |                                     | DECEMBER                   |                                      |                                     |
| 1       | 37                         | 20                                   | 2.0                                 | 430                        | 13                                   | 15                                  | 2910                       | 41                                   | 322                                 |
| 2       | 41                         | 13                                   | 1.4                                 | 393                        | 10                                   | 11                                  | 2300                       | 34                                   | 211                                 |
| 3       | 40                         | 12                                   | 1.3                                 | 410                        | 9                                    | 10                                  | 1890                       | 41                                   | 209                                 |
| 4       | 40                         | 8                                    | .86                                 | 439                        | 61                                   | 72                                  | 1560                       | 29                                   | 122                                 |
| 5       | 37                         | 7                                    | .70                                 | 439                        | 10                                   | 12                                  | 1290                       | 34                                   | 118                                 |
| 6       | 35                         | 6                                    | .57                                 | 432                        | 10                                   | 12                                  | 1390                       | 13                                   | 49                                  |
| 7       | 35                         | 10                                   | .95                                 | 414                        | 10                                   | 11                                  | 1620                       | 20                                   | 87                                  |
| 8       | 67                         | 12                                   | 2.2                                 | 374                        | 10                                   | 10                                  | 1400                       | 20                                   | 76                                  |
| 9       | 169                        | 8                                    | 3.7                                 | 344                        | 10                                   | 9.3                                 | 1340                       | 21                                   | 76                                  |
| 10      | 321                        | 11                                   | 9.5                                 | 408                        | 40                                   | 44                                  | 1270                       | 20                                   | 69                                  |
| 11      | 246                        | 6                                    | 4.0                                 | 1940                       | 100                                  | 524                                 | 1200                       | 16                                   | 52                                  |
| 12      | 151                        | 5                                    | 2.0                                 | 2500                       | 50                                   | 337                                 | 1080                       | 27                                   | 79                                  |
| 13      | 113                        | 6                                    | 1.8                                 | 1420                       | 20                                   | 77                                  | 980                        | 68                                   | 180                                 |
| 14      | 94                         | 6                                    | 1.5                                 | 970                        | 20                                   | 52                                  | 889                        | 11                                   | 26                                  |
| 15      | 89                         | 7                                    | 1.7                                 | 775                        | 24                                   | 50                                  | 796                        | 20                                   | 43                                  |
| 16      | 76                         | 13                                   | 2.7                                 | 790                        | 40                                   | 85                                  | 725                        | 13                                   | 25                                  |
| 17      | 70                         | 5                                    | .95                                 | 926                        | 15                                   | 38                                  | 681                        | 24                                   | 44                                  |
| 18      | 66                         | 3                                    | .53                                 | 947                        | 34                                   | 130                                 | 670                        | 21                                   | 38                                  |
| 19      | 66                         | 5                                    | .89                                 | 13000                      | 1080                                 | 50000                               | 762                        | 27                                   | 56                                  |
| 20      | 497                        | 43                                   | 67                                  | 8500                       | 563                                  | 15600                               | 976                        | 17                                   | 45                                  |
| 21      | 1370                       | 58                                   | 230                                 | 3460                       | 117                                  | 1190                                | 1240                       | 15                                   | 50                                  |
| 22      | 787                        | 33                                   | 70                                  | 2210                       | 60                                   | 358                                 | 2080                       | 15                                   | 84                                  |
| 23      | 1010                       | 50                                   | 169                                 | 1630                       | 50                                   | 220                                 | 2700                       | 22                                   | 160                                 |
| 24      | 5420                       | 246                                  | 3940                                | 1260                       | 30                                   | 102                                 | 2300                       | 19                                   | 118                                 |
| 25      | 2390                       | 107                                  | 716                                 | 1050                       | 12                                   | 34                                  | 4180                       | 37                                   | 459                                 |
| 26      | 1220                       | 60                                   | 198                                 | 898                        | 10                                   | 24                                  | 5020                       | 90                                   | 1220                                |
| 27      | 791                        | 42                                   | 90                                  | 787                        | 10                                   | 21                                  | 3370                       | 39                                   | 355                                 |
| 28      | 595                        | 24                                   | 39                                  | 4990                       | 122                                  | 2960                                | 2510                       | 22                                   | 149                                 |
| 29      | 513                        | 67                                   | 93                                  | 7440                       | 233                                  | 5240                                | 2010                       | 14                                   | 76                                  |
| 30      | 535                        | 22                                   | 32                                  | 3800                       | 64                                   | 680                                 | 1700                       | 13                                   | 60                                  |
| 31      | 509                        | 17                                   | 23                                  | ---                        | ---                                  | ---                                 | 2440                       | 19                                   | 125                                 |
| TOTAL   | 17430                      | ---                                  | 5706.25                             | 63376                      | ---                                  | 77928.3                             | 55279                      | ---                                  | 4783                                |
| JANUARY |                            |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
| 1       | 5150                       | 58                                   | 826                                 | 9440                       | 117                                  | 4190                                | 1350                       | 24                                   | 87                                  |
| 2       | 9270                       | 149                                  | 3750                                | 11200                      | 320                                  | 10500                               | 1250                       | 33                                   | 111                                 |
| 3       | 5990                       | 106                                  | 1710                                | 4980                       | 128                                  | 1750                                | 1140                       | 19                                   | 58                                  |
| 4       | 6290                       | 78                                   | 1320                                | 3160                       | 112                                  | 956                                 | 1030                       | 17                                   | 47                                  |
| 5       | 6070                       | 81                                   | 1330                                | 2760                       | 93                                   | 669                                 | 1050                       | 17                                   | 48                                  |
| 6       | 4310                       | 70                                   | 815                                 | 5500                       | 32                                   | 475                                 | 1060                       | 16                                   | 46                                  |
| 7       | 3260                       | 62                                   | 546                                 | 5170                       | 52                                   | 726                                 | 917                        | 18                                   | 45                                  |
| 8       | 2560                       | 40                                   | 276                                 | 3480                       | 41                                   | 385                                 | 861                        | 26                                   | 60                                  |
| 9       | 2030                       | 29                                   | 159                                 | 2570                       | 34                                   | 236                                 | 1390                       | 30                                   | 113                                 |
| 10      | 1690                       | 19                                   | 87                                  | 2210                       | 27                                   | 161                                 | 2240                       | 40                                   | 242                                 |
| 11      | 1550                       | 18                                   | 75                                  | 2080                       | 25                                   | 140                                 | 2020                       | 40                                   | 218                                 |
| 12      | 1390                       | 27                                   | 101                                 | 4320                       | 24                                   | 280                                 | 1890                       | 40                                   | 204                                 |
| 13      | 1200                       | 16                                   | 52                                  | 4450                       | 39                                   | 469                                 | 1740                       | 41                                   | 193                                 |
| 14      | 1100                       | 16                                   | 48                                  | 3250                       | 31                                   | 272                                 | 1490                       | 47                                   | 189                                 |
| 15      | 1030                       | 15                                   | 42                                  | 2610                       | 18                                   | 127                                 | 1340                       | 46                                   | 166                                 |
| 16      | 876                        | 62                                   | 147                                 | 2090                       | 14                                   | 79                                  | 1180                       | 40                                   | 127                                 |
| 17      | 922                        | 70                                   | 174                                 | 1940                       | 13                                   | 68                                  | 1060                       | 13                                   | 37                                  |
| 18      | 1060                       | 31                                   | 89                                  | 1880                       | 19                                   | 96                                  | 970                        | 16                                   | 42                                  |
| 19      | 1050                       | 15                                   | 43                                  | 2280                       | 20                                   | 123                                 | 866                        | 12                                   | 28                                  |
| 20      | 953                        | 15                                   | 39                                  | 3330                       | 30                                   | 270                                 | 785                        | 11                                   | 23                                  |
| 21      | 798                        | 15                                   | 32                                  | 3360                       | 30                                   | 272                                 | 743                        | 10                                   | 20                                  |
| 22      | 835                        | 10                                   | 23                                  | 3120                       | 33                                   | 278                                 | 796                        | 24                                   | 52                                  |
| 23      | 925                        | 10                                   | 25                                  | 2960                       | 26                                   | 208                                 | 926                        | 36                                   | 90                                  |
| 24      | 880                        | 10                                   | 24                                  | 2660                       | 29                                   | 208                                 | 1070                       | 37                                   | 107                                 |
| 25      | 865                        | 9                                    | 21                                  | 2260                       | 34                                   | 207                                 | 1540                       | 40                                   | 166                                 |
| 26      | 800                        | 7                                    | 15                                  | 1970                       | 30                                   | 160                                 | 1560                       | 40                                   | 168                                 |
| 27      | 750                        | 10                                   | 20                                  | 1810                       | 31                                   | 151                                 | 1450                       | 39                                   | 153                                 |
| 28      | 700                        | 10                                   | 19                                  | 1530                       | 42                                   | 174                                 | 1360                       | 52                                   | 191                                 |
| 29      | 670                        | 10                                   | 18                                  | ---                        | ---                                  | ---                                 | 1280                       | 41                                   | 142                                 |
| 30      | 650                        | 10                                   | 18                                  | ---                        | ---                                  | ---                                 | 1160                       | 22                                   | 69                                  |
| 31      | 1500                       | 20                                   | 81                                  | ---                        | ---                                  | ---                                 | 1170                       | 11                                   | 35                                  |
| TOTAL   | 67124                      | ---                                  | 11925                               | 98370                      | ---                                  | 23630                               | 38684                      | ---                                  | 3277                                |



## CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 1910                       | 14                                   | 72                                  | 434                        | 22                                   | 26                                  | 291                        | 16                                   | 13                                  |
| 2     | 2000                       | 12                                   | 65                                  | 540                        | 21                                   | 31                                  | 259                        | 15                                   | 10                                  |
| 3     | 1700                       | 16                                   | 73                                  | 1760                       | 34                                   | 162                                 | 280                        | 17                                   | 13                                  |
| 4     | 1470                       | 21                                   | 83                                  | 1510                       | 25                                   | 102                                 | 316                        | 17                                   | 15                                  |
| 5     | 1260                       | 15                                   | 51                                  | 1000                       | 27                                   | 73                                  | 299                        | 16                                   | 13                                  |
| 6     | 2000                       | 28                                   | 219                                 | 756                        | 26                                   | 53                                  | 284                        | 12                                   | 9.2                                 |
| 7     | 2700                       | 58                                   | 423                                 | 732                        | 21                                   | 42                                  | 517                        | 16                                   | 22                                  |
| 8     | 2040                       | 125                                  | 688                                 | 735                        | 19                                   | 38                                  | 651                        | 16                                   | 28                                  |
| 9     | 1740                       | 29                                   | 136                                 | 623                        | 13                                   | 22                                  | 818                        | 19                                   | 42                                  |
| 10    | 1470                       | 18                                   | 71                                  | 525                        | 17                                   | 24                                  | 527                        | 13                                   | 18                                  |
| 11    | 1280                       | 14                                   | 48                                  | 477                        | 11                                   | 14                                  | 460                        | 11                                   | 14                                  |
| 12    | 1150                       | 12                                   | 37                                  | 788                        | 581                                  | 2490                                | 821                        | 13                                   | 29                                  |
| 13    | 1020                       | 11                                   | 30                                  | 1900                       | 71                                   | 373                                 | 1150                       | 18                                   | 56                                  |
| 14    | 951                        | 17                                   | 44                                  | 1760                       | 60                                   | 285                                 | 813                        | 20                                   | 44                                  |
| 15    | 997                        | 13                                   | 35                                  | 1120                       | 26                                   | 79                                  | 550                        | 17                                   | 25                                  |
| 16    | 2020                       | 19                                   | 104                                 | 752                        | 20                                   | 41                                  | 416                        | 12                                   | 13                                  |
| 17    | 2150                       | 20                                   | 116                                 | 661                        | 16                                   | 29                                  | 334                        | 19                                   | 17                                  |
| 18    | 1770                       | 26                                   | 124                                 | 754                        | 14                                   | 29                                  | 320                        | 11                                   | 9.5                                 |
| 19    | 1460                       | 20                                   | 79                                  | 719                        | 13                                   | 25                                  | 309                        | 18                                   | 15                                  |
| 20    | 1240                       | 16                                   | 54                                  | 573                        | 11                                   | 17                                  | 362                        | 13                                   | 13                                  |
| 21    | 1070                       | 16                                   | 46                                  | 538                        | 11                                   | 16                                  | 277                        | 9                                    | 6.7                                 |
| 22    | 927                        | 13                                   | 33                                  | 651                        | 8                                    | 14                                  | 219                        | 7                                    | 4.1                                 |
| 23    | 802                        | 16                                   | 35                                  | 932                        | 10                                   | 25                                  | 189                        | 14                                   | 7.1                                 |
| 24    | 718                        | 15                                   | 29                                  | 1080                       | 13                                   | 38                                  | 167                        | 16                                   | 7.2                                 |
| 25    | 667                        | 15                                   | 27                                  | 1200                       | 30                                   | 97                                  | 150                        | 14                                   | 5.7                                 |
| 26    | 597                        | 16                                   | 26                                  | 1010                       | 19                                   | 52                                  | 139                        | 11                                   | 4.1                                 |
| 27    | 537                        | 14                                   | 20                                  | 745                        | 11                                   | 22                                  | 133                        | 16                                   | 5.7                                 |
| 28    | 551                        | 24                                   | 36                                  | 565                        | 11                                   | 17                                  | 130                        | 11                                   | 3.9                                 |
| 29    | 548                        | 15                                   | 22                                  | 472                        | 10                                   | 13                                  | 117                        | 10                                   | 3.2                                 |
| 30    | 492                        | 37                                   | 49                                  | 402                        | 12                                   | 13                                  | 102                        | 12                                   | 3.3                                 |
| 31    | ---                        | ---                                  | ---                                 | 336                        | 16                                   | 15                                  | ---                        | ---                                  | ---                                 |
| TOTAL | 39237                      | ---                                  | 2875                                | 26050                      | ---                                  | 4277                                | 11400                      | ---                                  | 469.7                               |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 93                         | 12                                   | 3.0                                 | 1640                       | 386                                  | 1790                                | 1160                       | 38                                   | 119                                 |
| 2     | 90                         | 10                                   | 2.4                                 | 2760                       | 128                                  | 914                                 | 764                        | 30                                   | 62                                  |
| 3     | 95                         | 15                                   | 3.8                                 | 1380                       | 266                                  | 977                                 | 560                        | 32                                   | 48                                  |
| 4     | 196                        | 20                                   | 11                                  | 804                        | 176                                  | 382                                 | 452                        | 38                                   | 46                                  |
| 5     | 190                        | 12                                   | 6.2                                 | 543                        | 80                                   | 117                                 | 460                        | 23                                   | 29                                  |
| 6     | 172                        | 14                                   | 6.5                                 | 403                        | 48                                   | 52                                  | 391                        | 24                                   | 25                                  |
| 7     | 157                        | 11                                   | 4.7                                 | 331                        | 38                                   | 34                                  | 410                        | 22                                   | 24                                  |
| 8     | 128                        | 11                                   | 3.8                                 | 364                        | 34                                   | 33                                  | 692                        | 27                                   | 50                                  |
| 9     | 116                        | 6                                    | 1.9                                 | 376                        | 26                                   | 26                                  | 419                        | 20                                   | 23                                  |
| 10    | 102                        | 14                                   | 3.9                                 | 336                        | 22                                   | 20                                  | 315                        | 16                                   | 14                                  |
| 11    | 88                         | 7                                    | 1.7                                 | 263                        | 20                                   | 14                                  | 259                        | 16                                   | 11                                  |
| 12    | 327                        | 14                                   | 12                                  | 212                        | 16                                   | 9.2                                 | 233                        | 16                                   | 10                                  |
| 13    | 313                        | 13                                   | 11                                  | 189                        | 13                                   | 6.6                                 | 215                        | 16                                   | 9.3                                 |
| 14    | 328                        | 12                                   | 11                                  | 168                        | 11                                   | 5.0                                 | 179                        | 15                                   | 7.2                                 |
| 15    | 286                        | 19                                   | 15                                  | 303                        | 12                                   | 9.8                                 | 156                        | 18                                   | 7.6                                 |
| 16    | 460                        | 12                                   | 15                                  | 374                        | 9                                    | 9.1                                 | 142                        | 16                                   | 6.1                                 |
| 17    | 423                        | 12                                   | 14                                  | 3060                       | 156                                  | 3150                                | 128                        | 16                                   | 5.5                                 |
| 18    | 279                        | 20                                   | 15                                  | 9400                       | 847                                  | 22200                               | 119                        | 20                                   | 6.4                                 |
| 19    | 200                        | 14                                   | 7.6                                 | 3030                       | 209                                  | 1810                                | 112                        | 20                                   | 6.0                                 |
| 20    | 151                        | 21                                   | 8.6                                 | 1760                       | 68                                   | 323                                 | 106                        | 25                                   | 7.2                                 |
| 21    | 125                        | 17                                   | 5.7                                 | 1870                       | 116                                  | 586                                 | 100                        | 15                                   | 4.1                                 |
| 22    | 145                        | 16                                   | 6.3                                 | 1370                       | 68                                   | 252                                 | 94                         | 14                                   | 3.6                                 |
| 23    | 271                        | 22                                   | 16                                  | 891                        | 64                                   | 154                                 | 88                         | 14                                   | 3.3                                 |
| 24    | 359                        | 15                                   | 15                                  | 729                        | 54                                   | 106                                 | 89                         | 17                                   | 4.1                                 |
| 25    | 257                        | 25                                   | 17                                  | 1550                       | 74                                   | 356                                 | 94                         | 15                                   | 3.8                                 |
| 26    | 246                        | 14                                   | 9.3                                 | 3750                       | 174                                  | 2020                                | 155                        | 16                                   | 6.7                                 |
| 27    | 3300                       | 305                                  | 3190                                | 3300                       | 275                                  | 2410                                | 822                        | 24                                   | 53                                  |
| 28    | 3180                       | 219                                  | 2010                                | 1790                       | 192                                  | 965                                 | 612                        | 19                                   | 31                                  |
| 29    | 1300                       | 172                                  | 604                                 | 1150                       | 59                                   | 183                                 | 366                        | 21                                   | 21                                  |
| 30    | 765                        | 171                                  | 353                                 | 842                        | 70                                   | 159                                 | 249                        | 16                                   | 11                                  |
| 31    | 558                        | 90                                   | 136                                 | 1080                       | 44                                   | 128                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 14700                      | ---                                  | 6520.4                              | 46018                      | ---                                  | 39200.7                             | 9941                       | ---                                  | 657.9                               |

TOTAL LOAD FOR YEAR: 181250.25

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN

LOCATION.--Lat 36°24'58", Long 85°01'35", Fentress County, Hydrologic Unit 05130105, on right bank 200 ft upstream from bridge on State Highway 52, 0.5 mi upstream from Poplar Cove Creek, 5.3 mi west of Jamestown, and at mile 12.7.

DRAINAGE AREA.--202 mi<sup>2</sup>, includes 6.0 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.30 ft Sandy Hook Datum. Feb. 24 to Apr. 7, 1943, nonrecording gage 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--43 years, 422 ft<sup>3</sup>/s, 28.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft<sup>3</sup>/s, May 27, 1973, gage height, 30.46 ft, from rating curve extended above 32,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 3.6 ft<sup>3</sup>/s, Sept. 26-28, 1948; minimum gage height, 0.55 ft, Sept. 12-17, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in march 1929 reached a stage of about 30.7 ft, from flood profile by U.S. Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft<sup>3</sup>/s, and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0845 | *5,350                            | *10.23              |      |      |                                   |                     |

Minimum discharge, 5.2 ft<sup>3</sup>/s, Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT    | NOV   | DEC   | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL   | AUG  | SEP  |
|-------|--------|-------|-------|-------|-------|-------|------|------|------|-------|------|------|
| 1     | 6.3    | 109   | 654   | 2190  | 2790  | 305   | 468  | 124  | 48   | 16    | 52   | 65   |
| 2     | 6.2    | 109   | 479   | 2780  | 1850  | 282   | 429  | 142  | 45   | 165   | 152  | 50   |
| 3     | 6.0    | 110   | 392   | 1640  | 1020  | 254   | 380  | 340  | 56   | 69    | 65   | 42   |
| 4     | 5.8    | 98    | 322   | 1910  | 709   | 235   | 334  | 341  | 48   | 40    | 39   | 35   |
| 5     | 5.5    | 92    | 267   | 1420  | 793   | 258   | 297  | 267  | 41   | 31    | 28   | 57   |
| 6     | 5.4    | 98    | 295   | 977   | 1490  | 278   | 382  | 212  | 37   | 27    | 23   | 50   |
| 7     | 5.3    | 87    | 311   | 798   | 1120  | 247   | 398  | 180  | 40   | 23    | 22   | 39   |
| 8     | 7.9    | 75    | 274   | 612   | 801   | 244   | 389  | 170  | 67   | 21    | 29   | 33   |
| 9     | 13     | 67    | 261   | 487   | 610   | 673   | 359  | 144  | 52   | 19    | 32   | 30   |
| 10    | 13     | 91    | 256   | 419   | 507   | 793   | 321  | 122  | 41   | 17    | 71   | 31   |
| 11    | 14     | 246   | 244   | 395   | 605   | 634   | 288  | 109  | 37   | 15    | 56   | 28   |
| 12    | 13     | 253   | 224   | 357   | 1490  | 534   | 257  | 107  | 143  | 15    | 33   | 27   |
| 13    | 12     | 187   | 209   | 319   | 1080  | 459   | 232  | 199  | 155  | 14    | 25   | 24   |
| 14    | 11     | 144   | 190   | 297   | 806   | 394   | 219  | 182  | 98   | 13    | 81   | 21   |
| 15    | 10     | 127   | 171   | 273   | 637   | 350   | 308  | 150  | 68   | 13    | 49   | 19   |
| 16    | 8.6    | 232   | 157   | 237   | 484   | 309   | 555  | 112  | 52   | 14    | 36   | 17   |
| 17    | 9.3    | 270   | 148   | 265   | 440   | 280   | 479  | 99   | 45   | 13    | 801  | 16   |
| 18    | 9.4    | 247   | 142   | 299   | 442   | 250   | 389  | 104  | 54   | 11    | 700  | 16   |
| 19    | 9.7    | 3070  | 163   | 295   | 686   | 222   | 333  | 96   | 61   | 11    | 280  | 15   |
| 20    | 81     | 1290  | 188   | 278   | 923   | 204   | 286  | 78   | 54   | 9.8   | 158  | 15   |
| 21    | 178    | 640   | 316   | 222   | 852   | 193   | 251  | 70   | 41   | 8.7   | 152  | 14   |
| 22    | 200    | 407   | 707   | 243   | 775   | 221   | 219  | 89   | 35   | 11    | 103  | 14   |
| 23    | 430    | 314   | 704   | 245   | 689   | 239   | 193  | 110  | 31   | 13    | 80   | 13   |
| 24    | 1120   | 249   | 539   | 237   | 584   | 317   | 176  | 118  | 28   | 12    | 71   | 13   |
| 25    | 406    | 207   | 1420  | 240   | 496   | 399   | 161  | 116  | 27   | 12    | 248  | 12   |
| 26    | 240    | 177   | 1140  | 216   | 435   | 378   | 142  | 93   | 26   | 14    | 211  | 31   |
| 27    | 150    | 158   | 757   | 192   | 390   | 349   | 135  | 74   | 25   | 37    | 171  | 123  |
| 28    | 109    | 1740  | 548   | 193   | 339   | 323   | 146  | 63   | 21   | 27    | 117  | 76   |
| 29    | 149    | 1370  | 430   | 178   | ---   | 297   | 163  | 73   | 18   | 20    | 90   | 44   |
| 30    | 195    | 784   | 362   | 167   | ---   | 267   | 146  | 69   | 17   | 18    | 72   | 35   |
| 31    | 147    | ---   | 945   | 912   | ---   | 307   | ---  | 56   | ---  | 19    | 80   | ---  |
| TOTAL | 3576.4 | 13048 | 13215 | 19293 | 23843 | 10495 | 8835 | 4209 | 1511 | 748.5 | 4127 | 1005 |
| MEAN  | 115    | 435   | 426   | 622   | 852   | 339   | 295  | 136  | 50.4 | 24.1  | 133  | 33.5 |
| MAX   | 1120   | 3070  | 1420  | 2780  | 2790  | 793   | 555  | 341  | 155  | 165   | 801  | 123  |
| MIN   | 5.3    | 67    | 142   | 167   | 339   | 193   | 135  | 56   | 17   | 8.7   | 22   | 12   |
| CFSM  | .57    | 2.15  | 2.11  | 3.08  | 4.22  | 1.68  | 1.46 | .67  | .25  | .12   | .66  | .17  |
| IN.   | .66    | 2.40  | 2.43  | 3.55  | 4.39  | 1.93  | 1.63 | .78  | .28  | .14   | .76  | .19  |

|             |       |          |      |     |     |       |     |     |      |      |     |       |
|-------------|-------|----------|------|-----|-----|-------|-----|-----|------|------|-----|-------|
| CAL YR 1984 | TOTAL | 189713.0 | MEAN | 518 | MAX | 19700 | MIN | 5.3 | CFSM | 2.56 | IN. | 34.94 |
| WTR YR 1985 | TOTAL | 103905.9 | MEAN | 285 | MAX | 3070  | MIN | 5.3 | CFSM | 1.41 | IN. | 19.14 |

## CUMBERLAND RIVER BASIN

03416000 WOLF RIVER NEAR BYRDSTOWN

LOCATION.--Lat 36°33'37", long 85°04'23", Pickett County, Hydrologic Unit 05130105; on right bank 0.3 mi upstream from bridge on county road, 0.5 mi upstream from Widow Creek, 3.2 mi east of Byrdstown, 5.4 mi upstream from Lick Creek, and at mile 26.2.

DRAINAGE AREA.--106 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year. Prior to June 1943 monthly discharge only, published in WSP 1306.

REVISED RECORD.--WSP 1276: 1943. WSP 1910: Drainage area. WDR TN-82: 1944-81(M).

GAGE.--Water-stage recorder. Datum of gage is 707.54 ft Sandy Hook datum.

REMARKS.--Estimated daily discharges: July 7-10. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--43 years, 191 ft<sup>3</sup>/s, 24.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft<sup>3</sup>/s Sept. 2, 1982, gage height, 17.14 ft, from rating curve extended above 7,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.09 ft and 17.14 ft; minimum, 2.0 ft<sup>3</sup>/s Sept. 17, 1954, gage height, 0.50 ft result of construction at mill dam upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 10.8 ft, discharge, about 12,400 ft<sup>3</sup>/s from information by local resident. From flood marks, flood of June 30, 1928, reached a stage 1.5 ft higher than that in March 1929 at a point 12.5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0615 | *3,360                            | *6.08               |      |      |                                   |                     |

Minimum discharge, 6.2 ft<sup>3</sup>/s, Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG  | SEP   |       |
|-------------|-------|---------|------|------|------|------|------|------|------|-------|------|-------|-------|
| 1           | 7.9   | 29      | 227  | 582  | 1220 | 95   | 307  | 60   | 32   | 19    | 31   | 26    |       |
| 2           | 7.3   | 37      | 181  | 661  | 588  | 89   | 240  | 64   | 33   | 19    | 54   | 23    |       |
| 3           | 7.1   | 51      | 150  | 471  | 325  | 80   | 204  | 113  | 39   | 22    | 38   | 20    |       |
| 4           | 7.0   | 40      | 118  | 533  | 225  | 78   | 168  | 107  | 40   | 18    | 28   | 18    |       |
| 5           | 6.7   | 33      | 104  | 471  | 308  | 116  | 160  | 88   | 35   | 17    | 22   | 17    |       |
| 6           | 6.5   | 30      | 116  | 372  | 511  | 98   | 290  | 73   | 40   | 19    | 19   | 18    |       |
| 7           | 6.3   | 27      | 103  | 310  | 352  | 91   | 224  | 76   | 49   | 15    | 19   | 19    |       |
| 8           | 9.5   | 24      | 95   | 254  | 244  | 99   | 223  | 86   | 52   | 14    | 18   | 18    |       |
| 9           | 9.6   | 23      | 93   | 212  | 185  | 497  | 208  | 69   | 48   | 13    | 17   | 16    |       |
| 10          | 12    | 42      | 93   | 188  | 152  | 399  | 185  | 61   | 76   | 12    | 15   | 15    |       |
| 11          | 10    | 127     | 90   | 183  | 203  | 316  | 162  | 55   | 56   | 12    | 14   | 16    |       |
| 12          | 9.1   | 76      | 85   | 166  | 413  | 271  | 136  | 52   | 74   | 12    | 13   | 15    |       |
| 13          | 8.5   | 51      | 80   | 152  | 289  | 223  | 122  | 77   | 87   | 12    | 12   | 14    |       |
| 14          | 8.6   | 39      | 71   | 146  | 221  | 194  | 116  | 70   | 66   | 12    | 15   | 13    |       |
| 15          | 8.8   | 37      | 64   | 130  | 172  | 158  | 168  | 60   | 52   | 11    | 12   | 12    |       |
| 16          | 9.1   | 59      | 60   | 111  | 133  | 134  | 227  | 52   | 44   | 11    | 23   | 12    |       |
| 17          | 11    | 58      | 57   | 142  | 127  | 123  | 187  | 50   | 43   | 11    | 247  | 11    |       |
| 18          | 11    | 193     | 60   | 163  | 163  | 111  | 157  | 58   | 44   | 12    | 234  | 11    |       |
| 19          | 13    | 1940    | 110  | 150  | 310  | 101  | 134  | 53   | 41   | 11    | 92   | 10    |       |
| 20          | 37    | 442     | 282  | 134  | 346  | 95   | 119  | 45   | 34   | 9.8   | 59   | 10    |       |
| 21          | 32    | 239     | 372  | 244  | 300  | 92   | 107  | 40   | 30   | 9.2   | 49   | 9.8   |       |
| 22          | 22    | 160     | 474  | 181  | 291  | 100  | 96   | 42   | 27   | 12    | 41   | 9.3   |       |
| 23          | 67    | 118     | 355  | 128  | 271  | 109  | 88   | 46   | 26   | 11    | 35   | 9.3   |       |
| 24          | 160   | 93      | 283  | 106  | 219  | 182  | 82   | 53   | 24   | 10    | 35   | 10    |       |
| 25          | 56    | 77      | 539  | 106  | 160  | 224  | 75   | 59   | 23   | 9.9   | 35   | 9.8   |       |
| 26          | 34    | 65      | 409  | 94   | 132  | 192  | 69   | 53   | 21   | 13    | 36   | 18    |       |
| 27          | 26    | 58      | 302  | 86   | 115  | 173  | 70   | 46   | 20   | 51    | 32   | 19    |       |
| 28          | 29    | 879     | 242  | 89   | 102  | 157  | 70   | 42   | 19   | 57    | 26   | 22    |       |
| 29          | 55    | 442     | 201  | 83   | ---  | 138  | 65   | 39   | 18   | 34    | 23   | 16    |       |
| 30          | 52    | 281     | 182  | 81   | ---  | 120  | 59   | 37   | 17   | 24    | 23   | 14    |       |
| 31          | 39    | ---     | 445  | 1250 | ---  | 235  | ---  | 33   | ---  | 24    | 25   | ---   |       |
| TOTAL       | 778.0 | 5770    | 6043 | 7979 | 8077 | 5090 | 4518 | 1859 | 1210 | 536.9 | 1342 | 451.2 |       |
| MEAN        | 25.1  | 192     | 195  | 257  | 288  | 164  | 151  | 60.0 | 40.3 | 17.3  | 43.3 | 15.0  |       |
| MAX         | 160   | 1940    | 539  | 1250 | 1220 | 497  | 307  | 113  | 87   | 57    | 247  | 26    |       |
| MIN         | 6.3   | 23      | 57   | 81   | 102  | 78   | 59   | 33   | 17   | 9.2   | 12   | 9.3   |       |
| CFSM        | .24   | 1.81    | 1.84 | 2.42 | 2.72 | 1.55 | 1.42 | .57  | .38  | .16   | .41  | .14   |       |
| IN.         | .27   | 2.02    | 2.12 | 2.80 | 2.83 | 1.79 | 1.59 | .65  | .42  | .19   | .47  | .16   |       |
| CAL YR 1984 | TOTAL | 84377.7 |      | MEAN | 231  | MAX  | 7430 | MIN  | 6.0  | CFSM  | 2.18 | IN.   | 29.61 |
| WTR YR 1985 | TOTAL | 43654.1 |      | MEAN | 120  | MAX  | 1940 | MIN  | 6.3  | CFSM  | 1.13 | IN.   | 15.32 |

## CUMBERLAND RIVER BASIN

95

03417500 CUMBERLAND RIVER AT CELINA, TN

LOCATION.--Lat 36°33'15", long 85°30'52", Clay County, Hydrologic Unit 05130106, on right bank at State Highway 52 bridge, 0.5 mi northwest of courthouse in Celina, 600 ft downstream from Obey River, and at mile 380.8.

DRAINAGE AREA.--7,307 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected at same site 1903-54 are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-38. WSP 1276: 1924. WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 489.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1930, nonrecording gage at site 400 ft downstream at same datum. Since Feb. 2, 1973, auxiliary water-stage recorder 15.8 mi downstream from base gage at same datum.

REMARKS.--Estimated daily discharge: Apr. 1-10, 24, 25. Records fair, except those for periods of low fall and fragmentary record, October to June which are poor. Flow regulated by Lake Cumberland and Dale Hollow Lake (see page 137). Periodic observations of water temperature are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--62 years (water years 1922-1980, 1982-1985), 11,780 ft<sup>3</sup>/s, 21.89 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft<sup>3</sup>/s, Dec. 29, 1926, maximum gage height, 57.25 ft, Dec. 29, 1926, from graph based on gage readings; minimum daily, 69 ft<sup>3</sup>/s, Sept. 2, 11-14, 1925; minimum gage height observed, 0.20 ft, Sept. 2, 11-14, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 59.2 ft in March 1826, from Cumberland River profile.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,500 ft<sup>3</sup>/s, Nov. 28, gage height, 21.06 ft; minimum daily, 993 ft<sup>3</sup>/s, June 30; minimum recorded gage height, 10.62 ft, Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |      |       |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------|
| 1           | 5140   | 2320    | 16000  | 10300  | 12600  | 10700  | 3540   | 5090   | 4960   | 2430   | 10900  | 9210   |      |       |
| 2           | 5240   | 1500    | 17600  | 13800  | 11000  | 9540   | 5300   | 5370   | 2220   | 5950   | 9700   | 7870   |      |       |
| 3           | 5650   | 2120    | 17200  | 15900  | 11400  | 9960   | 6800   | 5190   | 2590   | 7720   | 8410   | 7760   |      |       |
| 4           | 4510   | 2590    | 18300  | 16900  | 10900  | 8220   | 7000   | 1830   | 7630   | 7800   | 4690   | 9980   |      |       |
| 5           | 4450   | 3290    | 20700  | 17300  | 10500  | 8560   | 7100   | 1690   | 9550   | 7760   | 3990   | 10900  |      |       |
| 6           | 3900   | 3360    | 19800  | 15400  | 12500  | 8460   | 6300   | 2530   | 10200  | 7000   | 9090   | 11300  |      |       |
| 7           | 3910   | 3350    | 20700  | 15000  | 12400  | 11200  | 4800   | 4450   | 9220   | 2510   | 9640   | 11100  |      |       |
| 8           | 3750   | 3390    | 19200  | 17500  | 13700  | 11200  | 4000   | 4670   | 7180   | 3300   | 9510   | 7550   |      |       |
| 9           | 3480   | 9050    | 10200  | 19800  | 13300  | 11000  | 6200   | 4750   | 4720   | 6400   | 9210   | 4530   |      |       |
| 10          | 3820   | 7670    | 7100   | 20100  | 8930   | 7500   | 7320   | 4750   | 4320   | 7940   | 8080   | 5190   |      |       |
| 11          | 3490   | 7080    | 11100  | 20500  | 8470   | 5610   | 7650   | 3680   | 6490   | 7990   | 4920   | 5970   |      |       |
| 12          | 3550   | 3760    | 13300  | 19400  | 15300  | 7500   | 7600   | 1980   | 8380   | 8090   | 3940   | 5790   |      |       |
| 13          | 3260   | 3880    | 14300  | 16100  | 13800  | 9550   | 6660   | 2200   | 7380   | 6600   | 7340   | 5490   |      |       |
| 14          | 3110   | 4050    | 14200  | 15300  | 14900  | 12200  | 4340   | 3990   | 6530   | 2710   | 9260   | 5490   |      |       |
| 15          | 3730   | 4110    | 11700  | 17000  | 15300  | 11500  | 3690   | 4430   | 5800   | 3420   | 9580   | 5010   |      |       |
| 16          | 4420   | 4370    | 8630   | 18600  | 14700  | 7400   | 6780   | 4590   | 3920   | 6180   | 9410   | 3250   |      |       |
| 17          | 5040   | 4500    | 5920   | 18700  | 9370   | 3930   | 8440   | 5380   | 3260   | 7840   | 8910   | 5800   |      |       |
| 18          | 5080   | 9460    | 10400  | 17900  | 7260   | 3350   | 8750   | 4660   | 5700   | 8100   | 5300   | 7700   |      |       |
| 19          | 4930   | 22700   | 13700  | 16700  | 10200  | 7270   | 8680   | 1780   | 6170   | 9140   | 3830   | 8570   |      |       |
| 20          | 5330   | 15000   | 14600  | 15700  | 12000  | 8450   | 7780   | 2040   | 5970   | 9110   | 7330   | 8530   |      |       |
| 21          | 4090   | 14500   | 15900  | 20600  | 12200  | 8460   | 5220   | 4010   | 5650   | 6010   | 9990   | 8110   |      |       |
| 22          | 3390   | 14500   | 15800  | 23400  | 12000  | 8630   | 4180   | 4850   | 5190   | 6390   | 9450   | 6450   |      |       |
| 23          | 4810   | 14100   | 7680   | 21900  | 10500  | 8260   | 7390   | 5380   | 3150   | 8620   | 9950   | 3340   |      |       |
| 24          | 6350   | 13100   | 4700   | 18500  | 8870   | 5460   | 7880   | 5070   | 2650   | 9230   | 8670   | 5140   |      |       |
| 25          | 4120   | 12800   | 8560   | 10600  | 10400  | 3900   | 6910   | 4720   | 2690   | 9480   | 5860   | 6720   |      |       |
| 26          | 3270   | 12200   | 6990   | 7900   | 10100  | 7440   | 7920   | 2200   | 3060   | 8370   | 5220   | 7540   |      |       |
| 27          | 2650   | 12700   | 11300  | 5370   | 8950   | 7770   | 7290   | 2230   | 3570   | 7160   | 8740   | 8710   |      |       |
| 28          | 4720   | 23200   | 14900  | 3150   | 9390   | 7520   | 5390   | 4430   | 3590   | 4540   | 11500  | 7030   |      |       |
| 29          | 9010   | 19600   | 13500  | 5770   | ---    | 9230   | 4090   | 5270   | 3060   | 3740   | 12800  | 4950   |      |       |
| 30          | 4510   | 15100   | 9410   | 6120   | ---    | 5850   | 5810   | 5780   | 993    | 6930   | 12900  | 2350   |      |       |
| 31          | 2550   | ---     | 8780   | 13700  | ---    | 4080   | ---    | 4390   | ---    | 9270   | 12000  | ---    |      |       |
| TOTAL       | 135260 | 269350  | 402170 | 474910 | 320940 | 249700 | 190810 | 123380 | 155793 | 207730 | 260120 | 207330 |      |       |
| MEAN        | 4363   | 8978    | 12970  | 15320  | 11460  | 8055   | 6360   | 3980   | 5193   | 6701   | 8391   | 6911   |      |       |
| MAX         | 9010   | 23200   | 20700  | 23400  | 15300  | 12200  | 8750   | 5780   | 10200  | 9480   | 12900  | 11300  |      |       |
| MIN         | 2550   | 1500    | 4700   | 3150   | 7260   | 3350   | 3540   | 1690   | 993    | 2430   | 3830   | 2350   |      |       |
| CAL YR 1984 | TOTAL  | 5034200 | MEAN   | 13750  | MAX    | 60300  | MIN    | 1390   | MEAN*  | 14480  | CFSM*  | 1.98   | IN.* | 26.98 |
| WTR YR 1985 | TOTAL  | 2997493 | MEAN   | 8212   | MAX    | 23400  | MIN    | 993    | MEAN*  | 8415   | CFSM*  | 1.15   | IN.* | 15.63 |

\* Adjusted for change in contents in Lake Cumberland and Dale Hollow Lake.



## CUMBERLAND RIVER BASIN

03418070 ROARING RIVER ABOVE GAINESBORO, TN

LOCATION.--Lat 36°21'04", long 85°32'45", Jackson County, Hydrologic Unit 05130106, near left bank of downstream end of county road bridge, 1.1 mi upstream from Blackburn Fork, 6.3 mi east of Gainesboro, and at mile 9.1.

DRAINAGE AREA.--210 mi<sup>2</sup>, includes 34 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 520.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, Jan. 21-26, Apr. 26-30, and those below 5.0 ft<sup>3</sup>/s, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 272 ft<sup>3</sup>/s, 17.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s Mar. 12, 1975, gage height, 21.83 ft, from high-water marks; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0445 | *3,310                            | *9.63               |      |      |                                   |                     |

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV       | DEC  | JAN  | FEB   | MAR  | APR    | MAY   | JUN   | JUL  | AUG    | SEP   |       |
|-------------|--------|-----------|------|------|-------|------|--------|-------|-------|------|--------|-------|-------|
| 1           | .00    | .15       | 353  | 615  | 1440  | 78   | 216    | 2.7   | .00   | .00  | 4.8    | .24   |       |
| 2           | .00    | .30       | 250  | 706  | 1080  | 66   | 132    | 2.8   | .00   | .00  | 15     | .00   |       |
| 3           | .00    | .48       | 183  | 554  | 689   | 51   | 98     | 1.9   | .00   | .00  | .00    | .00   |       |
| 4           | .00    | .95       | 115  | 683  | 532   | 44   | 81     | 1.3   | .00   | .00  | .00    | .00   |       |
| 5           | .00    | 1.2       | 87   | 647  | 780   | 52   | 84     | .93   | .00   | .00  | .00    | .00   |       |
| 6           | .00    | .23       | 129  | 509  | 1350  | 46   | 262    | .67   | .00   | .00  | .00    | .00   |       |
| 7           | .00    | .00       | 112  | 416  | 956   | 32   | 191    | .77   | .00   | .00  | .00    | .00   |       |
| 8           | .00    | .00       | 88   | 304  | 696   | 37   | 135    | 1.5   | .00   | .00  | .00    | .00   |       |
| 9           | .00    | .00       | 79   | 225  | 559   | 543  | 100    | .78   | .00   | .00  | .00    | .00   |       |
| 10          | .00    | 9.2       | 72   | 182  | 486   | 501  | 80     | .28   | .78   | .00  | .00    | .00   |       |
| 11          | .00    | 167       | 61   | 148  | 663   | 361  | 67     | .04   | 12    | .00  | .00    | 17    |       |
| 12          | .00    | 98        | 52   | 102  | 1080  | 291  | 58     | .11   | 29    | .00  | .00    | .00   |       |
| 13          | .00    | 26        | 46   | 75   | 712   | 195  | 54     | .42   | 5.6   | .00  | .00    | .00   |       |
| 14          | .00    | 3.2       | 38   | 68   | 543   | 146  | 49     | .00   | .23   | .00  | .00    | .00   |       |
| 15          | .00    | 4.1       | 29   | 57   | 434   | 107  | 81     | .00   | .00   | .00  | .00    | .00   |       |
| 16          | .00    | 132       | 25   | 44   | 336   | 78   | 184    | .00   | .00   | .00  | 3.9    | .00   |       |
| 17          | .00    | 99        | 23   | 65   | 292   | 65   | 168    | .00   | .00   | .00  | 16     | .00   |       |
| 18          | .00    | 302       | 21   | 91   | 329   | 53   | 105    | .00   | .00   | .00  | 10     | .00   |       |
| 19          | .00    | 2360      | 28   | 78   | 558   | 42   | 74     | .00   | .00   | .00  | .16    | .00   |       |
| 20          | .00    | 882       | 37   | 53   | 618   | 35   | 59     | .00   | .00   | .00  | 235    | .00   |       |
| 21          | 24     | 449       | 161  | 17   | 507   | 33   | 50     | .00   | .00   | .00  | 69     | .00   |       |
| 22          | 1.7    | 283       | 345  | 25   | 408   | 43   | 40     | .00   | .00   | .00  | 6.6    | .00   |       |
| 23          | 89     | 176       | 289  | 35   | 331   | 41   | 30     | .00   | .00   | .00  | .54    | .00   |       |
| 24          | 353    | 105       | 246  | 40   | 285   | 66   | 27     | .00   | .00   | .00  | 2.1    | .00   |       |
| 25          | 63     | 67        | 728  | 45   | 226   | 73   | 22     | .00   | .00   | .00  | 12     | .00   |       |
| 26          | 4.3    | 52        | 575  | 37   | 186   | 51   | 15     | .00   | .00   | .00  | 23     | 9.8   |       |
| 27          | .02    | 48        | 392  | 32   | 140   | 45   | 22     | .00   | .00   | 6.8  | 5.1    | .83   |       |
| 28          | 6.7    | 1160      | 271  | 36   | 94    | 45   | 10     | .00   | .00   | .20  | .78    | .00   |       |
| 29          | 41     | 873       | 195  | 33   | ---   | 44   | 5.0    | .00   | .00   | .00  | .04    | .00   |       |
| 30          | 33     | 481       | 159  | 34   | ---   | 40   | 3.0    | .00   | .00   | .00  | 2.2    | .00   |       |
| 31          | 2.8    | ---       | 374  | 927  | ---   | 86   | ---    | .00   | ---   | .00  | 3.2    | ---   |       |
| TOTAL       | 618.52 | 7779.81   | 5563 | 6883 | 16310 | 3390 | 2502.0 | 14.20 | 47.61 | 7.00 | 409.42 | 27.87 |       |
| MEAN        | 20.0   | 259       | 179  | 222  | 583   | 109  | 83.4   | .46   | 1.59  | .23  | 13.2   | .93   |       |
| MAX         | 353    | 2360      | 728  | 927  | 1440  | 543  | 262    | 2.8   | 29    | 6.8  | 235    | 17    |       |
| MIN         | .00    | .00       | 21   | 17   | 94    | 32   | 3.0    | .00   | .00   | .00  | .00    | .00   |       |
| CFSM        | .10    | 1.23      | .85  | 1.06 | 2.78  | .52  | .40    | .00   | .01   | .00  | .06    | .00   |       |
| IN.         | .11    | 1.38      | .99  | 1.22 | 2.89  | .60  | .44    | .00   | .01   | .00  | .07    | .00   |       |
| CAL YR 1984 | TOTAL  | 118431.69 |      | MEAN | 324   | MAX  | 12400  | MIN   | .00   | CFSM | 1.54   | IN.   | 20.98 |
| WTR YR 1985 | TOTAL  | 43552.43  |      | MEAN | 119   | MAX  | 2360   | MIN   | .00   | CFSM | .57    | IN.   | 7.72  |

## CUMBERLAND RIVER BASIN

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03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN

LOCATION.--Lat 36°17'12", long 85°56'27", Smith County, Hydrologic Unit 05130108, on right bank in powerhouse at Cordell Hull Dam, 2.7 mi north of Carthage, and at mile 313.5.

DRAINAGE AREA.--8,095 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. Equivalent record prior to 1981 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Lake Cumberland (station 03413500) and Dale Hollow Lake (station 03416500).

AVERAGE DISCHARGE.--13 years, 14,210 ft<sup>3</sup>/s, unadjusted.

COOPERATION.--Records provided by U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 116,000 ft<sup>3</sup>/s Mar. 13, 1975; no flow Nov. 2, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 39,000 ft<sup>3</sup>/s Nov. 19; minimum daily, 1,930 ft<sup>3</sup>/s Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 4560   | 4250    | 18400  | 14600  | 20100  | 9900   | 4020   | 5300   | 4930   | 2460   | 9670   | 8770   |
| 2           | 4950   | 3230    | 22500  | 16600  | 17400  | 10800  | 7400   | 5950   | 3770   | 4320   | 9910   | 7420   |
| 3           | 4940   | 2920    | 19800  | 20100  | 15100  | 10600  | 7860   | 4030   | 3110   | 7000   | 8730   | 7200   |
| 4           | 5010   | 2270    | 14200  | 20400  | 15300  | 9880   | 6520   | 4010   | 5650   | 8430   | 6730   | 7800   |
| 5           | 5050   | 3240    | 25600  | 24500  | 18300  | 9850   | 6800   | 2470   | 8410   | 8750   | 3700   | 9470   |
| 6           | 3430   | 3200    | 25000  | 18100  | 15800  | 9280   | 7170   | 2150   | 9420   | 5720   | 5300   | 10900  |
| 7           | 3430   | 4150    | 19700  | 18700  | 17600  | 9980   | 7230   | 3700   | 10100  | 4320   | 9060   | 9860   |
| 8           | 3750   | 4270    | 22100  | 20800  | 18300  | 11600  | 6410   | 5240   | 8810   | 3710   | 9430   | 7470   |
| 9           | 3120   | 9760    | 16800  | 22200  | 14700  | 15400  | 7260   | 5240   | 4680   | 5660   | 9420   | 4060   |
| 10          | 3770   | 12200   | 13000  | 23500  | 15400  | 9870   | 7980   | 5300   | 4440   | 7370   | 6740   | 3390   |
| 11          | 3450   | 10700   | 10500  | 24100  | 12200  | 6400   | 9200   | 3700   | 4970   | 8800   | 6280   | 5050   |
| 12          | 3150   | 4560    | 13400  | 21100  | 19000  | 5660   | 9440   | 2770   | 8600   | 8800   | 3420   | 4320   |
| 13          | 2820   | 5920    | 15300  | 19200  | 19300  | 12500  | 7950   | 2160   | 8730   | 7330   | 4320   | 5800   |
| 14          | 2840   | 5380    | 17100  | 19100  | 17100  | 12900  | 6300   | 3090   | 7630   | 3080   | 8230   | 5000   |
| 15          | 4060   | 3270    | 15800  | 18600  | 19000  | 14100  | 5410   | 3700   | 5580   | 3080   | 9790   | 4000   |
| 16          | 4100   | 2330    | 13000  | 20000  | 19100  | 10500  | 5040   | 3700   | 3700   | 4010   | 9020   | 3110   |
| 17          | 4740   | 1930    | 11400  | 23900  | 12900  | 6480   | 6750   | 5260   | 4000   | 8000   | 9730   | 4320   |
| 18          | 5410   | 12400   | 8690   | 22300  | 10800  | 3360   | 8330   | 4930   | 4930   | 7770   | 6600   | 4930   |
| 19          | 5770   | 39000   | 14700  | 18100  | 11500  | 6500   | 8540   | 3080   | 6030   | 10400  | 6030   | 7680   |
| 20          | 5450   | 28300   | 18300  | 19900  | 14800  | 8150   | 5850   | 2780   | 6380   | 9010   | 4360   | 8080   |
| 21          | 4430   | 17500   | 19000  | 23700  | 14100  | 10700  | 5180   | 2790   | 5780   | 5980   | 7380   | 7800   |
| 22          | 3800   | 17300   | 18300  | 23300  | 14500  | 10900  | 3890   | 3700   | 4980   | 9660   | 10400  | 5080   |
| 23          | 4800   | 18800   | 12500  | 22100  | 13000  | 8710   | 3600   | 4930   | 4320   | 5780   | 10100  | 4010   |
| 24          | 7780   | 16600   | 6810   | 23000  | 8640   | 6590   | 5450   | 4740   | 2790   | 6730   | 7430   | 4150   |
| 25          | 5780   | 15700   | 15400  | 17700  | 15500  | 7010   | 5580   | 4630   | 2470   | 9450   | 5630   | 5390   |
| 26          | 4900   | 15600   | 11800  | 11800  | 12100  | 6970   | 5630   | 3700   | 2480   | 9130   | 4350   | 6370   |
| 27          | 3480   | 15600   | 13900  | 7930   | 10800  | 8060   | 5350   | 2150   | 4370   | 5600   | 7530   | 10500  |
| 28          | 4550   | 28700   | 17100  | 7370   | 10100  | 10000  | 5000   | 2160   | 4680   | 6780   | 9500   | 8490   |
| 29          | 11100  | 31500   | 18800  | 8050   | ---    | 10600  | 4350   | 5050   | 4630   | 3700   | 14500  | 4650   |
| 30          | 4430   | 17500   | 15400  | 7620   | ---    | 8690   | 3390   | 4930   | 3080   | 5830   | 13200  | 3390   |
| 31          | 4760   | ---     | 9380   | 19000  | ---    | 5390   | ---    | 4360   | ---    | 7400   | 10100  | ---    |
| TOTAL       | 143610 | 358080  | 493680 | 577370 | 422440 | 287330 | 188880 | 121700 | 163450 | 204060 | 246590 | 188460 |
| MEAN        | 4633   | 11940   | 15930  | 18620  | 15090  | 9269   | 6296   | 3926   | 5448   | 6583   | 7955   | 6282   |
| MAX         | 11100  | 39000   | 25600  | 24500  | 20100  | 15400  | 9440   | 5950   | 10100  | 10400  | 14500  | 10900  |
| MIN         | 2820   | 1930    | 6810   | 7370   | 8640   | 3360   | 3390   | 2150   | 2470   | 2460   | 3420   | 3110   |
| CAL YR 1984 | TOTAL  | 5306870 |        | MEAN   | 14500  | MAX    | 85200  | MIN    | 1930   |        |        |        |
| WTR YR 1985 | TOTAL  | 3395650 |        | MEAN   | 9303   | MAX    | 39000  | MIN    | 1930   |        |        |        |

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURE: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Flow regulated by Cordell Hull Dam and other reservoirs above station. Interruptions in the record were due to monitor malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 255 microsiemens, Dec. 30, 31, 1981; minimum, 140 microsiemens, Sept. 3, 1984.

WATER TEMPERATURE: Maximum, 23.0°C, Aug. 7, 1981, July 14, 24, Sept. 24, 1985; minimum, 2.0°C, Jan. 12, 15-21, 1981.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Mar. 4, 1983; minimum, 4.1 mg/L, Sept. 13, 23, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 216 microsiemens, Sept. 23; minimum, 155 microsiemens, Oct. 24, 25.

WATER TEMPERATURE: Maximum, 23.0°C, July 14, 24, Sept. 24; minimum, 3.0°C, Feb. 3, 8.

DISSOLVED OXYGEN: Maximum, 12.4 mg/L, Apr. 17; minimum, 4.8 mg/L, Aug. 28.

## SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 169     | 161 | 165  | 171      | 156 | 161  | 171      | 167 | 169  | 200     | 194 | 196  |
| 2     | 168     | 156 | 160  | 166      | 160 | 163  | 169      | 165 | 166  | 196     | 192 | 193  |
| 3     | 166     | 160 | 161  | 170      | 158 | 164  | 173      | 167 | 170  | 194     | 190 | 192  |
| 4     | 160     | 160 | 160  | 168      | 160 | 163  | 173      | 171 | 172  | 198     | 194 | 196  |
| 5     | 166     | 160 | 160  | 168      | 162 | 165  | 173      | 169 | 172  | 198     | 196 | 198  |
| 6     | 168     | 163 | 164  | 170      | 164 | 167  | 171      | 169 | 169  | 198     | 196 | 197  |
| 7     | 169     | 159 | 163  | 172      | 166 | 168  | 171      | 169 | 169  | 198     | 196 | 197  |
| 8     | 167     | 159 | 163  | 174      | 166 | 169  | 171      | 169 | 169  | 196     | 194 | 195  |
| 9     | 175     | 159 | 165  | 174      | 168 | 170  | 173      | 169 | 171  | 194     | 192 | 192  |
| 10    | 167     | 159 | 162  | 179      | 171 | 175  | 181      | 173 | 174  | 194     | 190 | 192  |
| 11    | 171     | 159 | 162  | 183      | 177 | 181  | 182      | 172 | 175  | 192     | 188 | 190  |
| 12    | 167     | 157 | 162  | 191      | 183 | 185  | 174      | 172 | 173  | 190     | 188 | 188  |
| 13    | 169     | 159 | 163  | 201      | 185 | 189  | 177      | 173 | 175  | 188     | 186 | 187  |
| 14    | 171     | 157 | 164  | 195      | 186 | 191  | 178      | 174 | 177  | 188     | 186 | 188  |
| 15    | 175     | 158 | 163  | 197      | 191 | 193  | 180      | 178 | 179  | 202     | 184 | 190  |
| 16    | 168     | 156 | 161  | 201      | 195 | 197  | 177      | 175 | 176  | 208     | 186 | 194  |
| 17    | 168     | 158 | 160  | 207      | 199 | 203  | 178      | 174 | 174  | 200     | 186 | 193  |
| 18    | 164     | 158 | 160  | 205      | 201 | 203  | 181      | 171 | 175  | 200     | 188 | 194  |
| 19    | 164     | 158 | 159  | 203      | 191 | 196  | 177      | 173 | 174  | 208     | 182 | 189  |
| 20    | 164     | 158 | 160  | 191      | 189 | 191  | 178      | 172 | 175  | 192     | 180 | 185  |
| 21    | 162     | 156 | 159  | 193      | 187 | 190  | 182      | 178 | 180  | 208     | 180 | 190  |
| 22    | 166     | 156 | 160  | 187      | 177 | 180  | 182      | 180 | 181  | 210     | 178 | 188  |
| 23    | 162     | 156 | 158  | 175      | 163 | 169  | 186      | 180 | 182  | 190     | 176 | 185  |
| 24    | 161     | 155 | 157  | 163      | 157 | 161  | 190      | 182 | 184  | 196     | 180 | 189  |
| 25    | 163     | 155 | 158  | 173      | 163 | 170  | 188      | 184 | 185  | 194     | 178 | 188  |
| 26    | 165     | 157 | 159  | 177      | 173 | 176  | 190      | 186 | 188  | 204     | 182 | 187  |
| 27    | 169     | 159 | 162  | 181      | 175 | 177  | 194      | 188 | 191  | 202     | 182 | 192  |
| 28    | 169     | 159 | 163  | 175      | 171 | 173  | 196      | 192 | 195  | 204     | 186 | 193  |
| 29    | 159     | 157 | 158  | 171      | 169 | 170  | 200      | 196 | 197  | 196     | 184 | 189  |
| 30    | 163     | 157 | 160  | 173      | 169 | 171  | 202      | 196 | 199  | 204     | 184 | 194  |
| 31    | 167     | 159 | 160  | ---      | --- | ---  | 198      | 194 | 196  | 208     | 184 | 198  |
| MONTH | 175     | 155 | 161  | 207      | 156 | 178  | 202      | 165 | 178  | 210     | 176 | 192  |

## CUMBERLAND RIVER BASIN

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03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
| FEBRUARY |     |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1        | 208 | 184 | 198  | 206   | 192 | 198  | 202   | 186 | 194  | 203 | 196 | 199  |
| 2        | 208 | 184 | 193  | 206   | 192 | 200  | 204   | 190 | 195  | 202 | 196 | 198  |
| 3        | 204 | 188 | 194  | 200   | 184 | 196  | 196   | 192 | 194  | --- | --- | 198  |
| 4        | 206 | 178 | 193  | 204   | 190 | 197  | 198   | 192 | 195  | --- | --- | 197  |
| 5        | 202 | 180 | 195  | 208   | 192 | 197  | 204   | 194 | 196  | 199 | 196 | 197  |
| 6        | 202 | 182 | 193  | 206   | 190 | 195  | 198   | 192 | 195  | 202 | 195 | 199  |
| 7        | 203 | 187 | 199  | 206   | 186 | 199  | 198   | 194 | 195  | 199 | 194 | 196  |
| 8        | 205 | 189 | 199  | 208   | 192 | 198  | 204   | 194 | 197  | 197 | 193 | 195  |
| 9        | 203 | 187 | 194  | 202   | 188 | 193  | 202   | 192 | 197  | 197 | 193 | 194  |
| 10       | 207 | 189 | 197  | 208   | 186 | 197  | 202   | 194 | 198  | 197 | 193 | 195  |
| 11       | 205 | 187 | 197  | 204   | 192 | 197  | 204   | 196 | 199  | 203 | 194 | 197  |
| 12       | 205 | 187 | 195  | 204   | 182 | 196  | 204   | 196 | 199  | 198 | 193 | 195  |
| 13       | 201 | 191 | 196  | 206   | 190 | 197  | 206   | 196 | 199  | 199 | 194 | 196  |
| 14       | 199 | 193 | 197  | 208   | 188 | 199  | 202   | 196 | 198  | 199 | 194 | 195  |
| 15       | 203 | 187 | 197  | 210   | 186 | 198  | 204   | 198 | 199  | 199 | 193 | 195  |
| 16       | 207 | 189 | 197  | 212   | 192 | 198  | 208   | 196 | 200  | 202 | 194 | 196  |
| 17       | 203 | 191 | 198  | 210   | 190 | 198  | 206   | 198 | 201  | 197 | 194 | 195  |
| 18       | 201 | 183 | 189  | 206   | 196 | 198  | 204   | 196 | 199  | 199 | 195 | 196  |
| 19       | 207 | 187 | 198  | 210   | 192 | 200  | 200   | 192 | 196  | 199 | 196 | 197  |
| 20       | 204 | 192 | 198  | 214   | 198 | 204  | 196   | 192 | 194  | 199 | 196 | 197  |
| 21       | 204 | 190 | 196  | 208   | 188 | 199  | 198   | 192 | 194  | 203 | 196 | 198  |
| 22       | 212 | 194 | 203  | 208   | 190 | 197  | 198   | 192 | 194  | 203 | 196 | 198  |
| 23       | 212 | 194 | 202  | 204   | 188 | 193  | 198   | 192 | 196  | 200 | 197 | 198  |
| 24       | 206 | 196 | 199  | 206   | 188 | 193  | 202   | 194 | 197  | 200 | 196 | 198  |
| 25       | 208 | 190 | 201  | 206   | 190 | 200  | 202   | 194 | 198  | 198 | 194 | 196  |
| 26       | 208 | 186 | 200  | 204   | 188 | 198  | 201   | 198 | 199  | 199 | 195 | 196  |
| 27       | 208 | 188 | 199  | 208   | 182 | 199  | 201   | 198 | 199  | 198 | 194 | 196  |
| 28       | 206 | 190 | 199  | 208   | 190 | 201  | 202   | 198 | 199  | 197 | 193 | 195  |
| 29       | --- | --- | ---  | 208   | 186 | 197  | 202   | 197 | 198  | 199 | 194 | 195  |
| 30       | --- | --- | ---  | 210   | 184 | 196  | 204   | 195 | 199  | 197 | 191 | 193  |
| 31       | --- | --- | ---  | 192   | 188 | 190  | ---   | --- | ---  | 195 | 190 | 192  |
| MONTH    | 212 | 178 | 197  | 214   | 182 | 197  | 208   | 186 | 197  | 203 | 190 | 196  |

| DAY   | MAX | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|-----|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| JUNE  |     |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 201 | 197 | 198  | 205  | 198 | 201  | 201    | 190 | 193  | 198       | 185 | 188  |
| 2     | 200 | 196 | 197  | 209  | 198 | 200  | 193    | 190 | 191  | 202       | 188 | 191  |
| 3     | 200 | 196 | 197  | 204  | 196 | 200  | 199    | 189 | 192  | 200       | 189 | 192  |
| 4     | 200 | 196 | 198  | 204  | 194 | 196  | 202    | 188 | 193  | 197       | 188 | 191  |
| 5     | 199 | 195 | 197  | 198  | 192 | 194  | 203    | 185 | 194  | 198       | 188 | 192  |
| 6     | 198 | 196 | 197  | 201  | 190 | 193  | 206    | 187 | 195  | 196       | 187 | 191  |
| 7     | 199 | 196 | 198  | 193  | 189 | 191  | 200    | 185 | 189  | 201       | 184 | 194  |
| 8     | 200 | 197 | 199  | 200  | 190 | 192  | 196    | 186 | 189  | 207       | 185 | 192  |
| 9     | 204 | 197 | 198  | 205  | 188 | 192  | 198    | 185 | 188  | 198       | 186 | 190  |
| 10    | 203 | 195 | 199  | 194  | 184 | 188  | 198    | 186 | 190  | 205       | 185 | 191  |
| 11    | 200 | 194 | 198  | 192  | 184 | 186  | 206    | 189 | 193  | 200       | 184 | 190  |
| 12    | 203 | 193 | 196  | 188  | 182 | 184  | 206    | 191 | 196  | 202       | 185 | 188  |
| 13    | 198 | 192 | 194  | 191  | 183 | 186  | 201    | 190 | 194  | 190       | 187 | 188  |
| 14    | 195 | 192 | 193  | 200  | 182 | 187  | 202    | 188 | 193  | 199       | 187 | 189  |
| 15    | 198 | 192 | 193  | 197  | 183 | 190  | 202    | 190 | 193  | 193       | 188 | 189  |
| 16    | 205 | 191 | 196  | 206  | 185 | 191  | 200    | 190 | 193  | 198       | 190 | 192  |
| 17    | 209 | 192 | 195  | 196  | 187 | 190  | 199    | 189 | 193  | 195       | 189 | 191  |
| 18    | 203 | 192 | 195  | 199  | 187 | 190  | 201    | 192 | 195  | 195       | 190 | 192  |
| 19    | 207 | 194 | 198  | 197  | 187 | 190  | 205    | 190 | 195  | 193       | 190 | 192  |
| 20    | 204 | 196 | 198  | 204  | 188 | 192  | 198    | 189 | 193  | 196       | 191 | 192  |
| 21    | 204 | 197 | 200  | 195  | 180 | 186  | 202    | 188 | 193  | 197       | 192 | 194  |
| 22    | 207 | 197 | 198  | 191  | 184 | 186  | 196    | 189 | 191  | 198       | 193 | 195  |
| 23    | 208 | 198 | 200  | 189  | 183 | 185  | 200    | 188 | 191  | 216       | 195 | 203  |
| 24    | 205 | 197 | 200  | 194  | 188 | 192  | 205    | 192 | 197  | 215       | 178 | 198  |
| 25    | 206 | 197 | 201  | 201  | 192 | 195  | 208    | 190 | 197  | 184       | 179 | 180  |
| 26    | 204 | 196 | 200  | 205  | 191 | 195  | 212    | 192 | 199  | 183       | 173 | 178  |
| 27    | 204 | 194 | 197  | 202  | 191 | 194  | 209    | 189 | 195  | 183       | 179 | 180  |
| 28    | 206 | 195 | 198  | 199  | 190 | 191  | 198    | 190 | 192  | 188       | 180 | 181  |
| 29    | 205 | 195 | 199  | 204  | 191 | 194  | 195    | 189 | 190  | 185       | 179 | 180  |
| 30    | 208 | 197 | 200  | 202  | 191 | 194  | 194    | 186 | 190  | 195       | 178 | 181  |
| 31    | --- | --- | ---  | 209  | 190 | 194  | 197    | 187 | 190  | ---       | --- | ---  |
| MONTH | 209 | 191 | 198  | 209  | 180 | 192  | 212    | 185 | 193  | 216       | 173 | 190  |



## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 19.0 | 16.0 | 17.5     | 19.0 | 18.0 | 18.5     | 11.0 | 11.0 | 11.0    | 11.0 | 10.5 | 10.5 |
| 2       | 18.5 | 18.0 | 18.0     | 18.5 | 17.5 | 18.0     | 11.0 | 10.0 | 10.5    | 11.0 | 10.5 | 11.0 |
| 3       | 18.0 | 17.0 | 17.5     | 18.0 | 17.0 | 17.5     | 10.5 | 10.0 | 10.0    | 11.0 | 10.5 | 10.5 |
| 4       | 18.0 | 16.5 | 17.5     | 17.5 | 17.5 | 17.5     | 10.5 | 10.0 | 10.5    | 10.5 | 10.0 | 10.0 |
| 5       | 17.5 | 17.0 | 17.5     | 17.5 | 17.0 | 17.5     | 10.0 | 10.0 | 10.0    | 10.0 | 9.5  | 9.5  |
| 6       | 17.5 | 17.0 | 17.5     | 17.0 | 16.5 | 17.0     | 10.0 | 9.5  | 10.0    | 9.0  | 8.5  | 8.5  |
| 7       | 18.0 | 17.0 | 17.5     | 17.0 | 16.0 | 16.5     | 9.5  | 9.0  | 9.5     | 8.5  | 8.0  | 8.0  |
| 8       | 17.5 | 17.0 | 17.5     | 16.5 | 16.0 | 16.0     | 9.0  | 9.0  | 9.0     | 8.0  | 7.5  | 8.0  |
| 9       | 17.5 | 17.0 | 17.5     | 16.0 | 15.5 | 16.0     | 9.5  | 9.0  | 9.0     | 7.5  | 7.5  | 7.5  |
| 10      | 18.0 | 17.0 | 17.5     | 15.5 | 15.0 | 15.5     | 9.5  | 9.5  | 9.5     | 7.5  | 7.5  | 7.5  |
| 11      | 18.0 | 17.5 | 17.5     | 15.0 | 14.5 | 14.5     | 10.0 | 9.5  | 9.5     | 7.5  | 7.5  | 7.5  |
| 12      | 18.0 | 17.0 | 17.5     | 14.5 | 14.0 | 14.0     | 10.0 | 9.5  | 10.0    | 7.5  | 7.0  | 7.0  |
| 13      | 18.0 | 16.5 | 17.0     | 14.0 | 13.5 | 14.0     | 10.5 | 10.0 | 10.0    | 7.0  | 7.0  | 7.0  |
| 14      | 17.0 | 16.5 | 17.0     | 13.5 | 13.0 | 13.5     | 10.5 | 10.5 | 10.5    | 7.0  | 6.5  | 6.5  |
| 15      | 17.5 | 16.5 | 17.0     | 13.5 | 13.0 | 13.5     | 11.0 | 10.5 | 11.0    | 6.5  | 6.0  | 6.5  |
| 16      | 18.0 | 16.5 | 17.5     | 13.5 | 12.5 | 13.0     | 11.5 | 11.0 | 11.5    | 6.0  | 6.0  | 6.0  |
| 17      | 17.5 | 17.0 | 17.5     | 13.0 | 12.5 | 12.5     | 12.0 | 11.5 | 11.5    | 6.0  | 6.0  | 6.0  |
| 18      | 17.5 | 17.0 | 17.5     | 12.5 | 12.0 | 12.5     | 12.0 | 12.0 | 12.0    | 6.0  | 6.0  | 6.0  |
| 19      | 18.0 | 17.0 | 17.5     | 12.0 | 11.0 | 11.5     | 12.0 | 12.0 | 12.0    | 6.0  | 6.0  | 6.0  |
| 20      | 18.0 | 17.5 | 17.5     | 11.0 | 9.0  | 10.0     | 12.0 | 12.0 | 12.0    | 6.0  | 4.5  | 5.5  |
| 21      | 19.0 | 18.0 | 18.5     | 9.0  | 8.0  | 8.0      | 12.0 | 12.0 | 12.0    | 4.5  | 4.5  | 4.5  |
| 22      | 18.0 | 18.0 | 18.0     | 8.5  | 7.5  | 8.5      | 12.0 | 11.5 | 12.0    | 4.5  | 4.0  | 4.0  |
| 23      | 18.0 | 17.5 | 18.0     | 8.5  | 8.5  | 8.5      | 11.5 | 11.0 | 11.5    | 4.0  | 4.0  | 4.0  |
| 24      | 18.5 | 18.0 | 18.0     | 8.5  | 8.5  | 8.5      | 11.5 | 11.0 | 11.0    | 4.5  | 4.0  | 4.0  |
| 25      | 18.5 | 18.0 | 18.0     | 9.0  | 8.5  | 9.0      | 11.0 | 10.5 | 10.5    | 5.0  | 4.5  | 4.5  |
| 26      | 18.5 | 18.0 | 18.0     | 10.0 | 9.0  | 9.5      | 10.5 | 10.0 | 10.5    | 4.5  | 4.0  | 4.5  |
| 27      | 18.5 | 17.5 | 18.0     | 10.5 | 10.0 | 10.0     | 10.5 | 10.0 | 10.0    | 4.5  | 4.0  | 4.5  |
| 28      | 18.5 | 18.0 | 18.0     | 11.0 | 10.5 | 10.5     | 10.5 | 10.0 | 10.5    | 4.0  | 4.0  | 4.0  |
| 29      | 18.5 | 18.5 | 18.5     | 11.0 | 11.0 | 11.0     | 10.5 | 10.0 | 10.0    | 4.0  | 4.0  | 4.0  |
| 30      | 18.5 | 18.0 | 18.0     | 11.0 | 11.0 | 11.0     | 10.5 | 10.0 | 10.0    | 4.5  | 4.0  | 4.0  |
| 31      | 18.0 | 18.0 | 18.0     | ---  | ---  | ---      | 10.5 | 10.0 | 10.0    | 4.5  | 4.0  | 4.5  |
| MONTH   | 19.0 | 16.0 | 17.5     | 19.0 | 7.5  | 13.0     | 12.0 | 9.0  | 10.5    | 11.0 | 4.0  | 6.5  |

| DAY      | MAX | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 4.5 | 3.5 | 4.0   | 8.5  | 8.0  | 8.0   | 12.5 | 11.0 | 11.5 | 17.0 | 15.5 | 16.0 |
| 2        | 3.5 | 3.5 | 3.5   | 8.5  | 8.5  | 8.5   | 12.0 | 10.5 | 11.5 | 16.5 | 15.5 | 16.0 |
| 3        | 3.5 | 3.0 | 3.5   | 9.0  | 8.5  | 8.5   | 12.0 | 11.5 | 12.0 | ---  | ---  | 16.0 |
| 4        | 3.5 | 3.5 | 3.5   | 9.0  | 8.5  | 9.0   | 13.0 | 11.5 | 12.5 | ---  | ---  | 16.5 |
| 5        | 4.0 | 3.5 | 3.5   | 9.0  | 8.5  | 8.5   | 13.5 | 13.0 | 13.5 | 17.5 | 16.0 | 16.5 |
| 6        | 3.5 | 3.5 | 3.5   | 8.5  | 8.5  | 8.5   | 13.5 | 13.0 | 13.0 | 17.5 | 15.5 | 16.0 |
| 7        | 3.5 | 3.5 | 3.5   | 8.5  | 8.5  | 8.5   | 13.0 | 12.0 | 13.0 | 16.0 | 15.5 | 16.0 |
| 8        | 4.0 | 3.0 | 3.5   | 9.0  | 8.5  | 8.5   | 13.5 | 12.5 | 13.0 | 17.0 | 15.5 | 16.0 |
| 9        | 4.5 | 4.0 | 4.0   | 9.0  | 8.5  | 8.5   | 13.0 | 12.0 | 13.0 | 17.0 | 15.5 | 16.5 |
| 10       | 5.0 | 4.5 | 4.5   | 9.0  | 9.0  | 9.0   | 13.0 | 12.0 | 13.0 | 16.5 | 16.0 | 16.5 |
| 11       | 5.0 | 4.5 | 4.5   | 9.5  | 9.0  | 9.0   | 13.0 | 12.5 | 13.0 | 17.0 | 16.0 | 16.5 |
| 12       | 4.5 | 3.5 | 4.0   | 10.0 | 9.0  | 9.5   | 13.5 | 12.5 | 13.0 | 17.5 | 16.0 | 16.5 |
| 13       | 3.5 | 3.5 | 3.5   | 9.5  | 9.5  | 9.5   | 13.5 | 12.5 | 13.0 | 17.0 | 16.5 | 16.5 |
| 14       | 4.0 | 3.5 | 3.5   | 9.5  | 9.0  | 9.5   | 13.5 | 13.0 | 13.0 | 17.5 | 16.5 | 17.0 |
| 15       | 4.0 | 4.0 | 4.0   | 9.5  | 9.0  | 9.5   | 13.5 | 13.0 | 13.0 | 17.5 | 15.5 | 16.5 |
| 16       | 4.0 | 3.5 | 3.5   | 9.5  | 9.5  | 9.5   | 13.5 | 12.5 | 13.0 | 16.5 | 15.5 | 16.0 |
| 17       | 4.0 | 3.5 | 4.0   | 10.0 | 9.0  | 9.5   | 13.5 | 12.0 | 12.5 | 16.5 | 15.5 | 15.5 |
| 18       | 4.0 | 4.0 | 4.0   | 10.5 | 8.5  | 9.5   | 14.5 | 12.0 | 13.0 | 17.0 | 15.0 | 16.5 |
| 19       | 4.5 | 4.0 | 4.0   | 10.0 | 9.0  | 9.5   | 14.5 | 12.5 | 13.0 | 17.5 | 16.0 | 17.0 |
| 20       | 4.5 | 4.0 | 4.5   | 10.5 | 9.5  | 10.0  | 14.0 | 13.0 | 13.5 | 18.0 | 17.0 | 17.5 |
| 21       | 5.0 | 4.5 | 4.5   | 10.0 | 9.5  | 10.0  | 14.5 | 13.5 | 14.0 | 18.0 | 17.5 | 17.5 |
| 22       | 5.5 | 5.0 | 5.5   | 9.5  | 9.5  | 9.5   | 16.5 | 14.0 | 15.0 | 18.0 | 17.5 | 17.5 |
| 23       | 7.0 | 5.5 | 6.0   | 9.5  | 9.0  | 9.5   | 16.5 | 14.5 | 15.0 | 17.5 | 17.0 | 17.5 |
| 24       | 7.0 | 7.0 | 7.0   | 9.5  | 9.0  | 9.5   | 15.5 | 14.5 | 15.0 | 18.5 | 16.5 | 17.0 |
| 25       | 7.5 | 7.0 | 7.0   | 10.0 | 9.0  | 9.5   | 15.5 | 14.5 | 15.0 | 18.5 | 17.0 | 17.5 |
| 26       | 7.5 | 7.5 | 7.5   | 10.0 | 9.5  | 9.5   | 15.5 | 14.5 | 15.0 | 18.5 | 17.5 | 18.0 |
| 27       | 8.0 | 7.5 | 7.5   | 10.0 | 10.0 | 10.0  | 15.5 | 14.5 | 15.0 | 18.5 | 18.0 | 18.0 |
| 28       | 8.5 | 7.5 | 8.0   | 10.5 | 10.0 | 10.5  | 15.5 | 14.5 | 15.0 | 19.0 | 18.0 | 18.5 |
| 29       | --- | --- | ---   | 11.0 | 10.5 | 11.0  | 16.0 | 15.0 | 15.5 | 20.0 | 17.5 | 18.5 |
| 30       | --- | --- | ---   | 11.5 | 11.0 | 11.0  | 16.5 | 15.0 | 15.5 | 19.5 | 17.5 | 18.5 |
| 31       | --- | --- | ---   | 12.0 | 11.5 | 11.5  | ---  | ---  | ---  | 19.0 | 18.0 | 18.5 |
| MONTH    | 8.5 | 3.0 | 4.5   | 12.0 | 8.0  | 9.5   | 16.5 | 10.5 | 13.5 | 20.0 | 15.0 | 17.0 |

## CUMBERLAND RIVER BASIN

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03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 19.0 | 18.0 | 18.5 | 21.5 | 18.5 | 19.5 | 20.0   | 18.0 | 19.0 | 20.5      | 18.5 | 19.5 |
| 2     | 19.5 | 18.0 | 18.5 | 20.0 | 19.0 | 19.5 | 20.0   | 18.0 | 18.5 | 21.0      | 18.5 | 19.5 |
| 3     | 19.5 | 18.0 | 19.0 | ---  | ---  | ---  | 19.0   | 17.5 | 18.5 | 21.5      | 19.0 | 20.0 |
| 4     | 20.5 | 18.5 | 19.0 | ---  | ---  | ---  | 19.0   | 16.5 | 17.5 | 20.5      | 19.0 | 20.0 |
| 5     | 20.5 | 18.5 | 19.5 | ---  | ---  | ---  | 19.5   | 15.5 | 18.5 | 19.5      | 18.5 | 19.0 |
| 6     | 21.5 | 19.0 | 20.0 | ---  | ---  | ---  | 20.5   | 18.5 | 19.0 | 21.5      | 18.0 | 19.5 |
| 7     | ---  | ---  | ---  | ---  | ---  | ---  | 20.5   | 18.5 | 19.5 | 20.0      | 18.5 | 19.5 |
| 8     | ---  | ---  | ---  | 21.0 | 19.5 | 20.5 | 20.5   | 18.5 | 20.5 | 21.0      | 19.0 | 20.0 |
| 9     | ---  | ---  | ---  | 21.5 | 20.0 | 20.5 | 20.0   | 18.0 | 18.5 | 20.0      | 19.5 | 19.5 |
| 10    | ---  | ---  | ---  | 21.5 | 19.5 | 20.5 | 20.0   | 18.0 | 19.0 | 20.5      | 19.0 | 19.0 |
| 11    | ---  | ---  | ---  | 22.0 | 19.0 | 21.0 | 20.0   | 18.0 | 18.5 | 20.0      | 18.5 | 19.0 |
| 12    | 20.5 | 19.0 | 20.0 | 22.0 | 20.5 | 21.0 | 19.0   | 18.5 | 19.0 | 19.5      | 18.5 | 19.0 |
| 13    | 20.5 | 18.5 | 19.5 | 22.5 | 20.0 | 20.5 | 19.0   | 18.0 | 18.5 | 20.5      | 18.5 | 19.5 |
| 14    | 20.5 | 18.5 | 19.0 | 23.0 | 19.0 | 20.0 | 22.0   | 18.0 | 19.5 | 19.5      | 18.5 | 19.5 |
| 15    | 19.5 | 18.5 | 18.5 | 21.5 | 19.5 | 20.0 | 20.0   | 18.0 | 19.5 | 20.0      | 18.5 | 19.0 |
| 16    | 19.0 | 18.0 | 18.5 | 20.5 | 19.5 | 20.0 | 19.0   | 18.5 | 19.0 | 21.0      | 19.0 | 20.0 |
| 17    | 18.5 | 17.5 | 18.0 | 21.5 | 19.0 | 20.5 | ---    | ---  | 19.0 | 20.0      | 19.5 | 19.5 |
| 18    | 18.0 | 17.5 | 18.0 | 21.5 | 19.0 | 20.5 | 20.0   | 18.0 | 19.0 | 20.0      | 19.5 | 20.0 |
| 19    | 18.0 | 17.0 | 18.0 | 22.5 | 20.0 | 21.0 | 20.0   | 18.5 | 19.0 | 21.5      | 19.5 | 20.5 |
| 20    | 19.0 | 17.0 | 18.0 | 22.0 | 19.5 | 21.0 | 20.0   | 18.5 | 19.0 | 22.0      | 20.0 | 21.0 |
| 21    | 19.0 | 18.0 | 18.5 | 21.0 | 19.5 | 20.0 | ---    | ---  | 19.5 | 22.5      | 20.5 | 21.5 |
| 22    | 19.5 | 18.0 | 18.5 | 22.0 | 19.0 | 20.5 | 21.0   | 18.5 | 19.5 | 22.0      | 21.0 | 21.5 |
| 23    | 18.5 | 18.0 | 18.5 | 22.0 | 20.0 | 20.5 | 21.0   | 18.0 | 20.5 | 22.0      | 21.0 | 21.5 |
| 24    | 19.5 | 18.0 | 18.5 | 23.0 | 20.0 | 21.0 | 20.5   | 18.5 | 19.5 | 23.0      | 21.0 | 21.5 |
| 25    | 19.5 | 18.0 | 19.0 | 22.0 | 20.0 | 21.0 | ---    | ---  | 19.5 | 22.5      | 20.5 | 21.5 |
| 26    | 19.5 | 18.0 | 18.5 | 21.5 | 20.0 | 20.5 | ---    | ---  | 19.5 | 21.5      | 21.0 | 21.0 |
| 27    | 19.5 | 18.0 | 18.5 | 20.0 | 19.0 | 19.5 | 20.0   | 18.5 | 19.5 | 21.5      | 20.0 | 21.0 |
| 28    | 18.5 | 17.0 | 18.0 | 19.5 | 19.0 | 19.0 | 20.5   | 18.5 | 19.5 | 21.5      | 20.0 | 20.5 |
| 29    | 19.0 | 18.0 | 18.5 | 20.0 | 19.0 | 19.5 | 22.0   | 18.5 | 20.5 | 20.5      | 20.0 | 20.0 |
| 30    | 20.0 | 18.0 | 19.0 | 20.5 | 19.0 | 19.5 | 21.0   | 18.5 | 20.0 | 20.5      | 20.0 | 20.0 |
| 31    | ---  | ---  | ---  | 20.0 | 18.5 | 19.5 | 21.5   | 18.5 | 20.0 | ---       | ---  | ---  |
| MONTH | 21.5 | 17.0 | 18.5 | 23.0 | 18.5 | 20.5 | 22.0   | 15.5 | 19.0 | 23.0      | 18.0 | 20.0 |

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN  | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|------|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |      |      |
| 1     | ---     | --- | ---  | 9.3      | 6.3 | 8.2  | ---      | --- | ---  | 10.0    | 9.8  | 9.9  |
| 2     | 7.4     | 6.9 | 7.4  | 9.2      | 6.5 | 8.0  | ---      | --- | ---  | 9.8     | 9.7  | 9.8  |
| 3     | 7.2     | 6.1 | 6.8  | 9.3      | 6.4 | 7.8  | ---      | --- | ---  | 9.7     | 9.7  | 9.7  |
| 4     | 7.4     | 6.4 | 6.9  | 9.1      | 5.2 | 7.8  | ---      | --- | ---  | 9.7     | 9.6  | 9.7  |
| 5     | 7.3     | 6.3 | 6.9  | 8.8      | 6.1 | 7.6  | ---      | --- | ---  | 9.8     | 9.6  | 9.7  |
| 6     | 7.1     | 6.2 | 6.7  | ---      | --- | ---  | ---      | --- | ---  | 9.9     | 9.8  | 9.8  |
| 7     | 8.2     | 6.2 | 7.3  | ---      | --- | ---  | ---      | --- | ---  | 10.0    | 9.8  | 9.9  |
| 8     | 8.0     | 6.5 | 7.5  | ---      | --- | ---  | ---      | --- | ---  | 10.1    | 10.0 | 10.0 |
| 9     | 8.1     | 6.4 | 7.2  | ---      | --- | ---  | ---      | --- | ---  | 10.2    | 10.1 | 10.2 |
| 10    | 7.9     | 6.7 | 7.6  | ---      | --- | ---  | 9.7      | 9.2 | 9.6  | 10.2    | 10.2 | 10.2 |
| 11    | 7.4     | 6.8 | 7.1  | ---      | --- | ---  | 9.7      | 9.0 | 9.5  | 10.2    | 10.2 | 10.2 |
| 12    | 7.4     | 6.0 | 7.1  | ---      | --- | ---  | 9.6      | 9.5 | 9.6  | 10.4    | 10.2 | 10.3 |
| 13    | 7.2     | 6.5 | 6.9  | ---      | --- | ---  | 9.6      | 9.5 | 9.5  | 10.4    | 10.3 | 10.4 |
| 14    | 7.4     | 5.8 | 6.8  | 9.0      | 8.2 | 8.6  | 9.6      | 9.5 | 9.6  | 10.5    | 10.4 | 10.5 |
| 15    | 8.0     | 6.0 | 7.0  | 8.7      | 7.6 | 8.3  | 9.7      | 9.5 | 9.6  | 10.7    | 10.5 | 10.6 |
| 16    | 8.1     | 7.1 | 7.6  | 8.4      | 7.4 | 8.0  | 9.5      | 9.5 | 9.5  | 10.7    | 10.6 | 10.7 |
| 17    | 8.2     | 6.7 | 7.5  | 8.0      | 7.2 | 7.7  | 9.7      | 9.3 | 9.4  | 10.8    | 10.7 | 10.7 |
| 18    | 8.0     | 6.3 | 7.1  | 9.4      | 7.3 | 8.3  | 9.6      | 8.6 | 9.4  | 10.8    | 10.7 | 10.7 |
| 19    | 8.0     | 6.8 | 7.4  | 9.2      | 8.7 | 9.0  | 9.5      | 9.3 | 9.5  | 10.8    | 10.7 | 10.8 |
| 20    | 8.4     | 5.9 | 7.4  | 9.4      | 9.0 | 9.2  | 9.6      | 9.3 | 9.4  | 11.0    | 10.8 | 10.9 |
| 21    | 8.7     | 6.9 | 7.8  | ---      | --- | ---  | 9.6      | 9.2 | 9.5  | 11.1    | 11.0 | 11.1 |
| 22    | 8.0     | 6.4 | 7.3  | ---      | --- | ---  | 9.7      | 9.5 | 9.6  | 11.2    | 11.0 | 11.1 |
| 23    | 7.7     | 7.0 | 7.6  | ---      | --- | ---  | 9.7      | 9.3 | 9.6  | 11.2    | 11.2 | 11.2 |
| 24    | 8.1     | 5.8 | 7.4  | ---      | --- | ---  | 9.7      | 9.4 | 9.5  | 11.2    | 11.2 | 11.2 |
| 25    | 8.3     | 6.3 | 7.5  | ---      | --- | ---  | 9.7      | 9.5 | 9.6  | 11.3    | 11.2 | 11.2 |
| 26    | 9.2     | 6.8 | 7.8  | ---      | --- | ---  | 9.8      | 9.7 | 9.8  | 11.3    | 11.2 | 11.3 |
| 27    | 8.2     | 5.9 | 7.4  | ---      | --- | ---  | 9.7      | 9.6 | 9.7  | 11.4    | 11.1 | 11.3 |
| 28    | 8.3     | 5.4 | 6.9  | ---      | --- | ---  | 9.7      | 9.6 | 9.6  | 11.4    | 11.1 | 11.3 |
| 29    | 8.5     | 7.2 | 7.7  | ---      | --- | ---  | 9.9      | 9.6 | 9.8  | 11.5    | 11.2 | 11.4 |
| 30    | 8.4     | 5.7 | 7.1  | ---      | --- | ---  | 10.1     | 9.3 | 9.9  | 11.6    | 11.1 | 11.5 |
| 31    | 8.3     | 5.8 | 7.6  | ---      | --- | ---  | 10.0     | 9.7 | 9.9  | 11.7    | 11.5 | 11.6 |
| MONTH | 9.2     | 5.4 | 7.3  | ---      | --- | ---  | ---      | --- | ---  | 11.7    | 9.6  | 10.6 |

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|-----|-----|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |     |     |      |
| 1        | 11.7 | 11.6 | 11.6  | 11.9 | 11.5 | 11.7  | 11.2 | 10.4 | 10.9 | 9.7 | 8.7 | 9.4  |
| 2        | 11.8 | 11.7 | 11.8  | 11.7 | 11.3 | 11.6  | 11.6 | 10.6 | 11.1 | 9.4 | 8.6 | 9.1  |
| 3        | 11.9 | 11.7 | 11.8  | 11.9 | 11.6 | 11.7  | 11.5 | 11.0 | 11.3 | --- | --- | 9.0  |
| 4        | 11.8 | 11.6 | 11.7  | 11.8 | 11.6 | 11.7  | 11.5 | 10.9 | 11.3 | --- | --- | 9.0  |
| 5        | 11.8 | 11.5 | 11.6  | 11.8 | 11.5 | 11.7  | 11.4 | 10.7 | 11.0 | 9.2 | 8.6 | 8.9  |
| 6        | 11.7 | 11.6 | 11.7  | 11.9 | 11.7 | 11.8  | 10.8 | 10.4 | 10.7 | 9.1 | 7.2 | 8.5  |
| 7        | 11.9 | 11.7 | 11.8  | 12.1 | 11.6 | 11.9  | 10.7 | 10.2 | 10.6 | 9.1 | 8.1 | 8.7  |
| 8        | 11.9 | 11.7 | 11.8  | 12.3 | 11.1 | 11.8  | 10.6 | 10.1 | 10.5 | 9.3 | 8.3 | 9.0  |
| 9        | 11.9 | 11.8 | 11.8  | 12.0 | 11.7 | 11.8  | 10.9 | 10.3 | 10.6 | 9.2 | 8.5 | 9.0  |
| 10       | 11.8 | 11.6 | 11.8  | 11.9 | 11.5 | 11.8  | 11.3 | 10.4 | 10.8 | 9.2 | 8.3 | 8.9  |
| 11       | 11.8 | 11.6 | 11.7  | 11.8 | 11.2 | 11.7  | 11.3 | 10.7 | 11.0 | 9.0 | 7.8 | 8.7  |
| 12       | 11.9 | 11.8 | 11.8  | 11.8 | 11.1 | 11.5  | 12.0 | 10.3 | 11.3 | 9.2 | 7.4 | 8.6  |
| 13       | 12.0 | 11.9 | 12.0  | 11.8 | 11.4 | 11.6  | 11.9 | 10.8 | 11.3 | 9.1 | 7.5 | 8.5  |
| 14       | 12.0 | 11.9 | 12.0  | 11.9 | 11.6 | 11.8  | 11.6 | 10.7 | 11.3 | 9.3 | 7.2 | 8.6  |
| 15       | 11.9 | 11.8 | 11.9  | 11.8 | 11.5 | 11.7  | 11.2 | 10.6 | 11.0 | 8.9 | 7.8 | 8.5  |
| 16       | 11.9 | 11.8 | 11.9  | 11.5 | 11.0 | 11.4  | 11.7 | 10.5 | 11.1 | 8.8 | 7.7 | 8.3  |
| 17       | 12.0 | 11.9 | 11.9  | 11.7 | 10.7 | 11.3  | 12.4 | 10.1 | 11.5 | 8.6 | 7.6 | 8.2  |
| 18       | 12.1 | 11.9 | 12.0  | 11.6 | 10.6 | 11.3  | ---  | ---  | ---  | 8.2 | 7.2 | 7.8  |
| 19       | 12.1 | 11.9 | 12.0  | 11.7 | 11.2 | 11.4  | ---  | ---  | ---  | 8.6 | 7.2 | 8.2  |
| 20       | 12.1 | 12.0 | 12.0  | 12.1 | 11.3 | 11.8  | ---  | ---  | ---  | 8.6 | 7.1 | 8.1  |
| 21       | 12.1 | 11.9 | 12.1  | 11.8 | 11.0 | 11.6  | ---  | ---  | ---  | 8.3 | 6.8 | 7.8  |
| 22       | 12.2 | 12.1 | 12.1  | 11.8 | 10.9 | 11.5  | ---  | ---  | ---  | 8.1 | 7.2 | 7.7  |
| 23       | 12.1 | 12.0 | 12.1  | 11.8 | 11.2 | 11.7  | ---  | ---  | ---  | 7.7 | 7.0 | 7.4  |
| 24       | 12.1 | 11.9 | 12.0  | 11.8 | 11.2 | 11.6  | ---  | ---  | ---  | 8.0 | 6.8 | 7.5  |
| 25       | 12.0 | 11.7 | 11.9  | 12.2 | 11.0 | 11.7  | 10.5 | 9.8  | 10.2 | 8.2 | 7.1 | 7.8  |
| 26       | 11.9 | 11.8 | 11.8  | 12.1 | 11.3 | 11.9  | 10.2 | 9.6  | 10.0 | 8.3 | 7.5 | 8.0  |
| 27       | 11.9 | 11.7 | 11.8  | 12.2 | 11.6 | 11.9  | 10.1 | 9.1  | 9.6  | 8.8 | 7.4 | 8.0  |
| 28       | 12.2 | 11.7 | 11.8  | 11.8 | 11.0 | 11.6  | 9.8  | 8.8  | 9.5  | 8.9 | 7.7 | 8.0  |
| 29       | ---  | ---  | ---   | 11.5 | 10.6 | 11.3  | 9.8  | 9.0  | 9.5  | 8.1 | 7.3 | 7.8  |
| 30       | ---  | ---  | ---   | 11.5 | 10.2 | 11.2  | 9.9  | 8.9  | 9.4  | 8.3 | 6.9 | 7.7  |
| 31       | ---  | ---  | ---   | 11.3 | 10.3 | 11.0  | ---  | ---  | ---  | 7.7 | 6.6 | 7.4  |
| MONTH    | 12.2 | 11.5 | 11.9  | 12.3 | 10.2 | 11.6  | ---  | ---  | ---  | 9.7 | 6.6 | 8.3  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 7.6 | 6.6 | 7.2  | 7.5 | 6.0 | 6.8    | 7.3 | 6.3 | 7.0       | 6.3 | 5.6 | 6.0  |
| 2     | 8.0 | 6.7 | 7.3  | 7.3 | 6.6 | 7.0    | 7.7 | 7.1 | 7.3       | 6.6 | 5.1 | 6.1  |
| 3     | 7.9 | 6.7 | 7.4  | 7.5 | 6.3 | 6.9    | 7.7 | 6.2 | 7.6       | 6.8 | 5.6 | 6.3  |
| 4     | 8.1 | 6.9 | 7.5  | 8.3 | 5.1 | 7.4    | 7.7 | 6.0 | 7.2       | 6.8 | 6.2 | 6.5  |
| 5     | 8.3 | 6.6 | 7.5  | 8.3 | 5.5 | 7.4    | 7.6 | 6.4 | 7.2       | 6.9 | 6.0 | 6.6  |
| 6     | 8.1 | 6.7 | 7.5  | 7.9 | 6.7 | 7.5    | 7.5 | 6.0 | 6.9       | 7.7 | 5.9 | 6.9  |
| 7     | 8.0 | 7.1 | 7.6  | 8.0 | 7.1 | 7.6    | 7.1 | 5.6 | 6.8       | 7.4 | 6.7 | 7.2  |
| 8     | 7.9 | 6.9 | 7.5  | 7.9 | 6.5 | 7.5    | 7.1 | 6.2 | 6.8       | 8.1 | 6.2 | 7.3  |
| 9     | 7.8 | 6.8 | 7.4  | 8.2 | 6.0 | 7.4    | 7.3 | 6.4 | 7.0       | 7.9 | 6.8 | 7.5  |
| 10    | 8.0 | 6.7 | 7.4  | 8.3 | 6.0 | 7.4    | 7.4 | 5.9 | 6.9       | 7.8 | 6.9 | 7.5  |
| 11    | 7.8 | 7.1 | 7.4  | 8.2 | 5.8 | 7.3    | 7.5 | 6.2 | 7.0       | 8.2 | 6.9 | 7.6  |
| 12    | 7.7 | 6.6 | 7.3  | 8.7 | 6.3 | 7.7    | 7.5 | 6.2 | 7.0       | 8.7 | 7.3 | 8.0  |
| 13    | 8.5 | 7.2 | 7.9  | 9.1 | 6.0 | 7.4    | 7.6 | 6.2 | 7.1       | 8.3 | 7.5 | 7.9  |
| 14    | 8.7 | 7.6 | 8.2  | 7.7 | 6.2 | 7.1    | 8.5 | 6.4 | 7.4       | 7.8 | 6.8 | 7.6  |
| 15    | 8.3 | 7.7 | 8.0  | 7.8 | 6.6 | 7.2    | 7.9 | 6.0 | 7.5       | 7.7 | 7.1 | 7.4  |
| 16    | 8.4 | 6.7 | 7.7  | 8.1 | 7.1 | 7.6    | 7.6 | 6.3 | 7.3       | 8.2 | 6.1 | 7.2  |
| 17    | 8.2 | 6.8 | 7.7  | 8.1 | 6.2 | 7.6    | 7.8 | 7.0 | 7.5       | 7.5 | 6.8 | 7.2  |
| 18    | 8.1 | 6.3 | 7.5  | 8.1 | 6.1 | 7.5    | 7.6 | 5.9 | 7.2       | 7.3 | 6.8 | 7.2  |
| 19    | 8.0 | 6.5 | 7.4  | 8.4 | 6.2 | 7.4    | 7.5 | 6.6 | 7.2       | 8.0 | 6.9 | 7.4  |
| 20    | 7.9 | 6.5 | 7.4  | 8.5 | 6.4 | 7.7    | 7.5 | 6.5 | 7.2       | 8.3 | 7.1 | 7.7  |
| 21    | 8.0 | 6.8 | 7.4  | 8.4 | 5.1 | 7.4    | 7.7 | 6.6 | 7.3       | 8.2 | 7.2 | 7.7  |
| 22    | 7.6 | 5.9 | 7.0  | 8.5 | 6.4 | 7.8    | 7.7 | 6.5 | 7.3       | 7.8 | 6.7 | 7.3  |
| 23    | 7.1 | 5.9 | 6.6  | 8.5 | 5.8 | 7.4    | 8.5 | 6.0 | 7.5       | 7.2 | 6.2 | 6.8  |
| 24    | 7.3 | 5.6 | 6.6  | 7.8 | 6.2 | 7.2    | 8.5 | 7.2 | 8.0       | 6.8 | 5.6 | 6.4  |
| 25    | 7.4 | 5.5 | 6.5  | 7.2 | 6.3 | 6.9    | 8.0 | 6.7 | 7.7       | 7.1 | 5.6 | 6.6  |
| 26    | 7.5 | 5.7 | 6.5  | 7.2 | 6.0 | 6.8    | 7.8 | 6.0 | 7.3       | 7.1 | 6.6 | 7.0  |
| 27    | 7.8 | 6.0 | 7.0  | 7.2 | 6.1 | 6.9    | 7.0 | 5.3 | 6.5       | 7.5 | 6.5 | 7.1  |
| 28    | 7.7 | 6.1 | 7.2  | 7.2 | 6.7 | 7.2    | 5.4 | 4.8 | 5.2       | 7.6 | 6.9 | 7.3  |
| 29    | 7.6 | 6.6 | 7.2  | 7.4 | 6.4 | 7.0    | 6.4 | 4.9 | 5.6       | 7.6 | 7.2 | 7.4  |
| 30    | 8.5 | 6.6 | 7.4  | 7.5 | 6.7 | 7.2    | 6.2 | 5.3 | 5.7       | 7.7 | 6.8 | 7.5  |
| 31    | --- | --- | ---  | 7.4 | 6.5 | 7.2    | 6.4 | 5.2 | 5.9       | --- | --- | ---  |
| MONTH | 8.7 | 5.5 | 7.3  | 9.1 | 5.1 | 7.3    | 8.5 | 4.8 | 7.0       | 8.7 | 5.1 | 7.1  |

## 03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U. S. Highway 70S, 1.8 mi downstream from Barren Fork River, 2.5 mi northeast of McMinnville, and at mile 19.5.

DRAINAGE AREA.--640 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 825.78 ft Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--61 years, 1,162 ft<sup>3</sup>/s, 24.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft<sup>3</sup>/s Mar. 23, 1929, gage height, 39.1 ft, from rating curve extended above 42,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 35 ft<sup>3</sup>/s Sept. 21, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 1700 | *7,760                            | *11.51              |      |      |                                   |                     |

Minimum discharge, 89 ft<sup>3</sup>/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| 1           | 101   | 356    | 2140  | 2030  | 4750  | 1200  | 1570  | 577   | 197   | 163  | 173   | 464  |       |
| 2           | 96    | 334    | 1720  | 3160  | 6570  | 1140  | 1690  | 572   | 187   | 163  | 151   | 383  |       |
| 3           | 97    | 340    | 1490  | 1980  | 4000  | 1060  | 1390  | 640   | 179   | 144  | 136   | 313  |       |
| 4           | 97    | 353    | 1350  | 2500  | 2610  | 989   | 1190  | 647   | 171   | 143  | 127   | 259  |       |
| 5           | 94    | 378    | 1190  | 2690  | 3180  | 1040  | 1060  | 583   | 165   | 450  | 120   | 227  |       |
| 6           | 93    | 381    | 1210  | 2160  | 5110  | 1090  | 1390  | 525   | 163   | 378  | 128   | 219  |       |
| 7           | 92    | 367    | 1260  | 1780  | 3880  | 993   | 1860  | 568   | 178   | 262  | 150   | 215  |       |
| 8           | 131   | 337    | 1120  | 1520  | 2830  | 933   | 1560  | 707   | 304   | 222  | 298   | 205  |       |
| 9           | 142   | 306    | 1040  | 1300  | 2220  | 972   | 1280  | 692   | 272   | 196  | 211   | 195  |       |
| 10          | 121   | 402    | 962   | 1150  | 1930  | 1140  | 1100  | 622   | 238   | 174  | 169   | 184  |       |
| 11          | 107   | 1350   | 883   | 1060  | 2240  | 1080  | 966   | 559   | 653   | 176  | 161   | 179  |       |
| 12          | 103   | 1530   | 807   | 980   | 4380  | 1050  | 860   | 517   | 1160  | 171  | 144   | 181  |       |
| 13          | 99    | 1070   | 751   | 880   | 3370  | 1010  | 786   | 519   | 1040  | 150  | 132   | 170  |       |
| 14          | 99    | 805    | 697   | 823   | 2600  | 956   | 737   | 755   | 612   | 142  | 123   | 161  |       |
| 15          | 100   | 703    | 638   | 780   | 2170  | 892   | 939   | 661   | 399   | 145  | 115   | 154  |       |
| 16          | 100   | 1150   | 589   | 722   | 1830  | 833   | 1550  | 542   | 289   | 253  | 115   | 149  |       |
| 17          | 141   | 1130   | 552   | 729   | 1640  | 792   | 1510  | 469   | 253   | 193  | 742   | 142  |       |
| 18          | 158   | 1040   | 522   | 790   | 1630  | 745   | 1260  | 408   | 872   | 152  | 1530  | 137  |       |
| 19          | 142   | 5510   | 501   | 775   | 2340  | 696   | 1080  | 360   | 676   | 137  | 1140  | 134  |       |
| 20          | 237   | 3380   | 564   | 731   | 2930  | 659   | 944   | 321   | 486   | 130  | 647   | 131  |       |
| 21          | 419   | 1980   | 1100  | 625   | 2460  | 638   | 836   | 307   | 358   | 127  | 910   | 130  |       |
| 22          | 439   | 1480   | 1570  | 591   | 2040  | 703   | 750   | 319   | 273   | 133  | 492   | 128  |       |
| 23          | 1220  | 1200   | 1830  | 574   | 1750  | 973   | 682   | 313   | 240   | 155  | 341   | 126  |       |
| 24          | 2280  | 1020   | 1550  | 571   | 1600  | 1270  | 639   | 287   | 239   | 229  | 288   | 125  |       |
| 25          | 1190  | 890    | 1880  | 588   | 1510  | 1340  | 621   | 266   | 200   | 188  | 298   | 124  |       |
| 26          | 811   | 786    | 2070  | 575   | 1450  | 1180  | 602   | 248   | 175   | 154  | 863   | 303  |       |
| 27          | 605   | 718    | 1720  | 524   | 1420  | 1060  | 579   | 229   | 185   | 161  | 1030  | 386  |       |
| 28          | 502   | 4500   | 1450  | 514   | 1300  | 1000  | 607   | 235   | 184   | 157  | 759   | 205  |       |
| 29          | 543   | 4400   | 1250  | 502   | ---   | 949   | 618   | 222   | 169   | 147  | 568   | 186  |       |
| 30          | 479   | 2870   | 1110  | 498   | ---   | 875   | 622   | 209   | 158   | 146  | 469   | 173  |       |
| 31          | 404   | ---    | 1040  | 954   | ---   | 849   | ---   | 203   | ---   | 189  | 638   | ---  |       |
| TOTAL       | 11242 | 41066  | 36556 | 35056 | 75740 | 30107 | 31278 | 14082 | 10675 | 5730 | 13168 | 6088 |       |
| MEAN        | 363   | 1369   | 1179  | 1131  | 2705  | 971   | 1043  | 454   | 356   | 185  | 425   | 203  |       |
| MAX         | 2280  | 5510   | 2140  | 3160  | 6570  | 1340  | 1860  | 755   | 1160  | 450  | 1530  | 464  |       |
| MIN         | 92    | 306    | 501   | 498   | 1300  | 638   | 579   | 203   | 158   | 127  | 115   | 124  |       |
| CFSM        | .57   | 2.14   | 1.84  | 1.77  | 4.23  | 1.52  | 1.63  | .71   | .56   | .29  | .66   | .32  |       |
| IN.         | .65   | 2.39   | 2.12  | 2.04  | 4.40  | 1.75  | 1.82  | .82   | .62   | .33  | .77   | .35  |       |
| CAL YR 1984 | TOTAL | 453468 |       | MEAN  | 1239  | MAX   | 18400 | MIN   | 92    | CFSM | 1.94  | IN.  | 26.36 |
| WTR YR 1985 | TOTAL | 310788 |       | MEAN  | 851   | MAX   | 6570  | MIN   | 92    | CFSM | 1.33  | IN.  | 18.06 |



## CUMBERLAND RIVER BASIN

03422500 CANEY FORK NEAR ROCK ISLAND, TN

LOCATION.--Lat 35°48'26", long 85°37'44", White County, Hydrologic Unit 05130108, on right bank 180 ft downstream from powerhouse of Tennessee Valley Authority, 0.8 mi downstream from Great Falls Dam, 0.9 mi downstream from Collins River, 1.5 mi northwest of Rock Island, and at mile 90.3.

DRAINAGE AREA.--1,678 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1911 to April 1913, July 1913 to May 1914, August 1914 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1934, 1937. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 647.09 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1924, at sites from 80 ft to 0.5 mi upstream at different datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 5.00 ft higher and Sept. 10, 1930, to Sept. 18, 1964, 3.00 ft higher.

REMARKS.--Records good, except for estimated daily discharges, Oct. 5-8, Nov. 29 to Dec. 6, which are fair. Flow regulated since Dec. 8, 1916, by Great Falls Lake (station 03422000). Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--71 years (1915-85), 3,167 ft<sup>3</sup>/s, 25.63 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft<sup>3</sup>/s, Mar. 23, 1929, gage height, 43.6 ft, present datum, from floodmark, from rating curve extended above 110,000 ft<sup>3</sup>/s; minimum daily, 25 ft<sup>3</sup>/s, several days August to October 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1902 reached a stage about 10 ft lower than the flood of Mar. 23, 1929, at a point 8 mi downstream, from profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,500 ft<sup>3</sup>/s, Feb. 2, gage-height, 18.08 ft; minimum, 37 ft<sup>3</sup>/s Oct. 19; minimum daily, 43 ft<sup>3</sup>/s Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT           | NOV       | DEC       | JAN    | FEB        | MAR        | APR        | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|---------------|-----------|-----------|--------|------------|------------|------------|-------|-------|-------|-------|-------|
| 1           | 176           | 2060      | 5000      | 6990   | 2950       | 3340       | 2180       | 1630  | 57    | 559   | 609   | 1100  |
| 2           | 170           | 2950      | 4800      | 10000  | 18700      | 3310       | 2040       | 1130  | 57    | 119   | 64    | 540   |
| 3           | 172           | 172       | 4200      | 6040   | 9650       | 3290       | 3100       | 1120  | 688   | 64    | 64    | 529   |
| 4           | 168           | 60        | 3700      | 8450   | 6570       | 3260       | 3150       | 58    | 1060  | 66    | 66    | 538   |
| 5           | 110           | 1250      | 3400      | 8000   | 7760       | 3260       | 3110       | 58    | 591   | 67    | 66    | 565   |
| 6           | 60            | 2180      | 3300      | 5850   | 14200      | 3260       | 3090       | 1190  | 590   | 68    | 72    | 573   |
| 7           | 60            | 2160      | 3310      | 4760   | 9450       | 3260       | 1870       | 1540  | 584   | 69    | 70    | 67    |
| 8           | 450           | 2150      | 3300      | 4080   | 7400       | 3060       | 3090       | 1550  | 57    | 659   | 70    | 68    |
| 9           | 559           | 2200      | 3290      | 3640   | 4800       | 2970       | 3200       | 2090  | 56    | 397   | 71    | 553   |
| 10          | 661           | 57        | 3270      | 3400   | 4570       | 3240       | 3170       | 887   | 1530  | 398   | 72    | 536   |
| 11          | 544           | 1310      | 3300      | 3340   | 5470       | 3230       | 3180       | 1360  | 1550  | 264   | 72    | 389   |
| 12          | 556           | 2980      | 3300      | 3330   | 9750       | 3210       | 3150       | 1100  | 734   | 916   | 290   | 368   |
| 13          | 61            | 3190      | 3270      | 3320   | 7570       | 3190       | 3120       | 2050  | 1940  | 68    | 285   | 261   |
| 14          | 61            | 3210      | 3240      | 3290   | 5360       | 3170       | 2450       | 3120  | 1510  | 69    | 289   | 43    |
| 15          | 735           | 3170      | 3220      | 3240   | 5080       | 3150       | 1520       | 3130  | 993   | 467   | 71    | 43    |
| 16          | 594           | 2970      | 3170      | 3190   | 4310       | 3110       | 2230       | 1830  | 76    | 68    | 72    | 207   |
| 17          | 221           | 2670      | 2640      | 3160   | 3770       | 2390       | 3200       | 1750  | 1110  | 68    | 2190  | 263   |
| 18          | 302           | 2400      | 2100      | 3120   | 3790       | 2380       | 3210       | 850   | 1720  | 385   | 3240  | 216   |
| 19          | 212           | 6600      | 2330      | 3120   | 5890       | 2070       | 3200       | 828   | 3140  | 1110  | 3230  | 170   |
| 20          | 953           | 9700      | 1990      | 3120   | 7930       | 2330       | 3190       | 1150  | 3120  | 68    | 3210  | 65    |
| 21          | 912           | 5920      | 1970      | 3090   | 6290       | 2280       | 3170       | 1240  | 1780  | 67    | 2430  | 67    |
| 22          | 1560          | 4390      | 2860      | 3060   | 5060       | 1680       | 3150       | 837   | 74    | 1100  | 2330  | 67    |
| 23          | 3140          | 3740      | 3020      | 1910   | 4350       | 1160       | 3130       | 836   | 67    | 1070  | 2280  | 179   |
| 24          | 3240          | 3360      | 3110      | 1380   | 3990       | 56         | 1570       | 770   | 1300  | 1160  | 566   | 260   |
| 25          | 3280          | 3270      | 3280      | 1310   | 3860       | 2350       | 1920       | 57    | 1350  | 63    | 64    | 179   |
| 26          | 3220          | 3240      | 3300      | 1920   | 3650       | 3180       | 1800       | 56    | 923   | 63    | 1300  | 187   |
| 27          | 3210          | 3240      | 3300      | 1980   | 3540       | 3160       | 1530       | 57    | 1320  | 64    | 1720  | 183   |
| 28          | 2270          | 8650      | 3400      | 1120   | 3380       | 3120       | 983        | 2390  | 63    | 64    | 1720  | 67    |
| 29          | 2450          | 12000     | 3500      | 1360   | ---        | 3080       | 859        | 561   | 63    | 64    | 1720  | 67    |
| 30          | 1940          | 8000      | 3360      | 1960   | ---        | 1010       | 1250       | 573   | 64    | 67    | 1710  | 302   |
| 31          | 2460          | ---       | 3330      | 1830   | ---        | 949        | ---        | 1200  | ---   | 1210  | 1710  | ---   |
| TOTAL       | 34507         | 109249    | 100560    | 114360 | 179090     | 82505      | 75812      | 36998 | 28167 | 10941 | 31723 | 8652  |
| MEAN        | 1113          | 3642      | 3244      | 3689   | 6396       | 2661       | 2527       | 1193  | 939   | 353   | 1023  | 288   |
| MAX         | 3280          | 12000     | 5000      | 10000  | 18700      | 3340       | 3210       | 3130  | 3140  | 1210  | 3240  | 1100  |
| MIN         | 60            | 57        | 1970      | 1120   | 2950       | 56         | 859        | 56    | 56    | 63    | 64    | 43    |
| (†)         | - 500         | +8000     | - 500     | -12300 | +12500     | -12400     | - 800      | - 400 | +4300 | +1200 | +1300 | + 100 |
| MEAN*       | 1097          | 3908      | 3228      | 3292   | 6842       | 2261       | 2500       | 1181  | 1082  | 392   | 1065  | 292   |
| CFSM*       | .65           | 2.33      | 1.92      | 1.96   | 4.08       | 1.35       | 1.49       | .70   | .64   | .23   | .63   | .17   |
| IN.*        | .75           | 2.60      | 2.22      | 2.26   | 4.25       | 1.55       | 1.66       | .81   | .72   | .27   | .73   | .19   |
| CAL YR 1984 | TOTAL 1268808 | MEAN 3467 | MAX 68000 | MIN 42 | MEAN* 3464 | CFSM* 2.06 | IN.* 28.10 |       |       |       |       |       |
| WTR YR 1985 | TOTAL 812564  | MEAN 2226 | MAX 18700 | MIN 43 | MEAN* 2228 | CFSM* 1.33 | IN.* 18.02 |       |       |       |       |       |

† Change in contents, in cfs-days, in Great Falls Lake.

\* Adjusted for change in contents.

03425000 CUMBERLAND RIVER AT CARTHAGE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°14'53", long 85°57'19", Smith County, Hydrologic Unit 05130201, on left bank of Cordell Hull Bridge on State Highway 25, at Carthage, 1.0 mi downstream from Caney Fork River, and at mile 308.2.

DRAINAGE AREA.--10,690 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected in this vicinity since 1885 are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M). WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 437.53 ft above National Geodetic Vertical Datum of 1929. Prior to May 12, 1936 nonrecording gage at site 1,000 ft downstream at same datum. May 12 to July 17, 1936, non-recording gage at present site and datum. Since Oct. 1, 1957, auxiliary water-stage recorder 15.8 mi downstream from base gage at same datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 28-30, Aug. 24-26, which are fair. Flow regulated by five upstream lakes or reservoirs, (see p.137). U.S. Army Corps of Engineers Satellite telemeter at station.

AVERAGE DISCHARGE.--63 years, 17,540 ft<sup>3</sup>/s, 22.28 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft<sup>3</sup>/s, Dec. 30, 1926; maximum gage height, 59.8 ft, Dec. 30, 1926; minimum daily discharge, 366 ft<sup>3</sup>/s, Oct. 29, 1940; minimum gage height since filling of Old Hickory Lake on Dec. 30, 1956, 4.3 ft, Oct. 28, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, that of Dec. 30, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,200 ft<sup>3</sup>/s, Nov. 28; maximum gage height, 23.22 ft, Nov. 19; minimum daily discharge, 3,230 ft<sup>3</sup>/s, Oct. 13; minimum gage height, 4.09 ft, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 4090   | 6690   | 31100  | 17600  | 25800  | 17700  | 5890   | 7300   | 6430   | 3410   | 10900  | 5850   |
| 2     | 5290   | 6630   | 36000  | 22800  | 20900  | 14800  | 9760   | 8410   | 5680   | 5860   | 11400  | 6560   |
| 3     | 5310   | 6360   | 35300  | 27200  | 20000  | 11500  | 9760   | 5830   | 6740   | 8570   | 9400   | 11200  |
| 4     | 5280   | 5110   | 30400  | 28500  | 17800  | 12400  | 8730   | 5620   | 8770   | 9840   | 7650   | 11100  |
| 5     | 5200   | 6960   | 39600  | 35000  | 22900  | 11800  | 8460   | 3710   | 11000  | 10900  | 4660   | 12600  |
| 6     | 3570   | 5910   | 40300  | 24100  | 24500  | 13300  | 9350   | 3910   | 11800  | 7560   | 6890   | 14900  |
| 7     | 3630   | 7070   | 36000  | 24100  | 25600  | 14100  | 7430   | 5940   | 12100  | 4940   | 10700  | 13200  |
| 8     | 4080   | 7530   | 34800  | 29600  | 27400  | 13900  | 8420   | 7560   | 10400  | 4130   | 11600  | 11400  |
| 9     | 3690   | 12700  | 24500  | 31000  | 22300  | 14400  | 10600  | 7230   | 6590   | 6890   | 11200  | 5920   |
| 10    | 4310   | 14300  | 20300  | 33800  | 20800  | 13000  | 9990   | 7730   | 6560   | 8450   | 9210   | 5830   |
| 11    | 4050   | 15300  | 18000  | 33700  | 18500  | 7490   | 12500  | 5580   | 7230   | 10100  | 7050   | 7080   |
| 12    | 4120   | 8940   | 21100  | 31400  | 32000  | 7160   | 10800  | 4270   | 10900  | 10400  | 5090   | 6340   |
| 13    | 3230   | 10100  | 22800  | 26900  | 29500  | 14400  | 10200  | 4390   | 10200  | 9090   | 6040   | 7380   |
| 14    | 3380   | 9580   | 24600  | 24100  | 27700  | 15500  | 6560   | 5160   | 9060   | 3580   | 9660   | 7770   |
| 15    | 5020   | 7170   | 23100  | 25600  | 28900  | 16800  | 7290   | 5970   | 7000   | 3480   | 11500  | 6000   |
| 16    | 5220   | 6950   | 19800  | 27500  | 28400  | 11900  | 7740   | 5840   | 5400   | 5060   | 10500  | 5350   |
| 17    | 5860   | 6890   | 15400  | 30700  | 18900  | 7230   | 9280   | 8050   | 5310   | 9090   | 11800  | 6150   |
| 18    | 5970   | 14600  | 13000  | 30400  | 16500  | 5280   | 11000  | 6620   | 6570   | 8720   | 8570   | 7010   |
| 19    | 7390   | 49500  | 19000  | 24100  | 18100  | 8810   | 10600  | 4870   | 7380   | 12100  | 7430   | 9770   |
| 20    | 5970   | 39500  | 22700  | 25700  | 21700  | 9780   | 7750   | 4840   | 7210   | 12200  | 6290   | 11200  |
| 21    | 4870   | 22900  | 24500  | 30800  | 22000  | 12400  | 5980   | 5580   | 6690   | 6860   | 9510   | 8990   |
| 22    | 4400   | 22800  | 23500  | 32100  | 19700  | 12500  | 5280   | 5980   | 5610   | 11000  | 12900  | 8430   |
| 23    | 7600   | 24500  | 17200  | 28600  | 19100  | 11700  | 7320   | 7260   | 4580   | 10200  | 13000  | 5650   |
| 24    | 11000  | 23000  | 10400  | 26000  | 13500  | 7280   | 7000   | 7470   | 4230   | 9400   | 10000  | 5340   |
| 25    | 6630   | 21800  | 18300  | 19000  | 21000  | 10100  | 8080   | 6670   | 5740   | 9860   | 8000   | 9250   |
| 26    | 5980   | 22200  | 16600  | 15300  | 18900  | 10900  | 8140   | 5590   | 5890   | 9500   | 11000  | 9650   |
| 27    | 4580   | 23700  | 19800  | 10200  | 18000  | 11200  | 7070   | 4330   | 7310   | 6340   | 13000  | 13400  |
| 28    | 7380   | 46200  | 23900  | 9200   | 17100  | 13300  | 6090   | 5440   | 8010   | 6730   | 15200  | 11300  |
| 29    | 14500  | 46300  | 23800  | 10000  | ---    | 14200  | 5840   | 7550   | 6780   | 3990   | 19800  | 6300   |
| 30    | 7130   | 28100  | 18900  | 9500   | ---    | 12000  | 5270   | 7660   | 3700   | 6990   | 17800  | 4870   |
| 31    | 7290   | ---    | 16300  | 20000  | ---    | 6710   | ---    | 6490   | ---    | 8930   | 5980   | ---    |
| TOTAL | 176020 | 529290 | 741000 | 764500 | 617500 | 363540 | 248180 | 188850 | 220870 | 244170 | 313730 | 255790 |
| MEAN  | 5678   | 17640  | 23900  | 24660  | 22050  | 11730  | 8273   | 6092   | 7362   | 7876   | 10120  | 8526   |
| MAX   | 14500  | 49500  | 40300  | 35000  | 32000  | 17700  | 12500  | 8410   | 12100  | 12200  | 19800  | 14900  |
| MIN   | 3230   | 5110   | 10400  | 9200   | 13500  | 5280   | 5270   | 3710   | 3700   | 3410   | 4660   | 4870   |

CAL YR 1984 TOTAL 7423340 MEAN 20280 MAX 94200 MIN 2280 MEAN\* 20790 CFSM\* 1.94 IN.\* 26.47  
WTR YR 1985 TOTAL 4663440 MEAN 12780 MAX 49500 MIN 3230 MEAN\* 13020 CFSM\* 1.22 IN.\* 16.53

\* Adjusted for changes in contents in Lake Cumberland, Dale Hollow Lake, Cordell Hull Reservoir, Great Falls, and Center Hill Lakes.

## CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 338 microsiemens, Sept. 5, 1981; minimum, 89 microsiemens, July 2, 1980.

WATER TEMPERATURES: Maximum, 29.5°C, Oct. 10, 1977; minimum, 2.0°C, Jan 20, 22, 23, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE      | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) |
|-----------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|---|--|
| OCT 24... | 1115 | 1870  | 85  | 7.1                            | 16.5                        | 760  | 16                           | 8.1                                 | 83  | 1200   |
| JAN 29... | 1040 | 493   | --  | 8.5                            | 3.0                         | 758  | .50                          | 13.4                                | 100   | K3   |
| APR 17... | 1000 | 502   | 80  | 7.7                            | 16.0                        | 760  | 5.0                          | 10.0                                | 102   | 46   |
| JUL 15... | 1230 | 281   | 102   | 7.8                            | 26.5                        | 759  | 4.3                          | 7.8                                 | 98  | 92   |

| DATE      | 100 ML) | STREP-<br>TOCOCCHI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) |
|-----------|---------|---|--|--|--|--|--|-------------------|---|---|---|
| OCT 24... | 3900    | 38  | 2                                      | 12   | 1.9  | 1.6  | 8  | .1                | 1.3                                     | 36  |   |
| JAN 29... | K4      | 37  | 4                                      | 12   | 1.6  | 1.4  | 8  | .1                | .60                                     | --  |   |
| APR 17... | 64      | 40  | 0                                      | 13   | 1.8  | 1.4  | 7  | .1                | 2.7                                     | 46  |   |
| JUL 15... | 50      | 46  | 0                                      | 15   | 2.0  | 1.5  | 7  | .1                | .90                                     | 49  |   |

| DATE      | AS CO2) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|-----------|---------|---|---|---|--|---|--|--|---|---|---|
| OCT 24... | 5.5     | 5.3   | 2.4   | <.10  | 6.4  | 54  | 53   | .07  | 273   | .20   |   |
| JAN 29... | .2      | 4.7   | 2.9   | <.10  | 3.3  | 45  | 46   | .06  | 60  | .32   |   |
| APR 17... | 1.8     | 3.7   | 3.6   | .20   | 3.3  | 48  | 58   | .07  | 65  | .13   |   |
| JUL 15... | 1.5     | 4.1   | 2.3   | <.10  | 6.3  | 60  | 62   | .08  | 46  | .20   |   |

| DATE      | AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | SEDI-<br>MENT,<br>SUS-<br>PENDED<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDED<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>& FINER<br>THAN<br>.062 MM |
|-----------|-------|---|---|--|---|--|--|---|--|--|---|
| OCT 24... | .030  | .04   | .50   | .040   | .020  | .030   | .09  | 85  | 429  | 68   |   |
| JAN 29... | .020  | .03   | <.10  | <.010  | <.010                                       | <.010  | --   | 3   | 4.0  | 50   |   |
| APR 17... | .070  | .09   | 4.6   | --   | .040  | <.010  | --   | 12  | 16   | 73   |   |
| JUL 15... | .050  | .06   | .60   | .020   | <.010                                       | .010   | .03  | 12  | 9.1  | 54   |   |

K--Results based on non-ideal colony count.

## CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) |
|--------------|---|--|--|--|--|---|--|--|--|--|
| OCT<br>24... | 30  | <1   | 22   | <.5  | 1  | <1  | <3   | 1  | 61   | <1   |
| APR<br>17... | 20  | <1   | 20   | <.5  | <1   | 3   | <3   | 8  | 36   | 3  |

| DATE         | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|---|--|--|--|--|
| OCT<br>24... | <4   | 5  | <.1  | <10   | 1  | <1  | <1   | 49   | <6   | 4  |
| APR<br>17... | <4   | 9  | .8   | <10   | 2  | <1  | 1  | 48   | <6   | 5  |

| DATE         | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>YT-90) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>YT-90) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>YT-90) | RADIUM<br>226,<br>DIS-<br>SOLVED,<br>RADON<br>METHOD<br>(PCI/L) | URANIUM<br>DIS-<br>SOLVED,<br>EXTRAC-<br>TION<br>(UG/L) |
|--------------|--|--|---|---|--|--|--|---|---|
| APR<br>17... | <.9  | <.4  | .8  | <.4   | .7   | <.4  | .04  | .05   |   |

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | TEMPER-<br>ATURE<br>(DEG C) |
|--------------|------|---|-----------------------------|
| OCT<br>02... | 1500 | 182   | 16.5                        |
| NOV<br>07... | 0910 | 398   | 14.0                        |
| FEB<br>09... | 1350 | 1240  | 4.0                         |
| JUN<br>13... | 1135 | 320   | 21.0                        |
| AUG<br>22... | 0945 | 455   | 23.0                        |



## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°17'47", long 86°39'28", Davidson County, Hydrologic Unit 05130202, at end of lock wall near left downstream bank, at Old Hickory Dam, 2.0 mi west of Hendersonville, and at mile 216.2.

DRAINAGE AREA.--11,673 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1979 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1979 to current year.

pH: April 1979 to current year.

WATER TEMPERATURE: April 1979 to current year.

DISSOLVED OXYGEN: April 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1979.

REMARKS.--Flow regulated by Old Hickory Dam and other reservoirs above station. Continuous discharge records are published under station 03426500 Cumberland River below Old Hickory, Tn. Periods of missing record due to monitor malfunction.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 254 microsiemens, Dec. 14, 1983; minimum, 146 microsiemens, May 6, 1979.

pH: Maximum, 8.9 units, Feb. 10, 11, 1984; minimum, 6.8 units, Sept. 15, 1980, Sept. 26, Oct. 5, 16, 18, 20, 23, 1984.

WATER TEMPERATURE: Maximum, 27.5°C, July 5, 6, Sept. 7, 1980, Aug. 13, 1981, July 24, 1985; minimum, 2.5°C, Jan. 12-14, 1981, Jan. 21, 22, 1984, Feb. 2-4, 1985.

DISSOLVED OXYGEN: Maximum, 15.2 mg/L, April 6, 1983; minimum, 3.0 mg/L, Sept. 15, 1980, July 26, 1985.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 225 microsiemens, Apr. 6; minimum, not determined.

pH: Maximum, 8.6 units, June 21; minimum, 6.8 units, Oct. 5, 16, 18, 20, 23.

WATER TEMPERATURE: Maximum, 27.5°C, July 24; minimum, 2.5°C, Feb. 2-4.

OXYGEN: Maximum, 13.2 mg/L, Mar. 3; minimum, 3.0 mg/L, July 26.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 177     | 175 | 176  | 186      | 180 | 184  | ---      | --- | ---  | 215     | 213 | 214  |
| 2     | 177     | 175 | 176  | ---      | --- | ---  | ---      | --- | ---  | 212     | 200 | 207  |
| 3     | 177     | 176 | 177  | ---      | --- | ---  | ---      | --- | ---  | 199     | 197 | 198  |
| 4     | 178     | 175 | 176  | ---      | --- | ---  | ---      | --- | ---  | ---     | --- | ---  |
| 5     | 179     | 174 | 175  | ---      | --- | ---  | ---      | --- | ---  | ---     | --- | ---  |
| 6     | 178     | 176 | 177  | ---      | --- | ---  | ---      | --- | ---  | ---     | --- | ---  |
| 7     | 179     | 176 | 177  | ---      | --- | ---  | ---      | --- | ---  | 206     | 203 | 204  |
| 8     | 179     | 177 | 178  | ---      | --- | ---  | 158      | 156 | 157  | 207     | 205 | 206  |
| 9     | 180     | 177 | 179  | ---      | --- | ---  | 157      | 156 | 156  | 209     | 207 | 208  |
| 10    | 181     | 179 | 180  | ---      | --- | ---  | 160      | 158 | 159  | 210     | 208 | 209  |
| 11    | 181     | 179 | 180  | ---      | --- | ---  | 161      | 160 | 160  | 213     | 208 | 210  |
| 12    | 182     | 181 | 182  | ---      | --- | ---  | 162      | 159 | 161  | 208     | 202 | 205  |
| 13    | 184     | 182 | 183  | ---      | --- | ---  | 166      | 164 | 165  | 202     | 198 | 200  |
| 14    | 186     | 184 | 185  | ---      | --- | ---  | 171      | 168 | 169  | 199     | 196 | 197  |
| 15    | 189     | 186 | 187  | ---      | --- | ---  | 175      | 173 | 174  | 198     | 195 | 196  |
| 16    | 191     | 185 | 188  | ---      | --- | ---  | 176      | 175 | 176  | 198     | 196 | 197  |
| 17    | 190     | 186 | 188  | ---      | --- | ---  | 178      | 176 | 177  | 197     | 195 | 196  |
| 18    | 192     | 187 | 188  | ---      | --- | ---  | 180      | 178 | 179  | 195     | 194 | 194  |
| 19    | 190     | 186 | 188  | ---      | --- | ---  | 181      | 180 | 180  | 195     | 192 | 194  |
| 20    | 189     | 185 | 187  | ---      | --- | ---  | 184      | 181 | 183  | 193     | 191 | 192  |
| 21    | 193     | 187 | 189  | 208      | 199 | 204  | 181      | 180 | 180  | 192     | 190 | 191  |
| 22    | 197     | 190 | 191  | 202      | 197 | 199  | 182      | 181 | 182  | 193     | 191 | 192  |
| 23    | 193     | 186 | 189  | 198      | 197 | 198  | 182      | 180 | 181  | 194     | 192 | 193  |
| 24    | 189     | 188 | 189  | 198      | 196 | 197  | 181      | 179 | 180  | 194     | 193 | 193  |
| 25    | 189     | 188 | 188  | 199      | 198 | 199  | 181      | 177 | 179  | 194     | 193 | 193  |
| 26    | 194     | 189 | 191  | 201      | 199 | 200  | 186      | 180 | 183  | 195     | 193 | 194  |
| 27    | 178     | 175 | 176  | ---      | --- | ---  | 195      | 185 | 189  | 201     | 194 | 196  |
| 28    | 182     | 175 | 178  | ---      | --- | ---  | 207      | 193 | 200  | 196     | 191 | 195  |
| 29    | 183     | 179 | 181  | ---      | --- | ---  | 210      | 206 | 208  | 196     | 194 | 195  |
| 30    | 187     | 182 | 184  | ---      | --- | ---  | 215      | 209 | 212  | 196     | 194 | 195  |
| 31    | 184     | 180 | 183  | ---      | --- | ---  | 216      | 214 | 215  | 200     | 194 | 197  |
| MONTH | 197     | 174 | 183  | ---      | --- | ---  | ---      | --- | ---  | 215     | 190 | 199  |

## CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|----------|-----|------|-------|-----|------|--------|-----|------|-----------|-----|------|
|       | FEBRUARY |     |      | MARCH |     |      | APRIL  |     |      | MAY       |     |      |
| 1     | 203      | 199 | 201  | 212   | 205 | 207  | 220    | 218 | 219  | 219       | 217 | 218  |
| 2     | 207      | 202 | 204  | 207   | 205 | 206  | 219    | 218 | 218  | 219       | 217 | 218  |
| 3     | 208      | 207 | 208  | 208   | 206 | 207  | 220    | 218 | 219  | 219       | 216 | 217  |
| 4     | 207      | 205 | 206  | 208   | 206 | 207  | 222    | 219 | 220  | 221       | 218 | 219  |
| 5     | 210      | 205 | 207  | 208   | 206 | 207  | 223    | 221 | 222  | 220       | 218 | 219  |
| 6     | 219      | 210 | 215  | 208   | 207 | 207  | 225    | 222 | 223  | 219       | 217 | 218  |
| 7     | 223      | 219 | 221  | 208   | 205 | 208  | 224    | 222 | 223  | 217       | 216 | 216  |
| 8     | 220      | 216 | 218  | 211   | 205 | 207  | 224    | 222 | 223  | 219       | 216 | 217  |
| 9     | 217      | 215 | 216  | 205   | 204 | 205  | 223    | 221 | 222  | 220       | 217 | 218  |
| 10    | 216      | 214 | 215  | 205   | 203 | 204  | 223    | 221 | 222  | 218       | 216 | 217  |
| 11    | 215      | 213 | 214  | 207   | 204 | 206  | 221    | 219 | 220  | 218       | 214 | 216  |
| 12    | 214      | 212 | 213  | 208   | 206 | 207  | 219    | 218 | 218  | 216       | 213 | 215  |
| 13    | 218      | 212 | 214  | 209   | 208 | 209  | 219    | 217 | 218  | 215       | 212 | 214  |
| 14    | 219      | 217 | 218  | 210   | 209 | 209  | 222    | 217 | 218  | 216       | 214 | 215  |
| 15    | 218      | 214 | 215  | 210   | 209 | 210  | 222    | 218 | 220  | 216       | 212 | 213  |
| 16    | 215      | 214 | 214  | 212   | 209 | 211  | 224    | 218 | 221  | 216       | 210 | 213  |
| 17    | 215      | 212 | 213  | 215   | 211 | 214  | 222    | 218 | 219  | 214       | 210 | 212  |
| 18    | 212      | 210 | 211  | 216   | 214 | 215  | 221    | 218 | 219  | 215       | 211 | 213  |
| 19    | 210      | 208 | 209  | 218   | 214 | 215  | 222    | 217 | 219  | 217       | 214 | 216  |
| 20    | 209      | 206 | 208  | 218   | 214 | 216  | 218    | 216 | 217  | 217       | 214 | 215  |
| 21    | 207      | 206 | 207  | 219   | 216 | 217  | 218    | 215 | 217  | 214       | 212 | 213  |
| 22    | 207      | 206 | 206  | 221   | 218 | 220  | 220    | 216 | 217  | 214       | 211 | 213  |
| 23    | 208      | 207 | 207  | 221   | 218 | 219  | 223    | 217 | 218  | 214       | 208 | 210  |
| 24    | 208      | 206 | 207  | 218   | 216 | 217  | 223    | 217 | 219  | 213       | 209 | 210  |
| 25    | 207      | 206 | 207  | 217   | 214 | 216  | 219    | 217 | 218  | 212       | 207 | 210  |
| 26    | 207      | 206 | 206  | 216   | 214 | 215  | 220    | 217 | 219  | 212       | 209 | 211  |
| 27    | 207      | 206 | 206  | 215   | 214 | 214  | 221    | 218 | 219  | 210       | 207 | 209  |
| 28    | 208      | 206 | 207  | 217   | 214 | 215  | 221    | 219 | 220  | 210       | 206 | 208  |
| 29    | ---      | --- | ---  | 218   | 217 | 217  | 220    | 218 | 219  | 211       | 207 | 210  |
| 30    | ---      | --- | ---  | 218   | 217 | 218  | 222    | 218 | 220  | 212       | 208 | 210  |
| 31    | ---      | --- | ---  | 220   | 218 | 218  | ---    | --- | ---  | 209       | 204 | 207  |
| MONTH | 223      | 199 | 210  | 221   | 203 | 212  | 225    | 215 | 220  | 221       | 204 | 214  |
| DAY   | MAX      | MIN | MEAN | MAX   | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|       | JUNE     |     |      | JULY  |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 209      | 205 | 207  | 209   | 206 | 207  | 195    | 193 | 194  | 198       | 195 | 196  |
| 2     | 209      | 206 | 207  | 208   | 205 | 206  | 196    | 194 | 195  | 197       | 195 | 196  |
| 3     | 209      | 207 | 208  | 207   | 203 | 205  | 195    | 192 | 194  | 197       | 195 | 196  |
| 4     | 210      | 206 | 209  | 205   | 203 | 204  | 193    | 191 | 192  | 196       | 193 | 194  |
| 5     | 210      | 207 | 208  | 207   | 204 | 205  | 195    | 191 | 193  | 194       | 192 | 193  |
| 6     | 213      | 208 | 210  | 207   | 204 | 205  | 196    | 193 | 195  | 194       | 193 | 193  |
| 7     | 214      | 209 | 211  | 208   | 201 | 203  | 196    | 194 | 195  | 193       | 191 | 192  |
| 8     | 210      | 208 | 209  | 204   | 199 | 201  | 199    | 195 | 197  | 193       | 192 | 193  |
| 9     | 210      | 208 | 209  | 202   | 198 | 200  | 199    | 198 | 199  | 193       | 191 | 192  |
| 10    | 211      | 207 | 209  | 206   | 199 | 203  | 200    | 198 | 199  | 193       | 191 | 192  |
| 11    | 209      | 207 | 208  | 204   | 201 | 203  | 199    | 197 | 198  | 193       | 191 | 192  |
| 12    | 209      | 205 | 206  | 203   | 202 | 202  | 197    | 196 | 197  | 196       | 193 | 194  |
| 13    | 209      | 205 | 208  | 204   | 202 | 203  | 198    | 195 | 197  | 195       | 189 | 194  |
| 14    | 208      | 205 | 207  | 206   | 204 | 205  | 198    | 195 | 196  | 191       | 190 | 190  |
| 15    | 206      | 204 | 205  | 205   | 203 | 204  | 197    | 194 | 195  | 193       | 191 | 192  |
| 16    | 205      | 202 | 204  | 204   | 201 | 202  | 198    | 194 | 196  | 194       | 192 | 193  |
| 17    | 205      | 201 | 203  | 205   | 203 | 204  | 200    | 197 | 199  | 195       | 194 | 194  |
| 18    | 205      | 203 | 204  | 206   | 202 | 204  | 198    | 195 | 197  | 196       | 194 | 195  |
| 19    | 205      | 203 | 204  | 204   | 200 | 202  | 196    | 194 | 195  | 196       | 194 | 195  |
| 20    | 207      | 204 | 206  | 203   | 200 | 201  | 196    | 194 | 195  | 196       | 195 | 196  |
| 21    | 208      | 205 | 207  | 203   | 201 | 202  | 196    | 195 | 195  | 198       | 196 | 197  |
| 22    | 209      | 207 | 208  | 204   | 201 | 202  | 196    | 194 | 195  | 198       | 197 | 198  |
| 23    | ---      | --- | ---  | 202   | 200 | 201  | 197    | 195 | 196  | 199       | 187 | 198  |
| 24    | ---      | --- | ---  | 203   | 195 | 199  | 218    | 192 | 198  | 203       | 188 | 193  |
| 25    | ---      | --- | ---  | 203   | 193 | 197  | 197    | 195 | 196  | 191       | 189 | 190  |
| 26    | ---      | --- | ---  | 195   | 193 | 194  | 197    | 195 | 196  | 191       | 188 | 190  |
| 27    | ---      | --- | ---  | 194   | 192 | 193  | 199    | 196 | 198  | 189       | 188 | 189  |
| 28    | 210      | 208 | 209  | 194   | 193 | 194  | 200    | 198 | 199  | 189       | 188 | 188  |
| 29    | 211      | 208 | 209  | 195   | 193 | 194  | 201    | 199 | 200  | 189       | 187 | 188  |
| 30    | 210      | 207 | 209  | 195   | 193 | 194  | 200    | 198 | 199  | 189       | 187 | 188  |
| 31    | ---      | --- | ---  | 194   | 191 | 193  | 199    | 197 | 198  | ---       | --- | ---  |
| MONTH | 214      | 201 | 207  | 209   | 191 | 201  | 218    | 191 | 196  | 203       | 187 | 193  |

## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN      | MAX | MIN      | MAX | MIN     | MAX | MIN      | MAX | MIN   | MAX | MIN |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |     |
| 1       | 7.4 | 7.2      | 7.2 | 7.0      | --- | ---     | 7.5 | 7.4      | 8.1 | 7.9   | 8.1 | 7.9 |
| 2       | 7.4 | 7.1      | --- | ---      | --- | ---     | 7.5 | 7.4      | 8.0 | 7.9   | 8.1 | 8.0 |
| 3       | 7.3 | 7.1      | --- | ---      | --- | ---     | 7.5 | 7.4      | 8.0 | 7.9   | 8.2 | 8.0 |
| 4       | 7.4 | 6.9      | --- | ---      | --- | ---     | --- | ---      | 8.0 | 7.8   | 8.1 | 8.0 |
| 5       | 7.3 | 6.8      | --- | ---      | --- | ---     | --- | ---      | 7.9 | 7.8   | 8.0 | 7.9 |
| 6       | 7.2 | 6.9      | --- | ---      | --- | ---     | --- | ---      | 8.0 | 7.9   | 8.0 | 7.8 |
| 7       | 7.8 | 7.0      | --- | ---      | --- | ---     | 8.0 | 7.7      | 8.2 | 7.9   | 8.0 | 7.9 |
| 8       | 7.7 | 7.2      | --- | ---      | --- | ---     | 7.8 | 7.7      | 8.3 | 8.2   | 8.1 | 7.8 |
| 9       | 7.5 | 7.1      | --- | ---      | 7.3 | 7.2     | 7.8 | 7.7      | 8.3 | 8.2   | 8.3 | 8.0 |
| 10      | 7.3 | 7.0      | --- | ---      | 7.3 | 7.2     | 7.7 | 7.6      | 8.1 | 8.0   | 8.2 | 8.0 |
| 11      | 7.3 | 7.0      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.6      | 8.2 | 8.0   | 8.2 | 8.0 |
| 12      | 7.4 | 7.0      | --- | ---      | 7.4 | 7.3     | 7.9 | 7.8      | 8.2 | 8.2   | 8.1 | 7.9 |
| 13      | 7.2 | 7.0      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.8      | 8.2 | 8.1   | 8.1 | 8.0 |
| 14      | 7.2 | 7.0      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.8      | 8.1 | 8.0   | 8.1 | 8.0 |
| 15      | 7.3 | 7.0      | --- | ---      | 7.3 | 7.3     | 8.0 | 7.8      | 8.0 | 8.0   | 8.1 | 8.0 |
| 16      | 7.4 | 6.8      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.7      | 8.0 | 7.9   | 8.2 | 8.0 |
| 17      | 7.2 | 6.9      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.7      | 8.0 | 7.9   | 8.1 | 8.0 |
| 18      | 7.0 | 6.8      | --- | ---      | 7.3 | 7.3     | 7.8 | 7.7      | 7.9 | 7.8   | 8.2 | 8.0 |
| 19      | 7.2 | 6.9      | --- | ---      | 7.3 | 7.2     | 7.8 | 7.7      | 8.0 | 7.8   | 8.3 | 8.0 |
| 20      | 7.4 | 6.8      | --- | ---      | 7.2 | 7.2     | 7.8 | 7.7      | 8.0 | 7.8   | 8.4 | 8.2 |
| 21      | 7.3 | 7.0      | 7.3 | 7.3      | 7.2 | 7.2     | 7.8 | 7.7      | 8.0 | 7.8   | 8.2 | 8.1 |
| 22      | 7.1 | 6.9      | 7.4 | 7.3      | 7.2 | 7.2     | 7.8 | 7.7      | 7.8 | 7.8   | 8.1 | 8.0 |
| 23      | 7.2 | 6.8      | 7.3 | 7.3      | 7.2 | 7.2     | 7.8 | 7.8      | 7.9 | 7.7   | 8.1 | 8.0 |
| 24      | 7.2 | 7.1      | 7.3 | 7.2      | 7.3 | 7.2     | 7.8 | 7.7      | 7.8 | 7.5   | 8.0 | 8.0 |
| 25      | 7.1 | 7.1      | 7.2 | 7.2      | 7.3 | 7.3     | 7.8 | 7.7      | 7.9 | 7.7   | 8.0 | 7.9 |
| 26      | 7.2 | 6.9      | 7.2 | 7.2      | 7.4 | 7.3     | 7.8 | 7.8      | 7.9 | 7.7   | 8.1 | 7.9 |
| 27      | 7.2 | 7.0      | --- | ---      | 7.4 | 7.3     | 7.9 | 7.7      | 7.9 | 7.7   | 8.0 | 7.9 |
| 28      | 7.2 | 7.0      | --- | ---      | 7.4 | 7.3     | 8.0 | 7.7      | 8.0 | 7.7   | 7.9 | 7.8 |
| 29      | 7.2 | 7.1      | --- | ---      | 7.4 | 7.3     | 8.0 | 7.9      | --- | ---   | 7.9 | 7.8 |
| 30      | 7.2 | 7.0      | --- | ---      | 7.4 | 7.3     | 8.0 | 7.8      | --- | ---   | 7.9 | 7.7 |
| 31      | 7.2 | 7.0      | --- | ---      | 7.4 | 7.4     | 8.0 | 7.9      | --- | ---   | 7.9 | 7.7 |
| MONTH   | 7.8 | 6.8      | --- | ---      | --- | ---     | 8.0 | 7.4      | 8.3 | 7.5   | 8.4 | 7.7 |

| DAY   | MAX | MIN | MAX | MIN  | MAX | MIN  | MAX | MIN    | MAX | MIN       | MAX | MIN |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |     |
| 1     | 7.9 | 7.7 | 8.1 | 7.4  | 7.9 | 7.6  | 7.6 | 7.4    | 7.6 | 7.5       | 8.1 | 7.9 |
| 2     | 7.9 | 7.8 | 7.7 | 7.4  | 7.8 | 7.7  | 7.5 | 7.4    | 7.7 | 7.4       | 8.1 | 7.8 |
| 3     | 8.0 | 7.8 | 7.7 | 7.4  | 7.8 | 7.6  | 7.6 | 7.4    | 7.9 | 7.5       | 8.3 | 7.8 |
| 4     | 8.2 | 7.7 | 8.0 | 7.5  | 7.8 | 7.5  | 8.0 | 7.5    | 7.8 | 7.5       | 8.1 | 7.8 |
|       | 8.2 | 8.0 | 8.1 | 7.6  | 7.7 | 7.6  | 8.0 | 7.6    | 7.7 | 7.4       | 7.9 | 7.8 |
| 6     | 8.1 | 7.7 | 7.8 | 7.5  | 7.8 | 7.6  | 7.7 | 7.5    | 7.6 | 7.4       | 7.7 | 7.5 |
| 7     | 8.0 | 7.9 | 7.5 | 7.4  | 8.0 | 7.5  | 7.8 | 7.5    | 7.6 | 7.3       | 7.9 | 7.7 |
| 8     | 8.0 | 7.8 | 7.9 | 7.3  | 7.8 | 7.6  | 7.7 | 7.5    | 7.7 | 7.2       | 7.9 | 7.7 |
| 9     | 8.0 | 7.7 | 7.9 | 7.6  | 7.7 | 7.6  | 7.8 | 7.6    | 7.7 | 7.5       | 7.8 | 7.5 |
| 10    | 8.2 | 8.0 | 7.7 | 7.5  | 8.0 | 7.5  | 7.8 | 7.5    | 7.6 | 7.4       | 7.7 | 7.4 |
| 11    | 8.2 | 7.9 | 7.7 | 7.4  | 7.7 | 7.5  | 7.9 | 7.6    | 7.5 | 7.4       | 7.6 | 7.5 |
| 12    | 8.1 | 7.9 | 7.5 | 7.4  | 7.5 | 7.5  | 7.9 | 7.8    | 7.5 | 7.3       | 7.7 | 7.5 |
| 13    | 8.2 | 7.9 | 7.5 | 7.3  | 7.8 | 7.5  | 7.8 | 7.6    | 7.5 | 7.4       | 8.2 | 7.6 |
| 14    | 8.3 | 7.6 | 7.5 | 7.3  | 8.1 | 7.6  | 7.7 | 7.6    | 7.5 | 7.3       | 8.4 | 7.6 |
| 15    | 8.1 | 7.6 | 7.5 | 7.4  | 7.9 | 7.6  | 7.7 | 7.5    | 7.6 | 7.4       | 8.4 | 7.7 |
| 16    | 7.9 | 7.4 | 7.6 | 7.3  | 7.6 | 7.4  | 7.7 | 7.5    | 7.6 | 7.4       | 7.7 | 7.6 |
| 17    | 8.2 | 7.4 | 7.5 | 7.4  | 7.5 | 7.4  | 7.7 | 7.5    | 7.7 | 7.5       | 7.8 | 7.6 |
| 18    | 8.3 | 7.9 | 7.8 | 7.5  | 7.6 | 7.3  | 7.7 | 7.6    | 7.7 | 7.5       | 7.6 | 7.6 |
| 19    | 8.4 | 7.7 | 8.1 | 7.6  | 7.6 | 7.5  | 7.8 | 7.5    | 7.5 | 7.4       | 7.7 | 7.5 |
| 20    | 8.4 | 7.8 | 7.9 | 7.7  | 8.0 | 7.5  | 7.7 | 7.6    | 7.5 | 7.3       | 7.9 | 7.5 |
| 21    | 8.0 | 7.6 | 7.8 | 7.5  | 8.6 | 7.6  | 7.6 | 7.6    | 7.6 | 7.4       | 7.9 | 7.7 |
| 22    | 8.3 | 7.5 | 8.1 | 7.5  | 8.0 | 7.7  | 7.7 | 7.5    | 7.8 | 7.5       | 7.9 | 7.7 |
| 23    | 8.0 | 7.5 | 7.6 | 7.4  | --- | ---  | 7.7 | 7.6    | 7.7 | 7.6       | 7.9 | 7.6 |
| 24    | 7.8 | 7.4 | 8.0 | 7.3  | --- | ---  | 8.2 | 7.5    | 7.7 | 7.5       | 7.7 | 7.5 |
| 25    | 7.8 | 7.3 | 8.4 | 7.9  | --- | ---  | 7.9 | 7.6    | 7.6 | 7.4       | 7.9 | 7.5 |
| 26    | 8.0 | 7.4 | 8.3 | 8.0  | --- | ---  | 7.7 | 7.6    | 7.6 | 7.4       | 8.0 | 7.6 |
| 27    | 7.8 | 7.3 | 8.3 | 7.9  | --- | ---  | 7.7 | 7.5    | 8.0 | 7.4       | 7.9 | 7.7 |
| 28    | 7.7 | 7.3 | 8.0 | 7.8  | 7.7 | 7.4  | 7.8 | 7.5    | 8.0 | 7.8       | 8.2 | 7.9 |
| 29    | 7.7 | 7.5 | 7.9 | 7.7  | 7.6 | 7.4  | 7.7 | 7.5    | 8.2 | 7.9       | 8.4 | 8.0 |
| 30    | 7.8 | 7.4 | 8.1 | 7.8  | 7.6 | 7.4  | 7.7 | 7.6    | 8.3 | 7.9       | 8.5 | 8.1 |
| 31    | --- | --- | 8.0 | 7.8  | --- | ---  | 7.6 | 7.3    | 8.1 | 7.9       | --- | --- |
| MONTH | 8.4 | 7.3 | 8.4 | 7.3  | --- | ---  | 8.2 | 7.3    | 8.3 | 7.2       | 8.5 | 7.4 |

## CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 20.0 | 19.5 | 20.0     | 20.0 | 19.5 | 20.0     | ---  | ---  | ---     | 12.5 | 12.0 | 12.5 |
| 2       | 20.0 | 19.5 | 19.5     | ---  | ---  | ---      | ---  | ---  | ---     | 12.0 | 11.5 | 12.0 |
| 3       | 20.0 | 19.0 | 19.5     | ---  | ---  | ---      | ---  | ---  | ---     | 11.5 | 11.0 | 11.5 |
| 4       | 19.5 | 19.0 | 19.0     | ---  | ---  | ---      | ---  | ---  | ---     | ---  | ---  | ---  |
| 5       | 19.0 | 19.0 | 19.0     | ---  | ---  | ---      | ---  | ---  | ---     | ---  | ---  | ---  |
| 6       | 19.0 | 19.0 | 19.0     | ---  | ---  | ---      | ---  | ---  | ---     | ---  | ---  | ---  |
| 7       | 19.5 | 19.0 | 19.0     | ---  | ---  | ---      | ---  | ---  | ---     | 9.0  | 9.0  | 9.0  |
| 8       | 20.0 | 19.5 | 19.5     | ---  | ---  | ---      | ---  | ---  | ---     | 9.0  | 8.5  | 9.0  |
| 9       | 20.0 | 19.5 | 19.5     | ---  | ---  | ---      | 9.5  | 9.0  | 9.0     | 8.5  | 8.0  | 8.5  |
| 10      | 19.5 | 19.5 | 19.5     | ---  | ---  | ---      | 9.5  | 9.5  | 9.5     | 8.5  | 8.0  | 8.5  |
| 11      | 20.0 | 19.5 | 19.5     | ---  | ---  | ---      | 9.5  | 9.5  | 9.5     | 8.0  | 7.0  | 7.5  |
| 12      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 10.0 | 9.5  | 9.5     | 7.0  | 7.0  | 7.0  |
| 13      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 10.0 | 10.0 | 10.0    | 6.5  | 6.5  | 6.5  |
| 14      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 11.0 | 10.5 | 10.5    | 6.5  | 6.5  | 6.5  |
| 15      | 20.5 | 19.5 | 20.0     | ---  | ---  | ---      | 11.0 | 11.0 | 11.0    | 6.0  | 6.0  | 6.0  |
| 16      | 21.0 | 19.5 | 20.5     | ---  | ---  | ---      | 11.5 | 11.5 | 11.5    | 6.0  | 6.0  | 6.0  |
| 17      | 21.0 | 20.0 | 20.5     | ---  | ---  | ---      | 12.0 | 11.5 | 12.0    | 6.0  | 6.0  | 6.0  |
| 18      | 20.5 | 20.0 | 20.5     | ---  | ---  | ---      | 12.5 | 12.0 | 12.0    | 6.0  | 5.5  | 6.0  |
| 19      | 21.0 | 20.0 | 20.5     | ---  | ---  | ---      | 12.5 | 12.0 | 12.5    | 6.0  | 5.5  | 5.5  |
| 20      | 21.0 | 19.5 | 20.5     | ---  | ---  | ---      | 12.5 | 12.5 | 12.5    | 5.5  | 3.5  | 4.5  |
| 21      | 21.0 | 20.5 | 21.0     | 11.0 | 9.0  | 10.5     | 12.5 | 12.5 | 12.5    | 4.0  | 3.5  | 3.5  |
| 22      | 20.5 | 20.0 | 20.5     | 10.5 | 10.0 | 10.5     | 12.5 | 12.5 | 12.5    | 3.5  | 3.5  | 3.5  |
| 23      | 20.5 | 20.0 | 20.0     | 10.0 | 10.0 | 10.0     | 12.5 | 12.5 | 12.5    | 4.0  | 3.5  | 3.5  |
| 24      | 20.0 | 19.5 | 20.0     | 10.0 | 9.5  | 10.0     | 12.5 | 12.0 | 12.5    | 4.5  | 4.0  | 4.0  |
| 25      | 19.5 | 19.0 | 19.5     | 10.0 | 10.0 | 10.0     | 12.0 | 11.5 | 12.0    | 4.0  | 4.0  | 4.0  |
| 26      | 20.0 | 19.5 | 19.5     | 10.0 | 10.0 | 10.0     | 11.5 | 11.5 | 11.5    | 4.0  | 3.5  | 3.5  |
| 27      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 11.5 | 11.5 | 11.5    | 3.5  | 3.5  | 3.5  |
| 28      | 20.0 | 20.0 | 20.0     | ---  | ---  | ---      | 12.0 | 11.5 | 11.5    | 3.5  | 3.5  | 3.5  |
| 29      | 20.0 | 19.5 | 20.0     | ---  | ---  | ---      | 12.0 | 12.0 | 12.0    | 3.5  | 3.0  | 3.5  |
| 30      | 19.5 | 19.5 | 19.5     | ---  | ---  | ---      | 12.0 | 12.0 | 12.0    | 3.5  | 3.5  | 3.5  |
| 31      | 20.0 | 19.0 | 19.5     | ---  | ---  | ---      | 12.5 | 12.0 | 12.0    | 3.5  | 3.5  | 3.5  |
| MONTH   | 21.0 | 19.0 | 20.0     | ---  | ---  | ---      | ---  | ---  | ---     | 12.5 | 3.0  | 6.0  |

| DAY      | MAX | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|-----|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |     |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 3.5 | 3.5 | 3.5   | 8.5  | 8.0  | 8.0   | 14.0 | 13.5 | 13.5 | 20.5 | 17.5 | 19.0 |
| 2        | 3.5 | 2.5 | 3.0   | 9.0  | 8.5  | 8.5   | 14.0 | 13.5 | 13.5 | 19.5 | 18.0 | 18.5 |
| 3        | 2.5 | 2.5 | 2.5   | 9.5  | 8.5  | 9.0   | 14.5 | 13.5 | 14.0 | 19.0 | 17.5 | 18.5 |
| 4        | 3.0 | 2.5 | 2.5   | 10.0 | 9.0  | 9.5   | 15.5 | 14.0 | 14.5 | 20.0 | 18.5 | 19.5 |
| 5        | 3.5 | 3.0 | 3.0   | 9.5  | 9.5  | 9.5   | 15.0 | 14.5 | 15.0 | 20.0 | 19.0 | 19.5 |
| 6        | 4.0 | 3.5 | 4.0   | 10.0 | 9.5  | 9.5   | 14.5 | 14.5 | 14.5 | 19.5 | 18.5 | 19.0 |
| 7        | 4.0 | 3.5 | 4.0   | 10.5 | 9.5  | 10.0  | 14.5 | 14.5 | 14.5 | 19.0 | 18.0 | 18.5 |
| 8        | 3.5 | 3.5 | 3.5   | 10.5 | 10.0 | 10.5  | 14.5 | 14.0 | 14.0 | 20.0 | 18.0 | 19.0 |
| 9        | 4.0 | 3.5 | 3.5   | 11.0 | 10.0 | 10.5  | 14.0 | 13.5 | 14.0 | 20.0 | 19.0 | 19.5 |
| 10       | 4.5 | 4.0 | 4.0   | 10.5 | 10.5 | 10.5  | 14.5 | 13.5 | 14.0 | 19.5 | 19.0 | 19.5 |
| 11       | 4.5 | 4.5 | 4.5   | 11.0 | 10.5 | 11.0  | 14.5 | 14.0 | 14.0 | 20.0 | 18.5 | 19.5 |
| 12       | 4.5 | 4.0 | 4.5   | 11.5 | 11.0 | 11.0  | 14.5 | 14.0 | 14.0 | 19.5 | 18.5 | 19.0 |
| 13       | 4.0 | 4.0 | 4.0   | 11.5 | 11.0 | 11.5  | 15.5 | 14.5 | 15.0 | 19.0 | 18.5 | 18.5 |
| 14       | 4.5 | 4.0 | 4.5   | 11.5 | 11.0 | 11.5  | 15.5 | 14.5 | 15.0 | 20.0 | 18.5 | 19.5 |
| 15       | 4.5 | 4.5 | 4.5   | 11.5 | 11.0 | 11.0  | 15.5 | 14.5 | 15.0 | 19.5 | 18.5 | 19.0 |
| 16       | 5.0 | 4.5 | 4.5   | 11.5 | 11.0 | 11.5  | 15.0 | 14.5 | 14.5 | 20.0 | 18.0 | 19.0 |
| 17       | 5.0 | 4.5 | 4.5   | 11.5 | 11.0 | 11.5  | 16.0 | 14.5 | 15.5 | 19.5 | 18.0 | 19.0 |
| 18       | 5.0 | 4.5 | 5.0   | 11.5 | 11.0 | 11.0  | 17.0 | 15.5 | 16.0 | 20.5 | 19.0 | 20.0 |
| 19       | 5.5 | 5.0 | 5.0   | 12.0 | 11.0 | 11.5  | 18.0 | 15.5 | 16.5 | 21.0 | 20.0 | 20.5 |
| 20       | 5.5 | 5.0 | 5.5   | 12.0 | 11.5 | 12.0  | 18.0 | 16.0 | 16.5 | 21.0 | 20.5 | 20.5 |
| 21       | 6.0 | 5.5 | 5.5   | 11.5 | 11.5 | 11.5  | 17.0 | 16.0 | 16.5 | 20.5 | 20.0 | 20.0 |
| 22       | 6.5 | 6.0 | 6.5   | 11.5 | 11.5 | 11.5  | 18.5 | 16.0 | 17.0 | 21.5 | 20.0 | 21.0 |
| 23       | 7.5 | 6.5 | 7.0   | 12.0 | 11.5 | 11.5  | 18.5 | 16.5 | 17.5 | 21.0 | 19.5 | 20.0 |
| 24       | 8.0 | 7.0 | 7.5   | 11.5 | 11.5 | 11.5  | 17.5 | 16.5 | 17.0 | 20.5 | 19.5 | 20.0 |
| 25       | 8.0 | 7.5 | 8.0   | 12.0 | 11.5 | 12.0  | 18.0 | 16.0 | 17.0 | 21.0 | 19.5 | 20.5 |
| 26       | 8.5 | 8.0 | 8.5   | 12.5 | 12.0 | 12.0  | 19.0 | 17.5 | 18.0 | 21.5 | 20.0 | 21.0 |
| 27       | 8.5 | 8.0 | 8.5   | 12.5 | 12.0 | 12.0  | 18.0 | 17.5 | 18.0 | 21.5 | 20.0 | 21.0 |
| 28       | 8.5 | 8.0 | 8.5   | 13.5 | 12.0 | 12.5  | 18.5 | 17.0 | 17.5 | 21.0 | 20.0 | 20.5 |
| 29       | --- | --- | ---   | 13.5 | 13.0 | 13.5  | 18.5 | 17.5 | 18.0 | 21.0 | 20.0 | 20.5 |
| 30       | --- | --- | ---   | 14.0 | 13.5 | 13.5  | 19.0 | 18.0 | 18.5 | 22.0 | 20.5 | 21.5 |
| 31       | --- | --- | ---   | 14.5 | 14.0 | 14.0  | ---  | ---  | ---  | 21.5 | 20.5 | 21.0 |
| MONTH    | 8.5 | 2.5 | 5.0   | 14.5 | 8.0  | 11.0  | 19.0 | 13.5 | 15.5 | 22.0 | 17.5 | 19.5 |



## CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 21.0 | 20.0 | 21.0 | 23.5 | 23.0 | 23.0 | 24.5   | 23.5 | 24.0 | 24.0      | 23.0 | 23.5 |
| 2     | 21.0 | 20.5 | 21.0 | 23.0 | 22.5 | 23.0 | 26.0   | 24.0 | 25.0 | 24.0      | 23.0 | 23.5 |
| 3     | 21.5 | 20.5 | 21.0 | 23.5 | 22.5 | 23.0 | 26.0   | 24.5 | 25.5 | 24.5      | 22.0 | 23.0 |
| 4     | 22.0 | 20.5 | 21.5 | 24.5 | 22.5 | 23.5 | 25.5   | 24.5 | 25.0 | 23.5      | 21.5 | 22.5 |
| 5     | 22.0 | 21.0 | 21.5 | 24.5 | 23.5 | 24.0 | 25.0   | 24.5 | 24.5 | 22.5      | 21.5 | 22.0 |
| 6     | 23.0 | 21.5 | 22.0 | 23.5 | 23.0 | 23.5 | 25.5   | 23.5 | 25.0 | 22.5      | 22.0 | 22.5 |
| 7     | 23.5 | 22.0 | 23.0 | 23.0 | 22.5 | 23.0 | 25.5   | 24.5 | 25.5 | 23.5      | 21.5 | 22.5 |
| 8     | 22.5 | 22.0 | 22.5 | 22.5 | 22.0 | 22.0 | 25.5   | 24.5 | 25.0 | 24.0      | 22.5 | 23.0 |
| 9     | 23.0 | 22.5 | 22.5 | 23.0 | 21.5 | 22.0 | 25.0   | 24.0 | 24.5 | 23.5      | 21.5 | 22.5 |
| 10    | 24.0 | 22.0 | 23.0 | 22.5 | 21.5 | 22.0 | 24.5   | 24.0 | 24.0 | 22.5      | 22.0 | 22.5 |
| 11    | 23.5 | 22.5 | 23.0 | 23.5 | 21.0 | 22.5 | 24.0   | 23.5 | 23.5 | 22.0      | 20.0 | 21.5 |
| 12    | 22.5 | 22.0 | 22.0 | 24.0 | 22.0 | 23.0 | 24.0   | 23.0 | 23.5 | 23.0      | 20.0 | 22.0 |
| 13    | 23.5 | 22.5 | 23.0 | 23.5 | 22.5 | 23.0 | 24.0   | 23.0 | 23.5 | 24.0      | 21.0 | 23.0 |
| 14    | 23.5 | 23.0 | 23.5 | 23.0 | 22.0 | 22.5 | 24.0   | 23.0 | 23.5 | 24.5      | 22.0 | 23.5 |
| 15    | 23.5 | 22.5 | 23.0 | 23.5 | 22.5 | 23.0 | 24.5   | 23.0 | 24.0 | 23.5      | 22.0 | 23.0 |
| 16    | 23.0 | 21.5 | 22.5 | 23.5 | 21.5 | 22.5 | 25.0   | 23.5 | 24.0 | 23.0      | 21.0 | 22.5 |
| 17    | 23.0 | 21.5 | 22.0 | 25.0 | 22.0 | 24.0 | 26.0   | 25.0 | 25.0 | 23.0      | 20.5 | 22.0 |
| 18    | 22.5 | 21.5 | 22.0 | 24.5 | 23.5 | 24.0 | 26.0   | 24.0 | 25.0 | 23.5      | 20.5 | 22.0 |
| 19    | 22.5 | 22.0 | 22.5 | 25.5 | 23.5 | 24.5 | 24.5   | 23.0 | 24.0 | 23.0      | 21.5 | 22.0 |
| 20    | 23.5 | 22.0 | 23.0 | 26.0 | 23.5 | 24.5 | 24.0   | 23.0 | 23.5 | 22.5      | 21.0 | 22.0 |
| 21    | 24.0 | 22.5 | 23.5 | 25.0 | 23.5 | 24.0 | 25.0   | 24.0 | 24.5 | 22.5      | 22.0 | 22.0 |
| 22    | 24.0 | 23.5 | 23.5 | 26.0 | 23.0 | 24.5 | 25.5   | 24.0 | 25.0 | 23.0      | 21.0 | 22.0 |
| 23    | ---  | ---  | ---  | 26.0 | 24.0 | 25.0 | 25.0   | 24.0 | 24.5 | 22.5      | 22.0 | 22.0 |
| 24    | ---  | ---  | ---  | 27.5 | 25.0 | 26.0 | 24.5   | 23.5 | 24.0 | 22.5      | 20.0 | 21.5 |
| 25    | ---  | ---  | ---  | 26.5 | 25.0 | 26.0 | 24.0   | 23.0 | 23.5 | 22.5      | 21.0 | 22.0 |
| 26    | ---  | ---  | ---  | 26.0 | 25.0 | 25.5 | 24.0   | 22.5 | 23.5 | 22.5      | 21.5 | 21.5 |
| 27    | ---  | ---  | ---  | 25.5 | 24.5 | 25.0 | 24.5   | 22.5 | 23.5 | 21.5      | 21.0 | 21.5 |
| 28    | 23.5 | 23.5 | 23.5 | 25.5 | 25.0 | 25.5 | 24.5   | 23.5 | 24.0 | 21.5      | 21.5 | 21.5 |
| 29    | 23.5 | 23.0 | 23.5 | 25.5 | 24.5 | 25.0 | 25.0   | 23.0 | 24.0 | 21.5      | 21.0 | 21.0 |
| 30    | 23.5 | 23.0 | 23.5 | 25.5 | 24.5 | 25.0 | 24.5   | 23.0 | 24.0 | 21.5      | 20.5 | 21.0 |
| 31    | ---  | ---  | ---  | 25.0 | 24.5 | 25.0 | 24.5   | 23.0 | 23.5 | ---       | ---  | ---  |
| MONTH | 24.0 | 20.0 | 22.5 | 27.5 | 21.0 | 24.0 | 26.0   | 22.5 | 24.0 | 24.5      | 20.0 | 22.0 |

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN  | MEAN |
|---------|-----|-----|------|----------|-----|------|----------|-----|------|---------|------|------|
| OCTOBER |     |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |      |      |
| 1       | 7.1 | 6.8 | 6.9  | 6.4      | 4.9 | 5.9  | ---      | --- | ---  | 9.8     | 9.6  | 9.7  |
| 2       | 7.4 | 6.8 | 7.1  | ---      | --- | ---  | ---      | --- | ---  | 9.8     | 9.7  | 9.7  |
| 3       | 7.6 | 6.8 | 7.2  | ---      | --- | ---  | ---      | --- | ---  | 9.9     | 9.8  | 9.8  |
| 4       | 7.7 | 7.0 | 7.4  | ---      | --- | ---  | ---      | --- | ---  | ---     | ---  | ---  |
| 5       | 7.4 | 6.8 | 7.0  | ---      | --- | ---  | ---      | --- | ---  | ---     | ---  | ---  |
| 6       | 6.8 | 6.0 | 6.4  | ---      | --- | ---  | ---      | --- | ---  | ---     | ---  | ---  |
| 7       | 7.6 | 5.8 | 7.0  | ---      | --- | ---  | ---      | --- | ---  | ---     | ---  | ---  |
| 8       | 7.5 | 6.8 | 7.2  | ---      | --- | ---  | ---      | --- | ---  | 10.3    | 10.1 | 10.2 |
| 9       | 7.2 | 6.2 | 6.6  | ---      | --- | ---  | 9.4      | 9.1 | 9.3  | 10.4    | 10.2 | 10.3 |
| 10      | 6.4 | 5.8 | 6.1  | ---      | --- | ---  | 9.2      | 9.0 | 9.1  | 10.2    | 10.1 | 10.2 |
| 11      | 6.8 | 5.9 | 6.3  | ---      | --- | ---  | 9.3      | 9.1 | 9.2  | 10.5    | 10.1 | 10.3 |
| 12      | 6.9 | 5.9 | 6.4  | ---      | --- | ---  | 9.5      | 9.1 | 9.3  | 10.5    | 10.3 | 10.4 |
| 13      | 6.2 | 5.4 | 5.8  | ---      | --- | ---  | 9.4      | 9.3 | 9.3  | 10.6    | 10.5 | 10.5 |
| 14      | 5.9 | 5.0 | 5.5  | ---      | --- | ---  | 9.4      | 9.3 | 9.4  | 10.7    | 10.5 | 10.6 |
| 15      | 6.1 | 4.9 | 5.5  | ---      | --- | ---  | 9.5      | 9.3 | 9.4  | 11.0    | 10.7 | 10.8 |
| 16      | 6.4 | 4.0 | 5.3  | ---      | --- | ---  | 9.5      | 9.3 | 9.4  | 10.9    | 10.8 | 10.9 |
| 17      | 6.0 | 4.2 | 5.0  | ---      | --- | ---  | 9.5      | 9.4 | 9.4  | 10.9    | 10.8 | 10.9 |
| 18      | 5.7 | 4.1 | 4.8  | ---      | --- | ---  | 9.4      | 9.3 | 9.4  | 11.0    | 10.9 | 10.9 |
| 19      | 5.9 | 4.7 | 5.4  | ---      | --- | ---  | 9.4      | 9.3 | 9.4  | 11.1    | 10.9 | 11.0 |
| 20      | 6.7 | 4.5 | 5.5  | ---      | --- | ---  | 9.4      | 9.3 | 9.3  | 11.5    | 11.0 | 11.3 |
| 21      | 6.6 | 5.9 | 6.3  | 11.5     | 8.6 | 10.0 | 9.2      | 9.1 | 9.1  | 11.6    | 11.4 | 11.5 |
| 22      | 5.7 | 5.0 | 5.4  | 9.0      | 8.5 | 8.7  | 9.2      | 8.9 | 9.1  | 11.7    | 11.5 | 11.6 |
| 23      | 6.2 | 5.0 | 5.8  | 8.7      | 8.5 | 8.6  | 9.2      | 8.9 | 9.0  | 11.7    | 11.6 | 11.6 |
| 24      | 6.2 | 6.1 | 6.1  | 8.7      | 8.4 | 8.6  | 9.4      | 8.9 | 9.1  | 11.8    | 11.6 | 11.7 |
| 25      | 6.2 | 6.1 | 6.1  | 8.6      | 8.5 | 8.5  | 9.6      | 9.3 | 9.5  | 11.9    | 11.7 | 11.8 |
| 26      | 6.3 | 5.4 | 6.0  | 9.0      | 8.5 | 8.7  | 9.7      | 9.5 | 9.6  | 12.0    | 11.9 | 12.0 |
| 27      | 6.6 | 5.1 | 5.9  | ---      | --- | ---  | 9.7      | 9.5 | 9.6  | 12.2    | 12.0 | 12.1 |
| 28      | 6.5 | 5.4 | 5.9  | ---      | --- | ---  | 9.6      | 9.5 | 9.5  | 12.3    | 12.0 | 12.1 |
| 29      | 6.3 | 5.5 | 5.8  | ---      | --- | ---  | 9.5      | 9.4 | 9.5  | 12.5    | 12.1 | 12.3 |
| 30      | 6.1 | 4.8 | 5.5  | ---      | --- | ---  | 9.5      | 9.4 | 9.5  | 12.6    | 12.3 | 12.4 |
| 31      | 6.2 | 4.9 | 5.8  | ---      | --- | ---  | 9.7      | 9.5 | 9.5  | 12.6    | 12.3 | 12.5 |
| MONTH   | 7.7 | 4.0 | 6.1  | ---      | --- | ---  | ---      | --- | ---  | 12.6    | 9.6  | 11.1 |

## CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN   | MAX  | MIN | MEAN      | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|--------|------|-----|-----------|-----|-----|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL  |      |     | MAY       |     |     |      |
| 1        | 12.5 | 12.4 | 12.4  | 13.0 | 12.7 | 12.9   | 10.0 | 9.5 | 9.7       | 7.9 | 7.2 | 7.6  |
| 2        | 12.6 | 12.3 | 12.4  | 13.0 | 12.7 | 12.8   | 9.9  | 9.7 | 9.8       | 7.2 | 6.5 | 7.0  |
| 3        | 12.7 | 12.5 | 12.6  | 13.2 | 12.8 | 13.0   | 10.3 | 9.5 | 10.0      | 7.3 | 6.4 | 6.9  |
| 4        | 12.6 | 12.3 | 12.5  | 12.9 | 12.1 | 12.6   | 10.7 | 9.5 | 10.2      | 7.9 | 6.4 | 7.1  |
| 5        | 12.3 | 12.0 | 12.2  | 12.5 | 12.0 | 12.2   | 10.3 | 9.5 | 9.8       | 8.2 | 6.8 | 7.5  |
| 6        | 12.2 | 12.1 | 12.1  | 12.5 | 12.0 | 12.3   | 9.6  | 9.2 | 9.4       | 7.5 | 6.8 | 7.2  |
| 7        | 12.3 | 12.2 | 12.2  | 12.7 | 12.2 | 12.4   | 9.5  | 9.2 | 9.3       | 6.8 | 6.1 | 6.6  |
| 8        | 12.5 | 12.3 | 12.4  | 12.5 | 12.0 | 12.3   | 9.5  | 8.9 | 9.3       | 7.6 | 5.9 | 6.9  |
| 9        | 12.4 | 12.1 | 12.3  | 12.8 | 11.9 | 12.3   | 9.7  | 8.9 | 9.4       | 7.4 | 6.5 | 6.9  |
| 10       | 12.1 | 12.0 | 12.0  | 12.4 | 12.1 | 12.2   | 10.2 | 9.4 | 9.8       | 6.8 | 6.4 | 6.7  |
| 11       | 12.0 | 11.7 | 11.8  | 12.2 | 11.9 | 12.1   | 10.1 | 9.6 | 9.8       | 6.9 | 6.1 | 6.4  |
| 12       | 12.1 | 11.8 | 11.9  | 11.9 | 11.5 | 11.6   | 10.2 | 9.4 | 9.9       | 6.3 | 5.7 | 6.1  |
| 13       | 12.3 | 12.0 | 12.2  | 11.8 | 11.4 | 11.7   | 10.8 | 9.8 | 10.2      | 5.9 | 5.5 | 5.8  |
| 14       | 12.2 | 12.0 | 12.2  | 11.7 | 11.3 | 11.5   | 10.5 | 9.5 | 10.1      | 6.0 | 5.3 | 5.7  |
| 15       | 12.0 | 11.7 | 11.9  | 11.8 | 11.5 | 11.6   | 9.9  | 9.0 | 9.5       | 5.7 | 5.3 | 5.6  |
| 16       | 11.9 | 11.7 | 11.8  | 12.0 | 11.6 | 11.8   | 9.2  | 8.7 | 9.0       | 5.8 | 5.1 | 5.5  |
| 17       | 12.2 | 11.8 | 12.0  | 11.8 | 11.4 | 11.6   | 10.1 | 8.7 | 9.5       | 5.8 | 5.1 | 5.5  |
| 18       | 12.3 | 12.1 | 12.2  | 11.7 | 11.1 | 11.5   | 10.1 | 9.2 | 9.6       | 6.8 | 5.5 | 6.2  |
| 19       | 12.5 | 12.2 | 12.3  | 12.3 | 11.1 | 11.7   | 10.4 | 8.6 | 9.5       | 7.7 | 6.2 | 6.9  |
| 20       | 12.5 | 12.3 | 12.4  | 12.5 | 11.9 | 12.2   | 10.3 | 8.9 | 9.4       | 7.2 | 6.2 | 6.5  |
| 21       | 12.6 | 12.4 | 12.5  | 11.9 | 11.1 | 11.6   | 9.3  | 8.8 | 9.0       | 6.1 | 5.1 | 5.5  |
| 22       | 12.5 | 12.3 | 12.4  | 11.1 | 10.9 | 11.0   | 9.5  | 8.1 | 8.7       | 6.7 | 5.2 | 6.1  |
| 23       | 12.4 | 12.2 | 12.3  | 10.9 | 10.7 | 10.8   | 9.1  | 8.0 | 8.5       | 5.7 | 4.6 | 5.0  |
| 24       | 12.4 | 12.2 | 12.3  | 10.7 | 10.5 | 10.6   | 8.2  | 7.6 | 7.9       | 5.5 | 4.4 | 5.1  |
| 25       | 12.4 | 12.2 | 12.3  | 10.7 | 10.3 | 10.5   | 8.2  | 7.2 | 7.9       | 6.7 | 4.6 | 5.9  |
| 26       | 12.6 | 12.2 | 12.4  | 11.0 | 10.4 | 10.7   | 8.5  | 7.5 | 8.1       | 6.7 | 5.4 | 6.1  |
| 27       | 12.7 | 12.4 | 12.6  | 10.7 | 10.3 | 10.5   | 7.9  | 7.2 | 7.6       | 6.4 | 5.1 | 5.8  |
| 28       | 13.0 | 12.6 | 12.8  | 10.3 | 10.2 | 10.2   | 7.6  | 6.8 | 7.3       | 6.0 | 4.5 | 5.3  |
| 29       | ---  | ---  | ---   | 10.2 | 10.0 | 10.1   | 7.7  | 7.0 | 7.3       | 5.3 | 4.3 | 4.9  |
| 30       | ---  | ---  | ---   | 10.2 | 9.8  | 10.0   | 7.6  | 6.7 | 7.3       | 6.1 | 4.6 | 5.3  |
| 31       | ---  | ---  | ---   | 9.9  | 9.5  | 9.8    | ---  | --- | ---       | 5.3 | 4.3 | 4.9  |
| MONTH    | 13.0 | 11.7 | 12.3  | 13.2 | 9.5  | 11.6   | 10.8 | 6.7 | 9.1       | 8.2 | 4.3 | 6.2  |
| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN   | MAX  | MIN | MEAN      | MAX | MIN | MEAN |
| JUNE     |      |      | JULY  |      |      | AUGUST |      |     | SEPTEMBER |     |     |      |
| 1        | 5.0  | 4.2  | 4.7   | 4.8  | 3.3  | 4.3    | 4.9  | 3.5 | 4.2       | 7.1 | 5.7 | 6.5  |
| 2        | 5.2  | 4.4  | 4.9   | 4.7  | 4.3  | 4.6    | 4.8  | 3.7 | 4.3       | 7.2 | 6.0 | 6.5  |
| 3        | 5.5  | 4.4  | 4.9   | 5.3  | 4.3  | 5.0    | 5.8  | 4.2 | 4.9       | 6.9 | 5.9 | 6.4  |
| 4        | 5.4  | 4.6  | 5.0   | 6.2  | 5.1  | 5.5    | 5.3  | 4.4 | 5.0       | 6.7 | 5.3 | 5.8  |
| 5        | 4.9  | 4.5  | 4.7   | 6.3  | 5.2  | 5.7    | 5.1  | 4.0 | 4.7       | 6.4 | 5.2 | 5.6  |
| 6        | 5.2  | 4.6  | 4.9   | 5.4  | 4.9  | 5.1    | 5.1  | 3.5 | 4.5       | 6.4 | 4.2 | 5.6  |
| 7        | 5.5  | 4.4  | 5.1   | 6.0  | 4.9  | 5.5    | 5.1  | 3.6 | 4.6       | 6.5 | 5.5 | 6.1  |
| 8        | 5.0  | 4.6  | 4.8   | 5.9  | 5.4  | 5.7    | 5.2  | 3.9 | 4.5       | 6.7 | 5.9 | 6.2  |
| 9        | 5.2  | 4.6  | 4.9   | 6.1  | 5.5  | 5.9    | 5.3  | 4.1 | 4.8       | 6.8 | 5.3 | 6.1  |
| 10       | 5.7  | 4.6  | 5.1   | 6.1  | 4.7  | 5.5    | 5.1  | 4.3 | 4.7       | 6.2 | 5.3 | 5.9  |
| 11       | 5.1  | 4.5  | 4.7   | 6.0  | 4.0  | 5.3    | 5.2  | 4.2 | 4.8       | 5.4 | 5.0 | 5.2  |
| 12       | 4.9  | 4.4  | 4.7   | 6.2  | 4.7  | 5.5    | 5.3  | 4.2 | 4.8       | 5.4 | 5.1 | 5.2  |
| 13       | 5.7  | 5.0  | 5.3   | 5.8  | 4.2  | 5.3    | 5.0  | 4.1 | 4.7       | 5.7 | 5.2 | 5.4  |
| 14       | 6.7  | 5.1  | 5.9   | 5.4  | 4.1  | 4.9    | 5.0  | 4.2 | 4.7       | 6.3 | 5.2 | 5.7  |
| 15       | 6.2  | 5.2  | 5.7   | 5.6  | 4.5  | 5.1    | 5.2  | 4.1 | 4.8       | 5.7 | 5.0 | 5.3  |
| 16       | 5.3  | 4.3  | 5.0   | 5.7  | 4.0  | 4.9    | 4.7  | 3.9 | 4.3       | 5.6 | 4.9 | 5.2  |
| 17       | 5.2  | 4.4  | 4.8   | 4.6  | 3.7  | 4.1    | 5.2  | 4.0 | 4.7       | 6.0 | 4.8 | 5.4  |
| 18       | 4.7  | 4.2  | 4.5   | 4.5  | 3.4  | 3.9    | 5.3  | 4.3 | 4.8       | 6.2 | 5.0 | 5.3  |
| 19       | 4.7  | 4.0  | 4.4   | 5.3  | 3.3  | 4.4    | 5.4  | 4.1 | 4.8       | 6.2 | 4.8 | 5.6  |
| 20       | 5.6  | 3.8  | 4.9   | 4.8  | 3.5  | 4.2    | 5.1  | 4.4 | 4.7       | 7.2 | 5.2 | 6.0  |
| 21       | 6.6  | 4.5  | 5.6   | 4.7  | 3.2  | 4.1    | 5.4  | 4.7 | 5.0       | 7.3 | 5.9 | 6.4  |
| 22       | 5.6  | 4.6  | 5.1   | 5.4  | 3.9  | 4.7    | 6.0  | 4.9 | 5.5       | 7.4 | 6.0 | 6.6  |
| 23       | ---  | ---  | ---   | 5.5  | 4.2  | 4.9    | 5.6  | 4.9 | 5.2       | 6.8 | 5.8 | 6.2  |
| 24       | ---  | ---  | ---   | 6.8  | 3.7  | 5.4    | 5.7  | 4.8 | 5.2       | 5.6 | 4.9 | 5.2  |
| 25       | ---  | ---  | ---   | 5.7  | 4.2  | 4.8    | 5.7  | 4.6 | 5.3       | 6.3 | 4.9 | 5.7  |
| 26       | ---  | ---  | ---   | 4.7  | 3.0  | 4.1    | 5.9  | 5.1 | 5.6       | 6.1 | 5.0 | 5.4  |
| 27       | ---  | ---  | ---   | 4.8  | 4.1  | 4.5    | 6.2  | 4.9 | 5.6       | 6.4 | 5.4 | 5.9  |
| 28       | 4.9  | 3.5  | 4.2   | 5.4  | 3.8  | 4.6    | 6.1  | 4.8 | 5.5       | 7.4 | 6.3 | 6.8  |
| 29       | 4.1  | 3.1  | 3.8   | 5.2  | 4.2  | 4.9    | 6.9  | 5.2 | 6.0       | 8.3 | 6.3 | 7.1  |
| 30       | 5.0  | 3.5  | 4.3   | 5.2  | 4.3  | 4.8    | 7.2  | 5.5 | 6.4       | 7.5 | 7.0 | 7.3  |
| 31       | ---  | ---  | ---   | 4.9  | 3.8  | 4.5    | 6.8  | 5.5 | 6.2       | --- | --- | ---  |
| MONTH    | 6.7  | 3.1  | 4.9   | 6.8  | 3.0  | 4.9    | 7.2  | 3.5 | 5.0       | 8.3 | 4.2 | 5.9  |

## CUMBERLAND RIVER BASIN

03426500 CUMBERLAND RIVER BELOW OLD HICKORY, TN

LOCATION.--Lat 36°15'39", long 86°40'30", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of bridge on State Highway 45, 1.5 mi west of Old Hickory, 2.1 mi east of Madison, 3.3 mi downstream from Mansker Creek, 4.1 mi downstream from Old Hickory Dam, and at mile 212.1.

DRAINAGE AREA.--11,735 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1931 to September 1942, October 1947 to current year. Prior to July 1953, published as "at dam 3, near Old Hickory."

REVISED RECORDS.--WSP 923: 1932-39. WSP 1113: 1940(m). WSP 1910: Drainage area, at sites used prior to June 11, 1954. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 380.00 ft above National Geodetic Vertical Datum of 1929. See WSP 1726 for history of changes prior to Oct. 1, 1956. Since Apr. 1, 1957, auxiliary gage at Old Hickory dam 4.1 mi upstream from base gage at same datum.

REMARKS.--Records good except for estimated daily discharges, Mar. 1-5, which are fair. Flow regulated by six lakes or reservoirs (see p.137).

AVERAGE DISCHARGE.--49 years (water years 1932-42, 1948-85), 19,140 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft<sup>3</sup>/s Jan. 29, 1937; maximum gage height, 48.13 ft Mar. 14, 1975; minimum daily discharge, 86 ft<sup>3</sup>/s Aug. 15, 1936; minimum gage height since filling of Cheatham Lake on Oct. 1, 1956, 3.49 ft Sept. 10, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 57.4 ft Dec. 31, 1926, present site and datum, from profile by Corps of Engineers, discharge, 200,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,300 ft<sup>3</sup>/s Nov. 19; maximum gage height, 27.87 ft Nov. 19; minimum daily discharge, 2,830 ft<sup>3</sup>/s Oct. 7; minimum gage height, 3.61 ft Apr. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 3770   | 7050    | 38300  | 19800  | 35900  | 18900  | 6590   | 5640   | 7060   | 5300   | 10100  | 13700  |
| 2           | 3150   | 7150    | 39000  | 26700  | 31700  | 15000  | 8280   | 8580   | 5690   | 6000   | 11300  | 8230   |
| 3           | 3540   | 7370    | 25100  | 31700  | 25200  | 14000  | 9810   | 11400  | 5230   | 8800   | 13600  | 11100  |
| 4           | 3210   | 7220    | 27100  | 27600  | 22500  | 14000  | 11100  | 4800   | 8770   | 11000  | 9890   | 11900  |
| 5           | 4220   | 8770    | 30100  | 37300  | 27300  | 15000  | 10800  | 4790   | 9840   | 11800  | 5950   | 11500  |
| 6           | 3060   | 11400   | 33400  | 33100  | 31700  | 15100  | 10000  | 4840   | 11300  | 8780   | 6570   | 13000  |
| 7           | 2830   | 7030    | 40000  | 25700  | 26800  | 12800  | 10300  | 4680   | 12000  | 6880   | 9210   | 14700  |
| 8           | 3360   | 6910    | 35800  | 28200  | 33700  | 20300  | 9510   | 6960   | 11100  | 5810   | 11700  | 11500  |
| 9           | 4790   | 9720    | 37500  | 33200  | 32700  | 23600  | 9320   | 7850   | 9880   | 9450   | 12200  | 8240   |
| 10          | 5600   | 14500   | 24200  | 36500  | 21000  | 16500  | 12100  | 8620   | 4330   | 8960   | 9980   | 6220   |
| 11          | 4010   | 21600   | 14300  | 34700  | 28000  | 10100  | 14200  | 6210   | 5450   | 12000  | 7400   | 5300   |
| 12          | 4810   | 13400   | 22500  | 36000  | 40100  | 10700  | 13100  | 4620   | 9910   | 11500  | 6670   | 5890   |
| 13          | 3440   | 7050    | 26200  | 31700  | 40800  | 14000  | 14200  | 4640   | 12600  | 9320   | 5540   | 7460   |
| 14          | 3910   | 7760    | 28500  | 28400  | 37200  | 19500  | 5650   | 4150   | 13000  | 6990   | 6920   | 7010   |
| 15          | 3580   | 7940    | 25700  | 26500  | 32800  | 21500  | 7510   | 5260   | 7750   | 5690   | 11800  | 5370   |
| 16          | 7570   | 7540    | 18700  | 24000  | 29500  | 14500  | 9380   | 6980   | 4050   | 4890   | 13500  | 5230   |
| 17          | 6760   | 7980    | 18100  | 31600  | 31400  | 10400  | 12900  | 7640   | 5400   | 6160   | 15300  | 5300   |
| 18          | 6030   | 16100   | 19600  | 31500  | 20400  | 6290   | 12100  | 6560   | 5660   | 8130   | 11300  | 5340   |
| 19          | 8890   | 61000   | 17800  | 30700  | 17100  | 6300   | 12900  | 5780   | 6710   | 15100  | 9710   | 8830   |
| 20          | 8210   | 58100   | 19800  | 31100  | 25300  | 9950   | 12500  | 6130   | 9300   | 13500  | 6310   | 11000  |
| 21          | 8160   | 45600   | 26600  | 31500  | 28600  | 15000  | 7020   | 4620   | 8940   | 8450   | 8280   | 9360   |
| 22          | 6110   | 24800   | 31500  | 33600  | 22800  | 15800  | 5630   | 5330   | 7330   | 12700  | 10500  | 9420   |
| 23          | 14000  | 23300   | 21700  | 34200  | 22600  | 13700  | 7170   | 5880   | 4790   | 10300  | 14200  | 5090   |
| 24          | 20200  | 27900   | 20400  | 30400  | 19500  | 9590   | 6910   | 7270   | 6890   | 9420   | 13600  | 5040   |
| 25          | 13100  | 29900   | 20800  | 25100  | 18800  | 11500  | 11100  | 6820   | 6010   | 10900  | 6980   | 5740   |
| 26          | 13000  | 24600   | 26600  | 20700  | 24500  | 11400  | 9990   | 6080   | 6060   | 12200  | 9310   | 8010   |
| 27          | 5860   | 23100   | 24700  | 10500  | 20200  | 13600  | 8100   | 4180   | 7060   | 7960   | 13400  | 10800  |
| 28          | 6450   | 50100   | 24600  | 9520   | 18200  | 14700  | 10000  | 4600   | 8920   | 8540   | 14400  | 13700  |
| 29          | 32000  | 58600   | 22700  | 14300  | ---    | 15500  | 7520   | 6420   | 8960   | 7190   | 17300  | 11600  |
| 30          | 8340   | 43700   | 24600  | 12200  | ---    | 13000  | 5460   | 7310   | 5260   | 7970   | 22500  | 5170   |
| 31          | 7110   | ---     | 20200  | 30400  | ---    | 10900  | ---    | 6720   | ---    | 6900   | 20100  | ---    |
| TOTAL       | 229070 | 647190  | 806100 | 858420 | 766300 | 433130 | 291150 | 191360 | 235250 | 278590 | 345520 | 260750 |
| MEAN        | 7389   | 21570   | 26000  | 27690  | 27370  | 13970  | 9705   | 6173   | 7842   | 8987   | 11150  | 8692   |
| MAX         | 32000  | 61000   | 40000  | 37300  | 40800  | 23600  | 14200  | 11400  | 13000  | 15100  | 22500  | 14700  |
| MIN         | 2830   | 6910    | 14300  | 9520   | 17100  | 6290   | 5460   | 4150   | 4050   | 4890   | 5540   | 5040   |
| CAL YR 1984 | TOTAL  | 8535700 |        | MEAN   | 23320  | MAX    | 95800  | MIN    | 2830   |        |        |        |
| WTR YR 1985 | TOTAL  | 5342830 |        | MEAN   | 14640  | MAX    | 61000  | MIN    | 2830   |        |        |        |

## CUMBERLAND RIVER BASIN

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03426800 EAST FORK STONES RIVER AT WOODBURY, TN

LOCATION.--Lat 35°49'41", long 86°04'36", Cannon County, Hydrologic Unit 05130203, on center pier on downstream side of bridge on U. S. Highway 70S, at Woodbury, 0.4 mi downstream from Doolittle Branch, and at mile 45.6.

DRAINAGE AREA.--39.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1932-33, 1950, 1954, 1962, occasional low-flow measurements. October 1962 to current year.

REVISED RECORDS.--WSP 1910; Drainage area. WSP 2110: 1963, 1964(M), 1965.

GAGE.--Water-stage recorder. Datum of gage is 676.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--23 years, 68.1 ft<sup>3</sup>/s, 23.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft<sup>3</sup>/s Mar. 15, 1973, gage height, 16.75 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of velocity-area study and contracted-opening measurement at gage height 16.52 ft at bridge 4.6 mi downstream; minimum, 2.1 ft<sup>3</sup>/s Nov. 13, 1980 (result of unnatural regulation upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Nov. 18 | 2400 | 2,250                          | 9.42             | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 6.3 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG    | SEP   |       |
|-------------|--------|---------|------|------|------|------|------|------|------|-------|--------|-------|-------|
| 1           | 8.0    | 27      | 83   | 118  | 219  | 61   | 57   | 27   | 14   | 27    | 18     | 30    |       |
| 2           | 7.8    | 30      | 65   | 104  | 131  | 56   | 52   | 30   | 13   | 15    | 13     | 23    |       |
| 3           | 7.5    | 29      | 54   | 88   | 82   | 52   | 49   | 29   | 12   | 13    | 11     | 18    |       |
| 4           | 7.4    | 39      | 44   | 111  | 66   | 52   | 46   | 26   | 12   | 16    | 9.5    | 16    |       |
| 5           | 7.1    | 57      | 43   | 88   | 170  | 53   | 50   | 24   | 11   | 24    | 9.0    | 15    |       |
| 6           | 7.0    | 42      | 50   | 73   | 228  | 47   | 58   | 23   | 12   | 41    | 11     | 16    |       |
| 7           | 7.2    | 33      | 43   | 64   | 150  | 45   | 49   | 22   | 22   | 22    | 192    | 15    |       |
| 8           | 16     | 28      | 42   | 54   | 104  | 46   | 45   | 21   | 19   | 15    | 70     | 13    |       |
| 9           | 12     | 24      | 39   | 47   | 84   | 74   | 42   | 20   | 14   | 13    | 33     | 12    |       |
| 10          | 10     | 201     | 38   | 43   | 102  | 71   | 40   | 19   | 24   | 94    | 23     | 12    |       |
| 11          | 9.6    | 181     | 35   | 39   | 493  | 68   | 39   | 19   | 41   | 84    | 17     | 16    |       |
| 12          | 9.5    | 76      | 33   | 35   | 370  | 74   | 36   | 20   | 31   | 31    | 14     | 13    |       |
| 13          | 9.4    | 50      | 31   | 34   | 175  | 69   | 36   | 21   | 22   | 19    | 12     | 11    |       |
| 14          | 9.5    | 39      | 29   | 34   | 133  | 65   | 35   | 18   | 16   | 14    | 11     | 10    |       |
| 15          | 9.4    | 139     | 27   | 31   | 111  | 59   | 47   | 18   | 15   | 25    | 10     | 9.8   |       |
| 16          | 9.3    | 149     | 27   | 30   | 92   | 54   | 45   | 16   | 19   | 29    | 14     | 9.7   |       |
| 17          | 21     | 74      | 26   | 45   | 85   | 52   | 40   | 17   | 26   | 18    | 149    | 9.5   |       |
| 18          | 15     | 250     | 25   | 45   | 94   | 47   | 36   | 17   | 80   | 14    | 53     | 9.1   |       |
| 19          | 13     | 686     | 27   | 41   | 172  | 45   | 35   | 16   | 37   | 12    | 33     | 8.8   |       |
| 20          | 25     | 160     | 127  | 35   | 156  | 44   | 32   | 15   | 26   | 10    | 25     | 8.6   |       |
| 21          | 33     | 85      | 241  | 31   | 132  | 44   | 31   | 19   | 19   | 9.7   | 19     | 8.5   |       |
| 22          | 37     | 59      | 196  | 31   | 116  | 61   | 30   | 21   | 17   | 9.8   | 16     | 8.5   |       |
| 23          | 223    | 48      | 117  | 31   | 99   | 60   | 29   | 18   | 16   | 9.5   | 15     | 8.5   |       |
| 24          | 108    | 40      | 105  | 33   | 98   | 74   | 30   | 17   | 23   | 8.9   | 26     | 8.8   |       |
| 25          | 44     | 35      | 166  | 35   | 84   | 70   | 29   | 15   | 16   | 8.5   | 126    | 8.2   |       |
| 26          | 30     | 31      | 113  | 31   | 77   | 62   | 27   | 14   | 14   | 9.4   | 137    | 161   |       |
| 27          | 23     | 189     | 82   | 31   | 68   | 60   | 29   | 14   | 13   | 11    | 51     | 46    |       |
| 28          | 133    | 712     | 65   | 32   | 62   | 57   | 35   | 23   | 12   | 9.5   | 33     | 28    |       |
| 29          | 91     | 190     | 56   | 30   | ---  | 53   | 29   | 18   | 12   | 8.9   | 26     | 20    |       |
| 30          | 47     | 112     | 51   | 32   | ---  | 50   | 27   | 15   | 12   | 67    | 33     | 17    |       |
| 31          | 33     | ---     | 104  | 129  | ---  | 59   | ---  | 14   | ---  | 36    | 47     | ---   |       |
| TOTAL       | 1022.7 | 3815    | 2184 | 1605 | 3953 | 1784 | 1165 | 606  | 620  | 724.2 | 1256.5 | 590.0 |       |
| MEAN        | 33.0   | 127     | 70.5 | 51.8 | 141  | 57.5 | 38.8 | 19.5 | 20.7 | 23.4  | 40.5   | 19.7  |       |
| MAX         | 223    | 712     | 241  | 129  | 493  | 74   | 58   | 30   | 80   | 94    | 192    | 161   |       |
| MIN         | 7.0    | 24      | 25   | 30   | 62   | 44   | 27   | 14   | 11   | 8.5   | 9.0    | 8.2   |       |
| CFSM        | .84    | 3.25    | 1.80 | 1.32 | 3.61 | 1.47 | .99  | .50  | .53  | .60   | 1.04   | .50   |       |
| IN.         | .97    | 3.63    | 2.08 | 1.53 | 3.76 | 1.70 | 1.11 | .58  | .59  | .69   | 1.20   | .56   |       |
| CAL YR 1984 | TOTAL  | 30643.1 |      | MEAN | 83.7 | MAX  | 3180 | MIN  | 7.0  | CFSM  | 2.14   | IN.   | 29.15 |
| WTR YR 1985 | TOTAL  | 19325.4 |      | MEAN | 52.9 | MAX  | 712  | MIN  | 7.0  | CFSM  | 1.35   | IN.   | 18.39 |



## CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN

LOCATION.--Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 100 ft upstream from highway bridge, 2.5 mi southwest of Lascassas, 3.7 mi downstream from Bradley Creek, 6.0 mi northeast of the courthouse in Murfreesboro, and at mile 15.4.

DRAINAGE AREA.--262 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to November 1958, May 1963 to current year. Prior to February 1951 monthly discharge only, published in WSP 1726.

REVISED RECORDS.--WSP 1910: Drainage Area. WDR-TN-75-1: 1955(M), 1963(M), 1970(M), 1973 (M)(P).

GAGE.--Water-stage recorder. Datum of gage is 507.88 ft Sandy Hook datum (levels by Corps of Engineers). Prior to Oct. 1, 1973, water-stage recorder 100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 21-23. Records good. Frequent diurnal fluctuation at low flow caused by small mills above station. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--30 years (water years 1950-57, 1964-85), 465 ft<sup>3</sup>/s, 24.10 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft<sup>3</sup>/s Mar. 13, 1975, gage height, 39.48 ft; minimum, 0.2 ft<sup>3</sup>/s Oct. 23, 1953, gage height, 2.22 ft; minimum daily, 0.4 ft<sup>3</sup>/s Aug. 31, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 13, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft<sup>3</sup>/s and maximum(\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Oct. 23 | 2015 | 7,500                             | 17.74               | Nov. 28 | 0630 | *13,800                           | *25.01              |
| Nov. 19 | 0430 | 11,700                            | 22.71               | Feb. 11 | 2045 | 8,600                             | 19.15               |

Minimum discharge, 7.7 ft<sup>3</sup>/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC   | JAN   | FEB   | MAR  | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|---------|----------|-------|-------|-------|------|-------|------|------|------|------|------|-------|
| 1           | 20      | 256      | 831   | 1760  | 2050  | 304  | 304   | 75   | 34   | 35   | 69   | 177  |       |
| 2           | 19      | 486      | 634   | 1170  | 1060  | 277  | 245   | 71   | 32   | 47   | 41   | 98   |       |
| 3           | 18      | 514      | 504   | 761   | 690   | 239  | 215   | 103  | 31   | 42   | 32   | 67   |       |
| 4           | 18      | 372      | 375   | 1020  | 533   | 216  | 196   | 111  | 29   | 36   | 27   | 53   |       |
| 5           | 17      | 562      | 310   | 857   | 990   | 218  | 179   | 83   | 28   | 34   | 23   | 45   |       |
| 6           | 17      | 416      | 440   | 657   | 2230  | 200  | 208   | 69   | 27   | 44   | 22   | 42   |       |
| 7           | 17      | 275      | 418   | 536   | 1350  | 183  | 190   | 61   | 31   | 65   | 525  | 41   |       |
| 8           | 21      | 203      | 349   | 417   | 860   | 175  | 166   | 58   | 39   | 49   | 637  | 39   |       |
| 9           | 31      | 160      | 303   | 334   | 667   | 363  | 150   | 75   | 41   | 39   | 154  | 36   |       |
| 10          | 29      | 1280     | 266   | 285   | 792   | 443  | 138   | 67   | 34   | 34   | 78   | 34   |       |
| 11          | 21      | 1770     | 230   | 249   | 3870  | 358  | 133   | 59   | 32   | 215  | 51   | 38   |       |
| 12          | 16      | 776      | 204   | 211   | 3630  | 373  | 125   | 57   | 58   | 97   | 40   | 52   |       |
| 13          | 13      | 482      | 189   | 187   | 1470  | 348  | 119   | 86   | 55   | 53   | 34   | 40   |       |
| 14          | 12      | 322      | 168   | 176   | 983   | 312  | 117   | 64   | 45   | 40   | 30   | 34   |       |
| 15          | 12      | 886      | 149   | 163   | 798   | 286  | 131   | 51   | 36   | 35   | 27   | 32   |       |
| 16          | 9.9     | 1450     | 137   | 148   | 635   | 251  | 166   | 45   | 32   | 39   | 29   | 30   |       |
| 17          | 10      | 711      | 130   | 284   | 570   | 226  | 145   | 41   | 45   | 49   | 443  | 29   |       |
| 18          | 20      | 1250     | 123   | 345   | 706   | 201  | 125   | 39   | 391  | 36   | 339  | 28   |       |
| 19          | 25      | 7540     | 120   | 279   | 1340  | 180  | 113   | 39   | 256  | 30   | 129  | 27   |       |
| 20          | 65      | 1720     | 763   | 229   | 1160  | 165  | 105   | 37   | 121  | 26   | 75   | 25   |       |
| 21          | 314     | 895      | 2160  | 170   | 864   | 157  | 97    | 37   | 78   | 23   | 54   | 24   |       |
| 22          | 460     | 608      | 1840  | 160   | 702   | 311  | 90    | 43   | 58   | 22   | 43   | 22   |       |
| 23          | 3900    | 431      | 963   | 170   | 589   | 467  | 83    | 47   | 50   | 29   | 38   | 23   |       |
| 24          | 2320    | 323      | 742   | 175   | 560   | 544  | 81    | 47   | 46   | 24   | 36   | 24   |       |
| 25          | 796     | 253      | 1580  | 248   | 524   | 506  | 82    | 42   | 52   | 21   | 73   | 25   |       |
| 26          | 442     | 207      | 913   | 224   | 461   | 378  | 75    | 38   | 63   | 20   | 1260 | 514  |       |
| 27          | 256     | 860      | 673   | 198   | 400   | 315  | 74    | 35   | 51   | 19   | 318  | 422  |       |
| 28          | 2000    | 8910     | 520   | 194   | 339   | 289  | 106   | 38   | 40   | 22   | 151  | 147  |       |
| 29          | 1670    | 1960     | 403   | 178   | ---   | 253  | 112   | 42   | 36   | 23   | 95   | 83   |       |
| 30          | 696     | 1030     | 350   | 171   | ---   | 220  | 87    | 44   | 34   | 24   | 69   | 60   |       |
| 31          | 413     | ---      | 1340  | 1390  | ---   | 225  | ---   | 37   | ---  | 352  | 394  | ---  |       |
| TOTAL       | 13677.9 | 36908    | 18127 | 13346 | 30823 | 8983 | 4157  | 1741 | 1905 | 1624 | 5336 | 2311 |       |
| MEAN        | 441     | 1230     | 585   | 431   | 1101  | 290  | 139   | 56.2 | 63.5 | 52.4 | 172  | 77.0 |       |
| MAX         | 3900    | 8910     | 2160  | 1760  | 3870  | 544  | 304   | 111  | 391  | 352  | 1260 | 514  |       |
| MIN         | 9.9     | 160      | 120   | 148   | 339   | 157  | 74    | 35   | 27   | 19   | 22   | 22   |       |
| CFSM        | 1.68    | 4.69     | 2.23  | 1.65  | 4.20  | 1.11 | .53   | .21  | .24  | .20  | .66  | .29  |       |
| IN.         | 1.94    | 5.24     | 2.57  | 1.89  | 4.38  | 1.28 | .59   | .25  | .27  | .23  | .76  | .33  |       |
| CAL YR 1984 | TOTAL   | 239631.9 |       | MEAN  | 655   | MAX  | 16200 | MIN  | 9.9  | CFSM | 2.50 | IN.  | 34.02 |
| WTR YR 1985 | TOTAL   | 138938.9 |       | MEAN  | 381   | MAX  | 8910  | MIN  | 9.9  | CFSM | 1.45 | IN.  | 19.73 |

## CUMBERLAND RIVER BASIN

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03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: October 1975 to current year.

DISSOLVED OXYGEN: January 1980 to September 1981.

INSTRUMENTATION.--Water-quality monitor since October 1975.

REMARKS.--Interruptions in the record were due to monitor malfunction.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 697 microsiemens, Dec. 6, 1979; minimum, 72 microsiemens, Aug. 16, 1978.

WATER TEMPERATURE: Maximum, 31.5°C, July 8, 14-16, 1977, July 16, 1980, July 17, 1982; minimum, 0.0°C, Jan. 21, 1977, Jan. 21, 22, 1985.

DISSOLVED OXYGEN: Maximum recorded, 13.6 mg/L, Feb. 14, 25, 26, 1981; minimum, 4.4 mg/L, July 18, 19, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, not determined; minimum, 102 microsiemens, Nov. 19.

WATER TEMPERATURE: Maximum, not determined; minimum, 0.0°C, Jan. 21, 22.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 321     | 318 | 320  | 410      | 388 | 407  | 351      | 346 | 349  | 360     | 271 | 323  |
| 2     | 319     | 315 | 317  | 404      | 395 | 400  | 359      | 351 | 356  | 365     | 321 | 347  |
| 3     | 320     | 314 | 317  | 404      | 395 | 401  | 362      | 358 | 361  | 374     | 357 | 370  |
| 4     | 318     | 315 | 316  | 410      | 368 | 400  | 362      | 356 | 359  | 375     | 357 | 369  |
| 5     | 322     | 315 | 318  | 411      | 394 | 406  | 364      | 361 | 362  | 372     | 358 | 365  |
| 6     | 323     | 317 | 320  | 403      | 394 | 398  | 365      | 356 | 361  | 378     | 368 | 375  |
| 7     | 329     | 321 | 323  | 404      | 394 | 398  | 362      | 356 | 358  | 380     | 376 | 378  |
| 8     | 331     | 319 | 324  | 406      | 393 | 402  | 371      | 351 | 365  | 377     | 373 | 377  |
| 9     | 331     | 322 | 326  | 406      | 395 | 403  | 375      | 367 | 371  | 376     | 369 | 372  |
| 10    | 331     | 322 | 326  | 399      | 262 | 359  | 376      | 371 | 373  | 377     | 369 | 373  |
| 11    | 331     | 324 | 327  | 353      | 271 | 321  | 375      | 369 | 372  | 376     | 363 | 369  |
| 12    | 333     | 326 | 328  | 377      | 357 | 369  | 374      | 368 | 371  | 368     | 362 | 365  |
| 13    | 338     | 327 | 331  | 388      | 371 | 382  | 371      | 367 | 369  | 367     | 359 | 364  |
| 14    | 341     | 331 | 336  | 394      | 381 | 389  | 366      | 360 | 363  | 371     | 359 | 365  |
| 15    | 344     | 329 | 334  | 395      | 288 | 371  | 363      | 355 | 360  | 359     | 353 | 356  |
| 16    | 342     | 330 | 334  | 349      | 278 | 310  | 357      | 350 | 354  | 361     | 345 | 356  |
| 17    | 343     | 324 | 331  | 374      | 350 | 364  | 356      | 348 | 352  | 371     | 349 | 359  |
| 18    | 330     | 324 | 327  | 383      | 240 | 360  | 349      | 344 | 347  | 363     | 346 | 356  |
| 19    | 323     | 307 | 318  | 300      | 102 | 217  | 350      | 345 | 347  | 364     | 357 | 361  |
| 20    | 319     | 300 | 310  | 344      | 303 | 328  | 354      | 327 | 345  | 361     | 345 | 356  |
| 21    | 382     | 311 | 338  | 359      | 346 | 352  | 344      | 310 | 324  | 366     | 357 | 362  |
| 22    | 376     | 366 | 371  | 366      | 354 | 361  | 344      | 323 | 334  | 372     | 361 | 366  |
| 23    | 367     | 191 | 282  | 371      | 360 | 366  | 361      | 345 | 355  | 372     | 361 | 366  |
| 24    | 342     | 221 | 299  | 372      | 363 | 369  | 363      | 353 | 361  | 375     | 362 | 370  |
| 25    | 377     | 345 | 362  | 374      | 371 | 373  | 344      | 292 | 320  | 376     | 366 | 370  |
| 26    | 414     | 377 | 394  | 375      | 371 | 373  | 361      | 326 | 345  | 372     | 367 | 370  |
| 27    | 416     | 410 | 413  | 375      | 207 | 352  | 366      | 361 | 365  | 384     | 373 | 378  |
| 28    | 416     | 216 | 338  | 284      | 139 | 204  | 371      | 367 | 369  | 388     | 379 | 383  |
| 29    | 379     | 260 | 336  | 329      | 287 | 312  | 371      | 367 | 369  | 387     | 381 | 384  |
| 30    | 398     | 380 | 391  | 346      | 331 | 339  | 368      | 353 | 364  | 397     | 386 | 394  |
| 31    | 409     | 396 | 403  | ---      | --- | ---  | 362      | 300 | 323  | 396     | 312 | 342  |
| MONTH | 416     | 191 | 336  | 411      | 102 | 360  | 376      | 292 | 356  | 397     | 271 | 366  |

## CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN | MAX   | MIN | MEAN | MAX   | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|------|-------|-----|------|-------|-----|------|-----|-----|------|
| FEBRUARY |     |     |      | MARCH |     |      | APRIL |     |      | MAY |     |      |
| 1        | 318 | 299 | 311  | 335   | 332 | 333  | ---   | --- | ---  | 324 | 321 | 322  |
| 2        | 340 | 316 | 329  | 334   | 331 | 332  | ---   | --- | ---  | 325 | 322 | 323  |
| 3        | 356 | 340 | 347  | 331   | 328 | 330  | ---   | --- | ---  | 328 | 323 | 326  |
| 4        | 383 | 356 | 369  | 333   | 326 | 330  | ---   | --- | ---  | 328 | 322 | 325  |
| 5        | 385 | 339 | 368  | 327   | 317 | 323  | ---   | --- | ---  | 326 | 321 | 324  |
| 6        | 330 | 303 | 314  | 318   | 311 | 315  | ---   | --- | ---  | 328 | 320 | 323  |
| 7        | 349 | 323 | 335  | 318   | 311 | 315  | ---   | --- | ---  | 319 | 313 | 316  |
| 8        | 376 | 350 | 364  | 321   | 317 | 319  | ---   | --- | ---  | 317 | 311 | 312  |
| 9        | 386 | 374 | 379  | 326   | 317 | 322  | ---   | --- | ---  | 320 | 316 | 317  |
| 10       | 393 | 357 | 381  | 335   | 324 | 330  | ---   | --- | ---  | 321 | 317 | 319  |
| 11       | 351 | 178 | 288  | 344   | 335 | 340  | ---   | --- | ---  | 324 | 318 | 320  |
| 12       | 303 | 211 | 272  | 345   | 339 | 342  | ---   | --- | ---  | 322 | 302 | 318  |
| 13       | 319 | 302 | 312  | 341   | 336 | 338  | ---   | --- | ---  | 307 | 275 | 296  |
| 14       | 332 | 318 | 326  | 342   | 337 | 338  | ---   | --- | ---  | 311 | 306 | 308  |
| 15       | 334 | 328 | 330  | 337   | 336 | 337  | ---   | --- | ---  | 313 | 311 | 312  |
| 16       | 337 | 328 | 334  | 338   | 336 | 337  | ---   | --- | ---  | 312 | 308 | 310  |
| 17       | 341 | 337 | 339  | 339   | 331 | 335  | ---   | --- | ---  | 315 | 309 | 312  |
| 18       | 342 | 337 | 340  | 334   | 328 | 332  | ---   | --- | ---  | 323 | 314 | 318  |
| 19       | 337 | 312 | 327  | 333   | 328 | 331  | ---   | --- | ---  | 324 | 314 | 319  |
| 20       | 325 | 312 | 319  | 334   | 329 | 331  | ---   | --- | ---  | 325 | 316 | 319  |
| 21       | 331 | 324 | 328  | 331   | 329 | 330  | ---   | --- | ---  | 328 | 315 | 319  |
| 22       | 333 | 330 | 332  | 331   | 328 | 329  | 315   | 311 | 313  | 317 | 314 | 316  |
| 23       | 334 | 331 | 332  | 338   | 332 | 335  | 315   | 311 | 313  | 320 | 314 | 317  |
| 24       | 333 | 330 | 331  | ---   | --- | ---  | 314   | 309 | 311  | 320 | 313 | 316  |
| 25       | 335 | 330 | 333  | ---   | --- | ---  | 314   | 299 | 311  | 313 | 311 | 312  |
| 26       | 340 | 334 | 337  | ---   | --- | ---  | 315   | 310 | 313  | 314 | 311 | 312  |
| 27       | 339 | 336 | 338  | ---   | --- | ---  | 316   | 307 | 311  | 315 | 310 | 313  |
| 28       | 336 | 330 | 334  | ---   | --- | ---  | 310   | 307 | 309  | 310 | 304 | 306  |
| 29       | --- | --- | ---  | ---   | --- | ---  | 320   | 309 | 315  | 312 | 306 | 309  |
| 30       | --- | --- | ---  | ---   | --- | ---  | 325   | 317 | 322  | 314 | 310 | 312  |
| 31       | --- | --- | ---  | ---   | --- | ---  | ---   | --- | ---  | 319 | 314 | 316  |
| MONTH    | 393 | 178 | 334  | ---   | --- | ---  | ---   | --- | ---  | 328 | 275 | 316  |

| DAY   | MAX | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|-----|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| JUNE  |     |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 321 | 315 | 318  | ---  | --- | ---  | 263    | 193 | 245  | ---       | --- | ---  |
| 2     | 323 | 317 | 319  | ---  | --- | ---  | 269    | 256 | 262  | ---       | --- | ---  |
| 3     | 320 | 318 | 319  | ---  | --- | ---  | 267    | 252 | 261  | ---       | --- | ---  |
| 4     | 322 | 320 | 321  | ---  | --- | ---  | 266    | 260 | 263  | ---       | --- | ---  |
| 5     | 323 | 318 | 320  | ---  | --- | ---  | 267    | 255 | 261  | ---       | --- | ---  |
| 6     | 319 | 305 | 317  | ---  | --- | ---  | 269    | 263 | 267  | ---       | --- | ---  |
| 7     | 309 | 304 | 307  | ---  | --- | ---  | 307    | 178 | 257  | ---       | --- | ---  |
| 8     | 314 | 309 | 311  | ---  | --- | ---  | 269    | 184 | 229  | ---       | --- | ---  |
| 9     | 319 | 314 | 316  | ---  | --- | ---  | 319    | 271 | 298  | ---       | --- | ---  |
| 10    | 322 | 319 | 320  | ---  | --- | ---  | 343    | 321 | 333  | ---       | --- | ---  |
| 11    | 320 | 311 | 317  | ---  | --- | ---  | 355    | 342 | 349  | ---       | --- | ---  |
| 12    | 311 | 303 | 307  | ---  | --- | ---  | 364    | 355 | 360  | ---       | --- | ---  |
| 13    | 305 | 303 | 304  | ---  | --- | ---  | 369    | 361 | 366  | ---       | --- | ---  |
| 14    | 304 | 298 | 302  | ---  | --- | ---  | 376    | 368 | 372  | ---       | --- | ---  |
| 15    | 304 | 298 | 301  | 262  | 258 | 260  | 375    | 371 | 374  | ---       | --- | ---  |
| 16    | 306 | 302 | 304  | 286  | 262 | 271  | 371    | 350 | 365  | ---       | --- | ---  |
| 17    | 306 | 287 | 299  | 304  | 286 | 295  | 347    | 284 | 328  | ---       | --- | ---  |
| 18    | 315 | 284 | 293  | 317  | 309 | 314  | 318    | 283 | 305  | ---       | --- | ---  |
| 19    | 299 | 267 | 283  | 318  | 301 | 311  | 344    | 318 | 332  | ---       | --- | ---  |
| 20    | 326 | 292 | 310  | 335  | 318 | 322  | 356    | 343 | 350  | ---       | --- | ---  |
| 21    | 334 | 299 | 319  | 339  | 325 | 329  | 364    | 356 | 360  | ---       | --- | ---  |
| 22    | 341 | 321 | 327  | 335  | 330 | 332  | 369    | 363 | 366  | ---       | --- | ---  |
| 23    | --- | --- | ---  | 336  | 327 | 330  | 375    | 367 | 372  | ---       | --- | ---  |
| 24    | --- | --- | ---  | 327  | 325 | 326  | ---    | --- | ---  | ---       | --- | ---  |
| 25    | --- | --- | ---  | 326  | 324 | 325  | ---    | --- | ---  | ---       | --- | ---  |
| 26    | --- | --- | ---  | 324  | 321 | 322  | ---    | --- | ---  | ---       | --- | ---  |
| 27    | 344 | 324 | 334  | 321  | 318 | 319  | ---    | --- | ---  | ---       | --- | ---  |
| 28    | 336 | 334 | 335  | 319  | 314 | 317  | ---    | --- | ---  | ---       | --- | ---  |
| 29    | --- | --- | ---  | 314  | 303 | 309  | ---    | --- | ---  | ---       | --- | ---  |
| 30    | --- | --- | ---  | 306  | 302 | 304  | ---    | --- | ---  | ---       | --- | ---  |
| 31    | --- | --- | ---  | 313  | 160 | 221  | ---    | --- | ---  | ---       | --- | ---  |
| MONTH | --- | --- | ---  | ---  | --- | ---  | ---    | --- | ---  | ---       | --- | ---  |

## CUMBERLAND RIVER BASIN

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03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 15.5 | 14.0 | 14.5     | 18.5 | 17.5 | 18.0     | 11.0 | 10.5 | 11.0    | 15.5 | 14.0 | 15.0 |
| 2       | 15.5 | 13.5 | 14.5     | 18.0 | 15.5 | 17.0     | 11.5 | 10.5 | 11.0    | 13.5 | 11.0 | 12.0 |
| 3       | 15.5 | 13.0 | 14.5     | 15.0 | 14.0 | 15.0     | 11.5 | 10.0 | 11.0    | 10.5 | 10.0 | 10.0 |
| 4       | 16.5 | 14.5 | 15.5     | 15.5 | 15.0 | 15.5     | 10.0 | 8.5  | 9.5     | 10.0 | 8.5  | 9.5  |
| 5       | 17.5 | 15.5 | 16.5     | 16.0 | 15.0 | 15.5     | 8.5  | 8.0  | 8.5     | 8.5  | 8.0  | 8.0  |
| 6       | 17.5 | 16.5 | 17.0     | 14.5 | 13.0 | 14.0     | 8.0  | 6.0  | 7.5     | 8.0  | 7.0  | 8.0  |
| 7       | 18.0 | 17.5 | 17.5     | 13.0 | 12.0 | 12.5     | 6.0  | 5.5  | 6.0     | 8.5  | 8.0  | 8.0  |
| 8       | 19.0 | 18.0 | 18.5     | 12.0 | 10.5 | 11.5     | 7.0  | 5.0  | 6.0     | 8.5  | 7.5  | 8.0  |
| 9       | 19.0 | 18.5 | 18.5     | 13.0 | 11.5 | 12.0     | 8.5  | 6.0  | 7.5     | 8.5  | 7.5  | 8.0  |
| 10      | 19.0 | 18.0 | 18.5     | 13.5 | 12.5 | 13.0     | 10.5 | 8.5  | 9.5     | 8.5  | 8.0  | 8.5  |
| 11      | 19.5 | 18.5 | 19.0     | 13.5 | 11.5 | 12.5     | 11.5 | 10.5 | 10.5    | 8.0  | 6.5  | 7.5  |
| 12      | 19.5 | 18.5 | 19.0     | 11.5 | 10.5 | 11.0     | 12.0 | 10.0 | 11.0    | 6.5  | 5.5  | 6.0  |
| 13      | 20.0 | 19.0 | 19.5     | 10.5 | 9.5  | 10.0     | 13.5 | 11.5 | 12.5    | 5.5  | 4.0  | 5.0  |
| 14      | 20.5 | 19.0 | 20.0     | 10.5 | 9.0  | 10.0     | 14.5 | 13.0 | 13.5    | 5.0  | 4.0  | 4.5  |
| 15      | 21.0 | 19.5 | 20.5     | 12.0 | 9.5  | 10.5     | 14.0 | 12.5 | 13.5    | 4.5  | 3.5  | 4.0  |
| 16      | 21.5 | 19.5 | 20.5     | 12.5 | 11.5 | 12.0     | 14.0 | 13.0 | 13.5    | 4.5  | 3.0  | 3.5  |
| 17      | 21.0 | 20.5 | 20.5     | 11.5 | 10.0 | 10.5     | 15.0 | 14.0 | 14.5    | 5.5  | 4.5  | 5.0  |
| 18      | 21.5 | 19.5 | 20.5     | 11.5 | 10.5 | 11.0     | 15.0 | 14.5 | 14.5    | 6.5  | 5.5  | 6.0  |
| 19      | 21.5 | 20.5 | 21.0     | 12.0 | 11.5 | 12.0     | 15.0 | 14.5 | 14.5    | 7.0  | 5.0  | 6.5  |
| 20      | 22.0 | 20.5 | 21.0     | 12.0 | 10.5 | 11.0     | 14.5 | 13.5 | 14.0    | 4.5  | .5   | 2.5  |
| 21      | 21.0 | 19.5 | 20.5     | 10.0 | 9.5  | 10.0     | 15.0 | 13.5 | 14.0    | .5   | .0   | .5   |
| 22      | 19.5 | 18.0 | 19.0     | 9.5  | 8.5  | 9.0      | 14.5 | 12.0 | 13.5    | 1.0  | .0   | .5   |
| 23      | 18.0 | 16.0 | 17.0     | 9.0  | 8.0  | 8.5      | 12.0 | 11.0 | 11.0    | 2.0  | .5   | 1.0  |
| 24      | 16.5 | 16.0 | 16.5     | 9.0  | 8.0  | 8.5      | 12.0 | 10.5 | 11.0    | 4.0  | 1.0  | 2.5  |
| 25      | 17.5 | 16.5 | 17.0     | 10.0 | 8.0  | 9.0      | 12.5 | 10.5 | 11.5    | 4.0  | 3.0  | 3.5  |
| 26      | 18.5 | 17.0 | 17.5     | 11.0 | 8.5  | 10.0     | 10.5 | 9.5  | 10.0    | 3.5  | 2.0  | 3.0  |
| 27      | 18.5 | 17.0 | 18.0     | 12.5 | 10.5 | 11.5     | 12.5 | 10.5 | 11.5    | 3.5  | 2.5  | 3.0  |
| 28      | 19.5 | 18.0 | 18.5     | 12.5 | 11.0 | 11.5     | 14.0 | 13.0 | 13.5    | 4.0  | 3.0  | 3.5  |
| 29      | 19.0 | 18.5 | 19.0     | 12.0 | 10.5 | 11.0     | 15.0 | 14.0 | 14.5    | 4.0  | 2.0  | 3.0  |
| 30      | 18.5 | 17.5 | 18.0     | 11.5 | 10.5 | 11.0     | 15.0 | 14.5 | 15.0    | 5.5  | 4.0  | 4.5  |
| 31      | 18.5 | 17.5 | 18.0     | ---  | ---  | ---      | 15.5 | 14.5 | 15.0    | 7.5  | 5.5  | 7.0  |
| MONTH   | 22.0 | 13.0 | 18.5     | 18.5 | 8.0  | 12.0     | 15.5 | 5.0  | 11.5    | 15.5 | .0   | 5.5  |

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 7.5  | 4.0  | 5.5   | 11.5 | 10.0 | 10.5  | ---  | ---  | ---  | 21.0 | 20.5 | 20.5 |
| 2        | 5.0  | 4.0  | 4.5   | 12.5 | 10.0 | 11.5  | ---  | ---  | ---  | 21.5 | 20.0 | 20.5 |
| 3        | 6.0  | 4.5  | 5.0   | 13.0 | 10.5 | 12.0  | ---  | ---  | ---  | 20.0 | 19.0 | 19.5 |
| 4        | 7.0  | 5.0  | 6.0   | 15.0 | 11.5 | 13.0  | ---  | ---  | ---  | 21.0 | 18.0 | 19.5 |
| 5        | 8.0  | 7.0  | 7.5   | 14.5 | 12.0 | 13.0  | ---  | ---  | ---  | 21.5 | 19.0 | 20.0 |
| 6        | 8.0  | 7.0  | 7.5   | 13.0 | 10.5 | 12.0  | ---  | ---  | ---  | 22.5 | 19.5 | 21.0 |
| 7        | 7.5  | 6.5  | 7.0   | 12.5 | 10.0 | 11.5  | ---  | ---  | ---  | 22.0 | 20.5 | 21.5 |
| 8        | 7.0  | 5.5  | 6.5   | 13.0 | 11.0 | 12.0  | ---  | ---  | ---  | 21.0 | 20.0 | 20.5 |
| 9        | 7.5  | 5.0  | 6.5   | 14.5 | 12.5 | 13.5  | ---  | ---  | ---  | 20.0 | 19.0 | 19.5 |
| 10       | 9.5  | 7.5  | 8.5   | 13.0 | 12.0 | 12.5  | ---  | ---  | ---  | 20.5 | 19.0 | 19.5 |
| 11       | 9.5  | 5.0  | 7.5   | 13.0 | 12.0 | 12.5  | ---  | ---  | ---  | 21.5 | 19.0 | 20.0 |
| 12       | 7.0  | 5.5  | 6.5   | 14.0 | 12.5 | 13.0  | ---  | ---  | ---  | 23.0 | 20.0 | 21.5 |
| 13       | 7.5  | 6.5  | 7.0   | 13.0 | 12.0 | 12.5  | ---  | ---  | ---  | 24.0 | 21.0 | 22.5 |
| 14       | 8.5  | 6.5  | 7.5   | 12.5 | 11.0 | 12.0  | ---  | ---  | ---  | 25.0 | 22.0 | 23.5 |
| 15       | 8.0  | 6.5  | 7.0   | 12.5 | 9.5  | 11.0  | ---  | ---  | ---  | 25.0 | 22.5 | 24.0 |
| 16       | 7.5  | 5.5  | 6.5   | 12.5 | 10.0 | 11.0  | ---  | ---  | ---  | 23.0 | 21.5 | 22.5 |
| 17       | 8.5  | 7.5  | 8.0   | 13.0 | 10.0 | 11.5  | ---  | ---  | ---  | 22.0 | 20.0 | 21.0 |
| 18       | 9.0  | 8.5  | 8.5   | 12.5 | 9.5  | 11.0  | ---  | ---  | ---  | 21.5 | 19.0 | 20.0 |
| 19       | 9.0  | 8.5  | 8.5   | 13.0 | 9.0  | 11.0  | ---  | ---  | ---  | 22.0 | 19.0 | 20.5 |
| 20       | 10.0 | 8.5  | 9.0   | 13.0 | 10.0 | 12.0  | 22.5 | 19.5 | 21.0 | 22.0 | 20.0 | 21.0 |
| 21       | 11.5 | 9.0  | 10.5  | 12.5 | 11.5 | 12.0  | 23.0 | 20.5 | 21.5 | 23.0 | 21.0 | 22.0 |
| 22       | 13.0 | 10.0 | 11.5  | 12.0 | 11.5 | 11.5  | 23.0 | 20.5 | 21.5 | 23.0 | 21.5 | 22.0 |
| 23       | 14.5 | 12.0 | 13.0  | 12.5 | 11.5 | 11.5  | 21.5 | 20.5 | 21.5 | 21.5 | 19.5 | 20.0 |
| 24       | 14.5 | 14.0 | 14.0  | ---  | ---  | ---   | 22.5 | 20.0 | 21.0 | 21.0 | 18.5 | 20.0 |
| 25       | 14.0 | 12.5 | 13.0  | ---  | ---  | ---   | 22.5 | 19.5 | 20.5 | 22.5 | 19.0 | 21.0 |
| 26       | 13.0 | 12.0 | 12.5  | ---  | ---  | ---   | 22.5 | 19.0 | 21.0 | 23.0 | 20.0 | 21.5 |
| 27       | 12.5 | 11.0 | 12.0  | ---  | ---  | ---   | 21.5 | 20.5 | 21.0 | 23.5 | 21.5 | 22.5 |
| 28       | 12.0 | 10.0 | 11.0  | ---  | ---  | ---   | 21.5 | 20.0 | 20.5 | 24.0 | 22.0 | 23.0 |
| 29       | ---  | ---  | ---   | ---  | ---  | ---   | 22.5 | 20.0 | 21.0 | 25.0 | 22.0 | 23.5 |
| 30       | ---  | ---  | ---   | ---  | ---  | ---   | 21.5 | 20.0 | 21.0 | 25.5 | 23.0 | 24.5 |
| 31       | ---  | ---  | ---   | ---  | ---  | ---   | ---  | ---  | ---  | 25.0 | 24.0 | 24.5 |
| MONTH    | 14.5 | 4.0  | 8.5   | ---  | ---  | ---   | ---  | ---  | ---  | 25.5 | 18.0 | 21.5 |



CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

## CUMBERLAND RIVER BASIN

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03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN

LOCATION.--Lat 35°56'25", long 86°27'54", Rutherford County, Hydrologic Unit 05130203, near right bank at county bridge on Sulphur Springs Road, 400 ft upstream from Nice's Mill dam, 1.6 mi downstream from Overall Creek, 4.2 mi southeast of Smyrna, and at mile 6.4.

DRAINAGE AREA.--237 mi<sup>2</sup>, includes 43 mi<sup>2</sup> without surface drainage.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 21-23. Records good. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--20 years, 441 ft<sup>3</sup>/s, 25.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,800 ft<sup>3</sup>/s Mar. 13, 1975, gage height, 19.18 ft from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of area-velocity study at gage height 17.11 ft and flood routing from Murfreesboro gage and Overall Creek at gage heights 16.65 ft and 17.39 ft; no flow Aug. 9, 10, Sept. 12, 13, 1983, result of upstream regulation and diversion; minimum natural discharge, 2.2 ft<sup>3</sup>/s Nov. 6-8, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Nov. 28 | 1200 | *11,800                        | *11.96           | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 2.6 ft<sup>3</sup>/s June 3 due to upstream regulation and diversion.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC   | JAN   | FEB   | MAR  | APR   | MAY  | JUN    | JUL  | AUG  | SEP   |       |
|-------------|---------|----------|-------|-------|-------|------|-------|------|--------|------|------|-------|-------|
| 1           | 13      | 460      | 1060  | 1070  | 1320  | 324  | 268   | 81   | 29     | 51   | 28   | 50    |       |
| 2           | 20      | 1050     | 814   | 1030  | 793   | 301  | 235   | 77   | 16     | 53   | 26   | 42    |       |
| 3           | 25      | 901      | 677   | 723   | 577   | 274  | 213   | 74   | 9.7    | 46   | 25   | 39    |       |
| 4           | 24      | 625      | 553   | 784   | 474   | 254  | 194   | 73   | 12     | 45   | 22   | 36    |       |
| 5           | 21      | 536      | 474   | 700   | 544   | 241  | 187   | 70   | 13     | 44   | 21   | 33    |       |
| 6           | 15      | 429      | 522   | 580   | 1440  | 223  | 194   | 64   | 16     | 57   | 27   | 32    |       |
| 7           | 7.0     | 351      | 485   | 505   | 1160  | 210  | 191   | 60   | 26     | 61   | 36   | 30    |       |
| 8           | 13      | 300      | 422   | 432   | 810   | 202  | 178   | 54   | 30     | 51   | 122  | 29    |       |
| 9           | 17      | 255      | 377   | 373   | 638   | 227  | 165   | 77   | 29     | 44   | 77   | 24    |       |
| 10          | 22      | 692      | 343   | 343   | 615   | 239  | 149   | 71   | 21     | 41   | 53   | 26    |       |
| 11          | 22      | 1350     | 306   | 312   | 2620  | 230  | 138   | 67   | 29     | 42   | 42   | 37    |       |
| 12          | 19      | 670      | 277   | 277   | 3240  | 226  | 130   | 59   | 34     | 43   | 39   | 32    |       |
| 13          | 18      | 472      | 253   | 252   | 1430  | 210  | 124   | 51   | 36     | 37   | 34   | 25    |       |
| 14          | 15      | 375      | 232   | 234   | 1080  | 204  | 117   | 48   | 32     | 27   | 28   | 22    |       |
| 15          | 16      | 476      | 211   | 219   | 889   | 196  | 129   | 46   | 29     | 23   | 27   | 19    |       |
| 16          | 18      | 1190     | 200   | 206   | 717   | 187  | 134   | 41   | 31     | 20   | 52   | 19    |       |
| 17          | 29      | 661      | 189   | 238   | 643   | 183  | 127   | 38   | 27     | 18   | 173  | 17    |       |
| 18          | 28      | 776      | 180   | 280   | 817   | 173  | 117   | 38   | 350    | 17   | 95   | 20    |       |
| 19          | 22      | 5970     | 173   | 261   | 1270  | 163  | 102   | 34   | 224    | 19   | 95   | 22    |       |
| 20          | 100     | 1700     | 374   | 238   | 1080  | 158  | 92    | 32   | 136    | 15   | 77   | 18    |       |
| 21          | 142     | 1100     | 1160  | 220   | 812   | 155  | 81    | 32   | 99     | 15   | 64   | 13    |       |
| 22          | 286     | 816      | 1080  | 210   | 654   | 250  | 72    | 34   | 79     | 19   | 58   | 5.2   |       |
| 23          | 2730    | 641      | 782   | 200   | 548   | 421  | 68    | 41   | 67     | 29   | 54   | 14    |       |
| 24          | 2460    | 529      | 650   | 193   | 510   | 420  | 71    | 37   | 57     | 35   | 54   | 33    |       |
| 25          | 1000    | 440      | 1140  | 218   | 478   | 387  | 69    | 34   | 81     | 42   | 57   | 31    |       |
| 26          | 641     | 381      | 830   | 220   | 438   | 316  | 65    | 32   | 76     | 33   | 129  | 52    |       |
| 27          | 465     | 583      | 645   | 206   | 394   | 277  | 69    | 29   | 62     | 30   | 108  | 122   |       |
| 28          | 1550    | 8020     | 527   | 204   | 353   | 260  | 101   | 35   | 58     | 23   | 79   | 67    |       |
| 29          | 1840    | 1980     | 446   | 196   | ---   | 241  | 88    | 39   | 52     | 23   | 62   | 47    |       |
| 30          | 890     | 1250     | 405   | 190   | ---   | 220  | 84    | 27   | 47     | 27   | 55   | 40    |       |
| 31          | 606     | ---      | 626   | 615   | ---   | 220  | ---   | 30   | ---    | 30   | 65   | ---   |       |
| TOTAL       | 13074.0 | 34979    | 16413 | 11729 | 26344 | 7592 | 3952  | 1525 | 1807.7 | 1060 | 1884 | 996.2 |       |
| MEAN        | 422     | 1166     | 529   | 378   | 941   | 245  | 132   | 49.2 | 60.3   | 34.2 | 60.8 | 33.2  |       |
| MAX         | 2730    | 8020     | 1160  | 1070  | 3240  | 421  | 268   | 81   | 350    | 61   | 173  | 122   |       |
| MIN         | 7.0     | 255      | 173   | 190   | 353   | 155  | 65    | 27   | 9.7    | 15   | 21   | 5.2   |       |
| CFSM        | 1.78    | 4.92     | 2.23  | 1.59  | 3.97  | 1.03 | .56   | .21  | .25    | .14  | .26  | .14   |       |
| IN.         | 2.05    | 5.49     | 2.58  | 1.84  | 4.14  | 1.19 | .62   | .24  | .28    | .17  | .30  | .16   |       |
| CAL YR 1984 | TOTAL   | 202075.7 |       | MEAN  | 552   | MAX  | 11700 | MIN  | 2.7    | CFSM | 2.33 | IN.   | 31.72 |
| WTR YR 1985 | TOTAL   | 121355.9 |       | MEAN  | 332   | MAX  | 8020  | MIN  | 5.2    | CFSM | 1.40 | IN.   | 19.05 |

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: March 1974 to current year.

INSTRUMENTATION.--Water-temperature recorder March 1974 to September 1975, water-quality monitor October 1975 to current year.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 631 microsiemens, Nov. 18, 1980; minimum, 83 microsiemens, May 19, 1983.

WATER TEMPERATURES: Maximum, 30.0°C, July 12, 1976, Aug. 14, 1985; minimum, 0.5°C, Jan. 21, 1985.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 574 microsiemens, Oct. 1; minimum, 106 microsiemens, Nov. 28.

WATER TEMPERATURES: Maximum, 30.0°C, Aug. 14; minimum, 0.5°C, Jan. 21.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
|       | OCTOBER |     |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
| 1     | 574     | 554 | 569  | 400      | 381 | 393  | 342      | 326 | 335  | 383     | 277 | 363  |
| 2     | 562     | 541 | 556  | 394      | 361 | 381  | 350      | 336 | 345  | 329     | 254 | 293  |
| 3     | 553     | 540 | 547  | 367      | 361 | 364  | 358      | 346 | 354  | 360     | 334 | 350  |
| 4     | 550     | 520 | 541  | 390      | 361 | 378  | 363      | 356 | 361  | 373     | 363 | 366  |
| 5     | 514     | 490 | 498  | 402      | 390 | 395  | 370      | 357 | 367  | 379     | 373 | 377  |
| 6     | 496     | 493 | 495  | 412      | 400 | 408  | 370      | 357 | 368  | 380     | 373 | 377  |
| 7     | 497     | 494 | 496  | 417      | 410 | 415  | 376      | 365 | 368  | 390     | 374 | 386  |
| 8     | 495     | 471 | 484  | 422      | 410 | 419  | 379      | 366 | 375  | 396     | 384 | 394  |
| 9     | 476     | 460 | 470  | 424      | 415 | 421  | 382      | 366 | 379  | 400     | 395 | 398  |
| 10    | 497     | 470 | 487  | 421      | 376 | 405  | 386      | 375 | 382  | 400     | 393 | 398  |
| 11    | 563     | 491 | 535  | 365      | 265 | 293  | 390      | 375 | 385  | 407     | 393 | 404  |
| 12    | 557     | 530 | 544  | 361      | 305 | 332  | 392      | 385 | 387  | 406     | 394 | 401  |
| 13    | 544     | 520 | 532  | 391      | 355 | 378  | 397      | 385 | 394  | 405     | 393 | 400  |
| 14    | 536     | 520 | 528  | 405      | 385 | 398  | 396      | 385 | 392  | 403     | 393 | 396  |
| 15    | 537     | 521 | 532  | 412      | 375 | 403  | 396      | 380 | 389  | 405     | 393 | 401  |
| 16    | 537     | 520 | 533  | 385      | 316 | 347  | 401      | 384 | 391  | 405     | 393 | 398  |
| 17    | 533     | 516 | 529  | 352      | 316 | 330  | 399      | 384 | 388  | 403     | 392 | 395  |
| 18    | 540     | 530 | 534  | 372      | 299 | 358  | 396      | 384 | 390  | 402     | 392 | 396  |
| 19    | 545     | 531 | 541  | 297      | 115 | 194  | 399      | 384 | 396  | 402     | 382 | 392  |
| 20    | 550     | 431 | 517  | 327      | 246 | 293  | 397      | 359 | 384  | 399     | 392 | 396  |
| 21    | 424     | 330 | 355  | 352      | 325 | 341  | 369      | 334 | 356  | 412     | 392 | 402  |
| 22    | 357     | 331 | 343  | 367      | 346 | 359  | 356      | 325 | 342  | 409     | 402 | 405  |
| 23    | 364     | 167 | 302  | 372      | 365 | 370  | 377      | 355 | 368  | 414     | 402 | 405  |
| 24    | 280     | 166 | 219  | 379      | 376 | 377  | 381      | 377 | 379  | 438     | 413 | 422  |
| 25    | 345     | 281 | 319  | 383      | 380 | 382  | 377      | 365 | 371  | 423     | 416 | 418  |
| 26    | 374     | 340 | 360  | 389      | 376 | 385  | 364      | 345 | 355  | 413     | 396 | 400  |
| 27    | 387     | 370 | 380  | 393      | 280 | 377  | 376      | 354 | 366  | 404     | 397 | 401  |
| 28    | 393     | 200 | 344  | 293      | 106 | 161  | 389      | 374 | 385  | 407     | 397 | 401  |
| 29    | 303     | 191 | 248  | 303      | 223 | 272  | 395      | 384 | 391  | 419     | 399 | 411  |
| 30    | 366     | 310 | 342  | 333      | 306 | 321  | 397      | 374 | 392  | 425     | 413 | 420  |
| 31    | 387     | 360 | 378  | ---      | --- | ---  | 386      | 364 | 376  | 412     | 379 | 399  |
| MONTH | 574     | 166 | 453  | 424      | 106 | 355  | 401      | 325 | 375  | 438     | 254 | 392  |

## CUMBERLAND RIVER BASIN

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03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 385 | 319 | 346   | 384 | 364 | 376   | 408 | 391 | 398  | 412 | 405 | 409  |
| 2        | 346 | 310 | 327   | 385 | 374 | 380   | 402 | 391 | 395  | 412 | 405 | 410  |
| 3        | 374 | 350 | 364   | 382 | 366 | 378   | 400 | 390 | 394  | 422 | 406 | 418  |
| 4        | 388 | 371 | 382   | 379 | 355 | 370   | 400 | 390 | 395  | 426 | 416 | 419  |
| 5        | 402 | 381 | 393   | 380 | 357 | 374   | 397 | 380 | 392  | 427 | 416 | 421  |
| 6        | 397 | 313 | 363   | 377 | 366 | 369   | 396 | 379 | 390  | 421 | 407 | 419  |
| 7        | 329 | 312 | 320   | 374 | 357 | 365   | 401 | 389 | 393  | 428 | 418 | 422  |
| 8        | 357 | 333 | 344   | 370 | 353 | 363   | 401 | 389 | 396  | 433 | 418 | 430  |
| 9        | 369 | 353 | 365   | 371 | 354 | 364   | 410 | 399 | 404  | 434 | 413 | 426  |
| 10       | 380 | 365 | 375   | 375 | 365 | 371   | 410 | 398 | 404  | 415 | 408 | 411  |
| 11       | 374 | 165 | 308   | 383 | 366 | 376   | 405 | 399 | 403  | 420 | 408 | 416  |
| 12       | 269 | 146 | 207   | 384 | 377 | 380   | 405 | 389 | 401  | 420 | 408 | 416  |
| 13       | 330 | 276 | 303   | 384 | 368 | 380   | 401 | 388 | 395  | 422 | 409 | 419  |
| 14       | 343 | 326 | 335   | 389 | 369 | 378   | 401 | 387 | 398  | 426 | 409 | 417  |
| 15       | 352 | 337 | 347   | 394 | 380 | 389   | 394 | 377 | 388  | 429 | 419 | 425  |
| 16       | 359 | 347 | 355   | 393 | 380 | 386   | 397 | 387 | 391  | 435 | 430 | 433  |
| 17       | 365 | 359 | 362   | 395 | 381 | 389   | 399 | 387 | 395  | 440 | 430 | 435  |
| 18       | 363 | 359 | 362   | 392 | 382 | 387   | 401 | 386 | 394  | 447 | 430 | 438  |
| 19       | 359 | 320 | 341   | 398 | 393 | 395   | 409 | 390 | 403  | 448 | 441 | 446  |
| 20       | 325 | 300 | 312   | 396 | 385 | 393   | 414 | 397 | 407  | 448 | 445 | 447  |
| 21       | 352 | 321 | 342   | 398 | 384 | 393   | 413 | 397 | 408  | 444 | 432 | 442  |
| 22       | 361 | 350 | 355   | 397 | 383 | 390   | 403 | 396 | 398  | 443 | 422 | 434  |
| 23       | 368 | 351 | 363   | 400 | 383 | 391   | 411 | 396 | 402  | 447 | 442 | 445  |
| 24       | 371 | 351 | 363   | 404 | 383 | 396   | 413 | 397 | 408  | 449 | 446 | 447  |
| 25       | 378 | 362 | 372   | 407 | 393 | 402   | 407 | 395 | 403  | 452 | 442 | 447  |
| 26       | 382 | 372 | 377   | 405 | 393 | 401   | 402 | 395 | 399  | 463 | 444 | 453  |
| 27       | 384 | 373 | 379   | 409 | 392 | 402   | 402 | 395 | 400  | 467 | 453 | 460  |
| 28       | 383 | 363 | 375   | 412 | 402 | 407   | 397 | 384 | 393  | 460 | 444 | 453  |
| 29       | --- | --- | ---   | 416 | 402 | 408   | 406 | 390 | 399  | 450 | 434 | 440  |
| 30       | --- | --- | ---   | 415 | 401 | 409   | 407 | 394 | 404  | 448 | 446 | 447  |
| 31       | --- | --- | ---   | 415 | 401 | 407   | --- | --- | ---  | 456 | 447 | 449  |
| MONTH    | 402 | 146 | 348   | 416 | 353 | 386   | 414 | 377 | 398  | 467 | 405 | 432  |

| DAY   | MAX | MIN | MEAN | MAX | MIN | MEAN   | MAX | MIN | MEAN      | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE  |     |     | JULY |     |     | AUGUST |     |     | SEPTEMBER |     |     |      |
| 1     | 462 | 458 | 461  | 428 | 421 | 425    | 519 | 516 | 517       | 418 | 411 | 415  |
| 2     | 467 | 456 | 460  | 436 | 420 | 428    | 520 | 511 | 514       | 428 | 419 | 423  |
| 3     | 471 | 465 | 468  | 433 | 425 | 429    | 516 | 510 | 513       | 433 | 427 | 430  |
| 4     | 481 | 466 | 471  | 427 | 422 | 424    | 523 | 513 | 519       | 445 | 433 | 438  |
| 5     | 483 | 466 | 480  | 440 | 427 | 430    | 526 | 518 | 523       | 451 | 445 | 447  |
| 6     | 473 | 457 | 469  | 440 | 419 | 435    | 520 | 513 | 516       | 466 | 451 | 456  |
| 7     | 473 | 470 | 471  | 439 | 420 | 433    | 514 | 497 | 504       | 470 | 462 | 466  |
| 8     | 470 | 457 | 465  | 425 | 414 | 417    | 510 | 371 | 453       | 470 | 462 | 467  |
| 9     | 464 | 457 | 461  | 440 | 423 | 429    | 368 | 354 | 360       | 468 | 463 | 465  |
| 10    | 461 | 448 | 456  | 447 | 439 | 443    | 392 | 364 | 373       | 473 | 466 | 470  |
| 11    | 453 | 438 | 448  | 459 | 447 | 449    | 416 | 392 | 401       | 466 | 457 | 462  |
| 12    | 459 | 438 | 449  | 467 | 458 | 461    | 436 | 414 | 418       | 466 | 457 | 461  |
| 13    | 476 | 459 | 465  | 470 | 466 | 468    | 450 | 434 | 441       | 469 | 463 | 466  |
| 14    | 476 | 450 | 465  | 467 | 460 | 464    | 450 | 447 | 449       | 477 | 463 | 467  |
| 15    | 464 | 459 | 461  | 470 | 459 | 463    | 460 | 449 | 454       | 480 | 476 | 478  |
| 16    | 475 | 458 | 465  | 480 | 471 | 476    | 482 | 459 | 472       | 481 | 477 | 479  |
| 17    | 474 | 460 | 472  | 476 | 460 | 471    | 445 | 276 | 315       | 486 | 481 | 484  |
| 18    | 472 | 319 | 402  | 488 | 471 | 481    | 356 | 301 | 326       | 493 | 485 | 488  |
| 19    | 361 | 310 | 344  | 494 | 486 | 491    | 388 | 355 | 373       | 512 | 492 | 500  |
| 20    | 331 | 309 | 322  | 507 | 495 | 500    | 397 | 388 | 395       | 520 | 509 | 514  |
| 21    | 355 | 329 | 342  | 517 | 505 | 511    | 419 | 395 | 406       | 520 | 515 | 517  |
| 22    | 366 | 349 | 360  | 527 | 498 | 520    | 424 | 418 | 420       | 518 | 514 | 516  |
| 23    | 383 | 360 | 374  | 515 | 503 | 512    | 435 | 424 | 428       | 520 | 513 | 516  |
| 24    | 397 | 380 | 387  | 498 | 484 | 491    | 443 | 436 | 439       | 531 | 515 | 523  |
| 25    | 407 | 390 | 399  | 505 | 496 | 503    | 440 | 431 | 435       | 532 | 520 | 529  |
| 26    | 407 | 377 | 388  | 498 | 477 | 492    | 445 | 375 | 424       | 526 | 507 | 520  |
| 27    | 405 | 385 | 395  | 489 | 474 | 480    | 373 | 358 | 362       | 510 | 344 | 391  |
| 28    | 412 | 403 | 409  | 480 | 474 | 476    | 387 | 359 | 365       | 366 | 346 | 356  |
| 29    | 414 | 401 | 403  | 501 | 478 | 492    | 411 | 388 | 399       | 377 | 365 | 371  |
| 30    | 426 | 415 | 421  | 514 | 500 | 508    | 414 | 411 | 412       | 397 | 376 | 386  |
| 31    | --- | --- | ---  | 516 | 511 | 513    | 422 | 412 | 416       | --- | --- | ---  |
| MONTH | 483 | 309 | 428  | 527 | 414 | 468    | 526 | 276 | 430       | 532 | 344 | 463  |



## CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN     | MAX  | MIN  | MEAN    | MAX  | MIN  | MEAN |
|---------|------|------|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |      |
| 1       | 16.0 | 14.5 | 14.5     | 18.0 | 17.5 | 17.5     | 11.5 | 11.0 | 11.5    | 15.5 | 14.0 | 15.0 |
| 2       | 15.0 | 13.5 | 14.5     | 17.5 | 15.0 | 16.5     | 12.0 | 10.5 | 11.0    | 14.0 | 11.0 | 12.5 |
| 3       | 15.0 | 13.5 | 14.0     | 15.0 | 13.5 | 14.5     | 12.0 | 11.0 | 11.5    | 10.5 | 9.0  | 10.0 |
| 4       | 16.0 | 14.0 | 15.0     | 15.0 | 14.5 | 15.0     | 11.0 | 9.5  | 10.0    | 9.5  | 8.0  | 9.0  |
| 5       | 17.0 | 15.0 | 16.0     | 15.5 | 14.5 | 15.0     | 9.5  | 9.0  | 9.0     | 8.0  | 7.5  | 7.5  |
| 6       | 17.0 | 16.0 | 16.5     | 14.5 | 13.0 | 13.5     | 9.0  | 7.0  | 8.5     | 8.0  | 6.5  | 7.5  |
| 7       | 17.0 | 16.5 | 17.0     | 13.0 | 11.5 | 12.5     | 7.0  | 6.0  | 6.5     | 8.0  | 7.5  | 8.0  |
| 8       | 18.5 | 17.0 | 17.5     | 12.0 | 11.0 | 11.5     | 8.0  | 6.5  | 7.0     | 8.5  | 7.5  | 8.0  |
| 9       | 18.0 | 17.5 | 18.0     | 14.0 | 11.5 | 13.0     | 9.5  | 7.0  | 8.0     | 8.5  | 7.0  | 8.0  |
| 10      | 18.5 | 17.0 | 18.0     | 14.0 | 13.5 | 14.0     | 11.0 | 9.5  | 10.5    | 8.5  | 8.0  | 8.5  |
| 11      | 19.5 | 18.0 | 19.0     | 14.0 | 12.5 | 13.0     | 11.5 | 10.5 | 11.0    | 8.5  | 6.5  | 7.5  |
| 12      | 19.0 | 18.0 | 18.5     | 12.5 | 11.0 | 11.5     | 12.5 | 10.5 | 11.5    | 7.0  | 5.5  | 6.5  |
| 13      | 19.5 | 18.5 | 19.0     | 11.0 | 10.0 | 10.5     | 13.5 | 12.0 | 13.0    | 6.0  | 5.0  | 5.5  |
| 14      | 20.5 | 18.5 | 19.5     | 11.5 | 9.5  | 10.5     | 14.5 | 13.0 | 14.0    | 6.5  | 5.0  | 5.5  |
| 15      | 21.0 | 19.5 | 20.0     | 12.5 | 11.0 | 11.5     | 14.0 | 13.0 | 13.5    | 5.5  | 4.5  | 5.0  |
| 16      | 21.0 | 19.0 | 20.0     | 12.5 | 11.5 | 12.0     | 14.5 | 13.0 | 14.0    | 5.5  | 4.5  | 5.0  |
| 17      | 20.5 | 19.5 | 20.0     | 11.5 | 10.5 | 11.5     | 15.0 | 14.0 | 14.5    | 6.0  | 5.0  | 5.5  |
| 18      | 21.0 | 19.0 | 20.0     | 11.5 | 11.0 | 11.5     | 15.0 | 14.0 | 15.0    | 7.0  | 5.0  | 6.0  |
| 19      | 20.5 | 20.0 | 20.5     | 12.0 | 11.0 | 11.5     | 14.5 | 14.0 | 14.5    | 6.5  | 5.0  | 6.0  |
| 20      | 21.0 | 19.5 | 20.5     | 11.5 | 10.5 | 11.0     | 14.5 | 13.0 | 14.0    | 5.0  | 1.5  | 3.0  |
| 21      | 21.0 | 20.0 | 20.5     | 10.5 | 10.0 | 10.0     | 14.5 | 13.0 | 14.0    | 2.0  | .5   | 1.5  |
| 22      | 20.0 | 18.5 | 19.5     | 10.0 | 9.0  | 10.0     | 14.0 | 12.0 | 13.5    | 3.0  | 1.5  | 2.0  |
| 23      | 19.0 | 15.0 | 16.5     | 10.0 | 9.0  | 9.5      | 12.5 | 11.0 | 11.5    | 3.5  | 2.0  | 3.0  |
| 24      | 15.5 | 15.0 | 15.5     | 10.5 | 9.0  | 9.5      | 12.0 | 11.0 | 11.5    | 5.0  | 3.0  | 4.0  |
| 25      | 17.0 | 15.5 | 16.0     | 11.0 | 9.0  | 10.0     | 12.0 | 10.5 | 11.0    | 5.0  | 3.5  | 4.5  |
| 26      | 17.5 | 16.0 | 17.0     | 12.0 | 10.0 | 11.0     | 11.0 | 9.0  | 10.0    | 3.5  | 2.5  | 3.0  |
| 27      | 18.0 | 16.5 | 17.0     | 13.5 | 12.0 | 12.5     | 12.5 | 10.5 | 11.5    | 4.0  | 3.0  | 3.5  |
| 28      | 19.0 | 17.5 | 18.0     | 13.0 | 11.0 | 11.5     | 13.5 | 12.0 | 13.0    | 4.0  | 3.0  | 4.0  |
| 29      | 19.0 | 18.5 | 19.0     | 11.5 | 10.5 | 11.0     | 14.5 | 13.0 | 14.0    | 4.5  | 3.0  | 4.0  |
| 30      | 18.5 | 17.5 | 18.0     | 11.5 | 11.0 | 11.5     | 15.0 | 14.0 | 14.5    | 6.5  | 4.0  | 5.5  |
| 31      | 18.5 | 17.0 | 17.5     | ---  | ---  | ---      | 15.5 | 14.0 | 15.0    | 7.0  | 6.0  | 6.5  |
| MONTH   | 21.0 | 13.5 | 18.0     | 18.0 | 9.0  | 12.0     | 15.5 | 6.0  | 12.0    | 15.5 | .5   | 6.0  |

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 6.0  | 3.0  | 4.0   | 11.5 | 10.5 | 11.0  | 16.5 | 14.5 | 15.5 | 20.0 | 19.0 | 19.5 |
| 2        | 3.5  | 2.5  | 3.0   | 12.5 | 11.5 | 12.0  | 15.5 | 13.5 | 15.0 | 20.0 | 19.0 | 19.5 |
| 3        | 4.5  | 3.0  | 4.0   | 13.0 | 11.0 | 12.0  | 17.0 | 13.5 | 15.0 | 19.5 | 18.5 | 19.0 |
| 4        | 6.0  | 4.0  | 5.0   | 14.5 | 12.5 | 13.0  | 18.0 | 15.0 | 16.5 | 19.5 | 17.0 | 18.0 |
| 5        | 7.5  | 5.5  | 6.5   | 14.0 | 12.5 | 13.0  | 17.0 | 15.5 | 16.0 | 20.5 | 18.0 | 19.0 |
| 6        | 7.0  | 6.0  | 6.5   | 12.5 | 11.0 | 12.0  | 16.5 | 14.0 | 15.5 | 21.5 | 18.5 | 19.5 |
| 7        | 6.5  | 5.0  | 6.0   | 13.0 | 10.5 | 12.0  | 15.5 | 14.0 | 15.0 | 21.0 | 19.5 | 20.5 |
| 8        | 6.5  | 4.5  | 5.5   | 14.0 | 12.5 | 13.0  | 14.5 | 12.5 | 13.5 | 21.0 | 19.0 | 20.0 |
| 9        | 7.0  | 5.0  | 6.0   | 15.0 | 13.0 | 14.0  | 14.5 | 12.0 | 13.0 | 19.5 | 18.5 | 19.0 |
| 10       | 9.0  | 6.5  | 8.0   | 13.5 | 12.5 | 13.0  | 15.0 | 12.0 | 13.5 | 19.5 | 18.5 | 19.0 |
| 11       | 9.0  | 4.0  | 7.5   | 14.5 | 12.5 | 13.5  | 16.0 | 13.5 | 14.5 | 21.0 | 18.5 | 19.5 |
| 12       | 5.5  | 3.0  | 4.0   | 15.0 | 13.5 | 14.0  | 17.5 | 15.0 | 16.0 | 22.0 | 19.5 | 20.5 |
| 13       | 7.0  | 4.5  | 6.0   | 13.5 | 12.5 | 13.0  | 17.5 | 16.0 | 17.0 | 23.0 | 20.5 | 21.5 |
| 14       | 8.0  | 6.0  | 7.0   | 13.5 | 12.0 | 13.0  | 17.5 | 16.5 | 17.0 | 23.5 | 21.5 | 22.5 |
| 15       | 7.5  | 6.0  | 7.0   | 13.5 | 10.5 | 12.0  | 18.5 | 16.5 | 17.5 | 23.5 | 22.0 | 23.0 |
| 16       | 8.0  | 6.0  | 7.0   | 13.0 | 11.0 | 12.0  | 18.0 | 16.5 | 17.5 | 23.0 | 21.0 | 22.0 |
| 17       | 9.5  | 7.5  | 8.5   | 13.5 | 11.5 | 12.5  | 19.5 | 16.5 | 17.5 | 21.5 | 19.0 | 20.5 |
| 18       | 9.0  | 8.0  | 8.5   | 13.0 | 10.5 | 12.0  | 20.5 | 17.5 | 19.0 | 20.0 | 18.5 | 19.0 |
| 19       | 8.5  | 7.5  | 8.5   | 13.5 | 10.5 | 12.0  | 20.5 | 18.5 | 19.5 | 20.0 | 18.5 | 19.5 |
| 20       | 9.0  | 7.0  | 8.0   | 14.0 | 11.5 | 12.5  | 21.0 | 18.5 | 19.5 | 20.0 | 19.0 | 19.5 |
| 21       | 10.5 | 8.0  | 9.5   | 14.0 | 12.5 | 13.0  | 21.5 | 19.0 | 20.0 | 22.0 | 19.5 | 20.5 |
| 22       | 12.5 | 10.5 | 11.0  | 13.0 | 12.0 | 12.5  | 21.5 | 19.5 | 20.5 | 22.0 | 20.5 | 21.0 |
| 23       | 14.0 | 12.0 | 13.0  | 14.0 | 12.5 | 13.0  | 21.0 | 19.5 | 20.0 | 20.5 | 18.5 | 20.0 |
| 24       | 14.0 | 14.0 | 14.0  | 14.0 | 12.5 | 13.5  | 20.5 | 19.0 | 19.5 | 20.5 | 18.0 | 19.0 |
| 25       | 14.0 | 12.5 | 13.0  | 14.5 | 12.0 | 13.0  | 20.5 | 18.5 | 19.5 | 21.0 | 19.0 | 20.0 |
| 26       | 13.0 | 12.5 | 12.5  | 15.0 | 12.0 | 13.5  | 21.0 | 18.5 | 19.5 | 21.5 | 19.5 | 20.5 |
| 27       | 13.0 | 12.0 | 12.5  | 14.5 | 13.5 | 14.0  | 20.5 | 19.0 | 19.5 | 22.5 | 20.5 | 21.5 |
| 28       | 12.0 | 10.0 | 11.0  | 17.5 | 14.0 | 15.5  | 19.5 | 18.5 | 19.0 | 22.5 | 21.5 | 22.0 |
| 29       | ---  | ---  | ---   | 17.0 | 16.0 | 16.5  | 20.5 | 18.5 | 19.5 | 23.5 | 21.5 | 22.5 |
| 30       | ---  | ---  | ---   | 18.5 | 16.5 | 17.5  | 20.5 | 18.5 | 19.5 | 24.0 | 22.0 | 23.0 |
| 31       | ---  | ---  | ---   | 18.0 | 16.5 | 17.5  | ---  | ---  | ---  | 24.0 | 23.0 | 23.5 |
| MONTH    | 14.0 | 2.5  | 8.0   | 18.5 | 10.5 | 13.5  | 21.5 | 12.0 | 17.5 | 24.0 | 17.0 | 20.5 |

## CUMBERLAND RIVER BASIN

125

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
|       | JUNE |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 25.5 | 22.5 | 23.5 | 23.5 | 22.0 | 22.5 | 26.5   | 26.0 | 26.0 | 26.5      | 25.5 | 26.0 |
| 2     | 26.0 | 24.0 | 25.0 | 23.5 | 21.5 | 22.0 | 27.0   | 26.0 | 26.5 | 27.0      | 25.5 | 26.0 |
| 3     | 27.0 | 24.5 | 25.5 | 25.0 | 22.5 | 23.0 | 27.0   | 26.0 | 26.5 | 27.0      | 25.5 | 26.0 |
| 4     | 27.0 | 25.5 | 26.5 | 24.5 | 23.5 | 24.0 | 26.5   | 25.5 | 26.0 | 26.5      | 25.5 | 26.0 |
| 5     | 27.0 | 25.5 | 26.5 | 24.5 | 23.0 | 24.0 | 25.5   | 24.5 | 25.0 | 26.5      | 26.0 | 26.0 |
| 6     | 27.0 | 25.5 | 26.0 | 24.5 | 22.5 | 23.5 | 25.5   | 24.5 | 24.5 | 27.0      | 26.0 | 26.0 |
| 7     | 25.5 | 24.0 | 25.0 | 24.0 | 22.5 | 23.5 | 25.0   | 24.5 | 24.5 | 27.5      | 26.5 | 27.0 |
| 8     | 24.5 | 23.5 | 24.0 | 24.5 | 23.0 | 23.5 | 26.5   | 24.5 | 25.0 | 28.0      | 27.0 | 27.5 |
| 9     | 26.0 | 23.5 | 24.0 | 25.0 | 23.0 | 24.0 | 27.5   | 26.0 | 26.5 | 28.0      | 27.0 | 27.5 |
| 10    | 26.0 | 24.5 | 25.5 | 25.5 | 24.0 | 24.5 | 28.0   | 26.5 | 27.0 | 27.5      | 27.0 | 27.0 |
| 11    | 26.5 | 25.0 | 25.5 | 25.5 | 24.0 | 24.5 | 28.5   | 27.5 | 27.5 | 27.0      | 26.0 | 26.5 |
| 12    | 25.5 | 23.5 | 24.0 | 25.5 | 24.5 | 25.0 | 29.5   | 28.0 | 28.5 | 26.5      | 25.0 | 25.5 |
| 13    | 23.0 | 22.0 | 22.5 | 25.5 | 24.5 | 25.0 | 29.5   | 28.0 | 28.5 | 25.0      | 23.5 | 24.5 |
| 14    | 22.5 | 20.5 | 21.5 | 26.5 | 24.5 | 25.5 | 30.0   | 28.5 | 29.0 | 23.5      | 22.0 | 22.5 |
| 15    | 22.5 | 21.0 | 21.5 | 27.0 | 26.0 | 26.5 | 29.0   | 28.0 | 28.5 | 22.0      | 20.5 | 21.5 |
| 16    | 24.0 | 22.0 | 22.5 | 26.5 | 25.5 | 26.0 | 28.5   | 26.0 | 27.5 | 21.5      | 20.0 | 21.0 |
| 17    | 24.5 | 23.5 | 23.5 | 26.0 | 25.0 | 25.5 | 25.5   | 24.5 | 25.0 | 23.0      | 20.5 | 21.5 |
| 18    | 24.0 | 22.0 | 23.5 | 26.0 | 25.0 | 25.5 | 26.5   | 24.5 | 25.0 | 22.5      | 21.0 | 21.5 |
| 19    | 23.5 | 21.5 | 22.5 | 27.0 | 25.5 | 26.0 | 26.5   | 25.0 | 26.0 | 22.5      | 21.0 | 22.0 |
| 20    | 22.5 | 20.5 | 21.5 | 27.5 | 26.0 | 26.5 | 26.5   | 25.5 | 26.0 | 23.0      | 21.0 | 22.0 |
| 21    | 23.5 | 21.0 | 22.0 | 27.5 | 26.5 | 27.5 | 26.5   | 25.5 | 26.0 | 23.5      | 21.5 | 22.5 |
| 22    | 23.5 | 21.5 | 22.5 | 28.0 | 27.0 | 27.5 | 26.0   | 24.5 | 25.0 | 24.0      | 21.5 | 22.5 |
| 23    | 24.0 | 22.0 | 22.5 | 27.5 | 26.5 | 27.0 | 25.5   | 24.0 | 24.5 | 23.0      | 22.5 | 22.5 |
| 24    | 26.0 | 23.0 | 24.0 | 27.5 | 26.5 | 27.0 | 24.0   | 24.0 | 24.0 | 22.5      | 21.5 | 22.0 |
| 25    | 25.5 | 24.0 | 24.5 | 26.5 | 26.0 | 26.0 | 24.0   | 23.5 | 23.5 | 22.5      | 20.5 | 21.5 |
| 26    | 25.5 | 23.0 | 24.0 | 26.5 | 25.5 | 26.0 | 25.0   | 23.5 | 24.0 | 21.5      | 21.0 | 21.0 |
| 27    | 25.5 | 24.0 | 24.5 | 25.5 | 25.0 | 25.5 | 26.0   | 24.0 | 24.5 | 21.0      | 20.0 | 20.5 |
| 28    | 25.5 | 23.5 | 24.0 | 26.5 | 24.5 | 25.5 | 26.0   | 24.0 | 25.0 | 20.0      | 18.5 | 19.0 |
| 29    | 24.0 | 23.0 | 23.5 | 26.0 | 25.5 | 26.0 | 26.0   | 25.0 | 25.5 | 20.0      | 19.0 | 19.5 |
| 30    | 23.5 | 22.5 | 23.0 | 26.5 | 25.5 | 26.0 | 26.5   | 25.5 | 26.0 | 20.0      | 19.5 | 19.5 |
| 31    | ---  | ---  | ---  | 26.5 | 26.0 | 26.0 | 27.0   | 25.5 | 26.0 | ---       | ---  | ---  |
| MONTH | 27.0 | 20.5 | 24.0 | 28.0 | 21.5 | 25.0 | 30.0   | 23.5 | 26.0 | 28.0      | 18.5 | 23.5 |

## CUMBERLAND RIVER BASIN

03431517 CUMMINGS BRANCH AT LICKTON, TN

LOCATION.--Lat 36°18'25", long 86°48'00", Davidson County, Hydrologic Unit 05130202, on right downstream wing-wall of bridge, on Shaw Road, 900 ft above confluence with Shaw Branch, 0.8 mi northeast of Lickton, and at mile 0.2.

DRAINAGE AREA.--2.40 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1975 to April 1985, August to September 1985.

GAGE.--Water-stage recorder, crest-stage gage, and V-notch wier. Datum of gage is 532.25 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 31 to Feb. 6, Apr. 28-30, Aug. 1-14, Sept. 1-30. Records good, except those below 1.0 ft<sup>3</sup>/s, which are fair, and for periods of estimated daily record, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--8 years (water years 1977-84), 3.35 ft<sup>3</sup>/s, 18.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 881 ft<sup>3</sup>/s Sept. 13, 1979; gage height, 5.21 ft; no flow many days, 1980, 1983, 1984.

EXTREMES FOR CURRENT YEAR.--October to April, August, September. Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Nov. 28 | 0510 | *310                           | *3.97            | No other peak greater than base discharge. |      |                                |                  |

Minimum daily discharge, .04 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR  | APR  | MAY | JUN | JUL | AUG   | SEP  |
|-------|-------|-------|-------|-------|-------|------|------|-----|-----|-----|-------|------|
| 1     | .06   | 3.1   | 6.1   | 6.0   | 9.0   | 3.1  | 2.7  |     |     |     | 1.1   | .19  |
| 2     | .05   | 4.9   | 4.9   | 5.1   | 7.0   | 2.8  | 2.5  |     |     |     | .30   | .14  |
| 3     | .05   | 4.2   | 4.1   | 4.9   | 6.0   | 2.6  | 2.4  |     |     |     | .18   | .11  |
| 4     | .05   | 3.3   | 3.4   | 5.7   | 5.0   | 2.5  | 2.4  |     |     |     | .15   | .09  |
| 5     | .04   | 2.6   | 3.0   | 5.6   | 8.5   | 2.4  | 2.3  |     |     |     | .32   | .08  |
| 6     | .04   | 2.2   | 2.9   | 5.1   | 6.5   | 2.3  | 2.3  |     |     |     | .90   | .08  |
| 7     | .07   | 1.7   | 2.6   | 4.7   | 5.9   | 2.1  | 2.0  |     |     |     | .50   | .08  |
| 8     | .16   | 1.4   | 2.5   | 4.2   | 5.1   | 2.3  | 1.8  |     |     |     | .30   | .07  |
| 9     | .12   | 1.1   | 2.4   | 3.6   | 4.7   | 3.2  | 1.7  |     |     |     | .20   | .07  |
| 10    | .09   | 8.6   | 2.3   | 3.3   | 4.5   | 3.1  | 1.6  |     |     |     | .13   | .07  |
| 11    | .07   | 7.1   | 2.1   | 2.9   | 23    | 3.2  | 1.6  |     |     |     | .11   | .07  |
| 12    | .06   | 4.8   | 2.0   | 2.6   | 18    | 4.4  | 1.6  |     |     |     | .10   | .06  |
| 13    | .06   | 3.7   | 1.9   | 2.4   | 9.4   | 3.9  | 1.5  |     |     |     | .09   | .07  |
| 14    | .06   | 2.9   | 1.8   | 2.4   | 8.4   | 3.5  | 1.5  |     |     |     | .08   | .06  |
| 15    | .06   | 4.9   | 1.6   | 2.3   | 4.2   | 3.1  | 2.0  |     |     |     | .07   | .06  |
| 16    | .06   | 4.9   | 1.6   | 2.0   | 3.3   | 2.7  | 2.2  |     |     |     | .61   | .06  |
| 17    | .30   | 4.2   | 1.4   | 2.3   | 3.9   | 2.6  | 2.0  |     |     |     | 1.9   | .06  |
| 18    | .19   | 21    | 1.5   | 2.4   | 4.1   | 2.5  | 1.8  |     |     |     | .90   | .06  |
| 19    | .15   | 21    | 1.9   | 2.4   | 3.0   | 2.4  | 1.6  |     |     |     | .46   | .06  |
| 20    | .17   | 11    | 2.1   | 2.4   | 3.7   | 2.2  | 1.6  |     |     |     | .37   | .06  |
| 21    | 2.2   | 7.2   | 5.8   | 2.3   | 4.4   | 2.3  | 1.5  |     |     |     | .34   | .06  |
| 22    | 2.0   | 5.3   | 8.9   | 2.2   | 4.2   | 3.2  | 1.3  |     |     |     | .29   | .06  |
| 23    | 12    | 4.4   | 6.9   | 2.1   | 4.0   | 3.7  | 1.3  |     |     |     | .28   | .07  |
| 24    | 6.1   | 3.8   | 8.5   | 2.0   | 4.5   | 3.9  | 1.5  |     |     |     | .37   | .07  |
| 25    | 3.6   | 3.1   | 11    | 2.2   | 4.3   | 3.5  | 1.6  |     |     |     | .40   | .30  |
| 26    | 2.5   | 2.6   | 8.5   | 2.1   | 4.0   | 3.1  | 1.4  |     |     |     | .34   | 2.0  |
| 27    | 1.8   | 9.3   | 6.6   | 2.0   | 3.6   | 3.0  | 1.8  |     |     |     | .28   | .70  |
| 28    | 31    | 25    | 5.4   | 2.0   | 3.3   | 3.0  | 2.5  |     |     |     | .24   | .45  |
| 29    | 8.8   | 12    | 4.6   | 2.0   | ---   | 2.8  | 1.6  |     |     |     | .21   | .30  |
| 30    | 5.1   | 8.3   | 5.0   | 2.7   | ---   | 2.6  | 1.3  |     |     |     | .22   | .20  |
| 31    | 3.5   | ---   | 6.2   | 13    | ---   | 2.8  | ---  |     |     |     | .29   | ---  |
| TOTAL | 80.51 | 199.6 | 129.5 | 106.9 | 175.5 | 90.8 | 54.9 |     |     |     | 12.03 | 5.81 |
| MEAN  | 2.60  | 6.65  | 4.18  | 3.45  | 6.27  | 2.93 | 1.83 |     |     |     | .39   | .19  |
| MAX   | 31    | 25    | 11    | 13    | 23    | 4.4  | 2.7  |     |     |     | 1.9   | 2.0  |
| MIN   | .04   | 1.1   | 1.4   | 2.0   | 3.0   | 2.1  | 1.3  |     |     |     | .07   | .06  |
| CFSM  | 1.08  | 2.77  | 1.74  | 1.44  | 2.61  | 1.22 | .76  |     |     |     | .16   | .08  |
| IN.   | 1.25  | 3.09  | 2.01  | 1.66  | 2.72  | 1.41 | .85  |     |     |     | .19   | .09  |

CAL YR 1984 TOTAL 1613.13 MEAN 4.41 MAX 152 MIN .04 CFSM 1.84 IN. 25.00

## CUMBERLAND RIVER BASIN

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03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN

LOCATION.--Lat 36°09'04", long 86°51'16", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of Charlotte Avenue bridge on U.S. Highway 70, 3.7 mi upstream from mouth and 4.0 mi southwest of the State Capitol in Nashville, and at mile 3.6.

DRAINAGE AREA.--24.3 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 409.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharge: Oct. 1-2, Jan. 19-24, Aug. 7-13, 18 to Sept. 30. Records good, except those below 5.0 ft<sup>3</sup>/s which are fair, and periods of no gage-height record Oct. 1-2, Aug. 7-13, 18 to Sept. 30, which are poor. Diversions above station used for irrigation of golf courses and water supply. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--21 years, 34.6 ft<sup>3</sup>/s, 19.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,470 ft<sup>3</sup>/s, Sept. 13, 1979, gage height, 15.13 ft; minimum, 0.05 ft<sup>3</sup>/s, Oct. 7-9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|------|------|--------------------------------|------------------|
| June 25 | 1655 | *786                           | *4.53            |      |      |                                |                  |

Minimum daily discharge, 1.1 ft<sup>3</sup>/s, July 16-22, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN  | FEB  | MAR  | APR   | MAY   | JUN   | JUL  | AUG   | SEP  |       |
|-------------|-------|---------|-------|------|------|------|-------|-------|-------|------|-------|------|-------|
| 1           | 2.4   | 27      | 45    | 32   | 80   | 27   | 23    | 38    | 3.6   | 3.7  | 8.3   | 2.1  |       |
| 2           | 2.4   | 52      | 37    | 27   | 57   | 24   | 20    | 64    | 3.2   | 2.1  | 2.4   | 2.0  |       |
| 3           | 2.1   | 30      | 31    | 33   | 45   | 21   | 18    | 32    | 2.9   | 2.0  | 1.7   | 1.9  |       |
| 4           | 2.4   | 22      | 26    | 43   | 39   | 22   | 16    | 23    | 2.7   | 1.7  | 1.5   | 1.8  |       |
| 5           | 2.1   | 17      | 26    | 35   | 56   | 21   | 30    | 19    | 2.6   | 2.0  | 3.3   | 1.7  |       |
| 6           | 3.0   | 13      | 27    | 31   | 72   | 18   | 23    | 15    | 2.6   | 4.3  | 2.8   | 1.6  |       |
| 7           | 5.8   | 11      | 22    | 27   | 55   | 17   | 18    | 13    | 5.3   | 1.6  | 5.5   | 1.6  |       |
| 8           | 8.8   | 9.7     | 21    | 23   | 45   | 23   | 15    | 12    | 3.4   | 1.5  | 3.5   | 1.5  |       |
| 9           | 3.9   | 8.5     | 19    | 21   | 40   | 38   | 14    | 10    | 2.9   | 1.3  | 3.1   | 1.5  |       |
| 10          | 3.0   | 66      | 18    | 22   | 43   | 28   | 13    | 9.0   | 2.5   | 1.4  | 3.6   | 1.5  |       |
| 11          | 2.9   | 41      | 15    | 19   | 246  | 25   | 12    | 8.8   | 3.0   | 3.3  | 2.2   | 1.4  |       |
| 12          | 2.9   | 27      | 14    | 16   | 141  | 24   | 11    | 7.9   | 4.7   | 1.6  | 2.0   | 1.4  |       |
| 13          | 2.7   | 20      | 13    | 15   | 90   | 21   | 10    | 6.9   | 3.0   | 1.3  | 1.8   | 1.4  |       |
| 14          | 2.5   | 17      | 12    | 14   | 70   | 22   | 12    | 6.2   | 2.7   | 1.2  | 1.6   | 1.3  |       |
| 15          | 2.5   | 58      | 10    | 13   | 55   | 20   | 20    | 6.0   | 2.6   | 1.2  | 1.5   | 1.3  |       |
| 16          | 3.2   | 39      | 9.6   | 15   | 46   | 18   | 13    | 5.3   | 2.5   | 1.1  | 2.2   | 1.3  |       |
| 17          | 10    | 28      | 9.2   | 25   | 40   | 18   | 11    | 5.2   | 5.5   | 1.1  | 23    | 1.2  |       |
| 18          | 3.7   | 219     | 10    | 20   | 41   | 16   | 9.6   | 5.2   | 9.9   | 1.1  | 7.0   | 1.2  |       |
| 19          | 12    | 181     | 10    | 17   | 44   | 14   | 8.5   | 4.9   | 4.8   | 1.1  | 5.3   | 1.2  |       |
| 20          | 7.6   | 83      | 28    | 16   | 38   | 13   | 8.0   | 4.3   | 3.1   | 1.1  | 4.6   | 1.2  |       |
| 21          | 76    | 55      | 69    | 15   | 33   | 21   | 7.8   | 4.0   | 2.5   | 1.1  | 3.8   | 1.2  |       |
| 22          | 42    | 42      | 60    | 14   | 30   | 31   | 7.1   | 23    | 5.3   | 1.1  | 3.5   | 1.2  |       |
| 23          | 195   | 33      | 43    | 13   | 30   | 31   | 6.6   | 8.7   | 6.7   | 1.2  | 3.0   | 1.3  |       |
| 24          | 70    | 26      | 53    | 13   | 67   | 34   | 27    | 6.6   | 3.2   | 1.1  | 5.0   | 2.0  |       |
| 25          | 39    | 22      | 50    | 19   | 44   | 28   | 9.8   | 5.6   | 70    | 1.1  | 9.0   | 3.5  |       |
| 26          | 26    | 19      | 40    | 16   | 39   | 24   | 7.3   | 4.9   | 16    | 5.7  | 5.0   | 20   |       |
| 27          | 19    | 162     | 34    | 15   | 34   | 24   | 56    | 4.8   | 6.1   | 6.6  | 3.0   | 7.5  |       |
| 28          | 31    | 211     | 29    | 16   | 29   | 21   | 34    | 11    | 7.3   | 2.0  | 2.5   | 4.5  |       |
| 29          | 24    | 85      | 25    | 14   | ---  | 19   | 22    | 5.6   | 4.7   | 2.7  | 2.1   | 2.8  |       |
| 30          | 19    | 60      | 32    | 31   | ---  | 17   | 17    | 4.4   | 4.0   | 1.5  | 2.0   | 2.4  |       |
| 31          | 15    | ---     | 33    | 189  | ---  | 35   | ---   | 3.9   | ---   | 1.2  | 2.3   | ---  |       |
| TOTAL       | 641.9 | 1684.2  | 870.8 | 819  | 1649 | 715  | 499.7 | 378.2 | 199.3 | 61.0 | 128.1 | 76.5 |       |
| MEAN        | 20.7  | 56.1    | 28.1  | 26.4 | 58.9 | 23.1 | 16.7  | 12.2  | 6.64  | 1.97 | 4.13  | 2.55 |       |
| MAX         | 195   | 219     | 69    | 189  | 246  | 38   | 56    | 64    | 70    | 6.6  | 23    | 20   |       |
| MIN         | 2.1   | 8.5     | 9.2   | 13   | 29   | 13   | 6.6   | 3.9   | 2.5   | 1.1  | 1.5   | 1.2  |       |
| CFSM        | .85   | 2.31    | 1.16  | 1.09 | 2.42 | .95  | .69   | .50   | .27   | .08  | .17   | .10  |       |
| IN.         | .98   | 2.58    | 1.33  | 1.25 | 2.52 | 1.09 | .76   | .58   | .31   | .09  | .20   | .12  |       |
| CAL YR 1984 | TOTAL | 13307.5 |       | MEAN | 36.4 | MAX  | 1060  | MIN   | 1.6   | CFSM | 1.50  | IN.  | 20.37 |
| WTR YR 1985 | TOTAL | 7722.7  |       | MEAN | 21.2 | MAX  | 246   | MIN   | 1.1   | CFSM | .87   | IN.  | 11.82 |



## CUMBERLAND RIVER BASIN

03431800 SYCAMORE CREEK NEAR ASHLAND CITY, TN

LOCATION.--Lat 36°19'12", long 87°03'04", Cheatham County, Hydrologic Unit 05130202, near right bank on downstream end of pier of bridge on State Highway 49, at Sycamore, 3.2 mi north of Ashland City, and 4.4 mi upstream from Spring Creek, and at mile 8.6.

DRAINAGE AREA.--97.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good, except for estimated daily discharges, Jan. 18-23, June 16 to July 19, which are fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--24 years, 144 ft<sup>3</sup>/s, 20.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s May 19, 1983, gage height, 13.24 ft; minimum, 7.5 ft<sup>3</sup>/s Sept. 15, 16, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 10 | 1100 | 3,540                             | 8.54                | Nov. 28 | 0345 | 3,520                             | 8.52                |
| Nov. 18 | 2200 | *3,970                            | *8.91               | Feb. 11 | 1915 | 3,730                             | 8.71                |

Minimum discharge, 15 ft<sup>3</sup>/s Sept. 14, 19-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 23    | 80    | 188  | 330  | 356  | 110  | 157  | 150  | 49   | 61   | 36   | 30    |
| 2           | 21    | 229   | 151  | 241  | 239  | 107  | 130  | 198  | 39   | 44   | 33   | 26    |
| 3           | 21    | 154   | 131  | 216  | 177  | 99   | 118  | 155  | 36   | 35   | 26   | 23    |
| 4           | 21    | 113   | 110  | 313  | 151  | 99   | 108  | 127  | 60   | 35   | 24   | 22    |
| 5           | 21    | 88    | 104  | 240  | 173  | 109  | 104  | 108  | 54   | 60   | 29   | 21    |
| 6           | 27    | 70    | 115  | 196  | 250  | 92   | 104  | 94   | 44   | 110  | 55   | 22    |
| 7           | 34    | 59    | 96   | 174  | 218  | 88   | 90   | 83   | 156  | 70   | 37   | 21    |
| 8           | 53    | 54    | 95   | 148  | 174  | 97   | 82   | 75   | 77   | 47   | 33   | 20    |
| 9           | 33    | 51    | 95   | 128  | 155  | 466  | 77   | 68   | 58   | 43   | 29   | 20    |
| 10          | 26    | 1280  | 94   | 125  | 151  | 275  | 73   | 63   | 48   | 39   | 26   | 20    |
| 11          | 24    | 433   | 87   | 117  | 1430 | 221  | 73   | 61   | 85   | 36   | 24   | 18    |
| 12          | 23    | 231   | 85   | 103  | 758  | 181  | 71   | 57   | 179  | 34   | 23   | 18    |
| 13          | 23    | 171   | 83   | 95   | 348  | 149  | 68   | 54   | 92   | 32   | 21   | 17    |
| 14          | 24    | 140   | 78   | 97   | 252  | 141  | 77   | 50   | 67   | 30   | 20   | 15    |
| 15          | 25    | 156   | 72   | 89   | 203  | 125  | 143  | 45   | 57   | 29   | 20   | 16    |
| 16          | 25    | 165   | 69   | 84   | 170  | 114  | 120  | 41   | 54   | 27   | 90   | 16    |
| 17          | 61    | 133   | 68   | 117  | 155  | 108  | 101  | 40   | 50   | 26   | 186  | 16    |
| 18          | 45    | 1400  | 78   | 115  | 150  | 98   | 88   | 40   | 46   | 25   | 66   | 16    |
| 19          | 40    | 1290  | 110  | 110  | 198  | 93   | 80   | 38   | 41   | 24   | 44   | 15    |
| 20          | 37    | 371   | 132  | 100  | 178  | 91   | 74   | 36   | 37   | 24   | 40   | 15    |
| 21          | 172   | 234   | 327  | 99   | 160  | 92   | 67   | 35   | 35   | 23   | 35   | 15    |
| 22          | 159   | 177   | 482  | 96   | 147  | 131  | 64   | 65   | 38   | 22   | 30   | 15    |
| 23          | 371   | 147   | 263  | 99   | 139  | 129  | 63   | 54   | 35   | 22   | 29   | 22    |
| 24          | 267   | 128   | 257  | 100  | 167  | 123  | 109  | 44   | 32   | 27   | 62   | 59    |
| 25          | 140   | 113   | 487  | 103  | 150  | 111  | 86   | 38   | 29   | 24   | 68   | 30    |
| 26          | 97    | 102   | 267  | 101  | 140  | 100  | 72   | 35   | 27   | 24   | 61   | 203   |
| 27          | 76    | 272   | 207  | 89   | 127  | 99   | 1010 | 35   | 25   | 119  | 40   | 55    |
| 28          | 139   | 1630  | 172  | 90   | 114  | 101  | 618  | 59   | 24   | 59   | 33   | 33    |
| 29          | 168   | 393   | 150  | 91   | ---  | 96   | 264  | 40   | 25   | 41   | 30   | 25    |
| 30          | 120   | 254   | 247  | 90   | ---  | 90   | 169  | 35   | 160  | 31   | 28   | 49    |
| 31          | 90    | ---   | 459  | 807  | ---  | 173  | ---  | 31   | ---  | 28   | 35   | ---   |
| TOTAL       | 2406  | 10118 | 5359 | 4903 | 7030 | 4108 | 4460 | 2054 | 1759 | 1251 | 1313 | 893   |
| MEAN        | 77.6  | 337   | 173  | 158  | 251  | 133  | 149  | 66.3 | 58.6 | 40.4 | 42.4 | 29.8  |
| MAX         | 371   | 1630  | 487  | 807  | 1430 | 466  | 1010 | 198  | 179  | 119  | 186  | 203   |
| MIN         | 21    | 51    | 68   | 84   | 114  | 88   | 63   | 31   | 24   | 22   | 20   | 15    |
| CFSM        | .80   | 3.47  | 1.78 | 1.63 | 2.58 | 1.37 | 1.53 | .68  | .60  | .42  | .44  | .31   |
| IN.         | .92   | 3.87  | 2.05 | 1.88 | 2.69 | 1.57 | 1.71 | .79  | .67  | .48  | .50  | .34   |
| CAL YR 1984 | TOTAL | 60980 | MEAN | 167  | MAX  | 3620 | MIN  | 16   | CFSM | 1.72 | IN.  | 23.34 |
| WTR YR 1985 | TOTAL | 45654 | MEAN | 125  | MAX  | 1630 | MIN  | 15   | CFSM | 1.29 | IN.  | 17.47 |

## CUMBERLAND RIVER BASIN

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03432350 HARPETH RIVER AT FRANKLIN, TN

LOCATION.--Lat 35°55'14", long 86°51'56", Williamson County, Hydrologic Unit 05130204, on left bank 15 ft downstream from left downstream end of State Highway 96 bridge, 0.4 mi southeast of the courthouse in Franklin, and at mile 88.1.

DRAINAGE AREA.--191 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 604.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except those for estimated daily discharges, Dec. 6-12, Jan. 11-16 and Aug. 17, 18, and those below 5.0 ft<sup>3</sup>/s, which are poor. The Franklin Utility District diverts part of its municipal water supply from the river above the gage. This water along with other water is returned to the river through the sewage treatment plant below the gage. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 316 ft<sup>3</sup>/s, 22.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft<sup>3</sup>/s Mar. 13, 1975, gage height, 33.65 ft; minimum daily, 0.30 ft<sup>3</sup>/s Oct. 14, 20, 22, 23, 26, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 19 | 1000 | 5,150                             | 19.45               | Feb. 11 | 2245 | 3,040                             | 14.52               |
| Nov. 28 | 1445 | *5,260                            | *19.64              |         |      |                                   |                     |

Minimum daily discharge, 1.4 ft<sup>3</sup>/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV       | DEC   | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL   | AUG   | SEP   |       |
|-------------|--------|-----------|-------|------|-------|------|-------|------|-------|-------|-------|-------|-------|
| 1           | 2.1    | 230       | 590   | 571  | 888   | 201  | 212   | 137  | 21    | 11    | 2.1   | 13    |       |
| 2           | 2.2    | 907       | 455   | 495  | 563   | 182  | 181   | 135  | 20    | 12    | 2.0   | 5.1   |       |
| 3           | 2.4    | 519       | 388   | 394  | 405   | 163  | 161   | 110  | 14    | 8.6   | 1.9   | 8.0   |       |
| 4           | 2.8    | 352       | 326   | 400  | 327   | 157  | 140   | 92   | 9.7   | 10    | 2.0   | 1.8   |       |
| 5           | 2.8    | 276       | 291   | 350  | 474   | 151  | 205   | 80   | 8.6   | 17    | 2.3   | 1.4   |       |
| 6           | 2.6    | 221       | 380   | 311  | 973   | 130  | 298   | 73   | 9.7   | 14    | 2.1   | 1.7   |       |
| 7           | 2.5    | 186       | 280   | 288  | 768   | 118  | 194   | 67   | 20    | 7.9   | 6.9   | 1.9   |       |
| 8           | 7.1    | 163       | 212   | 249  | 550   | 115  | 158   | 58   | 24    | 9.1   | 3.1   | 3.7   |       |
| 9           | 2.5    | 147       | 168   | 219  | 437   | 153  | 134   | 58   | 20    | 11    | 3.6   | 5.5   |       |
| 10          | 2.6    | 292       | 135   | 214  | 444   | 158  | 120   | 53   | 13    | 12    | 3.0   | 3.4   |       |
| 11          | 8.5    | 572       | 112   | 190  | 1400  | 143  | 111   | 45   | 13    | 5.2   | 4.6   | 6.3   |       |
| 12          | 7.6    | 332       | 92    | 200  | 1730  | 142  | 102   | 42   | 15    | 2.9   | 2.8   | 2.6   |       |
| 13          | 1.9    | 249       | 151   | 179  | 846   | 130  | 98    | 39   | 15    | 9.0   | 1.9   | 2.4   |       |
| 14          | 2.3    | 204       | 140   | 165  | 663   | 129  | 97    | 40   | 14    | 7.2   | 1.9   | 2.3   |       |
| 15          | 4.0    | 304       | 126   | 155  | 538   | 129  | 276   | 34   | 17    | 2.2   | 2.4   | 2.2   |       |
| 16          | 5.3    | 586       | 117   | 145  | 434   | 120  | 192   | 27   | 12    | 1.8   | 9.9   | 2.2   |       |
| 17          | 11     | 355       | 106   | 170  | 386   | 114  | 146   | 26   | 6.7   | 1.9   | 138   | 2.4   |       |
| 18          | 37     | 916       | 98    | 202  | 372   | 101  | 123   | 30   | 167   | 2.0   | 70    | 2.5   |       |
| 19          | 21     | 4150      | 95    | 177  | 404   | 92   | 110   | 29   | 82    | 1.9   | 30    | 2.2   |       |
| 20          | 14     | 1190      | 325   | 145  | 377   | 87   | 102   | 24   | 35    | 2.0   | 22    | 2.4   |       |
| 21          | 193    | 667       | 1040  | 125  | 312   | 89   | 93    | 19   | 23    | 2.2   | 16    | 3.2   |       |
| 22          | 211    | 486       | 1140  | 136  | 267   | 171  | 79    | 54   | 23    | 2.1   | 11    | 3.1   |       |
| 23          | 1190   | 389       | 698   | 120  | 241   | 264  | 70    | 43   | 22    | 2.1   | 7.4   | 6.1   |       |
| 24          | 1200   | 329       | 593   | 123  | 287   | 316  | 104   | 37   | 17    | 1.9   | 8.1   | 4.0   |       |
| 25          | 571    | 285       | 933   | 146  | 275   | 269  | 93    | 35   | 21    | 1.9   | 16    | 3.4   |       |
| 26          | 332    | 246       | 638   | 127  | 256   | 213  | 70    | 30   | 35    | 2.8   | 12    | 78    |       |
| 27          | 241    | 310       | 494   | 122  | 233   | 189  | 156   | 23   | 22    | 3.0   | 7.4   | 15    |       |
| 28          | 380    | 4350      | 399   | 124  | 213   | 185  | 506   | 28   | 20    | 2.7   | 5.2   | 6.9   |       |
| 29          | 580    | 1490      | 339   | 113  | ---   | 169  | 224   | 25   | 17    | 2.2   | 3.3   | 2.7   |       |
| 30          | 321    | 758       | 359   | 120  | ---   | 147  | 160   | 20   | 12    | 2.3   | 3.9   | 3.6   |       |
| 31          | 241    | ---       | 792   | 871  | ---   | 210  | ---   | 18   | ---   | 2.4   | 26    | ---   |       |
| TOTAL       | 5602.2 | 21461     | 12012 | 7346 | 15063 | 4937 | 4715  | 1531 | 748.7 | 174.3 | 430.8 | 199.0 |       |
| MEAN        | 181    | 715       | 387   | 237  | 538   | 159  | 157   | 49.4 | 25.0  | 5.62  | 13.9  | 6.63  |       |
| MAX         | 1200   | 4350      | 1140  | 871  | 1730  | 316  | 506   | 137  | 167   | 17    | 138   | 78    |       |
| MIN         | 1.9    | 147       | 92    | 113  | 213   | 87   | 70    | 18   | 6.7   | 1.8   | 1.9   | 1.4   |       |
| CPFSM       | .95    | 3.74      | 2.03  | 1.24 | 2.82  | .83  | .82   | .26  | .13   | .03   | .07   | .03   |       |
| IN.         | 1.09   | 4.18      | 2.34  | 1.43 | 2.93  | .96  | .92   | .30  | .15   | .03   | .08   | .04   |       |
| CAL YR 1984 | TOTAL  | 146082.41 |       | MEAN | 399   | MAX  | 10800 | MIN  | .65   | CPFSM | 2.09  | IN.   | 28.45 |
| WTR YR 1985 | TOTAL  | 74220.0   |       | MEAN | 203   | MAX  | 4350  | MIN  | 1.4   | CPFSM | 1.06  | IN.   | 14.46 |

## CUMBERLAND RIVER BASIN

03433500 HARPETH RIVER AT BELLEVUE, TN

LOCATION.--Lat 36°03'16", long 86°55'42", Davidson County, Hydrologic Unit 05130204, on right bank 45 ft upstream from bridge on State Highway 100, 0.1 mi downstream from Little Harpeth River, 0.9 mi southeast of Bellevue, and at mile 62.1.

DRAINAGE AREA.--408 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only November 1929 to December 1931, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area. WSP 1910: 1960.

GAGE.--Water-stage recorder. Datum of gage is 541.04 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, non-recording gage at site 2.8 mi downstream at datum 7.85 ft lower.

REMARKS.--Estimated daily discharges: Nov. 19. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--65 years, 585 ft<sup>3</sup>/s, 19.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft<sup>3</sup>/s Feb. 13, 1948, gage height, 24.34 ft from floodmark; no flow Oct. 5-10, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Nov. 28 | 1400 | *8,590                            | *13.27              | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 7.8 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL   | AUG  | SEP   |       |
|-------------|--------|----------|-------|-------|-------|-------|-------|------|------|-------|------|-------|-------|
| 1           | 8.6    | 430      | 1480  | 1400  | 2140  | 560   | 653   | 338  | 65   | 43    | 18   | 51    |       |
| 2           | 10     | 1380     | 1170  | 1170  | 1490  | 506   | 519   | 668  | 64   | 50    | 19   | 39    |       |
| 3           | 10     | 1330     | 986   | 979   | 1160  | 443   | 447   | 442  | 63   | 53    | 15   | 30    |       |
| 4           | 10     | 887      | 825   | 1050  | 1030  | 409   | 397   | 322  | 58   | 42    | 14   | 24    |       |
| 5           | 10     | 667      | 728   | 956   | 947   | 409   | 359   | 258  | 50   | 35    | 12   | 23    |       |
| 6           | 11     | 507      | 776   | 833   | 1940  | 363   | 778   | 212  | 45   | 43    | 11   | 17    |       |
| 7           | 12     | 409      | 701   | 762   | 1790  | 319   | 528   | 192  | 50   | 58    | 17   | 15    |       |
| 8           | 18     | 328      | 635   | 674   | 1370  | 302   | 420   | 177  | 87   | 42    | 28   | 14    |       |
| 9           | 43     | 281      | 587   | 573   | 1140  | 406   | 353   | 164  | 73   | 34    | 36   | 15    |       |
| 10          | 36     | 519      | 535   | 527   | 1080  | 447   | 309   | 155  | 63   | 31    | 27   | 29    |       |
| 11          | 27     | 1220     | 470   | 507   | 2850  | 409   | 282   | 144  | 58   | 31    | 21   | 43    |       |
| 12          | 20     | 856      | 428   | 447   | 4700  | 385   | 264   | 133  | 53   | 33    | 17   | 52    |       |
| 13          | 19     | 610      | 395   | 403   | 2290  | 363   | 247   | 124  | 76   | 28    | 15   | 30    |       |
| 14          | 29     | 482      | 340   | 365   | 1690  | 343   | 246   | 116  | 60   | 23    | 15   | 22    |       |
| 15          | 25     | 601      | 303   | 328   | 1370  | 336   | 421   | 109  | 52   | 23    | 13   | 18    |       |
| 16          | 21     | 1290     | 281   | 298   | 1140  | 311   | 533   | 99   | 48   | 22    | 43   | 16    |       |
| 17          | 44     | 924      | 266   | 410   | 993   | 292   | 375   | 88   | 46   | 17    | 610  | 14    |       |
| 18          | 140    | 1060     | 248   | 519   | 908   | 267   | 314   | 85   | 65   | 14    | 246  | 14    |       |
| 19          | 92     | 5500     | 236   | 481   | 923   | 238   | 273   | 84   | 192  | 14    | 110  | 13    |       |
| 20          | 82     | 3110     | 334   | 432   | 912   | 223   | 249   | 82   | 104  | 12    | 76   | 12    |       |
| 21          | 323    | 1620     | 1980  | 396   | 795   | 220   | 228   | 76   | 69   | 11    | 59   | 11    |       |
| 22          | 483    | 1180     | 2840  | 389   | 700   | 347   | 207   | 121  | 57   | 11    | 47   | 9.9   |       |
| 23          | 1120   | 930      | 1740  | 354   | 627   | 571   | 187   | 157  | 56   | 10    | 40   | 13    |       |
| 24          | 1590   | 764      | 1360  | 301   | 843   | 728   | 278   | 121  | 58   | 10    | 35   | 17    |       |
| 25          | 1270   | 639      | 1860  | 358   | 853   | 700   | 284   | 103  | 59   | 9.3   | 38   | 25    |       |
| 26          | 776    | 539      | 1510  | 351   | 776   | 563   | 207   | 91   | 62   | 9.3   | 55   | 53    |       |
| 27          | 530    | 956      | 1220  | 319   | 701   | 485   | 211   | 83   | 87   | 12    | 57   | 147   |       |
| 28          | 510    | 7380     | 1010  | 322   | 611   | 465   | 1050  | 83   | 61   | 20    | 40   | 62    |       |
| 29          | 1160   | 4050     | 857   | 306   | ---   | 426   | 585   | 87   | 54   | 22    | 32   | 42    |       |
| 30          | 757    | 1900     | 790   | 299   | ---   | 378   | 400   | 84   | 47   | 22    | 27   | 34    |       |
| 31          | 532    | ---      | 1570  | 1810  | ---   | 530   | ---   | 74   | ---  | 20    | 29   | ---   |       |
| TOTAL       | 9718.6 | 42349    | 28461 | 18319 | 37769 | 12744 | 11604 | 5072 | 1982 | 804.6 | 1822 | 904.9 |       |
| MEAN        | 314    | 1412     | 918   | 591   | 1349  | 411   | 387   | 164  | 66.1 | 26.0  | 58.8 | 30.2  |       |
| MAX         | 1590   | 7380     | 2840  | 1810  | 4700  | 728   | 1050  | 668  | 192  | 58    | 610  | 147   |       |
| MIN         | 8.6    | 281      | 236   | 298   | 611   | 220   | 187   | 74   | 45   | 9.3   | 11   | 9.9   |       |
| CFSM        | .77    | 3.46     | 2.25  | 1.45  | 3.31  | 1.01  | .95   | .40  | .16  | .06   | .14  | .07   |       |
| IN.         | .89    | 3.86     | 2.59  | 1.67  | 3.44  | 1.16  | 1.06  | .46  | .18  | .07   | .17  | .08   |       |
| CAL YR 1984 | TOTAL  | 323556.3 |       | MEAN  | 884   | MAX   | 22300 | MIN  | 8.6  | CFSM  | 2.17 | IN.   | 29.50 |
| WTR YR 1985 | TOTAL  | 171550.1 |       | MEAN  | 470   | MAX   | 7380  | MIN  | 8.6  | CFSM  | 1.15 | IN.   | 15.64 |

## CUMBERLAND RIVER BASIN

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03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

LOCATION.--Lat 36°07'19", long 87°05'56", Cheatham County, Hydrologic Unit 05130204, on right bank 400 ft upstream from bridge on U. S. Highway 70, 1.7 mi northeast of Kingston Springs, 3.0 mi downstream from Turnbull Creek, and at mile 32.4.

DRAINAGE AREA.--681 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1924 to current year. Prior to July 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M). WSP 1706: 1945(P). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 448.04 ft above National Geodetic Vertical Datum of 1929. July 8, 1925, to Jan. 22, 1939, nonrecording gage at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharge: Jan. 20-26. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--61 years, 987 ft<sup>3</sup>/s, 19.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,000 ft<sup>3</sup>/s Jan. 7, 1946, gage height, 32.20 ft from high-water mark in gage house; minimum, 12 ft<sup>3</sup>/s Sept. 18, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Jan. 7, 1946. Flood of March 1902 reached a stage about 3 ft lower than that of Jan. 7, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 10,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 28 | 2100 | *9,270                            | *12.18              |      |      |                                   |                     |

Minimum discharge, 65 ft<sup>3</sup>/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|------|------|-------|
| 1           | 69    | 690    | 2110  | 1920  | 3310  | 882   | 1050  | 644   | 201  | 149  | 99   | 107  |       |
| 2           | 67    | 2110   | 1650  | 1530  | 2330  | 822   | 892   | 1550  | 181  | 154  | 93   | 110  |       |
| 3           | 67    | 2120   | 1330  | 1310  | 1660  | 744   | 781   | 1100  | 174  | 143  | 88   | 103  |       |
| 4           | 67    | 1290   | 1100  | 1540  | 1300  | 695   | 707   | 775   | 166  | 139  | 81   | 94   |       |
| 5           | 69    | 964    | 960   | 1450  | 1310  | 725   | 657   | 619   | 161  | 131  | 80   | 85   |       |
| 6           | 79    | 764    | 985   | 1220  | 2310  | 652   | 952   | 532   | 155  | 164  | 96   | 86   |       |
| 7           | 101   | 633    | 927   | 1080  | 2490  | 598   | 862   | 473   | 262  | 158  | 171  | 84   |       |
| 8           | 153   | 554    | 844   | 962   | 1930  | 573   | 695   | 440   | 207  | 154  | 168  | 92   |       |
| 9           | 129   | 494    | 798   | 840   | 1550  | 771   | 617   | 400   | 211  | 129  | 113  | 100  |       |
| 10          | 100   | 923    | 747   | 778   | 1390  | 829   | 567   | 378   | 190  | 116  | 109  | 79   |       |
| 11          | 110   | 1580   | 674   | 738   | 3990  | 780   | 535   | 359   | 173  | 108  | 97   | 80   |       |
| 12          | 94    | 1340   | 620   | 663   | 7190  | 742   | 509   | 338   | 183  | 108  | 89   | 91   |       |
| 13          | 88    | 939    | 589   | 601   | 3720  | 680   | 489   | 314   | 163  | 105  | 85   | 112  |       |
| 14          | 84    | 751    | 546   | 576   | 2500  | 656   | 480   | 294   | 174  | 102  | 78   | 87   |       |
| 15          | 82    | 887    | 510   | 544   | 1980  | 631   | 580   | 276   | 157  | 95   | 75   | 79   |       |
| 16          | 87    | 1560   | 475   | 509   | 1620  | 599   | 786   | 259   | 147  | 91   | 95   | 76   |       |
| 17          | 219   | 1380   | 456   | 611   | 1380  | 572   | 628   | 241   | 146  | 89   | 404  | 76   |       |
| 18          | 174   | 1930   | 447   | 720   | 1230  | 542   | 551   | 231   | 200  | 84   | 617  | 76   |       |
| 19          | 238   | 7970   | 445   | 719   | 1300  | 510   | 502   | 223   | 208  | 80   | 292  | 75   |       |
| 20          | 224   | 5800   | 470   | 620   | 1260  | 486   | 465   | 218   | 278  | 78   | 238  | 74   |       |
| 21          | 600   | 2480   | 1850  | 600   | 1130  | 486   | 440   | 209   | 202  | 76   | 176  | 74   |       |
| 22          | 781   | 1720   | 4140  | 580   | 1010  | 711   | 411   | 328   | 172  | 76   | 141  | 74   |       |
| 23          | 2310  | 1310   | 2930  | 540   | 917   | 921   | 387   | 361   | 192  | 78   | 125  | 75   |       |
| 24          | 3700  | 1080   | 2030  | 500   | 1340  | 1130  | 653   | 308   | 165  | 92   | 122  | 93   |       |
| 25          | 1930  | 919    | 2240  | 550   | 1390  | 1110  | 610   | 263   | 156  | 77   | 129  | 87   |       |
| 26          | 1130  | 789    | 2280  | 580   | 1230  | 946   | 506   | 235   | 166  | 76   | 143  | 229  |       |
| 27          | 788   | 1030   | 1740  | 604   | 1090  | 843   | 697   | 218   | 168  | 88   | 138  | 170  |       |
| 28          | 1570  | 8440   | 1400  | 557   | 958   | 802   | 1140  | 236   | 193  | 92   | 131  | 205  |       |
| 29          | 1530  | 6560   | 1170  | 519   | ---   | 750   | 984   | 231   | 171  | 89   | 113  | 133  |       |
| 30          | 1230  | 2860   | 1040  | 523   | ---   | 684   | 688   | 219   | 149  | 103  | 102  | 125  |       |
| 31          | 856   | ---    | 1490  | 3340  | ---   | 863   | ---   | 201   | ---  | 133  | 119  | ---  |       |
| TOTAL       | 18726 | 61867  | 38993 | 27824 | 54815 | 22735 | 19821 | 12473 | 5471 | 3357 | 4607 | 3031 |       |
| MEAN        | 604   | 2062   | 1258  | 898   | 1958  | 733   | 661   | 402   | 182  | 108  | 149  | 101  |       |
| MAX         | 3700  | 8440   | 4140  | 3340  | 7190  | 1130  | 1140  | 1550  | 278  | 164  | 617  | 229  |       |
| MIN         | 67    | 494    | 445   | 500   | 917   | 486   | 387   | 201   | 146  | 76   | 75   | 74   |       |
| CFSM        | .89   | 3.03   | 1.85  | 1.32  | 2.88  | 1.08  | .97   | .59   | .27  | .16  | .22  | .15  |       |
| IN.         | 1.02  | 3.38   | 2.13  | 1.52  | 2.99  | 1.24  | 1.08  | .68   | .30  | .18  | .25  | .17  |       |
| CAL YR 1984 | TOTAL | 490452 |       | MEAN  | 1340  | MAX   | 30600 | MIN   | 67   | CFSM | 1.97 | IN.  | 26.79 |
| WTR YR 1985 | TOTAL | 273720 |       | MEAN  | 750   | MAX   | 8440  | MIN   | 67   | CFSM | 1.10 | IN.  | 14.95 |



## CUMBERLAND RIVER BASIN

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN

LOCATION.--Lat 36°19'26", long 87°13'32", Cheatham County, Hydrologic Unit 05130205, on downstream end of lower lock wall at Cheatham Dam, 2.0 mi southwest of Neptune, 3.0 mi upstream from Half Pone Creek, 9.7 mi west of Ashland City, and at mile 148.4.

DRAINAGE AREA.--14,163 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to current year.

REVISED RECORDS.--WSP 1726: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 5, 1966, at National Geodetic Vertical Datum. Auxiliary water-stage recorder 15.3 mi downstream from base gage at same datum. Prior to June 3, 1966, auxiliary water-stage recorder and non-recording gage on upper lock wall at former dam B, at site 8.1 mi downstream from base gage at datum 1.76 ft lower.

REMARKS.--Estimated daily discharges: July 9-17. Records good. Flow regulated by eight lakes or reservoirs above station (see p.137).

AVERAGE DISCHARGE.--31 years, 23,680 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204,000 ft<sup>3</sup>/s Mar. 15, 1975; maximum gage height, 48.39 ft Mar. 1, 1962; minimum daily discharge, 700 ft<sup>3</sup>/s Oct. 29, 1969; minimum gage height, 1.55 ft Nov. 26, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 53.5 ft; Jan. 25, 1937, from profile by Corps of Engineers, discharge, about 200,000 ft<sup>3</sup>/s on Jan. 24, 1937. Flood of Jan. 1, 1927, reached a stage of 51.7 ft, from profile, discharge about 205,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82,300 ft<sup>3</sup>/s on Nov. 19; maximum gage height, 26.62 ft on Nov. 20; minimum daily discharge, 2,070 ft<sup>3</sup>/s on Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC     | JAN    | FEB     | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|----------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 3540   | 12900    | 56200   | 26900  | 49700   | 27200  | 12100  | 6170   | 5810   | 4060   | 6890   | 17600  |
| 2           | 3030   | 13200    | 53200   | 31800  | 43700   | 25500  | 8900   | 9420   | 6630   | 3720   | 11400  | 11900  |
| 3           | 2560   | 14500    | 50000   | 37700  | 35000   | 14900  | 9230   | 12700  | 4540   | 7260   | 12800  | 7440   |
| 4           | 2070   | 13400    | 44500   | 36400  | 30700   | 13000  | 13600  | 7070   | 5150   | 10400  | 11400  | 11900  |
| 5           | 2200   | 16400    | 43000   | 41200  | 31700   | 21100  | 12800  | 4540   | 9880   | 12500  | 5960   | 13100  |
| 6           | 5050   | 17100    | 42900   | 43400  | 39500   | 17700  | 12000  | 5660   | 11200  | 10500  | 4490   | 11700  |
| 7           | 3140   | 11500    | 45600   | 33200  | 39900   | 14400  | 10500  | 5920   | 10400  | 7150   | 8270   | 13100  |
| 8           | 2210   | 11400    | 47400   | 31700  | 40100   | 18700  | 11900  | 6920   | 10500  | 5700   | 11300  | 15700  |
| 9           | 5110   | 11000    | 42800   | 34400  | 42900   | 25800  | 10400  | 8150   | 8650   | 6500   | 12300  | 12100  |
| 10          | 7720   | 20500    | 35400   | 41700  | 32800   | 29300  | 11200  | 7700   | 10100  | 7800   | 10900  | 6440   |
| 11          | 4930   | 26600    | 25400   | 41900  | 35400   | 15300  | 13600  | 7240   | 3480   | 11000  | 7750   | 4260   |
| 12          | 4460   | 23700    | 25900   | 40700  | 57900   | 9560   | 16200  | 4600   | 5700   | 12300  | 5750   | 4310   |
| 13          | 4100   | 12300    | 27100   | 38400  | 58800   | 16700  | 15800  | 3050   | 14700  | 9500   | 4200   | 6740   |
| 14          | 3230   | 11300    | 34400   | 30800  | 51400   | 22100  | 9740   | 3100   | 11300  | 9100   | 5070   | 6580   |
| 15          | 3200   | 12800    | 31800   | 31100  | 44000   | 24300  | 6540   | 4330   | 9160   | 4200   | 10700  | 5190   |
| 16          | 6890   | 11700    | 24900   | 28500  | 40100   | 24700  | 9220   | 5940   | 5550   | 3400   | 14700  | 5000   |
| 17          | 7950   | 14400    | 21600   | 31400  | 38100   | 11100  | 12500  | 7840   | 2770   | 4300   | 17700  | 4510   |
| 18          | 7360   | 19400    | 21000   | 37600  | 35400   | 8090   | 15300  | 6890   | 3510   | 6360   | 16400  | 4500   |
| 19          | 8810   | 69500    | 22800   | 35500  | 26400   | 6690   | 13000  | 5590   | 5760   | 12500  | 6000   | 7310   |
| 20          | 9600   | 76200    | 22600   | 35500  | 26600   | 8100   | 12900  | 4450   | 6940   | 17600  | 5620   | 9550   |
| 21          | 8550   | 58800    | 27600   | 34400  | 33900   | 15900  | 8410   | 6220   | 9610   | 9960   | 6710   | 12200  |
| 22          | 13000  | 45300    | 41100   | 33300  | 32000   | 19600  | 4380   | 2680   | 8030   | 6590   | 10400  | 9980   |
| 23          | 17400  | 27800    | 38700   | 39900  | 28100   | 17100  | 4700   | 4240   | 5430   | 11100  | 15700  | 4780   |
| 24          | 33500  | 34200    | 25500   | 35500  | 28900   | 14300  | 7720   | 8560   | 4550   | 8390   | 14700  | 4250   |
| 25          | 24900  | 34700    | 27100   | 30000  | 27000   | 13400  | 10200  | 7840   | 5890   | 9060   | 13800  | 4240   |
| 26          | 18200  | 35800    | 38600   | 27300  | 27000   | 13100  | 9720   | 4070   | 6030   | 14600  | 8260   | 7220   |
| 27          | 9720   | 29900    | 34600   | 17500  | 27800   | 15100  | 18300  | 2950   | 7390   | 5950   | 16800  | 10800  |
| 28          | 16100  | 64500    | 29700   | 9590   | 27700   | 18600  | 14300  | 4580   | 8210   | 9890   | 19100  | 11700  |
| 29          | 30500  | 77400    | 29800   | 12200  | ---     | 19200  | 11500  | 4530   | 8390   | 7060   | 19000  | 14600  |
| 30          | 22200  | 58500    | 28500   | 17700  | ---     | 16100  | 8420   | 7310   | 5770   | 6430   | 18700  | 5620   |
| 31          | 13600  | ---      | 26700   | 32400  | ---     | 13700  | ---    | 6240   | ---    | 8230   | 27700  | ---    |
| TOTAL       | 304830 | 886700   | 1066400 | 999590 | 1032500 | 530340 | 335080 | 186500 | 221030 | 263110 | 360470 | 264320 |
| MEAN        | 9833   | 29560    | 34400   | 32240  | 36880   | 17110  | 11170  | 6016   | 7368   | 8487   | 11630  | 8811   |
| MAX         | 33500  | 77400    | 56200   | 43400  | 58800   | 29300  | 18300  | 12700  | 14700  | 17600  | 27700  | 17600  |
| MIN         | 2070   | 11000    | 21000   | 9590   | 26400   | 6690   | 4380   | 2680   | 2770   | 3400   | 4200   | 4240   |
| CAL YR 1984 | TOTAL  | 10401240 |         | MEAN   | 28420   | MAX    | 181000 | MIN    | 2070   |        |        |        |
| WTR YR 1985 | TOTAL  | 6450870  |         | MEAN   | 17670   | MAX    | 77400  | MIN    | 2070   |        |        |        |

## CUMBERLAND RIVER BASIN

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03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN

LOCATION.--Lat 36°30'47", long 86°51'44", Robertson County, Hydrologic Unit 05130206, on left bank 150 ft downstream from new bridge on State Highway 49, 1.2 mi downstream from Beaver Dam Creek, 1.3 mi northeast of Springfield, and at mile 30.8.

DRAINAGE AREA.--65.6 mi<sup>2</sup>, includes 9.0 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder, and crest-stage gage. Datum of gage is 538.17 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Estimated daily discharges: Jan. 1-17, 20, 21, 24, 25. Records fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--10 years, 106 ft<sup>3</sup>/s, 21.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s Dec. 8, 1978, gage height, 14.14 ft; minimum, 2.4 ft<sup>3</sup>/s Oct. 1-4, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s, and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 10 | 0915 | 2,090                             | 8.94                | Nov. 28 | 0200 | 1,930                             | 8.54                |
| Nov. 18 | 1915 | 1,940                             | 8.57                | June 10 | 2315 | *2,680                            | *9.97               |

Minimum discharge, 5.1 ft<sup>3</sup>/s Aug. 11, 12, 13, 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN  | JUL   | AUG   | SEP   |       |
|-------------|--------|---------|------|------|------|------|------|-------|------|-------|-------|-------|-------|
| 1           | 7.3    | 70      | 169  | 280  | 243  | 76   | 84   | 37    | 69   | 16    | 6.6   | 14    |       |
| 2           | 7.5    | 129     | 141  | 200  | 176  | 72   | 72   | 46    | 17   | 13    | 6.7   | 11    |       |
| 3           | 7.2    | 101     | 118  | 180  | 134  | 60   | 65   | 36    | 14   | 10    | 6.1   | 9.7   |       |
| 4           | 7.1    | 86      | 99   | 260  | 115  | 62   | 58   | 30    | 12   | 9.7   | 5.7   | 9.6   |       |
| 5           | 7.1    | 73      | 92   | 205  | 133  | 73   | 53   | 27    | 12   | 9.6   | 5.9   | 8.8   |       |
| 6           | 7.5    | 57      | 95   | 170  | 185  | 52   | 54   | 23    | 12   | 12    | 8.6   | 9.4   |       |
| 7           | 9.3    | 45      | 81   | 150  | 159  | 47   | 41   | 22    | 38   | 11    | 7.4   | 9.6   |       |
| 8           | 20     | 39      | 79   | 130  | 128  | 60   | 35   | 20    | 16   | 9.6   | 6.7   | 9.2   |       |
| 9           | 12     | 37      | 77   | 115  | 115  | 308  | 31   | 18    | 12   | 8.7   | 6.0   | 9.0   |       |
| 10          | 8.2    | 816     | 76   | 100  | 112  | 181  | 29   | 16    | 315  | 8.6   | 5.7   | 8.7   |       |
| 11          | 8.1    | 348     | 72   | 96   | 709  | 155  | 29   | 16    | 383  | 8.3   | 5.2   | 8.7   |       |
| 12          | 8.7    | 196     | 67   | 88   | 553  | 125  | 27   | 15    | 197  | 7.5   | 5.1   | 8.7   |       |
| 13          | 9.7    | 133     | 62   | 80   | 286  | 104  | 26   | 15    | 99   | 7.5   | 5.1   | 8.7   |       |
| 14          | 10     | 99      | 52   | 82   | 202  | 98   | 25   | 14    | 72   | 7.3   | 5.1   | 8.7   |       |
| 15          | 11     | 104     | 45   | 75   | 163  | 86   | 58   | 13    | 50   | 7.1   | 5.1   | 8.7   |       |
| 16          | 13     | 100     | 43   | 70   | 136  | 78   | 48   | 11    | 38   | 6.8   | 9.3   | 8.7   |       |
| 17          | 30     | 81      | 41   | 88   | 124  | 74   | 36   | 12    | 30   | 6.7   | 23    | 8.8   |       |
| 18          | 18     | 812     | 50   | 82   | 119  | 62   | 30   | 12    | 28   | 6.7   | 9.6   | 9.1   |       |
| 19          | 15     | 806     | 88   | 78   | 150  | 55   | 27   | 12    | 23   | 6.6   | 7.3   | 9.0   |       |
| 20          | 13     | 339     | 102  | 64   | 133  | 50   | 26   | 11    | 21   | 6.0   | 7.7   | 8.7   |       |
| 21          | 100    | 230     | 321  | 60   | 120  | 49   | 23   | 11    | 18   | 5.8   | 8.1   | 8.7   |       |
| 22          | 91     | 181     | 394  | 54   | 111  | 83   | 23   | 18    | 16   | 5.9   | 7.9   | 8.7   |       |
| 23          | 220    | 152     | 217  | 50   | 103  | 76   | 20   | 17    | 19   | 7.1   | 8.1   | 11    |       |
| 24          | 159    | 123     | 287  | 50   | 109  | 70   | 29   | 13    | 16   | 6.4   | 18    | 22    |       |
| 25          | 95     | 109     | 401  | 49   | 97   | 57   | 23   | 10    | 14   | 6.1   | 36    | 13    |       |
| 26          | 74     | 99      | 228  | 46   | 91   | 48   | 20   | 9.9   | 15   | 6.7   | 20    | 85    |       |
| 27          | 58     | 264     | 182  | 47   | 83   | 48   | 60   | 10    | 13   | 9.9   | 13    | 22    |       |
| 28          | 121    | 1010    | 155  | 48   | 76   | 50   | 107  | 13    | 13   | 8.3   | 11    | 13    |       |
| 29          | 152    | 361     | 133  | 42   | ---  | 47   | 61   | 10    | 13   | 7.0   | 9.7   | 13    |       |
| 30          | 108    | 225     | 355  | 55   | ---  | 43   | 42   | 8.7   | 12   | 6.6   | 13    | 16    |       |
| 31          | 82     | ---     | 429  | 548  | ---  | 96   | ---  | 13    | ---  | 6.4   | 23    | ---   |       |
| TOTAL       | 1489.7 | 7225    | 4751 | 3642 | 4865 | 2545 | 1262 | 539.6 | 1607 | 254.9 | 315.7 | 399.2 |       |
| MEAN        | 48.1   | 241     | 153  | 117  | 174  | 82.1 | 42.1 | 17.4  | 53.6 | 8.22  | 10.2  | 13.3  |       |
| MAX         | 220    | 1010    | 429  | 548  | 709  | 308  | 107  | 46    | 383  | 16    | 36    | 85    |       |
| MIN         | 7.1    | 37      | 41   | 42   | 76   | 43   | 20   | 8.7   | 12   | 5.8   | 5.1   | 8.7   |       |
| CFSM        | .73    | 3.67    | 2.33 | 1.78 | 2.65 | 1.25 | .64  | .27   | .82  | .13   | .16   | .20   |       |
| IN.         | .84    | 4.10    | 2.69 | 2.07 | 2.76 | 1.44 | .72  | .31   | .91  | .14   | .18   | .23   |       |
| CAL YR 1984 | TOTAL  | 48474.3 |      | MEAN | 132  | MAX  | 3240 | MIN   | 7.1  | CFSM  | 2.01  | IN.   | 27.49 |
| WTR YR 1985 | TOTAL  | 28896.1 |      | MEAN | 79.2 | MAX  | 1010 | MIN   | 5.1  | CFSM  | 1.21  | IN.   | 16.39 |

## CUMBERLAND RIVER BASIN

03436000 SULPHUR FORK RED RIVER NEAR ADAMS, TN

LOCATION.--Lat 36°30'55", long 85°03'32", Robertson County, Hydrologic Unit 05130206, on left bank 600 ft downstream from county highway bridge, 2.8 mi downstream from Millers Creek, 4.1 mi southwest of Cedar Hill, 4.6 mi south of Adams, and at mile 10.2.

DRAINAGE AREA.--186 mi<sup>2</sup>, includes 21 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 424.36 ft Sandy Hook datum. Jan. 20, 1939, to Nov. 25, 1940, non-recording gage at site 600 ft upstream at same datum.

REMARKS.--Estimated daily discharge: Jan. 19-25. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--47 years, 252 ft<sup>3</sup>/s, 18.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft<sup>3</sup>/s Mar. 12, 1975, gage height, 30.86 ft, from floodmarks; minimum, 1.8 ft<sup>3</sup>/s Sept. 27, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1934 reached a stage of 25.1 ft, from floodmarks, discharge not determined. Flood in January 1937 reached a stage of about 22.6 ft, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 10 | 1315 | 3,770                             | 11.13               | Feb. 11 | 2145 | 3,600                             | 10.86               |
| Nov. 18 | 2345 | *4,580                            | *12.35              | June 11 | 0415 | 3,530                             | 10.76               |
| Nov. 28 | 0545 | 4,150                             | 11.71               |         |      |                                   |                     |

Minimum discharge, 15 ft<sup>3</sup>/s Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|-------|-------|-------|------|------|------|------|------|------|------|-------|
| 1           | 24    | 153    | 503   | 819   | 725   | 208  | 257  | 199  | 353  | 144  | 34   | 50   |       |
| 2           | 24    | 302    | 405   | 620   | 545   | 203  | 206  | 216  | 139  | 90   | 37   | 35   |       |
| 3           | 23    | 281    | 347   | 543   | 422   | 185  | 187  | 195  | 96   | 70   | 33   | 29   |       |
| 4           | 23    | 227    | 285   | 697   | 361   | 183  | 177  | 159  | 84   | 61   | 29   | 26   |       |
| 5           | 23    | 184    | 254   | 571   | 359   | 210  | 173  | 144  | 119  | 61   | 31   | 24   |       |
| 6           | 29    | 145    | 267   | 485   | 508   | 176  | 187  | 129  | 97   | 96   | 47   | 25   |       |
| 7           | 38    | 118    | 228   | 441   | 468   | 161  | 155  | 118  | 227  | 72   | 43   | 23   |       |
| 8           | 73    | 105    | 213   | 379   | 384   | 178  | 141  | 112  | 147  | 59   | 39   | 23   |       |
| 9           | 55    | 98     | 206   | 324   | 343   | 728  | 131  | 102  | 97   | 54   | 34   | 28   |       |
| 10          | 37    | 1750   | 202   | 310   | 324   | 553  | 124  | 96   | 223  | 52   | 30   | 23   |       |
| 11          | 34    | 910    | 187   | 292   | 1500  | 464  | 121  | 92   | 1520 | 49   | 27   | 21   |       |
| 12          | 34    | 529    | 181   | 246   | 1630  | 395  | 117  | 89   | 628  | 47   | 24   | 20   |       |
| 13          | 32    | 383    | 176   | 224   | 807   | 322  | 114  | 84   | 361  | 46   | 23   | 19   |       |
| 14          | 32    | 295    | 163   | 223   | 609   | 297  | 114  | 80   | 245  | 43   | 23   | 18   |       |
| 15          | 31    | 270    | 151   | 206   | 501   | 257  | 207  | 75   | 185  | 42   | 24   | 17   |       |
| 16          | 31    | 287    | 142   | 184   | 418   | 228  | 200  | 69   | 152  | 40   | 31   | 17   |       |
| 17          | 65    | 227    | 139   | 214   | 376   | 213  | 162  | 68   | 127  | 36   | 110  | 17   |       |
| 18          | 71    | 1590   | 149   | 222   | 353   | 192  | 141  | 67   | 113  | 35   | 66   | 17   |       |
| 19          | 57    | 2410   | 205   | 210   | 433   | 177  | 129  | 64   | 100  | 34   | 42   | 17   |       |
| 20          | 62    | 889    | 275   | 208   | 402   | 168  | 119  | 61   | 89   | 33   | 37   | 16   |       |
| 21          | 200   | 619    | 684   | 205   | 364   | 163  | 111  | 59   | 81   | 32   | 38   | 16   |       |
| 22          | 310   | 491    | 1070  | 200   | 334   | 205  | 104  | 84   | 80   | 31   | 33   | 16   |       |
| 23          | 508   | 407    | 633   | 190   | 311   | 212  | 99   | 99   | 84   | 31   | 33   | 17   |       |
| 24          | 504   | 336    | 587   | 185   | 317   | 190  | 119  | 76   | 74   | 31   | 58   | 38   |       |
| 25          | 301   | 289    | 962   | 186   | 287   | 173  | 111  | 66   | 68   | 31   | 190  | 39   |       |
| 26          | 213   | 250    | 619   | 146   | 262   | 157  | 96   | 60   | 64   | 32   | 82   | 224  |       |
| 27          | 160   | 404    | 512   | 146   | 239   | 152  | 272  | 57   | 66   | 47   | 55   | 99   |       |
| 28          | 158   | 2630   | 435   | 149   | 215   | 156  | 513  | 73   | 67   | 44   | 41   | 56   |       |
| 29          | 301   | 968    | 379   | 132   | ---   | 152  | 301  | 68   | 63   | 38   | 34   | 42   |       |
| 30          | 255   | 653    | 837   | 139   | ---   | 145  | 217  | 58   | 103  | 34   | 32   | 45   |       |
| 31          | 189   | ---    | 1190  | 1280  | ---   | 239  | ---  | 61   | ---  | 32   | 56   | ---  |       |
| TOTAL       | 3897  | 18200  | 12586 | 10376 | 13797 | 7442 | 5105 | 2980 | 5852 | 1547 | 1416 | 1057 |       |
| MEAN        | 126   | 607    | 406   | 335   | 493   | 240  | 170  | 96.1 | 195  | 49.9 | 45.7 | 35.2 |       |
| MAX         | 508   | 2630   | 1190  | 1280  | 1630  | 728  | 513  | 216  | 1520 | 144  | 190  | 224  |       |
| MIN         | 23    | 98     | 139   | 132   | 215   | 145  | 96   | 57   | 63   | 31   | 23   | 16   |       |
| CFSM        | .68   | 3.26   | 2.18  | 1.80  | 2.65  | 1.29 | .91  | .52  | 1.05 | .27  | .25  | .19  |       |
| IN.         | .78   | 3.64   | 2.52  | 2.08  | 2.76  | 1.49 | 1.02 | .60  | 1.17 | .31  | .28  | .21  |       |
| CAL YR 1984 | TOTAL | 125549 |       | MEAN  | 343   | MAX  | 7840 | MIN  | 23   | CFSM | 1.84 | IN.  | 25.11 |
| WTR YR 1985 | TOTAL | 84255  |       | MEAN  | 231   | MAX  | 2630 | MIN  | 16   | CFSM | 1.24 | IN.  | 16.85 |

## CUMBERLAND RIVER BASIN

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## 03436100 RED RIVER AT PORT ROYAL, TN

LOCATION.--Lat 36°33'17", long 87°08'31", Montgomery County, Hydrologic Unit 05130206, on left bank at county road bridge at Port Royal, 250 ft downstream from Sulphur Fork, and at mile 25.5.

DRAINAGE AREA.--935 mi<sup>2</sup> includes 437 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--July 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 376.25 ft above National Geodetic Vertical Datum of 1929. July 13, 1961, to Oct. 9, 1963, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--24 years, 1,361 ft<sup>3</sup>/s, 19.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft<sup>3</sup>/s Mar. 13, 1975, gage height, 48.26 ft; minimum, 54 ft<sup>3</sup>/s Sept. 17, 18, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 23, 1937, reached a stage of 44.4 ft; from flood profile of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Nov. 19 | 1645 | *12,900                           | *25.81              | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 98 ft<sup>3</sup>/s Aug. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1           | 129   | 655    | 3110  | 4960  | 4240  | 1350  | 1100  | 1190  | 960   | 609  | 153  | 612  |       |
| 2           | 123   | 799    | 2520  | 4610  | 2820  | 1300  | 990   | 1900  | 613   | 621  | 154  | 430  |       |
| 3           | 121   | 1040   | 2190  | 3590  | 2210  | 1210  | 865   | 1440  | 521   | 532  | 144  | 301  |       |
| 4           | 119   | 924    | 1880  | 4110  | 1860  | 1150  | 820   | 1170  | 723   | 396  | 136  | 237  |       |
| 5           | 117   | 775    | 1640  | 3820  | 1710  | 1160  | 789   | 996   | 581   | 360  | 142  | 206  |       |
| 6           | 127   | 666    | 1570  | 3120  | 1980  | 1140  | 820   | 881   | 566   | 441  | 166  | 190  |       |
| 7           | 148   | 585    | 1460  | 2790  | 2090  | 1030  | 808   | 802   | 914   | 613  | 221  | 180  |       |
| 8           | 224   | 522    | 1320  | 2470  | 1810  | 1010  | 728   | 750   | 1700  | 445  | 194  | 172  |       |
| 9           | 235   | 468    | 1250  | 2170  | 1610  | 2600  | 666   | 694   | 962   | 353  | 153  | 172  |       |
| 10          | 203   | 2510   | 1210  | 1990  | 1510  | 2900  | 623   | 639   | 854   | 314  | 135  | 172  |       |
| 11          | 176   | 5100   | 1150  | 1900  | 3190  | 2270  | 605   | 604   | 4780  | 286  | 125  | 153  |       |
| 12          | 157   | 2790   | 1070  | 1720  | 8360  | 2020  | 599   | 586   | 2660  | 265  | 114  | 141  |       |
| 13          | 142   | 1980   | 1030  | 1550  | 4880  | 1720  | 581   | 556   | 1800  | 248  | 108  | 133  |       |
| 14          | 135   | 1580   | 973   | 1490  | 3570  | 1560  | 570   | 521   | 1320  | 230  | 102  | 126  |       |
| 15          | 128   | 1380   | 888   | 1400  | 2920  | 1440  | 683   | 489   | 1060  | 214  | 102  | 123  |       |
| 16          | 122   | 1310   | 832   | 1270  | 2440  | 1300  | 810   | 452   | 907   | 205  | 131  | 118  |       |
| 17          | 141   | 1170   | 796   | 1260  | 2180  | 1210  | 771   | 422   | 787   | 195  | 272  | 116  |       |
| 18          | 318   | 2390   | 792   | 1290  | 2200  | 1130  | 670   | 410   | 712   | 181  | 276  | 114  |       |
| 19          | 314   | 11300  | 956   | 1240  | 2600  | 1040  | 612   | 398   | 641   | 176  | 216  | 113  |       |
| 20          | 232   | 7380   | 1430  | 1140  | 2750  | 982   | 584   | 385   | 587   | 168  | 176  | 109  |       |
| 21          | 330   | 4000   | 2980  | 967   | 2480  | 945   | 551   | 367   | 534   | 161  | 147  | 108  |       |
| 22          | 820   | 3080   | 5330  | 987   | 2290  | 982   | 520   | 420   | 487   | 158  | 130  | 106  |       |
| 23          | 1430  | 2550   | 3880  | 947   | 2120  | 1100  | 486   | 906   | 468   | 150  | 124  | 108  |       |
| 24          | 1890  | 2200   | 3260  | 917   | 2010  | 1030  | 530   | 945   | 424   | 148  | 215  | 131  |       |
| 25          | 1440  | 1920   | 5890  | 929   | 1880  | 956   | 535   | 624   | 396   | 148  | 610  | 164  |       |
| 26          | 1000  | 1700   | 4520  | 891   | 1710  | 880   | 527   | 510   | 390   | 156  | 554  | 629  |       |
| 27          | 789   | 1560   | 3490  | 837   | 1580  | 833   | 794   | 481   | 476   | 219  | 477  | 597  |       |
| 28          | 668   | 6360   | 2930  | 828   | 1440  | 823   | 1690  | 551   | 454   | 216  | 318  | 437  |       |
| 29          | 924   | 6940   | 2550  | 793   | ---   | 816   | 1260  | 465   | 411   | 206  | 254  | 278  |       |
| 30          | 1020  | 4050   | 3190  | 769   | ---   | 787   | 949   | 419   | 391   | 172  | 261  | 240  |       |
| 31          | 794   | ---    | 5810  | 3690  | ---   | 865   | ---   | 429   | ---   | 158  | 559  | ---  |       |
| TOTAL       | 14516 | 79684  | 71897 | 60445 | 72440 | 39539 | 22536 | 21402 | 28079 | 8744 | 6869 | 6716 |       |
| MEAN        | 468   | 2656   | 2319  | 1950  | 2587  | 1275  | 751   | 690   | 936   | 282  | 222  | 224  |       |
| MAX         | 1890  | 11300  | 5890  | 4960  | 8360  | 2900  | 1690  | 1900  | 4780  | 621  | 610  | 629  |       |
| MIN         | 117   | 468    | 792   | 769   | 1440  | 787   | 486   | 367   | 390   | 148  | 102  | 106  |       |
| CFSM        | .50   | 2.84   | 2.48  | 2.09  | 2.77  | 1.36  | .80   | .74   | 1.00  | .30  | .24  | .24  |       |
| IN.         | .58   | 3.17   | 2.86  | 2.40  | 2.88  | 1.57  | .90   | .85   | 1.12  | .35  | .27  | .27  |       |
| CAL YR 1984 | TOTAL | 691690 |       | MEAN  | 1890  | MAX   | 35600 | MIN   | 117   | CFSM | 2.02 | IN.  | 27.52 |
| WTR YR 1985 | TOTAL | 432867 |       | MEAN  | 1186  | MAX   | 11300 | MIN   | 102   | CFSM | 1.27 | IN.  | 17.22 |



## CUMBERLAND RIVER BASIN

03436690 YELLOW CREEK AT ELLIS MILLS, TN

LOCATION.--Lat 36°18'39", long 87°33'15", Houston County, Hydrologic Unit 05130205, on right bank at downstream end of bridge on county road, 0.3 mi northeast of Ellis Mills, 1.0 mi upstream from Leatherwood Creek, 1.0 mi downstream from Williamson Branch.

DRAINAGE AREA.--103 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 417 ft. above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U. S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--5 years, 163 ft<sup>3</sup>/s, 21.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft<sup>3</sup>/s May 6, 1984, gage height, 18.47 ft recorded; 18.95 ft, from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s on basis of regression formula and peak discharge at Station No. 03436700 Yellow Creek near Shiloh, TN; minimum, 12 ft<sup>3</sup>/s Sept. 9, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Nov. 18 | 2245 | *1,820                            | *8.22               | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 19 ft<sup>3</sup>/s Sept. 19, 20, 21, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 26    | 58    | 290  | 688  | 451  | 178  | 225  | 528  | 85   | 94   | 33   | 38    |
| 2           | 25    | 82    | 235  | 565  | 364  | 173  | 212  | 562  | 70   | 74   | 32   | 36    |
| 3           | 24    | 77    | 194  | 435  | 300  | 163  | 203  | 460  | 57   | 59   | 29   | 35    |
| 4           | 23    | 71    | 165  | 384  | 258  | 161  | 190  | 359  | 58   | 52   | 29   | 34    |
| 5           | 23    | 65    | 153  | 327  | 246  | 154  | 184  | 298  | 55   | 99   | 32   | 33    |
| 6           | 32    | 56    | 147  | 289  | 277  | 139  | 183  | 257  | 56   | 167  | 37   | 34    |
| 7           | 39    | 52    | 135  | 264  | 278  | 137  | 166  | 217  | 64   | 100  | 33   | 32    |
| 8           | 54    | 80    | 119  | 233  | 254  | 139  | 155  | 192  | 66   | 78   | 31   | 31    |
| 9           | 50    | 55    | 115  | 202  | 238  | 219  | 146  | 173  | 53   | 65   | 28   | 30    |
| 10          | 44    | 475   | 115  | 189  | 229  | 275  | 140  | 148  | 51   | 59   | 26   | 28    |
| 11          | 40    | 353   | 104  | 173  | 643  | 279  | 135  | 143  | 51   | 53   | 25   | 28    |
| 12          | 37    | 225   | 102  | 158  | 931  | 255  | 129  | 133  | 57   | 49   | 25   | 28    |
| 13          | 34    | 165   | 99   | 151  | 590  | 217  | 122  | 120  | 49   | 48   | 23   | 26    |
| 14          | 31    | 140   | 94   | 148  | 446  | 198  | 120  | 111  | 48   | 46   | 21   | 25    |
| 15          | 30    | 132   | 89   | 140  | 368  | 175  | 124  | 101  | 46   | 42   | 24   | 24    |
| 16          | 35    | 132   | 82   | 132  | 321  | 164  | 120  | 95   | 46   | 40   | 73   | 23    |
| 17          | 49    | 118   | 78   | 136  | 287  | 157  | 114  | 96   | 45   | 38   | 123  | 22    |
| 18          | 46    | 573   | 78   | 138  | 267  | 147  | 108  | 93   | 47   | 36   | 80   | 21    |
| 19          | 45    | 1110  | 80   | 138  | 332  | 138  | 105  | 86   | 45   | 36   | 61   | 19    |
| 20          | 45    | 526   | 83   | 130  | 347  | 131  | 101  | 79   | 43   | 35   | 90   | 20    |
| 21          | 55    | 351   | 170  | 119  | 324  | 128  | 98   | 76   | 42   | 33   | 87   | 19    |
| 22          | 73    | 276   | 353  | 115  | 294  | 150  | 95   | 109  | 48   | 31   | 68   | 19    |
| 23          | 108   | 221   | 324  | 114  | 268  | 176  | 93   | 101  | 48   | 32   | 57   | 24    |
| 24          | 152   | 181   | 303  | 115  | 260  | 190  | 119  | 86   | 43   | 31   | 57   | 30    |
| 25          | 108   | 163   | 397  | 116  | 238  | 192  | 121  | 77   | 40   | 30   | 54   | 28    |
| 26          | 86    | 149   | 367  | 112  | 221  | 177  | 116  | 76   | 38   | 37   | 52   | 99    |
| 27          | 71    | 162   | 318  | 109  | 204  | 175  | 485  | 70   | 38   | 53   | 48   | 58    |
| 28          | 65    | 693   | 274  | 110  | 182  | 176  | 588  | 67   | 37   | 44   | 44   | 43    |
| 29          | 59    | 494   | 236  | 105  | ---  | 169  | 390  | 70   | 38   | 38   | 42   | 36    |
| 30          | 53    | 362   | 304  | 106  | ---  | 159  | 312  | 61   | 196  | 35   | 40   | 38    |
| 31          | 51    | ---   | 555  | 428  | ---  | 188  | ---  | 64   | ---  | 33   | 40   | ---   |
| TOTAL       | 1613  | 7597  | 6158 | 6569 | 9418 | 5479 | 5399 | 5108 | 1660 | 1667 | 1444 | 961   |
| MEAN        | 52.0  | 253   | 199  | 212  | 336  | 177  | 180  | 165  | 55.3 | 53.8 | 46.6 | 32.0  |
| MAX         | 152   | 1110  | 555  | 688  | 931  | 279  | 588  | 562  | 196  | 167  | 123  | 99    |
| MIN         | 23    | 52    | 78   | 105  | 182  | 128  | 93   | 61   | 37   | 30   | 21   | 19    |
| CFSM        | .50   | 2.45  | 1.93 | 2.06 | 3.26 | 1.72 | 1.75 | 1.60 | .54  | .52  | .45  | .31   |
| IN.         | .58   | 2.74  | 2.22 | 2.37 | 3.40 | 1.98 | 1.95 | 1.84 | .60  | .60  | .52  | .35   |
| CAL YR 1984 | TOTAL | 71935 | MEAN | 197  | MAX  | 5240 | MIN  | 20   | CFSM | 1.91 | IN.  | 25.95 |
| WTR YR 1985 | TOTAL | 53073 | MEAN | 145  | MAX  | 1110 | MIN  | 19   | CFSM | 1.41 | IN.  | 19.14 |

## RESERVOIRS IN CUMBERLAND RIVER BASIN

03413500 LAKE CUMBERLAND.--Lat 36°52'09", long 85°08'45", Russel County, Hydrologic Unit 05130103, in pylon of Wolf Creek Dam on Cumberland River and 10 mi southwest of Jamestown, Ky. DRAINAGE AREA, 5,789 mi<sup>2</sup>. PERIOD OF RECORD, April 1950 to current year. Prior to October 1954, published as Wolf Creek Reservoir. April to June 1950, published in WSP 1726. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Dec. 6, 1950, nonrecording gage at same site at datum 545.0 ft higher.

REVISIONS.--WSP 1556: Drainage area.

REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 tainter gates, each 37 ft high by 50 ft wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft top of gates, is 3,070,000 cfs-days, of which 1,056,000 cfs-days above elevation 723.00 ft, crest of spillway, are reserved for flood control and 1,080,000 cfs-days between elevation 673.00 ft, minimum power pool, and 723.00 ft are used for power production. Figures given herein represent total contents, of which 934,000 cfs-days below elevation 673.00 ft is dead storage. Reservoir is used for flood control, power, navigation, and recreation.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,811,000 cfs-days, May 13, 1984, elevation, 751.70 ft; minimum, after first filling, 934,400 cfs-days, Jan. 1, 1956, elevation, 673.01 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,846,700 cfs-days, May 29, elevation, 716.26 ft; minimum, 1,358,900 cfs-days, Oct. 20, elevation, 694.74 ft.

03416500 DALE HOLLOW LAKE.--Lat 36°32'19", long 85°27'05", Clay County, Hydrologic Unit 05130105, at Dale Hollow Dam on Obey River, 3 mi east of Celina, and 7.3 mi upstream from mouth. DRAINAGE AREA, 936 mi<sup>2</sup>. PERIOD OF RECORD, August 1943 to current year. Prior to October 1965, published as Dale Hollow Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to June 25, 1946, nonrecording gage at same site and datum.

REVISIONS.--WSP 1306: 1944. WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with six tainter gates, each 12 ft high by 60 ft wide. Closure of dam was made Aug. 30, 1943; water in reservoir first reached minimum pool elevation May 7, 1944. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 663.00 ft, top of gates, is 859,800 cfs-days of which 177,500 cfs-days between elevations 663.00 ft and 651.00 ft, crest of spillway, are reserved for flood control, and 250,200 cfs-days between elevations 651.00 ft and 631.00 ft, ordinary minimum pool, are used for power production. Contents of 432,100 cfs-days below elevation 631.00 ft is dead storage. Reservoir is used for flood control, navigation, and power.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 828,600 cfs-days, Mar. 15, 1975, elevation, 660.98 ft; minimum, after first filling, 428,000 cfs-days, Sept. 11, 1944, elevation, 630.63 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 637,400 cfs-days, May 7, elevation, 647.73 ft; minimum, 502,000 cfs-days, Oct. 31, elevation, 637.08 ft.

03418400 CORDELL HULL RESERVOIR.--Lat 36°17'23", long 85°56'39", Smith County, Hydrologic Unit 05130108, at Cordell Hull Dam on Cumberland River, 2.7 mi north of Carthage, and at mile 313.5. DRAINAGE AREA, 8,095 mi<sup>2</sup>. PERIOD OF RECORD, October 1972 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with five tainter gates, each 41 ft high and 45 ft wide. Closure of dam was made Oct. 4, 1967; water in reservoir first reached ordinary minimum pool Mar. 13, 1973. Total capacity at elevation 508.0 ft, maximum surcharge pool, is 156,700 cfs-days, of which 53,400 cfs-days is controlled storage between elevations 508.0 ft and 499.0 ft, ordinary minimum pool. Contents of 5,000 cfs-days between elevation of 499.0 ft and 500.0 ft full winter pool, is available for power production. Contents of 48,400 cfs-days above 500.0 ft is available for flood control during the winter, and 26,100 cfs-days above 504.0 ft, full pool during spring to fall season, is available for flood control the rest of the year. Contents of 103,300 cfs-days below elevation 499.0 ft is dead storage. Reservoir is used for navigation, power, and flood control.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 156,700 cfs-days, Mar. 13, 1975, May 8, 1984, elevation, 508.00 ft; minimum, after first filling to ordinary minimum pool, 96,700 cfs-days, Apr. 18, 1974, elevation, 497.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 134,600 cfs-days, June 6, elevation, 504.65 ft; minimum, 102,800 cfs-days, Jan. 11, elevation, 498.90 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE          | 03413500 LAKE CUMBERLAND |                        |                                     | 03416500 DALE HOLLOW LAKE |                        |                                     | 03418400 CORDELL HULL RESERVOIR |                        |                                     |
|---------------|--------------------------|------------------------|-------------------------------------|---------------------------|------------------------|-------------------------------------|---------------------------------|------------------------|-------------------------------------|
|               | Elevation<br>(feet)      | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)       | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)             | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
| Sept. 30..... | 697.20                   | 1,411,200              | -                                   | 637.60                    | 508,200                | -                                   | 504.13                          | 131,400                | -                                   |
| Oct. 31.....  | 696.92                   | 1,405,200              | -6,000                              | 638.07                    | 513,900                | +5,700                              | 502.58                          | 122,300                | -9,100                              |
| Nov. 30.....  | 703.49                   | 1,509,000              | +103,800                            | 640.77                    | 547,000                | +33,100                             | 499.67                          | 106,600                | -15,700                             |
| Dec. 31.....  | 702.73                   | 1,532,100              | +23,100                             | 640.70                    | 546,200                | -800                                | 500.34                          | 110,100                | +3,500                              |
| CAL YR 1984   | -                        | -                      | +242,700                            | -                         | -                      | +23,300                             | -                               | -                      | +3,700                              |
| Jan. 31.....  | 697.38                   | 1,415,100              | -117,000                            | 640.66                    | 545,700                | -500                                | 500.83                          | 112,700                | +2,600                              |
| Feb. 28.....  | 711.28                   | 1,727,700              | +312,600                            | 643.93                    | 587,200                | +41,500                             | 499.17                          | 104,100                | -8,600                              |
| Mar. 31.....  | 712.92                   | 1,766,500              | +38,800                             | 646.18                    | 615,300                | +28,100                             | 499.55                          | 106,000                | +1,900                              |
| Apr. 30.....  | 714.54                   | 1,805,200              | +38,700                             | 646.60                    | 635,600                | +20,300                             | 504.17                          | 131,700                | +25,700                             |
| May 31.....   | 716.00                   | 1,840,400              | +35,200                             | 647.33                    | 632,000                | -3,600                              | 504.02                          | 130,800                | -900                                |
| June 30.....  | 714.12                   | 1,795,100              | -45,300                             | 645.97                    | 613,900                | -18,100                             | 503.90                          | 130,000                | -800                                |
| July 31.....  | 709.12                   | 1,677,200              | -117,900                            | 642.90                    | 573,900                | -40,000                             | 504.34                          | 132,700                | +2,700                              |
| Aug. 31.....  | 705.26                   | 1,588,800              | -88,400                             | 641.33                    | 554,000                | -19,900                             | 504.03                          | 130,800                | -1,900                              |
| Sept. 30..... | 699.53                   | 1,461,600              | -127,200                            | 639.52                    | 531,600                | -22,400                             | 503.62                          | 128,400                | -2,400                              |
| WTR YR 1985   | -                        | -                      | +50,400                             | -                         | -                      | +23,400                             | -                               | -                      | -3,000                              |

## CUMBERLAND RIVER BASIN

## RESERVOIRS IN CUMBERLAND RIVER BASIN--Continued

- 03422000 GREAT FALLS LAKE.--Lat 35°48'21", long 85°38'09", Warren County, Hydrologic Unit 05130108, at penstock inlet on Collins River, 700 ft southwest of powerhouse of Tennessee Valley Authority, 1.5 mi northwest of Rock Island, 1.8 mi upstream from mouth of Collins River, and 2.0 mi upstream from Great Falls Dam on Caney Fork. DRAINAGE AREA, 1,677 mi<sup>2</sup>. PERIOD OF RECORD, January 1917 to current year. GAGE, remote indicator gage. Datum of gage is National Geodetic Vertical Datum of 1929.
- REVISIONS.--WSP 2110: Drainage area.
- REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates, each 14 ft high by 25 ft wide. Closure of dam was made in 1916; dam redesigned and crest raised 35 ft in 1925. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 805.3 ft top of gates, is 25,900 cfs-days, of which 18,700 cfs-days are controlled storage above elevation 780.0 ft, normal minimum pool. Contents of 1,500 cfs-days below elevation 762.0 ft is dead storage. Reservoir is used primarily for power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum midnight elevation, 817.48 ft, Mar. 23, 1929, contents not determined; minimum midnight contents, 1,700 cfs-days, Aug. 19, 1918, elevation, 756.3 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,200 cfs-days, Feb. 2, elevation, 808.18 ft; minimum, 10,900 cfs-days, Mar. 22, elevation, 786.80 ft.
- 03424000 CENTER HILL LAKE.--Lat 36°05'48", long 85°49'38", DeKalb County, Hydrologic Unit 05130108, at Center Hill Dam on Caney Fork, 10 mi north of Smithville, 14 mi southeast of Carthage, and at mile 26.6. DRAINAGE AREA, 2,174 mi<sup>2</sup>. PERIOD OF RECORD, October 1948 to current year. Prior to October 1965, published as Center Hill Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Mar. 14, 1949, nonrecording gage at site 1,320 ft upstream at same datum.
- REVISIONS.--WSP 1910: Drainage area.
- REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam. Spillway is equipped with eight taintor gates, each 37 ft high by 50 ft wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 685.0 ft, top of gates, is 1,054,800 cfs-days, of which 384,500 cfs-days between 685.0 ft and 648.0 ft, crest of spillway, are reserved for flood control, and 248,000 cfs-days between elevations 648.0 ft and 618.0 ft, ordinary minimum pool, are used for power production. Contents of 422,300 cfs-days below 618.0 ft is dead storage. Reservoir is used for flood control, navigation, and power.
- COOPERATION.--Records furnished by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,014,600 cfs-days, May 10, 1984, elevation, 681.52 ft; minimum, after first filling, 171,000 cfs-days, Dec. 1, 2, 1949, elevation, 576.1 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 637,300 cfs-days, May 19, elevation, 644.36 ft; minimum, 505,300 cfs-days, Jan. 24, elevation, 628.80 ft.
- 03426300 OLD HICKORY LAKE.--Lat 36°17'50", long 86°39'20", Sumner County, Hydrologic Unit 05130201, at Old Hickory Dam on Cumberland River, 2.0 mi west of Hendersonville, 10 mi northeast of the State Capitol in Nashville, and at mile 216.2. DRAINAGE AREA, 11,673 mi<sup>2</sup>. PERIOD OF RECORD, June 1954 to current year. GAGE, water-stage recorder. Datum of gage is 408.5 ft National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Apr. 4, 1957, nonrecording gage at same site and datum.
- REVISIONS.--WSP 2110: Drainage area.
- REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, each 41 ft high and 45 ft wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 450.0 ft, maximum surcharge pool, 274,600 cfs-days of which 63,000 cfs-days between elevations 450.0 ft and 445.0 ft, normal pool, are induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days between elevations 445.0 ft and 442.0 ft, ordinary minimum pool, are used for power production. Contents of 179,800 cfs-days below elevation 442.0 ft, is dead storage. Reservoir is used for navigation and power.
- COOPERATION.--Records furnished by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 277,200 cfs-days, May 9, 1984, elevation, 450.18 ft; minimum, after first filling to ordinary minimum pool, 179,400 cfs-days, Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 226,900 cfs-days, Nov. 19, elevation, 446.31 ft; minimum, 185,700 cfs-days, Oct. 1, elevation, 442.59 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|
|               | 03422000            | GREAT FALLS LAKE       |                                     | 03424000            | CENTER HILL LAKE       |                                     | 03426300            | OLD HICKORY LAKE       |                                     |
| Sept. 30..... | 797.38              | 18,500                 | -                                   | 631.10              | 523,900                | -                                   | 442.77              | 187,600                | -                                   |
| Oct. 31.....  | 796.79              | 18,000                 | -500                                | 633.16              | 540,800                | +16,900                             | 444.72              | 208,400                | +20,800                             |
| Nov. 30.....  | 805.43              | 26,000                 | +8,000                              | 639.50              | 594,400                | +53,600                             | 444.01              | 200,600                | -7,800                              |
| Dec. 31.....  | 804.99              | 25,500                 | -500                                | 631.30              | 525,500                | -68,900                             | 444.90              | 210,500                | +9,900                              |
| CAL YR 1984   | -                   | -                      | -900                                | -                   | -                      | -82,600                             | -                   | -                      | +7,800                              |
| Jan. 31.....  | 790.35              | 13,200                 | -12,300                             | 629.65              | 512,100                | -13,400                             | 444.70              | 208,200                | -2,300                              |
| Feb. 28.....  | 805.17              | 25,700                 | +12,500                             | 636.25              | 566,600                | +54,500                             | 444.35              | 204,300                | -3,900                              |
| Mar. 31.....  | 790.46              | 13,300                 | -12,400                             | 639.78              | 596,900                | +30,300                             | 444.35              | 204,300                | 0                                   |
| Apr. 30.....  | 789.29              | 12,500                 | -800                                | 643.82              | 632,400                | +35,500                             | 444.41              | 205,000                | +700                                |
| May 31.....   | 788.66              | 12,100                 | -400                                | 643.60              | 630,500                | -1,900                              | 444.60              | 207,100                | +2,100                              |
| June 30.....  | 791.81              | 16,400                 | +4,300                              | 642.37              | 619,600                | -10,900                             | 444.49              | 205,900                | -1,200                              |
| July 31.....  | 796.23              | 17,600                 | +1,200                              | 638.55              | 586,200                | -33,400                             | 444.37              | 204,600                | -1,300                              |
| Aug. 31.....  | 797.80              | 18,900                 | +1,300                              | 636.43              | 568,100                | -18,100                             | 444.25              | 203,200                | -1,400                              |
| Sept. 30..... | 797.95              | 19,000                 | +100                                | 633.22              | 541,300                | -26,800                             | 444.27              | 203,500                | +300                                |
| WTR YR 1985   | -                   | -                      | +500                                | -                   | -                      | +17,400                             | -                   | -                      | +15,900                             |



## RESERVOIRS IN CUMBERLAND RIVER BASIN--Continued

03430050 J. PERCY PRIEST RESERVOIR.--Lat 36°09'23", long 86°37'07", Davidson County, Hydrologic Unit 05130203, on upstream face of J. Percy Priest Dam on Stones River, 2.6 mi east of Donelson, and 6.8 mi above mouth. DRAINAGE AREA, 892 mi<sup>2</sup>. PERIOD OF RECORD, September 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 15, 1967, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with four taintor gates, each 41 ft high by 45 ft wide. Closure of dam was made Sept. 18, 1967; water in reservoir first reached ordinary minimum pool May 15, 1968. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 504.5 ft, maximum controlled pool, is 328,700 cfs-days of which 193,600 cfs-days is controlled storage between elevations 504.5 ft and 480.0 ft, ordinary minimum pool. Contents of 17,200 cfs-days between elevations 480.0 ft and 483.0 ft, full winter pool, is available for power production. Contents of 176,400 cfs-days above 483.0 ft is available for flood control during the winter, and 131,100 cfs-days above 490.0 ft, full pool during spring-to-fall season, is available for flood control the rest of the year. Contents of 135,100 cfs-days below elevation 480.0 ft is dead storage. Reservoir is used for flood control, power, recreation, and wildlife.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 336,600 cfs-days, May 9, 1984, elevation, 505.18 ft; minimum, after first filling to ordinary minimum pool, 109,500 cfs-days, Dec. 5, 1968, elevation, 474.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 214,400 cfs-days, Nov. 29, elevation, 492.27 ft; minimum, 177,400 cfs-days, May 1, elevation, 487.06 ft.

03434900 CHEATHAM LAKE.--Lat 36°18'56", long 87°13'10", Cheatham County, Hydrologic Unit 05130202, at Cheatham Dam on Cumberland River, 9.4 mi west of Ashland City, 16 mi southeast of the courthouse in Clarksville, and at mile 148.7. DRAINAGE AREA, 14,159 mi<sup>2</sup>.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with seven semi-submersible taintor gates, each 27 ft high by 60 ft wide. Total capacity at elevation 385.0 ft, normal pool, is 52,200 cfs-days, of which 9,800 cfs-days are controlled storage. Records of contents not published herein.

03438210 LAKE BARKLEY.--Lat 37°01'17", long 88°13'16", Lyon County, Hydrologic Unit 05130205, in powerhouse of Barkley Dam on Cumberland River, 1.4 mi northeast of Grand Rivers, Ky., and at mile 30.6. DRAINAGE AREA, 17,598 mi<sup>2</sup>. PERIOD OF RECORD, July 1964 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). Prior to Jan. 1, 1966, nonrecording gage, 1,200 ft upstream from Barkley Dam at same datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with 12 taintor gates, each 50 ft high by 55 ft wide. Construction cofferdam was closed and limited storage began July 1, 1964; reservoir reached ordinary minimum pool elevation of 354.0 ft Feb. 16, 1966. Total level pool capacity at elevation 375.0 ft, top of gates, is 1,049,600 cfs-days, of which 742,000 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Contents of 130,500 cfs-days between ordinary minimum pool elevation, 354.0 ft, and full pool elevation, 359.0 ft, is available for power during the spring-to-fall season. Minimum pool elevation in advance of floods is 346.0 ft, contents 171,000 cfs-days. Reservoir is used for navigation, flood control, power, and recreation. Barkley-Kentucky Canal opened June 13, 1966, for navigation and power use. Canal is 1.75 mi long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see station 03438190, Kentucky reports.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 370.04 ft, May 13, 1984; minimum after reaching permanent pool elevation, 353.20 ft, Dec. 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 470,200 cfs-days, Apr. 28; maximum elevation, 360.08 ft, Apr. 28; minimum contents, 300,000 cfs-days, Dec. 6, minimum elevation, 353.66 ft. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet)           | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------|-------------------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|
|               | 03430050 J. PERCY PRIEST LAKE |                        |                                     |                     | 03438210 LAKE BARKLEY* |                                     |
| Sept. 30..... | 489.69                        | 195,400                | -                                   | 355.14              | 334,400                | -                                   |
| Oct. 31.....  | 490.23                        | 199,300                | +3,900                              | 355.20              | 335,800                | +1,400                              |
| Nov. 30.....  | 491.76                        | 210,600                | +11,300                             | 354.84              | 327,100                | -8,700                              |
| Dec. 31.....  | 482.64                        | 150,100                | -60,500                             | 355.36              | 339,800                | +12,700                             |
| CAL YR 1984   | -                             | -                      | +2,700                              | -                   | -                      | +8,800                              |
| Jan. 31.....  | 482.59                        | 149,800                | -300                                | 354.05              | 308,700                | -31,100                             |
| Feb. 28.....  | 481.88                        | 145,700                | -4,100                              | 354.40              | 316,800                | +8,100                              |
| Mar. 31.....  | 484.45                        | 161,000                | +15,300                             | 355.35              | 339,500                | +22,700                             |
| Apr. 30.....  | 487.06                        | 177,400                | +16,400                             | 359.60              | 455,700                | +116,200                            |
| May 31.....   | 487.63                        | 181,200                | +3,800                              | 359.20              | 443,900                | -11,800                             |
| June 30.....  | 488.02                        | 183,900                | +2,700                              | 359.18              | 443,300                | -600                                |
| July 31.....  | 488.28                        | 185,600                | +1,700                              | 358.27              | 417,100                | -26,200                             |
| Aug. 31.....  | 489.38                        | 193,200                | +7,600                              | 355.94              | 354,300                | -62,800                             |
| Sept. 30..... | 489.65                        | 195,100                | +1,900                              | 354.09              | 309,600                | -44,700                             |
| WTR YR 1985   | -                             | -                      | -300                                | -                   | -                      | -24,800                             |

\* Contents based on backwater profile.



## 03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Cocke County, Hydrologic Unit 06010105, on left bank, 200 ft upstream from bridge on U. S. Highway 411, 1.0 mi northeast of Newport city limits, 3.7 mi upstream from Pigeon River, and at mile 77.5.

DRAINAGE AREA.--1,858 mi<sup>2</sup>.

PERIOD OF RECORD.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to current year. Monthly discharge only October to November 1920, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M). WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1706: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,011.61 ft above National Geodetic Vertical Datum of 1929. See WSP 1910 for history of changes prior to Mar. 31, 1934.

REMARKS.--Estimated daily discharge: Jan. 22. Records good. Diurnal fluctuation during low flow caused by powerplants above station.

AVERAGE DISCHARGE.--67 years (water years 1904-05, 1921-85), 2,979 ft<sup>3</sup>/s, 21.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,300 ft<sup>3</sup>/s Aug. 30, 1940, gage height, 19.25 ft; minimum, 208 ft<sup>3</sup>/s Oct. 23, 1952, gage height, 0.97 ft; minimum daily, 240 ft<sup>3</sup>/s Sept. 9, 1925; minimum gage height, 0.91 ft Sept. 20, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--From reports of Tennessee Valley Authority, the flood of Mar. 7, 1867, gage height, 24 ft, present datum, discharge, estimated, 110,000 ft<sup>3</sup>/s, has not been exceeded since that date. From the same reports, other outstanding floods occurred Feb. 28, 1902, gage height, 23.0 ft present datum, discharge, estimated, 101,000 ft<sup>3</sup>/s; and July 17, 1916, gage height, 22.5 ft, present datum, discharge, estimated, 97,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 1 | 1800 | *13,800                           | *7.32               |      |      |                                   |                     |

Minimum discharge, 614 ft<sup>3</sup>/s July 23; minimum daily, 710 ft<sup>3</sup>/s July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|---------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 1130  | 1380    | 1920  | 1200  | 8200   | 2950  | 1720  | 1460  | 1200  | 1520  | 2760  | 1850  |       |
| 2           | 1200  | 1300    | 1640  | 1410  | 12100  | 2770  | 1660  | 1440  | 1180  | 1810  | 3050  | 1630  |       |
| 3           | 1170  | 1210    | 1560  | 1940  | 8730   | 2560  | 1560  | 1530  | 1450  | 1530  | 2290  | 1500  |       |
| 4           | 1100  | 1170    | 1640  | 3350  | 5320   | 2410  | 1560  | 1610  | 1440  | 1270  | 1810  | 1430  |       |
| 5           | 1060  | 1260    | 1800  | 3830  | 3810   | 2380  | 1460  | 1600  | 1260  | 1080  | 1500  | 1380  |       |
| 6           | 1050  | 1740    | 1820  | 3020  | 3710   | 2270  | 1890  | 1410  | 1260  | 1250  | 1420  | 1330  |       |
| 7           | 1030  | 1590    | 2540  | 2430  | 3740   | 2130  | 2520  | 1380  | 1520  | 1260  | 1300  | 1250  |       |
| 8           | 997   | 1360    | 2160  | 2120  | 3180   | 2050  | 2300  | 1350  | 2070  | 1160  | 1480  | 1340  |       |
| 9           | 1000  | 1280    | 1910  | 1920  | 2720   | 2240  | 1970  | 1380  | 1770  | 1090  | 1660  | 1400  |       |
| 10          | 1070  | 1230    | 1780  | 1770  | 2600   | 2220  | 1810  | 1680  | 1620  | 940   | 1560  | 1340  |       |
| 11          | 1110  | 1710    | 1680  | 1700  | 2460   | 2060  | 1710  | 1690  | 1390  | 1060  | 1390  | 1320  |       |
| 12          | 1080  | 2150    | 1750  | 1640  | 9980   | 1980  | 1660  | 1750  | 1380  | 1080  | 1210  | 1340  |       |
| 13          | 1040  | 1860    | 1390  | 1510  | 8610   | 2020  | 1630  | 2080  | 1370  | 863   | 1260  | 1240  |       |
| 14          | 998   | 1540    | 1580  | 1450  | 5650   | 1880  | 1570  | 3350  | 1200  | 874   | 1240  | 1190  |       |
| 15          | 988   | 1460    | 1410  | 1640  | 4140   | 1890  | 1660  | 2550  | 1120  | 1130  | 1250  | 1160  |       |
| 16          | 968   | 1460    | 1370  | 1530  | 3460   | 1800  | 3540  | 2210  | 1030  | 1180  | 1460  | 1100  |       |
| 17          | 977   | 1450    | 1250  | 1430  | 3200   | 1700  | 4430  | 2000  | 946   | 1010  | 2580  | 1080  |       |
| 18          | 991   | 1330    | 1320  | 1440  | 2920   | 1730  | 3480  | 2270  | 1050  | 983   | 8740  | 1010  |       |
| 19          | 1010  | 1330    | 1330  | 1520  | 2870   | 1650  | 2880  | 1980  | 1120  | 896   | 6880  | 1000  |       |
| 20          | 1090  | 1370    | 1360  | 1490  | 3200   | 1620  | 2530  | 1750  | 912   | 801   | 5500  | 962   |       |
| 21          | 1020  | 1380    | 1380  | 1030  | 3470   | 1600  | 2330  | 1620  | 932   | 710   | 3990  | 911   |       |
| 22          | 1050  | 1350    | 1380  | 763   | 3470   | 1600  | 2120  | 1520  | 882   | 738   | 2700  | 904   |       |
| 23          | 1190  | 1230    | 1520  | 784   | 3490   | 1860  | 1970  | 1510  | 787   | 905   | 2170  | 906   |       |
| 24          | 1460  | 1180    | 1480  | 1370  | 3320   | 2140  | 1900  | 1570  | 970   | 1190  | 1890  | 938   |       |
| 25          | 1470  | 1160    | 1380  | 1640  | 3120   | 2120  | 1920  | 1610  | 942   | 1260  | 1950  | 928   |       |
| 26          | 1480  | 1150    | 1360  | 1530  | 3420   | 1910  | 1870  | 1590  | 904   | 1770  | 2600  | 941   |       |
| 27          | 1280  | 1100    | 1330  | 1200  | 3740   | 1800  | 1670  | 1460  | 882   | 2220  | 2850  | 1000  |       |
| 28          | 1170  | 1520    | 1270  | 1250  | 3350   | 1760  | 1620  | 1370  | 799   | 2380  | 2680  | 986   |       |
| 29          | 1250  | 2900    | 1250  | 1340  | ---    | 1740  | 1660  | 1360  | 724   | 2280  | 2170  | 974   |       |
| 30          | 1450  | 2610    | 1240  | 1360  | ---    | 1690  | 1550  | 1330  | 961   | 2770  | 1930  | 884   |       |
| 31          | 1560  | ---     | 1230  | 1510  | ---    | 1650  | ---   | 1360  | ---   | 2370  | 2040  | ---   |       |
| TOTAL       | 35439 | 44760   | 48030 | 52117 | 127980 | 62180 | 62150 | 52770 | 35071 | 41380 | 77310 | 35224 |       |
| MEAN        | 1143  | 1492    | 1549  | 1681  | 4571   | 2006  | 2072  | 1702  | 1169  | 1335  | 2494  | 1174  |       |
| MAX         | 1560  | 2900    | 2540  | 3830  | 12100  | 2950  | 4430  | 3350  | 2070  | 2770  | 8740  | 1850  |       |
| MIN         | 968   | 1100    | 1230  | 763   | 2460   | 1600  | 1460  | 1330  | 724   | 710   | 1210  | 884   |       |
| CFSM        | .62   | .80     | .83   | .90   | 2.46   | 1.08  | 1.12  | .92   | .63   | .72   | 1.34  | .63   |       |
| IN.         | .71   | .90     | .96   | 1.04  | 2.56   | 1.24  | 1.24  | 1.06  | .70   | .83   | 1.55  | .71   |       |
| CAL YR 1984 | TOTAL | 1181389 |       | MEAN  | 3228   | MAX   | 31800 | MIN   | 968   | CFSM  | 1.74  | IN.   | 23.65 |
| WTR YR 1985 | TOTAL | 674411  |       | MEAN  | 1848   | MAX   | 12100 | MIN   | 710   | CFSM  | .99   | IN.   | 13.50 |

## TENNESSEE RIVER BASIN

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03461200 COSBY CREEK ABOVE COSBY, TN

LOCATION.--Lat 35°46'58", long 83°13'03", Cocke County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park on left retaining wall of creek, 400 ft downstream from Crying Creek, 600 ft upstream from bridge on State Highway 32, 3,600 ft upstream from Stillhouse Branch, 2.4 mi southeast of Cosby, and at mile 10.7.

DRAINAGE AREA.--10.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum, water years 1959-66 (1959-65 published as "near Cosby"); October 1966 to current year.

REVISED RECORD.--WDR TN-82-1: 1977-78(M)(P), 1979, 1980-81(M)(P).

GAGE.--Water-stage recorder and crest stage gage. Datum of gage is 1,644.07 ft above National Geodetic Vertical Datum of 1929. Oct. 15, 1958, to Sept. 30, 1966, crest-stage gage at site 600 ft downstream, at datum 1.08 ft lower (gage heights adjusted to present datum in WSP 2110). Oct. 1, 1966 to June 13, 1977, water-stage recorder at site 600 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 20-25. Records good.

AVERAGE DISCHARGE.--19 years, 27.9 ft<sup>3</sup>/s, 37.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 4.11 ft former site; about 17.1 ft present site; minimum, 1.4 ft<sup>3</sup>/s, Sept. 30, Oct. 1, 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 1 | 1100 | *1,190                            | *16.22              | Aug. 20 | 1900 | 425                               | 14.80               |

Minimum discharge, 3.1 ft<sup>3</sup>/s July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN   | FEB  | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|---------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 6.1   | 4.0     | 18    | 13    | 411  | 30   | 20    | 8.9   | 9.6   | 6.5   | 47    | 16    |       |
| 2           | 5.0   | 4.9     | 16    | 27    | 193  | 28   | 18    | 8.7   | 10    | 4.9   | 34    | 14    |       |
| 3           | 4.6   | 5.6     | 15    | 33    | 87   | 26   | 17    | 10    | 9.7   | 4.2   | 20    | 13    |       |
| 4           | 4.2   | 4.7     | 14    | 46    | 56   | 23   | 16    | 9.2   | 8.3   | 5.5   | 14    | 12    |       |
| 5           | 4.2   | 11      | 13    | 42    | 49   | 25   | 16    | 8.5   | 7.7   | 4.5   | 11    | 11    |       |
| 6           | 4.1   | 13      | 14    | 33    | 51   | 22   | 27    | 8.0   | 7.2   | 4.2   | 9.6   | 11    |       |
| 7           | 3.9   | 9.0     | 12    | 27    | 44   | 20   | 23    | 7.5   | 19    | 4.2   | 17    | 11    |       |
| 8           | 3.9   | 7.3     | 11    | 23    | 37   | 20   | 21    | 7.5   | 18    | 3.8   | 22    | 9.4   |       |
| 9           | 5.0   | 6.4     | 11    | 21    | 33   | 38   | 19    | 7.7   | 12    | 3.6   | 16    | 8.8   |       |
| 10          | 4.6   | 6.6     | 11    | 18    | 29   | 33   | 18    | 7.6   | 11    | 4.1   | 15    | 8.1   |       |
| 11          | 4.3   | 17      | 11    | 18    | 31   | 30   | 17    | 7.3   | 10    | 29    | 26    | 7.5   |       |
| 12          | 4.2   | 12      | 10    | 16    | 38   | 29   | 16    | 16    | 14    | 9.1   | 17    | 7.3   |       |
| 13          | 4.1   | 9.4     | 10    | 15    | 30   | 27   | 15    | 17    | 11    | 6.9   | 13    | 7.2   |       |
| 14          | 3.9   | 8.0     | 9.7   | 14    | 29   | 25   | 14    | 21    | 9.6   | 5.8   | 11    | 6.5   |       |
| 15          | 3.9   | 7.3     | 9.4   | 13    | 27   | 23   | 20    | 18    | 9.0   | 5.2   | 9.8   | 6.2   |       |
| 16          | 3.9   | 8.7     | 9.1   | 12    | 25   | 21   | 19    | 14    | 8.2   | 5.0   | 9.9   | 6.2   |       |
| 17          | 3.9   | 7.6     | 8.9   | 13    | 23   | 19   | 17    | 25    | 7.7   | 4.6   | 23    | 5.9   |       |
| 18          | 3.9   | 7.1     | 8.8   | 12    | 22   | 18   | 17    | 39    | 11    | 4.1   | 40    | 5.6   |       |
| 19          | 3.9   | 9.5     | 8.6   | 12    | 23   | 17   | 16    | 28    | 8.2   | 3.8   | 30    | 5.3   |       |
| 20          | 3.9   | 11      | 12    | 11    | 22   | 16   | 15    | 21    | 7.4   | 3.6   | 89    | 5.1   |       |
| 21          | 3.8   | 9.3     | 13    | 9.0   | 22   | 15   | 14    | 17    | 6.8   | 3.4   | 82    | 4.8   |       |
| 22          | 4.5   | 8.5     | 16    | 8.5   | 23   | 17   | 13    | 14    | 6.2   | 4.0   | 40    | 4.7   |       |
| 23          | 5.2   | 7.7     | 15    | 9.5   | 28   | 16   | 12    | 15    | 5.6   | 4.4   | 29    | 4.6   |       |
| 24          | 5.8   | 7.2     | 14    | 12    | 37   | 25   | 12    | 14    | 5.4   | 5.9   | 27    | 5.7   |       |
| 25          | 5.5   | 6.8     | 21    | 13    | 43   | 24   | 12    | 26    | 5.2   | 4.6   | 32    | 5.2   |       |
| 26          | 4.8   | 6.5     | 19    | 10    | 48   | 22   | 11    | 21    | 4.8   | 7.0   | 33    | 8.2   |       |
| 27          | 4.5   | 5.9     | 18    | 9.8   | 39   | 23   | 10    | 17    | 4.6   | 9.0   | 30    | 9.2   |       |
| 28          | 4.3   | 43      | 17    | 9.6   | 34   | 26   | 9.9   | 15    | 4.4   | 8.6   | 27    | 6.1   |       |
| 29          | 4.2   | 30      | 15    | 9.4   | ---  | 24   | 9.8   | 13    | 4.3   | 9.1   | 25    | 5.3   |       |
| 30          | 4.2   | 22      | 14    | 9.3   | ---  | 21   | 9.3   | 12    | 4.4   | 8.4   | 22    | 4.8   |       |
| 31          | 4.1   | ---     | 13    | 16    | ---  | 21   | ---   | 11    | ---   | 8.6   | 19    | ---   |       |
| TOTAL       | 136.4 | 317.0   | 407.5 | 535.1 | 1534 | 724  | 474.0 | 464.9 | 260.3 | 195.6 | 840.3 | 235.7 |       |
| MEAN        | 4.40  | 10.6    | 13.1  | 17.3  | 54.8 | 23.4 | 15.8  | 15.0  | 8.68  | 6.31  | 27.1  | 7.86  |       |
| MAX         | 6.1   | 43      | 21    | 46    | 411  | 38   | 27    | 39    | 19    | 29    | 89    | 16    |       |
| MIN         | 3.8   | 4.0     | 8.6   | 8.5   | 22   | 15   | 9.3   | 7.3   | 4.3   | 3.4   | 9.6   | 4.6   |       |
| CFSM        | .44   | 1.05    | 1.30  | 1.71  | 5.43 | 2.32 | 1.56  | 1.49  | .86   | .62   | 2.68  | .78   |       |
| IN.         | .50   | 1.17    | 1.50  | 1.97  | 5.65 | 2.67 | 1.75  | 1.71  | .96   | .72   | 3.09  | .87   |       |
| CAL YR 1984 | TOTAL | 10979.4 |       | MEAN  | 30.0 | MAX  | 543   | MIN   | 3.8   | CFSM  | 2.97  | IN.   | 40.44 |
| WTR YR 1985 | TOTAL | 6124.8  |       | MEAN  | 16.8 | MAX  | 411   | MIN   | 3.4   | CFSM  | 1.66  | IN.   | 22.56 |

## TENNESSEE RIVER BASIN

03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, Hydrologic Unit 06010108, on left bank, at Embreeville, 1,000 ft upstream from bridge on State Highway 81, 3 mi northwest of Erwin, 5.2 mi downstream from North Indian Creek, and at mile 89.0.

DRAINAGE AREA.--805 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to current year. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 1,519.30 ft above National Geodetic Vertical Datum of 1929. Sept. 1, 1900 to May 21, 1901, nonrecording gage at site 3 mi downstream at different datum, destroyed by flood of May 21, 1901. July 1, 1920 to Sept. 30, 1931, nonrecording gage at bridge 2,000 ft downstream at datum 6.33 ft lower.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--66 years (water years 1920-85), 1,366 ft<sup>3</sup>/s, 23.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft<sup>3</sup>/s, Nov. 6, 1977, gage height, 21.52 ft, from rating curve extended above 48,000 ft<sup>3</sup>/s on basis of contracted-opening and slope-area measurements of peak flow; minimum, 85 ft<sup>3</sup>/s, Sept. 8, 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of 24 ft, discharge, 120,000 ft<sup>3</sup>/s, present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft<sup>3</sup>/s, and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) | Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) |
|--------|------|--------------------------------|------------------|---------|------|--------------------------------|------------------|
| Feb. 1 | 1930 | *10,000                        | *5.16            | Aug. 18 | 0300 | 9,860                          | 5.12             |

Minimum discharge, 133 ft<sup>3</sup>/s Jan. 22, (result of freeze-up).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 374   | 374    | 832   | 499   | 5560  | 1560  | 914   | 1120  | 659   | 835   | 1720  | 765   |       |
| 2           | 429   | 360    | 711   | 691   | 7320  | 1400  | 856   | 994   | 728   | 937   | 1920  | 682   |       |
| 3           | 374   | 353    | 681   | 1260  | 4320  | 1240  | 735   | 1040  | 1440  | 805   | 1330  | 639   |       |
| 4           | 335   | 342    | 660   | 2030  | 2510  | 1110  | 705   | 915   | 1170  | 670   | 1010  | 601   |       |
| 5           | 318   | 480    | 602   | 1960  | 1870  | 1080  | 682   | 805   | 859   | 620   | 821   | 587   |       |
| 6           | 307   | 624    | 814   | 1370  | 1980  | 1060  | 1320  | 739   | 1150  | 657   | 706   | 568   |       |
| 7           | 299   | 486    | 859   | 1110  | 1780  | 925   | 1380  | 697   | 1170  | 595   | 691   | 545   |       |
| 8           | 308   | 417    | 675   | 962   | 1330  | 873   | 1090  | 674   | 1730  | 538   | 714   | 519   |       |
| 9           | 328   | 385    | 702   | 842   | 1080  | 1050  | 1010  | 670   | 1240  | 481   | 870   | 542   |       |
| 10          | 353   | 382    | 683   | 763   | 1130  | 1100  | 936   | 660   | 1060  | 452   | 849   | 571   |       |
| 11          | 356   | 925    | 650   | 737   | 1070  | 950   | 871   | 653   | 1860  | 475   | 666   | 540   |       |
| 12          | 339   | 1050   | 624   | 681   | 4510  | 921   | 823   | 722   | 1550  | 446   | 589   | 468   |       |
| 13          | 315   | 608    | 587   | 555   | 2850  | 917   | 771   | 1050  | 1250  | 448   | 551   | 442   |       |
| 14          | 307   | 495    | 558   | 552   | 1860  | 850   | 751   | 1120  | 997   | 465   | 639   | 437   |       |
| 15          | 304   | 448    | 536   | 647   | 1520  | 811   | 934   | 951   | 841   | 453   | 646   | 411   |       |
| 16          | 304   | 436    | 520   | 490   | 1250  | 751   | 3050  | 2850  | 759   | 682   | 1320  | 396   |       |
| 17          | 302   | 425    | 504   | 587   | 1170  | 724   | 1910  | 2200  | 705   | 556   | 3000  | 384   |       |
| 18          | 306   | 399    | 492   | 628   | 1020  | 704   | 1470  | 2490  | 738   | 474   | 6690  | 372   |       |
| 19          | 312   | 451    | 480   | 605   | 997   | 671   | 1260  | 1990  | 686   | 418   | 2900  | 364   |       |
| 20          | 320   | 559    | 520   | 531   | 1150  | 653   | 1130  | 1470  | 629   | 383   | 1860  | 354   |       |
| 21          | 313   | 508    | 600   | 209   | 1230  | 640   | 1040  | 1200  | 587   | 364   | 1410  | 343   |       |
| 22          | 374   | 425    | 649   | 198   | 1290  | 657   | 949   | 1050  | 554   | 362   | 1130  | 339   |       |
| 23          | 435   | 399    | 711   | 412   | 1490  | 941   | 869   | 1100  | 538   | 569   | 952   | 337   |       |
| 24          | 427   | 393    | 642   | 723   | 1740  | 993   | 835   | 1120  | 527   | 665   | 873   | 371   |       |
| 25          | 430   | 388    | 639   | 610   | 1920  | 1050  | 1010  | 1090  | 516   | 951   | 906   | 400   |       |
| 26          | 515   | 384    | 639   | 563   | 2460  | 908   | 885   | 971   | 498   | 2100  | 915   | 383   |       |
| 27          | 411   | 377    | 603   | 544   | 2240  | 831   | 779   | 860   | 467   | 1550  | 1740  | 463   |       |
| 28          | 369   | 1490   | 571   | 542   | 1850  | 810   | 1590  | 781   | 436   | 2080  | 1680  | 439   |       |
| 29          | 500   | 2440   | 548   | 524   | ---   | 811   | 2410  | 760   | 452   | 1410  | 1170  | 377   |       |
| 30          | 506   | 1090   | 531   | 560   | ---   | 800   | 1470  | 737   | 596   | 1280  | 959   | 338   |       |
| 31          | 431   | ---    | 518   | 612   | ---   | 764   | ---   | 688   | ---   | 1310  | 891   | ---   |       |
| TOTAL       | 11301 | 17893  | 19341 | 22997 | 60497 | 28555 | 34435 | 34167 | 26392 | 24031 | 42118 | 13977 |       |
| MEAN        | 365   | 596    | 624   | 742   | 2161  | 921   | 1148  | 1102  | 880   | 775   | 1359  | 466   |       |
| MAX         | 515   | 2440   | 859   | 2030  | 7320  | 1560  | 3050  | 2850  | 1860  | 2100  | 6690  | 765   |       |
| MIN         | 299   | 342    | 480   | 198   | 997   | 640   | 682   | 653   | 436   | 362   | 551   | 337   |       |
| CFSM        | .45   | .74    | .78   | .92   | 2.68  | 1.14  | 1.43  | 1.37  | 1.09  | .96   | 1.69  | .58   |       |
| IN.         | .52   | .83    | .89   | 1.06  | 2.80  | 1.32  | 1.59  | 1.58  | 1.22  | 1.11  | 1.95  | .65   |       |
| CAL YR 1984 | TOTAL | 502870 |       | MEAN  | 1374  | MAX   | 19600 | MIN   | 277   | CFSM  | 1.71  | IN.   | 23.24 |
| WTR YR 1985 | TOTAL | 335704 |       | MEAN  | 920   | MAX   | 7320  | MIN   | 198   | CFSM  | 1.14  | IN.   | 15.51 |

## TENNESSEE RIVER BASIN

143

03466228 SINKING CREEK AT AFTON, TN

LOCATION.--Lat 36°11'55", long 82°44'31", Greene County, Hydrologic Unit 06010108, on left bank 300 ft upstream from bridge on county road, 0.4 mi northwest of Afton, and at mile 3.1.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,459.36 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--8 years, 13.2 ft<sup>3</sup>/s, 13.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft<sup>3</sup>/s July 21, 1979, gage height, 7.79 ft from rating curve extended above 100 ft<sup>3</sup>/s on basis of area-velocity study; minimum, 1.7 ft<sup>3</sup>/s several days in December 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                      | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---|------|-----------------------------------|---------------------|---|------|-----------------------------------|---------------------|
| Feb. 1  | 1400 | *363                              | *4.16               | No other peak greater than base discharge |      |                                   |                     |
| Minimum discharge, 3.0 ft <sup>3</sup> /s Sept. 22. |      |                                   |                     |   |      |                                   |                     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB  | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|-------|--------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 5.4   | 3.9    | 4.1   | 3.4   | 187  | 18    | 9.5   | 6.8   | 4.8   | 4.6   | 9.6   | 4.3   |
| 2           | 5.3   | 3.9    | 3.7   | 18    | 78   | 17    | 8.2   | 6.5   | 6.2   | 4.7   | 9.0   | 4.3   |
| 3           | 5.1   | 4.0    | 3.7   | 18    | 36   | 16    | 8.4   | 9.0   | 10    | 4.8   | 7.7   | 4.1   |
| 4           | 5.1   | 4.1    | 3.7   | 23    | 26   | 16    | 8.2   | 7.7   | 6.3   | 4.5   | 7.2   | 3.9   |
| 5           | 5.0   | 4.1    | 3.4   | 17    | 24   | 15    | 7.8   | 7.1   | 5.5   | 4.3   | 6.8   | 3.9   |
| 6           | 4.9   | 4.1    | 3.4   | 12    | 24   | 14    | 12    | 6.8   | 6.2   | 4.4   | 6.8   | 3.9   |
| 7           | 5.1   | 4.1    | 3.4   | 9.7   | 20   | 14    | 8.4   | 6.5   | 5.9   | 4.1   | 6.8   | 3.9   |
| 8           | 4.9   | 4.0    | 3.4   | 8.5   | 17   | 13    | 8.4   | 6.4   | 6.3   | 4.0   | 6.6   | 3.9   |
| 9           | 4.8   | 3.9    | 3.4   | 7.5   | 16   | 15    | 8.0   | 6.3   | 5.5   | 3.7   | 6.2   | 3.9   |
| 10          | 4.8   | 3.9    | 3.4   | 6.9   | 15   | 13    | 7.7   | 6.1   | 5.1   | 3.7   | 5.7   | 4.0   |
| 11          | 4.7   | 4.7    | 3.4   | 6.6   | 15   | 13    | 7.7   | 6.1   | 5.1   | 14    | 5.6   | 4.6   |
| 12          | 4.6   | 3.9    | 3.4   | 6.2   | 33   | 13    | 7.7   | 6.7   | 11    | 5.2   | 5.4   | 3.9   |
| 13          | 4.3   | 3.7    | 3.4   | 5.7   | 23   | 12    | 7.4   | 6.2   | 6.4   | 4.5   | 5.4   | 3.9   |
| 14          | 4.3   | 3.7    | 3.2   | 5.5   | 21   | 12    | 7.4   | 5.9   | 5.5   | 4.3   | 5.1   | 3.9   |
| 15          | 4.3   | 3.7    | 3.1   | 5.3   | 18   | 11    | 7.1   | 5.9   | 5.2   | 4.1   | 5.1   | 3.7   |
| 16          | 4.3   | 3.7    | 3.0   | 5.1   | 16   | 11    | 9.0   | 5.7   | 6.0   | 18    | 5.1   | 3.7   |
| 17          | 4.3   | 3.5    | 3.0   | 5.4   | 16   | 11    | 9.4   | 5.9   | 5.2   | 5.6   | 8.2   | 3.7   |
| 18          | 4.3   | 3.5    | 3.0   | 5.8   | 15   | 10    | 8.7   | 6.1   | 11    | 4.6   | 7.4   | 3.7   |
| 19          | 4.4   | 5.1    | 3.0   | 5.9   | 19   | 9.8   | 8.0   | 5.9   | 7.0   | 4.6   | 5.4   | 3.4   |
| 20          | 4.3   | 4.2    | 3.0   | 5.4   | 29   | 10    | 7.7   | 5.9   | 5.9   | 4.6   | 5.1   | 3.4   |
| 21          | 4.3   | 3.7    | 3.0   | 5.4   | 30   | 9.7   | 7.4   | 5.6   | 5.4   | 4.3   | 5.0   | 3.5   |
| 22          | 4.4   | 3.5    | 4.3   | 5.4   | 28   | 9.7   | 7.4   | 5.6   | 5.1   | 6.4   | 4.7   | 3.4   |
| 23          | 4.6   | 3.4    | 4.2   | 5.4   | 25   | 9.7   | 6.8   | 6.1   | 4.9   | 25    | 4.6   | 3.3   |
| 24          | 4.6   | 3.4    | 3.8   | 5.5   | 24   | 9.9   | 6.8   | 5.7   | 11    | 6.9   | 5.0   | 3.4   |
| 25          | 4.2   | 3.4    | 4.1   | 5.6   | 23   | 9.9   | 6.5   | 5.8   | 9.6   | 5.8   | 5.0   | 3.4   |
| 26          | 4.1   | 3.3    | 4.3   | 5.6   | 27   | 9.6   | 6.2   | 5.4   | 5.9   | 9.5   | 4.5   | 3.3   |
| 27          | 4.1   | 3.2    | 4.1   | 5.2   | 22   | 9.0   | 6.2   | 5.1   | 5.3   | 56    | 5.2   | 3.7   |
| 28          | 4.0   | 7.5    | 3.9   | 5.1   | 19   | 9.0   | 9.4   | 5.0   | 4.9   | 18    | 4.8   | 3.7   |
| 29          | 4.0   | 5.2    | 3.5   | 5.1   | ---  | 9.0   | 8.4   | 4.8   | 4.6   | 11    | 4.3   | 3.4   |
| 30          | 4.3   | 4.1    | 3.4   | 5.4   | ---  | 8.7   | 7.1   | 4.8   | 4.6   | 9.7   | 6.5   | 3.4   |
| 31          | 4.1   | ---    | 3.4   | 9.7   | ---  | 8.8   | ---   | 4.8   | ---   | 9.6   | 6.0   | ---   |
| TOTAL       | 140.9 | 120.4  | 109.1 | 244.3 | 846  | 366.8 | 238.9 | 188.2 | 191.4 | 274.5 | 185.8 | 112.5 |
| MEAN        | 4.55  | 4.01   | 3.52  | 7.88  | 30.2 | 11.8  | 7.96  | 6.07  | 6.38  | 8.85  | 5.99  | 3.75  |
| MAX         | 5.4   | 7.5    | 4.3   | 23    | 187  | 18    | 12    | 9.0   | 11    | 56    | 9.6   | 4.6   |
| MIN         | 4.0   | 3.2    | 3.0   | 3.4   | 15   | 8.7   | 6.2   | 4.8   | 4.6   | 3.7   | 4.3   | 3.3   |
| CFSM        | .33   | .29    | .26   | .58   | 2.20 | .86   | .58   | .44   | .47   | .65   | .44   | .27   |
| IN.         | .38   | .33    | .30   | .66   | 2.30 | 1.00  | .65   | .51   | .52   | .75   | .50   | .31   |
| CAL YR 1984 | TOTAL | 6030.5 | MEAN  | 16.5  | MAX  | 561   | MIN   | 3.0   | CFSM  | 1.20  | IN.   | 16.37 |
| WTR YR 1985 | TOTAL | 3018.8 | MEAN  | 8.27  | MAX  | 187   | MIN   | 3.0   | CFSM  | .60   | IN.   | 8.20  |



## TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°57'30", long 83°46'26", Knox County, Hydrologic Unit 06010107, on left bank, 0.7 mi downstream from Johnson Hollow, 7.5 mi upstream from confluence with Holston River, and 8 mi east of Knoxville.

DRAINAGE AREA.--5,101 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to December 1945 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Dec. 10, 1945, to Sept. 30, 1957, at site 200 ft upstream on right bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Douglas Lake (station 03468500), 24.6 mi upstream.

AVERAGE DISCHARGE.--40 years, 7,846 ft<sup>3</sup>/s, 20.89 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,600 ft<sup>3</sup>/s, May 8, 1984, elevation, 834.60 ft; minimum, 67 ft<sup>3</sup>/s, Oct. 25, 1953, elevation, 813.38 ft; minimum daily, 68 ft<sup>3</sup>/s, Oct. 23-26, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of 855.0 ft, from floodmarks, estimated discharge, 160,000 ft<sup>3</sup>/s, from investigations by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,600 ft<sup>3</sup>/s, Feb. 1, elevation, 824.34 ft; minimum, 132 ft<sup>3</sup>/s, Sept. 15; elevation, 814.26 ft; minimum daily, 286 ft<sup>3</sup>/s, Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |     |       |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-------|
| 1           | 3610   | 4980    | 3260   | 1830   | 15400  | 10100  | 3140   | 1670   | 1990   | 2620   | 8110   | 7800   |     |       |
| 2           | 5830   | 4550    | 1320   | 4700   | 11400  | 8030   | 3050   | 1270   | 2450   | 3030   | 6670   | 5810   |     |       |
| 3           | 5390   | 3320    | 2950   | 6440   | 4100   | 5040   | 2730   | 1800   | 7130   | 2700   | 3030   | 5810   |     |       |
| 4           | 4450   | 1480    | 5580   | 7820   | 4430   | 5180   | 1570   | 2400   | 6650   | 2600   | 2060   | 6270   |     |       |
| 5           | 4130   | 5150    | 5470   | 8570   | 6430   | 5860   | 867    | 777    | 8120   | 2030   | 3580   | 6330   |     |       |
| 6           | 3400   | 7430    | 6080   | 8400   | 12300  | 7450   | 3050   | 4390   | 6870   | 2010   | 4410   | 6520   |     |       |
| 7           | 1300   | 8510    | 11000  | 8270   | 14300  | 9190   | 2330   | 3410   | 5610   | 1290   | 5030   | 6020   |     |       |
| 8           | 3540   | 8540    | 5440   | 5590   | 15800  | 6670   | 2320   | 1170   | 1810   | 2680   | 4580   | 4610   |     |       |
| 9           | 4850   | 9510    | 1580   | 6770   | 16400  | 5030   | 2640   | 2450   | 2000   | 3300   | 4800   | 5830   |     |       |
| 10          | 4520   | 3850    | 6390   | 6250   | 13900  | 3900   | 2770   | 1980   | 4600   | 4020   | 4060   | 7340   |     |       |
| 11          | 4510   | 2160    | 10500  | 6060   | 13500  | 4030   | 2870   | 1400   | 4060   | 2990   | 3380   | 7470   |     |       |
| 12          | 5280   | 4470    | 10700  | 4690   | 13400  | 3910   | 1340   | 1940   | 2990   | 7430   | 4620   | 7290   |     |       |
| 13          | 2830   | 6180    | 9800   | 3410   | 13600  | 6600   | 1790   | 5460   | 3480   | 4670   | 7510   | 5340   |     |       |
| 14          | 1280   | 6800    | 11000  | 4280   | 16800  | 5930   | 2000   | 3230   | 1830   | 1820   | 9110   | 2570   |     |       |
| 15          | 3030   | 4650    | 7060   | 4830   | 17400  | 5120   | 2230   | 1720   | 1530   | 5480   | 7600   | 286    |     |       |
| 16          | 4650   | 3950    | 2640   | 2740   | 13900  | 2540   | 2090   | 1620   | 2220   | 4100   | 4360   | 3510   |     |       |
| 17          | 4420   | 4270    | 5090   | 2640   | 11000  | 1820   | 1790   | 1840   | 5320   | 1220   | 3480   | 4310   |     |       |
| 18          | 4470   | 1530    | 5590   | 2330   | 11000  | 3310   | 3050   | 1870   | 1420   | 1810   | 2200   | 7070   |     |       |
| 19          | 4640   | 4290    | 4960   | 1600   | 11900  | 4990   | 1970   | 2350   | 2330   | 5410   | 1430   | 5880   |     |       |
| 20          | 2640   | 7170    | 5590   | 2540   | 13300  | 4130   | 2000   | 2120   | 3360   | 6740   | 780    | 5470   |     |       |
| 21          | 1460   | 5910    | 5500   | 8190   | 12800  | 4810   | 2180   | 4100   | 5080   | 4270   | 3220   | 3750   |     |       |
| 22          | 4270   | 3630    | 3310   | 3470   | 9980   | 4480   | 3720   | 4700   | 3040   | 7390   | 6280   | 2070   |     |       |
| 23          | 5710   | 4540    | 3270   | 1080   | 6180   | 3820   | 4330   | 3960   | 1600   | 9650   | 5300   | 2370   |     |       |
| 24          | 4760   | 3220    | 2620   | 1650   | 5130   | 1630   | 1820   | 1920   | 6290   | 7290   | 4220   | 3250   |     |       |
| 25          | 2480   | 2430    | 2730   | 1520   | 10000  | 4510   | 2230   | 1420   | 6700   | 4040   | 3060   | 3150   |     |       |
| 26          | 1830   | 3290    | 5780   | 1610   | 9770   | 3730   | 1870   | 1940   | 6400   | 3180   | 6180   | 4650   |     |       |
| 27          | 2310   | 4310    | 7240   | 1800   | 9400   | 6150   | 2330   | 2390   | 5750   | 2340   | 7780   | 7230   |     |       |
| 28          | 1640   | 4920    | 6890   | 2020   | 10100  | 7230   | 1920   | 4850   | 2710   | 1370   | 8770   | 3010   |     |       |
| 29          | 3140   | 4800    | 3940   | 3870   | ---    | 5130   | 2280   | 4230   | 1410   | 3370   | 8040   | 1970   |     |       |
| 30          | 4050   | 1870    | 2010   | 3110   | ---    | 2820   | 2730   | 3760   | 1370   | 3980   | 8470   | 4380   |     |       |
| 31          | 4360   | ---     | 2750   | 1470   | ---    | 2130   | ---    | 5760   | ---    | 6340   | 8510   | ---    |     |       |
| TOTAL       | 114780 | 141710  | 168040 | 129550 | 323620 | 155270 | 71007  | 83897  | 116120 | 121170 | 160630 | 147366 |     |       |
| MEAN        | 3703   | 4724    | 5421   | 4179   | 11560  | 5009   | 2367   | 2706   | 3871   | 3909   | 5182   | 4912   |     |       |
| MAX         | 5830   | 9510    | 11000  | 8570   | 17400  | 10100  | 4330   | 5760   | 8120   | 9650   | 9110   | 7800   |     |       |
| MIN         | 1280   | 1480    | 1320   | 1080   | 4100   | 1630   | 867    | 777    | 1370   | 1220   | 780    | 286    |     |       |
| (†)         | -43900 | -44400  | -60600 | +3700  | +82600 | +11200 | +88900 | +42800 | -23100 | -31000 | +4600  | -81800 |     |       |
| MEAN†       | 2286   | 3244    | 3466   | 4298   | 14508  | 5370   | 5330   | 4087   | 3101   | 2909   | 5330   | 2186   |     |       |
| CFSM†       | .45    | .64     | .68    | .84    | 2.84   | 1.05   | 1.04   | .80    | .61    | .57    | 1.04   | .43    |     |       |
| IN.†        | .52    | .71     | .78    | .97    | 2.96   | 1.21   | 1.17   | .92    | .68    | .66    | 1.20   | .48    |     |       |
| CAL YR 1984 | TOTAL  | 3293990 | MEAN   | 9000   | MAX    | 70000  | MIN    | 1280   | MEAN†  | 8908   | CFSM†  | 1.75   | IN† | 23.77 |
| WTR YR 1985 | TOTAL  | 1733160 | MEAN   | 4748   | MAX    | 17400  | MIN    | 286    | MEAN†  | 4609   | CFSM†  | .90    | IN† | 12.26 |

† Change in contents, in cfs-days, in Douglas Lake, furnished by Tennessee Valley Authority.

† Adjusted for change in contents in Douglas Lake.

TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1975 to September 1981.

WATER TEMPERATURE: June 1975 to September 1981.

REMARKS.--Flow regulated by Douglas Lake (station 03468500), 24.6 mi upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens, June 25, 1978; minimum, 34 microsiemens, Oct. 23, 1978.

WATER TEMPERATURE: Maximum, 33.0°C, Aug. 11, 12, 1977; minimum, 0.0°C, Jan. 19, 1977, Feb. 11, 12, 20, 1979.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 310 microsiemens was observed on Dec. 18, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|--|--|
| OCT<br>18... | 1330 | 980   | 190   | 7.7                            | 20.0                        | 744  | 2.1                          | 9.1                                 | 103  | 58   | K7   | 65                                     |
| JAN<br>31... | 1200 | 960   | 185   | 8.0                            | 5.0                         | 740  | 2.5                          | 12.0                                | 97   | 32   | 42   | 63                                     |
| APR<br>17... | 1300 | 751   | 170   | 8.1                            | 15.5                        | 745  | 5.0                          | 11.0                                | 113  | 22   | K2   | 69                                     |
| JUL<br>16... | 1330 | 1070  | 170   | 7.8                            | 24.0                        | 742  | 2.0                          | 6.4                                 | 78   | K15  | 29   | 62                                     |

| DATE         | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|---|--|--|--|-------------------|---|---|---|---|---|---|--|
| OCT<br>18... | 10  | 20   | 3.7  | 14   | 31                | .8                                      | 1.9   | 55  | 2.1   | 19  | 12  | <.10   |
| JAN<br>31... | 7   | 19   | 3.7  | 14   | 32                | .8                                      | 2.0   | 56  | 1.1   | 21  | 16  | .10  |
| APR<br>17... | 10  | 21   | 4.1  | 8.6  | 21                | .5                                      | 1.2   | 60  | .9  | 16  | 9.8   | .20  |
| JUL<br>16... | 10  | 19   | 3.4  | 12   | 29                | .7                                      | 1.8   | 52  | 1.6   | 19  | 16  | .10  |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
|--------------|---|--|--|---|---|---|---|---|--|---|--|--|
| OCT<br>18... | 5.7   | 121  | 110  | .16   | 320   | .31   | <.010   | --  | .30  | <.010                                       | <.010  | .010   |
| JAN<br>31... | 7.3   | --   | 120  | --  | --  | .61   | .140  | .18   | .20  | .020  | .010   | .020   |
| APR<br>17... | 3.9   | 101  | 100  | .14   | 205   | .49   | .040  | .05   | 1.2  | .030  | <.010  | <.010  |
| JUL<br>16... | 5.7   | 114  | 110  | .16   | 329   | .13   | .040  | .05   | .30  | .010  | .020   | .010   |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>18... | .03   | <10   | <1   | 36   | <.5  | <1   | <1  | <3   | 1  | 7  | 2  | 8  |
| JAN<br>31... | .06   | 10  | <1   | 31   | .9   | <1   | 1   | <3   | 1  | 80   | 3  | 4  |
| APR<br>17... | --  | 10  | 1  | 31   | <.5  | <1   | 8   | <3   | 2  | 16   | 2  | 7  |
| JUL<br>16... | .03   | 20  | <1   | 28   | <.5  | <1   | 3   | <3   | 4  | 23   | 1  | 6  |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>DIS-<br>SUS-<br>PENDE<br>(MG/L) | SED-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|--|---|
| OCT<br>18... | 7  | <.1  | <10   | 1  | <1  | 1  | 85   | <6   | 13   | 9   | 24   | 53  |
| JAN<br>31... | 43   | <.1  | <10   | 1  | 7   | <1   | 84   | <6   | <3   | 34  | 88   | 35  |
| APR<br>17... | 8  | .1   | <10   | 2  | <1  | 1  | 86   | <6   | 6  | 239   | 485  | 7   |
| JUL<br>16... | 27   | <.1  | <10   | 3  | <1  | <1   | 77   | <6   | 5  | 5   | 14   | 71  |

## TENNESSEE RIVER BASIN

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03487550 REEDY CREEK AT OREBANK, TN

LOCATION.--Lat 36°33'42", long 82°27'36", Sullivan County, Hydrologic Unit 06010102, on left bank, 50 ft upstream from Anderson Bridge, 0.1 mi south of U. S. Highway 11W, 0.3 mi north of Orebank, 1.0 mi upstream from Gaines Branch, and at mile 9.8.

DRAINAGE AREA.--36.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD TN 1973: 1971(P), 1972(M); WRD TN 1980: 1979(M), 1982(P)(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,232.61 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 4, 1975, at site 50 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 1-10, Jan. 24-31, and July 23. Records good. The Bloomingdale Utility District diverts an average of about 0.6 ft<sup>3</sup>/s for water supply, 0.8 mi upstream from the gage.

AVERAGE DISCHARGE.--22 years, 44.6 ft<sup>3</sup>/s, 16.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft<sup>3</sup>/s Oct. 2, 1977, gage height, 11.61 ft from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.2 ft<sup>3</sup>/s July 27, 1982 and Oct. 28, 1984, result of upstream pumpage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1927, reached a stage of 11.4 ft, discharge, about 11,000 ft<sup>3</sup>/s, datum then in use and before flood plain development, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 1 | 1530 | *864                           | *6.72            | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 2.2 ft<sup>3</sup>/s Oct. 28, result of upstream pumpage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN   | JUL   | AUG  | SEP   |       |
|-------------|-------|---------|------|------|------|------|------|------|-------|-------|------|-------|-------|
| 1           | 10    | 7.1     | 14   | 45   | 554  | 44   | 22   | 22   | 14    | 10    | 148  | 15    |       |
| 2           | 9.0   | 7.4     | 12   | 121  | 275  | 40   | 19   | 24   | 15    | 14    | 109  | 14    |       |
| 3           | 8.0   | 7.3     | 12   | 78   | 137  | 36   | 19   | 48   | 14    | 17    | 63   | 13    |       |
| 4           | 7.0   | 7.5     | 11   | 95   | 91   | 34   | 19   | 31   | 12    | 18    | 46   | 14    |       |
| 5           | 6.5   | 9.5     | 11   | 93   | 74   | 34   | 18   | 24   | 12    | 12    | 37   | 15    |       |
| 6           | 6.0   | 10      | 21   | 53   | 69   | 30   | 35   | 20   | 13    | 11    | 33   | 11    |       |
| 7           | 5.5   | 8.9     | 17   | 39   | 57   | 28   | 30   | 18   | 22    | 10    | 31   | 8.8   |       |
| 8           | 6.5   | 8.1     | 14   | 32   | 46   | 27   | 31   | 17   | 27    | 9.0   | 29   | 11    |       |
| 9           | 7.5   | 8.4     | 13   | 26   | 40   | 29   | 29   | 16   | 16    | 8.9   | 24   | 11    |       |
| 10          | 8.5   | 9.9     | 12   | 23   | 38   | 27   | 26   | 15   | 13    | 8.9   | 22   | 11    |       |
| 11          | 7.6   | 24      | 14   | 22   | 37   | 26   | 24   | 15   | 18    | 11    | 20   | 11    |       |
| 12          | 7.8   | 12      | 12   | 20   | 81   | 26   | 24   | 16   | 78    | 8.3   | 18   | 11    |       |
| 13          | 7.8   | 9.5     | 12   | 18   | 64   | 24   | 22   | 15   | 37    | 7.7   | 17   | 10    |       |
| 14          | 7.8   | 8.7     | 11   | 18   | 51   | 24   | 21   | 13   | 22    | 12    | 16   | 9.8   |       |
| 15          | 7.7   | 9.0     | 11   | 17   | 46   | 23   | 23   | 13   | 16    | 10    | 15   | 9.4   |       |
| 16          | 7.9   | 9.6     | 11   | 16   | 41   | 22   | 23   | 13   | 15    | 63    | 19   | 9.6   |       |
| 17          | 7.5   | 9.2     | 11   | 18   | 37   | 22   | 20   | 16   | 13    | 19    | 76   | 9.1   |       |
| 18          | 7.2   | 9.0     | 11   | 17   | 36   | 21   | 19   | 15   | 14    | 14    | 64   | 8.6   |       |
| 19          | 7.5   | 36      | 12   | 16   | 48   | 20   | 18   | 13   | 13    | 11    | 33   | 10    |       |
| 20          | 11    | 17      | 19   | 14   | 73   | 20   | 17   | 12   | 11    | 10    | 25   | 8.5   |       |
| 21          | 9.2   | 11      | 18   | 13   | 88   | 19   | 17   | 12   | 11    | 9.1   | 23   | 8.0   |       |
| 22          | 7.0   | 9.5     | 29   | 15   | 82   | 20   | 16   | 12   | 9.8   | 10    | 20   | 7.9   |       |
| 23          | 8.5   | 8.9     | 24   | 15   | 74   | 22   | 16   | 31   | 10    | 16    | 18   | 7.8   |       |
| 24          | 9.3   | 8.5     | 19   | 14   | 62   | 28   | 16   | 39   | 11    | 10    | 21   | 8.1   |       |
| 25          | 7.5   | 8.0     | 52   | 15   | 55   | 26   | 15   | 33   | 12    | 11    | 24   | 8.0   |       |
| 26          | 6.9   | 12      | 35   | 14   | 68   | 23   | 14   | 21   | 10    | 32    | 24   | 8.2   |       |
| 27          | 7.6   | 13      | 24   | 12   | 58   | 21   | 16   | 17   | 8.9   | 181   | 19   | 10    |       |
| 28          | 6.4   | 34      | 20   | 13   | 48   | 22   | 35   | 14   | 8.5   | 107   | 17   | 8.1   |       |
| 29          | 8.2   | 22      | 17   | 13   | ---  | 21   | 45   | 14   | 7.8   | 53    | 15   | 7.7   |       |
| 30          | 10    | 15      | 16   | 12   | ---  | 20   | 27   | 13   | 9.7   | 60    | 17   | 7.5   |       |
| 31          | 7.3   | ---     | 39   | 30   | ---  | 20   | ---  | 12   | ---   | 84    | 17   | ---   |       |
| TOTAL       | 242.2 | 370.0   | 554  | 947  | 2430 | 799  | 676  | 594  | 493.7 | 857.9 | 1060 | 302.1 |       |
| MEAN        | 7.81  | 12.3    | 17.9 | 30.5 | 86.8 | 25.8 | 22.5 | 19.2 | 16.5  | 27.7  | 34.2 | 10.1  |       |
| MAX         | 11    | 36      | 52   | 121  | 554  | 44   | 45   | 48   | 78    | 181   | 148  | 15    |       |
| MIN         | 5.5   | 7.1     | 11   | 12   | 36   | 19   | 14   | 12   | 7.8   | 7.7   | 15   | 7.5   |       |
| CFSM        | .22   | .34     | .49  | .84  | 2.39 | .71  | .62  | .53  | .45   | .76   | .94  | .28   |       |
| IN.         | .25   | .38     | .57  | .97  | 2.49 | .82  | .69  | .61  | .51   | .88   | 1.09 | .31   |       |
| CAL YR 1984 | TOTAL | 16723.3 |      | MEAN | 45.7 | MAX  | 1400 | MIN  | 5.5   | CFSM  | 1.26 | IN.   | 17.14 |
| WTR YR 1985 | TOTAL | 9325.9  |      | MEAN | 25.6 | MAX  | 554  | MIN  | 5.5   | CFSM  | .71  | IN.   | 9.56  |



## TENNESSEE RIVER BASIN

## 03490500 HOLSTON RIVER AT SURGOINSVILLE, TN

LOCATION.--Lat 36°28'19", long 82°50'50", Hawkins County, Hydrologic Unit 06010104, on right bank 1,500 ft upstream from Surgoinsville Creek and county bridge at Surgoinsville, 9.8 mi upstream from Big Creek, and at mile 118.7. Records include flow of Surgoinsville Creek.

DRAINAGE AREA.--2,874 mi<sup>2</sup>, includes that of Surgoinsville Creek.

PERIOD OF RECORD.--October 1940 to current year. Prior to April 1941 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,088.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those for growing season, which are fair. Flow partly regulated by four reservoirs (see p. 207).

AVERAGE DISCHARGE.--45 years, 3,770 ft<sup>3</sup>/s, 17.81 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft<sup>3</sup>/s, Feb. 18, 1944, gage height, 17.48 ft; minimum, 470 ft<sup>3</sup>/s, Oct. 21, 1941; minimum daily, 528 ft<sup>3</sup>/s, Oct. 21, 1941. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 59,300 ft<sup>3</sup>/s, Mar. 13, 1963, gage height, 17.13 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,100 ft<sup>3</sup>/s, Feb. 2, gage height, 9.73 ft; minimum, 978 ft<sup>3</sup>/s, Oct. 16; minimum daily, 1,060 ft<sup>3</sup>/s, Jan. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG    | SEP   |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| 1     | 1660  | 1970  | 2250  | 2820  | 8480   | 2730  | 1470  | 1230  | 1360  | 1220  | 4630   | 3560  |
| 2     | 2650  | 1620  | 1340  | 5970  | 20300  | 2220  | 1420  | 1240  | 1350  | 1620  | 6120   | 3490  |
| 3     | 2050  | 1510  | 2020  | 7090  | 13600  | 2000  | 1940  | 1460  | 2070  | 1580  | 5190   | 2670  |
| 4     | 2430  | 1540  | 3760  | 6460  | 8200   | 2220  | 1480  | 1420  | 5060  | 2190  | 2890   | 2720  |
| 5     | 1930  | 1620  | 2880  | 7280  | 5980   | 2120  | 1390  | 1350  | 1270  | 1560  | 2240   | 1970  |
| 6     | 1820  | 2310  | 4560  | 5060  | 3640   | 3000  | 1700  | 1310  | 1610  | 2010  | 3780   | 1990  |
| 7     | 1330  | 2400  | 6190  | 4270  | 3480   | 2130  | 1780  | 1210  | 1260  | 1720  | 4260   | 2920  |
| 8     | 1360  | 2910  | 3950  | 3460  | 3770   | 1580  | 1760  | 1180  | 1430  | 1670  | 4690   | 2040  |
| 9     | 1350  | 5590  | 2100  | 3030  | 3200   | 1520  | 1810  | 1140  | 1370  | 1660  | 4250   | 2340  |
| 10    | 1360  | 1750  | 1400  | 3070  | 2050   | 1480  | 1800  | 1110  | 1300  | 1680  | 5250   | 3110  |
| 11    | 1940  | 1780  | 1540  | 2920  | 1960   | 1540  | 1710  | 1080  | 1320  | 1720  | 3330   | 3400  |
| 12    | 2820  | 2280  | 1440  | 2040  | 4090   | 1560  | 1610  | 1120  | 1810  | 1870  | 3330   | 3110  |
| 13    | 2340  | 1810  | 1470  | 1400  | 5960   | 2000  | 1520  | 1110  | 2020  | 3380  | 3140   | 2690  |
| 14    | 1330  | 1690  | 1510  | 2070  | 3820   | 2710  | 1460  | 1090  | 1660  | 1660  | 3400   | 1610  |
| 15    | 1530  | 1520  | 1290  | 2830  | 2110   | 1680  | 1460  | 1090  | 1530  | 1710  | 3770   | 1680  |
| 16    | 1750  | 1820  | 1140  | 2630  | 2350   | 1410  | 1480  | 1080  | 1440  | 3070  | 3300   | 1450  |
| 17    | 2270  | 2030  | 1310  | 2110  | 2110   | 1370  | 1450  | 1120  | 1370  | 1750  | 2210   | 1410  |
| 18    | 1560  | 1400  | 1510  | 2070  | 2290   | 1330  | 1520  | 1180  | 1370  | 1690  | 2820   | 3220  |
| 19    | 1490  | 1830  | 1580  | 1520  | 2280   | 1310  | 1450  | 1220  | 1440  | 1720  | 2090   | 2220  |
| 20    | 1570  | 2660  | 1940  | 1240  | 2660   | 1290  | 1360  | 1310  | 1410  | 3400  | 3880   | 2260  |
| 21    | 1560  | 3880  | 2100  | 4260  | 2780   | 1270  | 1310  | 1320  | 1620  | 3500  | 4370   | 2210  |
| 22    | 1570  | 3020  | 2050  | 4150  | 2730   | 1300  | 1240  | 1280  | 1500  | 3780  | 4020   | 1590  |
| 23    | 1580  | 2090  | 1450  | 2060  | 2820   | 1330  | 1950  | 1450  | 1300  | 3890  | 3630   | 1430  |
| 24    | 1630  | 1380  | 1440  | 1270  | 3030   | 1420  | 1210  | 1540  | 1830  | 4300  | 3810   | 1550  |
| 25    | 1580  | 1100  | 1690  | 1640  | 3300   | 1540  | 1580  | 2910  | 1570  | 3680  | 2250   | 1380  |
| 26    | 1550  | 1350  | 2270  | 1560  | 3730   | 1820  | 1320  | 2940  | 3380  | 3020  | 2360   | 1420  |
| 27    | 1520  | 1740  | 3130  | 1060  | 4230   | 2700  | 1140  | 2080  | 2170  | 2150  | 3750   | 1950  |
| 28    | 1460  | 2470  | 3060  | 1270  | 4380   | 3060  | 1200  | 1740  | 2050  | 2260  | 3570   | 1620  |
| 29    | 1520  | 2730  | 2470  | 1560  | ---    | 1990  | 1290  | 1550  | 2370  | 2540  | 3410   | 1540  |
| 30    | 1520  | 3170  | 1930  | 1460  | ---    | 1520  | 1350  | 1460  | 1210  | 4190  | 4320   | 1290  |
| 31    | 1470  | ---   | 2120  | 1400  | ---    | 1470  | ---   | 1400  | ---   | 4050  | 4560   | ---   |
| TOTAL | 53500 | 64970 | 68890 | 91030 | 129330 | 56620 | 45160 | 43720 | 52450 | 76240 | 114620 | 65840 |
| MEAN  | 1726  | 2166  | 2222  | 2936  | 4619   | 1826  | 1505  | 1410  | 1748  | 2459  | 3697   | 2195  |
| MAX   | 2820  | 5590  | 6190  | 7280  | 20300  | 3060  | 1950  | 2940  | 5060  | 4300  | 6120   | 3560  |
| MIN   | 1330  | 1100  | 1140  | 1060  | 1960   | 1270  | 1140  | 1080  | 1210  | 1220  | 2090   | 1290  |

CAL YR 1984 TOTAL 1240670 MEAN 3390 MAX 46600 MIN 1100 MEAN\* 3636 CFSM\* 1.27 IN\* 17.17  
WTR YR 1985 TOTAL 862370 MEAN 2363 MAX 20300 MIN 1060 MEAN\* 2340 CFSM\* .81 IN\* 11.02

† Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.

## TENNESSEE RIVER BASIN

149

03491000 BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, Hydrologic Unit 06010104, on left bank 300 ft upstream from county road bridge, 3 mi northeast of Rogersville, and at mile 2.0.

DRAINAGE AREA.--47.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1941 to June 1949; occasional low-flow measurements, water years 1950-55, 1957; annual maximum, water years 1955-57; October 1957 to current year.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Water-stage recorder. Datum of gage is 1,128.9 ft above National Geodetic Vertical Datum of 1929 (levels based on City of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--35 years (water years 1942-48, 1958-85), 58.9 ft<sup>3</sup>/s, 16.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,760 ft<sup>3</sup>/s Mar. 12, 1963, gage height, 9.40 ft from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 10.68 ft Dec. 30, 1969, backwater from log jam; minimum discharge observed, 1.3 ft<sup>3</sup>/s Sept. 23, 1955; minimum gage height, 1.32 ft Sept. 12, Oct. 2, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s, and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1230 | *1,950                            | *5.53               | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 2.3 ft<sup>3</sup>/s several days in September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|-------|---------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1           | 5.7   | 5.3     | 25   | 59   | 1040 | 59   | 36   | 14    | 6.3   | 4.6   | 12    | 8.6   |
| 2           | 6.1   | 5.0     | 21   | 74   | 582  | 54   | 31   | 15    | 7.3   | 7.3   | 12    | 6.7   |
| 3           | 4.6   | 4.7     | 18   | 83   | 256  | 47   | 28   | 20    | 11    | 7.7   | 9.5   | 5.5   |
| 4           | 3.9   | 4.8     | 15   | 125  | 159  | 43   | 27   | 16    | 11    | 8.6   | 6.8   | 4.9   |
| 5           | 3.7   | 5.3     | 14   | 125  | 125  | 42   | 26   | 13    | 8.8   | 7.6   | 5.4   | 4.5   |
| 6           | 3.6   | 6.3     | 20   | 80   | 125  | 37   | 205  | 12    | 7.5   | 6.8   | 4.9   | 4.4   |
| 7           | 3.3   | 7.5     | 26   | 60   | 103  | 33   | 107  | 12    | 8.7   | 6.4   | 4.7   | 4.6   |
| 8           | 3.6   | 6.6     | 21   | 47   | 81   | 32   | 85   | 11    | 12    | 5.7   | 4.9   | 4.9   |
| 9           | 4.1   | 5.7     | 19   | 38   | 66   | 35   | 69   | 11    | 12    | 5.1   | 5.0   | 4.4   |
| 10          | 5.0   | 6.7     | 17   | 32   | 59   | 31   | 56   | 11    | 8.8   | 6.0   | 4.4   | 4.3   |
| 11          | 4.9   | 37      | 17   | 30   | 54   | 30   | 49   | 10    | 8.9   | 44    | 3.9   | 4.7   |
| 12          | 4.3   | 26      | 15   | 26   | 144  | 31   | 42   | 9.7   | 26    | 17    | 3.4   | 4.0   |
| 13          | 3.9   | 15      | 13   | 22   | 120  | 28   | 37   | 9.4   | 27    | 9.4   | 3.2   | 3.6   |
| 14          | 3.7   | 10      | 12   | 21   | 91   | 26   | 35   | 10    | 14    | 7.1   | 3.1   | 2.9   |
| 15          | 3.8   | 8.9     | 11   | 21   | 79   | 25   | 35   | 8.8   | 10    | 5.8   | 2.8   | 2.8   |
| 16          | 3.9   | 8.8     | 11   | 18   | 69   | 23   | 39   | 8.2   | 8.7   | 5.4   | 2.9   | 2.8   |
| 17          | 3.8   | 9.0     | 11   | 20   | 64   | 23   | 31   | 9.0   | 7.8   | 4.8   | 8.7   | 2.8   |
| 18          | 4.1   | 8.3     | 10   | 19   | 58   | 22   | 27   | 9.7   | 7.9   | 4.4   | 35    | 2.8   |
| 19          | 4.1   | 70      | 10   | 18   | 73   | 20   | 26   | 9.4   | 7.5   | 4.0   | 14    | 2.6   |
| 20          | 11    | 48      | 11   | 16   | 127  | 19   | 24   | 8.1   | 6.7   | 3.9   | 8.6   | 2.5   |
| 21          | 19    | 25      | 12   | 15   | 149  | 19   | 22   | 7.8   | 6.2   | 3.8   | 6.5   | 2.5   |
| 22          | 8.9   | 18      | 15   | 14   | 135  | 22   | 21   | 9.0   | 5.6   | 3.4   | 5.5   | 2.5   |
| 23          | 13    | 14      | 22   | 16   | 114  | 31   | 19   | 11    | 5.2   | 7.0   | 5.0   | 2.5   |
| 24          | 36    | 12      | 19   | 15   | 94   | 45   | 19   | 14    | 5.7   | 6.9   | 5.4   | 2.5   |
| 25          | 18    | 11      | 34   | 16   | 79   | 66   | 18   | 13    | 6.4   | 5.0   | 22    | 2.7   |
| 26          | 9.7   | 9.6     | 43   | 14   | 86   | 50   | 17   | 10    | 6.2   | 4.6   | 33    | 3.2   |
| 27          | 7.1   | 8.8     | 32   | 13   | 76   | 40   | 17   | 8.6   | 5.3   | 6.3   | 24    | 3.2   |
| 28          | 6.0   | 58      | 26   | 14   | 65   | 36   | 21   | 7.9   | 4.5   | 8.4   | 13    | 3.0   |
| 29          | 5.6   | 62      | 22   | 14   | ---  | 33   | 19   | 7.6   | 4.2   | 8.8   | 9.2   | 2.8   |
| 30          | 6.6   | 32      | 20   | 14   | ---  | 30   | 16   | 7.3   | 4.0   | 6.7   | 7.6   | 2.7   |
| 31          | 6.0   | ---     | 26   | 20   | ---  | 28   | ---  | 6.8   | ---   | 10    | 8.2   | ---   |
| TOTAL       | 227.0 | 549.3   | 588  | 1099 | 4273 | 1060 | 1204 | 330.3 | 271.2 | 242.5 | 294.6 | 111.9 |
| MEAN        | 7.32  | 18.3    | 19.0 | 35.5 | 153  | 34.2 | 40.1 | 10.7  | 9.04  | 7.82  | 9.50  | 3.73  |
| MAX         | 36    | 70      | 43   | 125  | 1040 | 66   | 205  | 20    | 27    | 44    | 35    | 8.6   |
| MIN         | 3.3   | 4.7     | 10   | 13   | 54   | 19   | 16   | 6.8   | 4.0   | 3.4   | 2.8   | 2.5   |
| CFSM        | .15   | .39     | .40  | .75  | 3.23 | .72  | .85  | .23   | .19   | .17   | .20   | .08   |
| IN.         | .18   | .43     | .46  | .86  | 3.36 | .83  | .95  | .26   | .21   | .19   | .23   | .09   |
| CAL YR 1984 | TOTAL | 20062.6 | MEAN | 54.8 | MAX  | 2270 | MIN  | 2.5   | CFSM  | 1.16  | IN.   | 15.78 |
| WTR YR 1985 | TOTAL | 10250.8 | MEAN | 28.1 | MAX  | 1040 | MIN  | 2.5   | CFSM  | .59   | IN.   | 8.06  |

## TENNESSEE RIVER BASIN

03491300 BEECH CREEK AT KEPLER, TN

LOCATION.--Lat 36°24'06", long 82°53'09", Hawkins County, Hydrologic Unit 06010104, on upstream right wingwall of county road bridge, at Kepler, 5.9 mi east of intersection of U. S. Highway 11W and Burem Road, and at mile 6.6.

DRAINAGE AREA.--47.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements, water years 1961-62, 1964-65.

GAGE.--Water-stage recorder. Datum of gage is 1,107.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20 to Feb. 1. Records fair.

AVERAGE DISCHARGE.--20 years, 49.8 ft<sup>3</sup>/s, 14.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft<sup>3</sup>/s, Mar. 30, 1975, gage height, 13.38 ft from rating curve extended above 1,300 ft<sup>3</sup>/s; minimum observed, 0.97 ft<sup>3</sup>/s Sept. 17, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 12, 1963, reached a stage of 14.6 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,200 ft<sup>3</sup>/s and maximum (\*)

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1500 | *2,410                            | *11.53              | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 2.0 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|-------|---------|-------|------|------|------|------|-------|-------|-------|-------|-------|
| 1           | 4.9   | 7.3     | 13    | 16   | 1450 | 49   | 34   | 10    | 5.4   | 6.0   | 11    | 6.6   |
| 2           | 4.0   | 7.8     | 10    | 251  | 588  | 45   | 27   | 16    | 6.7   | 7.2   | 11    | 5.2   |
| 3           | 3.3   | 7.9     | 9.9   | 100  | 195  | 39   | 24   | 31    | 25    | 6.1   | 5.9   | 4.5   |
| 4           | 3.1   | 7.7     | 8.8   | 159  | 110  | 37   | 23   | 15    | 12    | 12    | 4.8   | 4.2   |
| 5           | 3.1   | 8.8     | 8.4   | 92   | 87   | 38   | 26   | 12    | 7.7   | 7.2   | 4.5   | 4.0   |
| 6           | 3.1   | 9.3     | 24    | 45   | 79   | 32   | 173  | 10    | 16    | 6.5   | 4.3   | 3.8   |
| 7           | 3.1   | 7.9     | 19    | 33   | 60   | 30   | 79   | 9.7   | 12    | 6.3   | 4.4   | 4.0   |
| 8           | 3.2   | 7.0     | 14    | 26   | 48   | 29   | 65   | 9.2   | 22    | 5.2   | 4.6   | 3.9   |
| 9           | 3.9   | 6.3     | 11    | 21   | 44   | 35   | 52   | 8.6   | 11    | 4.6   | 4.4   | 3.5   |
| 10          | 4.2   | 7.3     | 10    | 18   | 38   | 30   | 44   | 8.3   | 7.7   | 5.0   | 3.8   | 3.5   |
| 11          | 4.2   | 22      | 10    | 17   | 37   | 29   | 39   | 8.0   | 21    | 10    | 3.5   | 3.4   |
| 12          | 4.3   | 13      | 9.1   | 15   | 169  | 30   | 34   | 8.9   | 69    | 5.4   | 3.4   | 3.4   |
| 13          | 4.2   | 9.9     | 8.3   | 14   | 93   | 27   | 31   | 9.0   | 27    | 4.3   | 3.2   | 3.3   |
| 14          | 4.5   | 8.4     | 7.5   | 14   | 73   | 26   | 29   | 7.8   | 14    | 4.0   | 3.3   | 2.9   |
| 15          | 4.7   | 7.9     | 7.0   | 14   | 62   | 25   | 32   | 7.2   | 10    | 3.7   | 3.2   | 2.9   |
| 16          | 4.9   | 8.8     | 6.7   | 13   | 59   | 23   | 34   | 7.3   | 12    | 3.7   | 24    | 2.8   |
| 17          | 5.6   | 8.1     | 6.5   | 14   | 50   | 23   | 27   | 11    | 11    | 3.5   | 112   | 2.6   |
| 18          | 6.0   | 7.7     | 6.3   | 14   | 51   | 22   | 23   | 13    | 14    | 3.4   | 41    | 2.5   |
| 19          | 5.6   | 34      | 6.4   | 13   | 93   | 21   | 21   | 8.1   | 13    | 3.1   | 8.9   | 2.4   |
| 20          | 7.7   | 19      | 6.9   | 12   | 148  | 21   | 19   | 6.7   | 9.5   | 3.1   | 6.3   | 2.4   |
| 21          | 11    | 12      | 7.7   | 11   | 128  | 20   | 17   | 7.0   | 8.3   | 3.5   | 5.6   | 2.2   |
| 22          | 11    | 9.4     | 23    | 10   | 100  | 25   | 16   | 7.8   | 7.5   | 3.3   | 4.9   | 2.2   |
| 23          | 13    | 8.3     | 18    | 12   | 82   | 31   | 14   | 8.0   | 7.0   | 3.8   | 4.5   | 2.1   |
| 24          | 13    | 7.8     | 12    | 11   | 68   | 47   | 14   | 9.8   | 10    | 4.3   | 4.7   | 2.3   |
| 25          | 10    | 7.2     | 37    | 12   | 61   | 40   | 13   | 9.2   | 11    | 3.9   | 5.8   | 2.4   |
| 26          | 9.3   | 6.7     | 25    | 11   | 92   | 32   | 11   | 7.2   | 10    | 3.8   | 34    | 2.3   |
| 27          | 8.5   | 6.7     | 16    | 10   | 68   | 30   | 14   | 6.4   | 7.1   | 16    | 8.6   | 2.7   |
| 28          | 8.4   | 68      | 13    | 11   | 55   | 29   | 18   | 6.1   | 5.9   | 16    | 5.8   | 2.6   |
| 29          | 8.2   | 27      | 10    | 11   | ---  | 27   | 15   | 6.1   | 5.2   | 6.7   | 5.0   | 2.2   |
| 30          | 8.0   | 15      | 9.5   | 10   | ---  | 24   | 11   | 5.8   | 5.7   | 5.3   | 16    | 2.1   |
| 31          | 7.7   | ---     | 12    | 10   | ---  | 26   | ---  | 5.6   | ---   | 7.5   | 20    | ---   |
| TOTAL       | 195.7 | 384.2   | 386.0 | 1020 | 4188 | 942  | 979  | 295.8 | 403.7 | 184.4 | 382.4 | 94.9  |
| MEAN        | 6.31  | 12.8    | 12.5  | 32.9 | 150  | 30.4 | 32.6 | 9.54  | 13.5  | 5.95  | 12.3  | 3.16  |
| MAX         | 13    | 68      | 37    | 251  | 1450 | 49   | 173  | 31    | 69    | 16    | 112   | 6.6   |
| MIN         | 3.1   | 6.3     | 6.3   | 10   | 37   | 20   | 11   | 5.6   | 5.2   | 3.1   | 3.2   | 2.1   |
| CFSM        | .13   | .27     | .27   | .70  | 3.19 | .65  | .69  | .20   | .29   | .13   | .26   | .07   |
| IN.         | .15   | .30     | .31   | .81  | 3.31 | .75  | .77  | .23   | .32   | .15   | .30   | .08   |
| CAL YR 1984 | TOTAL | 19478.0 | MEAN  | 53.2 | MAX  | 2400 | MIN  | 2.4   | CFSM  | 1.13  | IN.   | 15.42 |
| WTR YR 1985 | TOTAL | 9456.1  | MEAN  | 25.9 | MAX  | 1450 | MIN  | 2.1   | CFSM  | .55   | IN.   | 7.48  |

## TENNESSEE RIVER BASIN

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03495500 HOLSTON RIVER NEAR KNOXVILLE, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°00'56", 83°49'54", Knox County, Hydrologic Unit 06010104, on right bank at bridge on U.S. Highway 70, at Knoxville city limits, and 5.5 mi upstream from confluence with French Broad River.

DRAINAGE AREA.--3,747 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1976, January 1978 to current year. Published as "at Strawberry Plains" 1930-48. Records published for both sites June 1945 to September 1948. Gage-height records collected at Strawberry Plains from December to March 1885-97 are contained in reports of the U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1935(M). WSP 1336: 1939.

GAGE.--Water-stage recorder. Datum of gage is 815.84 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1930, to June 8, 1931, nonrecording gage, and June 9, 1931, to Sept. 30, 1948, water-stage recorder, at site 12 mi upstream at datum 22.55 ft higher. June 19, 1945, to Oct. 4, 1960, 300 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by five reservoirs (see p. 207).

AVERAGE DISCHARGE.--52 years (water years 1931-75, 1979-85), 4,731 ft<sup>3</sup>/s, 17.15 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft<sup>3</sup>/s, Mar. 28, 1935, gage height, 20.20 ft, site and datum then in use; minimum, 44 ft<sup>3</sup>/s, Dec. 12, 21, 22, 1941, gage height, -0.58 ft, site and datum then in use; minimum daily, 44 ft<sup>3</sup>/s, Dec. 21, 22, 1941. Maximum discharge since closure of Cherokee Dam on Dec. 5, 1941, 31,400 ft<sup>3</sup>/s, Mar. 22, 1963, gage height, 11.20 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, about 41 ft in March 1867, from profile by Tennessee Valley Authority. Flood in 1901 reached a stage of about 32 ft, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft<sup>3</sup>/s, June 26, gage height, 7.61 ft; minimum, 129 ft<sup>3</sup>/s, Sept. 3, 4; minimum daily, 157 ft<sup>3</sup>/s, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG    | SEP    |
|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|--------|--------|
| 1     | 2690  | 5210   | 1620   | 1620   | 4710  | 2320  | 421   | 159   | 3120  | 458   | 5800   | 741    |
| 2     | 5840  | 5210   | 1610   | 1630   | 2810  | 5150  | 1020  | 1450  | 518   | 2990  | 7200   | 280    |
| 3     | 5040  | 3000   | 1600   | 3440   | 1470  | 1730  | 604   | 833   | 3040  | 1730  | 5730   | 157    |
| 4     | 4440  | 1440   | 3770   | 4810   | 991   | 1960  | 334   | 409   | 5570  | 3210  | 1800   | 4510   |
| 5     | 4120  | 1620   | 2470   | 9130   | 835   | 2340  | 1260  | 1560  | 4470  | 1590  | 1710   | 5050   |
| 6     | 4790  | 4760   | 3570   | 3860   | 1590  | 5570  | 853   | 590   | 5310  | 2310  | 6460   | 5080   |
| 7     | 2440  | 6790   | 10800  | 4830   | 849   | 5430  | 575   | 4510  | 5530  | 1610  | 7080   | 6120   |
| 8     | 2850  | 6430   | 6100   | 4110   | 3170  | 3120  | 467   | 540   | 2200  | 534   | 6520   | 2360   |
| 9     | 4820  | 9520   | 1620   | 4640   | 3030  | 2630  | 1650  | 299   | 537   | 3060  | 6610   | 3610   |
| 10    | 5120  | 3790   | 2690   | 5220   | 2000  | 2800  | 949   | 315   | 292   | 3500  | 6760   | 6080   |
| 11    | 4820  | 1570   | 8200   | 5040   | 671   | 2160  | 1480  | 1180  | 3970  | 4020  | 4080   | 5920   |
| 12    | 5040  | 2770   | 7810   | 4550   | 3100  | 2640  | 1400  | 564   | 1980  | 3640  | 4070   | 5610   |
| 13    | 4590  | 4810   | 8150   | 4320   | 2710  | 5900  | 409   | 278   | 2730  | 6430  | 6080   | 5870   |
| 14    | 1540  | 5070   | 7540   | 4100   | 3140  | 5070  | 278   | 205   | 639   | 1670  | 8120   | 3630   |
| 15    | 1280  | 3630   | 6590   | 8790   | 2870  | 5560  | 263   | 1110  | 1300  | 534   | 7920   | 2350   |
| 16    | 3250  | 2320   | 3040   | 9810   | 2790  | 2240  | 541   | 573   | 546   | 5260  | 4720   | 1260   |
| 17    | 3080  | 3040   | 1760   | 4520   | 1980  | 686   | 1320  | 1050  | 1520  | 1760  | 4860   | 3260   |
| 18    | 2960  | 1590   | 2260   | 2740   | 2470  | 721   | 372   | 1190  | 2820  | 515   | 740    | 5330   |
| 19    | 2990  | 1470   | 2450   | 2360   | 2640  | 2950  | 238   | 448   | 509   | 1550  | 338    | 5040   |
| 20    | 3010  | 3800   | 2500   | 2360   | 2820  | 2190  | 210   | 213   | 254   | 6850  | 4080   | 5310   |
| 21    | 1560  | 6640   | 2530   | 9460   | 3190  | 2450  | 197   | 1200  | 773   | 4020  | 4370   | 5790   |
| 22    | 1340  | 4560   | 2550   | 12200  | 1770  | 3130  | 187   | 2830  | 4680  | 3300  | 4480   | 2000   |
| 23    | 3740  | 1770   | 1610   | 2950   | 1380  | 2900  | 3480  | 3180  | 590   | 7540  | 4640   | 535    |
| 24    | 3730  | 1540   | 1530   | 4130   | 1560  | 696   | 2480  | 1070  | 313   | 6860  | 4400   | 2160   |
| 25    | 2440  | 1610   | 1750   | 3490   | 658   | 623   | 491   | 1490  | 6280  | 5040  | 834    | 2530   |
| 26    | 1640  | 1840   | 2600   | 3250   | 2550  | 1800  | 225   | 505   | 8640  | 3500  | 886    | 2520   |
| 27    | 1510  | 3530   | 4110   | 2290   | 2920  | 1820  | 161   | 244   | 5280  | 3680  | 5550   | 6220   |
| 28    | 1530  | 4140   | 3990   | 2100   | 3570  | 4170  | 158   | 171   | 3180  | 1710  | 875    | 5120   |
| 29    | 1280  | 2400   | 3560   | 3600   | ---   | 2740  | 200   | 4830  | 1080  | 603   | 3450   | 2200   |
| 30    | 3090  | 1550   | 1890   | 2300   | ---   | 1630  | 190   | 639   | 1190  | 5020  | 4090   | 650    |
| 31    | 3020  | ---    | 1370   | 1690   | ---   | 611   | ---   | 2840  | ---   | 5390  | 6540   | ---    |
| TOTAL | 99590 | 107420 | 113640 | 139340 | 64244 | 85737 | 22413 | 36475 | 78861 | 99884 | 140793 | 107293 |
| MEAN  | 3213  | 3581   | 3666   | 4495   | 2294  | 2766  | 747   | 1177  | 2629  | 3222  | 4542   | 3576   |
| MAX   | 5840  | 9520   | 10800  | 12200  | 4710  | 5900  | 3480  | 4830  | 8640  | 7540  | 8120   | 6220   |
| MIN   | 1280  | 1440   | 1370   | 1620   | 658   | 611   | 158   | 159   | 254   | 458   | 338    | 157    |
| CFSM  | .86   | .96    | .98    | 1.20   | .61   | .74   | .20   | .31   | .70   | .86   | 1.21   | .95    |
| IN.   | .99   | 1.07   | 1.13   | 1.38   | .64   | .85   | .22   | .36   | .78   | .99   | 1.40   | 1.07   |

CAL YR 1984 TOTAL 1749629 MEAN 4780 MAX 23800 MIN 254 MEAN\* 4915 CFSM\* 1.31 IN\* 17.81  
WTR YR 1985 TOTAL 1095690 MEAN 3002 MAX 12200 MIN 157 MEAN\* 2763 CFSM\* .74 IN\* 9.98

\* Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.



03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1980 to current year.

WATER TEMPERATURE: February 1980 to current year.

INSTRUMENTATION.--Water quality monitor since Feb. 23, 1980.

REMARKS.--Flow regulated by many reservoirs (see p. 207).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 365 microsiemens, Mar. 1, 1981; minimum, 121 microsiemens, July 31, 1982.

WATER TEMPERATURE: Maximum, 27.0°C, Aug. 21, 1982, Sept. 2, 1985; minimum, 1.5°C, Feb. 3, 5, 12, 1981, Jan. 21, 1985.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 321 microsiemens, Jan. 1, minimum, 190 microsiemens, Feb. 1.

WATER TEMPERATURE: Maximum, 27.0°C, Sept. 2; minimum, 1.5°C, Jan. 21.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) |
|-------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|
| OCT   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 16... | 1045 | 5310  | 270   | 7.6                            | 19.5                        | 742  | 3.7                          | 8.0                                 | 90   | 110  |
| DEC   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 03... | 1115 | 1460  | 280   | 7.7                            | 11.0                        | 746  | .50                          | 10.6                                | 98   | 30   |
| FEB   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 25... | 1200 | 697   | 305   | 8.7                            | 10.5                        | 745  | 2.0                          | --                                  | --   | K14  |
| APR   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 29... | 1030 | 281   | 300   | 8.0                            | 20.0                        | 744  | 2.5                          | 7.0                                 | 79   | 800  |
| JUN   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 28... | 1000 | 5060  | 305   | 8.0                            | 17.0                        | 740  | 2.5                          | 8.3                                 | 89   | 180  |
| AUG   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 09... | 0850 | 9250  | 305   | 7.8                            | 23.0                        | 741  | 2.5                          | 4.6                                 | 55   | 80   |

| DATE  | STREP-<br>TOCOCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) |
|-------|---|--|--|--|--|--|-------------------|---|---|---|
| OCT   |   |  |  |  |  |  |                   |   |   |   |
| 16... | 50  | 120                                    | 16   | 32   | 8.7  | 12   | 18                | .5                                      | 1.9   | 100   |
| DEC   |   |  |  |  |  |  |                   |   |   |   |
| 03... | 54  | 120                                    | 23   | 34   | 9.1  | 13   | 18                | .5                                      | 1.9   | 100   |
| FEB   |   |  |  |  |  |  |                   |   |   |   |
| 25... | K6  | 150                                    | 26   | 42   | 9.8  | 11   | 14                | .4                                      | 2.4   | 120   |
| APR   |   |  |  |  |  |  |                   |   |   |   |
| 29... | 720   | 140                                    | 15   | 41   | 9.4  | 10   | 13                | .4                                      | 3.3   | 126   |
| JUN   |   |  |  |  |  |  |                   |   |   |   |
| 28... | 67  | 140                                    | 20   | 40   | 8.6  | 12   | 16                | .5                                      | 1.6   | 116   |
| AUG   |   |  |  |  |  |  |                   |   |   |   |
| 09... | 570   | 120                                    | 20   | 33   | 9.1  | 17   | 23                | .7                                      | 2.1   | 100   |

| DATE  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|-------|---|---|---|--|---|--|---|---|---|---|
| OCT   |   |   |   |  |   |  |   |   |   |   |
| 16... | 4.9   | 25  | --  | .10  | 2.4   | 155  | --  | .21   | 2220  | .45   |
| DEC   |   |   |   |  |   |  |   |   |   |   |
| 03... | 3.9   | 25  | 14  | .20  | 2.5   | 154  | 160   | .21   | 607   | .61   |
| FEB   |   |   |   |  |   |  |   |   |   |   |
| 25... | .5  | 27  | 13  | .10  | 1.2   | 187  | 180   | .25   | 352   | .66   |
| APR   |   |   |   |  |   |  |   |   |   |   |
| 29... | 2.4   | 26  | 11  | .20  | 1.6   | 215  | 180   | .29   | 163   | .61   |
| JUN   |   |   |   |  |   |  |   |   |   |   |
| 28... | 2.2   | 28  | 15  | .10  | 2.3   | 207  | 180   | .28   | 2830  | .76   |
| AUG   |   |   |   |  |   |  |   |   |   |   |
| 09... | 3.1   | 32  | 19  | <.10   | 1.5   | 174  | 170   | .24   | 4350  | .16   |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

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03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE      | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | SEDI-<br>MENT,<br>DIS-<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|-----------|---|---|--|---|--|--|---|---|---|---|
| OCT 16... | .030  | .04   | .20  | .040  | <.010  | .010   | .03   | 18  | 258   | 75  |
| DEC 03... | .050  | .06   | .30  | <.010                                       | <.010  | --   | --  | 8   | 32  | 76  |
| FEB 25... | .040  | .05   | .40  | <.010                                       | <.010  | <.010  | --  | 6   | 11  | 94  |
| APR 29... | .110  | .14   | --   | --  | .030   | <.010  | --  | 5   | 3.8   | 94  |
| JUN 28... | .050  | .06   | .60  | .080  | .020   | .020   | .06   | 17  | 232   | 74  |
| AUG 09... | .120  | .15   | .50  | .040  | <.010  | .020   | .06   | 27  | 674   | 74  |

| DATE      | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) |
|-----------|---|--|--|--|--|---|--|--|--|--|
| OCT 16... | 10  | 1  | 35   | <.5  | <1   | <1  | <3   | <1   | 5  | <1   |
| FEB 25... | 10  | <1   | 33   | <.5  | <1   | <1  | <3   | 7  | 9  | <1   |
| APR 29... | 20  | <1   | 41   | <.5  | 1  | <1  | <3   | 2  | 9  | 1  |
| JUN 28... | 50  | <1   | 35   | .6   | <1   | 3   | <3   | 1  | <3   | 2  |

| DATE      | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|-----------|--|--|--|---|--|---|--|--|--|--|
| OCT 16... | 5  | 2  | <.1  | <10   | 1  | <1  | <1   | 120  | <6   | 10   |
| FEB 25... | 4  | 24   | <.1  | <10   | 4  | <1  | 1  | 130  | <6   | 4  |
| APR 29... | 15   | 34   | .1   | <10   | 2  | <1  | <1   | 130  | <6   | 7  |
| JUN 28... | 6  | 3  | <.1  | <10   | <1   | <1  | <1   | 130  | <6   | 5  |

## TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER |     |     | NOVEMBER |     |     | DECEMBER |     |     | JANUARY |     |     |      |
| 1       | 268 | 263 | 265      | 276 | 270 | 272      | 279 | 275 | 277     | 321 | 304 | 309  |
| 2       | 264 | 260 | 262      | 272 | 268 | 270      | 284 | 272 | 277     | 313 | 302 | 308  |
| 3       | 264 | 259 | 262      | 273 | 268 | 271      | 285 | 276 | 281     | 306 | 302 | 304  |
| 4       | 265 | 260 | 263      | 275 | 271 | 273      | 282 | 279 | 281     | 303 | 296 | 300  |
| 5       | 267 | 261 | 264      | 279 | 274 | 277      | 285 | 280 | 283     | 299 | 292 | 296  |
| 6       | 266 | 259 | 264      | 275 | 268 | 270      | 282 | 273 | 280     | 301 | 293 | 297  |
| 7       | 269 | 265 | 267      | 270 | 266 | 269      | 276 | 270 | 273     | 301 | 295 | 297  |
| 8       | 269 | 265 | 268      | 270 | 268 | 269      | 276 | 271 | 273     | 300 | 294 | 297  |
| 9       | 267 | 263 | 265      | 275 | 270 | 272      | 286 | 273 | 280     | 300 | 293 | 296  |
| 10      | 266 | 263 | 265      | 276 | 271 | 273      | 289 | 277 | 282     | 302 | 294 | 298  |
| 11      | 267 | 262 | 266      | 279 | 273 | 277      | 280 | 273 | 276     | 301 | 297 | 298  |
| 12      | 267 | 263 | 265      | 279 | 272 | 276      | 277 | 272 | 274     | 301 | 294 | 298  |
| 13      | 266 | 262 | 265      | 273 | 268 | 271      | 280 | 275 | 277     | 300 | 297 | 298  |
| 14      | 270 | 266 | 268      | 273 | 269 | 271      | 281 | 276 | 279     | 305 | 295 | 300  |
| 15      | 272 | 268 | 270      | 275 | 269 | 270      | 284 | 278 | 281     | 299 | 294 | 297  |
| 16      | 271 | 264 | 267      | 274 | 270 | 272      | 288 | 280 | 284     | 300 | 297 | 298  |
| 17      | 265 | 263 | 264      | 273 | 268 | 271      | 293 | 284 | 288     | 302 | 297 | 300  |
| 18      | 266 | 263 | 265      | 276 | 269 | 273      | 301 | 292 | 296     | 306 | 298 | 302  |
| 19      | 268 | 264 | 266      | 279 | 274 | 277      | 302 | 295 | 298     | 305 | 298 | 302  |
| 20      | 266 | 262 | 264      | 280 | 268 | 273      | 307 | 300 | 304     | 305 | 288 | 296  |
| 21      | 268 | 263 | 265      | 270 | 266 | 268      | 309 | 304 | 306     | 300 | 282 | 276  |
| 22      | 276 | 266 | 268      | 268 | 266 | 267      | 309 | 305 | 308     | 301 | 298 | 300  |
| 23      | 274 | 262 | 267      | 278 | 267 | 272      | 314 | 309 | 311     | 307 | 283 | 295  |
| 24      | 269 | 261 | 266      | 280 | 270 | 275      | 316 | 310 | 313     | 286 | 280 | 284  |
| 25      | 276 | 268 | 272      | 278 | 271 | 275      | 317 | 308 | 313     | 288 | 284 | 287  |
| 26      | 277 | 274 | 275      | 279 | 270 | 273      | 315 | 300 | 308     | 290 | 281 | 288  |
| 27      | 279 | 273 | 276      | 270 | 266 | 268      | 307 | 296 | 302     | 293 | 283 | 289  |
| 28      | 278 | 274 | 276      | 274 | 258 | 266      | 304 | 294 | 299     | 292 | 284 | 289  |
| 29      | 279 | 275 | 276      | 274 | 261 | 267      | 303 | 297 | 300     | 288 | 281 | 286  |
| 30      | 275 | 270 | 272      | 283 | 265 | 274      | 310 | 299 | 304     | 293 | 285 | 290  |
| 31      | 275 | 272 | 273      | --- | --- | ---      | 312 | 305 | 309     | 302 | 284 | 293  |
| MONTH   | 279 | 259 | 267      | 283 | 258 | 272      | 317 | 270 | 291     | 321 | 280 | 296  |

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 302 | 190 | 228   | 301 | 286 | 294   | 290 | 278 | 285  | 307 | 302 | 304  |
| 2        | 208 | 197 | 204   | 291 | 283 | 287   | 288 | 272 | 283  | 309 | 285 | 300  |
| 3        | 230 | 206 | 217   | 299 | 285 | 290   | 301 | 271 | 286  | 284 | 264 | 277  |
| 4        | 259 | 230 | 246   | 294 | 281 | 286   | 298 | 288 | 294  | 285 | 264 | 272  |
| 5        | 279 | 256 | 270   | 285 | 275 | 282   | 294 | 272 | 280  | 294 | 271 | 285  |
| 6        | 306 | 272 | 283   | 283 | 267 | 278   | 285 | 279 | 281  | 297 | 287 | 289  |
| 7        | 312 | 307 | 310   | 284 | 273 | 281   | 281 | 261 | 270  | 294 | 280 | 283  |
| 8        | 311 | 286 | 298   | 287 | 281 | 284   | 292 | 269 | 281  | 293 | 287 | 290  |
| 9        | 297 | 290 | 294   | 285 | 276 | 283   | 287 | 256 | 274  | 298 | 289 | 295  |
| 10       | 301 | 289 | 297   | 283 | 272 | 279   | 288 | 274 | 281  | 310 | 293 | 298  |
| 11       | 313 | 300 | 305   | 287 | 276 | 280   | 287 | 267 | 280  | 309 | 288 | 300  |
| 12       | 302 | 272 | 285   | 285 | 277 | 282   | 287 | 268 | 280  | 302 | 292 | 298  |
| 13       | 281 | 270 | 276   | 281 | 271 | 277   | 294 | 284 | 290  | 299 | 291 | 294  |
| 14       | 292 | 282 | 287   | 279 | 276 | 277   | 301 | 287 | 293  | 302 | 293 | 298  |
| 15       | 297 | 284 | 293   | 279 | 270 | 275   | 302 | 294 | 298  | 309 | 290 | 299  |
| 16       | 301 | 283 | 295   | 282 | 270 | 279   | 308 | 291 | 301  | 303 | 293 | 299  |
| 17       | 304 | 288 | 299   | 293 | 281 | 286   | 298 | 281 | 289  | 297 | 291 | 293  |
| 18       | 300 | 287 | 294   | 299 | 272 | 288   | 299 | 288 | 292  | 297 | 291 | 294  |
| 19       | 296 | 290 | 294   | 289 | 265 | 279   | 312 | 296 | 303  | 302 | 291 | 295  |
| 20       | 293 | 285 | 290   | 284 | 268 | 278   | 316 | 304 | 311  | 305 | 298 | 300  |
| 21       | 296 | 280 | 290   | 282 | 269 | 275   | 318 | 309 | 313  | 304 | 290 | 300  |
| 22       | 305 | 287 | 298   | 279 | 271 | 276   | 320 | 308 | 315  | 300 | 284 | 290  |
| 23       | 300 | 285 | 292   | 277 | 273 | 275   | 308 | 273 | 280  | 294 | 287 | 290  |
| 24       | 303 | 285 | 294   | 292 | 275 | 280   | 278 | 271 | 274  | 297 | 290 | 294  |
| 25       | 307 | 293 | 302   | 295 | 270 | 281   | 287 | 278 | 281  | 300 | 293 | 297  |
| 26       | 303 | 287 | 295   | 285 | 261 | 276   | 290 | 281 | 286  | 300 | 294 | 296  |
| 27       | 292 | 284 | 289   | 281 | 263 | 272   | 297 | 284 | 292  | 302 | 296 | 299  |
| 28       | 293 | 278 | 286   | 274 | 264 | 270   | 299 | 292 | 296  | 304 | 298 | 300  |
| 29       | --- | --- | ---   | 277 | 271 | 273   | 307 | 296 | 301  | 305 | 282 | 290  |
| 30       | --- | --- | ---   | 278 | 272 | 275   | 307 | 301 | 303  | 295 | 290 | 292  |
| 31       | --- | --- | ---   | 281 | 274 | 277   | --- | --- | ---  | 297 | 286 | 291  |
| MONTH    | 313 | 190 | 283   | 301 | 261 | 280   | 320 | 256 | 290  | 310 | 264 | 294  |

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
|       | JUNE |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 293  | 286 | 290  | 301  | 297 | 299  | ---    | --- | ---  | 303       | 298 | 300  |
| 2     | 296  | 289 | 292  | 306  | 292 | 300  | ---    | --- | ---  | 310       | 299 | 305  |
| 3     | 298  | 285 | 290  | 308  | 303 | 305  | ---    | --- | ---  | 311       | 300 | 306  |
| 4     | 292  | 285 | 289  | 306  | 296 | 302  | ---    | --- | ---  | 314       | 300 | 303  |
| 5     | 295  | 287 | 291  | 308  | 303 | 305  | ---    | --- | ---  | 302       | 292 | 297  |
| 6     | 293  | 285 | 289  | 307  | 296 | 302  | ---    | --- | ---  | 297       | 292 | 296  |
| 7     | 300  | 286 | 288  | 309  | 300 | 304  | ---    | --- | ---  | 298       | 294 | 297  |
| 8     | 286  | 242 | 274  | 307  | 299 | 302  | ---    | --- | ---  | 299       | 294 | 298  |
| 9     | 283  | 275 | 278  | 306  | 294 | 301  | ---    | --- | ---  | 299       | 294 | 298  |
| 10    | 297  | 282 | 289  | 308  | 299 | 303  | ---    | --- | ---  | 300       | 286 | 297  |
| 11    | 302  | 267 | 291  | 309  | 298 | 302  | ---    | --- | ---  | 301       | 286 | 294  |
| 12    | 299  | 292 | 295  | 304  | 298 | 302  | ---    | --- | ---  | 301       | 287 | 295  |
| 13    | 300  | 289 | 295  | 304  | 299 | 302  | ---    | --- | ---  | 299       | 288 | 296  |
| 14    | 303  | 296 | 298  | 305  | 302 | 304  | ---    | --- | ---  | 303       | 289 | 298  |
| 15    | 304  | 296 | 301  | 304  | 299 | 302  | ---    | --- | ---  | 303       | 299 | 300  |
| 16    | 303  | 298 | 301  | 305  | 293 | 302  | ---    | --- | ---  | 304       | 300 | 301  |
| 17    | 307  | 297 | 301  | 307  | 303 | 305  | ---    | --- | ---  | 306       | 299 | 304  |
| 18    | 302  | 290 | 296  | 306  | 301 | 303  | ---    | --- | ---  | 303       | 290 | 299  |
| 19    | 303  | 294 | 298  | 306  | 298 | 302  | ---    | --- | ---  | 303       | 290 | 300  |
| 20    | 310  | 298 | 302  | 306  | 292 | 304  | ---    | --- | ---  | 303       | 290 | 300  |
| 21    | 311  | 301 | 306  | 307  | 302 | 305  | 304    | 299 | 301  | 303       | 290 | 300  |
| 22    | 305  | 290 | 301  | 306  | 301 | 304  | 305    | 300 | 303  | 304       | 300 | 302  |
| 23    | 307  | 301 | 304  | 305  | 302 | 304  | 301    | 290 | 299  | 304       | 299 | 301  |
| 24    | 311  | 304 | 307  | 305  | 301 | 303  | 305    | 291 | 296  | 304       | 300 | 302  |
| 25    | 306  | 288 | 294  | 305  | 301 | 303  | 297    | 292 | 295  | 300       | 290 | 298  |
| 26    | 305  | 290 | 300  | 307  | 299 | 304  | 298    | 268 | 291  | 300       | 289 | 296  |
| 27    | 308  | 301 | 305  | 308  | 301 | 306  | 299    | 225 | 288  | 300       | 289 | 291  |
| 28    | 309  | 303 | 306  | 308  | 304 | 307  | 306    | 295 | 300  | 295       | 294 | 295  |
| 29    | 310  | 307 | 308  | 313  | 306 | 309  | 306    | 295 | 300  | 295       | 290 | 293  |
| 30    | 309  | 298 | 305  | 311  | 304 | 306  | 301    | 296 | 300  | 301       | 290 | 294  |
| 31    | ---  | --- | ---  | 307  | 303 | 305  | 302    | 297 | 298  | ---       | --- | ---  |
| MONTH | 311  | 242 | 296  | 313  | 292 | 303  | ---    | --- | ---  | 314       | 286 | 299  |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|---------|------|------|----------|------|------|----------|------|------|---------|------|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | 19.0    | 18.5 | 18.5 | 20.0     | 19.5 | 19.5 | 10.0     | 9.0  | 9.5  | 12.5    | 12.0 | 12.5 |
| 2     | 21.0    | 19.0 | 20.0 | 20.0     | 18.5 | 19.5 | 10.5     | 9.5  | 10.0 | 12.0    | 10.5 | 11.5 |
| 3     | 21.0    | 19.5 | 20.0 | 18.5     | 17.5 | 17.5 | 11.5     | 10.5 | 11.0 | 10.5    | 9.5  | 9.5  |
| 4     | 21.0    | 20.0 | 21.0 | 18.0     | 17.5 | 18.0 | 11.0     | 10.0 | 10.0 | 9.5     | 8.5  | 9.5  |
| 5     | 22.0    | 20.0 | 21.0 | 18.0     | 17.0 | 17.5 | 10.0     | 9.5  | 10.0 | 9.0     | 8.5  | 9.0  |
| 6     | 22.0    | 20.5 | 21.0 | 17.5     | 17.0 | 17.0 | 10.0     | 8.0  | 9.5  | 8.5     | 8.0  | 8.0  |
| 7     | 21.0    | 20.5 | 20.5 | 17.5     | 16.0 | 17.0 | 10.0     | 8.5  | 9.0  | 8.5     | 7.5  | 8.0  |
| 8     | 20.5    | 20.0 | 20.0 | 17.0     | 16.5 | 17.0 | 10.0     | 9.5  | 9.5  | 8.5     | 8.0  | 8.5  |
| 9     | 20.5    | 19.5 | 20.0 | 18.0     | 17.0 | 17.5 | 9.5      | 8.5  | 9.0  | 8.5     | 8.0  | 8.0  |
| 10    | 21.5    | 20.0 | 20.5 | 17.5     | 16.0 | 16.5 | 9.5      | 8.5  | 9.0  | 8.5     | 7.5  | 8.0  |
| 11    | 21.5    | 20.5 | 21.0 | 16.0     | 13.5 | 14.5 | 11.0     | 9.5  | 10.0 | 8.0     | 7.0  | 8.0  |
| 12    | 21.0    | 20.0 | 20.5 | 13.5     | 12.5 | 13.0 | 10.5     | 10.0 | 10.0 | 7.0     | 6.5  | 7.0  |
| 13    | 20.5    | 19.5 | 20.0 | 15.0     | 13.0 | 14.0 | 11.0     | 10.0 | 10.5 | 7.0     | 6.0  | 6.5  |
| 14    | 20.5    | 19.5 | 20.0 | 15.0     | 14.0 | 14.5 | 11.0     | 10.5 | 10.5 | 6.5     | 6.0  | 6.5  |
| 15    | 20.5    | 19.5 | 20.0 | 15.0     | 14.5 | 15.0 | 11.0     | 10.0 | 10.5 | 7.0     | 6.5  | 6.5  |
| 16    | 20.5    | 19.5 | 20.0 | 15.0     | 13.5 | 14.5 | 11.0     | 10.5 | 10.5 | 7.0     | 6.5  | 6.5  |
| 17    | 20.5    | 20.0 | 20.5 | 13.5     | 13.0 | 13.0 | 11.5     | 11.0 | 11.0 | 6.5     | 6.5  | 6.5  |
| 18    | 20.5    | 19.5 | 20.0 | 13.0     | 12.5 | 12.5 | 11.5     | 11.5 | 11.5 | 6.5     | 6.0  | 6.0  |
| 19    | 20.5    | 20.0 | 20.5 | 12.5     | 12.0 | 12.5 | 12.0     | 11.5 | 11.5 | 6.5     | 5.5  | 6.0  |
| 20    | 20.5    | 20.0 | 20.0 | 13.0     | 11.0 | 12.5 | 12.0     | 11.0 | 11.5 | 5.5     | 3.5  | 4.5  |
| 21    | 20.5    | 20.0 | 20.0 | 13.0     | 12.0 | 13.0 | 11.5     | 11.0 | 11.0 | 4.0     | 1.5  | 3.5  |
| 22    | 20.0    | 19.5 | 20.0 | 12.5     | 12.5 | 12.5 | 11.5     | 11.0 | 11.5 | 4.5     | 4.5  | 4.5  |
| 23    | 19.5    | 18.5 | 19.0 | 12.0     | 11.0 | 11.5 | 11.0     | 9.0  | 10.0 | 4.5     | 3.5  | 4.0  |
| 24    | 19.5    | 18.5 | 19.0 | 11.0     | 10.0 | 10.5 | 9.5      | 8.5  | 9.0  | 5.0     | 3.5  | 4.0  |
| 25    | 20.0    | 19.5 | 19.5 | 10.5     | 9.5  | 10.0 | 8.5      | 8.5  | 8.5  | 5.0     | 4.5  | 4.5  |
| 26    | 20.0    | 19.5 | 20.0 | 11.0     | 10.0 | 10.5 | 9.0      | 8.0  | 8.5  | 4.5     | 3.0  | 3.5  |
| 27    | 20.0    | 19.5 | 20.0 | 13.0     | 10.5 | 12.0 | 10.0     | 8.0  | 9.0  | 3.5     | 3.0  | 3.0  |
| 28    | 20.0    | 19.5 | 20.0 | 13.0     | 11.5 | 12.5 | 11.0     | 9.5  | 10.0 | 3.5     | 3.0  | 3.0  |
| 29    | 20.0    | 19.5 | 20.0 | 12.0     | 10.5 | 11.0 | 11.0     | 10.0 | 10.5 | 4.5     | 3.0  | 4.0  |
| 30    | 20.0    | 19.5 | 20.0 | 10.5     | 9.5  | 10.0 | 11.5     | 11.0 | 11.0 | 4.5     | 4.0  | 4.0  |
| 31    | 20.0    | 19.5 | 20.0 | ---      | ---  | ---  | 12.5     | 11.5 | 12.0 | 4.5     | 4.5  | 4.5  |
| MONTH | 22.0    | 18.5 | 20.0 | 20.0     | 9.5  | 14.0 | 12.5     | 8.0  | 10.0 | 12.5    | 1.5  | 6.5  |



## TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |      |      | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 5.0  | 4.0  | 4.5   | 7.0  | 5.5  | 6.0   | 15.0 | 13.5 | 14.0 | 22.5 | 21.5 | 22.0 |
| 2        | 5.0  | 4.5  | 5.0   | 6.5  | 6.0  | 6.5   | 14.5 | 13.0 | 13.5 | 22.5 | 20.0 | 21.0 |
| 3        | 5.0  | 4.5  | 4.5   | 7.5  | 6.5  | 7.0   | 14.5 | 13.0 | 13.5 | 20.0 | 18.0 | 19.5 |
| 4        | 6.0  | 4.5  | 5.0   | 10.5 | 8.0  | 9.0   | 15.0 | 13.0 | 14.0 | 19.5 | 17.0 | 18.5 |
| 5        | 6.5  | 5.0  | 6.0   | 11.0 | 9.5  | 10.0  | 16.5 | 14.5 | 16.0 | 19.0 | 18.0 | 18.5 |
| 6        | 6.5  | 6.0  | 6.5   | 10.0 | 6.5  | 8.0   | 16.5 | 15.0 | 15.5 | 20.5 | 18.5 | 19.5 |
| 7        | 6.5  | 5.5  | 6.0   | 8.5  | 6.0  | 6.5   | 15.0 | 14.0 | 14.5 | 20.5 | 12.0 | 14.0 |
| 8        | 5.0  | 3.5  | 4.5   | 9.0  | 7.0  | 7.5   | 14.0 | 12.0 | 13.0 | 14.5 | 13.0 | 13.5 |
| 9        | 4.5  | 3.0  | 3.5   | 9.5  | 9.0  | 9.0   | 12.0 | 11.0 | 11.5 | 16.0 | 14.0 | 14.5 |
| 10       | 4.5  | 4.0  | 4.5   | 9.5  | 8.5  | 9.0   | 12.0 | 11.0 | 11.5 | 18.0 | 15.5 | 16.5 |
| 11       | 6.0  | 4.5  | 5.5   | 9.5  | 9.0  | 9.0   | 13.0 | 11.0 | 12.0 | 19.5 | 17.0 | 18.0 |
| 12       | 5.0  | 3.5  | 4.0   | 10.0 | 9.5  | 10.0  | 13.0 | 12.0 | 12.5 | 20.5 | 18.5 | 19.5 |
| 13       | 3.0  | 2.5  | 2.5   | 10.0 | 8.0  | 8.5   | 14.5 | 12.0 | 13.5 | 23.5 | 20.0 | 21.5 |
| 14       | 4.5  | 3.0  | 3.5   | 8.0  | 7.5  | 8.0   | 16.0 | 13.5 | 14.5 | 24.5 | 22.5 | 23.0 |
| 15       | 4.5  | 3.5  | 4.0   | 8.5  | 6.5  | 7.5   | 17.0 | 15.0 | 16.0 | 25.0 | 23.0 | 24.0 |
| 16       | 5.0  | 3.5  | 4.0   | 8.5  | 8.0  | 8.0   | 17.5 | 16.0 | 16.5 | 24.5 | 23.0 | 23.5 |
| 17       | 5.0  | 3.5  | 4.0   | 10.0 | 8.5  | 9.0   | 18.0 | 16.5 | 17.5 | 23.5 | 20.5 | 22.5 |
| 18       | 5.5  | 5.0  | 5.0   | 11.0 | 8.5  | 9.5   | 19.5 | 17.0 | 18.0 | 20.5 | 18.5 | 19.5 |
| 19       | 5.0  | 5.0  | 5.0   | 10.5 | 9.5  | 9.5   | 20.5 | 18.5 | 19.5 | 21.0 | 19.0 | 20.0 |
| 20       | 5.5  | 5.0  | 5.5   | 10.0 | 8.5  | 9.0   | 22.0 | 19.0 | 20.5 | 22.0 | 19.5 | 20.5 |
| 21       | 6.5  | 5.0  | 5.5   | 10.5 | 9.5  | 10.0  | 23.0 | 21.0 | 22.0 | 23.0 | 20.5 | 21.5 |
| 22       | 6.5  | 5.5  | 6.0   | 9.0  | 8.0  | 8.5   | 24.0 | 21.5 | 22.5 | 22.0 | 16.0 | 18.0 |
| 23       | 8.5  | 6.0  | 7.5   | 9.0  | 8.5  | 8.5   | 23.5 | 13.5 | 17.5 | 17.0 | 14.0 | 15.5 |
| 24       | 10.0 | 8.5  | 9.5   | 11.0 | 9.5  | 10.0  | 14.0 | 13.0 | 13.5 | 14.5 | 14.0 | 14.0 |
| 25       | 11.0 | 10.0 | 10.5  | 11.5 | 9.5  | 10.5  | 16.5 | 14.0 | 15.0 | 15.5 | 14.0 | 14.5 |
| 26       | 11.0 | 9.5  | 10.0  | 11.5 | 10.5 | 11.0  | 18.5 | 15.0 | 17.0 | 18.0 | 15.5 | 17.0 |
| 27       | 9.5  | 8.0  | 8.5   | 12.0 | 10.5 | 11.5  | 20.0 | 18.0 | 19.0 | 20.5 | 17.5 | 19.0 |
| 28       | 8.0  | 6.5  | 7.5   | 11.5 | 10.5 | 11.0  | 21.5 | 19.0 | 20.0 | 21.5 | 19.5 | 20.5 |
| 29       | ---  | ---  | ---   | 11.5 | 10.0 | 10.5  | 23.0 | 19.5 | 21.0 | 21.5 | 13.0 | 15.5 |
| 30       | ---  | ---  | ---   | 13.5 | 11.5 | 12.5  | 23.0 | 20.5 | 22.0 | 17.0 | 14.0 | 15.5 |
| 31       | ---  | ---  | ---   | 14.5 | 13.5 | 14.0  | ---  | ---  | ---  | 20.0 | 16.5 | 18.0 |
| MONTH    | 11.0 | 2.5  | 5.5   | 14.5 | 5.5  | 9.0   | 24.0 | 11.0 | 16.0 | 25.0 | 12.0 | 18.5 |

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN   | MAX  | MIN  | MEAN      | MAX  | MIN  | MEAN |
|-------|------|------|------|------|------|--------|------|------|-----------|------|------|------|
| JUNE  |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |      |
| 1     | 17.5 | 16.0 | 16.5 | 23.0 | 21.5 | 22.5   | ---  | ---  | ---       | 26.5 | 24.5 | 25.5 |
| 2     | 19.5 | 16.5 | 18.0 | 22.5 | 17.5 | 20.0   | ---  | ---  | ---       | 27.0 | 24.5 | 25.5 |
| 3     | 21.5 | 17.5 | 19.5 | 18.5 | 17.0 | 17.5   | ---  | ---  | ---       | 26.5 | 25.0 | 26.0 |
| 4     | 17.5 | 13.0 | 14.5 | 20.0 | 16.5 | 18.0   | ---  | ---  | ---       | 27.0 | 25.0 | 25.5 |
| 5     | 16.5 | 14.0 | 15.0 | 18.5 | 16.5 | 17.5   | ---  | ---  | ---       | 26.5 | 25.0 | 25.5 |
| 6     | 17.0 | 13.5 | 14.5 | 19.5 | 18.0 | 18.5   | ---  | ---  | ---       | 26.0 | 24.0 | 25.0 |
| 7     | 15.5 | 12.5 | 13.5 | 18.5 | 18.0 | 18.5   | ---  | ---  | ---       | 25.5 | 24.0 | 24.5 |
| 8     | 15.5 | 13.5 | 14.5 | 21.0 | 18.5 | 20.0   | ---  | ---  | ---       | 26.5 | 25.5 | 26.0 |
| 9     | 18.5 | 15.5 | 17.0 | 23.0 | 18.0 | 20.0   | ---  | ---  | ---       | 27.0 | 26.0 | 26.0 |
| 10    | 22.5 | 18.5 | 21.0 | 19.0 | 17.5 | 18.0   | ---  | ---  | ---       | 26.5 | 25.0 | 25.5 |
| 11    | 23.5 | 16.0 | 18.5 | 19.5 | 17.0 | 18.0   | ---  | ---  | ---       | 26.0 | 24.5 | 25.0 |
| 12    | 18.0 | 16.0 | 17.5 | 19.5 | 18.0 | 18.5   | ---  | ---  | ---       | 25.0 | 24.0 | 24.0 |
| 13    | 18.5 | 16.0 | 17.0 | 19.5 | 16.0 | 17.0   | ---  | ---  | ---       | 24.0 | 23.5 | 23.5 |
| 14    | 17.5 | 16.0 | 17.0 | 20.0 | 17.5 | 18.5   | ---  | ---  | ---       | 24.0 | 20.5 | 22.5 |
| 15    | 19.5 | 17.0 | 18.5 | 23.0 | 20.0 | 21.5   | ---  | ---  | ---       | 23.5 | 20.5 | 22.0 |
| 16    | 21.5 | 19.5 | 20.5 | 25.5 | 17.0 | 19.0   | ---  | ---  | ---       | 23.0 | 20.5 | 21.5 |
| 17    | 22.5 | 21.0 | 22.0 | 20.5 | 18.5 | 19.5   | ---  | ---  | ---       | 23.0 | 19.5 | 21.5 |
| 18    | 22.0 | 16.5 | 18.0 | 23.5 | 21.0 | 22.5   | ---  | ---  | ---       | 23.5 | 22.5 | 23.0 |
| 19    | 19.0 | 17.0 | 18.0 | 25.0 | 23.0 | 24.0   | ---  | ---  | ---       | 23.5 | 22.5 | 23.0 |
| 20    | 20.5 | 18.5 | 19.5 | 25.0 | 16.5 | 18.5   | ---  | ---  | ---       | 23.5 | 22.5 | 23.0 |
| 21    | 22.0 | 19.5 | 21.0 | 20.0 | 18.5 | 19.0   | 25.0 | 24.0 | 24.5      | 23.5 | 22.5 | 23.0 |
| 22    | 23.0 | 14.5 | 17.0 | 20.5 | 19.0 | 20.0   | 25.0 | 24.0 | 24.5      | 24.0 | 22.5 | 23.5 |
| 23    | 18.5 | 16.0 | 17.5 | 20.5 | 17.5 | 18.5   | 25.0 | 23.5 | 24.0      | 24.5 | 23.5 | 24.0 |
| 24    | 22.5 | 18.5 | 21.0 | 19.5 | 18.0 | 18.5   | 24.0 | 23.0 | 23.5      | 23.5 | 22.5 | 23.0 |
| 25    | 22.5 | 13.5 | 16.5 | 19.5 | 18.5 | 19.0   | 24.5 | 23.0 | 23.5      | 22.5 | 19.5 | 21.0 |
| 26    | 18.0 | 13.5 | 15.5 | 21.0 | 19.0 | 20.0   | 24.5 | 23.0 | 23.5      | 22.5 | 19.5 | 20.5 |
| 27    | 17.0 | 14.5 | 15.5 | 20.0 | 19.0 | 19.5   | 25.0 | 23.0 | 24.0      | 22.0 | 19.5 | 20.5 |
| 28    | 17.5 | 16.0 | 17.0 | 20.0 | 19.0 | 19.5   | 26.0 | 24.0 | 25.0      | 21.5 | 20.5 | 21.0 |
| 29    | 19.5 | 17.0 | 18.0 | 21.5 | 20.0 | 21.0   | 26.0 | 24.5 | 25.5      | 21.5 | 20.0 | 21.0 |
| 30    | 21.5 | 19.5 | 20.5 | 22.0 | 19.5 | 20.0   | 26.0 | 24.5 | 25.5      | 22.0 | 19.5 | 21.0 |
| 31    | ---  | ---  | ---  | 21.0 | 19.5 | 20.5   | 25.0 | 24.0 | 24.5      | ---  | ---  | ---  |
| MONTH | 23.5 | 12.5 | 17.5 | 25.5 | 16.0 | 19.5   | ---  | ---  | ---       | 27.0 | 19.5 | 23.5 |

TENNESSEE RIVER BASIN

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03497300 LITTLE RIVER ABOVE TOWNSEND, TN  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along State Highway 73, 0.3 mi upstream from Rush Branch, 0.4 mi southeast of Park entrance, 2.2 mi southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and crest stage gage. Datum of gage is 1,106.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 19, Jan. 21-24, Feb. 1, June 8, 18, 19, and July 20. Records good.

AVERAGE DISCHARGE.--22 years, 286 ft<sup>3</sup>/s, 36.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 12.30 ft minimum, 21 ft<sup>3</sup>/s Jan. 18, 1981, gage height, 1.13 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1200 | *9,740                            | *9.73               | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 37 ft<sup>3</sup>/s Sept. 30, gage height 1.26 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|--------|------|------|-------|------|------|------|------|------|------|-------|
| 1           | 70    | 57     | 194  | 156  | 4240  | 361  | 248  | 140  | 109  | 159  | 181  | 93    |
| 2           | 57    | 58     | 164  | 559  | 2240  | 324  | 210  | 140  | 133  | 151  | 200  | 82    |
| 3           | 49    | 62     | 180  | 527  | 1170  | 286  | 195  | 204  | 131  | 104  | 131  | 75    |
| 4           | 45    | 59     | 151  | 584  | 735   | 262  | 186  | 176  | 108  | 99   | 104  | 72    |
| 5           | 45    | 69     | 144  | 475  | 633   | 293  | 183  | 155  | 95   | 90   | 89   | 67    |
| 6           | 43    | 75     | 211  | 381  | 617   | 241  | 351  | 143  | 88   | 83   | 87   | 74    |
| 7           | 41    | 68     | 169  | 325  | 490   | 224  | 261  | 138  | 177  | 85   | 89   | 114   |
| 8           | 41    | 63     | 160  | 277  | 392   | 208  | 243  | 155  | 230  | 75   | 82   | 75    |
| 9           | 42    | 62     | 150  | 240  | 341   | 281  | 221  | 171  | 138  | 70   | 74   | 70    |
| 10          | 54    | 64     | 144  | 217  | 308   | 244  | 204  | 159  | 114  | 70   | 97   | 62    |
| 11          | 50    | 121    | 138  | 207  | 330   | 228  | 190  | 149  | 124  | 161  | 88   | 59    |
| 12          | 44    | 90     | 128  | 176  | 523   | 235  | 176  | 249  | 218  | 86   | 72   | 56    |
| 13          | 44    | 75     | 121  | 161  | 394   | 215  | 167  | 381  | 182  | 75   | 74   | 54    |
| 14          | 43    | 69     | 115  | 159  | 348   | 204  | 160  | 277  | 146  | 77   | 68   | 51    |
| 15          | 43    | 66     | 110  | 146  | 312   | 192  | 253  | 225  | 123  | 81   | 59   | 48    |
| 16          | 43    | 93     | 105  | 135  | 280   | 179  | 298  | 189  | 111  | 78   | 58   | 47    |
| 17          | 60    | 86     | 101  | 143  | 262   | 173  | 257  | 188  | 111  | 65   | 223  | 45    |
| 18          | 54    | 76     | 99   | 133  | 240   | 160  | 237  | 323  | 170  | 61   | 333  | 44    |
| 19          | 46    | 404    | 97   | 130  | 292   | 150  | 217  | 254  | 135  | 58   | 201  | 42    |
| 20          | 44    | 244    | 171  | 111  | 324   | 146  | 205  | 213  | 121  | 54   | 202  | 41    |
| 21          | 45    | 163    | 183  | 70   | 334   | 144  | 189  | 184  | 109  | 52   | 234  | 39    |
| 22          | 48    | 134    | 293  | 65   | 368   | 175  | 174  | 164  | 94   | 53   | 153  | 39    |
| 23          | 75    | 114    | 254  | 80   | 464   | 179  | 161  | 181  | 91   | 115  | 125  | 39    |
| 24          | 152   | 101    | 219  | 130  | 567   | 233  | 170  | 178  | 90   | 93   | 124  | 49    |
| 25          | 91    | 93     | 335  | 131  | 583   | 248  | 154  | 258  | 86   | 64   | 210  | 50    |
| 26          | 72    | 87     | 300  | 106  | 621   | 241  | 141  | 192  | 79   | 74   | 171  | 47    |
| 27          | 62    | 82     | 260  | 107  | 488   | 243  | 137  | 168  | 75   | 87   | 170  | 70    |
| 28          | 58    | 511    | 227  | 110  | 414   | 247  | 165  | 149  | 70   | 94   | 155  | 44    |
| 29          | 77    | 307    | 201  | 108  | ---   | 250  | 212  | 145  | 97   | 91   | 130  | 40    |
| 30          | 66    | 226    | 182  | 106  | ---   | 229  | 152  | 131  | 75   | 80   | 119  | 38    |
| 31          | 60    | ---    | 166  | 229  | ---   | 243  | ---  | 118  | ---  | 75   | 107  | ---   |
| TOTAL       | 1764  | 3779   | 5472 | 6484 | 18310 | 7038 | 6117 | 5897 | 3630 | 2660 | 4210 | 1726  |
| MEAN        | 56.9  | 126    | 177  | 209  | 654   | 227  | 204  | 190  | 121  | 85.8 | 136  | 57.5  |
| MAX         | 152   | 511    | 335  | 584  | 4240  | 361  | 351  | 381  | 230  | 161  | 333  | 114   |
| MIN         | 41    | 57     | 97   | 65   | 240   | 144  | 137  | 118  | 70   | 52   | 58   | 38    |
| CFSM        | .54   | 1.19   | 1.67 | 1.97 | 6.17  | 2.14 | 1.92 | 1.79 | 1.14 | .81  | 1.28 | .54   |
| IN.         | .62   | 1.33   | 1.92 | 2.28 | 6.43  | 2.47 | 2.15 | 2.07 | 1.27 | .93  | 1.48 | .61   |
| CAL YR 1984 | TOTAL | 109098 | MEAN | 298  | MAX   | 5420 | MIN  | 41   | CFSM | 2.81 | IN.  | 38.29 |
| WTR YR 1985 | TOTAL | 67087  | MEAN | 184  | MAX   | 4240 | MIN  | 38   | CFSM | 1.74 | IN.  | 23.54 |

## TENNESSEE RIVER BASIN

03498500 LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, Hydrologic Unit 06010201, on right bank on downstream side of bridge on U. S. Highway 411, 0.8 mi downstream from Crooked Creek, 5.0 mi east of Maryville, and at mile 17.3.

DRAINAGE AREA.--269 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20-25. Diurnal fluctuations at low flow caused by small mills above station. The town of Maryville diverted an average of about 2.8 ft<sup>3</sup>/s for municipal supply 300 ft upstream from gage. Records good.

AVERAGE DISCHARGE.--34 years, 530 ft<sup>3</sup>/s, 27.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft<sup>3</sup>/s, Mar. 12, 1963, gage height, 24.20 ft, from rating curve extended above 20,000 ft<sup>3</sup>/s on basis of area-velocity study and road overflow computations; minimum, 32 ft<sup>3</sup>/s, Aug. 27, 1956; minimum gage height, 6.16 ft, Aug. 11, 1980; minimum daily, 44 ft<sup>3</sup>/s, Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 31 ft, discharge, 50,000 ft<sup>3</sup>/s, and flood of April 1, 1896, reached a stage of 26 ft, discharge, 36,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1630 | *16,600                           | *19.69              | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 62 ft<sup>3</sup>/s, Sept. 14, gage height, 6.21 ft; minimum daily, 73 ft<sup>3</sup>/s, Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC  | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|--------|------|-------|-------|-------|-------|------|------|------|------|-------|
| 1           | 111   | 102    | 297  | 262   | 9010  | 623   | 452   | 245  | 180  | 206  | 163  | 140   |
| 2           | 117   | 101    | 249  | 785   | 4730  | 572   | 379   | 244  | 184  | 263  | 332  | 123   |
| 3           | 102   | 109    | 270  | 837   | 2210  | 517   | 360   | 303  | 240  | 192  | 211  | 113   |
| 4           | 95    | 106    | 236  | 978   | 1320  | 478   | 346   | 296  | 186  | 156  | 162  | 108   |
| 5           | 93    | 106    | 221  | 847   | 1080  | 508   | 334   | 255  | 165  | 157  | 139  | 105   |
| 6           | 90    | 119    | 306  | 652   | 1090  | 452   | 616   | 235  | 156  | 139  | 129  | 103   |
| 7           | 89    | 113    | 293  | 548   | 908   | 418   | 476   | 225  | 211  | 138  | 144  | 158   |
| 8           | 86    | 105    | 257  | 467   | 748   | 399   | 435   | 239  | 369  | 129  | 136  | 123   |
| 9           | 86    | 102    | 237  | 405   | 653   | 497   | 402   | 290  | 238  | 120  | 124  | 124   |
| 10          | 88    | 104    | 223  | 366   | 595   | 469   | 374   | 267  | 203  | 118  | 130  | 102   |
| 11          | 98    | 165    | 214  | 349   | 562   | 439   | 352   | 246  | 199  | 343  | 137  | 97    |
| 12          | 92    | 152    | 197  | 315   | 1070  | 438   | 333   | 248  | 289  | 175  | 121  | 93    |
| 13          | 88    | 122    | 185  | 281   | 815   | 420   | 315   | 488  | 314  | 133  | 111  | 90    |
| 14          | 86    | 113    | 175  | 279   | 707   | 397   | 305   | 370  | 241  | 124  | 114  | 79    |
| 15          | 83    | 110    | 165  | 266   | 642   | 380   | 375   | 314  | 212  | 120  | 103  | 83    |
| 16          | 83    | 127    | 162  | 229   | 578   | 356   | 535   | 282  | 191  | 131  | 99   | 81    |
| 17          | 88    | 141    | 156  | 270   | 556   | 344   | 435   | 263  | 182  | 114  | 185  | 80    |
| 18          | 108   | 121    | 151  | 265   | 547   | 328   | 394   | 391  | 359  | 107  | 459  | 79    |
| 19          | 96    | 399    | 146  | 250   | 740   | 309   | 369   | 353  | 274  | 102  | 304  | 77    |
| 20          | 100   | 385    | 198  | 220   | 871   | 300   | 349   | 298  | 240  | 98   | 219  | 76    |
| 21          | 105   | 244    | 371  | 150   | 780   | 294   | 330   | 279  | 194  | 93   | 335  | 74    |
| 22          | 95    | 192    | 448  | 140   | 728   | 324   | 305   | 257  | 170  | 87   | 224  | 73    |
| 23          | 118   | 160    | 442  | 170   | 758   | 356   | 284   | 261  | 161  | 198  | 183  | 73    |
| 24          | 226   | 144    | 366  | 290   | 816   | 410   | 297   | 270  | 152  | 177  | 180  | 78    |
| 25          | 160   | 132    | 689  | 290   | 829   | 430   | 282   | 348  | 148  | 122  | 268  | 92    |
| 26          | 122   | 126    | 590  | 260   | 980   | 415   | 253   | 297  | 137  | 115  | 265  | 81    |
| 27          | 111   | 120    | 463  | 260   | 803   | 408   | 239   | 258  | 128  | 129  | 226  | 96    |
| 28          | 106   | 557    | 395  | 259   | 695   | 411   | 269   | 237  | 123  | 143  | 254  | 89    |
| 29          | 119   | 508    | 345  | 255   | ---   | 412   | 360   | 235  | 187  | 136  | 191  | 77    |
| 30          | 118   | 344    | 309  | 250   | ---   | 390   | 275   | 217  | 130  | 133  | 178  | 74    |
| 31          | 106   | ---    | 282  | 505   | ---   | 394   | ---   | 195  | ---  | 122  | 158  | ---   |
| TOTAL       | 3265  | 5429   | 9038 | 11700 | 35821 | 12888 | 10830 | 8706 | 6163 | 4520 | 5984 | 2841  |
| MEAN        | 105   | 181    | 292  | 377   | 1279  | 416   | 361   | 281  | 205  | 146  | 193  | 94.7  |
| MAX         | 226   | 557    | 689  | 978   | 9010  | 623   | 616   | 488  | 369  | 343  | 459  | 158   |
| MIN         | 83    | 101    | 146  | 140   | 547   | 294   | 239   | 195  | 123  | 87   | 99   | 73    |
| CFSM        | .39   | .67    | 1.09 | 1.40  | 4.75  | 1.55  | 1.34  | 1.04 | .76  | .54  | .72  | .35   |
| IN.         | .45   | .75    | 1.25 | 1.62  | 4.95  | 1.78  | 1.50  | 1.20 | .85  | .63  | .83  | .39   |
| CAL YR 1984 | TOTAL | 199196 | MEAN | 544   | MAX   | 14300 | MIN   | 83   | CFSM | 2.02 | IN.  | 27.55 |
| WTR YR 1985 | TOTAL | 117185 | MEAN | 321   | MAX   | 9010  | MIN   | 73   | CFSM | 1.19 | IN.  | 16.21 |

## 03528000 CLINCH RIVER ABOVE TAZEWEILL, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, Hydrologic Unit 06010205, on right bank 0.4 mi upstream from Grissom Island, 4.6 mi downstream from Big War Creek, 10 mi east of Tazewell, and at mile 159.8.

DRAINAGE AREA.--1,474 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919 monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

REVISED RECORDS.--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,060.7 ft above National Geodetic Vertical Datum of 1929. Apr. 1, 1919 to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 mi downstream of datum 102.7 ft lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 mi downstream at datum 47.2 ft lower. Water-stage recorder at present site and datum since July 29, 1935.

REMARKS.--Estimated daily discharges: Jan. 22-30. Records good.

AVERAGE DISCHARGE.--67 years, 2,089 ft<sup>3</sup>/s, 19.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,100 ft<sup>3</sup>/s Apr. 5, 1977, gage height, 29.32 ft from floodmarks; minimum, 108 ft<sup>3</sup>/s Sept. 11, 1925; minimum gage height, at present site and datum, 0.33 ft Sept. 20, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1862 reached a stage of about 24 ft, present site and datum, from information by local resident; discharge, about 66,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage Height (ft) |
|--|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 2   | 2300 | *22,500                        | *12.66           | No other peak greater than base discharge. |      |                                |                  |
| Minimum discharge, 195 ft <sup>3</sup> /s Oct. 1, 2. |      |                                |                  |  |      |                                |                  |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 197   | 339    | 2060  | 2580  | 5560   | 3070  | 1460  | 1180  | 874   | 354   | 701   | 574   |       |
| 2           | 211   | 339    | 1550  | 4200  | 19100  | 2650  | 1520  | 1040  | 789   | 376   | 1770  | 543   |       |
| 3           | 234   | 321    | 1240  | 6180  | 19700  | 2320  | 1480  | 1030  | 808   | 433   | 4360  | 497   |       |
| 4           | 250   | 305    | 1030  | 6690  | 10300  | 2040  | 1390  | 1400  | 728   | 516   | 2640  | 452   |       |
| 5           | 253   | 304    | 884   | 6280  | 5920   | 1870  | 1300  | 1350  | 678   | 509   | 1590  | 412   |       |
| 6           | 248   | 320    | 902   | 6720  | 4760   | 1700  | 2180  | 1150  | 671   | 448   | 1120  | 385   |       |
| 7           | 232   | 325    | 1030  | 4990  | 4470   | 1540  | 2460  | 997   | 773   | 427   | 880   | 373   |       |
| 8           | 222   | 333    | 1070  | 3600  | 4170   | 1400  | 2360  | 891   | 1650  | 389   | 737   | 360   |       |
| 9           | 227   | 340    | 1020  | 2800  | 3450   | 1360  | 2370  | 803   | 1120  | 357   | 650   | 372   |       |
| 10          | 223   | 353    | 928   | 2250  | 2830   | 1340  | 2280  | 731   | 876   | 342   | 611   | 349   |       |
| 11          | 212   | 433    | 860   | 1900  | 2460   | 1420  | 2040  | 679   | 802   | 436   | 553   | 341   |       |
| 12          | 210   | 516    | 805   | 1650  | 3260   | 1430  | 1820  | 637   | 1190  | 397   | 535   | 367   |       |
| 13          | 208   | 539    | 773   | 1450  | 3820   | 1390  | 1650  | 640   | 2860  | 350   | 496   | 505   |       |
| 14          | 211   | 579    | 767   | 1280  | 3150   | 1370  | 1530  | 620   | 2540  | 359   | 477   | 396   |       |
| 15          | 215   | 578    | 752   | 1160  | 2600   | 1290  | 1450  | 588   | 1790  | 411   | 406   | 340   |       |
| 16          | 214   | 520    | 712   | 1070  | 2310   | 1220  | 1430  | 555   | 1270  | 358   | 377   | 311   |       |
| 17          | 212   | 493    | 668   | 988   | 2040   | 1160  | 1360  | 531   | 994   | 678   | 498   | 295   |       |
| 18          | 210   | 470    | 626   | 963   | 1910   | 1100  | 1290  | 695   | 902   | 696   | 1110  | 285   |       |
| 19          | 214   | 1080   | 616   | 950   | 1930   | 1040  | 1300  | 906   | 1100  | 492   | 1890  | 273   |       |
| 20          | 244   | 3620   | 645   | 876   | 2430   | 988   | 1200  | 842   | 905   | 390   | 1580  | 264   |       |
| 21          | 294   | 3060   | 869   | 670   | 3050   | 944   | 1120  | 776   | 743   | 343   | 1900  | 255   |       |
| 22          | 340   | 1830   | 1080  | 653   | 3580   | 948   | 1050  | 699   | 648   | 312   | 1400  | 250   |       |
| 23          | 532   | 1220   | 1450  | 653   | 4260   | 1040  | 987   | 676   | 583   | 317   | 1000  | 244   |       |
| 24          | 778   | 920    | 1680  | 674   | 5230   | 1290  | 937   | 757   | 552   | 296   | 826   | 242   |       |
| 25          | 784   | 752    | 1800  | 767   | 5480   | 1640  | 893   | 2260  | 564   | 298   | 943   | 242   |       |
| 26          | 707   | 646    | 2440  | 804   | 4900   | 1820  | 847   | 2960  | 508   | 274   | 1300  | 242   |       |
| 27          | 538   | 577    | 2720  | 782   | 4230   | 1890  | 816   | 2470  | 462   | 333   | 1240  | 241   |       |
| 28          | 443   | 1000   | 2240  | 752   | 3660   | 1720  | 836   | 1750  | 426   | 645   | 953   | 237   |       |
| 29          | 388   | 1640   | 1790  | 709   | ---    | 1580  | 1080  | 1330  | 391   | 1530  | 766   | 237   |       |
| 30          | 357   | 2170   | 1500  | 694   | ---    | 1460  | 1410  | 1120  | 365   | 1070  | 646   | 237   |       |
| 31          | 344   | ---    | 1400  | 749   | ---    | 1380  | ---   | 976   | ---   | 789   | 601   | ---   |       |
| TOTAL       | 9952  | 25922  | 37907 | 66484 | 140560 | 47410 | 43846 | 33039 | 28562 | 14925 | 34556 | 10121 |       |
| MEAN        | 321   | 864    | 1223  | 2145  | 5020   | 1529  | 1462  | 1066  | 952   | 481   | 1115  | 337   |       |
| MAX         | 784   | 3620   | 2720  | 6720  | 19700  | 3070  | 2460  | 2960  | 2860  | 1530  | 4360  | 574   |       |
| MIN         | 197   | 304    | 616   | 653   | 1910   | 944   | 816   | 531   | 365   | 274   | 377   | 237   |       |
| CFSM        | .22   | .59    | .83   | 1.46  | 3.41   | 1.04  | .99   | .72   | .65   | .33   | .76   | .23   |       |
| IN.         | .25   | .65    | .96   | 1.68  | 3.55   | 1.20  | 1.11  | .83   | .72   | .38   | .87   | .26   |       |
| CAL YR 1984 | TOTAL | 761710 |       | MEAN  | 2081   | MAX   | 39500 | MIN   | 197   | CFSM  | 1.41  | IN.   | 19.22 |
| WTR YR 1985 | TOTAL | 493284 |       | MEAN  | 1351   | MAX   | 19700 | MIN   | 197   | CFSM  | .92   | IN.   | 12.45 |



## TENNESSEE RIVER BASIN

03535000 BULLRUN CREEK NEAR HALLS CROSSROADS, TN

LOCATION.--Lat 36°06'52", long 83°59'16", Knox County, Hydrologic Unit 06010207, on left bank on downstream side of bridge on U. S. Highway 441, 2.1 mi downstream from Smith Branch, 4 mi northwest of Halls Crossroads, and at mile 16.3.

DRAINAGE AREA.--68.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20 to Feb. 1. Records good.

AVERAGE DISCHARGE.--28 years, 99.9 ft<sup>3</sup>/s, 19.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft<sup>3</sup>/s Apr. 4, 1977, gage height, 13.28 ft, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 2.5 ft<sup>3</sup>/s Aug. 12, 1974, caused by regulation upstream of unknown origin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1  | 1830 | *1,550                            | *8.57               | No other peak greater than base discharge. |      |                                   |                     |
| Minimum discharge, 6.5 ft <sup>3</sup> /s Sept. 23. |      |                                   |                     |  |      |                                   |                     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG    | SEP   |
|-------------|--------|---------|------|------|------|------|------|------|------|-------|--------|-------|
| 1           | 11     | 18      | 65   | 44   | 1030 | 78   | 66   | 32   | 16   | 18    | 38     | 16    |
| 2           | 11     | 17      | 51   | 54   | 691  | 75   | 55   | 140  | 16   | 21    | 50     | 14    |
| 3           | 10     | 17      | 44   | 51   | 294  | 69   | 52   | 294  | 17   | 18    | 20     | 13    |
| 4           | 9.8    | 16      | 38   | 71   | 196  | 65   | 51   | 108  | 18   | 15    | 14     | 12    |
| 5           | 9.7    | 18      | 35   | 107  | 173  | 66   | 48   | 75   | 16   | 14    | 12     | 11    |
| 6           | 10     | 18      | 70   | 87   | 172  | 60   | 183  | 61   | 44   | 15    | 13     | 11    |
| 7           | 11     | 17      | 56   | 73   | 135  | 55   | 115  | 53   | 255  | 14    | 13     | 11    |
| 8           | 12     | 16      | 48   | 62   | 110  | 54   | 92   | 48   | 253  | 13    | 13     | 11    |
| 9           | 16     | 15      | 43   | 52   | 97   | 81   | 76   | 44   | 72   | 12    | 11     | 10    |
| 10          | 16     | 38      | 40   | 47   | 89   | 66   | 67   | 43   | 45   | 14    | 10     | 10    |
| 11          | 15     | 104     | 38   | 44   | 86   | 63   | 61   | 47   | 44   | 23    | 9.3    | 9.6   |
| 12          | 16     | 46      | 34   | 39   | 391  | 62   | 57   | 45   | 52   | 14    | 8.6    | 8.8   |
| 13          | 16     | 32      | 32   | 36   | 232  | 57   | 53   | 36   | 42   | 12    | 8.2    | 8.3   |
| 14          | 16     | 27      | 30   | 34   | 168  | 55   | 51   | 33   | 29   | 11    | 12     | 7.9   |
| 15          | 17     | 24      | 28   | 33   | 139  | 53   | 73   | 30   | 25   | 13    | 8.6    | 7.7   |
| 16          | 22     | 29      | 26   | 31   | 119  | 50   | 77   | 28   | 23   | 12    | 8.9    | 7.7   |
| 17          | 25     | 25      | 26   | 33   | 113  | 49   | 61   | 29   | 24   | 12    | 59     | 7.6   |
| 18          | 27     | 23      | 25   | 33   | 121  | 47   | 55   | 30   | 34   | 9.7   | 41     | 7.4   |
| 19          | 27     | 170     | 24   | 31   | 143  | 46   | 52   | 26   | 25   | 9.2   | 18     | 7.3   |
| 20          | 37     | 81      | 27   | 29   | 185  | 44   | 49   | 23   | 21   | 9.0   | 14     | 7.2   |
| 21          | 33     | 50      | 41   | 28   | 163  | 43   | 46   | 22   | 18   | 8.6   | 12     | 7.1   |
| 22          | 126    | 38      | 77   | 30   | 138  | 47   | 44   | 26   | 17   | 8.6   | 11     | 7.1   |
| 23          | 283    | 33      | 64   | 32   | 120  | 50   | 41   | 27   | 17   | 8.5   | 9.8    | 6.8   |
| 24          | 164    | 29      | 51   | 33   | 109  | 56   | 40   | 27   | 20   | 8.5   | 16     | 8.2   |
| 25          | 46     | 26      | 134  | 35   | 98   | 56   | 39   | 25   | 49   | 8.4   | 80     | 8.8   |
| 26          | 30     | 24      | 113  | 33   | 109  | 53   | 36   | 21   | 24   | 9.7   | 375    | 9.2   |
| 27          | 24     | 22      | 82   | 32   | 92   | 50   | 37   | 19   | 19   | 18    | 65     | 9.4   |
| 28          | 22     | 249     | 64   | 30   | 83   | 50   | 41   | 18   | 16   | 22    | 35     | 8.3   |
| 29          | 22     | 125     | 56   | 29   | ---  | 50   | 43   | 18   | 15   | 12    | 25     | 7.5   |
| 30          | 24     | 74      | 49   | 28   | ---  | 48   | 35   | 17   | 14   | 17    | 20     | 7.2   |
| 31          | 22     | ---     | 47   | 100  | ---  | 49   | ---  | 16   | ---  | 28    | 19     | ---   |
| TOTAL       | 1130.5 | 1421    | 1558 | 1401 | 5596 | 1747 | 1796 | 1461 | 1280 | 428.2 | 1049.4 | 278.1 |
| MEAN        | 36.5   | 47.4    | 50.3 | 45.2 | 200  | 56.4 | 59.9 | 47.1 | 42.7 | 13.8  | 33.9   | 9.27  |
| MAX         | 283    | 249     | 134  | 107  | 1030 | 81   | 183  | 294  | 255  | 28    | 375    | 16    |
| MIN         | 9.7    | 15      | 24   | 28   | 83   | 43   | 35   | 16   | 14   | 8.4   | 8.2    | 6.8   |
| CFSM        | .53    | .69     | .73  | .66  | 2.92 | .82  | .87  | .69  | .62  | .20   | .49    | .14   |
| IN.         | .61    | .77     | .85  | .76  | 3.04 | .95  | .98  | .79  | .70  | .23   | .57    | .15   |
| CAL YR 1984 | TOTAL  | 47698.5 | MEAN | 130  | MAX  | 6130 | MIN  | 8.4  | CFSM | 1.90  | IN.    | 25.90 |
| WTR YR 1985 | TOTAL  | 19146.2 | MEAN | 52.5 | MAX  | 1030 | MIN  | 6.8  | CFSM | .77   | IN.    | 10.40 |

## TENNESSEE RIVER BASIN

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03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°53'07", long 84°18'03", Loudon County, Hydrologic Unit 06010201, at downstream side of Melton Hill Dam, 1.9 mi downstream from Hope Creek, and at mile 23.1.

DRAINAGE AREA.--3,343 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1936 to January 1941 (published as "near Wheat"), February 1941 to September 1960 (published as "near Scarboro"), October 1960 to September 1964 (published as "at Melton Hill Dam"), October 1967 to September 1968 (published as "near Oak Ridge"), October 1978 to current year. Equivalent record for the period October 1964 to December 1978 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to February 1941, at site 8.7 miles downstream at datum 717.36 ft higher. February 1941 to September 1962 at site 15.9 miles upstream at datum 753.35 ft higher. October 1962 to September 1964, headwater gage at upstream side of dam at present datum. October 1967 to September 1968, at site 8.6 miles downstream at datum 731.62 ft higher.

REMARKS.--Records good. Flow regulated by Melton Hill Lake (station 03535900) and Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--36 years, (1936-64, 1967-68, 1978-85), 4,647 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 39,600 ft<sup>3</sup>/s Feb. 18, 1937; minimum daily, no flow, many days since closure of Melton Hill Dam in August 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 12,200 ft<sup>3</sup>/s Jan. 21; minimum daily, no flow several days in May and June.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR   | APR   | MAY   | JUN   | JUL    | AUG    | SEP    |     |       |
|-------------|--------|---------|--------|--------|--------|-------|-------|-------|-------|--------|--------|--------|-----|-------|
| 1           | 7390   | 2350    | 775    | 2950   | 6730   | 4190  | 1200  | 733   | 400   | 3250   | 7450   | 7220   |     |       |
| 2           | 8040   | 1770    | 1100   | 4020   | 3990   | 2400  | 838   | 767   | 2300  | 2700   | 5650   | 4550   |     |       |
| 3           | 7540   | 383     | 5150   | 3150   | 3330   | 1970  | 833   | 3100  | 3240  | 2740   | 3600   | 7230   |     |       |
| 4           | 4870   | 400     | 5030   | 4500   | 3790   | 4870  | 1100  | 1100  | 4170  | 1920   | 2900   | 6670   |     |       |
| 5           | 3530   | 2120    | 4790   | 4550   | 1220   | 4690  | 1150  | 550   | 3780  | 2000   | 4900   | 5730   |     |       |
| 6           | 817    | 3340    | 4800   | 4200   | 767    | 6440  | 833   | 4900  | 2320  | 1100   | 4000   | 6550   |     |       |
| 7           | 888    | 3450    | 5140   | 5490   | 2650   | 3230  | 400   | 1000  | 1220  | 742    | 5520   | 5430   |     |       |
| 8           | 2670   | 4500    | 771    | 9770   | 5040   | 2570  | 2180  | 863   | 1900  | 2700   | 7100   | 2920   |     |       |
| 9           | 2620   | 2190    | 817    | 9370   | 2900   | 421   | 1470  | 771   | 0     | 3740   | 6370   | 4980   |     |       |
| 10          | 2740   | 2540    | 5420   | 5920   | 2020   | 417   | 3170  | 817   | 1960  | 3700   | 5480   | 4380   |     |       |
| 11          | 3650   | 2450    | 6570   | 4780   | 6390   | 1720  | 1670  | 783   | 1570  | 3450   | 4500   | 4200   |     |       |
| 12          | 2580   | 5820    | 5790   | 3490   | 6100   | 2530  | 1200  | 1350  | 2670  | 5190   | 5720   | 4200   |     |       |
| 13          | 2220   | 6590    | 8870   | 2000   | 2470   | 2450  | 1200  | 2300  | 875   | 1580   | 6290   | 4500   |     |       |
| 14          | 2240   | 4900    | 5930   | 6530   | 3680   | 4120  | 1250  | 871   | 917   | 851    | 5500   | 2820   |     |       |
| 15          | 5490   | 2600    | 4750   | 5340   | 3870   | 3170  | 1250  | 838   | 800   | 4770   | 6900   | 1980   |     |       |
| 16          | 4920   | 378     | 2800   | 5290   | 4700   | 2080  | 1190  | 767   | 733   | 2380   | 4830   | 4200   |     |       |
| 17          | 5270   | 571     | 5640   | 5220   | 2870   | 1200  | 892   | 992   | 1280  | 1840   | 4430   | 5520   |     |       |
| 18          | 2290   | 433     | 5870   | 5620   | 6020   | 4270  | 1700  | 400   | 1120  | 1330   | 3080   | 7050   |     |       |
| 19          | 1300   | 2020    | 6420   | 5330   | 6750   | 5490  | 821   | 21    | 1440  | 4610   | 5820   | 5550   |     |       |
| 20          | 383    | 4120    | 4140   | 9600   | 8600   | 4620  | 883   | 400   | 1160  | 3190   | 3930   | 6570   |     |       |
| 21          | 450    | 3790    | 4540   | 12200  | 4270   | 2470  | 863   | 2100  | 3270  | 3570   | 5680   | 2150   |     |       |
| 22          | 2130   | 2320    | 417    | 9150   | 2120   | 1230  | 2240  | 1750  | 783   | 7280   | 5280   | 417    |     |       |
| 23          | 1310   | 2510    | 400    | 6730   | 417    | 350   | 892   | 1100  | 21    | 6200   | 5370   | 2970   |     |       |
| 24          | 4200   | 2390    | 400    | 5790   | 438    | 438   | 875   | 400   | 3300  | 5350   | 3500   | 2870   |     |       |
| 25          | 2500   | 2000    | 1700   | 4470   | 2180   | 383   | 1210  | 400   | 5230  | 3820   | 4650   | 4260   |     |       |
| 26          | 1620   | 4680    | 3750   | 2330   | 2100   | 1450  | 1070  | 0     | 5250  | 3490   | 8470   | 5870   |     |       |
| 27          | 1240   | 2150    | 5440   | 2080   | 2500   | 3120  | 938   | 0     | 1330  | 2020   | 9820   | 6090   |     |       |
| 28          | 1300   | 2700    | 4550   | 5150   | 3440   | 2880  | 367   | 3270  | 2530  | 1750   | 4870   | 4370   |     |       |
| 29          | 4350   | 2000    | 3530   | 5550   | ---    | 3690  | 438   | 1700  | 1970  | 4720   | 7060   | 3220   |     |       |
| 30          | 5690   | 2350    | 2470   | 3550   | ---    | 1600  | 1470  | 2980  | 821   | 5470   | 6180   | 5170   |     |       |
| 31          | 6670   | ---     | 3550   | 6870   | ---    | 1170  | ---   | 2730  | ---   | 7220   | 6490   | ---    |     |       |
| TOTAL       | 102908 | 79815   | 121320 | 170990 | 101352 | 81629 | 35593 | 39753 | 58360 | 104673 | 171340 | 139637 |     |       |
| MEAN        | 3320   | 2661    | 3914   | 5516   | 3620   | 2633  | 1186  | 1282  | 1945  | 3377   | 5527   | 4655   |     |       |
| MAX         | 8040   | 6590    | 8870   | 12200  | 8600   | 6440  | 3170  | 4900  | 5250  | 7280   | 9820   | 7230   |     |       |
| MIN         | 383    | 378     | 400    | 2000   | 417    | 350   | 367   | .00   | .00   | 742    | 2900   | 417    |     |       |
| CAL YR 1984 | TOTAL  | 1878203 | MEAN   | 5132   | MAX    | 29900 | MIN   | .00   | MEAN* | 5093   | CFSM*  | 1.52   | IN* | 20.74 |
| WTR YR 1985 | TOTAL  | 1207370 | MEAN   | 3308   | MAX    | 12200 | MIN   | .00   | MEAN* | 3117   | CFSM*  | .93    | IN* | 12.65 |

\* Adjusted for change in contents in Norris and Melton Hill Lakes.

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to current year.

WATER TEMPERATURES: March 1981 to current year.

INSTRUMENTATION.--Water-quality monitor since March 21, 1981.

REMARKS.--Flow regulated by Melton Hill and Norris Lakes.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 449 microsiemens, Oct. 28, 1981; minimum, 186 microsiemens, May 29, 1982.

WATER TEMPERATURES: Maximum, 23.5°C, May 17, 1982; minimum, 4.0°C, Jan. 27, 1983, Jan. 21, 22, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 272 microsiemens, Sept. 29, 30; minimum, 224 microsiemens, Oct. 1, Feb. 18, 19.

WATER TEMPERATURES: Maximum, 21.5°C, May 28, June 25, 27, 29; minimum, 4.5°C, Jan. 26, 27, Feb. 9, 14, 15, 16.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) |
|-------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|
| OCT   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 17... | 1100 | 12800   | 235   | 7.2                            | 18.0                        | 746  | 1.8                          | 6.6                                 | 71   | K6   |
| DEC   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 07... | 1120 | 6000  | 235   | 8.0                            | 10.0                        | 754  | 1.0                          | 9.0                                 | 81   | K1   |
| FEB   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 27... | 1100 | 1600  | 240   | 8.1                            | 8.0                         | 750  | 2.0                          | 12.3                                | 106  | K1   |
| APR   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 16... | 1100 | 200   | 250   | 8.3                            | 13.5                        | 741  | .90                          | 10.3                                | 102  | K3   |
| JUN   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 05... | 1330 | 9400  | 255   | 7.8                            | 20.0                        | 743  | 1.1                          | 5.6                                 | 63   | K1   |
| AUG   |      |   |   |                                |                             |  |                              |                                     |  |  |
| 08... | 1300 | 19200   | 255   | 7.7                            | 17.5                        | 742  | 1.5                          | 7.8                                 | 84   | K5   |

| DATE  | STREP-<br>TOCOC-<br>CI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) |
|-------|---|--|--|--|--|--|-------------------|---|---|---|
| OCT   |   |  |  |  |  |  |                   |   |   |   |
| 17... | K5  | 120                                    | 11   | 34   | 8.7  | 2.9  | 5                 | .1                                      | 1.4   | 110   |
| DEC   |   |  |  |  |  |  |                   |   |   |   |
| 07... | K2  | 120                                    | 18   | 32   | 9.3  | 4.1  | 7                 | .2                                      | 1.5   | 100   |
| FEB   |   |  |  |  |  |  |                   |   |   |   |
| 27... | K1  | 130                                    | 16   | 34   | 9.9  | 4.9  | 8                 | .2                                      | 1.6   | 110   |
| APR   |   |  |  |  |  |  |                   |   |   |   |
| 16... | K3  | 130                                    | 14   | 35   | 10   | 4.8  | 7                 | .2                                      | 1.5   | 115   |
| JUN   |   |  |  |  |  |  |                   |   |   |   |
| 05... | 31  | 120                                    | 9  | 32   | 9.6  | 4.8  | 8                 | .2                                      | 1.5   | 111   |
| AUG   |   |  |  |  |  |  |                   |   |   |   |
| 08... | 85  | 120                                    | 12   | 33   | 9.6  | 4.4  | 7                 | .2                                      | 1.6   | 110   |

| DATE  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITU-<br>ENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|-------|---|---|---|--|---|--|---|---|---|---|
| OCT   |   |   |   |  |   |  |   |   |   |   |
| 17... | 13  | 18  | 2.8   | <.10   | 5.1   | 143  | 140   | .19   | 4940  | .44   |
| DEC   |   |   |   |  |   |  |   |   |   |   |
| 07... | 1.9   | 22  | 4.3   | .10  | 2.8   | --   | 140   | --  | --  | .29   |
| FEB   |   |   |   |  |   |  |   |   |   |   |
| 27... | 1.7   | 22  | 4.4   | .10  | 2.3   | 145  | 150   | .20   | 626   | .30   |
| APR   |   |   |   |  |   |  |   |   |   |   |
| 16... | 1.1   | 24  | 4.3   | .10  | 1.6   | 152  | 150   | .21   | 82  | .21   |
| JUN   |   |   |   |  |   |  |   |   |   |   |
| 05... | 3.4   | 24  | 4.7   | .10  | 2.0   | 173  | 150   | .24   | 4390  | .22   |
| AUG   |   |   |   |  |   |  |   |   |   |   |
| 08... | 4.2   | 22  | 4.5   | <.10   | 3.1   | 142  | 140   | .19   | 7360  | .45   |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

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03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|---|---|--|---|--|--|---|---|---|---|
| OCT<br>17... | .090  | .12   | .20  | <.010                                       | <.010  | <.010  | --  | 7   | 242   | 65  |
| DEC<br>07... | .140  | .18   | .30  | .010  | <.010  | .010   | .03   | 5   | 81  | 75  |
| FEB<br>27... | .020  | .03   | .60  | .020  | <.010  | <.010  | --  | 3   | 13  | 88  |
| APR<br>16... | .150  | .19   | .20  | .020  | <.010  | <.010  | --  | 4   | 2.2   | 78  |
| JUN<br>05... | .030  | .04   | .10  | --  | --   | .020   | .06   | 8   | 203   | 81  |
| AUG<br>08... | <.010   | --  | .40  | <.010                                       | <.010  | <.010  | --  | 9   | 467   | 85  |

| DATE         | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) |
|--------------|---|--|--|--|--|---|--|--|--|--|
| OCT<br>17... | <10   | <1   | 36   | <.5  | <1   | <1  | <3   | 1  | <3   | 1  |
| FEB<br>27... | 30  | <1   | 33   | <.5  | <1   | <1  | <3   | 1  | 6  | 1  |
| APR<br>16... | 10  | <1   | 33   | <.5  | <1   | <1  | <3   | 3  | 4  | 2  |
| JUN<br>05... | 10  | <1   | 30   | .9   | <1   | 5   | <3   | 3  | <3   | 2  |

| DATE         | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|---|--|--|--|--|
| OCT<br>17... | 14   | 1  | <.1  | <10   | 1  | <1  | <1   | 79   | <6   | 6  |
| FEB<br>27... | <4   | 3  | <.1  | <10   | <1   | <1  | 1  | 90   | <6   | 4  |
| APR<br>16... | 12   | <1   | <.1  | <10   | 1  | <1  | <1   | 95   | <6   | 6  |
| JUN<br>05... | <4   | 2  | <.1  | <10   | 1  | <1  | <1   | 87   | <6   | 5  |



## TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER |     |     | NOVEMBER |     |     | DECEMBER |     |     | JANUARY |     |     |      |
| 1       | 226 | 224 | 225      | 240 | 238 | 239      | 245 | 244 | 245     | 253 | 246 | 251  |
| 2       | 227 | 225 | 226      | 241 | 239 | 240      | 245 | 244 | 244     | 252 | 249 | 251  |
| 3       | 227 | 225 | 226      | 241 | 239 | 240      | 246 | 243 | 245     | 252 | 250 | 251  |
| 4       | 228 | 226 | 227      | 241 | 239 | 240      | 244 | 239 | 241     | 252 | 250 | 251  |
| 5       | 229 | 227 | 228      | 241 | 240 | 241      | 239 | 235 | 237     | 255 | 251 | 253  |
| 6       | 230 | 228 | 229      | 240 | 239 | 240      | 236 | 234 | 235     | 254 | 252 | 253  |
| 7       | 231 | 228 | 229      | 241 | 239 | 240      | 236 | 234 | 235     | 254 | 252 | 253  |
| 8       | 231 | 228 | 229      | 242 | 239 | 241      | 236 | 234 | 235     | 253 | 251 | 252  |
| 9       | 232 | 229 | 230      | 243 | 241 | 242      | 236 | 234 | 235     | 254 | 251 | 253  |
| 10      | 232 | 230 | 231      | 246 | 239 | 243      | 235 | 233 | 234     | 255 | 252 | 253  |
| 11      | 232 | 231 | 232      | 245 | 244 | 244      | 234 | 233 | 233     | 254 | 252 | 253  |
| 12      | 234 | 231 | 233      | 247 | 244 | 245      | 237 | 234 | 235     | 254 | 252 | 253  |
| 13      | 234 | 232 | 233      | 251 | 248 | 249      | 244 | 236 | 239     | 255 | 252 | 253  |
| 14      | 235 | 233 | 234      | 251 | 249 | 250      | 251 | 243 | 247     | 253 | 251 | 252  |
| 15      | 236 | 234 | 235      | 250 | 249 | 250      | 254 | 249 | 252     | 254 | 252 | 253  |
| 16      | 237 | 235 | 236      | 251 | 249 | 250      | 254 | 252 | 253     | 255 | 252 | 254  |
| 17      | 237 | 234 | 236      | 251 | 249 | 250      | 255 | 251 | 254     | 255 | 251 | 252  |
| 18      | 237 | 236 | 236      | 251 | 249 | 250      | 253 | 252 | 252     | 253 | 250 | 251  |
| 19      | 238 | 236 | 237      | 251 | 249 | 250      | 253 | 250 | 252     | 250 | 248 | 249  |
| 20      | 237 | 235 | 236      | 250 | 249 | 250      | 253 | 250 | 252     | 248 | 244 | 246  |
| 21      | 237 | 236 | 236      | 251 | 248 | 249      | 253 | 252 | 253     | 248 | 243 | 244  |
| 22      | 237 | 235 | 237      | 250 | 248 | 249      | 254 | 252 | 253     | 246 | 244 | 245  |
| 23      | 237 | 235 | 236      | 249 | 246 | 248      | 254 | 252 | 253     | 245 | 244 | 244  |
| 24      | 237 | 234 | 235      | 247 | 246 | 246      | 254 | 250 | 252     | 248 | 243 | 245  |
| 25      | 236 | 235 | 236      | 247 | 245 | 246      | 253 | 251 | 252     | 248 | 244 | 245  |
| 26      | 237 | 234 | 236      | 246 | 245 | 246      | 253 | 252 | 252     | 248 | 244 | 246  |
| 27      | 237 | 235 | 236      | 247 | 245 | 246      | 253 | 251 | 252     | 250 | 245 | 246  |
| 28      | 237 | 235 | 236      | 246 | 243 | 245      | 253 | 250 | 252     | 247 | 244 | 245  |
| 29      | 237 | 236 | 237      | 247 | 245 | 245      | 253 | 251 | 252     | 246 | 243 | 244  |
| 30      | 238 | 237 | 238      | 245 | 244 | 245      | 253 | 249 | 251     | 247 | 244 | 245  |
| 31      | 238 | 237 | 237      | --- | --- | ---      | 253 | 251 | 252     | 247 | 244 | 245  |
| MONTH   | 238 | 224 | 233      | 251 | 238 | 245      | 255 | 233 | 246     | 255 | 243 | 249  |

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 246 | 242 | 243   | 243 | 241 | 242   | 255 | 250 | 252  | 250 | 247 | 248  |
| 2        | 244 | 241 | 243   | 245 | 241 | 243   | 256 | 251 | 253  | 252 | 245 | 248  |
| 3        | 244 | 241 | 242   | 247 | 242 | 243   | 258 | 250 | 252  | 250 | 238 | 243  |
| 4        | 243 | 241 | 242   | 245 | 242 | 244   | 260 | 249 | 253  | 247 | 239 | 242  |
| 5        | 244 | 239 | 242   | 246 | 243 | 244   | 254 | 249 | 252  | 254 | 241 | 245  |
| 6        | 244 | 240 | 241   | 247 | 243 | 244   | 255 | 249 | 252  | 255 | 243 | 246  |
| 7        | 244 | 240 | 242   | 247 | 242 | 245   | 257 | 249 | 253  | 249 | 244 | 246  |
| 8        | 243 | 240 | 242   | 248 | 244 | 246   | 253 | 248 | 250  | 252 | 245 | 249  |
| 9        | 244 | 241 | 242   | 249 | 244 | 246   | 253 | 248 | 251  | 250 | 241 | 246  |
| 10       | 244 | 241 | 242   | 248 | 243 | 246   | 252 | 248 | 250  | 255 | 244 | 249  |
| 11       | 244 | 239 | 242   | 248 | 242 | 245   | 256 | 248 | 252  | 256 | 244 | 249  |
| 12       | 243 | 233 | 237   | 249 | 245 | 246   | 257 | 247 | 252  | 259 | 243 | 251  |
| 13       | 235 | 232 | 234   | 248 | 244 | 246   | 257 | 247 | 252  | 255 | 242 | 249  |
| 14       | 235 | 231 | 233   | 250 | 245 | 247   | 257 | 248 | 252  | 253 | 244 | 249  |
| 15       | 235 | 230 | 232   | 248 | 245 | 247   | 256 | 246 | 252  | 255 | 246 | 250  |
| 16       | 231 | 229 | 230   | 250 | 245 | 247   | 256 | 248 | 251  | 253 | 246 | 249  |
| 17       | 232 | 227 | 229   | 251 | 246 | 248   | 255 | 248 | 252  | 251 | 246 | 248  |
| 18       | 229 | 224 | 226   | 251 | 245 | 248   | 257 | 248 | 252  | 251 | 248 | 250  |
| 19       | 232 | 224 | 228   | 251 | 246 | 248   | 256 | 247 | 252  | 250 | 247 | 249  |
| 20       | 239 | 233 | 236   | 253 | 247 | 249   | 257 | 248 | 252  | 250 | 247 | 249  |
| 21       | 240 | 238 | 239   | 255 | 247 | 250   | 256 | 248 | 251  | 250 | 245 | 248  |
| 22       | 241 | 238 | 240   | 255 | 247 | 252   | 254 | 248 | 251  | 247 | 245 | 246  |
| 23       | 242 | 238 | 240   | 254 | 247 | 250   | 253 | 249 | 250  | 250 | 246 | 248  |
| 24       | 241 | 238 | 240   | 254 | 247 | 251   | 254 | 250 | 252  | 250 | 245 | 247  |
| 25       | 245 | 238 | 240   | 255 | 248 | 253   | 254 | 248 | 251  | 248 | 245 | 246  |
| 26       | 241 | 237 | 240   | 254 | 249 | 251   | 255 | 249 | 252  | 245 | 242 | 244  |
| 27       | 243 | 239 | 241   | 253 | 249 | 251   | 256 | 247 | 250  | 249 | 242 | 244  |
| 28       | 244 | 238 | 242   | 256 | 249 | 252   | 253 | 244 | 250  | 252 | 242 | 246  |
| 29       | --- | --- | ---   | 257 | 249 | 252   | 256 | 248 | 251  | 246 | 242 | 243  |
| 30       | --- | --- | ---   | 254 | 248 | 251   | 252 | 245 | 248  | 249 | 243 | 247  |
| 31       | --- | --- | ---   | 258 | 248 | 253   | --- | --- | ---  | 252 | 248 | 250  |
| MONTH    | 246 | 224 | 238   | 258 | 241 | 248   | 260 | 244 | 251  | 259 | 238 | 247  |

## 03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
|       | JUNE |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 253  | 251 | 252  | 247  | 240 | 243  | 255    | 249 | 252  | 257       | 253 | 255  |
| 2     | 254  | 250 | 252  | 246  | 244 | 245  | 252    | 247 | 250  | 256       | 254 | 254  |
| 3     | 252  | 249 | 251  | 247  | 245 | 246  | 251    | 248 | 249  | 259       | 255 | 257  |
| 4     | 251  | 249 | 250  | 247  | 244 | 246  | 253    | 251 | 252  | 261       | 259 | 260  |
| 5     | 252  | 249 | 250  | 247  | 244 | 246  | 255    | 253 | 254  | 263       | 260 | 261  |
| 6     | 250  | 248 | 249  | 251  | 248 | 249  | 255    | 253 | 254  | 264       | 261 | 263  |
| 7     | 250  | 248 | 249  | 253  | 248 | 251  | 257    | 253 | 255  | 265       | 264 | 264  |
| 8     | 253  | 249 | 250  | 250  | 248 | 249  | 256    | 251 | 253  | 265       | 264 | 264  |
| 9     | 254  | 252 | 253  | 251  | 245 | 248  | 255    | 251 | 253  | 266       | 264 | 265  |
| 10    | 255  | 251 | 254  | 248  | 245 | 246  | 257    | 254 | 256  | 267       | 265 | 266  |
| 11    | 252  | 248 | 250  | 250  | 245 | 247  | 259    | 256 | 258  | 267       | 265 | 266  |
| 12    | 252  | 248 | 250  | 248  | 243 | 246  | 260    | 257 | 259  | 267       | 266 | 266  |
| 13    | 252  | 247 | 251  | 247  | 244 | 246  | 260    | 257 | 258  | 267       | 266 | 266  |
| 14    | 250  | 245 | 248  | 250  | 248 | 249  | 259    | 257 | 258  | 268       | 266 | 267  |
| 15    | 248  | 245 | 246  | 251  | 247 | 250  | 260    | 257 | 259  | 268       | 267 | 267  |
| 16    | 251  | 245 | 248  | 250  | 245 | 248  | 261    | 251 | 258  | 268       | 267 | 267  |
| 17    | 253  | 248 | 250  | 248  | 244 | 246  | 255    | 240 | 250  | 269       | 267 | 268  |
| 18    | 251  | 248 | 249  | 248  | 244 | 246  | 256    | 253 | 254  | 270       | 269 | 269  |
| 19    | 252  | 250 | 251  | 249  | 247 | 248  | 258    | 254 | 256  | 271       | 270 | 270  |
| 20    | 252  | 248 | 251  | 250  | 247 | 248  | 258    | 256 | 257  | 271       | 270 | 270  |
| 21    | 249  | 246 | 248  | 251  | 246 | 248  | 258    | 254 | 257  | 271       | 269 | 270  |
| 22    | 248  | 246 | 247  | 250  | 243 | 247  | 258    | 252 | 256  | 271       | 269 | 270  |
| 23    | 248  | 245 | 246  | 249  | 244 | 247  | 257    | 252 | 254  | 271       | 269 | 270  |
| 24    | 251  | 243 | 247  | 250  | 247 | 248  | 259    | 253 | 255  | 270       | 269 | 270  |
| 25    | 246  | 239 | 244  | 252  | 247 | 249  | 259    | 256 | 258  | 270       | 268 | 269  |
| 26    | 245  | 240 | 242  | 253  | 251 | 252  | 257    | 253 | 255  | 271       | 269 | 270  |
| 27    | 244  | 241 | 242  | 254  | 251 | 253  | 255    | 253 | 254  | 271       | 268 | 270  |
| 28    | 246  | 243 | 244  | 253  | 249 | 251  | 259    | 254 | 256  | 271       | 269 | 270  |
| 29    | 247  | 244 | 245  | 252  | 250 | 251  | 260    | 259 | 259  | 272       | 269 | 270  |
| 30    | 249  | 239 | 246  | 252  | 249 | 251  | 261    | 257 | 259  | 272       | 269 | 270  |
| 31    | ---  | --- | ---  | 252  | 250 | 251  | 260    | 255 | 258  | ---       | --- | ---  |
| MONTH | 255  | 239 | 249  | 254  | 240 | 248  | 261    | 240 | 255  | 272       | 253 | 266  |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|---------|------|------|----------|------|------|----------|------|------|---------|------|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | 18.0    | 17.5 | 18.0 | 20.0     | 19.5 | 19.5 | 11.5     | 11.5 | 11.5 | 13.0    | 12.5 | 12.5 |
| 2     | 17.5    | 17.5 | 17.5 | 19.5     | 19.0 | 19.5 | 12.0     | 11.5 | 11.5 | 12.5    | 12.0 | 12.5 |
| 3     | 17.5    | 17.0 | 17.0 | 19.5     | 18.5 | 19.0 | 12.0     | 11.5 | 11.5 | 12.5    | 12.0 | 12.5 |
| 4     | 17.5    | 16.5 | 17.0 | 19.0     | 18.5 | 19.0 | 11.5     | 11.0 | 11.0 | 12.0    | 11.5 | 12.0 |
| 5     | 17.5    | 17.0 | 17.0 | 19.0     | 18.5 | 18.5 | 11.0     | 11.0 | 11.0 | 12.0    | 11.0 | 11.5 |
| 6     | 17.5    | 17.0 | 17.0 | 19.0     | 18.0 | 18.5 | 11.0     | 10.5 | 10.5 | 11.5    | 11.0 | 11.5 |
| 7     | 17.5    | 17.0 | 17.5 | 18.5     | 17.5 | 18.0 | 10.5     | 9.5  | 10.0 | 11.5    | 11.0 | 11.0 |
| 8     | 17.0    | 17.0 | 17.0 | 19.0     | 17.0 | 19.0 | 10.0     | 9.0  | 9.5  | 11.0    | 10.5 | 11.0 |
| 9     | 17.5    | 17.0 | 17.5 | 19.0     | 18.5 | 18.5 | 10.0     | 9.5  | 9.5  | 11.0    | 10.0 | 10.5 |
| 10    | 18.0    | 17.5 | 17.5 | 18.5     | 18.0 | 18.0 | 10.0     | 9.5  | 10.0 | 10.5    | 9.5  | 10.0 |
| 11    | 18.0    | 17.5 | 18.0 | 18.0     | 17.0 | 17.5 | 10.0     | 9.5  | 10.0 | 9.5     | 8.5  | 9.0  |
| 12    | 18.0    | 17.5 | 18.0 | 17.5     | 17.0 | 17.5 | 10.0     | 9.5  | 10.0 | 8.5     | 8.0  | 8.0  |
| 13    | 18.5    | 18.0 | 18.0 | 17.0     | 16.5 | 16.5 | 10.0     | 9.0  | 9.5  | 8.5     | 7.0  | 7.5  |
| 14    | 19.0    | 18.0 | 18.0 | 16.5     | 16.0 | 16.0 | 10.0     | 9.0  | 9.5  | 8.0     | 7.5  | 7.5  |
| 15    | 18.5    | 18.0 | 18.0 | 16.0     | 15.5 | 15.5 | 10.5     | 9.5  | 10.0 | 8.0     | 6.5  | 7.5  |
| 16    | 18.5    | 18.0 | 18.0 | 15.5     | 15.0 | 15.5 | 11.0     | 10.0 | 10.5 | 7.5     | 6.5  | 7.5  |
| 17    | 18.5    | 18.0 | 18.5 | 15.5     | 14.5 | 15.0 | 11.5     | 11.0 | 11.0 | 8.0     | 7.0  | 7.5  |
| 18    | 19.0    | 18.5 | 18.5 | 15.0     | 14.5 | 14.5 | 11.5     | 11.0 | 11.5 | 7.5     | 7.0  | 7.5  |
| 19    | 19.0    | 18.5 | 18.5 | 14.5     | 14.5 | 14.5 | 12.0     | 11.5 | 12.0 | 7.5     | 7.0  | 7.5  |
| 20    | 18.5    | 18.5 | 18.5 | 14.5     | 14.0 | 14.0 | 12.5     | 12.0 | 12.0 | 7.0     | 6.0  | 6.5  |
| 21    | 18.5    | 18.5 | 18.5 | 14.0     | 13.5 | 13.5 | 13.0     | 12.5 | 12.5 | 6.5     | 6.0  | 6.5  |
| 22    | 18.5    | 18.0 | 18.5 | 13.5     | 13.0 | 13.0 | 13.0     | 12.0 | 12.5 | 6.0     | 5.5  | 6.0  |
| 23    | 18.5    | 18.0 | 18.5 | 13.0     | 12.5 | 12.5 | 12.5     | 11.5 | 12.0 | 6.0     | 5.5  | 6.0  |
| 24    | 19.0    | 18.5 | 18.5 | 13.0     | 12.0 | 12.5 | 12.0     | 11.5 | 12.0 | 6.5     | 5.0  | 6.0  |
| 25    | 19.5    | 19.0 | 19.0 | 13.0     | 12.0 | 12.5 | 12.5     | 12.0 | 12.0 | 6.0     | 5.5  | 5.5  |
| 26    | 19.5    | 18.5 | 19.0 | 12.5     | 12.0 | 12.0 | 12.5     | 11.5 | 12.0 | 5.5     | 4.5  | 5.0  |
| 27    | 19.5    | 18.5 | 19.0 | 12.5     | 12.0 | 12.0 | 12.5     | 12.0 | 12.5 | 5.5     | 4.5  | 5.0  |
| 28    | 19.5    | 19.0 | 19.0 | 12.5     | 11.5 | 12.0 | 12.5     | 12.5 | 12.5 | 5.5     | 5.0  | 5.0  |
| 29    | 19.5    | 19.0 | 19.0 | 12.0     | 11.5 | 11.5 | 12.5     | 12.5 | 12.5 | 5.5     | 5.0  | 5.0  |
| 30    | 19.5    | 19.0 | 19.0 | 11.5     | 11.5 | 11.5 | 13.0     | 12.5 | 12.5 | 5.5     | 5.0  | 5.0  |
| 31    | 20.0    | 19.0 | 19.5 | ---      | ---  | ---  | 13.0     | 12.5 | 12.5 | 6.5     | 5.5  | 5.5  |
| MONTH | 20.0    | 16.5 | 18.0 | 20.0     | 11.5 | 15.5 | 13.0     | 9.0  | 11.0 | 13.0    | 4.5  | 8.0  |

## TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN | MEAN  | MAX  | MIN  | MEAN  | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|-----|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY |      |     | MARCH |      |      | APRIL |      |      | MAY  |      |      |      |
| 1        | 6.5  | 5.5 | 6.0   | 9.0  | 8.5  | 8.5   | 12.5 | 11.5 | 12.0 | 16.0 | 15.5 | 15.5 |
| 2        | 6.5  | 5.5 | 6.0   | 9.5  | 8.5  | 9.0   | 13.0 | 11.5 | 12.0 | 16.0 | 15.5 | 15.5 |
| 3        | 6.0  | 5.5 | 5.5   | 10.0 | 8.5  | 9.5   | 14.0 | 11.5 | 12.5 | 17.5 | 16.0 | 16.5 |
| 4        | 6.0  | 5.5 | 6.0   | 10.5 | 9.0  | 9.5   | 13.5 | 12.5 | 13.0 | 17.5 | 16.5 | 17.0 |
| 5        | 7.0  | 6.0 | 6.0   | 10.0 | 9.0  | 9.5   | 13.5 | 12.0 | 12.5 | 18.5 | 16.5 | 17.5 |
| 6        | 7.5  | 5.5 | 6.5   | 11.0 | 9.5  | 10.5  | 12.5 | 11.5 | 12.5 | 17.5 | 16.0 | 16.5 |
| 7        | 6.0  | 5.5 | 6.0   | 12.0 | 10.5 | 11.0  | 12.5 | 12.0 | 12.5 | 17.5 | 16.5 | 16.5 |
| 8        | 6.5  | 5.0 | 5.5   | 11.0 | 10.5 | 10.5  | 13.0 | 11.5 | 12.5 | 16.5 | 16.5 | 16.5 |
| 9        | 6.0  | 4.5 | 5.5   | 12.5 | 10.5 | 11.0  | 13.5 | 12.0 | 12.5 | 17.5 | 16.5 | 17.0 |
| 10       | 6.5  | 5.5 | 6.0   | 11.5 | 10.5 | 11.0  | 13.5 | 12.5 | 13.0 | 17.5 | 17.0 | 17.0 |
| 11       | 7.0  | 5.5 | 6.0   | 12.0 | 11.0 | 11.5  | 14.0 | 12.5 | 13.0 | 17.5 | 17.0 | 17.0 |
| 12       | 5.5  | 5.0 | 5.5   | 12.5 | 11.0 | 11.5  | 14.0 | 13.0 | 13.5 | 17.5 | 17.0 | 17.0 |
| 13       | 6.0  | 5.0 | 5.5   | 12.5 | 11.5 | 12.0  | 14.0 | 13.5 | 13.5 | 18.0 | 17.0 | 17.5 |
| 14       | 6.0  | 4.5 | 5.0   | 12.0 | 11.5 | 11.5  | 14.5 | 13.5 | 14.0 | 18.0 | 17.5 | 17.5 |
| 15       | 5.5  | 4.5 | 5.0   | 12.5 | 11.5 | 12.0  | 14.5 | 13.5 | 14.0 | 18.0 | 17.0 | 17.5 |
| 16       | 5.5  | 4.5 | 5.5   | 13.0 | 11.5 | 12.0  | 14.5 | 13.5 | 14.0 | 17.5 | 17.0 | 17.0 |
| 17       | 7.5  | 5.5 | 6.0   | 12.5 | 11.5 | 12.0  | 15.5 | 13.5 | 14.5 | 17.0 | 16.0 | 16.5 |
| 18       | 5.5  | 5.0 | 5.5   | 12.5 | 11.5 | 12.0  | 15.0 | 13.5 | 14.5 | 17.5 | 16.0 | 16.5 |
| 19       | 6.5  | 5.5 | 6.0   | 13.0 | 11.0 | 12.0  | 15.5 | 13.5 | 14.0 | 17.5 | 16.5 | 17.0 |
| 20       | 6.0  | 5.5 | 6.0   | 12.5 | 11.5 | 12.0  | 15.0 | 13.5 | 14.0 | 18.5 | 17.0 | 17.5 |
| 21       | 7.0  | 5.0 | 6.0   | 12.0 | 11.5 | 12.0  | 16.0 | 14.0 | 14.5 | 18.5 | 17.0 | 18.0 |
| 22       | 7.5  | 6.0 | 6.5   | 12.0 | 11.5 | 12.0  | 15.5 | 14.5 | 14.5 | 18.0 | 17.0 | 17.0 |
| 23       | 7.0  | 6.5 | 7.0   | 12.5 | 12.0 | 12.0  | 15.0 | 14.5 | 14.5 | 17.0 | 17.0 | 17.0 |
| 24       | 9.0  | 6.5 | 7.5   | 13.0 | 11.5 | 12.0  | 15.5 | 14.0 | 15.0 | 17.0 | 17.0 | 17.0 |
| 25       | 9.0  | 6.5 | 7.5   | 12.5 | 11.5 | 12.0  | 15.5 | 14.0 | 14.5 | 18.5 | 17.0 | 17.5 |
| 26       | 9.5  | 7.0 | 8.0   | 13.5 | 11.5 | 12.5  | 16.5 | 15.0 | 15.0 | 18.5 | 17.5 | 17.5 |
| 27       | 9.0  | 8.0 | 8.5   | 12.5 | 12.0 | 12.0  | 15.0 | 15.0 | 15.0 | 20.5 | 18.0 | 18.5 |
| 28       | 10.5 | 7.5 | 9.0   | 12.5 | 11.5 | 12.0  | 18.0 | 15.0 | 15.5 | 21.5 | 17.5 | 20.0 |
| 29       | ---  | --- | ---   | 13.0 | 12.0 | 12.0  | 16.5 | 16.0 | 16.0 | 18.5 | 18.0 | 18.0 |
| 30       | ---  | --- | ---   | 13.5 | 12.0 | 12.5  | 17.0 | 15.5 | 16.0 | 18.5 | 18.0 | 18.0 |
| 31       | ---  | --- | ---   | 13.0 | 12.5 | 12.5  | ---  | ---  | ---  | 19.0 | 18.0 | 18.5 |
| MONTH    | 10.5 | 4.5 | 6.5   | 13.5 | 8.5  | 11.5  | 18.0 | 11.5 | 14.0 | 21.5 | 15.5 | 17.0 |

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN   | MAX  | MIN  | MEAN      | MAX  | MIN  | MEAN |
|-------|------|------|------|------|------|--------|------|------|-----------|------|------|------|
| JUNE  |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |      |
| 1     | 19.5 | 18.0 | 18.5 | 20.0 | 18.5 | 19.5   | 18.5 | 17.0 | 17.5      | 19.0 | 18.5 | 18.5 |
| 2     | 19.5 | 19.0 | 19.0 | 19.5 | 18.5 | 19.0   | 18.5 | 18.0 | 18.0      | 19.0 | 18.5 | 18.5 |
| 3     | 19.5 | 19.0 | 19.0 | 19.0 | 18.0 | 18.5   | 18.5 | 17.5 | 18.0      | 19.0 | 18.5 | 18.5 |
| 4     | 20.0 | 19.5 | 19.5 | 18.5 | 18.5 | 18.5   | 18.0 | 17.0 | 17.5      | 19.0 | 18.5 | 18.5 |
| 5     | 20.0 | 19.5 | 19.5 | 19.0 | 18.0 | 18.5   | 18.0 | 17.0 | 17.5      | 19.0 | 18.5 | 18.5 |
| 6     | 20.5 | 19.5 | 20.0 | 18.5 | 18.0 | 18.5   | 18.0 | 17.0 | 17.5      | 19.0 | 18.5 | 18.5 |
| 7     | 20.0 | 19.5 | 19.5 | 19.0 | 18.0 | 18.5   | 18.0 | 17.0 | 17.5      | 19.0 | 18.5 | 19.0 |
| 8     | 20.0 | 18.5 | 19.5 | 19.0 | 18.5 | 18.5   | 18.5 | 17.5 | 18.0      | 19.5 | 18.5 | 19.0 |
| 9     | 19.5 | 18.5 | 19.0 | 19.5 | 18.5 | 19.0   | 19.0 | 18.0 | 18.5      | 19.0 | 18.5 | 18.5 |
| 10    | 21.0 | 18.0 | 20.0 | 20.0 | 19.0 | 19.5   | 18.5 | 17.5 | 18.0      | 19.0 | 18.5 | 18.5 |
| 11    | 18.5 | 17.5 | 18.0 | 20.0 | 19.0 | 19.5   | 18.0 | 17.5 | 18.0      | 19.5 | 18.5 | 19.0 |
| 12    | 18.5 | 16.0 | 17.5 | 20.5 | 20.0 | 20.0   | 18.0 | 17.5 | 18.0      | 19.5 | 19.0 | 19.0 |
| 13    | 17.0 | 16.5 | 16.5 | 20.5 | 19.5 | 20.0   | 18.5 | 17.5 | 18.0      | 20.0 | 19.0 | 19.5 |
| 14    | 18.0 | 17.0 | 17.0 | 20.5 | 19.5 | 20.0   | 18.5 | 18.0 | 18.5      | 20.0 | 19.0 | 19.5 |
| 15    | 18.5 | 17.5 | 18.0 | 20.0 | 19.0 | 19.5   | 18.5 | 17.5 | 18.0      | 20.0 | 18.5 | 19.0 |
| 16    | 19.0 | 17.0 | 17.5 | 20.5 | 19.5 | 19.5   | 19.0 | 17.5 | 18.0      | 19.0 | 18.5 | 19.0 |
| 17    | 17.5 | 17.0 | 17.5 | 21.0 | 20.0 | 20.5   | 19.0 | 18.0 | 18.5      | 19.0 | 18.5 | 19.0 |
| 18    | 18.0 | 17.5 | 17.5 | 20.5 | 19.5 | 20.0   | 19.0 | 18.0 | 18.5      | 19.5 | 18.5 | 19.0 |
| 19    | 19.0 | 17.5 | 18.0 | 20.0 | 19.0 | 19.5   | 18.5 | 18.0 | 18.0      | 19.5 | 19.0 | 19.5 |
| 20    | 18.5 | 17.5 | 18.0 | 20.0 | 19.5 | 19.5   | 18.5 | 18.0 | 18.5      | 19.5 | 19.0 | 19.5 |
| 21    | 19.0 | 18.0 | 18.5 | 20.0 | 18.5 | 20.0   | 19.5 | 18.5 | 19.0      | 19.5 | 19.0 | 19.5 |
| 22    | 19.0 | 19.0 | 19.0 | 21.0 | 19.5 | 20.0   | 20.0 | 18.5 | 19.0      | 20.0 | 19.0 | 19.5 |
| 23    | 20.0 | 19.0 | 19.5 | 20.5 | 20.0 | 20.5   | 20.0 | 19.0 | 20.0      | 19.5 | 18.5 | 19.0 |
| 24    | 21.0 | 19.5 | 20.5 | 20.0 | 20.0 | 20.0   | 20.0 | 18.5 | 19.5      | 19.0 | 18.5 | 18.5 |
| 25    | 21.5 | 19.5 | 20.5 | 20.5 | 19.0 | 20.0   | 19.0 | 18.5 | 18.5      | 19.5 | 18.5 | 19.0 |
| 26    | 21.0 | 20.5 | 21.0 | 19.5 | 18.5 | 19.0   | 19.0 | 18.5 | 18.5      | 19.0 | 19.0 | 19.0 |
| 27    | 21.5 | 20.5 | 21.0 | 19.0 | 18.0 | 18.5   | 19.5 | 18.5 | 19.0      | 19.0 | 18.5 | 19.0 |
| 28    | 21.0 | 20.0 | 20.5 | 18.5 | 17.5 | 18.0   | 19.5 | 18.5 | 19.0      | 19.5 | 18.5 | 19.0 |
| 29    | 21.5 | 19.5 | 20.5 | 17.5 | 17.0 | 17.5   | 19.0 | 18.5 | 18.5      | 19.0 | 18.5 | 19.0 |
| 30    | 20.5 | 19.5 | 20.0 | 18.0 | 17.0 | 17.0   | 19.0 | 18.0 | 18.5      | 19.0 | 18.5 | 19.0 |
| 31    | ---  | ---  | ---  | 18.0 | 17.0 | 17.5   | 19.0 | 18.5 | 18.5      | ---  | ---  | ---  |
| MONTH | 21.5 | 16.0 | 19.0 | 21.0 | 17.0 | 19.0   | 20.0 | 17.0 | 18.5      | 20.0 | 18.5 | 19.0 |

## TENNESSEE RIVER BASIN

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03538225 POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°59'55", long 84°20'23", Roane County, Hydrologic Unit 06010207, on right bank, 1,000 ft upstream from county road bridge, 0.4 mi downstream from Indian Creek, 8.2 mi southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 13.8.

DRAINAGE AREA.--82.5 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 743.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 24 to Dec. 21, June 18-26, and July 13 to Aug. 4. Records good, except for periods of estimated daily record, which are fair.

AVERAGE DISCHARGE.--25 years, 173 ft<sup>3</sup>/s, 28.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s Apr. 5, 1977, gage height, 27.93 ft from floodmarks, from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum, 4.0 ft<sup>3</sup>/s Oct. 14, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1928, at site about 5.0 mi upstream, drainage area, 55.9 mi<sup>2</sup>, discharge, about 14,000 ft<sup>3</sup>/s was the greatest known since at least 1900, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Aug. 18 | 0030 | *2,650                            | *16.12              | Aug. 26 | 0800 | 2,100                             | 14.72               |

Minimum discharge, 5.2 ft<sup>3</sup>/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|---------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 6.1   | 19      | 150  | 124  | 949  | 94   | 181  | 31   | 19   | 27   | 120  | 85    |
| 2           | 5.6   | 20      | 100  | 185  | 1010 | 94   | 142  | 313  | 19   | 54   | 100  | 68    |
| 3           | 5.5   | 21      | 80   | 178  | 446  | 87   | 120  | 453  | 21   | 28   | 90   | 57    |
| 4           | 6.0   | 20      | 70   | 220  | 281  | 81   | 105  | 171  | 18   | 24   | 80   | 52    |
| 5           | 6.0   | 22      | 60   | 212  | 269  | 89   | 118  | 118  | 114  | 24   | 64   | 48    |
| 6           | 5.7   | 20      | 150  | 177  | 305  | 73   | 495  | 92   | 50   | 23   | 64   | 368   |
| 7           | 6.0   | 18      | 120  | 152  | 243  | 63   | 285  | 78   | 222  | 28   | 63   | 204   |
| 8           | 16    | 16      | 100  | 126  | 190  | 64   | 199  | 68   | 263  | 22   | 63   | 91    |
| 9           | 21    | 15      | 90   | 105  | 160  | 102  | 152  | 60   | 98   | 18   | 45   | 69    |
| 10          | 14    | 98      | 80   | 93   | 143  | 84   | 125  | 53   | 70   | 30   | 40   | 54    |
| 11          | 9.6   | 272     | 70   | 89   | 146  | 82   | 109  | 49   | 68   | 200  | 38   | 50    |
| 12          | 7.8   | 107     | 60   | 74   | 246  | 97   | 96   | 47   | 133  | 55   | 35   | 41    |
| 13          | 8.3   | 66      | 55   | 64   | 193  | 91   | 91   | 42   | 83   | 40   | 33   | 34    |
| 14          | 9.4   | 49      | 50   | 62   | 175  | 87   | 86   | 39   | 52   | 60   | 52   | 29    |
| 15          | 8.8   | 44      | 45   | 59   | 162  | 82   | 160  | 36   | 43   | 70   | 42   | 26    |
| 16          | 8.6   | 80      | 43   | 50   | 143  | 75   | 253  | 32   | 36   | 80   | 45   | 25    |
| 17          | 9.2   | 57      | 40   | 59   | 136  | 72   | 193  | 33   | 43   | 60   | 1390 | 23    |
| 18          | 11    | 51      | 37   | 65   | 126  | 66   | 149  | 36   | 100  | 50   | 1490 | 21    |
| 19          | 9.4   | 559     | 35   | 57   | 147  | 59   | 123  | 29   | 70   | 45   | 288  | 19    |
| 20          | 25    | 251     | 45   | 49   | 146  | 55   | 104  | 27   | 50   | 40   | 163  | 19    |
| 21          | 24    | 139     | 200  | 44   | 137  | 54   | 90   | 26   | 40   | 38   | 118  | 17    |
| 22          | 83    | 99      | 278  | 41   | 128  | 68   | 77   | 24   | 35   | 40   | 89   | 17    |
| 23          | 182   | 79      | 218  | 40   | 120  | 73   | 66   | 25   | 30   | 45   | 77   | 17    |
| 24          | 182   | 65      | 174  | 40   | 116  | 103  | 61   | 25   | 35   | 80   | 164  | 34    |
| 25          | 64    | 55      | 226  | 43   | 112  | 95   | 54   | 27   | 50   | 300  | 268  | 25    |
| 26          | 39    | 50      | 195  | 41   | 130  | 86   | 47   | 25   | 40   | 200  | 1430 | 22    |
| 27          | 28    | 45      | 165  | 34   | 108  | 84   | 43   | 22   | 33   | 250  | 403  | 27    |
| 28          | 23    | 700     | 136  | 35   | 99   | 87   | 45   | 23   | 24   | 230  | 223  | 20    |
| 29          | 22    | 400     | 116  | 34   | ---  | 86   | 41   | 24   | 21   | 200  | 152  | 17    |
| 30          | 25    | 250     | 100  | 34   | ---  | 78   | 34   | 19   | 17   | 180  | 119  | 16    |
| 31          | 23    | ---     | 106  | 104  | ---  | 111  | ---  | 17   | ---  | 140  | 110  | ---   |
| TOTAL       | 894.0 | 3687    | 3394 | 2690 | 6566 | 2522 | 3844 | 2064 | 1897 | 2681 | 7458 | 1595  |
| MEAN        | 28.8  | 123     | 109  | 86.8 | 235  | 81.4 | 128  | 66.6 | 63.2 | 86.5 | 241  | 53.2  |
| MAX         | 182   | 700     | 278  | 220  | 1010 | 111  | 495  | 453  | 263  | 300  | 1490 | 368   |
| MIN         | 5.5   | 15      | 35   | 34   | 99   | 54   | 34   | 17   | 17   | 18   | 33   | 16    |
| CFSM        | .35   | 1.49    | 1.32 | 1.05 | 2.85 | .99  | 1.55 | .81  | .77  | 1.05 | 2.92 | .64   |
| IN.         | .40   | 1.66    | 1.53 | 1.21 | 2.96 | 1.14 | 1.73 | .93  | .86  | 1.21 | 3.36 | .72   |
| CAL YR 1984 | TOTAL | 61159.1 | MEAN | 167  | MAX  | 4270 | MIN  | 4.6  | CFSM | 2.02 | IN.  | 27.58 |
| WTR YR 1985 | TOTAL | 39292.0 | MEAN | 108  | MAX  | 1490 | MIN  | 5.5  | CFSM | 1.31 | IN.  | 17.72 |



## TENNESSEE RIVER BASIN

03538250 EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°57'58", long 84°21'30", Roane County, Hydrologic Unit 06010207, near left bank, on upstream side of county road bridge, 0.3 mi north of State Highway 95, 1.7 mi upstream from Bear Creek, 5.8 mi southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 3.3.

DRAINAGE AREA.--19.5 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: April 18-30 and May 3-17. Records good. Flow includes effect of operations of the Department of Energy's Y-12 Plant, which may add up to 20 ft<sup>3</sup>/s, and the west end sewage treatment plant of the City of Oak Ridge, which may add up to 10 ft<sup>3</sup>/s.

AVERAGE DISCHARGE.--25 years, 51.4 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft<sup>3</sup>/s Nov. 28, 1973, gage height, 16.0 ft from floodmarks, backwater from low steel on bridge, on basis of runoff comparison with nearby stations; minimum daily, 12 ft<sup>3</sup>/s July 1, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1944, the greatest known since 1900, reached a discharge of about 4,600 ft<sup>3</sup>/s at site 5.1 mi upstream, from report of the Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|-------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| May 2 | 2230 | *762                              | *6.63               | July 25 | 0300 | 725                               | 6.45                |

Minimum daily discharge, 17 ft<sup>3</sup>/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 1           | 21    | 22    | 41   | 55   | 353  | 35   | 39   | 25   | 19   | 50   | 58   | 35   |
| 2           | 18    | 27    | 33   | 82   | 221  | 35   | 34   | 143  | 23   | 53   | 40   | 31   |
| 3           | 18    | 23    | 33   | 61   | 110  | 32   | 32   | 90   | 19   | 25   | 31   | 29   |
| 4           | 18    | 21    | 30   | 78   | 80   | 32   | 32   | 65   | 19   | 23   | 27   | 28   |
| 5           | 19    | 25    | 30   | 64   | 89   | 38   | 40   | 55   | 21   | 22   | 26   | 27   |
| 6           | 18    | 22    | 49   | 54   | 83   | 31   | 121  | 50   | 19   | 23   | 34   | 82   |
| 7           | 17    | 20    | 35   | 49   | 66   | 30   | 56   | 45   | 68   | 22   | 36   | 56   |
| 8           | 42    | 20    | 32   | 44   | 57   | 30   | 48   | 40   | 34   | 21   | 28   | 41   |
| 9           | 31    | 20    | 29   | 40   | 51   | 57   | 43   | 37   | 23   | 22   | 27   | 35   |
| 10          | 21    | 90    | 29   | 39   | 46   | 40   | 39   | 35   | 25   | 43   | 25   | 32   |
| 11          | 20    | 85    | 29   | 37   | 52   | 39   | 36   | 33   | 24   | 84   | 24   | 29   |
| 12          | 20    | 40    | 27   | 33   | 87   | 41   | 34   | 32   | 46   | 29   | 24   | 27   |
| 13          | 20    | 33    | 26   | 31   | 62   | 36   | 32   | 30   | 26   | 26   | 24   | 25   |
| 14          | 19    | 29    | 26   | 31   | 56   | 35   | 31   | 28   | 22   | 25   | 30   | 24   |
| 15          | 19    | 31    | 25   | 30   | 52   | 33   | 72   | 26   | 21   | 31   | 25   | 23   |
| 16          | 20    | 53    | 24   | 30   | 47   | 31   | 57   | 24   | 20   | 42   | 28   | 22   |
| 17          | 22    | 32    | 24   | 34   | 43   | 30   | 43   | 24   | 59   | 26   | 476  | 22   |
| 18          | 21    | 30    | 24   | 32   | 43   | 29   | 38   | 24   | 75   | 24   | 125  | 21   |
| 19          | 21    | 111   | 24   | 30   | 55   | 29   | 36   | 22   | 33   | 23   | 64   | 21   |
| 20          | 56    | 50    | 45   | 28   | 51   | 28   | 34   | 23   | 28   | 22   | 49   | 21   |
| 21          | 25    | 38    | 50   | 28   | 47   | 28   | 33   | 23   | 26   | 21   | 42   | 20   |
| 22          | 122   | 33    | 81   | 29   | 45   | 41   | 32   | 23   | 24   | 23   | 36   | 20   |
| 23          | 150   | 29    | 50   | 30   | 42   | 34   | 30   | 27   | 23   | 28   | 33   | 22   |
| 24          | 95    | 27    | 43   | 29   | 40   | 56   | 29   | 24   | 24   | 61   | 90   | 34   |
| 25          | 41    | 26    | 67   | 28   | 42   | 41   | 28   | 23   | 27   | 181  | 73   | 22   |
| 26          | 33    | 25    | 47   | 27   | 50   | 37   | 27   | 20   | 25   | 36   | 155  | 34   |
| 27          | 29    | 24    | 44   | 26   | 40   | 35   | 26   | 20   | 25   | 73   | 65   | 28   |
| 28          | 27    | 91    | 43   | 28   | 36   | 35   | 28   | 22   | 22   | 37   | 49   | 22   |
| 29          | 26    | 45    | 38   | 28   | ---  | 34   | 27   | 21   | 22   | 39   | 42   | 21   |
| 30          | 24    | 42    | 35   | 29   | ---  | 32   | 26   | 20   | 21   | 37   | 55   | 21   |
| 31          | 23    | ---   | 40   | 68   | ---  | 43   | ---  | 19   | ---  | 33   | 47   | ---  |
| TOTAL       | 1056  | 1164  | 1153 | 1232 | 2046 | 1107 | 1183 | 1093 | 863  | 1205 | 1888 | 875  |
| MEAN        | 34.1  | 38.8  | 37.2 | 39.7 | 73.1 | 35.7 | 39.4 | 35.3 | 28.8 | 38.9 | 60.9 | 29.2 |
| MAX         | 150   | 111   | 81   | 82   | 353  | 57   | 121  | 143  | 75   | 181  | 476  | 82   |
| MIN         | 17    | 20    | 24   | 26   | 36   | 28   | 26   | 19   | 19   | 21   | 24   | 20   |
| CAL YR 1984 | TOTAL | 17846 | MEAN | 48.8 | MAX  | 971  | MIN  | 17   |      |      |      |      |
| WTR YR 1985 | TOTAL | 14865 | MEAN | 40.7 | MAX  | 476  | MIN  | 17   |      |      |      |      |

TENNESSEE RIVER BASIN

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03538270 BEAR CREEK AT STATE HIGHWAY 95 NEAR OAK RIDGE, TN

LOCATION.--Lat 35°56'17", long 84°20'29", Roane County, Hydrologic Unit 06010207, on right bank above bridge on State Highway 95, in triangle formed by intersection of Highway 95 and Bear Creek Valley Road, 6.8 mi southwest of Oak Ridge and at mile 2.8.

DRAINAGE AREA.--4.26 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1959 to June 1964 (discharge measurements only), March to September 1985.

GAGE.--Water-stage recorder and Cippolletti-weir. Datum of gage is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Daily discharge March 1-6 determined from stage record provided by the Oak Ridge National Laboratory.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 233 ft<sup>3</sup>/s, Mar. 12, 1963; minimum discharge observed, 0.40 ft<sup>3</sup>/s, Oct. 2, 1959.

EXTREMES FOR CURRENT PERIOD.--March 1985 to September 1985: Maximum discharge, 123 ft<sup>3</sup>/s, Aug. 17, gage height, 2.21 ft; minimum discharge, 0.43 ft<sup>3</sup>/s, July 21, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR MARCH 1985 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR   | APR   | MAY  | JUN   | JUL   | AUG    | SEP   |
|-------|-----|-----|-----|-----|-----|-------|-------|------|-------|-------|--------|-------|
| 1     |     |     |     |     |     | 5.6   | 5.8   | 1.9  | 1.1   | 2.1   | 4.4    | 4.8   |
| 2     |     |     |     |     |     | 5.6   | 5.3   | 12   | .92   | 1.1   | 2.5    | 3.3   |
| 3     |     |     |     |     |     | 5.1   | 5.1   | 10   | .88   | .86   | 1.6    | 2.8   |
| 4     |     |     |     |     |     | 4.5   | 4.6   | 6.0  | .79   | .73   | 1.2    | 2.8   |
| 5     |     |     |     |     |     | 5.1   | 7.3   | 4.1  | .74   | .68   | 1.1    | 2.1   |
| 6     |     |     |     |     |     | 3.9   | 18    | 3.3  | .79   | .68   | 1.3    | 3.8   |
| 7     |     |     |     |     |     | 3.5   | 13    | 2.9  | 2.8   | .66   | 1.8    | 3.0   |
| 8     |     |     |     |     |     | 3.6   | 10    | 2.7  | 2.1   | .58   | 1.4    | 2.1   |
| 9     |     |     |     |     |     | 8.7   | 8.8   | 2.6  | 1.3   | .62   | 1.1    | 1.8   |
| 10    |     |     |     |     |     | 8.1   | 7.8   | 2.4  | 1.0   | .91   | .88    | 1.6   |
| 11    |     |     |     |     |     | 7.8   | 6.7   | 2.3  | .99   | 4.5   | .78    | 1.5   |
| 12    |     |     |     |     |     | 7.6   | 5.8   | 2.2  | 2.5   | 1.1   | .67    | 1.3   |
| 13    |     |     |     |     |     | 6.6   | 5.6   | 2.0  | 1.4   | .87   | .62    | 1.2   |
| 14    |     |     |     |     |     | 5.9   | 5.2   | 1.8  | 1.1   | .77   | .59    | 1.1   |
| 15    |     |     |     |     |     | 5.4   | 9.5   | 1.6  | .94   | .79   | .57    | 1.1   |
| 16    |     |     |     |     |     | 4.5   | 9.3   | 1.5  | .88   | 1.0   | 7.7    | 1.0   |
| 17    |     |     |     |     |     | 4.2   | 8.0   | 1.6  | 1.9   | .75   | 79     | 1.0   |
| 18    |     |     |     |     |     | 3.8   | 7.0   | 1.7  | 4.1   | .58   | 19     | .98   |
| 19    |     |     |     |     |     | 3.5   | 5.9   | 1.5  | 1.6   | .50   | 9.6    | .87   |
| 20    |     |     |     |     |     | 3.3   | 5.7   | 1.5  | 1.2   | .47   | 6.2    | .78   |
| 21    |     |     |     |     |     | 3.3   | 5.0   | 1.5  | .97   | .48   | 4.0    | .74   |
| 22    |     |     |     |     |     | 5.1   | 4.0   | 1.5  | .87   | .43   | 2.7    | .74   |
| 23    |     |     |     |     |     | 4.8   | 3.5   | 1.7  | .78   | 1.5   | 2.2    | .82   |
| 24    |     |     |     |     |     | 8.6   | 3.3   | 1.5  | .73   | 13    | 14     | 1.2   |
| 25    |     |     |     |     |     | 7.8   | 3.0   | 1.4  | .78   | 5.1   | 17     | .93   |
| 26    |     |     |     |     |     | 6.9   | 2.7   | 1.2  | .76   | 1.9   | 30     | 1.3   |
| 27    |     |     |     |     |     | 6.3   | 2.6   | 1.1  | .71   | 7.4   | 13     | 1.5   |
| 28    |     |     |     |     |     | 5.9   | 2.5   | 1.1  | .63   | 2.7   | 8.7    | .98   |
| 29    |     |     |     |     |     | 5.5   | 2.3   | 1.2  | .59   | 2.8   | 6.1    | .86   |
| 30    |     |     |     |     |     | 4.9   | 2.1   | 1.0  | .64   | 3.4   | 6.9    | .80   |
| 31    |     |     |     |     |     | 5.7   | ---   | 1.1  | ---   | 2.6   | 7.1    | ---   |
| TOTAL |     |     |     |     |     | 171.1 | 185.4 | 79.9 | 36.49 | 61.56 | 253.71 | 48.80 |
| MEAN  |     |     |     |     |     | 5.52  | 6.18  | 2.58 | 1.22  | 1.99  | 8.18   | 1.63  |
| MAX   |     |     |     |     |     | 8.7   | 18    | 12   | 4.1   | 13    | 79     | 4.8   |
| MIN   |     |     |     |     |     | 3.3   | 2.1   | 1.0  | .59   | .43   | .57    | .74   |
| CFSM  |     |     |     |     |     | 1.30  | 1.45  | .61  | .29   | .47   | 1.92   | .38   |
| IN.   |     |     |     |     |     | 1.49  | 1.62  | .70  | .32   | .54   | 2.22   | .43   |

## TENNESSEE RIVER BASIN

03539800 OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, Hydrologic Unit 06010208, on left bank at Alley Ford, 2.9 mi southwest of Lancing, 3.0 mi downstream from Clear Creek, and at mile 1.5.

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

PERIOD OF RECORD.--October 1956 to September 1968, March 1973 to current year. Prior to May 1957, monthly discharge only, published in WSP 1726.

GAGE.--Water-stage recorder. Datum of gage is 891.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-3, 6, 7, Jan. 16-31, and July 16. Records good.

AVERAGE DISCHARGE.--24 years (water years 1957-68, 1974-85), 1,059 ft<sup>3</sup>/s, 27.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft<sup>3</sup>/s, May 27, 1973, gage height, 29.51 ft, dross line in gage well, 30.5 ft, from floodmarks, from rating curve extended above 33,000 ft<sup>3</sup>/s on basis of slope conveyance study at gage height, 22.40 ft, and slope-area measurement of peak flow; minimum, 0.4 ft<sup>3</sup>/s Oct. 31, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 33.9 ft, 35 ft downstream from gage, from high water marks by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft<sup>3</sup>/s, and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 1100 | *12,700                           | *10.99              |      |      |                                   |                     |

Minimum daily discharge, 6.5 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL    | AUG   | SEP  |       |
|-------------|---------|----------|-------|-------|-------|-------|-------|------|------|--------|-------|------|-------|
| 1           | 6.5     | 367      | 2500  | 1800  | 6830  | 778   | 1110  | 230  | 74   | 26     | 81    | 323  |       |
| 2           | 10      | 331      | 1980  | 3610  | 6070  | 720   | 1060  | 228  | 63   | 438    | 246   | 248  |       |
| 3           | 15      | 344      | 1690  | 2760  | 3020  | 649   | 897   | 651  | 56   | 222    | 183   | 184  |       |
| 4           | 20      | 325      | 1440  | 3720  | 2020  | 591   | 771   | 821  | 51   | 121    | 96    | 136  |       |
| 5           | 17      | 319      | 1290  | 3130  | 2230  | 647   | 693   | 545  | 56   | 77     | 64    | 103  |       |
| 6           | 13      | 334      | 1450  | 2310  | 4240  | 703   | 1460  | 411  | 67   | 67     | 51    | 85   |       |
| 7           | 10      | 307      | 1390  | 1850  | 3070  | 617   | 1470  | 338  | 62   | 94     | 51    | 112  |       |
| 8           | 24      | 276      | 1220  | 1460  | 2170  | 580   | 1210  | 300  | 470  | 70     | 52    | 141  |       |
| 9           | 99      | 254      | 1060  | 1190  | 1720  | 896   | 1020  | 270  | 367  | 55     | 60    | 104  |       |
| 10          | 124     | 301      | 919   | 1030  | 1480  | 1170  | 867   | 244  | 242  | 42     | 55    | 106  |       |
| 11          | 78      | 1770     | 844   | 990   | 1650  | 1080  | 735   | 219  | 187  | 34     | 53    | 86   |       |
| 12          | 60      | 1590     | 763   | 891   | 3610  | 1030  | 632   | 205  | 165  | 28     | 47    | 72   |       |
| 13          | 55      | 1130     | 694   | 777   | 2650  | 1000  | 559   | 616  | 141  | 27     | 39    | 61   |       |
| 14          | 42      | 865      | 625   | 714   | 2030  | 867   | 521   | 701  | 154  | 46     | 33    | 51   |       |
| 15          | 34      | 719      | 553   | 655   | 1670  | 779   | 783   | 550  | 113  | 30     | 29    | 44   |       |
| 16          | 28      | 1160     | 500   | 620   | 1320  | 687   | 1720  | 368  | 80   | 22     | 34    | 38   |       |
| 17          | 27      | 1290     | 463   | 600   | 1200  | 615   | 1460  | 280  | 64   | 18     | 1340  | 34   |       |
| 18          | 25      | 1120     | 431   | 750   | 1200  | 548   | 1170  | 235  | 56   | 14     | 2300  | 29   |       |
| 19          | 24      | 7920     | 416   | 720   | 1460  | 478   | 966   | 220  | 55   | 12     | 926   | 27   |       |
| 20          | 304     | 4990     | 492   | 700   | 1900  | 433   | 807   | 180  | 131  | 11     | 494   | 25   |       |
| 21          | 483     | 2620     | 1010  | 550   | 1690  | 409   | 701   | 157  | 96   | 9.7    | 659   | 22   |       |
| 22          | 382     | 1860     | 1660  | 600   | 1470  | 427   | 598   | 243  | 70   | 8.9    | 440   | 20   |       |
| 23          | 1650    | 1470     | 1800  | 650   | 1340  | 497   | 504   | 251  | 54   | 38     | 298   | 20   |       |
| 24          | 5970    | 1180     | 1490  | 600   | 1280  | 584   | 441   | 229  | 46   | 59     | 253   | 23   |       |
| 25          | 2300    | 925      | 2520  | 620   | 1150  | 749   | 401   | 208  | 38   | 42     | 931   | 22   |       |
| 26          | 1280    | 753      | 2450  | 550   | 1070  | 694   | 348   | 177  | 34   | 44     | 4620  | 50   |       |
| 27          | 810     | 646      | 1850  | 500   | 996   | 643   | 309   | 135  | 31   | 52     | 2150  | 184  |       |
| 28          | 558     | 6520     | 1500  | 540   | 863   | 616   | 296   | 106  | 28   | 96     | 1120  | 112  |       |
| 29          | 510     | 5190     | 1250  | 520   | ---   | 591   | 289   | 93   | 29   | 84     | 671   | 90   |       |
| 30          | 560     | 2890     | 1060  | 500   | ---   | 538   | 262   | 97   | 28   | 68     | 450   | 68   |       |
| 31          | 450     | ---      | 1360  | 800   | ---   | 535   | ---   | 90   | ---  | 56     | 382   | ---  |       |
| TOTAL       | 15968.5 | 49766    | 38670 | 36707 | 61399 | 21151 | 24060 | 9398 | 3108 | 2011.6 | 18208 | 2620 |       |
| MEAN        | 515     | 1659     | 1247  | 1184  | 2193  | 682   | 802   | 303  | 104  | 64.9   | 587   | 87.3 |       |
| MAX         | 5970    | 7920     | 2520  | 3720  | 6830  | 1170  | 1720  | 821  | 470  | 438    | 4620  | 323  |       |
| MIN         | 6.5     | 254      | 416   | 500   | 863   | 409   | 262   | 90   | 28   | 8.9    | 29    | 20   |       |
| CFSM        | .99     | 3.20     | 2.41  | 2.29  | 4.23  | 1.32  | 1.55  | .58  | .20  | .13    | 1.13  | .17  |       |
| IN.         | 1.15    | 3.57     | 2.78  | 2.64  | 4.41  | 1.52  | 1.73  | .67  | .22  | .14    | 1.31  | .19  |       |
| CAL YR 1984 | TOTAL   | 465994.5 |       | MEAN  | 1273  | MAX   | 33300 | MIN  | 6.5  | CFSM   | 2.46  | IN.  | 33.47 |
| WTR YR 1985 | TOTAL   | 283067.1 |       | MEAN  | 776   | MAX   | 7920  | MIN  | 6.5  | CFSM   | 1.50  | IN.  | 20.33 |

TENNESSEE RIVER BASIN

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03540500 EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, Hydrologic Unit 06010208, on left bank, at Oakdale, 1,000 ft downstream from highway bridge, 1,100 ft downstream from Mud Lick Creek, and at mile 18.3.

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

PERIOD OF RECORD.--June 1927 to current year. Prior to October 1929, published as Emory River at Harriman and October 1929 to September 1934 as Emory River at Oakdale.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

GAGE.--Water-stage recorder. Datum of gage is 761.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct 1, 1929, nonrecording gage at site 5.8 mi downstream at datum 43.60 ft lower, and Oct. 1, 1929, to Dec. 29, 1969, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--58 years, 1,466 ft<sup>3</sup>/s, 26.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft<sup>3</sup>/s Mar. 23, 1929, gage height, 41.2 ft, present site and datum, 61.1 ft, site and datum then in use, from floodmarks and flood profile, from rating curve extended above 85,000 ft<sup>3</sup>/s, confirmed by slope-area measurement of May 28, 1973, flood at gage height 38.68 ft; no flow at times in 1944, 1952-53.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1857, that of Mar. 23, 1929, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 1130 | *17,600                           | *15.86              |      |      |                                   |                     |

Minimum discharge, 9.6 ft<sup>3</sup>/s Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT     | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG   | SEP  |
|-------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|------|
| 1     | 9.6     | 533   | 3160  | 1990  | 10400 | 1110  | 1350  | 339   | 116  | 60   | 152   | 588  |
| 2     | 14      | 481   | 2500  | 4070  | 8950  | 1040  | 1410  | 338   | 100  | 342  | 284   | 445  |
| 3     | 25      | 476   | 2130  | 3380  | 4370  | 940   | 1240  | 680   | 90   | 358  | 342   | 337  |
| 4     | 27      | 481   | 1770  | 4960  | 2860  | 853   | 1110  | 1060  | 82   | 214  | 216   | 263  |
| 5     | 32      | 474   | 1580  | 4530  | 3040  | 861   | 1020  | 738   | 77   | 154  | 149   | 214  |
| 6     | 27      | 498   | 1740  | 3210  | 5800  | 938   | 2510  | 576   | 95   | 122  | 119   | 368  |
| 7     | 22      | 479   | 1740  | 2510  | 4360  | 832   | 2360  | 472   | 217  | 117  | 114   | 1180 |
| 8     | 67      | 433   | 1560  | 1930  | 2990  | 788   | 1830  | 415   | 582  | 133  | 119   | 446  |
| 9     | 206     | 398   | 1400  | 1570  | 2310  | 1080  | 1510  | 371   | 558  | 102  | 119   | 315  |
| 10    | 248     | 442   | 1240  | 1350  | 1930  | 1480  | 1280  | 332   | 353  | 85   | 122   | 262  |
| 11    | 165     | 2410  | 1150  | 1270  | 1930  | 1430  | 1110  | 313   | 243  | 79   | 129   | 338  |
| 12    | 122     | 2090  | 1040  | 1160  | 4930  | 1370  | 959   | 292   | 223  | 121  | 109   | 229  |
| 13    | 96      | 1460  | 957   | 1020  | 3760  | 1300  | 851   | 508   | 206  | 101  | 91    | 175  |
| 14    | 88      | 1140  | 868   | 940   | 2800  | 1170  | 792   | 741   | 201  | 125  | 94    | 138  |
| 15    | 73      | 957   | 778   | 876   | 2270  | 1060  | 1050  | 653   | 178  | 163  | 78    | 113  |
| 16    | 63      | 1230  | 712   | 765   | 1790  | 945   | 2420  | 452   | 139  | 105  | 69    | 98   |
| 17    | 62      | 1430  | 666   | 747   | 1610  | 856   | 2110  | 341   | 111  | 94   | 2100  | 87   |
| 18    | 57      | 1280  | 626   | 883   | 1570  | 779   | 1690  | 283   | 108  | 72   | 3220  | 78   |
| 19    | 53      | 10300 | 595   | 896   | 1810  | 694   | 1390  | 266   | 115  | 56   | 1410  | 70   |
| 20    | 156     | 6400  | 643   | 857   | 2460  | 636   | 1180  | 233   | 128  | 45   | 827   | 64   |
| 21    | 766     | 3320  | 1160  | 653   | 2280  | 601   | 1030  | 208   | 151  | 36   | 891   | 59   |
| 22    | 583     | 2280  | 2090  | 704   | 1990  | 603   | 880   | 247   | 118  | 36   | 721   | 53   |
| 23    | 1070    | 1760  | 2460  | 774   | 1810  | 677   | 758   | 308   | 97   | 34   | 494   | 50   |
| 24    | 6930    | 1440  | 2030  | 724   | 1710  | 789   | 668   | 276   | 87   | 70   | 513   | 59   |
| 25    | 2720    | 1160  | 3290  | 740   | 1550  | 1050  | 607   | 258   | 85   | 96   | 1690  | 70   |
| 26    | 1490    | 980   | 3420  | 677   | 1460  | 1010  | 533   | 239   | 72   | 95   | 7340  | 70   |
| 27    | 1040    | 836   | 2550  | 615   | 1350  | 967   | 469   | 193   | 63   | 100  | 3270  | 258  |
| 28    | 792     | 8560  | 2000  | 630   | 1200  | 941   | 441   | 161   | 57   | 164  | 1740  | 243  |
| 29    | 690     | 6980  | 1650  | 620   | ---   | 896   | 428   | 143   | 48   | 190  | 1130  | 192  |
| 30    | 722     | 3820  | 1400  | 595   | ---   | 822   | 386   | 132   | 47   | 160  | 800   | 150  |
| 31    | 639     | ---   | 1490  | 1070  | ---   | 798   | ---   | 130   | ---  | 161  | 675   | ---  |
| TOTAL | 19054.6 | 64528 | 50395 | 46716 | 85290 | 29316 | 35372 | 11698 | 4747 | 3790 | 29127 | 7012 |
| MEAN  | 615     | 2151  | 1626  | 1507  | 3046  | 946   | 1179  | 377   | 158  | 122  | 940   | 234  |
| MAX   | 6930    | 10300 | 3420  | 4960  | 10400 | 1480  | 2510  | 1060  | 582  | 358  | 7340  | 1180 |
| MIN   | 9.6     | 398   | 595   | 595   | 1200  | 601   | 386   | 130   | 47   | 34   | 69    | 50   |
| CFSM  | .80     | 2.82  | 2.13  | 1.97  | 3.99  | 1.24  | 1.54  | .49   | .21  | .16  | 1.23  | .31  |
| IN.   | .93     | 3.14  | 2.45  | 2.27  | 4.15  | 1.43  | 1.72  | .57   | .23  | .18  | 1.42  | .34  |

|             |       |          |      |      |     |       |     |     |      |      |     |       |
|-------------|-------|----------|------|------|-----|-------|-----|-----|------|------|-----|-------|
| CAL YR 1984 | TOTAL | 661558.6 | MEAN | 1808 | MAX | 47700 | MIN | 8.6 | CFSM | 2.37 | IN. | 32.21 |
| WTR YR 1985 | TOTAL | 387045.6 | MEAN | 1060 | MAX | 10400 | MIN | 9.6 | CFSM | 1.39 | IN. | 18.85 |



## TENNESSEE RIVER BASIN

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06020001, on right bank in powerhouse at Watts Bar Dam, 6.5 mi southeast of Spring City, and at mile 529.9.

DRAINAGE AREA.--17,310 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1934 to February 1940 (published as "at Breedenton"), October 1974 to current year. Equivalent record for period January 1942 to December 1974 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to March 1940 at site 6.7 mi downstream at datum 666.22 ft higher.

REMARKS.--Flow regulated since 1936 by many reservoirs above station (see p. 207 and Water Resources Data for North Carolina).

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--16 years (water years 1935-39, 1975-85), 28,330 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 208,000 ft<sup>3</sup>/s May 8, 1984; minimum daily, 3,070 ft<sup>3</sup>/s May 26, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 54,900 ft<sup>3</sup>/s Feb. 2; minimum daily, 3,070 ft<sup>3</sup>/s May 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 17600  | 20100    | 25900  | 14000  | 36900  | 23000  | 11800  | 5520   | 10500  | 8740   | 23900  | 18600  |
| 2           | 16000  | 18400    | 15700  | 28000  | 54900  | 30300  | 9560   | 5660   | 3700   | 3550   | 26200  | 15000  |
| 3           | 17700  | 11100    | 26500  | 30100  | 50900  | 14600  | 8530   | 5450   | 19400  | 12300  | 18300  | 15100  |
| 4           | 18300  | 10600    | 24300  | 29000  | 44400  | 20900  | 5920   | 5630   | 22000  | 9920   | 15000  | 19900  |
| 5           | 18600  | 18900    | 25500  | 27400  | 39700  | 19900  | 6030   | 5970   | 19700  | 17400  | 15000  | 20400  |
| 6           | 12900  | 24200    | 25000  | 35000  | 32000  | 20900  | 5630   | 8730   | 28200  | 8730   | 19000  | 18700  |
| 7           | 8740   | 24200    | 33300  | 31100  | 33000  | 26800  | 5850   | 7400   | 24400  | 8980   | 18200  | 20600  |
| 8           | 16500  | 26800    | 19800  | 29800  | 33900  | 26900  | 8800   | 6100   | 8530   | 10100  | 18200  | 23200  |
| 9           | 17100  | 30900    | 10100  | 30200  | 34400  | 11700  | 6620   | 5220   | 3080   | 10100  | 18400  | 19800  |
| 10          | 19600  | 13500    | 27400  | 27800  | 26800  | 7640   | 7630   | 6160   | 15700  | 9580   | 20900  | 21000  |
| 11          | 21900  | 16000    | 30700  | 26300  | 32100  | 13000  | 7100   | 3740   | 15700  | 10800  | 20900  | 21200  |
| 12          | 21300  | 26500    | 32900  | 18800  | 31000  | 12800  | 10300  | 5850   | 6760   | 18400  | 21200  | 20100  |
| 13          | 11100  | 27400    | 30300  | 14500  | 34300  | 23300  | 4310   | 5490   | 7220   | 19800  | 21300  | 21100  |
| 14          | 11700  | 23400    | 28900  | 19800  | 36300  | 27500  | 5400   | 7120   | 9420   | 14100  | 23800  | 12900  |
| 15          | 14800  | 24100    | 22200  | 26100  | 36500  | 17600  | 5800   | 19200  | 9900   | 13500  | 21900  | 12400  |
| 16          | 16200  | 24400    | 14600  | 22300  | 30700  | 11100  | 7720   | 8510   | 6570   | 12800  | 15700  | 13000  |
| 17          | 14800  | 13600    | 19500  | 18500  | 27400  | 7570   | 9620   | 7460   | 16900  | 8720   | 22400  | 12800  |
| 18          | 14900  | 7160     | 15800  | 14900  | 27600  | 18700  | 10400  | 3420   | 7730   | 6310   | 23400  | 20000  |
| 19          | 15000  | 15800    | 14500  | 11200  | 27600  | 16200  | 10800  | 3660   | 3210   | 19400  | 21000  | 20700  |
| 20          | 9540   | 25000    | 19500  | 15500  | 32300  | 15800  | 6170   | 4630   | 5700   | 15900  | 26500  | 24500  |
| 21          | 9440   | 29700    | 18700  | 36800  | 33900  | 14300  | 5910   | 9690   | 6810   | 16200  | 21000  | 17000  |
| 22          | 16100  | 14900    | 18500  | 37500  | 31200  | 12000  | 9300   | 11600  | 20500  | 20000  | 19200  | 12500  |
| 23          | 23900  | 17200    | 13000  | 18500  | 19800  | 7600   | 11200  | 17500  | 15100  | 15100  | 20800  | 12300  |
| 24          | 31200  | 20500    | 10200  | 16700  | 11300  | 7550   | 4740   | 5600   | 9410   | 18000  | 17800  | 12900  |
| 25          | 23000  | 20400    | 12200  | 11200  | 24500  | 11800  | 4340   | 4340   | 15200  | 17100  | 13300  | 13000  |
| 26          | 17300  | 27200    | 24400  | 6870   | 22500  | 11400  | 4910   | 3070   | 21200  | 21500  | 25600  | 14800  |
| 27          | 15800  | 27800    | 28200  | 11600  | 24800  | 12600  | 4140   | 4180   | 23000  | 11000  | 33100  | 15600  |
| 28          | 5840   | 28300    | 24400  | 16500  | 24300  | 20900  | 4450   | 12800  | 17400  | 13800  | 31200  | 11400  |
| 29          | 15300  | 23000    | 23100  | 19600  | ---    | 20300  | 4400   | 11200  | 10200  | 14200  | 30000  | 7830   |
| 30          | 15500  | 24200    | 13400  | 16000  | ---    | 10700  | 5040   | 13100  | 4690   | 18000  | 29600  | 18700  |
| 31          | 17000  | ---      | 14300  | 19400  | ---    | 9840   | ---    | 16500  | ---    | 18400  | 29300  | ---    |
| TOTAL       | 504660 | 635260   | 662800 | 680970 | 895000 | 505200 | 212420 | 240500 | 387830 | 422430 | 682100 | 507030 |
| MEAN        | 16280  | 21180    | 21380  | 21970  | 31960  | 16300  | 7081   | 7758   | 12930  | 13630  | 22000  | 16900  |
| MAX         | 31200  | 30900    | 33300  | 37500  | 54900  | 30300  | 11800  | 19200  | 28200  | 21500  | 33100  | 24500  |
| MIN         | 5840   | 7160     | 10100  | 6870   | 11300  | 7550   | 4140   | 3070   | 3080   | 3550   | 13300  | 7830   |
| CAL YR 1984 | TOTAL  | 10817590 |        | MEAN   | 29560  | MAX    | 208000 | MIN    | 5840   |        |        |        |
| WTR YR 1985 | TOTAL  | 6336200  |        | MEAN   | 17360  | MAX    | 54900  | MIN    | 3070   |        |        |        |

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1976 to September 1981.

WATER TEMPERATURE: February 1976 to September 1981.

REMARKS.--Flow regulated by many reservoirs (see p. 207 and Water Resources Data for North Carolina).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 270 microsiemens, July 27, 1978 and July 6, 1981; minimum, 88 microsiemens, June 14, 1979.

WATER TEMPERATURE: Maximum, 31.5°C, Aug. 22, 1980; minimum, 2.0°C, Jan. 23, 29, 1977, Feb. 7-10, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE      | TIME | STREAM-FLOW,<br>INSTANTANEOUS<br>(CFS) | SPECIFIC<br>CONDUCTANCE<br>(US/CM) | PH<br>(STANDARD<br>UNITS) | TEMPERATURE<br>(DEG C) | BAROMETRIC<br>PRESSURE<br>(MM<br>OF<br>HG) | TURBIDITY<br>(NTU) | OXYGEN,<br>DIS-SOLVED<br>(MG/L) | OXYGEN,<br>DIS-SOLVED<br>SATURATION<br>(PERCENT) | COLIFORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREPTOCOCCI<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARDNESS<br>(MG/L<br>AS<br>CACO3) |
|-----------|------|--|------------------------------------|---------------------------|------------------------|--|--------------------|---------------------------------|--|---|---|-----------------------------------|
| OCT 24... | 1230 | 33100                                  | 185                                | 7.2                       | 20.0                   | 751  | 1.8                | 6.4                             | 71   | K2  | K2  | 80                                |
| JAN 24... | 1400 | 16900                                  | --                                 | 8.0                       | 5.0                    | 739  | 4.0                | 11.8                            | 95   | K1  | K1  | 77                                |
| APR 18... | 1215 | 7800                                   | 165                                | 7.8                       | 14.0                   | 750  | 2.5                | 9.1                             | 90   | K2  | K1  | 70                                |
| JUL 18... | 1100 | 7300                                   | 180                                | 7.6                       | 26.5                   | 748  | 1.5                | 3.8                             | 48   | K12   | K4  | 77                                |

| DATE      | HARDNESS,<br>NONCARBONATE<br>(MG/L<br>AS CACO3) | CALCIUM<br>DIS-SOLVED<br>(MG/L<br>AS CA) | MAGNESIUM,<br>DIS-SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>ADSORPTION<br>RATIO | POTASSIUM,<br>DIS-SOLVED<br>(MG/L<br>AS K) | ALKALINITY<br>FIELD<br>(MG/L<br>AS CACO3) | CARBON<br>DIOXIDE<br>DIS-SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-SOLVED<br>(MG/L<br>AS SO4) | CHLORIDE,<br>DIS-SOLVED<br>(MG/L<br>AS CL) | FLUORIDE,<br>DIS-SOLVED<br>(MG/L<br>AS F) |
|-----------|---|--|---|--|-------------------|-------------------------------|--|---|---|---|--|---|
| OCT 24... | 15  | 23                                       | 5.4   | 7.2                                      | 16                | .4                            | 1.5  | 65  | 7.9   | 16  | 8.0  | .10                                       |
| JAN 24... | 3   | 22                                       | 5.4   | 9.1                                      | 20                | .5                            | 1.6  | 74  | 1.4   | 18  | 10   | <.10                                      |
| APR 18... | 4   | 20                                       | 4.9   | 6.4                                      | 16                | .3                            | 1.6  | 66  | 2.0   | 17  | 7.1  | <.10                                      |
| JUL 18... | 7   | 22                                       | 5.4   | 7.7                                      | 17                | .4                            | 1.6  | 70  | 3.4   | 17  | 8.2  | <.10                                      |

| DATE      | SILICA,<br>DIS-SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-SOLVED<br>(MG/L) | SOLIDS,<br>DIS-SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-SOLVED<br>(TONS<br>PER<br>DAY) | NITROGEN,<br>NO2+NO3<br>DIS-SOLVED<br>(MG/L<br>AS N) | NITROGEN,<br>AMMONIA<br>DIS-SOLVED<br>(MG/L<br>AS N) | NITROGEN,<br>AMMONIA<br>DIS-SOLVED<br>(MG/L<br>AS NH4) | NITROGEN,<br>AMMONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOSPHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOSPHORUS,<br>DIS-SOLVED<br>(MG/L<br>AS P) | PHOSPHORUS,<br>ORTHO,<br>DIS-SOLVED<br>(MG/L<br>AS P) |
|-----------|---|--|--|---|---|--|--|--|--|--|---|---|
| OCT 24... | 4.3   | 104  | 100  | .14   | 9290  | .18  | .030   | .04  | .60  | .010                                   | <.010                                       | <.010   |
| JAN 24... | 4.5   | --   | 120  | .14   | 4610  | .42  | <.010  | --   | .30  | .020                                   | .020  | <.010   |
| APR 18... | 2.8   | 94   | 100  | .13   | 1980  | .33  | <.010  | --   | 1.5  | <.010                                  | <.010                                       | .010  |
| JUL 18... | 2.6   | 124  | 110  | .17   | 2440  | .19  | .030   | .04  | .40  | --                                     | .020  | <.010   |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>24... | --  | 10  | <1   | 29   | <.5  | <1   | <1  | <3   | 1  | 300  | <1   | 5  |
| JAN<br>24... | --  | 10  | <1   | 30   | <.5  | <1   | <1  | <3   | 2  | 8  | 1  | <4   |
| APR<br>18... | .03   | <10   | <1   | 26   | <.5  | <1   | 2   | <3   | .2   | <3   | 4  | <4   |
| JUL<br>18... | --  | <10   | 1  | 29   | <.5  | <1   | <1  | <3   | 5  | <3   | 2  | <4   |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>& FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|---|---|
| OCT<br>24... | 8  | <.1  | <10   | 1  | <1  | <1   | 73   | <6   | 46   | 12  | 1070  | 66  |
| JAN<br>24... | 10   | <.1  | <10   | <1   | <1  | <1   | 75   | <6   | 9  | 2   | 91  | 80  |
| APR<br>18... | 2  | .1   | <10   | 2  | <1  | <1   | 64   | <6   | 8  | 21  | 442   | 60  |
| JUL<br>18... | <1   | <.1  | <10   | 4  | <1  | <1   | 73   | <6   | 9  | 6   | 118   | 72  |

## TENNESSEE RIVER BASIN

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## 03543500 SEWEE CREEK NEAR DECATUR, TN

LOCATION.--Lat 35°34'53", long 84°44'53", Meigs County, Hydrologic Unit 06020001, on right bank, 0.3 mi downstream from bridge on State Highway 58, 0.5 mi downstream from Dry Fork, 5.0 mi north of Decatur, and at mile 5.7.

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

PERIOD OF RECORD.--May 1934 to current year. Prior to October 1935, published as Suee Creek near Decatur.

REVISED RECORDS.--WSP 1910: 1936(M), 1939(M), 1943(M), 1946, 1948(M), 1949, 1951, 1957, 1958(P). WSP 2110: 1951 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 694.32 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 22-25. Records good.

AVERAGE DISCHARGE.--51 years, 192 ft<sup>3</sup>/s, 22.28 in/yr.

EXTREMES FOR PERIOD RECORD.--Maximum discharge, 23,900 ft<sup>3</sup>/s Jan. 7, 1946, gage height, 23.97 ft from floodmarks, from rating curve extended above 11,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 22.81 ft; minimum, 8.0 ft<sup>3</sup>/s Jan. 12, 1981, result of freezeup; minimum gage height, 0.15 ft Sept. 2, 3, 7-9, 13, 20, 1954, Jan. 12, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1600 | *2,360                            | *6.43               | No other peak greater than base discharge. |      |                                   |                     |

Minimum discharge, 15 ft<sup>3</sup>/s July 26, Aug. 5, 6, gage height, 0.21 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|-------|------|------|-------|------|------|------|------|------|------|-------|
| 1           | 35    | 51    | 138  | 95   | 1890  | 140  | 93   | 54   | 38   | 25   | 20   | 44    |
| 2           | 34    | 53    | 115  | 132  | 1270  | 137  | 80   | 76   | 35   | 29   | 19   | 36    |
| 3           | 33    | 55    | 124  | 127  | 652   | 126  | 75   | 135  | 34   | 24   | 17   | 32    |
| 4           | 33    | 51    | 105  | 225  | 450   | 117  | 74   | 82   | 33   | 22   | 17   | 32    |
| 5           | 33    | 50    | 97   | 235  | 421   | 116  | 85   | 67   | 32   | 24   | 16   | 31    |
| 6           | 32    | 47    | 141  | 182  | 411   | 106  | 248  | 61   | 31   | 24   | 25   | 29    |
| 7           | 29    | 44    | 119  | 159  | 312   | 98   | 149  | 57   | 37   | 22   | 29   | 28    |
| 8           | 44    | 42    | 107  | 137  | 245   | 93   | 125  | 70   | 40   | 21   | 38   | 28    |
| 9           | 62    | 40    | 98   | 120  | 212   | 100  | 112  | 79   | 33   | 21   | 30   | 26    |
| 10          | 49    | 58    | 93   | 109  | 190   | 97   | 102  | 75   | 31   | 21   | 22   | 26    |
| 11          | 45    | 172   | 86   | 104  | 251   | 93   | 95   | 110  | 32   | 19   | 19   | 27    |
| 12          | 39    | 92    | 80   | 92   | 490   | 93   | 89   | 87   | 38   | 19   | 17   | 25    |
| 13          | 38    | 73    | 74   | 84   | 330   | 87   | 85   | 88   | 36   | 19   | 22   | 24    |
| 14          | 38    | 65    | 70   | 82   | 271   | 84   | 81   | 70   | 31   | 19   | 38   | 22    |
| 15          | 36    | 62    | 65   | 78   | 244   | 81   | 128  | 63   | 30   | 20   | 21   | 22    |
| 16          | 40    | 102   | 63   | 72   | 211   | 77   | 128  | 57   | 28   | 22   | 20   | 22    |
| 17          | 60    | 86    | 61   | 79   | 195   | 75   | 105  | 54   | 31   | 19   | 538  | 22    |
| 18          | 54    | 75    | 60   | 81   | 187   | 72   | 93   | 53   | 154  | 18   | 182  | 21    |
| 19          | 47    | 105   | 59   | 75   | 255   | 70   | 87   | 49   | 64   | 17   | 83   | 19    |
| 20          | 45    | 102   | 78   | 70   | 255   | 69   | 82   | 46   | 44   | 17   | 59   | 19    |
| 21          | 45    | 82    | 111  | 61   | 216   | 69   | 77   | 61   | 38   | 17   | 50   | 19    |
| 22          | 115   | 72    | 268  | 60   | 193   | 92   | 73   | 98   | 34   | 19   | 41   | 19    |
| 23          | 558   | 67    | 185  | 59   | 175   | 91   | 69   | 56   | 33   | 22   | 38   | 21    |
| 24          | 370   | 64    | 149  | 59   | 163   | 113  | 70   | 51   | 42   | 21   | 39   | 29    |
| 25          | 123   | 61    | 170  | 61   | 160   | 105  | 68   | 46   | 32   | 20   | 112  | 24    |
| 26          | 92    | 57    | 150  | 58   | 197   | 93   | 62   | 43   | 31   | 18   | 82   | 26    |
| 27          | 76    | 55    | 134  | 54   | 162   | 87   | 60   | 40   | 34   | 18   | 61   | 26    |
| 28          | 67    | 447   | 122  | 59   | 147   | 88   | 61   | 48   | 28   | 22   | 50   | 22    |
| 29          | 63    | 218   | 111  | 58   | ---   | 85   | 58   | 52   | 26   | 30   | 42   | 20    |
| 30          | 59    | 147   | 102  | 60   | ---   | 81   | 54   | 42   | 26   | 27   | 46   | 19    |
| 31          | 54    | ---   | 95   | 239  | ---   | 86   | ---  | 39   | ---  | 22   | 92   | ---   |
| TOTAL       | 2448  | 2695  | 3430 | 3166 | 10155 | 2921 | 2768 | 2009 | 1156 | 658  | 1885 | 760   |
| MEAN        | 79.0  | 89.8  | 111  | 102  | 363   | 94.2 | 92.3 | 64.8 | 38.5 | 21.2 | 60.8 | 25.3  |
| MAX         | 558   | 447   | 268  | 239  | 1890  | 140  | 248  | 135  | 154  | 30   | 538  | 44    |
| MIN         | 29    | 40    | 59   | 54   | 147   | 69   | 54   | 39   | 26   | 17   | 16   | 19    |
| CFSM        | .68   | .77   | .95  | .87  | 3.10  | .81  | .79  | .55  | .33  | .18  | .52  | .22   |
| IN.         | .78   | .86   | 1.09 | 1.01 | 3.23  | .93  | .88  | .64  | .37  | .21  | .60  | .24   |
| CAL YR 1984 | TOTAL | 79283 | MEAN | 217  | MAX   | 6470 | MIN  | 28   | CFSM | 1.85 | IN.  | 25.21 |
| WTR YR 1985 | TOTAL | 34051 | MEAN | 93.3 | MAX   | 1890 | MIN  | 16   | CFSM | .80  | IN.  | 10.83 |



## TENNESSEE RIVER BASIN

03563000 OCOEE RIVER AT EMP, TN

LOCATION.--Lat 35°05'48", long 84°32'07", Polk County, Hydrologic Unit 06020203, on left bank 700 ft downstream from Tennessee Valley Authority powerplant, 0.8 mi upstream from former village of Emf, 2.0 mi downstream from Goforth Creek, and at mile 19.6.

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

PERIOD OF RECORD.--October 1912 to current year. Prior to January 1913, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1913-34. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 837.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 6-20. Records good. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia). Ocoee No. 3 Lake (station 03562500), and by powerplant above station.

AVERAGE DISCHARGE.--73 years, 1,243 ft<sup>3</sup>/s, 32.21 in/yr unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft<sup>3</sup>/s, July 10, 1916, gage height, 13.7 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 3.4 ft<sup>3</sup>/s, Sept. 20, 1962, gage height, 2.12 ft; minimum daily, 4.6 ft<sup>3</sup>/s, Sept. 14, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 62,000 ft<sup>3</sup>/s was the greatest known since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,900 ft<sup>3</sup>/s, Feb. 1, gage height, 8.77 ft; minimum, 7.8 ft<sup>3</sup>/s, Sept. 17, 30, gage height, 2.19 ft; minimum daily, 118 ft<sup>3</sup>/s, Nov. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB    | MAR    | APR    | MAY   | JUN   | JUL    | AUG   | SEP    |     |       |
|-------------|-------|--------|-------|-------|--------|--------|--------|-------|-------|--------|-------|--------|-----|-------|
| 1           | 898   | 693    | 1080  | 758   | 3970   | 622    | 325    | 458   | 510   | 961    | 873   | 1200   |     |       |
| 2           | 397   | 719    | 1090  | 934   | 2460   | 1110   | 386    | 409   | 518   | 789    | 876   | 1150   |     |       |
| 3           | 402   | 1180   | 1100  | 1180  | 1200   | 379    | 347    | 698   | 609   | 908    | 915   | 1140   |     |       |
| 4           | 392   | 1190   | 1090  | 948   | 851    | 1100   | 338    | 504   | 657   | 1030   | 822   | 1090   |     |       |
| 5           | 684   | 1410   | 1100  | 886   | 1040   | 829    | 350    | 504   | 639   | 933    | 836   | 1080   |     |       |
| 6           | 1090  | 440    | 1110  | 849   | 1170   | 780    | 695    | 519   | 665   | 1030   | 812   | 1080   |     |       |
| 7           | 1090  | 487    | 1090  | 848   | 875    | 620    | 829    | 465   | 668   | 995    | 830   | 1140   |     |       |
| 8           | 1160  | 118    | 1090  | 840   | 767    | 610    | 410    | 436   | 516   | 944    | 773   | 1080   |     |       |
| 9           | 905   | 519    | 838   | 837   | 820    | 360    | 490    | 452   | 498   | 1090   | 872   | 1090   |     |       |
| 10          | 401   | 1100   | 770   | 833   | 799    | 360    | 690    | 434   | 659   | 1090   | 913   | 1080   |     |       |
| 11          | 393   | 1100   | 795   | 836   | 801    | 360    | 194    | 692   | 671   | 1150   | 919   | 1070   |     |       |
| 12          | 685   | 1110   | 710   | 787   | 900    | 400    | 424    | 520   | 717   | 1140   | 879   | 1130   |     |       |
| 13          | 1180  | 1060   | 846   | 749   | 859    | 360    | 510    | 614   | 447   | 1190   | 867   | 699    |     |       |
| 14          | 968   | 1090   | 822   | 801   | 835    | 360    | 525    | 799   | 402   | 1180   | 818   | 593    |     |       |
| 15          | 669   | 1090   | 790   | 824   | 828    | 360    | 388    | 499   | 608   | 1140   | 736   | 616    |     |       |
| 16          | 657   | 1090   | 756   | 812   | 808    | 360    | 428    | 420   | 645   | 1090   | 884   | 632    |     |       |
| 17          | 691   | 688    | 801   | 780   | 801    | 360    | 509    | 726   | 525   | 1090   | 1000  | 627    |     |       |
| 18          | 903   | 644    | 814   | 747   | 799    | 320    | 503    | 464   | 719   | 1140   | 965   | 621    |     |       |
| 19          | 767   | 767    | 803   | 121   | 843    | 320    | 491    | 493   | 531   | 1150   | 989   | 629    |     |       |
| 20          | 544   | 845    | 847   | 762   | 671    | 277    | 518    | 255   | 729   | 1190   | 1030  | 627    |     |       |
| 21          | 556   | 832    | 868   | 1060  | 622    | 566    | 521    | 240   | 737   | 1210   | 881   | 475    |     |       |
| 22          | 685   | 766    | 815   | 1060  | 799    | 501    | 302    | 294   | 600   | 1150   | 970   | 476    |     |       |
| 23          | 758   | 727    | 776   | 736   | 1110   | 584    | 299    | 287   | 612   | 1100   | 971   | 810    |     |       |
| 24          | 1040  | 601    | 772   | 762   | 1100   | 589    | 382    | 467   | 696   | 874    | 971   | 853    |     |       |
| 25          | 716   | 586    | 778   | 780   | 1100   | 418    | 384    | 487   | 694   | 877    | 2050  | 861    |     |       |
| 26          | 747   | 759    | 829   | 784   | 1100   | 400    | 339    | 481   | 1090  | 906    | 1250  | 858    |     |       |
| 27          | 910   | 731    | 851   | 778   | 1100   | 390    | 499    | 493   | 1110  | 916    | 1110  | 851    |     |       |
| 28          | 784   | 912    | 820   | 771   | 1120   | 393    | 509    | 469   | 727   | 925    | 1090  | 524    |     |       |
| 29          | 748   | 874    | 792   | 765   | ---    | 396    | 473    | 595   | 1060  | 890    | 1080  | 491    |     |       |
| 30          | 832   | 1090   | 755   | 786   | ---    | 558    | 523    | 685   | 658   | 954    | 1150  | 458    |     |       |
| 31          | 658   | ---    | 752   | 990   | ---    | 581    | ---    | 567   | ---   | 809    | 1180  | ---    |     |       |
| TOTAL       | 23310 | 25218  | 27150 | 25404 | 30148  | 15623  | 13581  | 15426 | 19917 | 31841  | 30312 | 25031  |     |       |
| MEAN        | 752   | 841    | 876   | 819   | 1077   | 504    | 453    | 498   | 664   | 1027   | 978   | 834    |     |       |
| MAX         | 1180  | 1410   | 1110  | 1180  | 3970   | 1110   | 829    | 799   | 1110  | 1210   | 2050  | 1200   |     |       |
| MIN         | 392   | 118    | 710   | 121   | 622    | 277    | 194    | 240   | 402   | 789    | 736   | 458    |     |       |
| (†)         | -4800 | -7000  | -3700 | -2300 | +16100 | +13000 | +11000 | +6900 | +900  | -10400 | -6700 | -10700 |     |       |
| MEAN*       | 597   | 607    | 756   | 745   | 1652   | 923    | 819    | 720   | 694   | 692    | 762   | 478    |     |       |
| CFSM*       | 1.14  | 1.16   | 1.44  | 1.42  | 3.15   | 1.76   | 1.56   | 1.37  | 1.32  | 1.32   | 1.45  | .91    |     |       |
| IN.*        | 1.31  | 1.29   | 1.66  | 1.64  | 3.28   | 2.03   | 1.74   | 1.58  | 1.48  | 1.52   | 1.67  | 1.02   |     |       |
| CAL YR 1984 | TOTAL | 516428 | MEAN  | 1411  | MAX    | 6610   | MIN    | 118   | MEAN* | 1364   | CFSM* | 2.60   | IN* | 35.40 |
| WTR YR 1985 | TOTAL | 282961 | MEAN  | 775   | MAX    | 3970   | MIN    | 118   | MEAN* | 782    | CFSM* | 1.49   | IN* | 20.23 |

† Change in contents, in cfs-days, in Blue Ridge Lake (Georgia) furnished by Tennessee Valley Authority.

\* Adjusted for change in contents in Blue Ridge Lake (Georgia).

TENNESSEE RIVER BASIN

177

03564500 OCOEE RIVER AT PARKSVILLE, TN

LOCATION.--Lat 35°05'48", long 84°39'15", Polk County, Hydrologic Unit 06020203, on right bank 0.4 mi downstream from Lake Ocoee Dam and Ocoee No. 1 powerplant of Tennessee Valley Authority at Parksville, and at mile 11.5.

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

PERIOD OF RECORD.--January 1911 to September 1916, March 1921 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1916, 1921-36 (adjusted runoff). WSP 1386: 1926.

GAGE.--Water-stage recorder. Datum of gage is 716.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

AVERAGE DISCHARGE.--69 years, 1,330 ft<sup>3</sup>/s, 30.36 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft<sup>3</sup>/s, Mar. 29, 1951, gage height, 20.22 ft; minimum daily, 10 ft<sup>3</sup>/s Oct. 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.-- Flood of Nov. 19, 1906, discharge, 65,000 ft<sup>3</sup>/s was the greatest known flood since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft<sup>3</sup>/s Feb 1, gage height, 6.29 ft; minimum, 56 ft<sup>3</sup>/s Sept. 17, gage height, 2.75 ft; minimum daily, 75 ft<sup>3</sup>/s Jan. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY               | OCT    | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1                 | 894    | 649   | 1100  | 789   | 2000  | 728   | 256   | 469   | 510   | 1110  | 944   | 1080  |
| 2                 | 445    | 685   | 1170  | 789   | 2640  | 487   | 464   | 529   | 524   | 889   | 981   | 978   |
| 3                 | 433    | 1060  | 1220  | 1440  | 2650  | 487   | 387   | 460   | 627   | 929   | 888   | 1270  |
| 4                 | 358    | 893   | 1070  | 1480  | 2660  | 1080  | 311   | 546   | 667   | 884   | 756   | 924   |
| 5                 | 401    | 834   | 1530  | 944   | 2720  | 526   | 300   | 472   | 595   | 858   | 878   | 1120  |
| 6                 | 928    | 821   | 1700  | 913   | 2560  | 553   | 489   | 502   | 570   | 1020  | 783   | 1250  |
| 7                 | 1130   | 1050  | 1530  | 968   | 1560  | 756   | 485   | 498   | 556   | 1050  | 1010  | 1330  |
| 8                 | 1130   | 1310  | 1110  | 973   | 1070  | 728   | 474   | 518   | 474   | 970   | 724   | 1120  |
| 9                 | 1030   | 768   | 1160  | 973   | 1100  | 395   | 523   | 540   | 464   | 1260  | 927   | 1020  |
| 10                | 491    | 1060  | 968   | 772   | 1120  | 393   | 519   | 486   | 792   | 1200  | 870   | 1020  |
| 11                | 652    | 1020  | 980   | 816   | 1120  | 401   | 410   | 486   | 655   | 1170  | 858   | 966   |
| 12                | 687    | 1220  | 1040  | 817   | 779   | 400   | 440   | 644   | 660   | 1210  | 882   | 1110  |
| 13                | 985    | 1070  | 1010  | 907   | 711   | 444   | 470   | 747   | 474   | 1200  | 732   | 823   |
| 14                | 972    | 1180  | 821   | 929   | 616   | 336   | 444   | 595   | 569   | 1150  | 999   | 587   |
| 15                | 724    | 1050  | 676   | 834   | 474   | 369   | 209   | 694   | 609   | 1160  | 922   | 624   |
| 16                | 832    | 1280  | 681   | 790   | 582   | 363   | 252   | 530   | 607   | 1160  | 948   | 604   |
| 17                | 862    | 654   | 941   | 765   | 563   | 364   | 295   | 618   | 650   | 1130  | 887   | 618   |
| 18                | 847    | 708   | 1080  | 800   | 914   | 314   | 415   | 527   | 792   | 1090  | 972   | 601   |
| 19                | 1110   | 893   | 1040  | 75    | 913   | 268   | 471   | 569   | 481   | 981   | 1150  | 615   |
| 20                | 497    | 1120  | 886   | 916   | 1130  | 261   | 476   | 390   | 713   | 1200  | 914   | 655   |
| 21                | 500    | 1060  | 802   | 1200  | 1280  | 433   | 417   | 406   | 693   | 1190  | 953   | 457   |
| 22                | 838    | 947   | 832   | 559   | 1300  | 243   | 467   | 398   | 624   | 1080  | 1020  | 483   |
| 23                | 849    | 877   | 850   | 670   | 1680  | 284   | 300   | 317   | 571   | 997   | 967   | 805   |
| 24                | 740    | 521   | 862   | 781   | 1600  | 389   | 209   | 434   | 602   | 1010  | 1100  | 790   |
| 25                | 948    | 469   | 892   | 786   | 1470  | 345   | 208   | 422   | 1140  | 981   | 1570  | 779   |
| 26                | 837    | 957   | 1150  | 863   | 825   | 474   | 201   | 446   | 890   | 921   | 1510  | 718   |
| 27                | 874    | 794   | 1060  | 877   | 1070  | 645   | 385   | 467   | 1140  | 716   | 1820  | 690   |
| 28                | 859    | 1000  | 1290  | 852   | 1090  | 427   | 370   | 492   | 792   | 790   | 1050  | 520   |
| 29                | 841    | 1170  | 843   | 883   | ---   | 438   | 377   | 470   | 1040  | 810   | 1110  | 446   |
| 30                | 807    | 1340  | 741   | 836   | ---   | 375   | 489   | 634   | 815   | 973   | 1010  | 439   |
| 31                | 783    | ---   | 911   | 770   | ---   | 399   | ---   | 518   | ---   | 1060  | 1190  | ---   |
| TOTAL             | 24284  | 28460 | 31946 | 26767 | 38197 | 14105 | 11513 | 15824 | 20296 | 32149 | 31325 | 24442 |
| MEAN              | 783    | 949   | 1031  | 863   | 1364  | 455   | 384   | 510   | 677   | 1037  | 1010  | 815   |
| MAX               | 1130   | 1340  | 1700  | 1480  | 2720  | 1080  | 523   | 747   | 1140  | 1260  | 1820  | 1330  |
| MIN               | 358    | 469   | 676   | 75    | 474   | 243   | 201   | 317   | 464   | 716   | 724   | 439   |
| CAL YR 1984 TOTAL | 555811 |       |       | 1519  |       | 8010  |       |       |       |       |       |       |
| WTR YR 1985 TOTAL | 299308 |       |       | 820   |       | 2720  |       |       |       |       |       |       |
| MEAN              |        |       |       |       |       |       |       |       |       |       |       |       |
| MAX               |        |       |       |       |       |       |       |       |       |       |       |       |
| MIN               |        |       |       |       |       |       |       |       |       |       |       |       |
| MEAN*             |        |       |       |       |       |       |       |       |       |       |       |       |
| MEAN*             |        |       |       |       |       |       |       |       |       |       |       |       |
| CFSM*             |        |       |       |       |       |       |       |       |       |       |       |       |
| CFSM*             |        |       |       |       |       |       |       |       |       |       |       |       |
| 2.45              |        |       |       |       |       |       |       |       |       |       |       |       |
| 1.39              |        |       |       |       |       |       |       |       |       |       |       |       |
| IN*               |        |       |       |       |       |       |       |       |       |       |       |       |
| IN*               |        |       |       |       |       |       |       |       |       |       |       |       |
| 33.34             |        |       |       |       |       |       |       |       |       |       |       |       |
| 18.86             |        |       |       |       |       |       |       |       |       |       |       |       |

\* Adjusted for change in contents in Blue Ridge Lake (Georgia) and Lake Ocoee.

## TENNESSEE RIVER BASIN

03565300 SOUTH CHESTUEE CREEK NEAR BENTON, TN

LOCATION.--Lat 35°10'02", long 84°42'59", Bradley County, Hydrologic Unit 06020002, on right bank 50 ft downstream from county highway bridge, 0.2 mi downstream from Climer Branch, 2.4 mi southwest of Benton Station, 2.8 mi north of Ocoee, 3.6 mi west of Benton, and at mile 9.3.

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

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 712.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20-30, Apr. 10-16, May 11 to Aug. 15, and Sept. 20-24. Records good to May 10, and fair from May 11 to Sept. 30.

AVERAGE DISCHARGE.--28 years, 51.6 ft<sup>3</sup>/s, 22.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 12.11 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 1.7 ft<sup>3</sup>/s Oct. 11, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) | Date                                       | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage Height<br>(ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Feb. 1 | 1445 | *1,550                            | *7.75               | No other peak greater than base discharge. |      |                                   |                     |

Minimum daily discharge, 2.6 ft<sup>3</sup>/s, Sept. 20-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN   | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|-------|---------|-------|-------|------|------|------|-------|-------|-------|-------|-------|
| 1           | 4.9   | 5.9     | 14    | 13    | 985  | 34   | 36   | 12    | 5.2   | 14    | 4.3   | 5.7   |
| 2           | 4.4   | 6.1     | 14    | 33    | 518  | 32   | 23   | 15    | 5.0   | 12    | 4.2   | 4.8   |
| 3           | 4.2   | 6.2     | 26    | 39    | 166  | 28   | 20   | 18    | 4.8   | 11    | 4.2   | 4.4   |
| 4           | 4.1   | 6.1     | 15    | 72    | 98   | 26   | 19   | 14    | 4.6   | 10    | 4.2   | 4.2   |
| 5           | 4.0   | 6.3     | 13    | 41    | 180  | 39   | 88   | 12    | 4.5   | 11    | 4.2   | 4.1   |
| 6           | 4.0   | 5.8     | 19    | 27    | 190  | 28   | 342  | 12    | 4.5   | 12    | 4.3   | 4.5   |
| 7           | 4.1   | 5.5     | 14    | 22    | 91   | 25   | 67   | 11    | 5.0   | 11    | 4.5   | 4.1   |
| 8           | 4.6   | 5.3     | 12    | 19    | 61   | 23   | 44   | 13    | 7.0   | 9.0   | 4.4   | 3.9   |
| 9           | 11    | 5.3     | 11    | 16    | 50   | 24   | 32   | 14    | 6.0   | 8.0   | 4.2   | 3.8   |
| 10          | 11    | 5.6     | 11    | 15    | 44   | 23   | 30   | 13    | 5.0   | 7.0   | 3.8   | 3.5   |
| 11          | 5.2   | 7.7     | 11    | 15    | 48   | 21   | 29   | 13    | 6.0   | 6.0   | 3.8   | 3.5   |
| 12          | 4.8   | 6.6     | 9.8   | 13    | 89   | 21   | 28   | 12    | 5.5   | 5.8   | 4.0   | 3.4   |
| 13          | 5.0   | 5.9     | 9.4   | 12    | 59   | 19   | 27   | 30    | 6.0   | 5.5   | 4.2   | 3.2   |
| 14          | 5.4   | 5.8     | 8.9   | 12    | 52   | 18   | 26   | 20    | 5.5   | 5.0   | 4.5   | 2.9   |
| 15          | 5.5   | 5.9     | 8.3   | 12    | 51   | 18   | 30   | 15    | 5.0   | 5.5   | 3.5   | 2.9   |
| 16          | 6.1   | 8.9     | 8.0   | 11    | 46   | 18   | 45   | 13    | 6.0   | 6.0   | 3.2   | 2.8   |
| 17          | 9.3   | 7.4     | 7.9   | 14    | 45   | 18   | 31   | 12    | 7.0   | 5.6   | 16    | 3.2   |
| 18          | 8.3   | 6.7     | 7.6   | 15    | 45   | 17   | 25   | 11    | 8.0   | 5.4   | 6.4   | 2.8   |
| 19          | 6.8   | 11      | 7.6   | 13    | 69   | 16   | 22   | 10    | 9.0   | 5.2   | 4.8   | 2.7   |
| 20          | 6.8   | 9.7     | 14    | 12    | 66   | 15   | 20   | 9.0   | 6.0   | 5.0   | 4.1   | 2.6   |
| 21          | 7.0   | 7.7     | 16    | 11    | 50   | 16   | 18   | 8.0   | 5.5   | 4.8   | 3.8   | 2.6   |
| 22          | 12    | 7.0     | 40    | 11    | 41   | 33   | 17   | 7.5   | 5.2   | 5.5   | 3.5   | 2.6   |
| 23          | 18    | 6.7     | 22    | 10    | 37   | 26   | 16   | 7.0   | 5.3   | 5.2   | 3.7   | 2.7   |
| 24          | 33    | 6.6     | 17    | 10    | 34   | 32   | 17   | 6.5   | 5.4   | 5.0   | 17    | 3.3   |
| 25          | 13    | 6.5     | 32    | 11    | 43   | 24   | 16   | 6.0   | 5.3   | 4.8   | 16    | 3.1   |
| 26          | 8.7   | 6.3     | 23    | 10    | 78   | 21   | 15   | 5.7   | 5.2   | 4.5   | 6.9   | 3.0   |
| 27          | 7.4   | 6.2     | 17    | 9.5   | 47   | 19   | 14   | 5.5   | 5.1   | 5.0   | 5.7   | 3.4   |
| 28          | 7.1   | 70      | 15    | 10    | 38   | 19   | 17   | 5.4   | 5.0   | 5.5   | 5.4   | 3.3   |
| 29          | 7.6   | 20      | 13    | 9.8   | ---  | 18   | 15   | 5.8   | 7.0   | 5.8   | 5.0   | 3.2   |
| 30          | 6.6   | 14      | 12    | 9.5   | ---  | 17   | 13   | 5.6   | 15    | 5.0   | 5.1   | 3.0   |
| 31          | 6.2   | ---     | 11    | 52    | ---  | 29   | ---  | 5.4   | ---   | 4.5   | 10    | ---   |
| TOTAL       | 246.1 | 284.7   | 459.5 | 579.8 | 3321 | 717  | 1142 | 347.4 | 179.6 | 215.6 | 178.9 | 103.2 |
| MEAN        | 7.94  | 9.49    | 14.8  | 18.7  | 119  | 23.1 | 38.1 | 11.2  | 5.99  | 6.95  | 5.77  | 3.44  |
| MAX         | 33    | 70      | 40    | 72    | 985  | 39   | 342  | 30    | 15    | 14    | 17    | 5.7   |
| MIN         | 4.0   | 5.3     | 7.6   | 9.5   | 34   | 15   | 13   | 5.4   | 4.5   | 4.5   | 3.2   | 2.6   |
| CFSM        | .25   | .30     | .47   | .59   | 3.74 | .73  | 1.20 | .35   | .19   | .22   | .18   | .11   |
| IN.         | .29   | .33     | .54   | .68   | 3.88 | .84  | 1.34 | .41   | .21   | .25   | .21   | .12   |
| CAL YR 1984 | TOTAL | 17105.8 | MEAN  | 46.7  | MAX  | 1320 | MIN  | 3.6   | CFSM  | 1.47  | IN.   | 20.01 |
| WTR YR 1985 | TOTAL | 7774.8  | MEAN  | 21.3  | MAX  | 985  | MIN  | 2.6   | CFSM  | .67   | IN.   | 9.10  |

## TENNESSEE RIVER BASIN

179

03565500 OOSTANULA CREEK NEAR SANFORD, TN

LOCATION.--Lat 35°19'39", long 84°42'19", McMinn County, Hydrologic Unit 06020002, on right bank 20 ft downstream from highway bridge, 1.3 mi southeast of Sanford, 3.5 mi northeast of Calhoun, and at mile 5.7.

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

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--31 years, 94.2 ft<sup>3</sup>/s, 22.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 13.43 ft from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 10 ft<sup>3</sup>/s Sept. 30, 1985, result of bridge construction upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 2 | 1500 | *877                           | *5.69            | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 10 ft<sup>3</sup>/s Sept. 30, result of bridge construction upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 31    | 34    | 50   | 49   | 429  | 94   | 61   | 40   | 31   | 27   | 19   | 33    |
| 2           | 31    | 33    | 49   | 49   | 812  | 90   | 58   | 40   | 31   | 27   | 18   | 26    |
| 3           | 28    | 35    | 56   | 52   | 313  | 88   | 53   | 50   | 31   | 25   | 17   | 25    |
| 4           | 27    | 35    | 52   | 65   | 161  | 85   | 52   | 53   | 31   | 25   | 18   | 23    |
| 5           | 28    | 34    | 47   | 72   | 141  | 82   | 52   | 45   | 28   | 25   | 19   | 22    |
| 6           | 27    | 33    | 55   | 67   | 167  | 80   | 75   | 45   | 28   | 26   | 19   | 23    |
| 7           | 26    | 30    | 61   | 63   | 144  | 75   | 85   | 43   | 31   | 26   | 21   | 23    |
| 8           | 30    | 30    | 53   | 58   | 121  | 73   | 66   | 41   | 40   | 25   | 22   | 22    |
| 9           | 38    | 30    | 52   | 55   | 108  | 72   | 61   | 45   | 33   | 24   | 22   | 23    |
| 10          | 47    | 31    | 51   | 54   | 102  | 74   | 57   | 44   | 31   | 22   | 19   | 22    |
| 11          | 38    | 45    | 49   | 53   | 100  | 71   | 55   | 43   | 38   | 22   | 19   | 20    |
| 12          | 31    | 51    | 45   | 51   | 124  | 68   | 54   | 44   | 34   | 23   | 21   | 21    |
| 13          | 30    | 39    | 44   | 51   | 123  | 65   | 52   | 89   | 35   | 21   | 27   | 20    |
| 14          | 30    | 34    | 43   | 50   | 107  | 64   | 52   | 54   | 30   | 21   | 32   | 20    |
| 15          | 31    | 33    | 42   | 48   | 101  | 63   | 57   | 47   | 25   | 24   | 23   | 19    |
| 16          | 30    | 37    | 41   | 46   | 97   | 62   | 74   | 44   | 26   | 25   | 21   | 22    |
| 17          | 30    | 42    | 41   | 47   | 94   | 62   | 61   | 41   | 30   | 23   | 28   | 23    |
| 18          | 36    | 37    | 40   | 50   | 93   | 61   | 55   | 40   | 42   | 21   | 70   | 20    |
| 19          | 32    | 45    | 38   | 48   | 99   | 58   | 53   | 39   | 47   | 21   | 42   | 19    |
| 20          | 30    | 59    | 41   | 47   | 115  | 56   | 53   | 39   | 33   | 20   | 30   | 19    |
| 21          | 30    | 45    | 59   | 43   | 106  | 55   | 52   | 37   | 29   | 20   | 29   | 19    |
| 22          | 48    | 40    | 59   | 43   | 98   | 57   | 51   | 36   | 28   | 22   | 24   | 18    |
| 23          | 96    | 39    | 70   | 41   | 94   | 68   | 50   | 35   | 28   | 21   | 23   | 21    |
| 24          | 98    | 39    | 60   | 41   | 92   | 62   | 48   | 34   | 29   | 20   | 25   | 25    |
| 25          | 88    | 37    | 56   | 41   | 91   | 64   | 48   | 34   | 28   | 20   | 33   | 26    |
| 26          | 52    | 37    | 61   | 40   | 116  | 58   | 45   | 33   | 26   | 19   | 33   | 19    |
| 27          | 45    | 36    | 56   | 39   | 115  | 55   | 45   | 34   | 25   | 19   | 27   | 17    |
| 28          | 41    | 60    | 54   | 41   | 99   | 55   | 44   | 33   | 24   | 21   | 36   | 17    |
| 29          | 41    | 73    | 52   | 40   | ---  | 54   | 45   | 35   | 31   | 23   | 30   | 16    |
| 30          | 39    | 54    | 52   | 39   | ---  | 53   | 43   | 32   | 32   | 23   | 28   | 19    |
| 31          | 36    | ---   | 51   | 48   | ---  | 54   | ---  | 31   | ---  | 21   | 31   | ---   |
| TOTAL       | 1245  | 1207  | 1580 | 1531 | 4362 | 2078 | 1657 | 1300 | 935  | 702  | 826  | 642   |
| MEAN        | 40.2  | 40.2  | 51.0 | 49.4 | 156  | 67.0 | 55.2 | 41.9 | 31.2 | 22.6 | 26.6 | 21.4  |
| MAX         | 98    | 73    | 70   | 72   | 812  | 94   | 85   | 89   | 47   | 27   | 70   | 33    |
| MIN         | 26    | 30    | 38   | 39   | 91   | 53   | 43   | 31   | 24   | 19   | 17   | 16    |
| CFSM        | .71   | .71   | .89  | .87  | 2.74 | 1.18 | .97  | .74  | .55  | .40  | .47  | .38   |
| IN.         | .81   | .79   | 1.03 | 1.00 | 2.85 | 1.36 | 1.08 | .85  | .61  | .46  | .54  | .42   |
| CAL YR 1984 | TOTAL | 44991 | MEAN | 123  | MAX  | 5850 | MIN  | 26   | CFSM | 2.16 | IN.  | 29.36 |
| WTR YR 1985 | TOTAL | 18065 | MEAN | 49.5 | MAX  | 812  | MIN  | 16   | CFSM | .87  | IN.  | 11.79 |



## TENNESSEE RIVER BASIN

03566420 WOLFTEVER CREEK NEAR OOLTEWAH, TN

LOCATION.--Lat 35°03'43", long 85°03'59", Hamilton County, Hydrologic Unit 06020001, on right downstream wingwall of county road bridge, 0.6 mi downstream from Southern Railway bridge, 0.9 mi south of Ooltewah, 1.6 mi upstream from Little Wolftever Creek, and at mile 16.1.

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

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 24-25 and Aug. 1-7. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--21 years, 33.2 ft<sup>3</sup>/s, 23.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 9.75 ft; minimum, 1.4 ft<sup>3</sup>/s Aug. 31, 1983 (result of unnatural regulation upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 1 | 1400 | *804                           | *5.34            | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 3.9 ft<sup>3</sup>/s Aug. 13, 14, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|---------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 6.2   | 10      | 30   | 17   | 469  | 28   | 21    | 12    | 6.6   | 7.7   | 6.3   | 12    |       |
| 2           | 5.7   | 14      | 54   | 17   | 224  | 26   | 18    | 47    | 6.0   | 8.0   | 6.2   | 9.1   |       |
| 3           | 5.7   | 12      | 51   | 34   | 96   | 23   | 17    | 42    | 5.7   | 6.1   | 5.7   | 7.7   |       |
| 4           | 5.6   | 11      | 33   | 57   | 64   | 21   | 16    | 19    | 5.4   | 5.7   | 5.2   | 7.2   |       |
| 5           | 5.3   | 11      | 32   | 37   | 123  | 27   | 72    | 15    | 5.3   | 18    | 4.8   | 31    |       |
| 6           | 5.4   | 9.3     | 46   | 29   | 100  | 20   | 120   | 12    | 5.2   | 21    | 4.3   | 52    |       |
| 7           | 5.8   | 8.6     | 30   | 25   | 61   | 18   | 44    | 12    | 21    | 9.1   | 14    | 15    |       |
| 8           | 15    | 7.9     | 27   | 21   | 47   | 18   | 31    | 18    | 22    | 6.6   | 11    | 11    |       |
| 9           | 88    | 7.8     | 23   | 19   | 39   | 19   | 25    | 18    | 8.5   | 5.7   | 6.1   | 8.5   |       |
| 10          | 22    | 18      | 21   | 20   | 35   | 18   | 22    | 20    | 7.2   | 5.5   | 5.1   | 8.5   |       |
| 11          | 12    | 24      | 19   | 19   | 80   | 17   | 20    | 22    | 6.9   | 4.9   | 4.4   | 7.3   |       |
| 12          | 9.4   | 15      | 18   | 16   | 92   | 16   | 18    | 38    | 9.8   | 4.6   | 4.3   | 6.7   |       |
| 13          | 8.1   | 12      | 17   | 15   | 56   | 15   | 17    | 30    | 6.6   | 6.8   | 4.3   | 6.1   |       |
| 14          | 7.9   | 11      | 15   | 15   | 47   | 14   | 16    | 20    | 5.8   | 6.2   | 4.1   | 5.7   |       |
| 15          | 8.2   | 14      | 13   | 13   | 41   | 13   | 88    | 17    | 5.7   | 11    | 4.0   | 5.4   |       |
| 16          | 8.6   | 20      | 12   | 13   | 35   | 12   | 41    | 13    | 5.6   | 10    | 4.3   | 5.3   |       |
| 17          | 13    | 14      | 12   | 24   | 31   | 12   | 29    | 12    | 6.1   | 6.0   | 36    | 5.2   |       |
| 18          | 10    | 13      | 11   | 21   | 28   | 12   | 23    | 11    | 20    | 4.8   | 9.7   | 4.8   |       |
| 19          | 9.3   | 39      | 11   | 19   | 41   | 11   | 20    | 9.7   | 13    | 4.3   | 6.4   | 4.7   |       |
| 20          | 10    | 22      | 24   | 17   | 35   | 11   | 18    | 8.9   | 7.4   | 4.4   | 5.2   | 4.7   |       |
| 21          | 9.6   | 18      | 20   | 16   | 30   | 13   | 16    | 9.0   | 6.2   | 4.4   | 4.9   | 4.8   |       |
| 22          | 114   | 15      | 38   | 15   | 27   | 35   | 14    | 9.6   | 5.6   | 13    | 4.3   | 5.0   |       |
| 23          | 52    | 14      | 25   | 14   | 25   | 23   | 13    | 8.3   | 5.2   | 8.5   | 4.9   | 6.7   |       |
| 24          | 46    | 12      | 25   | 13   | 23   | 24   | 13    | 8.3   | 4.8   | 7.1   | 48    | 7.8   |       |
| 25          | 28    | 11      | 37   | 12   | 42   | 19   | 12    | 7.3   | 4.8   | 6.8   | 38    | 7.3   |       |
| 26          | 20    | 11      | 28   | 12   | 48   | 17   | 11    | 7.3   | 4.7   | 5.7   | 15    | 8.2   |       |
| 27          | 18    | 13      | 24   | 11   | 36   | 16   | 13    | 7.1   | 4.5   | 6.5   | 11    | 7.8   |       |
| 28          | 17    | 185     | 21   | 15   | 30   | 16   | 13    | 8.9   | 45    | 7.3   | 8.8   | 7.3   |       |
| 29          | 15    | 45      | 20   | 16   | ---  | 15   | 11    | 7.7   | 30    | 14    | 7.3   | 7.3   |       |
| 30          | 13    | 36      | 18   | 18   | ---  | 14   | 9.1   | 7.2   | 9.0   | 10    | 26    | 7.5   |       |
| 31          | 11    | ---     | 17   | 61   | ---  | 25   | ---   | 6.7   | ---   | 7.1   | 29    | ---   |       |
| TOTAL       | 604.8 | 653.6   | 772  | 651  | 2005 | 568  | 801.1 | 484.0 | 299.6 | 246.8 | 348.6 | 287.6 |       |
| MEAN        | 19.5  | 21.8    | 24.9 | 21.0 | 71.6 | 18.3 | 26.7  | 15.6  | 9.99  | 7.96  | 11.2  | 9.59  |       |
| MAX         | 114   | 185     | 54   | 61   | 469  | 35   | 120   | 47    | 45    | 21    | 48    | 52    |       |
| MIN         | 5.3   | 7.8     | 11   | 11   | 23   | 11   | 9.1   | 6.7   | 4.5   | 4.3   | 4.0   | 4.7   |       |
| CFSM        | 1.04  | 1.16    | 1.32 | 1.12 | 3.81 | .97  | 1.42  | .83   | .53   | .42   | .60   | .51   |       |
| IN.         | 1.20  | 1.29    | 1.53 | 1.29 | 3.97 | 1.12 | 1.59  | .96   | .59   | .49   | .69   | .57   |       |
| CAL YR 1984 | TOTAL | 11909.9 |      | MEAN | 32.5 | MAX  | 731   | MIN   | 4.7   | CFSM  | 1.73  | IN.   | 23.57 |
| WTR YR 1985 | TOTAL | 7722.1  |      | MEAN | 21.2 | MAX  | 469   | MIN   | 4.0   | CFSM  | 1.13  | IN.   | 15.28 |

## TENNESSEE RIVER BASIN

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## 03567500 SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN

LOCATION.--Lat 35°00'51", long 85°12'35", Hamilton County Hydrologic Unit 06020001, on left bank 0.1 mi upstream from bridge on U.S. Highway 11, 1.5 mi south of Chickamauga, 6.0 mi east of the city hall in Chattanooga, and at mile 12.2.

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

PERIOD OF RECORD.--October 1928 to September 1978, October 1980 to current year. Monthly discharge only for December 1930, published in WSP 1306. Gage-height record collected October 1978 to September 1980 (fragmentary). Prior to October 1937, published as Chickamauga Creek near Chickamauga.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1937. WSP 1386: 1932.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 644.12 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1930, nonrecording gage. Oct. 7, 1930, to Oct. 29, 1980, water-stage recorder at site 1,000 ft upstream at datum 7.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--55 years (water years 1929-78, 1981-85), 699 ft<sup>3</sup>/s, 22.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft<sup>3</sup>/s Mar. 17, 1973, gage height, 28.70 ft; maximum gage height, 30.75 ft, Mar. 17, 1973, present datum from floodmarks (backwater from Tennessee River); minimum discharge, 61 ft<sup>3</sup>/s Oct. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 2 | 1630 | *10,200                        | *18.96           | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 116 ft<sup>3</sup>/s Sept. 23,30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|------|-------|
| 1           | 152   | 213    | 544   | 283   | 4790  | 653   | 439   | 230   | 188  | 142  | 319   | 224  |       |
| 2           | 153   | 222    | 552   | 295   | 9430  | 620   | 360   | 425   | 179  | 165  | 249   | 190  |       |
| 3           | 148   | 226    | 1110  | 450   | 6890  | 574   | 316   | 1480  | 170  | 151  | 206   | 175  |       |
| 4           | 149   | 226    | 815   | 1110  | 3160  | 523   | 299   | 559   | 167  | 140  | 179   | 178  |       |
| 5           | 147   | 217    | 605   | 994   | 2080  | 526   | 345   | 366   | 166  | 152  | 164   | 169  |       |
| 6           | 145   | 207    | 819   | 700   | 3270  | 492   | 1660  | 297   | 162  | 216  | 157   | 165  |       |
| 7           | 145   | 191    | 775   | 577   | 2110  | 427   | 1080  | 297   | 192  | 182  | 243   | 155  |       |
| 8           | 186   | 182    | 603   | 505   | 1390  | 397   | 700   | 854   | 751  | 149  | 838   | 150  |       |
| 9           | 364   | 178    | 522   | 432   | 1110  | 418   | 552   | 1030  | 343  | 141  | 432   | 149  |       |
| 10          | 434   | 207    | 464   | 387   | 948   | 447   | 461   | 819   | 232  | 135  | 227   | 146  |       |
| 11          | 257   | 349    | 420   | 378   | 1160  | 405   | 410   | 1080  | 214  | 132  | 190   | 149  |       |
| 12          | 198   | 305    | 373   | 347   | 2780  | 388   | 371   | 1310  | 232  | 135  | 173   | 143  |       |
| 13          | 178   | 235    | 344   | 307   | 2240  | 351   | 346   | 1260  | 242  | 144  | 161   | 132  |       |
| 14          | 171   | 213    | 304   | 292   | 1380  | 326   | 330   | 790   | 202  | 149  | 152   | 129  |       |
| 15          | 168   | 212    | 295   | 282   | 1110  | 314   | 1070  | 553   | 180  | 182  | 146   | 127  |       |
| 16          | 164   | 249    | 278   | 267   | 929   | 303   | 1190  | 438   | 170  | 429  | 142   | 125  |       |
| 17          | 183   | 237    | 266   | 453   | 813   | 297   | 742   | 373   | 169  | 189  | 451   | 124  |       |
| 18          | 181   | 211    | 252   | 724   | 725   | 290   | 578   | 328   | 194  | 145  | 835   | 125  |       |
| 19          | 182   | 363    | 248   | 543   | 753   | 265   | 490   | 304   | 201  | 132  | 357   | 123  |       |
| 20          | 182   | 320    | 293   | 436   | 824   | 262   | 432   | 270   | 204  | 128  | 243   | 121  |       |
| 21          | 173   | 267    | 352   | 339   | 763   | 274   | 377   | 268   | 179  | 125  | 205   | 121  |       |
| 22          | 514   | 236    | 388   | 311   | 672   | 633   | 339   | 264   | 163  | 123  | 196   | 122  |       |
| 23          | 699   | 221    | 417   | 303   | 620   | 899   | 308   | 241   | 154  | 138  | 175   | 120  |       |
| 24          | 710   | 213    | 360   | 295   | 587   | 627   | 300   | 227   | 151  | 231  | 366   | 126  |       |
| 25          | 570   | 210    | 420   | 295   | 655   | 518   | 291   | 214   | 150  | 271  | 1680  | 127  |       |
| 26          | 500   | 200    | 387   | 283   | 1100  | 444   | 265   | 206   | 149  | 303  | 772   | 132  |       |
| 27          | 312   | 200    | 335   | 256   | 902   | 387   | 249   | 202   | 142  | 200  | 413   | 129  |       |
| 28          | 265   | 1420   | 313   | 274   | 730   | 371   | 280   | 200   | 139  | 192  | 305   | 127  |       |
| 29          | 250   | 1290   | 301   | 306   | ---   | 359   | 264   | 194   | 151  | 532  | 258   | 125  |       |
| 30          | 249   | 669    | 288   | 333   | ---   | 339   | 232   | 193   | 145  | 870  | 227   | 118  |       |
| 31          | 235   | ---    | 282   | 729   | ---   | 381   | ---   | 201   | ---  | 546  | 251   | ---  |       |
| TOTAL       | 8364  | 9689   | 13725 | 13486 | 53921 | 13510 | 15076 | 15473 | 6081 | 6869 | 10712 | 4246 |       |
| MEAN        | 270   | 323    | 443   | 435   | 1926  | 436   | 503   | 499   | 203  | 222  | 346   | 142  |       |
| MAX         | 710   | 1420   | 1110  | 1110  | 9430  | 899   | 1660  | 1480  | 751  | 870  | 1680  | 224  |       |
| MIN         | 145   | 178    | 248   | 256   | 587   | 262   | 232   | 193   | 139  | 123  | 142   | 118  |       |
| CFSM        | .63   | .75    | 1.04  | 1.02  | 4.50  | 1.02  | 1.18  | 1.17  | .47  | .52  | .81   | .33  |       |
| IN.         | .73   | .84    | 1.19  | 1.17  | 4.69  | 1.17  | 1.31  | 1.34  | .53  | .60  | .93   | .37  |       |
| CAL YR 1984 | TOTAL | 272755 |       | MEAN  | 745   | MAX   | 8610  | MIN   | 145  | CFSM | 1.74  | IN.  | 23.71 |
| WTR YR 1985 | TOTAL | 171152 |       | MEAN  | 469   | MAX   | 9430  | MIN   | 118  | CFSM | 1.10  | IN.  | 14.88 |

## TENNESSEE RIVER BASIN

## 03568000 TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43", Hamilton County, Hydrologic Unit 06020001, on right bank at Rivermont Golf and Country Club, 0.5 mi downstream from South Chickamauga Creek, 3.0 mi downstream from Chickamauga Dam, 3.5 mi upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6.

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

PERIOD OF RECORD.--April 1874 to current year. Monthly discharges only for some periods, published in WSP 1306. July 1930 to December 1935, published as "at Hales Bar, near Chattanooga." Gage-height records collected in this vicinity since 1874 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M). WSP 973: 1942. WSP 1306: 1916(M). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

GAGE.--Water-stage recorder. Datum of gage is 621.12 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1939, nonrecording or recording gages at several sites from 7.0 mi upstream from Chattanooga to Hales Bar Dam 33 mi downstream at or within 0.2 ft of present datum, except nonrecording gage at Bridgeport, AL, 49.9 mi downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2.2 mi downstream from base gage at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1936 by increasing number of upstream reservoirs (see p. 207 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--111 years, 36,990 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft<sup>3</sup>/s, Mar. 1, 1875, gage height, 53.8 ft, present datum, at Walnut Street, from rating curve extended above 250,000 ft<sup>3</sup>/s; minimum daily, 1,200 ft<sup>3</sup>/s, Nov. 1, 1953; minimum gage height, 0.0 ft, Sept. 11-14, 1881, Sept. 19, 1883.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 57.9 ft, Mar. 11, 1867, present datum at Walnut Street, discharge about 459,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 81,000 ft<sup>3</sup>/s, Feb. 2; maximum gage height, 20.02 ft, Feb. 9; maximum gage height at Walnut Street, 18.47 ft, Feb. 2; minimum daily discharge, 7,200 ft<sup>3</sup>/s, June 8; minimum gage height, 11.00 ft, June 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC    | JAN    | FEB     | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|----------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 21900  | 22500    | 33500  | 18700  | 45800   | 29200  | 17100  | 8330   | 17400  | 15700  | 26900  | 17200  |
| 2           | 20600  | 21100    | 22200  | 31700  | 78300   | 31800  | 12500  | 8860   | 7650   | 14700  | 27200  | 20300  |
| 3           | 22800  | 17500    | 34500  | 39400  | 77200   | 21800  | 10700  | 8640   | 23700  | 18600  | 20700  | 25800  |
| 4           | 20700  | 13300    | 36200  | 37000  | 68400   | 27100  | 11900  | 8140   | 23900  | 16400  | 18300  | 25000  |
| 5           | 23800  | 22300    | 36900  | 31900  | 58100   | 24700  | 11700  | 7950   | 24500  | 15900  | 18300  | 27600  |
| 6           | 16600  | 25700    | 34800  | 38500  | 49300   | 25600  | 10900  | 11100  | 34800  | 9700   | 14900  | 24700  |
| 7           | 12700  | 30200    | 38900  | 37600  | 45800   | 31000  | 10500  | 8010   | 19600  | 9310   | 12100  | 18800  |
| 8           | 22300  | 26700    | 23300  | 36500  | 45000   | 29800  | 10500  | 8050   | 7200   | 16800  | 11300  | 20500  |
| 9           | 21900  | 33300    | 16800  | 36500  | 44900   | 15800  | 10900  | 8510   | 7610   | 17800  | 14200  | 25500  |
| 10          | 25100  | 18100    | 33800  | 43600  | 41300   | 12400  | 10600  | 8070   | 18600  | 15700  | 18600  | 27000  |
| 11          | 30000  | 19700    | 35000  | 30700  | 37500   | 16500  | 10900  | 8830   | 19300  | 19000  | 20400  | 27600  |
| 12          | 28800  | 32000    | 37400  | 23600  | 44200   | 17600  | 8450   | 8830   | 19600  | 22900  | 33800  | 26000  |
| 13          | 19700  | 33900    | 38200  | 19300  | 46300   | 23900  | 9130   | 16100  | 16500  | 15500  | 27700  | 27800  |
| 14          | 16200  | 28400    | 35700  | 30600  | 45300   | 28400  | 9510   | 22600  | 8370   | 9590   | 28200  | 12200  |
| 15          | 18600  | 26100    | 26200  | 29800  | 40400   | 23700  | 10100  | 24100  | 8340   | 20300  | 29600  | 8980   |
| 16          | 20400  | 26200    | 21800  | 26300  | 38200   | 17000  | 9610   | 15100  | 8000   | 19200  | 20000  | 19000  |
| 17          | 20300  | 22700    | 22800  | 24900  | 35900   | 11700  | 9160   | 13300  | 18600  | 21400  | 19400  | 18800  |
| 18          | 18800  | 10400    | 22200  | 21400  | 35500   | 20900  | 9540   | 7810   | 17900  | 11400  | 25800  | 26500  |
| 19          | 18500  | 22500    | 21700  | 15800  | 31200   | 16600  | 8290   | 7640   | 9260   | 17900  | 25300  | 28200  |
| 20          | 15500  | 28500    | 21900  | 18700  | 37800   | 19300  | 7270   | 7600   | 12000  | 18200  | 34000  | 29900  |
| 21          | 14900  | 35600    | 22400  | 41600  | 41500   | 18900  | 7320   | 9590   | 12300  | 16800  | 28100  | 15500  |
| 22          | 19600  | 23200    | 23600  | 34700  | 40500   | 17100  | 10000  | 12300  | 16300  | 22400  | 24500  | 11500  |
| 23          | 30400  | 27300    | 17500  | 22700  | 28100   | 11200  | 13100  | 16400  | 13600  | 26200  | 25200  | 16300  |
| 24          | 33200  | 25000    | 13700  | 22500  | 19900   | 11700  | 9000   | 13300  | 16100  | 23700  | 18100  | 17100  |
| 25          | 33100  | 24100    | 15600  | 18500  | 29900   | 14900  | 8670   | 9960   | 20900  | 24500  | 14900  | 18000  |
| 26          | 33000  | 31600    | 30600  | 11700  | 27000   | 14000  | 8650   | 8700   | 28700  | 29200  | 29600  | 21600  |
| 27          | 25300  | 33300    | 33100  | 15300  | 30700   | 17200  | 8170   | 8180   | 27200  | 21600  | 37100  | 17100  |
| 28          | 12600  | 34800    | 36100  | 21500  | 30700   | 24300  | 7700   | 12800  | 17300  | 22700  | 37200  | 14900  |
| 29          | 21900  | 35500    | 28900  | 23400  | ---     | 24500  | 8500   | 14500  | 9410   | 21900  | 37500  | 8280   |
| 30          | 19200  | 34500    | 19900  | 21000  | ---     | 15700  | 8730   | 14000  | 9100   | 28300  | 38300  | 20100  |
| 31          | 18700  | ---      | 20400  | 18500  | ---     | 18800  | ---    | 23300  | ---    | 29900  | 30200  | ---    |
| TOTAL       | 677100 | 786000   | 855600 | 843900 | 1194700 | 633100 | 299100 | 360600 | 493740 | 593200 | 767400 | 617760 |
| MEAN        | 21840  | 26200    | 27600  | 27220  | 42670   | 20420  | 9970   | 11630  | 16460  | 19140  | 24750  | 20590  |
| MAX         | 33200  | 35600    | 38900  | 43600  | 78300   | 31800  | 17100  | 24100  | 34800  | 29900  | 38300  | 29900  |
| MIN         | 12600  | 10400    | 13700  | 11700  | 19900   | 11200  | 7270   | 7600   | 7200   | 9310   | 11300  | 8280   |
| CAL YR 1984 | TOTAL  | 13498100 |        | MEAN   | 36880   | MAX    | 228000 | MIN    | 10400  |        |        |        |
| WTR YR 1985 | TOTAL  | 8122200  |        | MEAN   | 22250   | MAX    | 78300  | MIN    | 7200   |        |        |        |



## 03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN

LOCATION.--Lat 35°12'22", long 85°29'48", Marion County, Hydrologic Unit 06020004, on right bank 250 ft upstream from county road bridge (revised), 1.5 mi east of Whitwell, 3.0 mi upstream from bridge on State Highway 27, 4.5 mi downstream from Griffith Creek, and at mile 25.1.

DRAINAGE AREA.--402 mi<sup>2</sup>, includes 18 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1920 to current year. Prior to December 1920 monthly discharges only, published in WSP 1306.

REVISED RECORDS.--WSP 603: 1922(M). WSP 758: 1929(M). WSP 1033: 1943(M). WSP 1386: 1921-22, 1923-25(M), 1927-28(M), 1930(M), 1933(M). WSP 1910: Drainage area. WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 632.73 ft above National Geodetic Vertical datum of 1929 (levels by Tennessee Valley Authority). Prior to Sept. 18, 1927, nonrecording gage at same site at datum 0.03 ft higher. Sept. 18, 1927, to Sept. 30, 1930, nonrecording gage at bridge 15 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Prior to 1950 some diurnal fluctuation caused by small mills above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--65 years, 745 ft<sup>3</sup>/s, 25.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 17.65 ft; minimum, 16 ft<sup>3</sup>/s Sept. 6-21, 27, 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of about 19 ft from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 2 | 0800 | *5,930                         | *12.96           | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 58 ft<sup>3</sup>/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|------|------|-------|
| 1           | 69    | 210    | 1500  | 557   | 3320  | 757   | 681   | 337   | 215  | 128  | 87   | 244  |       |
| 2           | 64    | 204    | 1140  | 649   | 5640  | 714   | 792   | 353   | 205  | 126  | 86   | 203  |       |
| 3           | 63    | 192    | 1060  | 782   | 3970  | 659   | 744   | 430   | 197  | 128  | 86   | 178  |       |
| 4           | 63    | 186    | 937   | 1250  | 2570  | 612   | 652   | 630   | 196  | 147  | 86   | 160  |       |
| 5           | 63    | 182    | 847   | 1460  | 1960  | 599   | 647   | 576   | 197  | 184  | 82   | 149  |       |
| 6           | 61    | 175    | 869   | 1320  | 2230  | 567   | 1640  | 447   | 186  | 149  | 78   | 143  |       |
| 7           | 60    | 167    | 849   | 1110  | 2190  | 529   | 1750  | 397   | 193  | 143  | 83   | 152  |       |
| 8           | 76    | 162    | 818   | 928   | 1770  | 506   | 1380  | 417   | 337  | 136  | 96   | 175  |       |
| 9           | 97    | 157    | 747   | 791   | 1420  | 497   | 1060  | 441   | 315  | 132  | 99   | 150  |       |
| 10          | 114   | 209    | 683   | 700   | 1200  | 503   | 874   | 432   | 280  | 125  | 95   | 139  |       |
| 11          | 141   | 645    | 624   | 642   | 1150  | 496   | 754   | 412   | 260  | 120  | 93   | 143  |       |
| 12          | 121   | 574    | 571   | 584   | 1920  | 501   | 663   | 396   | 300  | 116  | 89   | 199  |       |
| 13          | 101   | 519    | 532   | 535   | 1910  | 482   | 597   | 3230  | 250  | 113  | 82   | 165  |       |
| 14          | 89    | 420    | 486   | 502   | 1640  | 464   | 557   | 2940  | 240  | 131  | 80   | 137  |       |
| 15          | 83    | 363    | 440   | 486   | 1380  | 442   | 1060  | 1600  | 225  | 127  | 77   | 126  |       |
| 16          | 77    | 405    | 409   | 486   | 1180  | 419   | 2120  | 965   | 210  | 121  | 74   | 119  |       |
| 17          | 89    | 421    | 383   | 473   | 1040  | 403   | 1800  | 742   | 198  | 115  | 700  | 113  |       |
| 18          | 94    | 449    | 364   | 425   | 945   | 383   | 1360  | 626   | 224  | 105  | 667  | 108  |       |
| 19          | 88    | 653    | 351   | 420   | 1110  | 364   | 1070  | 535   | 247  | 101  | 416  | 104  |       |
| 20          | 89    | 840    | 400   | 401   | 1500  | 347   | 895   | 454   | 229  | 98   | 374  | 99   |       |
| 21          | 91    | 922    | 447   | 354   | 1470  | 340   | 773   | 428   | 211  | 96   | 449  | 95   |       |
| 22          | 132   | 717    | 638   | 344   | 1260  | 449   | 675   | 389   | 196  | 95   | 296  | 93   |       |
| 23          | 294   | 575    | 797   | 337   | 1090  | 584   | 596   | 363   | 184  | 93   | 218  | 92   |       |
| 24          | 740   | 498    | 875   | 331   | 986   | 608   | 550   | 336   | 174  | 97   | 258  | 90   |       |
| 25          | 575   | 436    | 835   | 329   | 915   | 652   | 497   | 311   | 161  | 98   | 892  | 87   |       |
| 26          | 495   | 387    | 824   | 317   | 914   | 634   | 446   | 289   | 182  | 94   | 676  | 88   |       |
| 27          | 371   | 359    | 826   | 302   | 871   | 599   | 420   | 267   | 154  | 94   | 660  | 94   |       |
| 28          | 310   | 2490   | 753   | 303   | 807   | 569   | 418   | 253   | 143  | 93   | 586  | 94   |       |
| 29          | 277   | 2420   | 682   | 295   | ---   | 536   | 393   | 246   | 136  | 90   | 433  | 105  |       |
| 30          | 251   | 2060   | 619   | 291   | ---   | 493   | 360   | 238   | 132  | 90   | 355  | 97   |       |
| 31          | 228   | ---    | 575   | 432   | ---   | 501   | ---   | 227   | ---  | 91   | 319  | ---  |       |
| TOTAL       | 5466  | 17997  | 21881 | 18136 | 48358 | 16209 | 26224 | 19707 | 6377 | 3576 | 8672 | 3941 |       |
| MEAN        | 176   | 600    | 706   | 585   | 1727  | 523   | 874   | 636   | 213  | 115  | 280  | 131  |       |
| MAX         | 740   | 2490   | 1500  | 1460  | 5640  | 757   | 2120  | 3230  | 337  | 184  | 892  | 244  |       |
| MIN         | 60    | 157    | 351   | 291   | 807   | 340   | 360   | 227   | 132  | 90   | 74   | 87   |       |
| CFSM        | .44   | 1.49   | 1.76  | 1.46  | 4.30  | 1.30  | 2.17  | 1.58  | .53  | .29  | .70  | .33  |       |
| IN.         | .51   | 1.67   | 2.02  | 1.68  | 4.47  | 1.50  | 2.43  | 1.82  | .59  | .33  | .80  | .36  |       |
| CAL YR 1984 | TOTAL | 328146 |       | MEAN  | 897   | MAX   | 13200 | MIN   | 60   | CFSM | 2.23 | IN.  | 30.37 |
| WTR YR 1985 | TOTAL | 196544 |       | MEAN  | 538   | MAX   | 5640  | MIN   | 60   | CFSM | 1.34 | IN.  | 18.19 |



## TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°00'41", long 85°41'51", Marion County, Hydrologic Unit 06030001, on right bank, 0.5 mi downstream from Tennessee State Highway 156 (revised), 0.5 mi downstream from Battle Creek, 0.5 mi east of South Pittsburg, 4.6 mi downstream from Sequatchie River, 6.5 mi downstream from Nickajack Dam, and at mile 418.2.

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

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1930 to current year. Published as "at Hales Bar, near Chattanooga, Tenn." July 1930 to July 1966.

REVISED RECORDS.--WSP 853: Drainage area. WSP 973: 1942. WSP 1306 (monthly runoff). WSP 1386: 1932-34.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 581.01 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 13, 1932, at site 12.9 mi upstream at datum 7.85 ft higher. Feb. 13, 1932, to July 17, 1966, at site 11.5 mi upstream at datum 7.50 ft higher. Since Jan. 27, 1939, auxiliary water-stage recorder at site 10.6 mi downstream.

REMARKS.--Records good, except for estimated daily discharges, Jan. 2-29, June 19 to July 8, 20-30, which are fair. Flow regulated since 1936 by increasing number of reservoirs above station (see p. 207 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--55 years, 37,950 ft<sup>3</sup>/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315,000 ft<sup>3</sup>/s Mar. 18, 1973, gage height, 34.33 ft; minimum daily, 2,900 ft<sup>3</sup>/s Nov. 1, 15, 1953; minimum gage height, 1.21 ft Oct. 27, 1931, site and datum used 1932-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 44.6 ft March 1867, site and datum used 1932-65. Flood of Mar. 8, 1917, reached a stage of 37.4 ft, site and datum used 1932-65, discharge, 320,000 ft<sup>3</sup>/s, from rating curve extended above 225,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 107,000 ft<sup>3</sup>/s Feb. 2; maximum gage height, 21.08 ft Feb. 2; minimum daily discharge, 8,930 ft<sup>3</sup>/s Sept. 29; minimum gage height 11.93 ft Mar. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC     | JAN     | FEB     | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|----------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 26300  | 29800    | 40000   | 25800   | 58100   | 41400  | 25400  | 16800  | 22800  | 18000  | 27200  | 18800  |
| 2           | 25700  | 28500    | 23600   | 35000   | 101000  | 36600  | 18900  | 15900  | 12600  | 22000  | 33300  | 26200  |
| 3           | 27600  | 19700    | 39300   | 50000   | 99700   | 26100  | 18300  | 14000  | 31200  | 25000  | 24200  | 34000  |
| 4           | 28500  | 19100    | 44100   | 45000   | 85000   | 33400  | 20300  | 13900  | 31100  | 20000  | 23200  | 31800  |
| 5           | 26000  | 29300    | 44800   | 40000   | 73700   | 31600  | 19300  | 14000  | 33500  | 22000  | 22300  | 32700  |
| 6           | 21200  | 36700    | 43200   | 50000   | 65000   | 38700  | 17300  | 18700  | 39100  | 15000  | 22700  | 28800  |
| 7           | 17900  | 39500    | 51000   | 45000   | 59000   | 35700  | 16400  | 14900  | 27700  | 14000  | 20000  | 22200  |
| 8           | 27500  | 38100    | 32900   | 45000   | 57100   | 34900  | 21800  | 13800  | 16000  | 25000  | 20700  | 28700  |
| 9           | 26600  | 33500    | 20000   | 45000   | 51400   | 21100  | 23400  | 16200  | 13800  | 28600  | 22500  | 39700  |
| 10          | 29000  | 21900    | 31100   | 55000   | 49400   | 16600  | 15200  | 17800  | 24200  | 30100  | 18800  | 40100  |
| 11          | 37300  | 20300    | 46400   | 40000   | 45800   | 24000  | 13800  | 14700  | 23300  | 30400  | 24600  | 28200  |
| 12          | 34700  | 40000    | 46600   | 30000   | 53400   | 19400  | 15500  | 15400  | 21300  | 33300  | 39800  | 29900  |
| 13          | 26000  | 40700    | 43300   | 25000   | 57100   | 32600  | 12700  | 30000  | 22100  | 23700  | 36400  | 31600  |
| 14          | 19300  | 37000    | 42100   | 40000   | 56800   | 32200  | 15200  | 31200  | 13600  | 20600  | 34200  | 14600  |
| 15          | 26900  | 28700    | 36500   | 35000   | 56300   | 27400  | 18800  | 28900  | 17000  | 28800  | 31600  | 13000  |
| 16          | 27600  | 30600    | 20100   | 35000   | 45000   | 17800  | 19000  | 21300  | 14900  | 28900  | 23900  | 29500  |
| 17          | 25000  | 26100    | 32400   | 30000   | 43800   | 15600  | 21000  | 17500  | 24400  | 29000  | 30500  | 26800  |
| 18          | 24800  | 16000    | 28000   | 25000   | 40500   | 29700  | 19500  | 15000  | 21900  | 25900  | 35600  | 28900  |
| 19          | 26300  | 29000    | 23700   | 20000   | 43900   | 23600  | 15300  | 14300  | 16000  | 29300  | 34900  | 32600  |
| 20          | 18400  | 40300    | 28900   | 25000   | 41200   | 25300  | 14400  | 16900  | 18000  | 24000  | 38100  | 34200  |
| 21          | 17500  | 42700    | 30200   | 55000   | 51400   | 23800  | 14400  | 20900  | 19000  | 20000  | 34200  | 16400  |
| 22          | 29200  | 28000    | 29600   | 45000   | 51600   | 23300  | 19300  | 17200  | 17000  | 24000  | 25100  | 13100  |
| 23          | 35200  | 27200    | 25000   | 30000   | 37800   | 18800  | 20700  | 22600  | 22000  | 30000  | 29400  | 24200  |
| 24          | 44500  | 30100    | 19400   | 30000   | 25700   | 17800  | 16300  | 20800  | 26000  | 26000  | 23700  | 22100  |
| 25          | 42400  | 29300    | 21300   | 25000   | 37100   | 22400  | 15700  | 14500  | 27000  | 35000  | 20200  | 25900  |
| 26          | 40100  | 40000    | 37000   | 15000   | 37200   | 24600  | 16200  | 13000  | 30000  | 40000  | 37000  | 27400  |
| 27          | 28800  | 36500    | 40800   | 20000   | 38900   | 25200  | 14700  | 14100  | 32000  | 30000  | 43500  | 20400  |
| 28          | 18200  | 43600    | 42900   | 25000   | 34100   | 31800  | 13400  | 23000  | 25000  | 25000  | 45100  | 17900  |
| 29          | 33400  | 51300    | 34500   | 35000   | ---     | 37300  | 16500  | 23600  | 12000  | 28000  | 43600  | 8930   |
| 30          | 24900  | 45600    | 26000   | 25300   | ---     | 22800  | 19600  | 22000  | 15000  | 35000  | 47200  | 25800  |
| 31          | 20700  | ---      | 27100   | 22700   | ---     | 15300  | ---    | 30200  | ---    | 37500  | 34600  | ---    |
| TOTAL       | 857500 | 979100   | 1051800 | 1068800 | 1497000 | 826800 | 528300 | 583100 | 669500 | 824100 | 948100 | 774430 |
| MEAN        | 27660  | 32640    | 33930   | 34480   | 53460   | 26670  | 17610  | 18810  | 22320  | 26580  | 30580  | 25810  |
| MAX         | 44500  | 51300    | 51000   | 55000   | 101000  | 41400  | 25400  | 31200  | 39100  | 40000  | 47200  | 40100  |
| MIN         | 17500  | 16000    | 19400   | 15000   | 25700   | 15300  | 12700  | 13000  | 12000  | 14000  | 18800  | 8930   |
| CAL YR 1984 | TOTAL  | 16367900 |         | MEAN    | 44720   | MAX    | 258000 | MIN    | 16000  |        |        |        |
| WTR YR 1985 | TOTAL  | 10668530 |         | MEAN    | 29060   | MAX    | 101000 | MIN    | 8930   |        |        |        |

## TENNESSEE RIVER BASIN

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03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to September 1981.

WATER TEMPERATURES: July 1975 to September 1981.

REMARKS.--Flow regulated by many reservoirs (see p. 207 and Water Resources Data for adjoining states).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 211 microsiemens, Sept. 27-28, 1981; minimum, 94 microsiemens, Dec. 31, 1975.

WATER TEMPERATURES: Maximum, 31.0°C, Aug. 26-28, 30, 1975, June 15, 1978; minimum recorded, 2.0°C, Jan. 22, 1977, Feb. 7, 1978.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|--|--|
| OCT<br>25... | 0915 | 48500   | 175   | 6.8                            | 21.0                        | 755  | 3.7                          | 6.6                                 | 75   | 88   | 70   | 72                                     |
| JAN<br>25... | 0900 | 35000   | 170   | 7.9                            | 4.5                         | 744  | 3.5                          | 11.8                                | 93   | K6   | K3   | 69                                     |
| APR<br>19... | 0915 | 18000   | 160   | 7.8                            | 17.0                        | 753  | 2.1                          | 9.8                                 | 103  | K3   | K2   | 67                                     |
| JUL<br>17... | 1330 | 29400   | 190   | 7.7                            | 28.5                        | 745  | 1.0                          | 6.2                                 | 82   | K1   | K4   | 73                                     |

| DATE         | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|--|--|--|--|-------------------|---|---|---|---|---|---|--|
| OCT<br>25... | 15   | 21   | 4.7  | 7.9  | 19                | .4                                      | 1.4   | 57  | 17  | 15  | 8.7   | <.10   |
| JAN<br>25... | 2  | 20   | 4.6  | 7.9  | 20                | .4                                      | 1.3   | 67  | 1.6   | 16  | 9.1   | <.10   |
| APR<br>19... | 6  | 20   | 4.1  | 7.0  | 18                | .4                                      | 1.5   | 61  | 1.9   | 15  | 8.5   | <.10   |
| JUL<br>17... | 9  | 21   | 5.0  | 11   | 24                | .6                                      | 1.5   | 64  | 2.5   | 19  | 12  | <.10   |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
|--------------|---|--|---|---|---|---|---|---|--|---|--|--|
| OCT<br>25... | 4.9   | 96   | 98  | .13   | 12600   | .27   | .050  | .06   | .70  | .030  | .020   | .030   |
| JAN<br>25... | 4.8   | 94   | 100   | .13   | 8880  | .43   | .040  | .05   | .10  | .030  | .020   | <.010  |
| APR<br>19... | 4.2   | 94   | 97  | .13   | 4570  | .36   | .050  | .06   | 1.8  | <.010                                       | <.010  | <.010  |
| JUL<br>17... | 2.8   | 110  | 110   | .15   | 8730  | .16   | .050  | .06   | .70  | <.010                                       | <.010  | <.010  |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>25... | .09   | 20  | <1   | 28   | <.5  | <1   | 1   | <3   | 2  | 20   | <1   | <4   |
| JAN<br>25... | --  | 30  | <1   | 26   | <.5  | <1   | <1  | <3   | 2  | 28   | 1  | 5  |
| APR<br>19... | --  | 10  | <1   | 24   | <.5  | <1   | 2   | <3   | 2  | 9  | 3  | <4   |
| JUL<br>17... | --  | <10   | <1   | 28   | <.5  | 1  | <1  | <3   | 6  | <3   | 3  | <4   |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|---|---|
| OCT<br>25... | 5  | <.1  | <10   | <1   | <1  | <1   | 66   | <6   | 8  | 9   | 1180  | 86  |
| JAN<br>25... | 19   | <.1  | <10   | 2  | <1  | 1  | 65   | <6   | 4  | 2   | 189   | 81  |
| APR<br>19... | 2  | <.1  | <10   | 2  | <1  | <1   | 59   | <6   | 10   | 4   | 194   | 89  |
| JUL<br>17... | 5  | <.1  | <10   | 4  | <1  | <1   | 67   | <6   | 8  | 5   | 397   | 86  |

| DATE         | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>SR/<br>YT-90) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>SR/<br>YT-90) | RADIUM<br>226,<br>DIS-<br>SOLVED,<br>RADON<br>METHOD<br>(PCI/L) | URANIUM<br>DIS-<br>SOLVED,<br>EXTRAC-<br>TION<br>(UG/L) |
|--------------|--|--|---|---|---|---|---|---|
| JAN<br>25... | <2.2   | <.4  | 1.6   | <.4   | 1.4   | <.4   | .03   | .05   |

TENNESSEE RIVER BASIN

187

03578000 ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, Hydrologic Unit 06030003, on right bank at downstream side of bridge on U. S. Highway 41, 1.1 mi southeast of Pelham, 1.8 mi upstream from Caldwell Creek, and at mile 194.2.

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

PERIOD OF RECORD.--October 1951 to current year. Prior to November 1951 monthly discharges only, published in WSP 1726.

REVISED RECORDS.--WRD TN 1973: 1963(P), 1965 (M), 1966(P), 1969(M), 1970-71(P).

GAGE.--Water-stage recorder. Datum of gage is 981.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good, except those for October, which are fair. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--34 years, 139 ft<sup>3</sup>/s, 28.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft<sup>3</sup>/s Mar. 16, 1973, gage height, 14.08 ft; minimum, 1.0 ft<sup>3</sup>/s Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

| Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Feb. 1 | 1600 | *1,840                         | *9.95            | No other peak greater than base discharge. |      |                                |                  |

Minimum daily discharge, 1.7 ft<sup>3</sup>/s Oct. 5-7,13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN   | JUL   | AUG    | SEP   |
|-------------|-------|---------|------|------|------|------|------|------|-------|-------|--------|-------|
| 1           | 2.1   | 24      | 270  | 106  | 1310 | 111  | 401  | 88   | 11    | 5.4   | 8.1    | 50    |
| 2           | 1.9   | 22      | 197  | 169  | 1080 | 101  | 237  | 96   | 9.9   | 5.0   | 7.4    | 34    |
| 3           | 1.9   | 26      | 191  | 170  | 460  | 88   | 172  | 93   | 9.4   | 4.7   | 6.7    | 26    |
| 4           | 1.8   | 29      | 154  | 317  | 295  | 81   | 135  | 73   | 8.7   | 7.1   | 6.1    | 22    |
| 5           | 1.7   | 45      | 129  | 268  | 465  | 135  | 163  | 60   | 8.0   | 31    | 5.8    | 19    |
| 6           | 1.7   | 53      | 161  | 193  | 611  | 125  | 490  | 50   | 7.4   | 28    | 6.3    | 18    |
| 7           | 1.7   | 43      | 144  | 161  | 419  | 105  | 301  | 44   | 7.5   | 19    | 11     | 17    |
| 8           | 3.3   | 33      | 124  | 129  | 272  | 96   | 205  | 50   | 12    | 14    | 38     | 16    |
| 9           | 2.5   | 28      | 109  | 107  | 202  | 95   | 155  | 59   | 13    | 11    | 40     | 14    |
| 10          | 2.2   | 89      | 95   | 95   | 169  | 102  | 124  | 50   | 11    | 9.0   | 31     | 13    |
| 11          | 1.8   | 315     | 84   | 98   | 299  | 92   | 105  | 46   | 11    | 9.0   | 23     | 12    |
| 12          | 1.8   | 163     | 75   | 86   | 574  | 90   | 90   | 42   | 10    | 7.3   | 16     | 11    |
| 13          | 1.7   | 96      | 68   | 76   | 368  | 91   | 82   | 75   | 10    | 6.6   | 12     | 9.6   |
| 14          | 1.7   | 69      | 60   | 72   | 262  | 82   | 80   | 56   | 10    | 5.9   | 11     | 8.9   |
| 15          | 1.7   | 63      | 55   | 67   | 212  | 74   | 288  | 41   | 9.2   | 5.9   | 9.1    | 8.1   |
| 16          | 1.8   | 201     | 51   | 59   | 170  | 67   | 318  | 33   | 8.2   | 9.4   | 8.3    | 7.5   |
| 17          | 2.5   | 158     | 48   | 67   | 151  | 63   | 213  | 27   | 8.6   | 11    | 420    | 7.1   |
| 18          | 3.5   | 115     | 46   | 86   | 166  | 58   | 158  | 24   | 18    | 9.7   | 538    | 6.7   |
| 19          | 3.0   | 418     | 44   | 77   | 349  | 53   | 126  | 22   | 28    | 7.9   | 162    | 6.3   |
| 20          | 2.5   | 332     | 122  | 66   | 398  | 49   | 107  | 19   | 21    | 6.7   | 88     | 5.9   |
| 21          | 2.5   | 184     | 218  | 54   | 281  | 49   | 91   | 19   | 15    | 6.0   | 232    | 5.6   |
| 22          | 2.6   | 123     | 345  | 53   | 207  | 122  | 78   | 19   | 12    | 5.8   | 116    | 5.4   |
| 23          | 19    | 94      | 286  | 52   | 170  | 167  | 67   | 21   | 11    | 5.8   | 65     | 5.1   |
| 24          | 176   | 77      | 199  | 52   | 150  | 177  | 68   | 19   | 8.8   | 7.5   | 124    | 5.3   |
| 25          | 70    | 65      | 299  | 54   | 142  | 167  | 71   | 18   | 7.6   | 12    | 408    | 5.1   |
| 26          | 44    | 57      | 273  | 49   | 161  | 129  | 57   | 15   | 6.9   | 9.7   | 316    | 8.5   |
| 27          | 31    | 65      | 199  | 44   | 144  | 110  | 61   | 14   | 7.2   | 14    | 178    | 7.8   |
| 28          | 25    | 897     | 155  | 45   | 123  | 103  | 176  | 13   | 7.3   | 14    | 108    | 8.5   |
| 29          | 24    | 696     | 126  | 44   | ---  | 93   | 147  | 12   | 6.4   | 12    | 75     | 8.3   |
| 30          | 28    | 313     | 106  | 46   | ---  | 82   | 109  | 13   | 5.8   | 11    | 55     | 8.1   |
| 31          | 28    | ---     | 96   | 207  | ---  | 250  | ---  | 12   | ---   | 9.3   | 56     | ---   |
| TOTAL       | 492.9 | 4893    | 4529 | 3169 | 9610 | 3207 | 4875 | 1223 | 319.9 | 320.7 | 3180.8 | 379.8 |
| MEAN        | 15.9  | 163     | 146  | 102  | 343  | 103  | 163  | 39.5 | 10.7  | 10.3  | 103    | 12.7  |
| MAX         | 176   | 897     | 345  | 317  | 1310 | 250  | 490  | 96   | 28    | 31    | 538    | 50    |
| MIN         | 1.7   | 22      | 44   | 44   | 123  | 49   | 57   | 12   | 5.8   | 4.7   | 5.8    | 5.1   |
| CFSM        | .24   | 2.48    | 2.23 | 1.55 | 5.23 | 1.57 | 2.48 | .60  | .16   | .16   | 1.57   | .19   |
| IN.         | .28   | 2.77    | 2.57 | 1.80 | 5.45 | 1.82 | 2.76 | .69  | .18   | .18   | 1.80   | .22   |
| CAL YR 1984 | TOTAL | 46666.7 | MEAN | 128  | MAX  | 2340 | MIN  | 1.6  | CFSM  | 1.95  | IN.    | 26.46 |
| WTR YR 1985 | TOTAL | 36200.1 | MEAN | 99.2 | MAX  | 1310 | MIN  | 1.7  | CFSM  | 1.51  | IN.    | 20.53 |



## TENNESSEE RIVER BASIN

03584500 ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, Hydrologic Unit 06030004, on right bank 50 ft upstream from county road bridge, 1.1 mi downstream from Richland Creek, 3.2 mi east of Prospect, 5.4 mi upstream from Ford Creek, 7.9 mi upstream from Tennessee - Alabama State line, and at mile 41.5.

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

PERIOD OF RECORD.--July 1904 to February 1908, January 1919 to current year. Published as "near Elkmont, Ala." 1904-8, 1919-34. Record for both sites published January to March 1934.

REVISED RECORDS.--WSP 523: 1904-8, 1919-20. WSP 823: Drainage area. WSP 1436: 1920-22, 1923(M), 1924, 1927, 1929, 1931-32(M).

GAGE.--Water-stage recorder. Datum of gage is 563.29 ft above National Geodetic Vertical Datum of 1929. July 1, 1904, to Feb. 2, 1908, and Jan. 20, 1919, to Mar. 31, 1934, nonrecording gage 11.9 mi downstream at datum 13.52 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Woods Reservoir (station 03579000) since May 1952, and Tims Ford Lake (station 03580740) since December 1970. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--69 years (water years 1905-7, 1920-85), 3,066 ft<sup>3</sup>/s, 23.34 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft<sup>3</sup>/s Mar. 17, 1973, gage height, 40.12 ft, from rating curve extended above 63,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 38.17 ft and contracted-opening measurement at gage height 38.96 ft; minimum, 78 ft<sup>3</sup>/s Sept. 29, 1961 (caused by highway construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage of 40.9 ft, discharge, 130,000 ft<sup>3</sup>/s, and may have been equaled by a flood in March 1897, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,100 ft<sup>3</sup>/s at 1600 hours Nov. 29, gage height, 22.18 ft; minimum, 232 ft<sup>3</sup>/s Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1995  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC    | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |      |       |
|-------------|-------|---------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1           | 297   | 2700    | 6560   | 3620  | 5920   | 3680  | 1600  | 952   | 520   | 1280  | 603   | 582   |      |       |
| 2           | 246   | 2370    | 5620   | 5000  | 6730   | 3550  | 1530  | 1480  | 560   | 960   | 452   | 518   |      |       |
| 3           | 365   | 3170    | 5280   | 4320  | 4150   | 2440  | 1320  | 1540  | 502   | 834   | 363   | 471   |      |       |
| 4           | 450   | 2370    | 5140   | 4900  | 3080   | 1590  | 1250  | 1230  | 427   | 858   | 317   | 418   |      |       |
| 5           | 451   | 1530    | 4860   | 4840  | 3350   | 1490  | 2190  | 1050  | 415   | 1400  | 288   | 706   |      |       |
| 6           | 451   | 1640    | 4850   | 4260  | 7100   | 1340  | 2450  | 939   | 442   | 1060  | 357   | 1210  |      |       |
| 7           | 456   | 2430    | 4470   | 4030  | 6860   | 1190  | 1970  | 1090  | 431   | 855   | 1100  | 1270  |      |       |
| 8           | 517   | 2200    | 4630   | 3550  | 6770   | 1110  | 1430  | 2840  | 573   | 601   | 1370  | 1220  |      |       |
| 9           | 602   | 2560    | 3500   | 2860  | 6010   | 1080  | 1200  | 2760  | 637   | 487   | 1270  | 647   |      |       |
| 10          | 603   | 3070    | 2060   | 2580  | 5580   | 1410  | 1070  | 2170  | 440   | 415   | 699   | 603   |      |       |
| 11          | 546   | 3530    | 2230   | 2550  | 10300  | 1420  | 995   | 2040  | 365   | 423   | 523   | 854   |      |       |
| 12          | 520   | 2390    | 2710   | 2370  | 16500  | 1310  | 938   | 1720  | 566   | 402   | 433   | 882   |      |       |
| 13          | 502   | 2100    | 2990   | 2340  | 11000  | 1200  | 887   | 1400  | 651   | 389   | 376   | 845   |      |       |
| 14          | 495   | 2490    | 3170   | 1790  | 7550   | 1100  | 863   | 1170  | 626   | 333   | 333   | 815   |      |       |
| 15          | 496   | 2400    | 2280   | 2160  | 6680   | 1040  | 1180  | 1020  | 762   | 305   | 303   | 815   |      |       |
| 16          | 493   | 3160    | 1220   | 2700  | 5910   | 972   | 1220  | 924   | 1490  | 336   | 553   | 518   |      |       |
| 17          | 733   | 3520    | 1080   | 2750  | 4690   | 927   | 1040  | 852   | 588   | 293   | 11300 | 502   |      |       |
| 18          | 1360  | 2860    | 1030   | 2420  | 4280   | 886   | 922   | 805   | 893   | 286   | 4830  | 495   |      |       |
| 19          | 865   | 11500   | 2310   | 2030  | 6630   | 836   | 843   | 766   | 2040  | 276   | 2340  | 521   |      |       |
| 20          | 690   | 11000   | 3690   | 1820  | 7720   | 798   | 791   | 722   | 1080  | 263   | 1580  | 481   |      |       |
| 21          | 1060  | 6000    | 5170   | 1730  | 6330   | 799   | 749   | 720   | 836   | 251   | 2530  | 476   |      |       |
| 22          | 2750  | 4500    | 5450   | 2950  | 5860   | 1520  | 707   | 743   | 744   | 240   | 1410  | 459   |      |       |
| 23          | 5800  | 3820    | 4320   | 2760  | 5340   | 2220  | 673   | 734   | 1390  | 264   | 942   | 477   |      |       |
| 24          | 8900  | 3180    | 3040   | 1500  | 5070   | 1910  | 1110  | 690   | 836   | 291   | 892   | 496   |      |       |
| 25          | 3860  | 2940    | 4070   | 1470  | 4880   | 1750  | 1380  | 647   | 643   | 323   | 1590  | 509   |      |       |
| 26          | 2250  | 2770    | 4840   | 1380  | 4820   | 1550  | 982   | 618   | 722   | 305   | 1450  | 1270  |      |       |
| 27          | 2000  | 4630    | 4800   | 1290  | 5060   | 1360  | 845   | 553   | 838   | 345   | 1130  | 1450  |      |       |
| 28          | 4130  | 19100   | 4830   | 1330  | 4380   | 1320  | 877   | 526   | 1070  | 657   | 897   | 871   |      |       |
| 29          | 6880  | 20700   | 4520   | 1390  | ---    | 1240  | 901   | 515   | 834   | 622   | 788   | 693   |      |       |
| 30          | 3920  | 10400   | 3930   | 1360  | ---    | 1130  | 834   | 544   | 1280  | 486   | 671   | 626   |      |       |
| 31          | 3200  | ---     | 2830   | 2010  | ---    | 1230  | ---   | 534   | ---   | 520   | 617   | ---   |      |       |
| TOTAL       | 55888 | 147030  | 117480 | 82060 | 178550 | 45398 | 34747 | 34294 | 23201 | 16360 | 42307 | 21700 |      |       |
| MEAN        | 1803  | 4901    | 3790   | 2647  | 6377   | 1464  | 1158  | 1106  | 773   | 528   | 1365  | 723   |      |       |
| MAX         | 8900  | 20700   | 6560   | 5000  | 16500  | 3680  | 2450  | 2840  | 2040  | 1400  | 11300 | 1450  |      |       |
| MIN         | 246   | 1530    | 1030   | 1290  | 3080   | 798   | 673   | 515   | 365   | 240   | 288   | 418   |      |       |
| CAL YR 1984 | TOTAL | 1107037 | MEAN   | 3025  | MAX    | 30600 | MIN   | 229   | MEAN* | 3010  | CFSM* | 1.69  | IN.* | 22.96 |
| WTR YR 1985 | TOTAL | 799015  | MEAN   | 2189  | MAX    | 20700 | MIN   | 240   | MEAN* | 2188  | CFSM* | 1.23  | IN.* | 16.65 |

\* Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

## 03588000 SHOAL CREEK AT LAWRENCEBURG, TN

LOCATION.--Lat 35°14'40", long 87°21'02", Lawrence County, Hydrologic Unit 06030005, on left bank at Lawrenceburg municipal water-supply intake, 500 ft downstream from Little Shoal Creek, 0.5 mi upstream from Crowson Creek, 0.9 mi west of courthouse in Lawrenceburg, and at mile 55.9.

DRAINAGE AREA.--55.4 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1932 to March 1934, March 1967 to current year.

REVISED RECORDS.--WSP 1306: Drainage area. WSP 2110: 1933.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 784.41 ft above National Geodetic Vertical Datum of 1929. June 7, 1932, to Mar. 31, 1934, nonrecording gage at site 500 ft downstream at datum 4.01 ft lower. Mar. 22, 1967, to Sept. 30, 1970, at site 1,300 ft downstream at datum 7.71 ft lower.

REMARKS.--Records good, except for estimated daily discharges, Mar. 22 to May 2, which are fair. About 6 ft<sup>3</sup>/s were diverted by Lawrenceburg water plant, some of which was returned to the stream through sewage treatment plant 0.6 mi downstream. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--19 years (water years 1933, 1968-85), 107 ft<sup>3</sup>/s, 26.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s Mar. 15, 1973, gage height, 18.71 ft, from rating curve extended above 6,700 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum 15 ft<sup>3</sup>/s Nov. 11, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1846, 20.0 ft present site and datum, Mar. 28, 1902, discharge, 23,000 ft<sup>3</sup>/s; flood of Mar. 21, 1955, reached a stage of 17.2 ft, present site and datum, discharge 18,000 ft<sup>3</sup>/s, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Oct. 23 | 0930 | *3,070                            | *6.59               | May 7   | 2215 | 2,510                             | 6.01                |
| Nov. 18 | 2300 | 2,590                             | 6.10                | June 25 | 1615 | 1,970                             | 5.41                |
| Nov. 27 | 2245 | 2,440                             | 5.94                | June 28 | 0130 | 2,180                             | 5.65                |
| Feb. 11 | 1500 | 1,920                             | 5.34                | Aug. 17 | 0045 | 2,550                             | 6.05                |

Minimum daily discharge, 22 ft<sup>3</sup>/s Oct. 1, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 22    | 65    | 100  | 71   | 117  | 77   | 105  | 110  | 35   | 79   | 31   | 30   |       |
| 2           | 23    | 100   | 105  | 67   | 79   | 74   | 95   | 140  | 33   | 51   | 31   | 29   |       |
| 3           | 23    | 66    | 100  | 72   | 69   | 72   | 92   | 58   | 33   | 44   | 31   | 30   |       |
| 4           | 22    | 57    | 77   | 93   | 67   | 71   | 88   | 54   | 30   | 45   | 30   | 28   |       |
| 5           | 23    | 53    | 78   | 71   | 120  | 72   | 85   | 51   | 29   | 56   | 31   | 28   |       |
| 6           | 25    | 47    | 102  | 68   | 168  | 66   | 80   | 48   | 29   | 52   | 31   | 28   |       |
| 7           | 30    | 48    | 73   | 66   | 128  | 66   | 70   | 550  | 29   | 42   | 95   | 29   |       |
| 8           | 81    | 46    | 67   | 63   | 96   | 63   | 65   | 432  | 31   | 40   | 35   | 28   |       |
| 9           | 32    | 45    | 64   | 61   | 90   | 62   | 60   | 117  | 30   | 38   | 31   | 27   |       |
| 10          | 31    | 99    | 61   | 66   | 172  | 62   | 55   | 86   | 28   | 36   | 31   | 27   |       |
| 11          | 30    | 66    | 56   | 65   | 818  | 63   | 52   | 76   | 33   | 35   | 31   | 27   |       |
| 12          | 27    | 53    | 56   | 59   | 239  | 58   | 52   | 66   | 30   | 35   | 29   | 27   |       |
| 13          | 27    | 49    | 52   | 56   | 155  | 59   | 50   | 59   | 28   | 35   | 29   | 27   |       |
| 14          | 27    | 47    | 50   | 56   | 135  | 55   | 55   | 55   | 28   | 35   | 28   | 27   |       |
| 15          | 26    | 61    | 47   | 54   | 120  | 55   | 70   | 51   | 29   | 33   | 28   | 27   |       |
| 16          | 27    | 60    | 46   | 58   | 103  | 56   | 65   | 50   | 28   | 34   | 249  | 26   |       |
| 17          | 133   | 52    | 45   | 71   | 103  | 53   | 50   | 48   | 40   | 32   | 574  | 25   |       |
| 18          | 31    | 483   | 44   | 63   | 107  | 53   | 46   | 46   | 71   | 33   | 54   | 26   |       |
| 19          | 31    | 570   | 45   | 60   | 163  | 51   | 45   | 45   | 29   | 32   | 42   | 26   |       |
| 20          | 31    | 119   | 146  | 56   | 120  | 51   | 44   | 43   | 28   | 32   | 38   | 25   |       |
| 21          | 131   | 88    | 116  | 53   | 102  | 60   | 43   | 42   | 28   | 32   | 37   | 26   |       |
| 22          | 144   | 77    | 122  | 51   | 94   | 115  | 42   | 44   | 171  | 34   | 35   | 27   |       |
| 23          | 1020  | 71    | 86   | 51   | 89   | 90   | 41   | 40   | 62   | 30   | 34   | 40   |       |
| 24          | 115   | 66    | 92   | 53   | 109  | 86   | 175  | 41   | 39   | 31   | 35   | 26   |       |
| 25          | 69    | 62    | 142  | 53   | 95   | 80   | 150  | 38   | 333  | 32   | 35   | 27   |       |
| 26          | 57    | 59    | 90   | 50   | 92   | 75   | 110  | 38   | 69   | 32   | 32   | 269  |       |
| 27          | 52    | 584   | 81   | 51   | 85   | 75   | 100  | 37   | 149  | 40   | 32   | 33   |       |
| 28          | 432   | 659   | 77   | 54   | 81   | 80   | 85   | 41   | 407  | 51   | 31   | 31   |       |
| 29          | 99    | 141   | 74   | 52   | ---  | 70   | 80   | 36   | 57   | 37   | 30   | 31   |       |
| 30          | 68    | 118   | 71   | 55   | ---  | 65   | 75   | 35   | 160  | 37   | 29   | 37   |       |
| 31          | 58    | ---   | 71   | 115  | ---  | 140  | ---  | 35   | ---  | 33   | 29   | ---  |       |
| TOTAL       | 2947  | 4111  | 2436 | 1934 | 3916 | 2175 | 2225 | 2612 | 2126 | 1208 | 1838 | 1094 |       |
| MEAN        | 95.1  | 137   | 78.6 | 62.4 | 140  | 70.2 | 74.2 | 84.3 | 70.9 | 39.0 | 59.3 | 36.5 |       |
| MAX         | 1020  | 659   | 146  | 115  | 818  | 140  | 175  | 550  | 407  | 79   | 574  | 269  |       |
| MIN         | 22    | 45    | 44   | 50   | 67   | 51   | 41   | 35   | 28   | 30   | 28   | 25   |       |
| CFSM        | 1.72  | 2.47  | 1.42 | 1.13 | 2.53 | 1.27 | 1.34 | 1.52 | 1.28 | .70  | 1.07 | .66  |       |
| IN.         | 1.98  | 2.76  | 1.64 | 1.30 | 2.63 | 1.46 | 1.49 | 1.75 | 1.43 | .81  | 1.23 | .73  |       |
| CAL YR 1984 | TOTAL | 34402 |      | MEAN | 94.0 | MAX  | 2160 | MIN  | 22   | CFSM | 1.70 | IN.  | 23.10 |
| WTR YR 1985 | TOTAL | 28622 |      | MEAN | 78.4 | MAX  | 1020 | MIN  | 22   | CFSM | 1.42 | IN.  | 19.22 |

## TENNESSEE RIVER BASIN

03588400 CHISHOLM CREEK AT WESTPOINT, TN

LOCATION.--Lat 35°08'04", long 87°31'45", Lawrence County, Hydrologic Unit 06030005, on left bank at downstream side of pier of county road bridge, 0.3 mi northeast of Westpoint, and at mile 1.2.

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

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--23 years, 86.6 ft<sup>3</sup>/s, 27.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft<sup>3</sup>/s Mar. 15, 1973, gage height, 14.74 ft, from rating curve extended above 4,100 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 8.4 ft<sup>3</sup>/s July 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0230 | *1,080                            | *6.64               |      |      |                                   |                     |

Minimum discharge, 15 ft<sup>3</sup>/s Oct. 2, 3, 4, 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 16    | 60    | 112  | 64   | 91   | 76   | 94   | 77   | 31   | 47   | 19   | 24   |       |
| 2           | 16    | 82    | 99   | 59   | 87   | 72   | 88   | 125  | 30   | 32   | 18   | 23   |       |
| 3           | 16    | 68    | 91   | 57   | 78   | 67   | 81   | 108  | 29   | 27   | 18   | 24   |       |
| 4           | 16    | 63    | 81   | 61   | 71   | 65   | 74   | 89   | 29   | 26   | 17   | 24   |       |
| 5           | 16    | 57    | 77   | 56   | 103  | 66   | 70   | 75   | 29   | 26   | 18   | 24   |       |
| 6           | 15    | 51    | 79   | 56   | 139  | 58   | 68   | 66   | 28   | 26   | 25   | 24   |       |
| 7           | 17    | 47    | 70   | 55   | 132  | 55   | 59   | 75   | 28   | 24   | 29   | 23   |       |
| 8           | 126   | 44    | 67   | 54   | 121  | 54   | 54   | 107  | 30   | 23   | 25   | 23   |       |
| 9           | 54    | 42    | 64   | 52   | 113  | 54   | 50   | 89   | 29   | 22   | 20   | 53   |       |
| 10          | 40    | 70    | 62   | 57   | 115  | 51   | 48   | 81   | 27   | 21   | 18   | 31   |       |
| 11          | 35    | 79    | 58   | 55   | 262  | 50   | 46   | 73   | 29   | 20   | 18   | 26   |       |
| 12          | 34    | 66    | 56   | 52   | 274  | 51   | 44   | 67   | 34   | 20   | 18   | 25   |       |
| 13          | 32    | 60    | 55   | 50   | 170  | 47   | 43   | 59   | 29   | 20   | 17   | 23   |       |
| 14          | 32    | 55    | 52   | 51   | 143  | 45   | 44   | 53   | 27   | 19   | 16   | 22   |       |
| 15          | 32    | 58    | 49   | 49   | 129  | 44   | 56   | 47   | 27   | 18   | 18   | 22   |       |
| 16          | 32    | 62    | 47   | 49   | 118  | 43   | 49   | 43   | 26   | 19   | 43   | 23   |       |
| 17          | 82    | 56    | 46   | 59   | 109  | 43   | 43   | 41   | 27   | 18   | 253  | 23   |       |
| 18          | 51    | 137   | 44   | 56   | 99   | 41   | 42   | 39   | 64   | 17   | 66   | 22   |       |
| 19          | 42    | 563   | 44   | 55   | 112  | 40   | 41   | 38   | 35   | 17   | 47   | 22   |       |
| 20          | 43    | 182   | 83   | 53   | 106  | 40   | 40   | 36   | 30   | 17   | 39   | 21   |       |
| 21          | 93    | 121   | 92   | 52   | 98   | 46   | 39   | 35   | 29   | 17   | 35   | 20   |       |
| 22          | 147   | 95    | 104  | 53   | 90   | 92   | 38   | 39   | 28   | 16   | 32   | 20   |       |
| 23          | 364   | 80    | 94   | 49   | 84   | 77   | 39   | 38   | 35   | 16   | 30   | 24   |       |
| 24          | 162   | 71    | 91   | 49   | 104  | 77   | 149  | 36   | 30   | 18   | 31   | 26   |       |
| 25          | 97    | 65    | 100  | 49   | 92   | 70   | 130  | 34   | 29   | 20   | 33   | 22   |       |
| 26          | 72    | 60    | 88   | 45   | 91   | 65   | 113  | 33   | 29   | 18   | 30   | 62   |       |
| 27          | 61    | 222   | 83   | 45   | 86   | 66   | 93   | 32   | 27   | 32   | 28   | 29   |       |
| 28          | 128   | 594   | 77   | 50   | 79   | 65   | 80   | 34   | 30   | 26   | 26   | 23   |       |
| 29          | 110   | 199   | 72   | 46   | ---  | 61   | 67   | 34   | 32   | 25   | 26   | 22   |       |
| 30          | 81    | 139   | 67   | 49   | ---  | 58   | 60   | 32   | 39   | 22   | 25   | 22   |       |
| 31          | 67    | ---   | 64   | 66   | ---  | 97   | ---  | 31   | ---  | 21   | 25   | ---  |       |
| TOTAL       | 2129  | 3548  | 2268 | 1653 | 3296 | 1836 | 1942 | 1766 | 926  | 690  | 1063 | 772  |       |
| MEAN        | 68.7  | 118   | 73.2 | 53.3 | 118  | 59.2 | 64.7 | 57.0 | 30.9 | 22.3 | 34.3 | 25.7 |       |
| MAX         | 364   | 594   | 112  | 66   | 274  | 97   | 149  | 125  | 64   | 47   | 253  | 62   |       |
| MIN         | 15    | 42    | 44   | 45   | 71   | 40   | 38   | 31   | 26   | 16   | 16   | 20   |       |
| CFSM        | 1.60  | 2.74  | 1.70 | 1.24 | 2.74 | 1.38 | 1.50 | 1.33 | .72  | .52  | .80  | .60  |       |
| IN.         | 1.84  | 3.07  | 1.96 | 1.43 | 2.85 | 1.59 | 1.68 | 1.53 | .80  | .60  | .92  | .67  |       |
| CAL YR 1984 | TOTAL | 30379 |      | MEAN | 83.0 | MAX  | 1830 | MIN  | 14   | CFSM | 1.93 | IN.  | 26.28 |
| WTR YR 1985 | TOTAL | 21889 |      | MEAN | 60.0 | MAX  | 594  | MIN  | 15   | CFSM | 1.40 | IN.  | 18.94 |

## 03588500 SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, Hydrologic Unit 06030005, near center of span on down stream side of bridge on county road, 400 ft downstream from Holly Creek, 1,350 ft upstream from Louisville and Nashville Railroad bridge, 1,350 ft northeast of Iron City Post Office, and at mile 22.3.

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

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1113: 1927(M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 534.22 ft above National Geodetic Vertical Datum of 1929.

Prior to Feb. 25, 1931, nonrecording gage at railroad bridge, 1,350 ft downstream at datum 0.85 ft lower.

Feb. 25, 1931, to Sept. 30, 1933, nonrecording gage at site 825 ft downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft downstream at datum 0.69 ft higher.

REMARKS.--No estimated daily discharges. Records good. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--60 years, 649 ft<sup>3</sup>/s, 25.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft<sup>3</sup>/s Mar. 21, 1955, gage height, 27.25 ft, site and datum then in use, present site and datum, 28.4 ft from high water profile, rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area measurement made 1,500 ft downstream; minimum, 38 ft<sup>3</sup>/s Aug. 31, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage about 3 ft higher than that of Mar. 21, 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft<sup>3</sup>/s, and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 19 | 1100 | 6,520                             | 10.92               | Nov. 28 | 1030 | *6,780                            | *11.15              |

Minimum discharge, 103 ft<sup>3</sup>/s Sept. 20, 21, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|------|-------|
| 1           | 140   | 520    | 1130  | 588   | 954   | 657   | 792   | 713   | 237  | 658  | 169   | 151  |       |
| 2           | 137   | 727    | 985   | 540   | 1000  | 636   | 719   | 1160  | 226  | 397  | 147   | 145  |       |
| 3           | 138   | 686    | 1010  | 507   | 973   | 599   | 668   | 1050  | 217  | 291  | 137   | 148  |       |
| 4           | 138   | 576    | 857   | 578   | 863   | 580   | 623   | 859   | 210  | 260  | 137   | 147  |       |
| 5           | 137   | 501    | 765   | 550   | 919   | 587   | 596   | 739   | 203  | 256  | 137   | 141  |       |
| 6           | 136   | 431    | 787   | 509   | 1310  | 530   | 632   | 655   | 198  | 260  | 221   | 144  |       |
| 7           | 146   | 380    | 697   | 497   | 1200  | 503   | 552   | 631   | 201  | 241  | 220   | 136  |       |
| 8           | 695   | 347    | 639   | 478   | 1010  | 493   | 504   | 1450  | 217  | 214  | 315   | 132  |       |
| 9           | 509   | 323    | 596   | 450   | 891   | 484   | 475   | 959   | 213  | 201  | 199   | 190  |       |
| 10          | 264   | 437    | 555   | 486   | 896   | 466   | 452   | 799   | 201  | 193  | 167   | 161  |       |
| 11          | 208   | 762    | 510   | 497   | 2240  | 459   | 439   | 704   | 208  | 186  | 149   | 138  |       |
| 12          | 190   | 580    | 477   | 459   | 3600  | 459   | 426   | 624   | 298  | 178  | 145   | 128  |       |
| 13          | 181   | 491    | 453   | 442   | 1820  | 439   | 411   | 542   | 233  | 171  | 139   | 120  |       |
| 14          | 176   | 435    | 422   | 447   | 1360  | 427   | 406   | 469   | 205  | 171  | 130   | 116  |       |
| 15          | 174   | 427    | 392   | 430   | 1140  | 411   | 486   | 415   | 198  | 166  | 129   | 112  |       |
| 16          | 174   | 520    | 372   | 414   | 990   | 397   | 474   | 370   | 196  | 176  | 243   | 110  |       |
| 17          | 499   | 450    | 362   | 527   | 893   | 393   | 429   | 343   | 200  | 168  | 3260  | 110  |       |
| 18          | 448   | 608    | 349   | 534   | 839   | 377   | 405   | 329   | 555  | 153  | 957   | 109  |       |
| 19          | 278   | 4550   | 341   | 519   | 910   | 366   | 391   | 309   | 388  | 148  | 500   | 107  |       |
| 20          | 273   | 1880   | 805   | 507   | 953   | 361   | 382   | 292   | 261  | 144  | 378   | 105  |       |
| 21          | 769   | 1180   | 1210  | 500   | 870   | 391   | 370   | 284   | 228  | 139  | 330   | 105  |       |
| 22          | 1090  | 892    | 1170  | 500   | 804   | 653   | 357   | 310   | 220  | 136  | 259   | 105  |       |
| 23          | 3460  | 725    | 1030  | 490   | 753   | 652   | 349   | 308   | 450  | 171  | 224   | 119  |       |
| 24          | 2090  | 618    | 925   | 460   | 804   | 612   | 1110  | 284   | 298  | 168  | 220   | 170  |       |
| 25          | 986   | 541    | 989   | 433   | 779   | 573   | 1160  | 264   | 248  | 184  | 244   | 135  |       |
| 26          | 695   | 484    | 892   | 392   | 748   | 530   | 886   | 251   | 706  | 161  | 220   | 644  |       |
| 27          | 538   | 871    | 813   | 379   | 723   | 519   | 746   | 241   | 308  | 190  | 193   | 368  |       |
| 28          | 1120  | 5040   | 747   | 422   | 677   | 538   | 659   | 252   | 662  | 209  | 178   | 195  |       |
| 29          | 1400  | 2130   | 689   | 403   | ---   | 507   | 582   | 273   | 414  | 242  | 169   | 160  |       |
| 30          | 824   | 1410   | 638   | 407   | ---   | 486   | 534   | 247   | 369  | 198  | 165   | 153  |       |
| 31          | 629   | ---    | 604   | 543   | ---   | 675   | ---   | 236   | ---  | 193  | 158   | ---  |       |
| TOTAL       | 18642 | 29522  | 22211 | 14888 | 30919 | 15760 | 17015 | 16362 | 8768 | 6623 | 10239 | 4804 |       |
| MEAN        | 601   | 984    | 716   | 480   | 1104  | 508   | 567   | 528   | 292  | 214  | 330   | 160  |       |
| MAX         | 3460  | 5040   | 1210  | 588   | 3600  | 675   | 1160  | 1450  | 706  | 658  | 3260  | 644  |       |
| MIN         | 136   | 323    | 341   | 379   | 677   | 361   | 349   | 236   | 196  | 136  | 129   | 105  |       |
| CFSM        | 1.73  | 2.83   | 2.06  | 1.38  | 3.17  | 1.46  | 1.63  | 1.52  | .84  | .61  | .95   | .46  |       |
| IN.         | 1.99  | 3.16   | 2.37  | 1.59  | 3.31  | 1.68  | 1.82  | 1.75  | .94  | .71  | 1.09  | .51  |       |
| CAL YR 1984 | TOTAL | 238600 |       | MEAN  | 652   | MAX   | 10100 | MIN   | 125  | CFSM | 1.87  | IN.  | 25.51 |
| WTR YR 1985 | TOTAL | 195753 |       | MEAN  | 536   | MAX   | 5040  | MIN   | 105  | CFSM | 1.54  | IN.  | 20.93 |



## TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°03'54", long 88°15'08", Hardin County, Hydrologic Unit 06040001, at downstream end of lockwall in lower pool at Pickwick Landing Dam, 16.8 mi upstream from Savannah, Tennessee, and at mile 206.7.

DRAINAGE AREA.--32,820 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1976 to September 1981.

WATER TEMPERATURE: April 1976 to September 1981.

REMARKS.--Flow regulated by Pickwick Landing Dam and many other reservoirs above the station. Continuous discharge records are published under station 03593500 Tennessee River at Savannah, Tn.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 326 microsiemens, Sept. 18, 19, 1978; minimum, 116 microsiemens, Apr. 27, 1979.

WATER TEMPERATURES: Maximum, 31.5°C, July 7, 1978; minimum, 2.0°C, Feb. 8, 9, 1978.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE      | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) |
|-----------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|-------------------------------------|--|--|--|--|
| OCT 26... | 1100 | 67200   | 160   | 7.5                            | 21.0                        | --   | 3.9                          | --                                  | --                                  | --   | 41   | 20   | 62                                     |
| JAN 18... | 0945 | 58100   | 170   | 7.4                            | 6.0                         | 760  | 5.0                          | 12.0                                | 97                                  | K14  | K16  |  | 75                                     |
| MAR 08... | 1000 | 47400   | 170   | 7.5                            | 11.0                        | 760  | 2.5                          | 12.2                                | 111                                 | K3   | <1   |  | 71                                     |
| APR 19... | 0930 | 16400   | 162   | 8.0                            | 18.0                        | 758  | 2.9                          | 10.2                                | 108                                 | K6   | K4   |  | 65                                     |
| JUL 19... | 0945 | 17700   | 175   | 7.5                            | 28.0                        | 760  | 2.2                          | 5.9                                 | 76                                  | 62   | K500   |  | 66                                     |

| DATE      | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|-----------|--|--|--|--|-------------------|---|---|---|---|---|---|--|
| OCT 26... | 8  | 18   | 4.0  | 7.3  | 20                | .4                                      | 1.5   | 54  | 3.3   | 15  | 8.3   | <.10   |
| JAN 18... | 13   | 23   | 4.2  | 7.0  | 17                | .4                                      | 1.3   | 62  | 4.8   | 15  | 7.8   | <.10   |
| MAR 08... | 9  | 22   | 3.9  | 5.9  | 15                | .3                                      | 1.3   | 62  | 3.8   | 14  | 7.2   | <.10   |
| APR 19... | 5  | 20   | 3.6  | 6.6  | 18                | .4                                      | 1.6   | 60  | 1.2   | 14  | 8.1   | .10  |
| JUL 19... | 8  | 20   | 3.9  | 8.3  | 21                | .5                                      | 1.8   | 58  | 3.5   | 16  | 9.7   | .10  |

| DATE      | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
|-----------|---|--|--|---|---|---|---|---|--|---|--|--|
| OCT 26... | 5.2   | 91   | 92   | .12   | 16500   | .24   | .130  | .17   | .80  | .110  | .030   | .010   |
| JAN 18... | 4.4   | --   | 100  | .14   | 15700   | .44   | .040  | .05   | .50  | .090  | .050   | .040   |
| MAR 08... | 3.0   | 93   | 95   | .13   | 11900   | .53   | <.010   | --  | .40  | .030  | <.010  | <.010  |
| APR 19... | 1.9   | 92   | 92   | .13   | 4070  | .33   | <.010   | --  | 1.9  | .010  | <.010  | <.010  |
| JUL 19... | 3.0   | 98   | 98   | .13   | 4680  | .10   | .040  | .05   | .20  | <.010                                       | <.010  | <.010  |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

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03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>26... | .03   | 10  | 1  | 39   | <.5  | <1   | --  | <3   | 4  | 13   | 4  | <4   |
| JAN<br>18... | .12   | 30  | <1   | 38   | <.5  | <1   | <1  | <3   | 3  | 30   | 4  | <4   |
| MAR<br>08... | --  | 30  | <1   | 34   | <.5  | <1   | <1  | <3   | 1  | 24   | <1   | 9  |
| APR<br>19... | --  | 30  | <1   | 37   | <.5  | <1   | 3   | <3   | 3  | 17   | 5  | <4   |
| JUL<br>19... | --  | 40  | <1   | 34   | .8   | <1   | <1  | <3   | 4  | 9  | 2  | 6  |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|---|---|
| OCT<br>26... | 4  | <.1  | <10   | 6  | <1  | --   | 63   | <6   | 3  | 9   | 1630  | 86  |
| JAN<br>18... | 11   | .3   | <10   | 1  | <1  | <1   | 69   | <6   | 6  | --  | --  | --  |
| MAR<br>08... | 2  | --   | <10   | 2  | <1  | <1   | 64   | <6   | 22   | 5   | 640   | 96  |
| APR<br>19... | 4  | .3   | <10   | 2  | <1  | <1   | 61   | <6   | 10   | 7   | 310   | 60  |
| JUL<br>19... | 2  | <.1  | <10   | 5  | <1  | <1   | 69   | <6   | 13   | 8   | 382   | 67  |

## TENNESSEE RIVER BASIN

03593500 TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'26", Hardin County, Hydrologic Unit 06040001, on right bank at upstream side of bridge on U.S. Highway 64, at Savannah, 16.8 mi downstream from Pickwick Landing Dam and at mile 189.9.

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

PERIOD OF RECORD.--September 1930 to current year. Gage-height records collected in this vicinity since June 1905, are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1306: 1936 (monthly runoff). WSP 2110: 1966. WRD Tenn. 1974: 1973.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1945, at datum 41.61 ft higher. Oct. 1, 1948, to Apr. 13, 1978, auxiliary water-stage recorder on downstream end of lockwall in lower pool at Pickwick Landing Dam. Since Apr. 13, 1978, auxiliary water-stage recorder over the tailwater elevation well adjacent to the powerhouse which is an integral part of Pickwick Landing Dam, 16.8 mi upstream from base gage at same datum. Apr. 5, 1937, to Jan. 31, 1939, auxiliary nonrecording gage 4.0 mi downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 mi downstream from base gage at same datum.

REMARKS.--TVA release data from Pickwick Landing Dam used Jan. 23-28, Apr. 18-19 and June 11-21 because of missing record. Records good. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 207 and Water Resources Data for adjoining states).

AVERAGE DISCHARGE.--55 years, 54,709 ft<sup>3</sup>/s unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 507,000 ft<sup>3</sup>/s (revised) Mar. 18, 1973 (revised); maximum gage height, 96.11 ft Mar. 20, 1973; minimum discharge 60 ft<sup>3</sup>/s Apr. 23, 1966; minimum gage height, 41.20 ft present datum, Oct. 20, 1931; minimum gage height since Kentucky Lake reached minimum pool elevation on Apr. 7, 1945, 53.40 ft Jan. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1867, 101.2 ft, Mar. 21, 1897, present datum, from floodmarks, discharge, 450,000 ft<sup>3</sup>/s from rating curve extended above 320,000 ft<sup>3</sup>/s. Flood of Jan. 2, 1927, reached a stage of 92.7 ft present datum, discharge, 349,000 ft<sup>3</sup>/s. Minimum stage since 1905, 38.8 ft present datum, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 128,000 ft<sup>3</sup>/s, Feb. 5; maximum gage height, 69.27 ft, Feb. 6; minimum daily discharge, 8,220 ft<sup>3</sup>/s, May 26; minimum gage height, 54.00 ft, Mar. 17, 20, Sept. 15, 22, 25.

REVISIONS.--Revised daily discharges, in cubic feet per second, for periods in March 1973 are given below. These figures supersede those published in the report for 1973.

## Daily discharges:

|         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|
| Mar. 16 | 272,000 | Mar. 17 | 446,000 | Mar. 18 | 495,000 | Mar. 19 | 488,000 |
| Mar. 20 | 455,000 | Mar. 21 | 406,000 | Mar. 22 | 342,000 | Mar. 23 | 288,000 |
| Mar. 24 | 250,000 | Mar. 25 | 233,000 | Mar. 26 | 204,000 | Mar. 27 | 180,000 |
| Mar. 28 | 163,000 | Mar. 29 | 151,000 | Mar. 30 | 148,000 | Mar. 31 | 150,000 |

| MONTH      | TOTAL   | MEAN   | MAX    | MIN   |
|------------|---------|--------|--------|-------|
| March 1973 | 5753400 | 185600 | 495000 | 42600 |

## TENNESSEE RIVER BASIN

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03593500 TENNESSEE RIVER AT SAVANNAH, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC     | JAN     | FEB     | MAR    | APR    | MAY    | JUN    | JUL    | AUG     | SEP    |
|-------------|---------|----------|---------|---------|---------|--------|--------|--------|--------|--------|---------|--------|
| 1           | 28800   | 36500    | 79200   | 33500   | 65900   | 60300  | 24100  | 17900  | 24600  | 11800  | 44400   | 38400  |
| 2           | 25200   | 38700    | 77800   | 51100   | 101000  | 62400  | 15700  | 37200  | 15500  | 12800  | 35900   | 36200  |
| 3           | 26400   | 27200    | 77400   | 51600   | 102000  | 40200  | 12200  | 57400  | 30100  | 20200  | 32900   | 35400  |
| 4           | 26600   | 26000    | 81400   | 56500   | 107000  | 44100  | 12700  | 48400  | 25900  | 19800  | 21400   | 29000  |
| 5           | 28400   | 30100    | 85400   | 51900   | 121000  | 38800  | 12400  | 26200  | 26800  | 33800  | 19100   | 32600  |
| 6           | 25700   | 37000    | 79900   | 51300   | 119000  | 43000  | 13300  | 36200  | 40000  | 24200  | 16500   | 28300  |
| 7           | 15300   | 42900    | 70000   | 55200   | 109000  | 41900  | 12900  | 24300  | 28300  | 23600  | 23700   | 31500  |
| 8           | 25100   | 33200    | 63000   | 57500   | 104000  | 35500  | 13200  | 35200  | 11400  | 17300  | 28100   | 26200  |
| 9           | 27000   | 38100    | 51100   | 55500   | 97400   | 31600  | 13200  | 44500  | 9730   | 20700  | 40700   | 28900  |
| 10          | 34500   | 29500    | 36600   | 56000   | 91600   | 19300  | 21700  | 42700  | 26200  | 21500  | 38000   | 28700  |
| 11          | 36800   | 25400    | 42800   | 52900   | 82400   | 29900  | 15300  | 24500  | 27200  | 23300  | 31300   | 29500  |
| 12          | 38100   | 44300    | 53900   | 43400   | 88600   | 31600  | 14500  | 27500  | 10700  | 29400  | 33500   | 27400  |
| 13          | 24100   | 44400    | 51200   | 32000   | 99900   | 33500  | 17500  | 37500  | 14900  | 28800  | 27600   | 22200  |
| 14          | 22000   | 37100    | 53000   | 41400   | 104000  | 39900  | 17200  | 41200  | 18300  | 23900  | 30000   | 25800  |
| 15          | 25600   | 41400    | 36900   | 39900   | 91900   | 34800  | 17500  | 51400  | 15300  | 20200  | 24400   | 14900  |
| 16          | 24900   | 42700    | 33300   | 28500   | 81000   | 23400  | 16700  | 33900  | 14100  | 20100  | 31000   | 22900  |
| 17          | 29300   | 35500    | 29400   | 35700   | 80400   | 19700  | 17100  | 27100  | 17200  | 13600  | 66700   | 26500  |
| 18          | 28600   | 31600    | 32400   | 41900   | 69600   | 26900  | 14600  | 12200  | 23300  | 11900  | 66100   | 33300  |
| 19          | 29000   | 57300    | 36200   | 21800   | 68700   | 24200  | 14300  | 13300  | 12100  | 30000  | 59700   | 28500  |
| 20          | 22700   | 70400    | 36200   | 29200   | 62700   | 26500  | 14900  | 13300  | 14200  | 36200  | 59700   | 28000  |
| 21          | 23500   | 62100    | 37000   | 51000   | 70200   | 25600  | 15600  | 20200  | 15700  | 24600  | 56800   | 19800  |
| 22          | 41100   | 46900    | 49800   | 54700   | 75500   | 26500  | 20000  | 24000  | 21200  | 23500  | 51700   | 16400  |
| 23          | 77600   | 40300    | 35900   | 45900   | 63700   | 17700  | 24500  | 20900  | 21300  | 25100  | 59700   | 16400  |
| 24          | 81600   | 38400    | 30100   | 29200   | 47700   | 17100  | 22500  | 23000  | 19600  | 27100  | 36100   | 16400  |
| 25          | 75200   | 36200    | 30500   | 39900   | 56300   | 18000  | 16900  | 14900  | 25800  | 23400  | 17500   | 16000  |
| 26          | 59700   | 46700    | 53000   | 18800   | 50500   | 17400  | 17500  | 8220   | 30800  | 40100  | 32900   | 22700  |
| 27          | 56900   | 46900    | 64200   | 17400   | 53600   | 18400  | 19100  | 14000  | 28500  | 36500  | 39900   | 22800  |
| 28          | 16700   | 65800    | 57600   | 28000   | 54400   | 27800  | 17300  | 17400  | 28500  | 43400  | 47800   | 19600  |
| 29          | 33400   | 79200    | 50400   | 30800   | ---     | 30300  | 16600  | 16600  | 18300  | 64500  | 52000   | 16900  |
| 30          | 33100   | 79500    | 35400   | 28400   | ---     | 23800  | 17200  | 27400  | 11600  | 40500  | 46800   | 24200  |
| 31          | 39000   | ---      | 40600   | 30300   | ---     | 18200  | ---    | 35300  | ---    | 43200  | 54800   | ---    |
| TOTAL       | 1081900 | 1311300  | 1591600 | 1261200 | 2319000 | 948300 | 498200 | 873820 | 627130 | 835000 | 1226700 | 765400 |
| MEAN        | 34900   | 43710    | 51340   | 40680   | 82820   | 30590  | 16610  | 28190  | 20900  | 26940  | 39570   | 25510  |
| MAX         | 81600   | 79500    | 85400   | 57500   | 121000  | 62400  | 24500  | 57400  | 40000  | 64500  | 66700   | 38400  |
| MIN         | 15300   | 25400    | 29400   | 17400   | 47700   | 17100  | 12200  | 8220   | 9730   | 11800  | 16500   | 14900  |
| CAL YR 1984 | TOTAL   | 21171600 |         | MEAN    | 57850   | MAX    | 269000 | MIN    | 15300  |        |         |        |
| WTR YR 1985 | TOTAL   | 13339550 |         | MEAN    | 36550   | MAX    | 121000 | MIN    | 8220   |        |         |        |



## TENNESSEE RIVER BASIN

03596000 DUCK RIVER BELOW MANCHESTER, TN

LOCATION.--Lat 35°28'15", long 86°07'18", Coffee County, Hydrologic Unit 06040002, on right bank 50 ft downstream from Powers Bridge, 2.0 mi southwest of Manchester, 3.2 mi downstream from Little Duck River, 7.0 mi upstream from Crumpton Creek, and at mile 265.4.

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

PERIOD OF RECORD.--April 1934 to current year.

REVISED RECORDS.--WSP 1436: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 878.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation for short periods during low flow by small reservoirs above station. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--51 years, 185 ft<sup>3</sup>/s, 23.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft<sup>3</sup>/s May 27, 1973, gage height, 20.95 ft, from rating curve extended above 12,000 ft<sup>3</sup>/s, based on contracted-opening measurement at gage height 15.04 ft, and slope-area measurements at gage heights 18.93 ft and 20.95 ft; minimum, 8.0 ft<sup>3</sup>/s Aug. 12, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 23.2 ft from floodmarks by Tennessee Valley Authority, discharge, about 50,000 ft<sup>3</sup>/s. Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 19 | 1100 | 2,560                             | 6.99                | Nov. 28 | 1115 | *3,290                            | *8.08               |

Minimum discharge, 15 ft<sup>3</sup>/s Oct. 4, 5, 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|-------|------|------|-------|------|------|------|------|------|------|------|-------|
| 1           | 25    | 70    | 315  | 543  | 952   | 139  | 168  | 51   | 21   | 29   | 28   | 33   |       |
| 2           | 24    | 92    | 238  | 661  | 606   | 138  | 121  | 59   | 20   | 29   | 27   | 28   |       |
| 3           | 24    | 100   | 217  | 321  | 343   | 121  | 100  | 214  | 19   | 28   | 24   | 26   |       |
| 4           | 22    | 93    | 173  | 425  | 257   | 114  | 90   | 67   | 19   | 37   | 24   | 25   |       |
| 5           | 15    | 124   | 152  | 320  | 744   | 153  | 89   | 49   | 19   | 34   | 23   | 25   |       |
| 6           | 15    | 98    | 206  | 231  | 1080  | 142  | 158  | 78   | 18   | 33   | 24   | 26   |       |
| 7           | 16    | 78    | 173  | 199  | 548   | 118  | 132  | 55   | 25   | 30   | 39   | 27   |       |
| 8           | 37    | 69    | 144  | 169  | 344   | 110  | 102  | 67   | 24   | 28   | 36   | 25   |       |
| 9           | 34    | 63    | 135  | 144  | 278   | 135  | 86   | 123  | 20   | 27   | 29   | 24   |       |
| 10          | 30    | 216   | 126  | 135  | 313   | 165  | 77   | 99   | 19   | 28   | 27   | 24   |       |
| 11          | 28    | 329   | 115  | 135  | 880   | 135  | 71   | 73   | 22   | 36   | 25   | 24   |       |
| 12          | 26    | 162   | 106  | 117  | 1140  | 124  | 68   | 60   | 36   | 27   | 24   | 24   |       |
| 13          | 26    | 117   | 99   | 103  | 482   | 114  | 65   | 52   | 22   | 26   | 24   | 23   |       |
| 14          | 25    | 96    | 92   | 98   | 363   | 104  | 65   | 49   | 22   | 25   | 23   | 22   |       |
| 15          | 26    | 115   | 84   | 93   | 310   | 95   | 125  | 44   | 22   | 57   | 22   | 22   |       |
| 16          | 27    | 337   | 79   | 85   | 246   | 88   | 157  | 45   | 28   | 78   | 25   | 22   |       |
| 17          | 71    | 185   | 76   | 121  | 237   | 83   | 111  | 41   | 34   | 35   | 96   | 22   |       |
| 18          | 42    | 201   | 73   | 142  | 260   | 77   | 87   | 39   | 148  | 30   | 65   | 22   |       |
| 19          | 37    | 1710  | 72   | 119  | 554   | 72   | 72   | 36   | 76   | 28   | 39   | 22   |       |
| 20          | 43    | 463   | 121  | 97   | 448   | 70   | 64   | 36   | 47   | 26   | 66   | 22   |       |
| 21          | 96    | 264   | 297  | 87   | 328   | 72   | 59   | 38   | 38   | 24   | 100  | 22   |       |
| 22          | 102   | 192   | 363  | 101  | 251   | 172  | 55   | 43   | 40   | 24   | 43   | 21   |       |
| 23          | 337   | 156   | 241  | 77   | 224   | 223  | 51   | 41   | 36   | 24   | 35   | 22   |       |
| 24          | 525   | 134   | 185  | 80   | 207   | 232  | 61   | 39   | 34   | 32   | 35   | 24   |       |
| 25          | 163   | 119   | 353  | 90   | 203   | 180  | 61   | 36   | 31   | 27   | 33   | 22   |       |
| 26          | 101   | 106   | 261  | 77   | 211   | 131  | 56   | 35   | 30   | 41   | 38   | 58   |       |
| 27          | 77    | 188   | 196  | 69   | 184   | 112  | 52   | 33   | 29   | 42   | 36   | 59   |       |
| 28          | 94    | 2310  | 165  | 74   | 155   | 110  | 55   | 33   | 29   | 31   | 31   | 32   |       |
| 29          | 178   | 593   | 144  | 71   | ---   | 106  | 62   | 21   | 28   | 31   | 29   | 26   |       |
| 30          | 110   | 359   | 129  | 77   | ---   | 96   | 55   | 21   | 27   | 37   | 28   | 25   |       |
| 31          | 82    | ---   | 132  | 301  | ---   | 121  | ---  | 22   | ---  | 29   | 30   | ---  |       |
| TOTAL       | 2458  | 9139  | 5262 | 5362 | 12148 | 3852 | 2575 | 1699 | 983  | 1013 | 1128 | 799  |       |
| MEAN        | 79.3  | 305   | 170  | 173  | 434   | 124  | 85.8 | 54.8 | 32.8 | 32.7 | 36.4 | 26.6 |       |
| MAX         | 525   | 2310  | 363  | 661  | 1140  | 232  | 168  | 214  | 148  | 78   | 100  | 59   |       |
| MIN         | 15    | 63    | 72   | 69   | 155   | 70   | 51   | 21   | 18   | 24   | 22   | 21   |       |
| CFSM        | .74   | 2.85  | 1.59 | 1.62 | 4.06  | 1.16 | .80  | .51  | .31  | .31  | .34  | .25  |       |
| IN.         | .85   | 3.18  | 1.83 | 1.86 | 4.22  | 1.34 | .90  | .59  | .34  | .35  | .39  | .28  |       |
| CAL YR 1984 | TOTAL | 68815 |      | MEAN | 188   | MAX  | 3820 | MIN  | 15   | CFSM | 1.76 | IN.  | 23.92 |
| WTR YR 1985 | TOTAL | 46418 |      | MEAN | 127   | MAX  | 2310 | MIN  | 15   | CFSM | 1.19 | IN.  | 16.14 |

## TENNESSEE RIVER BASIN

197

03598000 DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, Hydrologic Unit 06040002, on right bank 150 ft downstream from Sims Bridge, 2.1 mi upstream from Sugar Creek, 2.2 mi west of Shelbyville, 2.9 mi downstream from Flat Creek, and at mile 216.2.

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

PERIOD OF RECORD.--October 1933 to current year. Prior to April 1934 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1934. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.51 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 2, 1966, at datum 2.0 ft higher.

REMARKS.--No estimated daily discharge. Records good. Prior to 1948 diurnal fluctuation caused by powerplant upstream. Flow regulated by Normandy Reservoir (station 03596460) since January 1976. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 818 ft<sup>3</sup>/s, 23.09 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft<sup>3</sup>/s Feb. 13, 1948, gage height, 38.40 ft, present datum, from floodmarks, from rating curve extended above 35,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 5.0 ft<sup>3</sup>/s Aug. 23, 1936; minimum daily, 20 ft<sup>3</sup>/s Sept. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 39.6 ft present datum, discharge, about 70,000 ft<sup>3</sup>/s, from high water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2.0 ft higher than that in March 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft<sup>3</sup>/s at 1330 hours Nov. 28, gage height, 21.95 ft; minimum, 79 ft<sup>3</sup>/s Sept. 30; minimum daily, 86 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |      |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1           | 167   | 421    | 2670  | 622   | 1530  | 424   | 433   | 184   | 192   | 197   | 196   | 192   |      |       |
| 2           | 167   | 745    | 2430  | 768   | 1750  | 387   | 344   | 261   | 192   | 192   | 190   | 188   |      |       |
| 3           | 166   | 760    | 2310  | 1430  | 1440  | 348   | 313   | 330   | 187   | 189   | 185   | 189   |      |       |
| 4           | 167   | 619    | 2170  | 1590  | 1250  | 325   | 297   | 231   | 184   | 200   | 181   | 179   |      |       |
| 5           | 166   | 728    | 1930  | 903   | 1000  | 352   | 307   | 208   | 181   | 220   | 178   | 184   |      |       |
| 6           | 166   | 901    | 955   | 773   | 2170  | 317   | 391   | 195   | 179   | 206   | 181   | 192   |      |       |
| 7           | 167   | 825    | 859   | 704   | 2110  | 289   | 315   | 498   | 203   | 209   | 274   | 193   |      |       |
| 8           | 224   | 951    | 802   | 635   | 1660  | 280   | 278   | 1180  | 216   | 191   | 326   | 195   |      |       |
| 9           | 227   | 908    | 762   | 579   | 1070  | 329   | 257   | 702   | 203   | 184   | 248   | 191   |      |       |
| 10          | 193   | 1390   | 728   | 555   | 1220  | 368   | 244   | 428   | 185   | 183   | 209   | 187   |      |       |
| 11          | 180   | 1930   | 697   | 535   | 3860  | 337   | 234   | 383   | 190   | 181   | 196   | 196   |      |       |
| 12          | 174   | 1310   | 677   | 471   | 4780  | 334   | 224   | 310   | 245   | 179   | 187   | 200   |      |       |
| 13          | 172   | 1070   | 655   | 403   | 2770  | 305   | 216   | 261   | 224   | 180   | 182   | 181   |      |       |
| 14          | 171   | 966    | 636   | 386   | 2240  | 287   | 215   | 236   | 197   | 184   | 178   | 184   |      |       |
| 15          | 170   | 989    | 600   | 314   | 1930  | 273   | 263   | 235   | 195   | 190   | 184   | 192   |      |       |
| 16          | 169   | 1600   | 581   | 283   | 1220  | 255   | 257   | 204   | 232   | 275   | 207   | 189   |      |       |
| 17          | 182   | 1480   | 569   | 353   | 1180  | 249   | 227   | 200   | 241   | 217   | 512   | 190   |      |       |
| 18          | 188   | 1690   | 566   | 401   | 1400  | 236   | 196   | 235   | 723   | 184   | 338   | 186   |      |       |
| 19          | 191   | 7250   | 540   | 358   | 2590  | 225   | 176   | 237   | 514   | 180   | 214   | 188   |      |       |
| 20          | 194   | 2860   | 672   | 325   | 2150  | 218   | 169   | 231   | 310   | 185   | 245   | 186   |      |       |
| 21          | 198   | 2380   | 1110  | 282   | 1720  | 221   | 168   | 322   | 216   | 188   | 288   | 162   |      |       |
| 22          | 499   | 2010   | 1440  | 296   | 1420  | 393   | 164   | 309   | 202   | 183   | 214   | 144   |      |       |
| 23          | 3110  | 1770   | 1100  | 273   | 1220  | 503   | 165   | 248   | 207   | 183   | 194   | 148   |      |       |
| 24          | 2930  | 1600   | 942   | 254   | 1130  | 500   | 207   | 219   | 201   | 197   | 198   | 149   |      |       |
| 25          | 926   | 1450   | 1400  | 262   | 1040  | 459   | 195   | 201   | 197   | 190   | 213   | 143   |      |       |
| 26          | 571   | 1330   | 1190  | 250   | 967   | 390   | 172   | 203   | 258   | 202   | 291   | 688   |      |       |
| 27          | 410   | 2360   | 1100  | 232   | 664   | 352   | 191   | 209   | 204   | 217   | 231   | 404   |      |       |
| 28          | 2040  | 11300  | 1270  | 241   | 596   | 348   | 229   | 227   | 193   | 216   | 194   | 140   |      |       |
| 29          | 2150  | 3940   | 656   | 234   | ---   | 325   | 212   | 222   | 190   | 204   | 206   | 100   |      |       |
| 30          | 892   | 3060   | 560   | 238   | ---   | 300   | 188   | 197   | 189   | 317   | 196   | 86    |      |       |
| 31          | 582   | ---    | 538   | 678   | ---   | 358   | ---   | 184   | ---   | 217   | 211   | ---   |      |       |
| TOTAL       | 17909 | 60593  | 33115 | 15628 | 48077 | 10287 | 7247  | 9290  | 7050  | 6240  | 7047  | 5946  |      |       |
| MEAN        | 578   | 2020   | 1068  | 504   | 1717  | 332   | 242   | 300   | 235   | 201   | 227   | 198   |      |       |
| MAX         | 3110  | 11300  | 2670  | 1590  | 4780  | 503   | 433   | 1180  | 723   | 317   | 512   | 688   |      |       |
| MIN         | 166   | 421    | 538   | 232   | 596   | 218   | 164   | 184   | 179   | 179   | 178   | 86    |      |       |
| (†)         | + 400 | -9900  | -9400 | +2900 | +3000 | +5300 | +3100 | + 300 | -1700 | -2100 | -2000 | -2700 |      |       |
| MEAN*       | 591   | 1690   | 765   | 598   | 1824  | 503   | 345   | 309   | 178   | 134   | 163   | 108   |      |       |
| CFSM*       | 1.23  | 3.51   | 1.59  | 1.24  | 3.79  | 1.05  | .72   | .64   | .37   | .28   | .34   | .22   |      |       |
| IN.*        | 1.42  | 3.92   | 1.83  | 1.43  | 3.95  | 1.21  | .80   | .74   | .41   | .32   | .39   | .25   |      |       |
| CAL YR 1984 | TOTAL | 321671 | MEAN  | 879   | MAX   | 11300 | MIN   | 148   | MEAN* | 873   | CFSM* | 1.81  | IN.* | 24.69 |
| WTR YR 1985 | TOTAL | 228429 | MEAN  | 626   | MAX   | 11300 | MIN   | 86    | MEAN* | 591   | CFSM* | 1.23  | IN.* | 16.67 |

† Change in contents, in cfs-days, in Normandy Lake.

\* Adjusted for change in contents.

## TENNESSEE RIVER BASIN

03600500 BIG SIGBY CREEK AT SANDY HOOK, TN

LOCATION.--Lat 35°29'19", long 87°13'59", Maury County, Hydrologic Unit 06040003, on right bank 45 ft west of Louisville and Nashville Railroad track, 0.2 mi downstream from bridge on U. S. Highway 43, 0.4 mi northeast of Sandy Hook, 0.5 mi upstream from Dry Creek, 3.5 mi southwest of Mount Pleasant, and at mile 17.9.

DRAINAGE AREA.--17.5 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1953 to current year.

REVISED RECORDS.--WRD TN 1974: 1954(P), 1955, 1956-57(P), 1958(M), 1961(M), 1962-65(P), 1966 (M), 1967-68(P), 1969(M), 1970(P), 1971(M), 1972-73(P).

GAGE.--Water-stage recorder. Datum of gage is 670.44 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-2, Jan. 31 to Mar. 13, June 13 to July 17. Records good above 10 ft<sup>3</sup>/s and fair below, except for estimated daily discharges, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--32 years, 28.5 ft<sup>3</sup>/s, 22.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft<sup>3</sup>/s Mar. 15, 1973, gage height, 11.55 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum, 1.0 ft<sup>3</sup>/s Sept. 10, 1958, and July 9, 1959, caused by removal of gravel 0.2 mi upstream; minimum natural discharge, 1.5 ft<sup>3</sup>/s Sept. 4-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|---------|------|--------------------------------|------------------|
| Nov. 19 | 0800 | *709                           | *5.13            | Nov. 28 | 0545 | 657                            | 4.99             |

Minimum discharge, 4.1 ft<sup>3</sup>/s Oct. 5, 6, Sept. 18, 19, 20, 21, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV     | DEC   | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|---------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1           | 4.5   | 13      | 39    | 26   | 30   | 22   | 45   | 35    | 27    | 35    | 6.9   | 5.7   |       |
| 2           | 4.7   | 31      | 31    | 22   | 25   | 21   | 37   | 57    | 12    | 15    | 6.6   | 5.4   |       |
| 3           | 4.6   | 22      | 26    | 24   | 20   | 20   | 32   | 43    | 10    | 10    | 6.1   | 5.4   |       |
| 4           | 4.5   | 17      | 21    | 33   | 18   | 18   | 28   | 33    | 9.1   | 9.0   | 5.9   | 5.6   |       |
| 5           | 4.3   | 14      | 20    | 27   | 30   | 25   | 27   | 26    | 8.7   | 8.5   | 5.6   | 5.5   |       |
| 6           | 4.5   | 11      | 22    | 25   | 55   | 18   | 25   | 22    | 8.3   | 8.0   | 6.3   | 5.7   |       |
| 7           | 5.3   | 9.6     | 18    | 22   | 40   | 16   | 21   | 31    | 9.8   | 8.0   | 30    | 5.3   |       |
| 8           | 29    | 8.6     | 17    | 19   | 35   | 15   | 19   | 65    | 9.4   | 8.0   | 13    | 5.4   |       |
| 9           | 8.1   | 8.4     | 16    | 17   | 30   | 60   | 17   | 45    | 8.9   | 8.5   | 8.3   | 5.4   |       |
| 10          | 6.3   | 17      | 16    | 18   | 25   | 45   | 16   | 36    | 8.1   | 25    | 7.0   | 5.3   |       |
| 11          | 5.7   | 104     | 14    | 16   | 150  | 35   | 16   | 30    | 8.3   | 10    | 6.5   | 5.3   |       |
| 12          | 5.4   | 43      | 14    | 14   | 70   | 30   | 15   | 25    | 10    | 8.0   | 6.1   | 5.2   |       |
| 13          | 5.3   | 26      | 13    | 14   | 50   | 27   | 15   | 21    | 8.5   | 7.5   | 5.8   | 5.1   |       |
| 14          | 5.3   | 19      | 12    | 14   | 40   | 26   | 16   | 18    | 8.5   | 7.5   | 5.6   | 5.1   |       |
| 15          | 5.3   | 17      | 11    | 13   | 35   | 23   | 25   | 16    | 8.5   | 7.0   | 5.5   | 5.0   |       |
| 16          | 5.4   | 37      | 11    | 13   | 31   | 21   | 20   | 15    | 8.5   | 6.8   | 6.0   | 4.8   |       |
| 17          | 20    | 27      | 11    | 20   | 29   | 20   | 17   | 15    | 10    | 6.5   | 74    | 4.9   |       |
| 18          | 8.1   | 22      | 9.9   | 18   | 27   | 17   | 17   | 14    | 90    | 6.3   | 40    | 4.7   |       |
| 19          | 7.3   | 304     | 11    | 17   | 35   | 16   | 16   | 13    | 35    | 6.1   | 17    | 4.5   |       |
| 20          | 8.1   | 92      | 37    | 15   | 30   | 15   | 15   | 12    | 20    | 5.7   | 11    | 4.4   |       |
| 21          | 69    | 46      | 52    | 15   | 25   | 20   | 15   | 12    | 10    | 5.5   | 9.0   | 4.5   |       |
| 22          | 80    | 31      | 62    | 14   | 23   | 77   | 14   | 16    | 9.5   | 5.5   | 7.7   | 4.5   |       |
| 23          | 157   | 24      | 42    | 14   | 25   | 56   | 14   | 13    | 40    | 7.8   | 7.0   | 7.3   |       |
| 24          | 56    | 19      | 48    | 15   | 45   | 49   | 76   | 12    | 15    | 12    | 9.7   | 6.1   |       |
| 25          | 27    | 17      | 51    | 15   | 30   | 38   | 43   | 11    | 10    | 8.6   | 11    | 5.6   |       |
| 26          | 18    | 15      | 40    | 13   | 25   | 32   | 32   | 11    | 9.0   | 13    | 8.2   | 34    |       |
| 27          | 14    | 23      | 33    | 14   | 24   | 31   | 38   | 9.8   | 9.0   | 15    | 6.9   | 8.4   |       |
| 28          | 25    | 347     | 28    | 15   | 23   | 29   | 47   | 16    | 8.5   | 12    | 7.4   | 6.7   |       |
| 29          | 23    | 96      | 24    | 13   | ---  | 26   | 36   | 11    | 8.5   | 10    | 6.3   | 6.0   |       |
| 30          | 16    | 56      | 24    | 16   | ---  | 24   | 30   | 8.9   | 8.5   | 8.9   | 6.0   | 7.2   |       |
| 31          | 13    | ---     | 29    | 39   | ---  | 58   | ---  | 9.8   | ---   | 7.7   | 6.2   | ---   |       |
| TOTAL       | 649.7 | 1516.6  | 802.9 | 570  | 1025 | 930  | 784  | 702.5 | 446.6 | 312.4 | 358.6 | 194.0 |       |
| MEAN        | 21.0  | 50.6    | 25.9  | 18.4 | 36.6 | 30.0 | 26.1 | 22.7  | 14.9  | 10.1  | 11.6  | 6.47  |       |
| MAX         | 157   | 347     | 62    | 39   | 150  | 77   | 76   | 65    | 90    | 35    | 74    | 34    |       |
| MIN         | 4.3   | 8.4     | 9.9   | 13   | 18   | 15   | 14   | 8.9   | 8.1   | 5.5   | 5.5   | 4.4   |       |
| CFSM        | 1.20  | 2.89    | 1.48  | 1.05 | 2.09 | 1.71 | 1.49 | 1.30  | .85   | .58   | .66   | .37   |       |
| IN.         | 1.38  | 3.22    | 1.71  | 1.21 | 2.18 | 1.98 | 1.67 | 1.49  | .95   | .66   | .76   | .41   |       |
| CAL YR 1984 | TOTAL | 12129.2 |       | MEAN | 33.1 | MAX  | 683  | MIN   | 4.0   | CFSM  | 1.89  | IN.   | 25.78 |
| WTR YR 1985 | TOTAL | 8292.3  |       | MEAN | 22.7 | MAX  | 347  | MIN   | 4.3   | CFSM  | 1.30  | IN.   | 17.63 |

## 03602500 PINZY RIVER AT VERNON, TN

LOCATION.--Lat 35°52'16", long 87°30'05", Hickman County, Hydrologic Unit 06040003, on right bank at county highway bridge, 40 ft upstream from Pretty Creek, 0.2 mi northwest of Vernon, 2.3 mi downstream from Mill Creek, 6.5 mi north of Centerville, and at mile 8.3.

DRAINAGE AREA.--193 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1306: Drainage area at site used Feb. 9, 1931, to May 10, 1934. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 461.72 ft above National Geodetic Vertical Datum of 1929. Prior to May 11, 1934, nonrecording gage; July 3, 1925, to Feb. 8, 1931, at site 350 ft upstream at datum 3.17 ft higher; Feb. 9, 1931, to May 10, 1934, at site 0.4 mi downstream at datum 0.40 ft higher. May 11, 1934, to Sept. 30, 1970, water-stage recorder at site 350 ft upstream; prior to June 29, 1965, at datum 3.17 ft higher, and 2.17 ft higher thereafter.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--60 years, 317 ft<sup>3</sup>/s, 22.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft<sup>3</sup>/s Dec. 21, 1926, gage height, 16.5 ft, site and datum then in use; minimum, 35 ft<sup>3</sup>/s Sept. 19, 20, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1897 reached a stage of 17.5 ft, original site and datum, discharge, 37,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|-------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| May 2 | 0315 | *3,520                            | *8.88               |      |      |                                   |                     |

Minimum discharge, 55 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|-------|------|-------|-------|-------|-------|------|------|------|------|-------|
| 1           | 71    | 135    | 473   | 387  | 870   | 398   | 409   | 670   | 194  | 134  | 103  | 91   |       |
| 2           | 68    | 185    | 394   | 371  | 689   | 379   | 386   | 2320  | 163  | 126  | 98   | 90   |       |
| 3           | 68    | 176    | 339   | 354  | 553   | 349   | 374   | 1240  | 152  | 120  | 95   | 87   |       |
| 4           | 66    | 160    | 294   | 385  | 475   | 339   | 358   | 856   | 147  | 119  | 94   | 86   |       |
| 5           | 64    | 146    | 266   | 369  | 476   | 328   | 348   | 673   | 145  | 118  | 102  | 86   |       |
| 6           | 68    | 131    | 250   | 342  | 591   | 292   | 335   | 556   | 147  | 189  | 115  | 89   |       |
| 7           | 85    | 120    | 231   | 332  | 575   | 278   | 297   | 486   | 180  | 139  | 138  | 85   |       |
| 8           | 107   | 114    | 215   | 311  | 510   | 272   | 272   | 440   | 169  | 126  | 125  | 86   |       |
| 9           | 86    | 112    | 210   | 289  | 471   | 304   | 260   | 378   | 157  | 122  | 105  | 91   |       |
| 10          | 79    | 188    | 201   | 281  | 448   | 299   | 251   | 339   | 148  | 120  | 100  | 85   |       |
| 11          | 76    | 254    | 189   | 266  | 1080  | 308   | 244   | 309   | 153  | 122  | 98   | 82   |       |
| 12          | 74    | 215    | 185   | 244  | 1780  | 316   | 235   | 281   | 173  | 119  | 99   | 80   |       |
| 13          | 74    | 189    | 182   | 230  | 1130  | 294   | 225   | 258   | 146  | 117  | 98   | 75   |       |
| 14          | 76    | 172    | 175   | 226  | 872   | 289   | 222   | 240   | 140  | 116  | 92   | 74   |       |
| 15          | 79    | 205    | 165   | 218  | 721   | 279   | 241   | 224   | 136  | 116  | 91   | 76   |       |
| 16          | 77    | 265    | 161   | 211  | 624   | 272   | 225   | 210   | 137  | 115  | 132  | 75   |       |
| 17          | 156   | 232    | 157   | 240  | 554   | 265   | 216   | 201   | 141  | 102  | 240  | 76   |       |
| 18          | 104   | 306    | 153   | 248  | 496   | 252   | 207   | 196   | 160  | 101  | 145  | 74   |       |
| 19          | 102   | 1170   | 154   | 248  | 518   | 244   | 201   | 188   | 138  | 102  | 123  | 73   |       |
| 20          | 101   | 652    | 186   | 248  | 489   | 237   | 197   | 181   | 130  | 100  | 154  | 72   |       |
| 21          | 158   | 468    | 358   | 236  | 461   | 241   | 191   | 176   | 128  | 100  | 127  | 73   |       |
| 22          | 167   | 374    | 805   | 215  | 438   | 326   | 185   | 223   | 136  | 99   | 113  | 72   |       |
| 23          | 463   | 308    | 662   | 213  | 419   | 387   | 185   | 193   | 146  | 121  | 107  | 81   |       |
| 24          | 376   | 273    | 583   | 214  | 515   | 419   | 326   | 178   | 132  | 106  | 112  | 87   |       |
| 25          | 231   | 246    | 604   | 215  | 509   | 412   | 314   | 170   | 140  | 104  | 116  | 88   |       |
| 26          | 182   | 225    | 534   | 206  | 498   | 385   | 297   | 165   | 139  | 104  | 111  | 299  |       |
| 27          | 157   | 252    | 488   | 201  | 462   | 379   | 291   | 160   | 136  | 111  | 105  | 129  |       |
| 28          | 167   | 1140   | 439   | 204  | 421   | 377   | 295   | 166   | 137  | 111  | 99   | 104  |       |
| 29          | 170   | 800    | 397   | 197  | ---   | 355   | 271   | 157   | 131  | 105  | 97   | 95   |       |
| 30          | 155   | 601    | 368   | 206  | ---   | 334   | 309   | 151   | 127  | 104  | 94   | 111  |       |
| 31          | 142   | ---    | 392   | 952  | ---   | 397   | ---   | 148   | ---  | 107  | 93   | ---  |       |
| TOTAL       | 4049  | 9814   | 10210 | 8859 | 17645 | 10006 | 8167  | 12133 | 4408 | 3595 | 3521 | 2772 |       |
| MEAN        | 131   | 327    | 329   | 286  | 630   | 323   | 272   | 391   | 147  | 116  | 114  | 92.4 |       |
| MAX         | 463   | 1170   | 805   | 952  | 1780  | 419   | 409   | 2320  | 194  | 189  | 240  | 299  |       |
| MIN         | 64    | 112    | 153   | 197  | 419   | 237   | 185   | 148   | 127  | 99   | 91   | 72   |       |
| CFSM        | .68   | 1.69   | 1.70  | 1.48 | 3.26  | 1.67  | 1.41  | 2.03  | .76  | .60  | .59  | .48  |       |
| IN.         | .78   | 1.89   | 1.97  | 1.71 | 3.40  | 1.93  | 1.57  | 2.34  | .85  | .69  | .68  | .53  |       |
| CAL YR 1984 | TOTAL | 137807 |       | MEAN | 377   | MAX   | 12900 | MIN   | 64   | CFSM | 1.95 | IN.  | 26.56 |
| WTR YR 1985 | TOTAL | 95179  |       | MEAN | 261   | MAX   | 2320  | MIN   | 64   | CFSM | 1.35 | IN.  | 18.35 |



## TENNESSEE RIVER BASIN

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN

LOCATION.--Lat 35°55'48", long 87°44'35", Humphreys County, Hydrologic Unit 06040003, on left bank 0.4 mi downstream from Tumbling Creek, 1.3 mi upstream from bridge on State Highway 13, 3.6 mi Southeast of Hurricane Mills, and at mile 26.0.

DRAINAGE AREA.--2,557 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1951, published as "near Hurricane Mills."

REVISED RECORDS.--WSP 803: 1935. WSP 823: 1927(M). WSP 853: Drainage area. WSP 1436: 1926-28, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 370.53 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1934, nonrecording gage and Feb. 21, 1934, to Sept. 30, 1951, water-stage recorder at bridge 5.6 mi downstream at datum 8.80 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since January 1976 by Normandy Lake (station 03596460). Prior to 1953 occasional regulation at low flow from small dams upstream. Minor diversions for irrigation. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--60 years, 4,124 ft<sup>3</sup>/s, 21.90 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft<sup>3</sup>/s Feb. 14, 1948, gage height, 30.70 ft, from floodmark in gage house, present site and datum; minimum, 185 ft<sup>3</sup>/s Sept. 11, 12, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,000 ft<sup>3</sup>/s at 0930 hours Dec. 1, gage height, 16.82 ft; minimum, 477 ft<sup>3</sup>/s Sept. 21, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 653    | 5690   | 24500  | 4770   | 5070   | 4500  | 3510  | 2570  | 1130  | 1120  | 808   | 728   |
| 2     | 650    | 4290   | 12500  | 4570   | 6910   | 4020  | 3540  | 4760  | 1160  | 1130  | 766   | 715   |
| 3     | 640    | 4900   | 8660   | 5140   | 7960   | 3680  | 3480  | 4870  | 1110  | 1210  | 724   | 759   |
| 4     | 637    | 6140   | 7240   | 5650   | 6850   | 3340  | 3350  | 4130  | 1030  | 1110  | 728   | 718   |
| 5     | 633    | 5300   | 6430   | 5430   | 6060   | 3110  | 3060  | 3710  | 962   | 978   | 691   | 673   |
| 6     | 651    | 4070   | 5900   | 5690   | 6330   | 2890  | 2980  | 3240  | 919   | 1090  | 704   | 643   |
| 7     | 689    | 3370   | 5560   | 5350   | 8420   | 2680  | 3010  | 2770  | 988   | 1080  | 731   | 611   |
| 8     | 802    | 3000   | 5030   | 4570   | 9950   | 2570  | 2770  | 2530  | 1050  | 972   | 743   | 587   |
| 9     | 965    | 2800   | 4250   | 4100   | 9010   | 2550  | 2700  | 3420  | 1070  | 916   | 776   | 586   |
| 10    | 1000   | 2900   | 3810   | 3750   | 7480   | 2670  | 2480  | 5640  | 1010  | 861   | 776   | 591   |
| 11    | 896    | 4060   | 3500   | 3490   | 7200   | 2800  | 2290  | 4710  | 964   | 815   | 788   | 576   |
| 12    | 833    | 6130   | 3230   | 3210   | 14900  | 2970  | 2160  | 3550  | 1170  | 776   | 913   | 570   |
| 13    | 860    | 6990   | 3000   | 2990   | 20600  | 2940  | 2050  | 2930  | 1050  | 763   | 818   | 597   |
| 14    | 829    | 5410   | 2820   | 2810   | 20200  | 2780  | 1980  | 2600  | 971   | 732   | 722   | 572   |
| 15    | 793    | 4390   | 2650   | 2620   | 13100  | 2650  | 2020  | 2260  | 890   | 709   | 646   | 543   |
| 16    | 776    | 4500   | 2500   | 2460   | 9590   | 2520  | 2190  | 1990  | 869   | 853   | 659   | 533   |
| 17    | 1200   | 5570   | 2380   | 2460   | 8030   | 2400  | 2470  | 1800  | 898   | 998   | 1110  | 540   |
| 18    | 1710   | 6200   | 2270   | 2600   | 6740   | 2290  | 2350  | 1650  | 1040  | 782   | 2260  | 522   |
| 19    | 2010   | 9940   | 2190   | 2720   | 6110   | 2170  | 2180  | 1540  | 1430  | 710   | 2480  | 499   |
| 20    | 1750   | 20200  | 2300   | 2870   | 6750   | 2060  | 2000  | 1440  | 2140  | 703   | 2210  | 484   |
| 21    | 1830   | 22400  | 3320   | 2720   | 8980   | 2000  | 1860  | 1360  | 2240  | 726   | 1810  | 480   |
| 22    | 2480   | 17100  | 6180   | 2410   | 8380   | 2180  | 1750  | 1400  | 1860  | 681   | 1360  | 477   |
| 23    | 4340   | 9100   | 7940   | 2460   | 6880   | 3010  | 1660  | 1510  | 1830  | 656   | 1070  | 525   |
| 24    | 10400  | 7000   | 7840   | 2290   | 6190   | 3720  | 2050  | 1800  | 1590  | 679   | 965   | 559   |
| 25    | 15300  | 5860   | 7190   | 2260   | 6050   | 4470  | 2970  | 1780  | 1290  | 680   | 1020  | 621   |
| 26    | 13800  | 5050   | 7130   | 2260   | 5740   | 4440  | 2970  | 1580  | 1410  | 667   | 1070  | 851   |
| 27    | 7190   | 4570   | 7040   | 2190   | 5380   | 4110  | 2670  | 1400  | 1410  | 675   | 1010  | 996   |
| 28    | 4610   | 8470   | 6430   | 2210   | 4940   | 3730  | 2470  | 1320  | 1160  | 717   | 884   | 1260  |
| 29    | 4210   | 19900  | 5550   | 2160   | ---    | 3440  | 2370  | 1250  | 1170  | 771   | 801   | 1210  |
| 30    | 8120   | 24200  | 5020   | 2100   | ---    | 3180  | 2260  | 1210  | 1230  | 820   | 774   | 1500  |
| 31    | 9690   | ---    | 4870   | 2970   | ---    | 3110  | ---   | 1150  | ---   | 804   | 789   | ---   |
| TOTAL | 100947 | 239500 | 179230 | 103280 | 239800 | 94980 | 75600 | 77870 | 37041 | 26184 | 31606 | 20526 |
| MEAN  | 3256   | 7983   | 5782   | 3332   | 8564   | 3064  | 2520  | 2512  | 1235  | 845   | 1020  | 684   |
| MAX   | 15300  | 24200  | 24500  | 5690   | 20600  | 4500  | 3540  | 5640  | 2240  | 1210  | 2480  | 1500  |
| MIN   | 633    | 2800   | 2190   | 2100   | 4940   | 2000  | 1660  | 1150  | 869   | 656   | 646   | 477   |

|             |       |         |      |      |     |       |     |     |       |      |       |      |      |       |
|-------------|-------|---------|------|------|-----|-------|-----|-----|-------|------|-------|------|------|-------|
| CAL YR 1984 | TOTAL | 1830635 | MEAN | 5002 | MAX | 51000 | MIN | 616 | MEAN* | 4995 | CFSM* | 1.95 | IN.* | 26.59 |
| WTR YR 1985 | TOTAL | 1226564 | MEAN | 3360 | MAX | 24500 | MIN | 477 | MEAN* | 3325 | CFSM* | 1.30 | IN.* | 17.65 |

\* Adjusted for change in contents in Normandy Lake.

## TENNESSEE RIVER BASIN

201

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°29'45", long 87°49'58", Perry County, Hydrologic Unit 06040004, on right bank 0.4 mi downstream from Little Opossum Creek, 0.5 mi downstream from bridge on State Highway 13, 1.3 mi north of Flat Woods, 3.9 mi upstream from Sinking Creek, and at mile 58.7.

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

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M), WRD TN 1971: 1970.

GAGE.--Water-stage recorder. Datum of gage is 513.58 ft above National Geodetic Vertical Datum of 1929. Prior to May 27, 1934, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good.

AVERAGE DISCHARGE.--65 years, 757 ft<sup>3</sup>/s, 23.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft<sup>3</sup>/s Feb. 13, 1948, gage height, 32.0 ft, from high-water mark in gage house, from rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum, 65 ft<sup>3</sup>/s Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Nov. 19 | 1700 | *5,530                            | *11.12              | Nov. 28 | 2230 | 5,280                             | 10.83               |

Minimum discharge, 180 ft<sup>3</sup>/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1           | 182   | 554    | 1500  | 735   | 1100  | 811   | 924   | 765   | 381   | 1430  | 369   | 297  |       |
| 2           | 182   | 656    | 1170  | 719   | 1170  | 769   | 854   | 2290  | 380   | 1200  | 318   | 280  |       |
| 3           | 187   | 666    | 1020  | 676   | 1010  | 720   | 793   | 1790  | 367   | 822   | 287   | 269  |       |
| 4           | 191   | 557    | 906   | 679   | 887   | 681   | 740   | 1270  | 348   | 632   | 273   | 265  |       |
| 5           | 190   | 491    | 798   | 685   | 912   | 685   | 715   | 1020  | 335   | 541   | 266   | 259  |       |
| 6           | 193   | 442    | 768   | 645   | 1420  | 644   | 767   | 873   | 326   | 586   | 275   | 258  |       |
| 7           | 200   | 397    | 725   | 620   | 1550  | 598   | 686   | 796   | 334   | 532   | 300   | 252  |       |
| 8           | 289   | 370    | 682   | 601   | 1320  | 574   | 623   | 1420  | 356   | 443   | 315   | 245  |       |
| 9           | 448   | 349    | 640   | 573   | 1120  | 582   | 579   | 1860  | 355   | 395   | 315   | 258  |       |
| 10          | 331   | 451    | 599   | 562   | 1030  | 666   | 551   | 1300  | 335   | 364   | 276   | 294  |       |
| 11          | 254   | 1040   | 573   | 565   | 1460  | 630   | 532   | 1080  | 340   | 370   | 260   | 251  |       |
| 12          | 233   | 931    | 550   | 536   | 3930  | 637   | 518   | 925   | 366   | 336   | 253   | 245  |       |
| 13          | 224   | 722    | 538   | 511   | 2590  | 619   | 505   | 818   | 337   | 315   | 244   | 230  |       |
| 14          | 221   | 606    | 521   | 499   | 1870  | 601   | 491   | 729   | 312   | 303   | 236   | 220  |       |
| 15          | 220   | 621    | 490   | 492   | 1500  | 592   | 510   | 658   | 302   | 290   | 237   | 216  |       |
| 16          | 224   | 943    | 474   | 483   | 1260  | 566   | 540   | 600   | 299   | 302   | 332   | 213  |       |
| 17          | 361   | 873    | 448   | 539   | 1100  | 552   | 510   | 552   | 311   | 298   | 2170  | 213  |       |
| 18          | 406   | 876    | 440   | 572   | 983   | 536   | 485   | 524   | 621   | 276   | 1730  | 211  |       |
| 19          | 320   | 4270   | 438   | 553   | 955   | 519   | 468   | 499   | 632   | 266   | 916   | 208  |       |
| 20          | 272   | 3480   | 582   | 543   | 961   | 516   | 455   | 470   | 446   | 263   | 666   | 206  |       |
| 21          | 386   | 1830   | 998   | 480   | 906   | 543   | 444   | 467   | 377   | 256   | 608   | 205  |       |
| 22          | 680   | 1280   | 1250  | 517   | 844   | 643   | 432   | 498   | 366   | 250   | 465   | 205  |       |
| 23          | 1170  | 1020   | 1220  | 510   | 800   | 810   | 433   | 509   | 476   | 272   | 407   | 214  |       |
| 24          | 1650  | 880    | 1090  | 505   | 980   | 800   | 1110  | 470   | 519   | 307   | 406   | 260  |       |
| 25          | 1000  | 780    | 1200  | 505   | 1070  | 771   | 1460  | 437   | 407   | 333   | 551   | 267  |       |
| 26          | 665   | 698    | 1150  | 489   | 1010  | 715   | 1120  | 415   | 429   | 324   | 633   | 508  |       |
| 27          | 492   | 759    | 1020  | 472   | 946   | 687   | 951   | 402   | 443   | 414   | 507   | 582  |       |
| 28          | 798   | 3980   | 932   | 493   | 870   | 698   | 880   | 429   | 440   | 430   | 422   | 393  |       |
| 29          | 1340  | 3610   | 841   | 492   | ---   | 660   | 797   | 449   | 859   | 409   | 388   | 310  |       |
| 30          | 941   | 2010   | 769   | 482   | ---   | 626   | 709   | 411   | 831   | 394   | 356   | 360  |       |
| 31          | 671   | ---    | 754   | 700   | ---   | 721   | ---   | 388   | ---   | 398   | 321   | ---  |       |
| TOTAL       | 14921 | 36142  | 25086 | 17433 | 35554 | 20172 | 20582 | 25114 | 12630 | 13751 | 15102 | 8194 |       |
| MEAN        | 481   | 1205   | 809   | 562   | 1270  | 651   | 686   | 810   | 421   | 444   | 487   | 273  |       |
| MAX         | 1650  | 4270   | 1500  | 735   | 3930  | 811   | 1460  | 2290  | 859   | 1430  | 2170  | 582  |       |
| MIN         | 182   | 349    | 438   | 472   | 800   | 516   | 432   | 388   | 299   | 250   | 236   | 205  |       |
| CFSM        | 1.08  | 2.70   | 1.81  | 1.26  | 2.84  | 1.46  | 1.53  | 1.81  | .94   | .99   | 1.09  | .61  |       |
| IN.         | 1.24  | 3.01   | 2.09  | 1.45  | 2.96  | 1.68  | 1.71  | 2.09  | 1.05  | 1.14  | 1.26  | .68  |       |
| CAL YR 1984 | TOTAL | 313817 |       | MEAN  | 857   | MAX   | 13700 | MIN   | 168   | CFSM  | 1.92  | IN.  | 26.12 |
| WTR YR 1985 | TOTAL | 244681 |       | MEAN  | 670   | MAX   | 4270  | MIN   | 182   | CFSM  | 1.50  | IN.  | 20.36 |

## TENNESSEE RIVER BASIN

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1964 to January 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C, July 13-15, 1966; minimum, 0.0°C, many days during winter periods.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE      | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) |
|-----------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|
| OCT 24... | 1115 | 1870  | 85  | 7.1                            | 16.5                        | 760  | 16                           | 8.1                                 | 83   | 1200   |
| JAN 29... | 1040 | 493   | --  | 8.5                            | 3.0                         | 758  | .50                          | 13.4                                | 100  | K3   |
| APR 17... | 1000 | 502   | 80  | 7.7                            | 16.0                        | 760  | 5.0                          | 10.0                                | 102  | 46   |
| JUL 15... | 1230 | 281   | 102   | 7.8                            | 26.5                        | 759  | 4.3                          | 7.8                                 | 98   | 92   |

| DATE         | STREP-<br>TOCOCCHI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) |
|--------------|---|--|--|--|--|--|-------------------|---|---|---|
| OCT<br>24... | 3900  | 38                                     | 2  | 12   | 1.9  | 1.6  | 8                 | .1                                      | 1.3   | 36  |
| JAN<br>29... | K4  | 37                                     | 4  | 12   | 1.6  | 1.4  | 8                 | .1                                      | .60   | --  |
| APR<br>17... | 64  | 40                                     | 0  | 13   | 1.8  | 1.4  | 7                 | .1                                      | 2.7   | 46  |
| JUL<br>15... | 50  | 46                                     | 0  | 15   | 2.0  | 1.5  | 7                 | .1                                      | .90   | 49  |

| DATE         | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|---|---|---|--|---|--|---|---|---|---|
| OCT<br>24... | 5.5   | 5.3   | 2.4   | <.10   | 6.4   | 54   | 53  | .07   | 273   | .20   |
| JAN<br>29... | .2  | 4.7   | 2.9   | <.10   | 3.3   | 45   | 46  | .06   | 60  | .32   |
| APR<br>17... | 1.8   | 3.7   | 3.6   | .20  | 3.3   | 48   | 58  | .07   | 65  | .13   |
| JUL<br>15... | 1.5   | 4.1   | 2.3   | <.10   | 6.3   | 60   | 62  | .08   | 46  | .20   |

| DATE      | AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(MG/L) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|-----------|-------|---|---|--|---|--|--|---|--|---|
| OCT 24... | .030  | .04   | .50   | .040   | .020  | .030   | .09  | 85  | 429  | 68  |
| JAN 29... | .020  | .03   | <.10  | <.010  | <.010                                       | <.010  | --   | 3   | 4.0  | 50  |
| APR 17... | .070  | .09   | 4.6   | --   | .040  | <.010  | --   | 12  | 16   | 73  |
| JUL 15... | .050  | .06   | .60   | .020   | <.010                                       | .010   | .03  | 12  | 9.1  | 54  |

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

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03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) |
|--------------|---|--|--|--|--|---|--|--|--|--|
| OCT<br>24... | 30  | <1   | 22   | <.5  | 1  | <1  | <3   | 1  | 61   | <1   |
| APR<br>17... | 20  | <1   | 20   | <.5  | <1   | 3   | <3   | 8  | 36   | 3  |

| DATE         | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|---|--|--|--|--|
| OCT<br>24... | <4   | 5  | <.1  | <10   | 1  | <1  | <1   | 49   | <6   | 4  |
| APR<br>17... | <4   | 9  | .8   | <10   | 2  | <1  | 1  | 48   | <6   | 5  |

| DATE         | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>SR/<br>YT-90) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>SR/<br>YT-90) | RADIUM<br>226,<br>DIS-<br>SOLVED,<br>RADON<br>METHOD<br>(PCI/L) | URANIUM<br>DIS-<br>SOLVED,<br>EXTRAC-<br>TION<br>(UG/L) |
|--------------|--|--|---|---|---|---|---|---|
| APR<br>17... | <.9  | <.4  | .8  | <.4   | .7  | <.4   | .04   | .05   |

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | TEMPER-<br>ATURE<br>(DEG C) |
|--------------|------|---|-----------------------------|
| OCT<br>02... | 1500 | 182   | 16.5                        |
| NOV<br>07... | 0910 | 398   | 14.0                        |
| FEB<br>09... | 1350 | 1240  | 4.0                         |
| JUN<br>13... | 1135 | 320   | 21.0                        |
| AUG<br>22... | 0945 | 455   | 23.0                        |



## TENNESSEE RIVER BASIN

03604500 BUFFALO RIVER NEAR LOBELVILLE, TN

LOCATION.--Lat 35°48'46", long 87°47'51", Perry County, Hydrologic Unit 06040004, on right bank 30 ft upstream from Standing Rock Bridge, 1.4 mi downstream from bridge on State Highway 13, 3 mi north of Lobelville, 13 mi downstream from Cane Creek, and at mile 17.7.

DRAINAGE AREA.--707 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935. WSP 823: Drainage area. WSP 853: 1928-37. WSP 1436: 1932(M).

GAGE.--Water-stage recorder. Datum of gage 403.02 ft above National Geodetic Vertical Datum of 1929. Nov. 1, 1927, to May 31, 1934, nonrecording gage 40 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--58 years, 1,196 ft<sup>3</sup>/s, 22.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft<sup>3</sup>/s, Feb. 14, 1948, gage height, 23.76 ft, from high-water mark in gage house, from rating curve extended above 40,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 135 ft<sup>3</sup>/s, Aug. 18, 1953, caused by regulations upstream at unknown location; minimum discharge unaffected by regulation, 142 ft<sup>3</sup>/s, Oct. 1-8, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 14, 1948. Flood of March 1902 reached a stage of about 21.8 ft, discharge not determined, from flood profile by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,200 ft<sup>3</sup>/s, and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|---------|------|--------------------------------|------------------|
| Nov. 20 | 1900 | *5,870                         | *10.25           | Nov. 29 | 2030 | 5,620                          | 10.08            |

Minimum discharge, 336 ft<sup>3</sup>/s, Oct. 1, 2, 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 338   | 1050   | 2630  | 1310  | 1520  | 1350  | 1190  | 1200  | 656   | 1730  | 612   | 560   |       |
| 2           | 337   | 1050   | 2070  | 1280  | 1750  | 1280  | 1290  | 1510  | 620   | 2190  | 593   | 528   |       |
| 3           | 337   | 1070   | 1710  | 1240  | 1690  | 1210  | 1270  | 2510  | 600   | 1790  | 555   | 503   |       |
| 4           | 337   | 1050   | 1500  | 1220  | 1520  | 1160  | 1210  | 2080  | 586   | 1410  | 523   | 487   |       |
| 5           | 342   | 958    | 1360  | 1180  | 1430  | 1130  | 1160  | 1680  | 565   | 1170  | 513   | 478   |       |
| 6           | 352   | 864    | 1250  | 1140  | 1610  | 1080  | 1190  | 1450  | 549   | 1060  | 520   | 474   |       |
| 7           | 374   | 791    | 1170  | 1090  | 2000  | 1030  | 1180  | 1310  | 545   | 972   | 525   | 464   |       |
| 8           | 467   | 730    | 1110  | 1050  | 2020  | 979   | 1110  | 1680  | 570   | 919   | 538   | 457   |       |
| 9           | 566   | 683    | 1050  | 1010  | 1810  | 1030  | 1050  | 2210  | 571   | 805   | 528   | 451   |       |
| 10          | 590   | 807    | 1000  | 991   | 1640  | 1150  | 993   | 2170  | 560   | 727   | 523   | 448   |       |
| 11          | 576   | 1210   | 944   | 971   | 1860  | 1170  | 952   | 1760  | 552   | 686   | 503   | 468   |       |
| 12          | 498   | 1420   | 903   | 949   | 3320  | 1140  | 913   | 1530  | 604   | 655   | 482   | 459   |       |
| 13          | 454   | 1350   | 869   | 913   | 4640  | 1110  | 880   | 1350  | 594   | 624   | 467   | 437   |       |
| 14          | 432   | 1160   | 840   | 880   | 3350  | 1080  | 855   | 1220  | 562   | 596   | 452   | 423   |       |
| 15          | 422   | 1090   | 811   | 849   | 2580  | 1050  | 844   | 1120  | 535   | 579   | 444   | 411   |       |
| 16          | 425   | 1210   | 776   | 826   | 2160  | 1010  | 833   | 1020  | 519   | 595   | 462   | 400   |       |
| 17          | 694   | 1350   | 749   | 869   | 1870  | 979   | 838   | 944   | 521   | 569   | 673   | 396   |       |
| 18          | 676   | 1390   | 719   | 909   | 1670  | 946   | 809   | 880   | 731   | 553   | 1980  | 389   |       |
| 19          | 672   | 2580   | 707   | 933   | 1550  | 911   | 776   | 824   | 809   | 533   | 1810  | 385   |       |
| 20          | 613   | 5170   | 792   | 912   | 1470  | 880   | 749   | 778   | 873   | 513   | 1280  | 379   |       |
| 21          | 640   | 3930   | 1230  | 867   | 1430  | 873   | 724   | 744   | 742   | 500   | 1020  | 376   |       |
| 22          | 734   | 2390   | 1850  | 818   | 1360  | 957   | 702   | 761   | 723   | 490   | 912   | 372   |       |
| 23          | 1310  | 1830   | 2010  | 806   | 1290  | 1060  | 689   | 775   | 1000  | 482   | 776   | 388   |       |
| 24          | 2050  | 1530   | 1870  | 830   | 1410  | 1200  | 1300  | 761   | 830   | 481   | 695   | 406   |       |
| 25          | 1930  | 1340   | 1820  | 825   | 1590  | 1210  | 2000  | 720   | 817   | 505   | 722   | 428   |       |
| 26          | 1420  | 1210   | 1840  | 805   | 1620  | 1180  | 1890  | 683   | 753   | 527   | 755   | 499   |       |
| 27          | 1110  | 1150   | 1730  | 788   | 1540  | 1140  | 1610  | 654   | 713   | 561   | 842   | 570   |       |
| 28          | 942   | 2360   | 1570  | 782   | 1440  | 1130  | 1430  | 661   | 886   | 589   | 779   | 722   |       |
| 29          | 1160  | 4930   | 1450  | 779   | ---   | 1110  | 1310  | 669   | 816   | 639   | 691   | 642   |       |
| 30          | 1510  | 4070   | 1330  | 785   | ---   | 1070  | 1210  | 675   | 1300  | 632   | 633   | 564   |       |
| 31          | 1270  | ---    | 1320  | 1170  | ---   | 1110  | ---   | 647   | ---   | 637   | 595   | ---   |       |
| TOTAL       | 23578 | 51723  | 40980 | 29777 | 53140 | 33715 | 32957 | 36976 | 20702 | 24719 | 22403 | 13964 |       |
| MEAN        | 761   | 1724   | 1322  | 961   | 1898  | 1088  | 1099  | 1193  | 690   | 797   | 723   | 465   |       |
| MAX         | 2050  | 5170   | 2630  | 1310  | 4640  | 1350  | 2000  | 2510  | 1300  | 2190  | 1980  | 722   |       |
| MIN         | 337   | 683    | 707   | 779   | 1290  | 873   | 689   | 647   | 519   | 481   | 444   | 372   |       |
| CFSM        | 1.08  | 2.44   | 1.87  | 1.36  | 2.68  | 1.54  | 1.55  | 1.69  | .98   | 1.13  | 1.02  | .66   |       |
| IN.         | 1.24  | 2.72   | 2.16  | 1.57  | 2.80  | 1.77  | 1.73  | 1.95  | 1.09  | 1.30  | 1.18  | .73   |       |
| CAL YR 1984 | TOTAL | 491666 |       | MEAN  | 1343  | MAX   | 16300 | MIN   | 305   | CFSM  | 1.90  | IN.   | 25.87 |
| WTR YR 1985 | TOTAL | 384634 |       | MEAN  | 1054  | MAX   | 5170  | MIN   | 337   | CFSM  | 1.49  | IN.   | 20.24 |

03605555 TRACE CREEK ABOVE DENVER, TN

LOCATION.--Lat 36°03'08", long 87°54'27", Humphreys County, Hydrologic Unit 06040005, on left bank at bridge on U.S. Highway 70, 1.0 mi east of Denver, 3.9 mi northeast of New Johnsonville, and at mile 4.2.

DRAINAGE AREA.--31.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. Published as "near Denver" prior to October 1972.

REVISED RECORDS.--WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 377.05 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1973, at site 1.1 mi upstream. Oct. 22 to Nov. 6, 1963, at different datum and Nov. 7, 1963, to Dec. 31, 1972, at datum 12.47 ft higher.

REMARKS.--Records fair except for estimated daily discharges, Oct. 1-17, Mar. 20 to Apr. 24, which are poor. Natural flow of stream effected by periodic transbasin diversion of water from the Duck River basin into the Trace Creek basin to supplement the Waverly municipal water supply. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--22 years, 52.4 ft<sup>3</sup>/s, 22.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s, May 6, 1984, gage height, 13.61 ft; maximum discharge at prior site and datum, 3,640 ft<sup>3</sup>/s, May 13, 1967, gage height, 9.08 ft; minimum discharge, 3.0 ft<sup>3</sup>/s Aug. 9, 13, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1886, 14 ft January 1937, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,850 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|------|------|--------------------------------|------------------|
| Nov. 10 | 0915 | *962                           | *5.50            |      |      |                                |                  |

Minimum daily discharge, 7.9 fts<sup>3</sup>/s June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| 1     | 11   | 16   | 65   | 250  | 100  | 42   | 32   | 267  | 12    | 14    | 12    | 11    |
| 2     | 11   | 23   | 54   | 147  | 76   | 41   | 29   | 163  | 13    | 13    | 12    | 10    |
| 3     | 11   | 18   | 47   | 102  | 62   | 37   | 26   | 97   | 12    | 12    | 10    | 9.8   |
| 4     | 11   | 18   | 41   | 93   | 56   | 37   | 25   | 72   | 11    | 11    | 9.7   | 9.6   |
| 5     | 11   | 17   | 37   | 77   | 57   | 42   | 31   | 58   | 9.0   | 12    | 13    | 9.7   |
| 6     | 11   | 15   | 37   | 67   | 87   | 37   | 40   | 48   | 9.2   | 26    | 17    | 11    |
| 7     | 13   | 14   | 32   | 60   | 77   | 32   | 25   | 42   | 19    | 16    | 12    | 10    |
| 8     | 17   | 14   | 29   | 58   | 60   | 32   | 23   | 37   | 14    | 14    | 12    | 10    |
| 9     | 15   | 14   | 27   | 54   | 54   | 54   | 21   | 31   | 12    | 13    | 9.7   | 9.9   |
| 10    | 13   | 336  | 26   | 55   | 51   | 49   | 20   | 27   | 9.8   | 13    | 9.5   | 9.9   |
| 11    | 12   | 130  | 23   | 55   | 311  | 46   | 21   | 24   | 10    | 12    | 9.8   | 9.8   |
| 12    | 12   | 70   | 22   | 48   | 246  | 43   | 22   | 22   | 11    | 11    | 9.0   | 9.6   |
| 13    | 11   | 53   | 21   | 45   | 134  | 40   | 25   | 20   | 9.5   | 11    | 8.3   | 9.5   |
| 14    | 12   | 44   | 20   | 43   | 100  | 39   | 30   | 20   | 9.1   | 8.6   | 8.0   | 9.9   |
| 15    | 12   | 54   | 19   | 40   | 82   | 36   | 35   | 20   | 9.0   | 8.4   | 8.8   | 9.1   |
| 16    | 12   | 58   | 17   | 37   | 69   | 30   | 26   | 18   | 8.8   | 9.6   | 28    | 8.9   |
| 17    | 24   | 46   | 17   | 45   | 63   | 26   | 24   | 17   | 8.9   | 8.8   | 36    | 8.9   |
| 18    | 13   | 308  | 18   | 47   | 65   | 25   | 22   | 17   | 10    | 8.5   | 18    | 8.8   |
| 19    | 17   | 343  | 17   | 44   | 129  | 25   | 21   | 16   | 8.6   | 8.9   | 18    | 8.8   |
| 20    | 17   | 132  | 20   | 39   | 88   | 24   | 20   | 14   | 8.2   | 9.6   | 24    | 8.7   |
| 21    | 32   | 86   | 53   | 34   | 72   | 29   | 19   | 14   | 7.9   | 9.7   | 19    | 8.6   |
| 22    | 35   | 66   | 139  | 34   | 63   | 53   | 20   | 25   | 10    | 9.8   | 15    | 8.6   |
| 23    | 60   | 54   | 75   | 32   | 57   | 56   | 34   | 18   | 10    | 11    | 14    | 10    |
| 24    | 69   | 46   | 69   | 32   | 63   | 39   | 54   | 16   | 9.5   | 11    | 16    | 12    |
| 25    | 46   | 41   | 131  | 36   | 60   | 29   | 41   | 15   | 11    | 9.9   | 25    | 13    |
| 26    | 36   | 35   | 80   | 32   | 54   | 32   | 33   | 14   | 11    | 9.6   | 18    | 74    |
| 27    | 28   | 46   | 65   | 30   | 49   | 34   | 31   | 14   | 11    | 12    | 14    | 24    |
| 28    | 23   | 333  | 56   | 29   | 45   | 32   | 34   | 12   | 12    | 11    | 13    | 17    |
| 29    | 20   | 120  | 50   | 26   | ---  | 30   | 29   | 12   | 12    | 10    | 12    | 14    |
| 30    | 18   | 85   | 61   | 27   | ---  | 49   | 29   | 11   | 14    | 10    | 11    | 16    |
| 31    | 16   | ---  | 128  | 177  | ---  | 41   | ---  | 12   | ---   | 11    | 14    | ---   |
| TOTAL | 649  | 2635 | 1496 | 1895 | 2430 | 1161 | 842  | 1193 | 322.5 | 355.4 | 455.8 | 390.1 |
| MEAN  | 20.9 | 87.8 | 48.3 | 61.1 | 86.8 | 37.5 | 28.1 | 38.5 | 10.7  | 11.5  | 14.7  | 13.0  |
| MAX   | 69   | 343  | 139  | 250  | 311  | 56   | 54   | 267  | 19    | 26    | 36    | 74    |
| MIN   | 11   | 14   | 17   | 26   | 45   | 24   | 19   | 11   | 7.9   | 8.4   | 8.0   | 8.6   |
| CFSM  | .66  | 2.75 | 1.51 | 1.92 | 2.72 | 1.18 | .88  | 1.21 | .34   | .36   | .46   | .41   |
| IN.   | .76  | 3.07 | 1.74 | 2.21 | 2.83 | 1.35 | .98  | 1.39 | .38   | .41   | .53   | .45   |

| CAL YR 1984 | TOTAL | 21732.4 | MEAN | 59.4 | MAX | 2360 | MIN | 8.3 | CFSM | 1.86 | IN. | 25.34 |
|-------------|-------|---------|------|------|-----|------|-----|-----|------|------|-----|-------|
| WTR YR 1985 | TOTAL | 13824.8 | MEAN | 37.9 | MAX | 343  | MIN | 7.9 | CFSM | 1.19 | IN. | 16.12 |

## TENNESSEE RIVER BASIN

03606500 BIG SANDY RIVER AT BRUCETON, TN

LOCATION.--Lat 36°02'19", long 88°13'42", Carroll County, Hydrologic Unit 06040005, on right bank on downstream end of abutment of county bridge, 700 ft downstream from bridge on U.S. Highway 70, 0.6 mi upstream from Cherry Creek, 0.9 mi east of Bruceton, and at mile 31.6.

DRAINAGE AREA.--205 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 923: 1929-35.

GAGE.--Water-stage recorder. Datum of gage is 380.58 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 21-29, Feb. 1 to Mar. 13, which are poor. Periodic observations of water temperature are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--56 years, 294 ft<sup>3</sup>/s, 19.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s Jan. 21, 1935, gage height, 16.16 ft from graph based on gage readings, from rating curve extended above 9,200 ft<sup>3</sup>/s; minimum, 28 ft<sup>3</sup>/s Aug. 17-19, 22, Sept. 1, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1897 reached a stage of 18 ft, discharge, 25,000 ft<sup>3</sup>/s, and flood in March 1919 reached a stage of 17 ft, discharge, 21,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0100 | *1,910                            | *11.98              |      |      |                                   |                     |

Minimum discharge, 64 ft<sup>3</sup>/s July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|--------|------|------|-------|------|------|------|------|------|------|------|-------|
| 1           | 80    | 171    | 279  | 672  | 600   | 250  | 270  | 520  | 121  | 180  | 78   | 98   |       |
| 2           | 78    | 484    | 205  | 576  | 450   | 240  | 201  | 591  | 99   | 185  | 74   | 80   |       |
| 3           | 77    | 420    | 180  | 471  | 350   | 230  | 182  | 637  | 92   | 133  | 70   | 75   |       |
| 4           | 77    | 280    | 157  | 401  | 300   | 220  | 172  | 476  | 88   | 99   | 69   | 77   |       |
| 5           | 77    | 193    | 162  | 352  | 400   | 250  | 189  | 215  | 86   | 91   | 78   | 89   |       |
| 6           | 89    | 160    | 238  | 304  | 550   | 240  | 241  | 164  | 87   | 221  | 125  | 100  |       |
| 7           | 152   | 143    | 182  | 299  | 450   | 230  | 186  | 148  | 104  | 232  | 330  | 86   |       |
| 8           | 270   | 139    | 178  | 348  | 400   | 225  | 164  | 295  | 130  | 129  | 380  | 79   |       |
| 9           | 203   | 149    | 172  | 318  | 350   | 250  | 155  | 366  | 110  | 98   | 214  | 79   |       |
| 10          | 147   | 995    | 168  | 415  | 350   | 300  | 152  | 475  | 98   | 88   | 111  | 76   |       |
| 11          | 114   | 986    | 153  | 412  | 750   | 280  | 150  | 250  | 133  | 83   | 93   | 74   |       |
| 12          | 106   | 875    | 151  | 273  | 850   | 260  | 151  | 166  | 188  | 80   | 85   | 73   |       |
| 13          | 103   | 481    | 151  | 212  | 750   | 250  | 153  | 145  | 124  | 75   | 91   | 70   |       |
| 14          | 104   | 223    | 146  | 207  | 500   | 228  | 165  | 127  | 106  | 73   | 78   | 68   |       |
| 15          | 102   | 356    | 142  | 195  | 450   | 214  | 251  | 124  | 97   | 71   | 77   | 69   |       |
| 16          | 102   | 433    | 139  | 188  | 400   | 193  | 206  | 115  | 94   | 86   | 228  | 71   |       |
| 17          | 529   | 330    | 135  | 435  | 350   | 185  | 172  | 110  | 103  | 79   | 561  | 71   |       |
| 18          | 397   | 1050   | 133  | 386  | 300   | 173  | 156  | 110  | 244  | 71   | 405  | 70   |       |
| 19          | 518   | 1580   | 148  | 293  | 500   | 166  | 145  | 108  | 179  | 68   | 189  | 69   |       |
| 20          | 405   | 1150   | 280  | 231  | 350   | 163  | 137  | 104  | 118  | 66   | 119  | 66   |       |
| 21          | 532   | 972    | 754  | 220  | 300   | 216  | 130  | 100  | 100  | 65   | 105  | 66   |       |
| 22          | 453   | 397    | 1050 | 200  | 250   | 477  | 125  | 253  | 123  | 74   | 92   | 66   |       |
| 23          | 721   | 236    | 840  | 190  | 300   | 370  | 131  | 225  | 201  | 97   | 86   | 71   |       |
| 24          | 678   | 199    | 609  | 175  | 350   | 282  | 619  | 148  | 126  | 80   | 106  | 104  |       |
| 25          | 508   | 180    | 539  | 170  | 325   | 218  | 449  | 124  | 103  | 75   | 123  | 95   |       |
| 26          | 278   | 165    | 428  | 162  | 300   | 188  | 300  | 113  | 141  | 84   | 101  | 462  |       |
| 27          | 191   | 411    | 289  | 160  | 275   | 204  | 189  | 108  | 179  | 241  | 88   | 369  |       |
| 28          | 167   | 1090   | 232  | 169  | 265   | 230  | 172  | 106  | 223  | 132  | 83   | 219  |       |
| 29          | 158   | 792    | 212  | 180  | ---   | 203  | 152  | 108  | 329  | 105  | 79   | 103  |       |
| 30          | 147   | 607    | 288  | 199  | ---   | 192  | 137  | 100  | 393  | 92   | 76   | 128  |       |
| 31          | 155   | ---    | 428  | 884  | ---   | 325  | ---  | 104  | ---  | 82   | 129  | ---  |       |
| TOTAL       | 7718  | 15647  | 9168 | 9697 | 11765 | 7452 | 6002 | 6735 | 4319 | 3335 | 4523 | 3223 |       |
| MEAN        | 249   | 522    | 296  | 313  | 420   | 240  | 200  | 217  | 144  | 108  | 146  | 107  |       |
| MAX         | 721   | 1580   | 1050 | 884  | 850   | 477  | 619  | 637  | 393  | 241  | 561  | 462  |       |
| MIN         | 77    | 139    | 133  | 160  | 250   | 163  | 125  | 100  | 86   | 65   | 69   | 66   |       |
| CFSM        | 1.21  | 2.55   | 1.44 | 1.53 | 2.05  | 1.17 | .98  | 1.06 | .70  | .53  | .71  | .52  |       |
| IN.         | 1.40  | 2.84   | 1.66 | 1.76 | 2.13  | 1.35 | 1.09 | 1.22 | .78  | .61  | .82  | .58  |       |
| CAL YR 1984 | TOTAL | 128988 |      | MEAN | 352   | MAX  | 4730 | MIN  | 66   | CFSM | 1.72 | IN.  | 23.41 |
| WTR YR 1985 | TOTAL | 89584  |      | MEAN | 245   | MAX  | 1580 | MIN  | 65   | CFSM | 1.20 | IN.  | 16.26 |



TENNESSEE RIVER BASIN

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RESERVOIRS IN TENNESSEE RIVER BASIN

- 03468500 DOUGLAS LAKE.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at Douglas Dam on French Broad River, 6.5 mi north of Sevierville, and at mile 32.3. DRAINAGE AREA, 4,541 mi<sup>2</sup>. PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 radial gages, each 32 ft high by 40 ft wide and 8 sluice gates 10 ft high by 5.67 ft wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,002.00 ft, top of gates, is 743,600 cfs-days, of which 631,200 cfs-days is controlled storage above elevation 940.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 760,000 cfs-days, July 25, 1949, elevation, 1,001.79 ft; minimum after first filling, 1,000 cfs-days, Jan. 16, 1956, elevation, 883.7 ft, estimated.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 362,500 cfs-days, May 28, elevation, 972.50 ft; minimum, 112,500 cfs-days, Jan. 22, elevation, 941.01 ft.
- 03476000 SOUTH HOLSTON LAKE.--Lat 36°31'15", long 82°05'11", Sullivan County, Hydrologic Unit 06010102, 470 ft upstream from South Holston Dam on South Fork Holston River, 7.0 mi southeast of Bristol, Virginia-Tennessee, and at mile 49.8. DRAINAGE AREA, 703 mi<sup>2</sup>. PERIOD OF RECORD, November 1950 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 11, 1951, non-recording gage at same site and datum.
- REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,742.00 ft, spillway crest, is 385,200 cfs-days, of which 220,800 cfs-days is controlled storage above elevation 1,675.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 363,800 cfs-days, May 10, 1984, elevation, 1,736.86 ft; minimum after first filling, 57,700 cfs-days, Jan. 13, 1956, elevation, 1,614.15 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 293,700 cfs-days, June 18, elevation, 1,718.66 ft; minimum, 199,200 cfs-days, Dec. 8, elevation, 1,688.41 ft.
- 03483500 WATAUGA LAKE.--Lat 36°19'20", long 82°07'16", Carter County, Hydrologic Unit 06010103, at Watauga Dam on Watauga River, 5 mi east of Elizabethton, and at mile 36.7. DRAINAGE AREA, 468 mi<sup>2</sup>. PERIOD OF RECORD, December 1948 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,975.00 ft, spillway crest, is 341,300 cfs-days, of which 178,500 cfs-days is controlled storage above elevation 1,915.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 293,300 cfs-days, Apr. 6, 1974, elevation, 1,961.07 ft; minimum after first filling, 25,100 cfs-days, Jan. 13, 1956, elevation, 1,813.47 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 242,700 cfs-days, June 3, elevation, 1,944.82 ft; minimum, 184,600 cfs-days, Jan. 25, elevation, 1,923.61 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date                  | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)         | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)   | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|-----------------------|---------------------|------------------------|-------------------------------------|-----------------------------|------------------------|-------------------------------------|-----------------------|------------------------|-------------------------------------|
| 03468500 DOUGLAS LAKE |                     |                        |                                     | 03476000 SOUTH HOLSTON LAKE |                        |                                     | 03483500 WATAUGA LAKE |                        |                                     |
| Sept. 30.....         | 963.19              | 274,000                | -                                   | 1,700.55                    | 234,500                | -                                   | 1,929.99              | 201,100                | -                                   |
| Oct. 31.....          | 958.03              | 230,100                | -43,900                             | 1,694.07                    | 215,200                | -19,300                             | 1,929.17              | 199,000                | -2,100                              |
| Nov. 30.....          | 952.10              | 185,700                | -44,400                             | 1,690.55                    | 205,200                | -10,000                             | 1,926.78              | 192,700                | -6,300                              |
| Dec. 31.....          | 942.39              | 125,100                | -60,600                             | 1,690.17                    | 204,100                | -1,100                              | 1,925.26              | 188,800                | -3,900                              |
| CAL YR 1984           | -                   | -                      | -33,500                             | -                           | -                      | -53,700                             | -                     | -                      | +137,300                            |
| Jan. 31.....          | 943.07              | 128,800                | +3,700                              | 1,690.92                    | 206,200                | +2,100                              | 1,923.72              | 184,900                | -3,900                              |
| Feb. 28.....          | 955.64              | 211,400                | +82,600                             | 1,705.70                    | 250,400                | +44,200                             | 1,933.95              | 211,900                | +27,000                             |
| Mar. 31.....          | 957.09              | 222,600                | +11,200                             | 1,709.20                    | 261,600                | +11,200                             | 1,937.19              | 220,900                | + 9,000                             |
| Apr. 30.....          | 967.32              | 311,500                | +88,900                             | 1,711.39                    | 268,900                | +7,300                              | 1,941.72              | 233,800                | +12,900                             |
| May 31.....           | 971.70              | 354,300                | +42,800                             | 1,718.16                    | 292,000                | +23,100                             | 1,944.55              | 241,900                | +8,100                              |
| June 30.....          | 969.38              | 331,200                | -23,100                             | 1,717.74                    | 290,500                | -1,500                              | 1,943.08              | 237,700                | -4,200                              |
| July 31.....          | 966.09              | 300,200                | -31,000                             | 1,714.89                    | 280,800                | -9,700                              | 1,938.50              | 224,700                | -13,000                             |
| Aug. 31.....          | 966.59              | 304,800                | +4,600                              | 1,706.96                    | 254,400                | -26,400                             | 1,933.30              | 210,100                | -14,600                             |
| Sept. 30.....         | 957.14              | 223,000                | -81,800                             | 1,698.56                    | 228,400                | -26,000                             | 1,929.47              | 199,700                | -10,400                             |
| WTR YR 1985           | -                   | -                      | -51,000                             | -                           | -                      | -6,100                              | -                     | -                      | -1,400                              |



## TENNESSEE RIVER BASIN

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03486800 BOONE LAKE.--Lat 36°26'26", long 82°26'16", Sullivan County, Hydrologic Unit 06010102, at Boone Dam on South Fork Holston River, 0.7 mi northeast of Spurgeon, 1.3 mi downstream from Watauga River, and at mile 18.6. DRAINAGE AREA, 1,840 mi<sup>2</sup>. PERIOD OF RECORD, December 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,385.0 ft, top of gates, is 97,500 cfs-days, of which 74,800 cfs-days is controlled storage above elevation 1,330 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,100 cfs-days, May 19, 1964, elevation 1,384.99 ft; minimum after first filling, 21,300 cfs-days, Jan. 23, 1956, elevation, 1,327.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 93,500 cfs-days, Aug. 1, elevation, 1,383.15 ft; minimum, 47,500 cfs-days, Jan. 24, elevation, 1,354.95 ft.

03487000 FORT PATRICK HENRY LAKE.--Lat 36°29'53", long 82°30'32", Sullivan County, Hydrologic Unit 06010102, at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mi upstream from bridge on U. S. Highway 23, 4.5 mi southeast of Kingsport, and at mile 8.2. DRAINAGE AREA, 1,903 mi<sup>2</sup>. PERIOD OF RECORD, October 1953 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,263 ft, top of gates, is 13,600 cfs-days, of which 2,200 cfs-days is controlled storage above elevation 1,258 ft, normal minimum pool. Reservoir is used for navigation, flood control and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 14,000 cfs-days, Feb. 11, 1954, elevation, 1,263.80 ft, minimum after first filling, 9,300 cfs-days, Mar. 16, 1954, elevation, 1,252.32 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,500 cfs-days, Aug. 29, elevation, 1,262.96 ft; minimum, 11,300 cfs-days, Sept. 12, elevation, 1,257.74 ft.

03493500 CHEROKEE LAKE.--Lat 36°10'00", long 83°29'55", Jefferson County, Hydrologic Unit 06010104, at Cherokee Dam on Holston River, 0.3 mi upstream from bridge on State Highway 92, 2.7 mi upstream from Mill Spring Creek, 2.8 mi north of Jefferson City, and at mile 52.3. DRAINAGE AREA, 3,429 mi<sup>2</sup>. PERIOD OF RECORD, December 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with nine radial gates, each 32 ft high by 40 ft wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 1942. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,075.0 ft, top of gates, is 778,400 cfs-days, of which 580,300 cfs-days is controlled storage above elevation 1,020.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 779,400 cfs-days, May 11, 1944, maximum elevation, 1,074.47 ft May 30, 1973; minimum after first filling, 48,400 cfs-days, Jan. 7, 1954, elevation, 980.77 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 411,500 cfs-days, May 28, elevation, 1,046.35 ft; minimum, 219,700 cfs-days, Jan. 30, elevation, 1,023.34 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date                | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)              | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)    | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------------|---------------------|------------------------|-------------------------------------|----------------------------------|------------------------|-------------------------------------|------------------------|------------------------|-------------------------------------|
| 03486800 BOONE LAKE |                     |                        |                                     | 03487000 FORT PATRICK HENRY LAKE |                        |                                     | 03493500 CHEROKEE LAKE |                        |                                     |
| Sept. 30.....       | 1,378.25            | 83,400                 | -                                   | 1,260.57                         | 12,500                 | -                                   | 1,041.96               | 368,700                | -                                   |
| Oct. 31.....        | 1,372.29            | 72,600                 | -10,800                             | 1,261.46                         | 12,900                 | +400                                | 1,037.42               | 328,100                | -40,600                             |
| Nov. 30.....        | 1,364.98            | 60,600                 | -12,000                             | 1,260.20                         | 12,400                 | -500                                | 1,033.33               | 293,600                | -34,500                             |
| Dec. 31.....        | 1,357.39            | 50,900                 | -9,700                              | 1,261.52                         | 12,900                 | +500                                | 1,028.70               | 257,400                | -36,200                             |
| CAL YR 1984         | -                   | -                      | +6,100                              | -                                | -                      | +400                                | -                      | -                      | -41,000                             |
| Jan. 31.....        | 1,356.21            | 49,100                 | -1,800                              | 1,260.92                         | 12,700                 | -200                                | 1,023.50               | 220,700                | -36,700                             |
| Feb. 28.....        | 1,364.94            | 60,500                 | +11,400                             | 1,261.26                         | 12,800                 | +100                                | 1,040.24               | 353,000                | +132,300                            |
| Mar. 31.....        | 1,368.94            | 66,900                 | +6,400                              | 1,260.65                         | 12,500                 | -300                                | 1,039.82               | 349,300                | -3,700                              |
| Apr. 30.....        | 1,372.84            | 73,500                 | +6,600                              | 1,260.93                         | 12,700                 | +200                                | 1,044.47               | 392,600                | +43,300                             |
| May 31.....         | 1,376.49            | 80,100                 | +6,600                              | 1,260.26                         | 12,400                 | -300                                | 1,045.69               | 404,800                | +12,200                             |
| June 30.....        | 1,380.24            | 87,400                 | +7,300                              | 1,260.92                         | 12,700                 | +300                                | 1,043.66               | 384,800                | -20,000                             |
| July 31.....        | 1,382.40            | 91,900                 | +4,500                              | 1,260.58                         | 12,500                 | -200                                | 1,039.82               | 349,300                | -35,500                             |
| Aug. 31.....        | 1,381.75            | 90,500                 | -1,400                              | 1,260.16                         | 12,300                 | -200                                | 1,038.40               | 337,000                | -12,300                             |
| Sept. 30.....       | 1,377.69            | 82,400                 | -8,100                              | 1,261.00                         | 12,700                 | +400                                | 1,032.85               | 289,700                | -47,300                             |
| WTR YR 1985         | -                   | -                      | -1,000                              | -                                | -                      | +200                                | -                      | -                      | -79,000                             |

## TENNESSEE RIVER BASIN

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## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03499500 FORT LOUDOUN LAKE.--Lat 35°47'30", long 84°14'35", Loudon County, Hydrologic Unit 06010201, at Fort Loudoun Dam on Tennessee River, 1 mi northeast of Lenoir City, and at mile 602.3. DRAINAGE AREA, 9,550 mi<sup>2</sup>. PERIOD OF RECORD, July 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 radial gates, each 32 ft high by 40 ft wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Revised capacity table put into use Jan. 19, 1980. Total level pool capacity at elevation 815.00 ft, top of gates, is 424,000 cfs-days, of which 120,000 cfs-days is controlled flood storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 815.14 ft, May 8, 1984; minimum after first filling, 805.54 ft, Jan 18, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 183,000 cfs-days, Sept. 8; maximum elevation, 813.10 ft Sept. 18; minimum elevation, 807.21 ft, Jan. 11. Contents based on backwater profile.

03518200 CHILHOWEE LAKE.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam on Little Tennessee River, 2.4 mi southwest of Chilhowee, 2.6 mi upstream from Citico Creek, 10.1 mi downstream from Calderwood Dam, and at mile 33.6. DRAINAGE AREA, 1,977 mi<sup>2</sup>. PERIOD OF RECORD, August 1957 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by six radial gates, each 38 ft high by 35 ft wide. Closure of dam was made June 9, 1957; storage began Aug. 1, 1957; water in reservoir first reached minimum pool elevation Aug. 9, 1957. Total capacity at elevation 874.0 ft, top of gates, is 24,800 cfs-days, of which 3,400 cfs-days is controlled storage above elevation 870.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 25,400 cfs-days, May 28, 1973, elevation, 874.60 ft; minimum after first filling, 18,100 cfs-days, May 18, 1963, elevation, 865.94 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 24,800 cfs-days, May 26, elevation, 873.98 ft; minimum, 22,100 cfs-days, Sept. 18, elevation, 870.80 ft.

03519800 TELlico LAKE.--Lat 35°46'53", long 84°15'10", Loudon County, Hydrologic Unit 06010201, at Tellico Dam on Little Tennessee River, 1.1 mi south of Lenoir City, and at mile 0.4. DRAINAGE AREA, 2,627 mi<sup>2</sup>. PERIOD OF RECORD, December 1979 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 3 radial gates, each 42 ft high by 40 ft wide. Closure of dam was made Nov. 29, 1979; water in reservoir first reached ordinary minimum pool elevation Dec. 24, 1979. Total capacity at elevation 815.00 ft, top of gates, is 225,500 cfs-days, of which 63,800 cfs-days is controlled storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and indirectly, power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 228,700 cfs-days, May 8, 1984, elevation, 815.37 ft; minimum after first filling, 161,400 cfs-days, Jan. 14, 1980, elevation, 806.96 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 199,200 cfs-days, Sept. 18, elevation, 813.20 ft; minimum, 155,400 cfs-days, Jan. 11, elevation, 807.31 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|
|               | 03499500            | FORT LOUDOUN LAKE*     |                                     | 03518200            | CHILHOWEE LAKE         |                                     | 03519800            | TELlico LAKE           |                                     |
| Sept. 30..... | 812.73              | 181,000                | -                                   | 873.47              | 24,400                 | -                                   | 812.76              | 207,000                | -                                   |
| Oct. 31.....  | 812.62              | 180,000                | -1,000                              | 871.24              | 22,500                 | -1,900                              | 812.65              | 194,900                | -12,100                             |
| Nov. 30.....  | 809.14              | 156,000                | -24,000                             | 873.49              | 24,400                 | +1,900                              | 809.23              | 169,100                | -25,800                             |
| Dec. 31.....  | 807.92              | 148,000                | -8,000                              | 873.66              | 24,500                 | +100                                | 807.99              | 160,200                | -8,900                              |
| CAL YR 1984   | -                   | -                      | -12,000                             | -                   | -                      | +300                                | -                   | -                      | -22,100                             |
| Jan. 31.....  | 808.37              | 151,000                | +3,000                              | 873.50              | 24,400                 | -100                                | 808.39              | 163,000                | +2,800                              |
| Feb. 28.....  | 807.97              | 149,000                | -2,000                              | 873.66              | 24,500                 | +100                                | 808.02              | 160,400                | -2,600                              |
| Mar. 31.....  | 808.20              | 150,000                | +1,000                              | 873.39              | 24,300                 | -200                                | 808.26              | 162,100                | +1,700                              |
| Apr. 30.....  | 811.80              | 174,000                | +24,000                             | 873.74              | 24,600                 | +300                                | 811.88              | 188,900                | +26,800                             |
| May 31.....   | 812.45              | 179,000                | +5,000                              | 873.57              | 24,400                 | -200                                | 812.55              | 194,100                | +5,200                              |
| June 30.....  | 812.93              | 183,000                | +4,000                              | 873.73              | 24,600                 | +200                                | 813.00              | 197,600                | +3,500                              |
| July 31.....  | 812.50              | 180,000                | -3,000                              | 873.16              | 24,100                 | -500                                | 812.54              | 194,000                | -3,600                              |
| Aug. 31.....  | 812.46              | 179,000                | -1,000                              | 872.82              | 23,800                 | -300                                | 812.48              | 193,600                | -400                                |
| Sept. 30..... | 812.88              | 182,000                | +3,000                              | 873.00              | 24,000                 | +200                                | 812.88              | 196,700                | +3,100                              |
| WTR YR 1985   | -                   | -                      | +1,000                              | -                   | -                      | -400                                | -                   | -                      | -10,300                             |

\* Contents based on backwater profile.

## TENNESSEE RIVER BASIN

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03532500 NORRIS LAKE.--Lat 36°13'29", long 84°05'29", Anderson County, Hydrologic Unit 06010205, at Norris Dam on Clinch River, 2.5 mi northwest of Norris, and at mile 79.8. DRAINAGE AREA, 2,912 mi<sup>2</sup>. PERIOD OF RECORD, June 1935 to current year. GAGE, water-stage recorder. Datum of gage is 0.11 ft above National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with three drum gates, each 100 ft wide by 14 ft high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,034.11 ft, top of gates, is 1,286,600 cfs-days, of which 969,000 cfs-days is controlled storage above elevation 960.11 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,236,700 cfs-days, Feb. 11, 1937, elevation, 1,031.21 ft; minimum after first filling, 75,500 cfs-days, Jan. 24, 1956, elevation, 909.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 771,800 cfs-days, June 21, elevation, 1,003.51 ft; minimum, 461,400 cfs-days, Jan. 31, elevation, 977.06 ft.

03535900 MELTON HILL LAKE.--Lat 35°53'04", 84°18'01", Loudon-Roane County line, Hydrologic Unit 06010207, 9 mi southwest of Oak Ridge, 19 mi west of Knoxville, 57 mi downstream from Norris Dam on Clinch River, and at mile 23.1. DRAINAGE AREA, 3,343 mi<sup>2</sup>. PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with three radial gates, each 42 ft high by 40 ft wide. Dam completed and storage began May 1, 1963; water in reservoir first reached minimum pool elevation May 23, 1963. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 796 ft, top of gates, is 63,500 cfs-days, of which 16,100 cfs-days is controlled storage above elevation 790.0 ft, normal minimum pool. Reservoir is used for navigation, power, and recreation.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 cfs-days, Mar. 16, 1973, elevation, 796.45 ft; minimum after first filling, 35,100 cfs-days, Feb. 9, 1966, elevation, 784.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,500 cfs-days, Aug. 1, elevation, 795.01 ft; minimum, 47,400 cfs-days, Oct. 31, elevation, 790.00 ft.

03543000 WATTS BAR LAKE.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi southeast of Spring City, 72.4 mi downstream from Fort Loudoun Dam, and at mile 529.9. DRAINAGE AREA, 17,310 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates, each 32 ft high by 40 ft wide, also one 2-section leaf trashway gate 16.3 ft high by 24 ft wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft, top of gates, is 592,400 cfs-days, of which 191,000 cfs-days is controlled flood storage above elevation 735.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 745.40 ft, Mar. 17, 1973; minimum after first filling, 733.44 ft, Mar. 20, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 524,000 cfs-days, Aug. 17; maximum elevation, 741.77 ft, Aug. 18; minimum elevation, 735.11 ft, Jan. 12. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date                 | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)       | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)      | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|----------------------|---------------------|------------------------|-------------------------------------|---------------------------|------------------------|-------------------------------------|--------------------------|------------------------|-------------------------------------|
| 03532500 NORRIS LAKE |                     |                        |                                     | 03535900 MELTON HILL LAKE |                        |                                     | 03543000 WATTS BAR LAKE* |                        |                                     |
| Sept. 30.....        | 988.38              | 580,600                | -                                   | 794.06                    | 57,800                 | -                                   | 740.47                   | 499,000                | -                                   |
| Oct. 31.....         | 984.09              | 533,000                | -47,600                             | 790.55                    | 48,800                 | -9,000                              | 738.67                   | 465,000                | -34,000                             |
| Nov. 30.....         | 983.24              | 524,000                | -9,000                              | 793.12                    | 55,200                 | +6,400                              | 736.85                   | 432,000                | -33,000                             |
| Dec. 31.....         | 980.59              | 496,400                | -27,600                             | 793.47                    | 56,200                 | +1,000                              | 736.07                   | 419,000                | -13,000                             |
| CAL YR 1984          | -                   | -                      | -10,000                             | -                         | -                      | -4,100                              | -                        | -                      | -19,000                             |
| Jan. 31.....         | 977.11              | 461,900                | -34,500                             | 793.98                    | 57,600                 | +1,400                              | 735.85                   | 416,000                | -3,000                              |
| Feb. 28.....         | 995.05              | 660,100                | +198,200                            | 793.59                    | 56,500                 | -1,100                              | 735.71                   | 415,000                | -1,000                              |
| Mar. 31.....         | 966.75              | 681,600                | +21,500                             | 793.56                    | 56,400                 | -100                                | 736.28                   | 423,000                | +8,000                              |
| Apr. 30.....         | 1,001.41            | 743,000                | +61,400                             | 793.56                    | 56,400                 | 0                                   | 739.35                   | 478,000                | +55,000                             |
| May 31.....          | 1,003.27            | 768,500                | +25,500                             | 793.53                    | 56,300                 | -100                                | 741.08                   | 511,000                | +33,000                             |
| June 30.....         | 1,002.46            | 757,300                | -11,200                             | 794.45                    | 58,900                 | +2,600                              | 740.10                   | 492,000                | -19,000                             |
| July 31.....         | 997.39              | 689,900                | -67,400                             | 794.37                    | 58,700                 | -200                                | 740.76                   | 505,000                | +13,000                             |
| Aug. 31.....         | 991.63              | 618,400                | -71,500                             | 793.99                    | 57,600                 | -1,100                              | 740.38                   | 497,000                | -8,000                              |
| Sept. 30.....        | 981.99              | 510,900                | -107,500                            | 794.03                    | 57,700                 | +100                                | 741.02                   | 510,000                | +13,000                             |
| WTR YR 1985          | -                   | -                      | -69,700                             | -                         | -                      | -100                                | -                        | -                      | +11,000                             |

\* Contents based on backwater profile.



TENNESSEE RIVER BASIN

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RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03564000 LAKE OCOEE.--Lat 35°05'40", long 84°38'53", Polk County, Hydrologic Unit 06020003, at Lake Ocoee Dam on Ocoee River at Parksville, 13.8 mi east of Cleveland, and at mile 11.9. DRAINAGE AREA, 595 mi<sup>2</sup>. PERIOD OF RECORD, June 1914 to current year. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir," and October 1953 to September 1968, as "Parksville Lake." GAGE, nonrecording gage. Datum of gage is 6.89 ft above National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with 347 ft of spillway. Spillway is equipped with four floodgates, each 6 ft high by 20 ft wide and 265 ft of flashboards about 5.7 ft high. Crest of spillway under gates is at elevation 830.82 ft; remainder of spillway is 1.0 ft higher. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting. Revised capacity table put into use Jan. 1, 1979. Total capacity at elevation 837.55 ft, about top of flashboards, is 42,300 cfs-days, of which 15,600 cfs-days is controlled storage above elevation 817.9 ft, normal minimum pool. Reservoir is used for power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum midnight contents observed, 53,300 cfs-days, July 9, 1916; maximum midnight elevation observed, 840.2 ft, Feb. 10, 1946; minimum contents observed, 27,300 cfs-days, Jan. 27, 1956, elevation, 817.7 ft; minimum midnight elevation observed, 814.8 ft, Dec. 14, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 41,100 cfs-days, Sept. 5, elevation, 836.2 ft; minimum contents observed, 33,100 cfs-days, Jan. 16, elevation, 827.1 ft.

03566500 CHICKAMAUGA LAKE.--Lat 35°06'07", long 85°13'42", Hamilton County, Hydrologic Unit 06020001, at Chickamauga Dam on Tennessee River, 5.8 mi northeast of Chattanooga, 58.9 mi downstream from Watts Bar Dam, and at mile 471.0. DRAINAGE AREA, 20,790 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1939 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates, each 40.44 ft high by 40 ft wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 685.44 ft, top of gates, is 372,600 cfs-days, of which 175,000 cfs-days is controlled flood storage above elevation 675.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 686.10 ft, Mar. 18, 1973; minimum after first filling, 673.27 ft, Jan. 21, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 327,000 cfs-days, May 12; maximum elevation, 683.26 ft, May 13; minimum elevation, 674.82 ft, Jan. 21. Contents based on backwater profile.

03570520 NICKAJACK LAKE.--Lat 35°00'07", long 85°37'14", Marion County, Hydrologic Unit 06020001, at Nickajack Dam on Tennessee River, 2 mi upstream from Sequatchie River, 5 mi south of Jasper, 46.3 mi downstream from Chickamauga Dam, and at mile 424.7. DRAINAGE AREA, 21,870 mi<sup>2</sup>, approximately. PERIOD OF RECORD, December 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with earth embankments on each side. The spillway, with crest at elevation 595.0 ft, is equipped with 10 radial gates, each 40 ft high by 40 ft wide. A trash gate, 5.5 ft high by 15 ft wide, is located between the spillway and powerhouse. Dam was completed and storage began on Dec. 14, 1967. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 635.0 ft, top of gates, is 127,200 cfs-days, of which 16,200 cfs-days is controlled storage above elevation 632.0 ft, ordinary minimum. Reservoir is used for navigation and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 634.99 ft, Apr. 19, 1969; minimum after first filling, 630.82 ft, Feb. 20, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 126,000 cfs-days, Feb. 9; maximum elevation, 634.22 ft, May 26; minimum elevation, 632.07 ft, Feb. 4. Contents based on backwater profile.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet) | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------------------|
|               | 03564000            | LAKE OCOEE             |                                     | 03566500            | CHICKAMAUGA LAKE*      |                                     | 03570520            | NICKAJACK LAKE*        |                                     |
| Sept. 30..... | 835.4               | 40,300                 | -                                   | 680.67              | 282,000                | -                                   | 633.31              | 120,000                | -                                   |
| Oct. 31.....  | 834.8               | 39,800                 | -500                                | 678.63              | 249,000                | -33,000                             | 633.45              | 119,000                | -1,000                              |
| Nov. 30.....  | 831.6               | 36,900                 | -2,900                              | 676.63              | 220,000                | -29,000                             | 633.04              | 116,000                | -3,000                              |
| Dec. 31.....  | 827.6               | 33,500                 | -3,400                              | 676.26              | 214,000                | -6,000                              | 633.30              | 118,000                | +2,000                              |
| CAL YR 1984   | -                   | -                      | -5,200                              | -                   | -                      | -21,000                             | -                   | -                      | -4,000                              |
| Jan. 31.....  | 828.4               | 34,100                 | +600                                | 676.39              | 217,000                | +3,000                              | 633.19              | 121,000                | +3,000                              |
| Feb. 28.....  | 828.9               | 34,500                 | +400                                | 676.06              | 212,000                | -5,000                              | 633.73              | 122,000                | +1,000                              |
| Mar. 31.....  | 831.7               | 37,000                 | +2,500                              | 676.31              | 215,000                | +3,000                              | 633.65              | 121,000                | -1,000                              |
| Apr. 30.....  | 835.0               | 40,000                 | +3,000                              | 681.00              | 289,000                | +74,000                             | 633.80              | 122,000                | +1,000                              |
| May 31.....   | 835.1               | 40,100                 | +100                                | 682.45              | 316,000                | +27,000                             | 633.70              | 122,000                | 0                                   |
| June 30.....  | 835.3               | 40,200                 | +100                                | 682.50              | 316,000                | 0                                   | 633.50              | 120,000                | -2,000                              |
| July 31.....  | 835.5               | 40,400                 | +200                                | 678.97              | 255,000                | -61,000                             | 633.30              | 120,000                | 0                                   |
| Aug. 31.....  | 835.6               | 40,500                 | +100                                | 680.51              | 282,000                | +27,000                             | 633.20              | 121,000                | +1,000                              |
| Sept. 30..... | 835.6               | 40,500                 | 0                                   | 681.01              | 289,000                | +7,000                              | 633.40              | 120,000                | -1,000                              |
| WTR YR 1985   | -                   | -                      | +200                                | -                   | -                      | +7,000                              | -                   | -                      | 0                                   |

\* Contents based on backwater profile.



## TENNESSEE RIVER BASIN

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

- 03579000 WOODS RESERVOIR.--Lat 35°17'54", long 86°05'48", Franklin County, Hydrologic Unit 06030003, at Elk River Dam on Elk River, 1.2 mi upstream from Spring Creek, 2.5 mi northeast of Estill Springs, 6.8 mi upstream from bridge on U. S. Highway 41-A, and at mile 170.0. DRAINAGE AREA, 263 mi<sup>2</sup>. PERIOD OF RECORD, May 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete gravity and earthfill-type dam with riprapped embankments. Spillway equipped with three radial gates, each 25 ft high by 50 ft wide, and two sluice gates, each 6 ft high by 4 ft wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft, surcharge pool, is 44,400 cfs-days, of which 9,900 cfs-days is controlled storage above elevation 957.0 ft, normal minimum pool. Reservoir is used for cooling water, flood control, and recreational purposes.
- COOPERATION.--Twice-daily gage readings (0600 and 2400 hours) furnished by U.S. Air Force.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 42,300 cfs-days, April 21 and 22, 1956, elevation, 960.98 ft; minimum after first filling, 26,300 cfs-days, Nov. 8-11, 1953, elevation, 951.93 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 39,900 cfs-days, Aug. 16, elevation, 959.80 ft; minimum elevation, 957.76 ft.
- 03580740 TIMS FORD LAKE.--Lat 35°11'51", long 86°16'41", Franklin County, Hydrologic Unit 06030003, in intake tower near left bank at Tims Ford Dam on Elk River, 0.4 mi upstream from bridge on State Highway 50, 9.5 mi west of Winchester, and at mile 133.4. DRAINAGE AREA, 529 mi<sup>2</sup>. PERIOD OF RECORD, December 1970 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete dam with compacted rockfill impervious earth core embankments. Spillway equipped with three radial gates, each 42 ft high by 40 ft wide. Storage began Dec. 1, 1970; water in reservoir first reached minimum pool elevation Feb. 23, 1971, and first filling was completed June 3, 1971. Total capacity at elevation 895 ft, top of gates, is 306,500 cfs-days, of which 142,400 cfs-days is controlled storage above elevation 865 ft, normal minimum pool. Reservoir is used for flood control, power, and recreation.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 296,300 cfs-days, Mar. 17, 1973, elevation, 893.24 ft; minimum after first filling 154,000 cfs-days, Oct. 15, 1972, elevation, 862.24 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 251,200 cfs-days, Sept. 3, elevation, 884.94 ft; minimum, 190,800 cfs-days, Jan. 22, elevation, 871.80 ft.
- 03593000 PICKWICK LAKE.--Lat 35°04'16", long 88°15'04", Hardin County, Hydrologic Unit 06040001, at Pickwick Landing Dam on Tennessee River, 1.5 mi north of town of Pickwick Dam, 6.1 mi upstream from Lick Creek, 52.7 mi downstream from Wilson Dam, and at mile 206.7. DRAINAGE AREA, 38,820 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1937 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
- REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates, each 40 ft high by 40 ft wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 418.0 ft, top of gates, is 557,100 cfs-days, of which 210,200 cfs-days is controlled flood storage above elevation 408.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 419.49 ft, Mar. 30, 1944; minimum after first filling, 407.12 ft, Dec. 18, 1944.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 583,000 cfs-days, May 3; maximum elevation, 414.90 ft May 3; minimum elevation, 407.90 ft, Feb. 23. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet)      | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)     | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) | Elevation<br>(feet)     | Contents<br>(cfs-days) | Change in<br>contents<br>(cfs-days) |
|---------------|--------------------------|------------------------|-------------------------------------|-------------------------|------------------------|-------------------------------------|-------------------------|------------------------|-------------------------------------|
|               | 03579000 WOODS RESERVOIR |                        |                                     | 03580740 TIMS FORD LAKE |                        |                                     | 03593000 PICKWICK LAKE* |                        |                                     |
| Sept. 30..... | 958.80                   | 37,900                 | -                                   | 882.93                  | 241,100                | -                                   | 410.96                  | 403,000                | -                                   |
| Oct. 31.....  | 958.82                   | 37,900                 | 0                                   | 882.25                  | 237,700                | -3,400                              | 410.50                  | 477,000                | +74,000                             |
| Nov. 30.....  | 958.16                   | 36,700                 | -1,200                              | 879.51                  | 224,600                | -13,100                             | 411.08                  | 501,000                | +24,000                             |
| Dec. 31.....  | 957.96                   | 36,300                 | -400                                | 874.54                  | 202,400                | -22,200                             | 409.37                  | 452,000                | -49,000                             |
| CAL YR 1984   | -                        | -                      | +100                                | -                       | -                      | -5,600                              | -                       | -                      | -62,000                             |
| Jan. 31.....  | 958.20                   | 36,800                 | +500                                | 872.22                  | 192,600                | -9,800                              | 409.25                  | 451,000                | -1,000                              |
| Feb. 28.....  | 958.05                   | 36,500                 | -300                                | 873.99                  | 200,000                | +7,400                              | 409.23                  | 450,000                | -1,000                              |
| Mar. 31.....  | 958.03                   | 36,400                 | -100                                | 878.50                  | 219,900                | +19,900                             | 411.52                  | 502,000                | +52,000                             |
| Apr. 30.....  | 958.00                   | 36,400                 | 0                                   | 882.23                  | 237,600                | +17,700                             | 413.94                  | 561,000                | +59,000                             |
| May 31.....   | 958.14                   | 36,700                 | +300                                | 882.82                  | 240,500                | +2,900                              | 413.86                  | 559,000                | -2,000                              |
| June 30.....  | 958.36                   | 37,100                 | +400                                | 882.13                  | 237,100                | -3,400                              | 413.18                  | 544,000                | -15,000                             |
| July 31.....  | 959.12                   | 38,500                 | +1,400                              | 882.40                  | 238,500                | +1,400                              | 412.67                  | 529,000                | -15,000                             |
| Aug. 31.....  | 959.46                   | 39,200                 | +700                                | 884.82                  | 250,600                | +12,100                             | 412.59                  | 528,000                | -1,000                              |
| Sept. 30..... | 958.57                   | 37,500                 | -1,700                              | 882.91                  | 241,000                | -9,600                              | 410.94                  | 490,000                | -38,000                             |
| WTR YR 1985   | -                        | -                      | -400                                | -                       | -                      | -100                                | -                       | -                      | +87,000                             |

\* Contents based on backwater profile.

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03596460 NORMANDY LAKE.--Lat 35°27'55", long 86°14'48", Coffee County, Hydrologic Unit 06040002, at Normandy Dam on Duck River, 1.5 mi northeast of Normandy, 2.6 mi downstream from Riley Creek, 8 mi north of Tullahoma, and at mile 248.6. DRAINAGE AREA, 195 mi<sup>2</sup>. PERIOD OF RECORD, January 1976 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete gravity dam with riprapped and rolled earthfill embankment on left side. Spillway is equipped with two radial gates, each 40 ft high by 36 ft wide. Storage began Jan. 5, 1976; water in reservoir first reached minimum pool elevation Mar. 22, 1976. Revised capacity table put into use Jan. 1, 1977. Total capacity at elevation 880 ft, top of gates, is 64,000 cfs-days, of which 30,400 cfs-days is controlled storage above elevation 859 ft, normal minimum pool. Reservoir is used for flood control, water supply, water quality control, recreation, and shoreline development.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,500 cfs-days, May 19, 1983, elevation, 879.70 ft; minimum after first filling, 26,800 cfs-days, Nov. 27, 1981, elevation, 853.12 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,700 cfs-days, Nov. 5, elevation, 873.34 ft; minimum, 32,900 cfs-days, Dec. 28, elevation, 858.91 ft.

03609000 KENTUCKY LAKE.--Lat. 37°00'49", long 88°16'06", Marshall County, KY, Hydrologic Unit 06040006, at Kentucky Dam on Tennessee River at Gilbertsville, and at mile 22.4. DRAINAGE AREA, 40,200 mi<sup>2</sup>, approximately. PERIOD OF RECORD, July 1944 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with 24 lift gates 50 ft high by 40 ft wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 375.0 ft, top of gates, is 3,090,000 cfs-days, of which 2,020,700 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Reservoir is used for navigation, flood control, and power. Barkley-Kentucky Canal opened July 13, 1966, for navigation and power use. Canal is 1.75 miles long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see Kentucky reports.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 369.87 ft, May 24, 1983; minimum after first filling, 348.02 ft, Mar. 11, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 1,511,000 cfs-days, May 3; maximum elevation, 360.04 ft, May 4; minimum elevation, 353.62 ft, Dec. 6. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| Date          | Elevation<br>(feet) | Change in<br>Contents<br>(cfs-days) | contents<br>(cfs-days) | Elevation<br>(feet) | Change in<br>Contents<br>(cfs-days) | contents<br>(cfs-days) |
|---------------|---------------------|-------------------------------------|------------------------|---------------------|-------------------------------------|------------------------|
|               | 03596460            | NORMANDY LAKE                       |                        | 03609000            | KENTUCKY LAKE*                      |                        |
| Sept. 30..... | 872.46              | 52,000                              | -                      | 355.15              | 1,135,000                           | -                      |
| Oct. 31.....  | 873.13              | 52,400                              | +400                   | 355.50              | 1,172,000                           | +37,000                |
| Nov. 30.....  | 866.33              | 42,500                              | -9,900                 | 354.84              | 1,177,000                           | +5,000                 |
| Dec. 31.....  | 859.04              | 33,100                              | -9,400                 | 355.30              | 1,140,000                           | -37,000                |
| CAL YR 1984   | -                   | -                                   | -2,300                 | -                   | -                                   | -100,000               |
| Jan. 31.....  | 861.35              | 36,000                              | +2,900                 | 354.00              | 1,093,000                           | -47,000                |
| Feb. 28.....  | 863.75              | 39,000                              | +3,000                 | 354.44              | 1,118,000                           | +25,000                |
| Mar. 31.....  | 867.61              | 44,300                              | +5,300                 | 355.20              | 1,137,000                           | +19,000                |
| Apr. 30.....  | 869.79              | 47,400                              | +3,100                 | 359.66              | 1,459,000                           | +322,000               |
| May 31.....   | 870.01              | 47,700                              | +300                   | 359.16              | 1,433,000                           | -26,000                |
| June 30.....  | 868.86              | 46,000                              | -1,700                 | 359.14              | 1,434,000                           | +1,000                 |
| July 31.....  | 867.33              | 43,900                              | -2,100                 | 358.21              | 1,375,000                           | -59,000                |
| Aug. 31.....  | 865.92              | 41,900                              | -2,000                 | 356.16              | 1,228,000                           | -147,000               |
| Sept. 30..... | 863.91              | 39,200                              | -2,700                 | 355.08              | 1,152,000                           | -76,000                |
| WTR YR 1985   | -                   | -                                   | -12,800                | -                   | -                                   | +17,000                |

OTHER RESERVOIRS.--The following small reservoirs in the Tennessee River basin are described below, but records of contents are not published herein.

03466400 DAVY CROCKETT LAKE on Nolichucky River at Nolichucky Dam, with a total capacity of 1,300 cfs-days, none of which is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, with a total capacity of 20,800 cfs-days of which 840 cfs-days is controlled storage.

03562500 OCOEE NO. 3 LAKE on Ocoee River at Ocoee No. 3 Dam, 5.0 miles west of Ducktown, with a total capacity of 1,660 cfs-days, of which 1,550 cfs-days is controlled storage. Records of contents previous to 1971 water year published as Ocoee No. 3 Lake near Ducktown, TN.

\* Contents based on backwater profile.

## OBION RIVER BASIN

07024300 BEAVER CREEK AT HUNTINGDON, TN

LOCATION.--Lat 35°59'56", long 88°26'01", Carroll County, Hydrologic Unit 08010203, on left bank on downstream end of pier of bridge on U.S. Highway 70, 0.3 mi southwest of Huntingdon, 0.6 mi downstream from Brier Creek, and at mile 5.6.

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

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1946, 1948, 1952-54, 1958-61 and annual maximum, water years 1954-62. October 1962 to current year.

REVISED RECORDS.--WSP 1920: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 364.20 ft above National Geodetic Vertical Datum of 1929 (Tennessee State Highway Department bench mark). Dec. 21, 1945, to Oct. 3, 1962, nonrecording gage at site 30 ft downstream at same datum; Jan. 6, 1954, to Oct. 3, 1962, crest-stage gage at same site at datum 1.17 ft higher.

REMARKS.--Estimated daily discharges: Jan. 31 to Feb. 8. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--23 years, 116 ft<sup>3</sup>/s, 28.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft<sup>3</sup>/s Sept. 9, 1970 from rating curve extended above 3,600 ft<sup>3</sup>/s on basis of contracted opening measurement of peak flow; maximum gage height, 15.20 ft Sept. 13, 1982; minimum discharge, 19 ft<sup>3</sup>/s May 17, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Nov. 19 | 0930 | *1,330                            | *10.66              |      |      |                                   |                     |

Minimum discharge, 20 ft<sup>3</sup>/s, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |       |
|-------------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|
| 1           | 30    | 71    | 85   | 257  | 315  | 57   | 95   | 226  | 26   | 57   | 29   | 22   |       |
| 2           | 29    | 151   | 71   | 153  | 190  | 57   | 70   | 106  | 26   | 52   | 29   | 21   |       |
| 3           | 29    | 72    | 66   | 89   | 140  | 54   | 63   | 67   | 25   | 42   | 28   | 21   |       |
| 4           | 30    | 63    | 59   | 120  | 110  | 65   | 61   | 56   | 24   | 37   | 28   | 25   |       |
| 5           | 29    | 59    | 66   | 118  | 90   | 92   | 111  | 51   | 25   | 71   | 36   | 34   |       |
| 6           | 37    | 55    | 89   | 106  | 85   | 68   | 120  | 46   | 25   | 281  | 39   | 33   |       |
| 7           | 56    | 56    | 67   | 115  | 78   | 60   | 71   | 76   | 41   | 88   | 38   | 27   |       |
| 8           | 60    | 58    | 69   | 141  | 74   | 57   | 61   | 146  | 30   | 52   | 33   | 25   |       |
| 9           | 39    | 57    | 67   | 112  | 70   | 179  | 57   | 59   | 27   | 46   | 31   | 25   |       |
| 10          | 37    | 397   | 67   | 181  | 93   | 93   | 54   | 52   | 26   | 42   | 29   | 25   |       |
| 11          | 33    | 384   | 61   | 133  | 638  | 79   | 53   | 45   | 52   | 37   | 30   | 24   |       |
| 12          | 36    | 117   | 62   | 80   | 1060 | 83   | 52   | 42   | 52   | 36   | 30   | 24   |       |
| 13          | 36    | 58    | 63   | 65   | 438  | 64   | 51   | 37   | 29   | 35   | 29   | 23   |       |
| 14          | 35    | 50    | 59   | 67   | 167  | 78   | 89   | 34   | 26   | 33   | 28   | 23   |       |
| 15          | 34    | 148   | 54   | 63   | 109  | 68   | 141  | 33   | 25   | 33   | 29   | 24   |       |
| 16          | 49    | 101   | 52   | 63   | 87   | 59   | 74   | 32   | 24   | 43   | 73   | 24   |       |
| 17          | 184   | 58    | 57   | 205  | 105  | 56   | 63   | 31   | 45   | 32   | 92   | 24   |       |
| 18          | 61    | 509   | 57   | 123  | 170  | 54   | 57   | 30   | 70   | 30   | 32   | 23   |       |
| 19          | 167   | 1190  | 61   | 89   | 355  | 51   | 52   | 30   | 33   | 31   | 27   | 23   |       |
| 20          | 79    | 537   | 143  | 67   | 184  | 49   | 48   | 29   | 28   | 31   | 26   | 23   |       |
| 21          | 140   | 143   | 338  | 68   | 100  | 70   | 44   | 28   | 26   | 31   | 26   | 23   |       |
| 22          | 142   | 82    | 549  | 68   | 83   | 183  | 41   | 138  | 127  | 31   | 24   | 24   |       |
| 23          | 274   | 72    | 258  | 68   | 76   | 105  | 60   | 57   | 68   | 42   | 24   | 29   |       |
| 24          | 273   | 66    | 131  | 72   | 108  | 80   | 308  | 44   | 37   | 28   | 39   | 36   |       |
| 25          | 102   | 62    | 171  | 68   | 81   | 62   | 125  | 38   | 31   | 28   | 41   | 37   |       |
| 26          | 68    | 66    | 89   | 38   | 71   | 56   | 58   | 34   | 28   | 30   | 28   | 114  |       |
| 27          | 58    | 188   | 74   | 36   | 62   | 69   | 52   | 29   | 85   | 41   | 25   | 38   |       |
| 28          | 57    | 590   | 69   | 42   | 57   | 71   | 48   | 28   | 531  | 34   | 24   | 31   |       |
| 29          | 67    | 333   | 63   | 40   | ---  | 59   | 42   | 28   | 184  | 34   | 23   | 29   |       |
| 30          | 59    | 128   | 121  | 83   | ---  | 56   | 40   | 27   | 65   | 31   | 22   | 49   |       |
| 31          | 56    | ---   | 198  | 430  | ---  | 212  | ---  | 27   | ---  | 29   | 22   | ---  |       |
| TOTAL       | 2386  | 5921  | 3436 | 3360 | 5196 | 2446 | 2261 | 1706 | 1841 | 1468 | 1014 | 903  |       |
| MEAN        | 77.0  | 197   | 111  | 108  | 186  | 78.9 | 75.4 | 55.0 | 61.4 | 47.4 | 32.7 | 30.1 |       |
| MAX         | 274   | 1190  | 549  | 430  | 1060 | 212  | 308  | 226  | 531  | 281  | 92   | 114  |       |
| MIN         | 29    | 50    | 52   | 36   | 57   | 49   | 40   | 27   | 24   | 28   | 22   | 21   |       |
| CFSM        | 1.39  | 3.55  | 2.00 | 1.95 | 3.35 | 1.42 | 1.36 | .99  | 1.11 | .85  | .59  | .54  |       |
| IN.         | 1.60  | 3.97  | 2.30 | 2.25 | 3.48 | 1.64 | 1.52 | 1.14 | 1.23 | .98  | .68  | .61  |       |
| CAL YR 1984 | TOTAL | 46778 |      | MEAN | 128  | MAX  | 2760 | MIN  | 20   | CFSM | 2.31 | IN.  | 31.35 |
| WTR YR 1985 | TOTAL | 31938 |      | MEAN | 87.5 | MAX  | 1190 | MIN  | 21   | CFSM | 1.58 | IN.  | 21.41 |

## OBION RIVER BASIN

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07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN

LOCATION.--Lat 36°07'05", long 88°48'39", Weakley County, Hydrologic Unit 08010203, on left bank 75 ft downstream from bridge on U.S. Highway 45E, 1.1 mi downstream from Mosley Branch, 2.5 mi south of Greenfield, and 9.7 mi upstream from confluence with Middle Fork.

DRAINAGE AREA.--383 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 1311: 1936(M). WSP 1920: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 300.36 ft above National Geodetic Vertical Datum of 1929. Prior to June 22, 1939, recording gage at site 75 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 2-8. Records good.

AVERAGE DISCHARGE.--56 years, 591 ft<sup>3</sup>/s, 20.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft<sup>3</sup>/s Jan. 22, 1937, gage height, 17.82 ft, from floodmarks, from rating curve extended above 14,000 ft<sup>3</sup>/s; minimum, 61 ft<sup>3</sup>/s Aug. 21, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date   | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--------|------|--------------------------------|------------------|
| Nov. 18 | 1600 | 3,530                          | 13.24            | July 5 | 2300 | *3,690                         | *13.46           |

Minimum discharge, 124 ft<sup>3</sup>/s, Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1     | 125   | 248   | 1070  | 1310  | 897   | 432   | 932   | 615  | 168  | 448  | 142  | 174  |
| 2     | 125   | 267   | 775   | 1140  | 860   | 393   | 821   | 544  | 165  | 282  | 140  | 169  |
| 3     | 125   | 257   | 567   | 952   | 750   | 369   | 690   | 410  | 162  | 233  | 136  | 164  |
| 4     | 125   | 283   | 423   | 787   | 680   | 382   | 478   | 339  | 160  | 213  | 136  | 180  |
| 5     | 124   | 284   | 396   | 641   | 640   | 408   | 455   | 279  | 159  | 554  | 164  | 188  |
| 6     | 135   | 259   | 403   | 577   | 620   | 390   | 463   | 243  | 215  | 1220 | 154  | 186  |
| 7     | 140   | 239   | 344   | 568   | 600   | 393   | 450   | 294  | 181  | 438  | 149  | 174  |
| 8     | 148   | 224   | 343   | 566   | 580   | 389   | 406   | 277  | 168  | 403  | 148  | 171  |
| 9     | 153   | 219   | 337   | 545   | 573   | 710   | 343   | 264  | 171  | 334  | 149  | 170  |
| 10    | 156   | 1000  | 333   | 612   | 616   | 657   | 324   | 260  | 171  | 249  | 148  | 168  |
| 11    | 151   | 903   | 321   | 593   | 2160  | 660   | 280   | 236  | 438  | 207  | 148  | 165  |
| 12    | 147   | 1050  | 312   | 572   | 1950  | 589   | 253   | 219  | 283  | 181  | 145  | 162  |
| 13    | 143   | 1090  | 308   | 517   | 2090  | 509   | 244   | 208  | 217  | 167  | 141  | 159  |
| 14    | 140   | 832   | 302   | 465   | 2260  | 475   | 375   | 199  | 210  | 156  | 138  | 158  |
| 15    | 137   | 606   | 294   | 324   | 2010  | 435   | 358   | 191  | 193  | 159  | 136  | 157  |
| 16    | 254   | 464   | 286   | 295   | 1100  | 411   | 319   | 183  | 183  | 267  | 260  | 157  |
| 17    | 254   | 410   | 279   | 447   | 852   | 382   | 349   | 181  | 177  | 177  | 349  | 157  |
| 18    | 188   | 2590  | 273   | 502   | 1000  | 358   | 326   | 177  | 178  | 155  | 323  | 156  |
| 19    | 516   | 2550  | 274   | 551   | 1350  | 335   | 297   | 169  | 181  | 151  | 294  | 155  |
| 20    | 357   | 2290  | 393   | 453   | 1270  | 316   | 276   | 165  | 179  | 148  | 259  | 154  |
| 21    | 448   | 2370  | 933   | 442   | 1140  | 323   | 254   | 167  | 174  | 141  | 224  | 153  |
| 22    | 435   | 2240  | 1070  | 442   | 913   | 391   | 239   | 437  | 559  | 189  | 202  | 153  |
| 23    | 1190  | 1530  | 1210  | 442   | 790   | 523   | 314   | 297  | 526  | 146  | 190  | 153  |
| 24    | 1010  | 782   | 1470  | 440   | 939   | 628   | 860   | 326  | 493  | 136  | 205  | 153  |
| 25    | 986   | 517   | 1540  | 368   | 735   | 550   | 651   | 281  | 415  | 136  | 239  | 157  |
| 26    | 856   | 399   | 1050  | 342   | 631   | 472   | 635   | 240  | 308  | 145  | 203  | 316  |
| 27    | 636   | 756   | 863   | 341   | 551   | 434   | 561   | 212  | 267  | 156  | 196  | 200  |
| 28    | 436   | 1040  | 684   | 317   | 484   | 412   | 400   | 195  | 317  | 143  | 198  | 198  |
| 29    | 321   | 1080  | 524   | 273   | ---   | 401   | 313   | 188  | 418  | 141  | 196  | 191  |
| 30    | 268   | 1200  | 1000  | 350   | ---   | 399   | 266   | 182  | 514  | 141  | 188  | 207  |
| 31    | 241   | ---   | 942   | 1150  | ---   | 1160  | ---   | 174  | ---  | 142  | 191  | ---  |
| TOTAL | 10470 | 27979 | 19319 | 17324 | 29041 | 14686 | 12932 | 8152 | 7950 | 7758 | 5891 | 5205 |
| MEAN  | 338   | 933   | 623   | 559   | 1037  | 474   | 431   | 263  | 265  | 250  | 190  | 174  |
| MAX   | 1190  | 2590  | 1540  | 1310  | 2260  | 1160  | 932   | 615  | 559  | 1220 | 349  | 316  |
| MIN   | 124   | 219   | 273   | 273   | 484   | 316   | 239   | 165  | 159  | 136  | 136  | 153  |
| CFSM  | .88   | 2.44  | 1.63  | 1.46  | 2.71  | 1.24  | 1.13  | .69  | .69  | .65  | .50  | .45  |
| IN.   | 1.02  | 2.72  | 1.88  | 1.68  | 2.82  | 1.43  | 1.26  | .79  | .77  | .75  | .57  | .51  |

| CAL YR 1984 | TOTAL | 278932 | MEAN | 762 | MAX | 14600 | MIN | 124 | CFSM | 1.99 | IN. | 27.09 |
|-------------|-------|--------|------|-----|-----|-------|-----|-----|------|------|-----|-------|
| WTR YR 1985 | TOTAL | 166707 | MEAN | 457 | MAX | 2590  | MIN | 124 | CFSM | 1.19 | IN. | 16.19 |



## OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 36°15'04", long 89°11'33", Obion County, Hydrologic Unit 08010202, near left bank on downstream end of pier of bridge on old U.S. Highway 51, 0.5 mi upstream from Richland Creek, 0.6 mi south of Obion, 14.5 mi downstream from North Fork, and at mile 62.4. Water quality sampling site at same location.

DRAINAGE AREA.--1,852 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to September 1958, October 1966 to current year. Gage height and discharge records at this site from 1964 to 1975 are in reports of U.S. Corps of Engineers.

REVISED RECORD.--WSP 1211: 1930, 1943. WSP 2120: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.48 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Corps of Engineers). Prior to Oct. 1, 1932, nonrecording gage at present site at datum 5.00 ft higher; Oct. 1, 1932, to Aug. 2, 1939, nonrecording gage, and Aug. 3, 1939, to Sept. 1958, water-stage recorder at present site at datum 15.00 ft higher.

REMARKS.--Estimated daily discharges: Feb. 2-9. Records fair.

COOPERATION.--Thirty nine discharge measurements furnished by the U.S. Corps of Engineers.

AVERAGE DISCHARGE.--48 years, (water years 1930-58, 1967-85), 2729 ft<sup>3</sup>/s, 20.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99,500 ft<sup>3</sup>/s, Jan. 24, 1937, gage height, 40.4 ft present datum; minimum, under conditions of no backwater, 230 ft<sup>3</sup>/s, Oct. 7-9, 1943; minimum daily discharge, 15 ft<sup>3</sup>/s, backwater from Mississippi River, Feb. 4, 1937; reverse flow of 57 ft<sup>3</sup>/s measured by current meter on that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,400 ft<sup>3</sup>/s, Nov. 20, gage height, 31.40 ft; minimum discharge, 450 ft<sup>3</sup>/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|--------|---------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 612    | 1200    | 2700   | 13900 | 4070   | 1600  | 5770  | 10300 | 776   | 1440  | 502   | 1130  |       |
| 2           | 609    | 3520    | 2000   | 11000 | 2800   | 1600  | 3020  | 13600 | 716   | 1400  | 534   | 584   |       |
| 3           | 605    | 2140    | 1600   | 5400  | 2000   | 1400  | 2260  | 8630  | 641   | 925   | 508   | 505   |       |
| 4           | 604    | 1410    | 1400   | 4300  | 1700   | 1450  | 1870  | 4830  | 633   | 878   | 472   | 572   |       |
| 5           | 602    | 1290    | 1480   | 3500  | 1600   | 1800  | 1740  | 2310  | 697   | 1890  | 2000  | 4540  |       |
| 6           | 8720   | 1180    | 3390   | 2700  | 1500   | 1500  | 2830  | 1540  | 1180  | 14700 | 5940  | 6520  |       |
| 7           | 16800  | 1070    | 1850   | 2500  | 1450   | 1300  | 1940  | 1540  | 4710  | 12800 | 1710  | 1740  |       |
| 8           | 15000  | 1010    | 1540   | 3300  | 1400   | 1350  | 1540  | 2730  | 1910  | 7470  | 875   | 945   |       |
| 9           | 4500   | 1090    | 1470   | 2600  | 1370   | 5950  | 1350  | 1490  | 1030  | 3390  | 642   | 970   |       |
| 10          | 2500   | 8050    | 1420   | 2700  | 1500   | 4700  | 1250  | 1220  | 850   | 1620  | 1030  | 738   |       |
| 11          | 1500   | 10300   | 1340   | 3400  | 12900  | 2930  | 1240  | 1120  | 3940  | 1150  | 1750  | 683   |       |
| 12          | 1250   | 6760    | 1310   | 2500  | 15400  | 2360  | 1140  | 1530  | 8340  | 969   | 620   | 649   |       |
| 13          | 1130   | 3470    | 1370   | 2020  | 15000  | 1900  | 1090  | 2970  | 2960  | 855   | 551   | 618   |       |
| 14          | 1060   | 2160    | 1390   | 1640  | 10000  | 1730  | 1180  | 1710  | 1250  | 780   | 540   | 591   |       |
| 15          | 1050   | 1630    | 1350   | 1470  | 7500   | 1690  | 3450  | 1050  | 944   | 744   | 676   | 582   |       |
| 16          | 1100   | 1700    | 1320   | 1300  | 5000   | 1480  | 2000  | 848   | 819   | 1110  | 1940  | 566   |       |
| 17          | 5460   | 1310    | 1320   | 1840  | 4500   | 1330  | 1500  | 760   | 786   | 775   | 2810  | 558   |       |
| 18          | 3020   | 9230    | 9330   | 2360  | 7190   | 1210  | 1350  | 759   | 972   | 650   | 1340  | 549   |       |
| 19          | 2960   | 16500   | 11300  | 2230  | 10900  | 1200  | 1220  | 753   | 929   | 602   | 922   | 536   |       |
| 20          | 2930   | 17300   | 8400   | 1740  | 6600   | 1080  | 1150  | 758   | 807   | 582   | 1100  | 526   |       |
| 21          | 4800   | 16900   | 12900  | 1680  | 4300   | 1120  | 1070  | 769   | 752   | 578   | 834   | 518   |       |
| 22          | 3800   | 14000   | 14800  | 1960  | 3300   | 1730  | 1010  | 5470  | 1280  | 558   | 667   | 521   |       |
| 23          | 5980   | 10100   | 11000  | 2020  | 2900   | 1980  | 1050  | 8870  | 2940  | 1120  | 1760  | 591   |       |
| 24          | 8280   | 6560    | 8200   | 1690  | 10400  | 1710  | 7210  | 4170  | 1370  | 743   | 5360  | 960   |       |
| 25          | 4000   | 3420    | 9400   | 1780  | 7500   | 1540  | 4710  | 1690  | 1120  | 669   | 4170  | 770   |       |
| 26          | 2190   | 1970    | 8000   | 1580  | 3100   | 1350  | 2030  | 1170  | 1230  | 619   | 1360  | 2120  |       |
| 27          | 1580   | 2650    | 4000   | 1180  | 2150   | 1310  | 3440  | 982   | 1050  | 2200  | 804   | 1310  |       |
| 28          | 1310   | 10300   | 2600   | 1130  | 1750   | 1450  | 7200  | 877   | 3860  | 1020  | 664   | 902   |       |
| 29          | 1320   | 7970    | 2100   | 1080  | ---    | 1450  | 3880  | 811   | 1520  | 647   | 615   | 747   |       |
| 30          | 1110   | 4470    | 7510   | 1120  | ---    | 1430  | 1920  | 774   | 1150  | 536   | 580   | 1210  |       |
| 31          | 1040   | ---     | 13000  | 7400  | ---    | 7010  | ---   | 730   | ---   | 514   | 666   | ---   |       |
| TOTAL       | 107422 | 170660  | 150790 | 95020 | 149780 | 61640 | 72410 | 86761 | 51162 | 63934 | 43942 | 33751 |       |
| MEAN        | 3465   | 5689    | 4864   | 3065  | 5349   | 1988  | 2414  | 2799  | 1705  | 2062  | 1417  | 1125  |       |
| MAX         | 16800  | 17300   | 14800  | 13900 | 15400  | 7010  | 7210  | 13600 | 8340  | 14700 | 5940  | 6520  |       |
| MIN         | 602    | 1010    | 1310   | 1080  | 1370   | 1080  | 1010  | 730   | 633   | 514   | 472   | 505   |       |
| CFSM        | 1.87   | 3.07    | 2.63   | 1.65  | 2.89   | 1.07  | 1.30  | 1.51  | .92   | 1.11  | .77   | .61   |       |
| IN.         | 2.16   | 3.43    | 3.03   | 1.91  | 3.01   | 1.24  | 1.45  | 1.74  | 1.03  | 1.28  | .88   | .68   |       |
| CAL YR 1984 | TOTAL  | 1403299 |        | MEAN  | 3834   | MAX   | 43800 | MIN   | 551   | CFSM  | 2.07  | IN.   | 28.19 |
| WTR YR 1985 | TOTAL  | 1087272 |        | MEAN  | 2979   | MAX   | 17300 | MIN   | 472   | CFSM  | 1.61  | IN.   | 21.84 |

## OBION RIVER BASIN

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07026000 OBION RIVER AT OBION, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to September 1981.

WATER TEMPERATURE: June 1975 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 488 microsiemens, Dec. 14, 1976; minimum, 35 microsiemens, July 21, 22, 1975.

WATER TEMPERATURES: Maximum, 33.5°C, June 18, 1978; minimum, -0.5°C, several days in Jan. and Feb. 1979.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|--|--|
| OCT<br>24... | 1030 | 8710  | 80  | 6.7                            | 13.5                        | --   | 130                          | --                                  | --   | K3000  | 35000  | 20                                     |
| JAN<br>16... | 1100 | 1300  | 105   | 7.3                            | 2.5                         | 760  | 1.0                          | 12.4                                | 91   | K120   | K150   | 34                                     |
| APR<br>17... | 1000 | 1500  | 88  | 6.9                            | 19.0                        | 762  | 25                           | 7.9                                 | 85   | K11000   | 570  | 29                                     |
| JUL<br>17... | 1100 | 1320  | 101   | 6.4                            | 26.0                        | 760  | 90                           | 6.4                                 | 79   | 4700   | 3800   | 27                                     |

| DATE         | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|---|--|--|--|-------------------|---|---|---|---|---|---|--|
| OCT<br>24... | 0   | 5.2  | 1.8  | 2.8  | 19                | .3                                      | 4.5   | 22  | 8.5   | 7.4   | 4.1   | <.10   |
| JAN<br>16... | 0   | 8.3  | 3.2  | 6.1  | 27                | .5                                      | 1.7   | 36  | 3.5   | 8.4   | 6.3   | <.10   |
| APR<br>17... | 0   | 7.0  | 2.7  | 5.8  | 29                | .5                                      | 2.2   | 32  | 7.8   | 6.1   | 5.2   | .10  |
| JUL<br>17... | 0   | 6.8  | 2.3  | 6.0  | 30                | .5                                      | 2.7   | 30  | 23  | 5.3   | 5.2   | .20  |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
|--------------|---|--|---|---|---|---|---|---|--|---|--|--|
| OCT<br>24... | 7.0   | 64   | 47  | .09   | 1510  | .37   | .120  | .15   | 1.5  | .240  | .110   | .100   |
| JAN<br>16... | 11  | 71   | 68  | .10   | 249   | .55   | .290  | .37   | .90  | .160  | .060   | .040   |
| APR<br>17... | 8.6   | 56   | 58  | .08   | 227   | .33   | .070  | .09   | 1.3  | .090  | .050   | .050   |
| JUL<br>17... | 9.6   | 59   | 57  | .08   | 210   | .64   | .220  | .28   | 1.7  | .120  | --   | .040   |

K--Results based on non-ideal colony count.

## OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>24... | --  | 320   | 1  | 59   | <.5  | <1   | <1  | <3   | 16   | 460  | 3  | <4   |
| JAN<br>16... | .12   | 70  | <1   | 67   | <.5  | 1  | <1  | <3   | 5  | 370  | 4  | <4   |
| APR<br>17... | .15   | 40  | <1   | 51   | <.5  | <1   | 3   | <3   | 4  | 430  | 4  | <4   |
| JUL<br>17... | .12   | 90  | <1   | 47   | .5   | <1   | --  | <3   | 4  | 150  | 3  | <4   |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDEDED<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDEDED<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|--|---|
| OCT<br>24... | 370  | .2   | <10   | 8  | <1  | --   | 39   | <6   | 10   | 1180  | 27800  | 38  |
| JAN<br>16... | 150  | .3   | <10   | 3  | <1  | <1   | 54   | <6   | 6  | 41  | 144  | 82  |
| APR<br>17... | 89   | .6   | <10   | 4  | <1  | <1   | 50   | <6   | 17   | 132   | 535  | 92  |
| JUL<br>17... | 46   | <.1  | <10   | 5  | <1  | <1   | 48   | <6   | 21   | 449   | 1600   | 99  |

## OBION RIVER BASIN

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07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN

LOCATION.--Lat 36°27'50", long 89°15'13", Obion County, Hydrologic Unit 08010202, on left bank on upstream side of bridge on State Highway 22, 0.9 mi northwest of Clayton, 9.9 mi west of intersection of State Highways 22 and 5, and 11.8 mi northeast of the spillway at Reelfoot Lake.

DRAINAGE AREA.--56.3 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1980 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft<sup>3</sup>/s, Dec. 3, 1982, gage height, 19.30 ft; no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s (revised) and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Oct. 6  | 1445 | 1,360                             | 18.12               | Mar. 31 | 0245 | 1,020                             | 16.88               |
| Oct. 16 | 2330 | 770                               | 15.48               | Apr. 27 | 1715 | 1,040                             | 16.93               |
| Nov. 18 | 1200 | 985                               | 16.69               | May 1   | 1715 | 1,030                             | 17.16               |
| Dec. 18 | 0015 | 892                               | 16.22               | June 10 | 2345 | 1,210                             | 17.71               |
| Dec. 21 | 0300 | 1,400                             | 18.21               | June 11 | 0015 | 1,180                             | 17.62               |
| Dec. 30 | 1015 | 1,510                             | 18.41               | July 6  | 0630 | *1,700                            | *18.75              |
| Jan. 1  | 0515 | 755                               | 15.38               | Aug. 5  | 1300 | 760                               | 15.31               |
| Feb. 11 | 0115 | 985                               | 16.69               | Aug. 24 | 1200 | 1,150                             | 17.49               |
| Mar. 8  | 2145 | 1,070                             | 17.09               |         |      |                                   |                     |

No flow Oct. 1-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC    | JAN  | FEB  | MAR  | APR    | MAY    | JUN    | JUL     | AUG     | SEP    |       |
|-------------|---------|----------|--------|------|------|------|--------|--------|--------|---------|---------|--------|-------|
| 1           | .00     | 15       | 31     | 557  | 113  | 36   | 211    | 606    | 6.1    | 76      | .23     | 1.5    |       |
| 2           | .00     | 40       | 22     | 352  | 71   | 34   | 93     | 414    | 4.8    | 148     | .19     | .91    |       |
| 3           | .00     | 19       | 16     | 314  | 61   | 29   | 52     | 261    | 3.6    | 51      | .13     | .61    |       |
| 4           | .00     | 15       | 13     | 247  | 36   | 72   | 36     | 134    | 2.9    | 26      | .09     | .36    |       |
| 5           | .00     | 11       | 12     | 104  | 39   | 66   | 51     | 76     | 2.0    | 309     | 322     | 33     |       |
| 6           | 735     | 8.2      | 14     | 59   | 50   | 40   | 42     | 48     | 3.2    | 1370    | 410     | 16     |       |
| 7           | 454     | 5.9      | 11     | 96   | 51   | 30   | 28     | 43     | 6.7    | 643     | 257     | 13     |       |
| 8           | 310     | 4.3      | 11     | 108  | 40   | 199  | 22     | 44     | 3.9    | 337     | 171     | 8.5    |       |
| 9           | 283     | 3.5      | 11     | 85   | 24   | 397  | 18     | 26     | 2.8    | 316     | 71      | 6.0    |       |
| 10          | 260     | 5.2      | 11     | 110  | 192  | 225  | 16     | 20     | 187    | 315     | 43      | 4.2    |       |
| 11          | 195     | 4.2      | 9.7    | 103  | 726  | 106  | 14     | 17     | 675    | 284     | 33      | 2.9    |       |
| 12          | 66      | 3.2      | 9.5    | 53   | 392  | 58   | 12     | 17     | 316    | 223     | 26      | 27     |       |
| 13          | 29      | 2.3      | 13     | 40   | 299  | 40   | 11     | 28     | 129    | 88      | 15      | 72     |       |
| 14          | 19      | 2.1      | 18     | 28   | 170  | 43   | 68     | 31     | 64     | 42      | 9.5     | 46     |       |
| 15          | 16      | 4.7      | 17     | 23   | 103  | 31   | 55     | 55     | 38     | 28      | 37      | 3.9    |       |
| 16          | 89      | 4.1      | 13     | 20   | 70   | 25   | 33     | 25     | 26     | 18      | 131     | .71    |       |
| 17          | 231     | 2.8      | 96     | 45   | 189  | 21   | 24     | 17     | 73     | 12      | 33      | .42    |       |
| 18          | 83      | 459      | 694    | 45   | 360  | 17   | 18     | 14     | 39     | 8.6     | 21      | .42    |       |
| 19          | 161     | 299      | 544    | 47   | 415  | 15   | 15     | 10     | 22     | 6.3     | 24      | .42    |       |
| 20          | 107     | 185      | 417    | 40   | 341  | 14   | 11     | 7.5    | 16     | 4.8     | 60      | .42    |       |
| 21          | 277     | 74       | 1230   | 31   | 250  | 19   | 9.0    | 5.2    | 11     | 3.8     | 53      | .42    |       |
| 22          | 110     | 38       | 485    | 24   | 153  | 27   | 7.4    | 162    | 65     | 2.9     | 37      | .42    |       |
| 23          | 76      | 24       | 370    | 21   | 173  | 23   | 15     | 131    | 33     | 2.4     | 18      | .77    |       |
| 24          | 61      | 19       | 410    | 23   | 375  | 21   | 63     | 71     | 19     | 2.0     | 447     | 3.7    |       |
| 25          | 38      | 15       | 341    | 34   | 202  | 17   | 27     | 41     | 13     | 1.6     | 191     | .98    |       |
| 26          | 26      | 12       | 220    | 22   | 97   | 14   | 19     | 28     | 9.1    | 2.5     | 66      | 2.1    |       |
| 27          | 19      | 246      | 101    | 19   | 56   | 15   | 438    | 20     | 6.7    | 1.4     | 23      | 1.4    |       |
| 28          | 14      | 189      | 60     | 19   | 40   | 15   | 231    | 16     | 7.1    | 1.0     | 12      | .73    |       |
| 29          | 12      | 97       | 42     | 17   | ---  | 13   | 105    | 13     | 5.4    | .71     | 6.7     | .41    |       |
| 30          | 9.9     | 49       | 947    | 35   | ---  | 16   | 58     | 10     | 7.3    | .51     | 4.1     | .42    |       |
| 31          | 8.7     | ---      | 489    | 247  | ---  | 490  | ---    | 8.3    | ---    | .32     | 2.8     | ---    |       |
| TOTAL       | 3689.60 | 1856.5   | 6678.2 | 2968 | 5088 | 2168 | 1802.4 | 2399.0 | 1797.6 | 4324.84 | 2524.74 | 249.62 |       |
| MEAN        | 119     | 61.9     | 215    | 95.7 | 182  | 69.9 | 60.1   | 77.4   | 59.9   | 140     | 81.4    | 8.32   |       |
| MAX         | 735     | 459      | 1230   | 557  | 726  | 490  | 438    | 606    | 675    | 1370    | 447     | 72     |       |
| MIN         | .00     | 2.1      | 9.5    | 17   | 24   | 13   | 7.4    | 5.2    | 2.0    | .32     | .09     | .36    |       |
| CFSM        | 2.11    | 1.10     | 3.82   | 1.70 | 3.23 | 1.24 | 1.07   | 1.37   | 1.06   | 2.49    | 1.45    | .15    |       |
| IN.         | 2.44    | 1.23     | 4.41   | 1.96 | 3.36 | 1.43 | 1.19   | 1.59   | 1.19   | 2.86    | 1.67    | .16    |       |
| WTR YR 1985 | TOTAL   | 35546.50 |        | MEAN | 97.4 | MAX  | 1370   | MIN    | .00    | CFSM    | 1.73    | IN.    | 23.49 |



07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to October 1983, April 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1982 to October 1983, April 1984 to current year.

INSTRUMENTATION.-- Sediment pumping sampler October 1982 to October 1983, April 1984 to current year.

REMARKS.--No flow October 1-5.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,010 mg/L, June 11, 1985; minimum daily mean, 0 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 12,800 tons, June 11, 1985; minimum daily, 0 ton, many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,010 mg/L, June 11; minimum daily mean, 0 mg/L, Oct. 1-5.

SEDIMENT LOADS: Maximum daily, 12,800 tons, June 11; minimum daily, 0 ton, Oct. 1-5, Aug. 3-4.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|-------|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| OCT   |      |   |   |                             | MAR   |      |   |   |                             |
| 09... | 1500 | 280   | 90  | 19.0                        | 05... | 1300 | 61  | 280   | 10.0                        |
| 10... | 0915 | 260   | 88  | 18.5                        | 14... | 1345 | 43  | 325   | 13.0                        |
| 16... | 1530 | 8.8   | 140   | 21.0                        | 20... | 1300 | 14  | 400   | 12.0                        |
| 19... | 1120 | 273   | 125   | 18.0                        | 21... | 1230 | 20  | 440   | 11.0                        |
| 24... | 1240 | 57  | 124   | 14.0                        | 27... | 0830 | 14  | 420   | 13.0                        |
| NOV   |      |   |   |                             | APR   |      |   |   |                             |
| 01... | 1330 | 8.2   | 200   | 20.0                        | 05... | 1110 | 27  | 370   | 18.0                        |
| 02... | 1045 | 37  | 220   | 14.5                        | 16... | 1245 | 33  | 330   | 17.0                        |
| 15... | 1315 | 5.8   | 240   | 11.0                        | MAY   |      |   |   |                             |
| 20... | 1250 | 140   | 130   | 7.0                         | 07... | 1745 | 34  | 310   | 22.5                        |
| 29... | 1445 | 87  | 220   | 9.0                         | 16... | 1345 | 25  | 280   | 23.0                        |
| 30... | 1000 | 53  | 220   | 9.0                         | 22... | 1600 | 183   | 320   | 19.0                        |
| DEC   |      |   |   |                             | JUN   |      |   |   |                             |
| 06... | 1210 | 14  | 300   | 20.0                        | 11... | 1700 | 253   | 160   | 24.0                        |
| 13... | 1630 | 14  | 380   | 14.0                        | 21... | 1015 | 12  | 210   | 22.0                        |
| 20... | 1315 | 328   | 180   | 10.0                        | 26... | 1730 | 6.2   | 220   | 28.0                        |
| 27... | 1405 | 95  | 175   | 14.0                        | JUL   |      |   |   |                             |
| JAN   |      |   |   |                             | 17... | 1330 | 11  | 150   | 26.5                        |
| 07... | 1645 | 93  | 250   | 3.0                         | 24... | 1115 | 2.0   | 180   | 26.5                        |
| 14... | 1145 | 28  | 500   | 2.0                         | AUG   |      |   |   |                             |
| FEB   |      |   |   |                             | 02... | 1125 | .24   | 60  | 24.0                        |
| 07... | 1015 | 39  | 380   | 1.0                         | 21... | 1400 | 54  | 150   | 21.0                        |
| 13... | 1445 | 302   | 180   | 2.0                         | 23... | 1000 | 25  | 160   | 23.0                        |
| 21... | 1300 | 229   | 200   | 3.0                         | SEP   |      |   |   |                             |
| 26... | 1450 | 88  | 260   | 12.0                        | 06... | 0945 | 18  | 175   | 24.0                        |
| 27... | 1050 | 57  | 280   | 9.0                         | 12... | 1440 | 2.1   | 160   | 26.0                        |
|       |      |   |   |                             | 24... | 1140 | 5.3   | 280   | 20.0                        |

07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      |                                     | NOVEMBER                   |                                      |                                     | DECEMBER                   |                                      |                                     |
| 1       | .00                        | 0                                    | .00                                 | 15                         | 167                                  | 12                                  | 31                         | 107                                  | 9.0                                 |
| 2       | .00                        | 0                                    | .00                                 | 40                         | 207                                  | 24                                  | 22                         | 84                                   | 5.0                                 |
| 3       | .00                        | 0                                    | .00                                 | 19                         | 119                                  | 6.1                                 | 16                         | 70                                   | 3.0                                 |
| 4       | .00                        | 0                                    | .00                                 | 15                         | 102                                  | 4.1                                 | 13                         | 58                                   | 2.0                                 |
| 5       | .00                        | 0                                    | .00                                 | 11                         | 91                                   | 2.7                                 | 12                         | 49                                   | 1.6                                 |
| 6       | 735                        | 1600                                 | 3780                                | 8.2                        | 89                                   | 2.0                                 | 14                         | 62                                   | 2.3                                 |
| 7       | 454                        | 490                                  | 601                                 | 5.9                        | 80                                   | 1.3                                 | 11                         | 58                                   | 1.7                                 |
| 8       | 310                        | 320                                  | 268                                 | 4.3                        | 69                                   | .80                                 | 11                         | 54                                   | 1.6                                 |
| 9       | 283                        | 260                                  | 199                                 | 3.5                        | 75                                   | .71                                 | 11                         | 47                                   | 1.4                                 |
| 10      | 260                        | 230                                  | 161                                 | 5.2                        | 98                                   | 1.4                                 | 11                         | 40                                   | 1.2                                 |
| 11      | 195                        | 220                                  | 116                                 | 4.2                        | 80                                   | .91                                 | 9.7                        | 35                                   | .92                                 |
| 12      | 66                         | 150                                  | 27                                  | 3.2                        | 72                                   | .62                                 | 9.5                        | 32                                   | .82                                 |
| 13      | 29                         | 120                                  | 9.4                                 | 2.3                        | 65                                   | .40                                 | 13                         | 65                                   | 2.3                                 |
| 14      | 19                         | 100                                  | 5.1                                 | 2.1                        | 55                                   | .31                                 | 18                         | 91                                   | 4.4                                 |
| 15      | 16                         | 105                                  | 4.5                                 | 4.7                        | 85                                   | 1.1                                 | 17                         | 75                                   | 3.4                                 |
| 16      | 89                         | 1000                                 | 842                                 | 4.1                        | 87                                   | .96                                 | 13                         | 57                                   | 2.0                                 |
| 17      | 231                        | 571                                  | 582                                 | 2.8                        | 81                                   | .61                                 | 96                         | 210                                  | 305                                 |
| 18      | 83                         | 225                                  | 50                                  | 459                        | 764                                  | 1240                                | 694                        | 1090                                 | 2090                                |
| 19      | 161                        | 500                                  | 284                                 | 299                        | 425                                  | 343                                 | 544                        | 631                                  | 1000                                |
| 20      | 107                        | 452                                  | 211                                 | 185                        | 315                                  | 157                                 | 417                        | 435                                  | 490                                 |
| 21      | 277                        | 422                                  | 377                                 | 74                         | 175                                  | 35                                  | 1230                       | 649                                  | 2230                                |
| 22      | 110                        | 200                                  | 59                                  | 38                         | 140                                  | 14                                  | 485                        | 385                                  | 504                                 |
| 23      | 76                         | 155                                  | 32                                  | 24                         | 125                                  | 8.1                                 | 370                        | 285                                  | 285                                 |
| 24      | 61                         | 290                                  | 48                                  | 19                         | 105                                  | 5.4                                 | 410                        | 466                                  | 611                                 |
| 25      | 38                         | 98                                   | 10                                  | 15                         | 85                                   | 3.4                                 | 341                        | 299                                  | 284                                 |
| 26      | 26                         | 85                                   | 6.0                                 | 12                         | 62                                   | 2.0                                 | 220                        | 180                                  | 107                                 |
| 27      | 19                         | 83                                   | 4.3                                 | 246                        | 538                                  | 489                                 | 101                        | 140                                  | 38                                  |
| 28      | 14                         | 82                                   | 3.1                                 | 189                        | 280                                  | 143                                 | 60                         | 125                                  | 20                                  |
| 29      | 12                         | 80                                   | 2.6                                 | 97                         | 165                                  | 43                                  | 42                         | 115                                  | 13                                  |
| 30      | 9.9                        | 79                                   | 2.1                                 | 49                         | 130                                  | 17                                  | 947                        | 1040                                 | 3360                                |
| 31      | 8.7                        | 79                                   | 1.9                                 | ---                        | ---                                  | ---                                 | 489                        | 590                                  | 796                                 |
| TOTAL   | 3689.60                    | ---                                  | 7686.00                             | 1856.5                     | ---                                  | 2559.92                             | 6678.2                     | ---                                  | 12175.64                            |
| JANUARY |                            |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
| 1       | 557                        | 527                                  | 903                                 | 113                        | 144                                  | 44                                  | 36                         | 116                                  | 11                                  |
| 2       | 352                        | 290                                  | 276                                 | 71                         | 128                                  | 25                                  | 34                         | 121                                  | 11                                  |
| 3       | 314                        | 275                                  | 233                                 | 61                         | 279                                  | 48                                  | 29                         | 106                                  | 8.3                                 |
| 4       | 247                        | 260                                  | 173                                 | 36                         | 249                                  | 24                                  | 72                         | 212                                  | 56                                  |
| 5       | 104                        | 205                                  | 58                                  | 39                         | 248                                  | 26                                  | 66                         | 210                                  | 37                                  |
| 6       | 59                         | 160                                  | 25                                  | 50                         | 280                                  | 38                                  | 40                         | 151                                  | 16                                  |
| 7       | 96                         | 141                                  | 39                                  | 51                         | 267                                  | 37                                  | 30                         | 128                                  | 10                                  |
| 8       | 108                        | 110                                  | 32                                  | 40                         | 251                                  | 27                                  | 199                        | 975                                  | 2120                                |
| 9       | 85                         | 78                                   | 18                                  | 24                         | 218                                  | 14                                  | 397                        | 716                                  | 936                                 |
| 10      | 110                        | 98                                   | 29                                  | 192                        | 474                                  | 623                                 | 225                        | 375                                  | 228                                 |
| 11      | 103                        | 79                                   | 22                                  | 726                        | 617                                  | 1280                                | 106                        | 300                                  | 86                                  |
| 12      | 53                         | 64                                   | 9.2                                 | 392                        | 370                                  | 392                                 | 58                         | 250                                  | 39                                  |
| 13      | 40                         | 80                                   | 8.6                                 | 299                        | 215                                  | 174                                 | 40                         | 211                                  | 23                                  |
| 14      | 28                         | 69                                   | 5.2                                 | 170                        | 184                                  | 84                                  | 43                         | 178                                  | 21                                  |
| 15      | 23                         | 72                                   | 4.5                                 | 103                        | 160                                  | 44                                  | 31                         | 157                                  | 13                                  |
| 16      | 20                         | 88                                   | 4.8                                 | 70                         | 145                                  | 27                                  | 25                         | 149                                  | 10                                  |
| 17      | 45                         | 181                                  | 22                                  | 189                        | 355                                  | 253                                 | 21                         | 141                                  | 8.0                                 |
| 18      | 45                         | 189                                  | 23                                  | 360                        | 372                                  | 416                                 | 17                         | 138                                  | 6.3                                 |
| 19      | 47                         | 169                                  | 21                                  | 415                        | 349                                  | 402                                 | 15                         | 130                                  | 5.3                                 |
| 20      | 40                         | 172                                  | 19                                  | 341                        | 272                                  | 252                                 | 14                         | 128                                  | 4.8                                 |
| 21      | 31                         | 150                                  | 13                                  | 250                        | 212                                  | 143                                 | 19                         | 141                                  | 7.2                                 |
| 22      | 24                         | 122                                  | 7.9                                 | 153                        | 200                                  | 83                                  | 27                         | 160                                  | 12                                  |
| 23      | 21                         | 98                                   | 5.6                                 | 173                        | 668                                  | 789                                 | 23                         | 155                                  | 9.6                                 |
| 24      | 23                         | 85                                   | 5.3                                 | 375                        | 1080                                 | 1380                                | 21                         | 148                                  | 8.4                                 |
| 25      | 34                         | 110                                  | 10                                  | 202                        | 425                                  | 232                                 | 17                         | 145                                  | 6.7                                 |
| 26      | 22                         | 105                                  | 6.2                                 | 97                         | 242                                  | 63                                  | 14                         | 143                                  | 5.4                                 |
| 27      | 19                         | 94                                   | 4.8                                 | 56                         | 180                                  | 27                                  | 15                         | 141                                  | 5.7                                 |
| 28      | 19                         | 89                                   | 4.6                                 | 40                         | 132                                  | 14                                  | 15                         | 135                                  | 5.5                                 |
| 29      | 17                         | 83                                   | 3.8                                 | ---                        | ---                                  | ---                                 | 13                         | 129                                  | 4.5                                 |
| 30      | 35                         | 282                                  | 88                                  | ---                        | ---                                  | ---                                 | 16                         | 215                                  | 9.3                                 |
| 31      | 247                        | 272                                  | 211                                 | ---                        | ---                                  | ---                                 | 490                        | 1740                                 | 3300                                |
| TOTAL   | 2968                       | ---                                  | 2285.5                              | 5088                       | ---                                  | 6961                                | 2168                       | ---                                  | 7024.0                              |

## OBION RIVER BASIN

07026370 NORTH REELFOOT CREEK AT STATE HIGHWAY 22, NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 211                        | 650                                  | 370                                 | 606                        | 1790                                 | 3250                                | 6.1                        | 94                                   | 1.5                                 |
| 2     | 93                         | 450                                  | 113                                 | 414                        | 640                                  | 715                                 | 4.8                        | 85                                   | 1.1                                 |
| 3     | 52                         | 300                                  | 42                                  | 261                        | 550                                  | 388                                 | 3.6                        | 76                                   | .74                                 |
| 4     | 36                         | 240                                  | 23                                  | 134                        | 500                                  | 181                                 | 2.9                        | 68                                   | .53                                 |
| 5     | 51                         | 258                                  | 42                                  | 76                         | 450                                  | 92                                  | 2.0                        | 80                                   | .43                                 |
| 6     | 42                         | 224                                  | 25                                  | 48                         | 350                                  | 45                                  | 3.2                        | 80                                   | .69                                 |
| 7     | 28                         | 185                                  | 14                                  | 43                         | 330                                  | 49                                  | 6.7                        | 110                                  | 2.0                                 |
| 8     | 22                         | 159                                  | 9.4                                 | 44                         | 478                                  | 62                                  | 3.9                        | 70                                   | .74                                 |
| 9     | 18                         | 141                                  | 6.9                                 | 26                         | 230                                  | 16                                  | 2.8                        | 58                                   | .44                                 |
| 10    | 16                         | 124                                  | 5.4                                 | 20                         | 179                                  | 9.7                                 | 187                        | 4570                                 | 10800                               |
| 11    | 14                         | 106                                  | 4.0                                 | 17                         | 158                                  | 7.3                                 | 675                        | 6010                                 | 12800                               |
| 12    | 12                         | 90                                   | 2.9                                 | 17                         | 147                                  | 6.7                                 | 316                        | 1440                                 | 1220                                |
| 13    | 11                         | 83                                   | 2.5                                 | 28                         | 195                                  | 15                                  | 129                        | 860                                  | 300                                 |
| 14    | 68                         | 432                                  | 140                                 | 31                         | 131                                  | 11                                  | 64                         | 555                                  | 96                                  |
| 15    | 55                         | 240                                  | 36                                  | 55                         | 374                                  | 61                                  | 38                         | 420                                  | 43                                  |
| 16    | 33                         | 151                                  | 13                                  | 25                         | 162                                  | 11                                  | 26                         | 275                                  | 19                                  |
| 17    | 24                         | 130                                  | 8.4                                 | 17                         | 129                                  | 5.9                                 | 73                         | 4790                                 | 1800                                |
| 18    | 18                         | 122                                  | 5.9                                 | 14                         | 109                                  | 4.1                                 | 39                         | 1200                                 | 126                                 |
| 19    | 15                         | 120                                  | 4.9                                 | 10                         | 95                                   | 2.6                                 | 22                         | 229                                  | 14                                  |
| 20    | 11                         | 118                                  | 3.5                                 | 7.5                        | 80                                   | 1.6                                 | 16                         | 180                                  | 7.8                                 |
| 21    | 9.0                        | 117                                  | 2.9                                 | 5.2                        | 68                                   | .95                                 | 11                         | 150                                  | 4.5                                 |
| 22    | 7.4                        | 115                                  | 2.3                                 | 162                        | 857                                  | 479                                 | 65                         | 4810                                 | 1380                                |
| 23    | 15                         | 213                                  | 17                                  | 131                        | 440                                  | 156                                 | 33                         | 500                                  | 45                                  |
| 24    | 63                         | 432                                  | 89                                  | 71                         | 270                                  | 52                                  | 19                         | 220                                  | 11                                  |
| 25    | 27                         | 240                                  | 17                                  | 41                         | 230                                  | 25                                  | 13                         | 172                                  | 6.0                                 |
| 26    | 19                         | 170                                  | 8.7                                 | 28                         | 196                                  | 15                                  | 9.1                        | 134                                  | 3.3                                 |
| 27    | 438                        | 1480                                 | 1910                                | 20                         | 168                                  | 9.1                                 | 6.7                        | 108                                  | 2.0                                 |
| 28    | 231                        | 445                                  | 278                                 | 16                         | 142                                  | 6.1                                 | 7.1                        | 99                                   | 1.9                                 |
| 29    | 105                        | 275                                  | 78                                  | 13                         | 121                                  | 4.2                                 | 5.5                        | 138                                  | 2.0                                 |
| 30    | 58                         | 175                                  | 27                                  | 10                         | 105                                  | 2.8                                 | 7.3                        | 500                                  | 9.9                                 |
| 31    | ---                        | ---                                  | ---                                 | 8.3                        | 100                                  | 2.2                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 1802.4                     | ---                                  | 3301.7                              | 2399.0                     | ---                                  | 5686.25                             | 1797.6                     | ---                                  | 28699.57                            |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 76                         | 3570                                 | 1850                                | .23                        | 29                                   | .02                                 | 1.5                        | 49                                   | .21                                 |
| 2     | 148                        | 2500                                 | 1360                                | .19                        | 21                                   | .01                                 | .91                        | 40                                   | .10                                 |
| 3     | 51                         | 725                                  | 100                                 | .13                        | 18                                   | .00                                 | .61                        | 32                                   | .05                                 |
| 4     | 26                         | 400                                  | 28                                  | .09                        | 12                                   | .00                                 | .36                        | 24                                   | .02                                 |
| 5     | 309                        | 2430                                 | 6250                                | 322                        | 3170                                 | 4400                                | 33                         | 357                                  | 46                                  |
| 6     | 1370                       | 2120                                 | 8080                                | 410                        | 850                                  | 941                                 | 16                         | 300                                  | 13                                  |
| 7     | 643                        | 1300                                 | 2260                                | 257                        | 400                                  | 278                                 | 13                         | 280                                  | 9.8                                 |
| 8     | 337                        | 1050                                 | 955                                 | 171                        | 176                                  | 81                                  | 8.5                        | 170                                  | 3.9                                 |
| 9     | 316                        | 900                                  | 768                                 | 71                         | 125                                  | 24                                  | 6.0                        | 130                                  | 2.1                                 |
| 10    | 315                        | 1270                                 | 1170                                | 43                         | 1660                                 | 461                                 | 4.2                        | 90                                   | 1.0                                 |
| 11    | 284                        | 650                                  | 498                                 | 33                         | 1500                                 | 134                                 | 2.9                        | 50                                   | .39                                 |
| 12    | 223                        | 450                                  | 271                                 | 26                         | 1450                                 | 102                                 | 27                         | 1050                                 | 203                                 |
| 13    | 88                         | 300                                  | 71                                  | 15                         | 1350                                 | 55                                  | 72                         | 1110                                 | 216                                 |
| 14    | 42                         | 190                                  | 22                                  | 9.5                        | 590                                  | 15                                  | 46                         | 550                                  | 68                                  |
| 15    | 28                         | 495                                  | 50                                  | 37                         | 1090                                 | 198                                 | 3.9                        | 225                                  | 2.4                                 |
| 16    | 18                         | 500                                  | 24                                  | 131                        | 2820                                 | 2720                                | .71                        | 91                                   | .17                                 |
| 17    | 12                         | 210                                  | 6.8                                 | 33                         | 400                                  | 36                                  | .42                        | 79                                   | .09                                 |
| 18    | 8.6                        | 147                                  | 3.4                                 | 21                         | 150                                  | 8.5                                 | .42                        | 65                                   | .07                                 |
| 19    | 6.3                        | 139                                  | 2.4                                 | 24                         | 455                                  | 61                                  | .42                        | 52                                   | .06                                 |
| 20    | 4.8                        | 128                                  | 1.7                                 | 60                         | 625                                  | 101                                 | .42                        | 45                                   | .05                                 |
| 21    | 3.8                        | 115                                  | 1.2                                 | 53                         | 300                                  | 43                                  | .42                        | 41                                   | .05                                 |
| 22    | 2.9                        | 97                                   | .76                                 | 37                         | 190                                  | 19                                  | .42                        | 39                                   | .04                                 |
| 23    | 2.4                        | 80                                   | .52                                 | 18                         | 511                                  | 40                                  | .77                        | 32                                   | .07                                 |
| 24    | 2.0                        | 65                                   | .35                                 | 447                        | 2360                                 | 4210                                | 3.7                        | 40                                   | .40                                 |
| 25    | 1.6                        | 52                                   | .22                                 | 191                        | 850                                  | 438                                 | .98                        | 23                                   | .06                                 |
| 26    | 2.5                        | 68                                   | .46                                 | 66                         | 350                                  | 62                                  | 2.1                        | 50                                   | .28                                 |
| 27    | 1.4                        | 63                                   | .24                                 | 23                         | 170                                  | 11                                  | 1.4                        | 50                                   | .19                                 |
| 28    | 1.0                        | 55                                   | .15                                 | 12                         | 108                                  | 3.5                                 | .73                        | 30                                   | .06                                 |
| 29    | .71                        | 45                                   | .09                                 | 6.7                        | 65                                   | 1.2                                 | .41                        | 28                                   | .03                                 |
| 30    | .51                        | 41                                   | .06                                 | 4.1                        | 58                                   | .64                                 | .42                        | 22                                   | .02                                 |
| 31    | .32                        | 38                                   | .03                                 | 2.8                        | 55                                   | .42                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 4324.84                    | ---                                  | 23775.38                            | 2524.74                    | ---                                  | 14444.29                            | 249.62                     | ---                                  | 567.61                              |

TOTAL LOAD FOR YEAR: 114906.86

## OBION RIVER BASIN

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07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN

LOCATION.--Lat 36°26'20", long 89°15'37", Obion County, Hydrologic Unit 08010202, at county road bridge, 1.7 mi above confluence with North Reelfoot Creek, and 2 mi southwest of Clayton.

DRAINAGE AREA.--38.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1955, 1956, 1964, 1983. May 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 317 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 3-9, June 6-12, July 13-24. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft<sup>3</sup>/s, Oct. 6, 1984, gage height, 22.22 ft; no flow several days each year.

EXTREMES FOR CURRENT Year.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s (revised) and maximum (\*):

| Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|---------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Oct. 6  | Unknown | *3,440                            | *22.22              | Mar. 31 | 0230    | 1,860                             | 19.61               |
| Nov. 18 | 1145    | 1,910                             | 19.75               | May 1   | 2215    | 2,000                             | 19.99               |
| Dec. 18 | 0500    | 1,640                             | 18.97               | May 7   | 2130    | 893                               | 16.05               |
| Dec. 21 | 0300    | 1,280                             | 17.83               | June 11 | Unknown | Unknown                           | Unknown             |
| Dec. 30 | 0945    | 2,230                             | 20.52               | July 5  | 2400    | 2,190                             | 20.42               |
| Jan. 1  | 0215    | 855                               | 16.12               | Aug. 16 | 0215    | 863                               | 16.01               |
| Feb. 10 | 2300    | 1,550                             | 18.72               | Aug. 24 | 0900    | 1,680                             | 19.11               |
| Feb. 23 | 2300    | 967                               | 16.64               | Sep. 5  | 1330    | 903                               | 16.21               |

No flow Oct. 1-5.

REVISIONS.--Revised maximum discharges for water year 1984, revised daily discharges, in cubic feet per second, for high-water periods during the year, and revised monthly discharge are given below. These figures supersede those published in the report for 1984.

Peak discharges above base of 360 ft<sup>3</sup>/s and maximum (\*):

| Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|-------|------|-----------------------------------|---------------------|--------|------|-----------------------------------|---------------------|
| May 3 | 0515 | 537                               | 14.44               | May 7  | 0415 | 1,790                             | 19.41               |
| May 6 | 0915 | 382                               | 13.38               | May 27 | 1530 | *2,120                            | *20.28              |
| May 6 | 1645 | 1,520                             | 18.60               |        |      |                                   |                     |

## Daily discharges:

|       |     |        |     |
|-------|-----|--------|-----|
| May 6 | 509 | May 27 | 726 |
|-------|-----|--------|-----|

| MONTH    | TOTAL  | MEAN | MAX  | MIN |
|----------|--------|------|------|-----|
| May 1984 | 3645.8 | 118  | 1050 | 6.3 |



## OBION RIVER BASIN

07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT     | NOV      | DEC    | JAN  | FEB  | MAR  | APR   | MAY  | JUN    | JUL     | AUG     | SEP    |       |
|-------------|---------|----------|--------|------|------|------|-------|------|--------|---------|---------|--------|-------|
| 1           | .00     | 52       | 3.6    | 350  | 46   | 48   | 37    | 896  | 21     | 19      | 2.9     | 2.5    |       |
| 2           | .00     | 56       | 5.9    | 52   | 44   | 48   | 26    | 331  | 23     | 11      | 4.5     | 1.6    |       |
| 3           | .00     | 17       | 5.8    | 43   | 37   | 45   | 23    | 73   | 21     | .59     | 3.3     | 1.0    |       |
| 4           | .00     | 18       | 6.5    | 44   | 36   | 67   | 20    | 49   | 17     | 2.0     | 3.4     | 4.2    |       |
| 5           | .00     | 18       | 16     | 41   | 38   | 49   | 34    | 38   | 21     | 403     | 182     | 294    |       |
| 6           | 450     | 15       | 21     | 41   | 39   | 42   | 22    | 31   | 37     | 491     | 45      | 41     |       |
| 7           | 140     | 12       | 12     | 44   | 34   | 42   | 16    | 146  | 54     | 129     | 5.0     | 18     |       |
| 8           | 90      | 11       | 11     | 43   | 30   | 66   | 13    | 75   | 28     | 30      | 2.8     | 11     |       |
| 9           | 67      | 11       | 8.9    | 39   | 31   | 88   | 14    | 34   | 23     | 16      | 3.6     | 5.9    |       |
| 10          | 50      | 15       | 12     | 48   | 295  | 52   | 15    | 28   | 15     | 40      | 33      | 3.9    |       |
| 11          | 35      | 7.3      | 9.9    | 38   | 631  | 51   | 16    | 27   | 610    | 48      | 6.6     | 3.2    |       |
| 12          | 18      | 8.7      | 11     | 33   | 118  | 46   | 16    | 32   | 69     | 27      | .32     | .51    |       |
| 13          | 14      | 9.7      | 13     | 31   | 102  | 44   | 13    | 31   | 37     | 7.3     | .50     | 2.6    |       |
| 14          | 20      | 11       | 18     | 33   | 91   | 49   | 53    | 26   | 22     | 1.7     | .51     | 2.1    |       |
| 15          | 30      | 15       | 15     | 31   | 82   | 42   | 24    | 48   | 17     | 37      | 119     | 1.9    |       |
| 16          | 36      | 5.0      | 15     | 31   | 81   | 40   | 15    | 21   | 12     | 48      | 236     | 2.1    |       |
| 17          | 43      | 3.0      | 45     | 42   | 127  | 38   | 10    | 20   | 33     | 4.4     | 22      | 2.8    |       |
| 18          | 29      | 613      | 808    | 37   | 160  | 34   | 6.7   | 21   | 20     | 3.0     | 8.6     | 3.2    |       |
| 19          | 116     | 94       | 228    | 34   | 107  | 32   | 6.4   | 18   | 5.6    | 2.8     | 4.1     | 3.0    |       |
| 20          | 47      | 49       | 121    | 29   | 77   | 30   | 7.3   | 19   | 4.4    | 2.6     | 88      | 3.4    |       |
| 21          | 199     | 21       | 696    | 29   | 66   | 37   | 4.2   | 21   | 5.6    | 2.1     | 10      | 3.0    |       |
| 22          | 38      | 13       | 94     | 30   | 59   | 42   | 5.4   | 266  | 32     | 1.9     | 4.3     | 3.0    |       |
| 23          | 34      | 20       | 29     | 30   | 160  | 31   | 49    | 51   | 1.8    | 1.2     | 106     | 3.4    |       |
| 24          | 27      | 32       | 52     | 33   | 184  | 26   | 57    | 30   | 1.1    | 1.2     | 542     | 2.1    |       |
| 25          | 19      | 39       | 28     | 34   | 58   | 22   | 25    | 22   | 1.4    | .41     | 146     | 3.2    |       |
| 26          | 24      | 34       | 16     | 28   | .52  | 20   | 23    | 17   | 2.4    | 8.2     | 43      | 8.4    |       |
| 27          | 31      | 182      | 14     | 29   | 48   | 23   | 165   | 15   | 8.9    | 9.8     | 20      | 3.2    |       |
| 28          | 38      | 45       | 13     | 30   | 46   | 23   | 56    | 14   | 10     | 1.9     | 12      | 3.0    |       |
| 29          | 37      | 24       | 12     | 29   | ---  | 20   | 32    | 14   | 1.3    | 1.7     | 7.6     | 3.9    |       |
| 30          | 32      | 12       | 866    | 54   | ---  | 22   | 26    | 18   | 8.1    | 3.1     | 5.0     | 12     |       |
| 31          | 37      | ---      | 181    | 196  | ---  | 478  | ---   | 21   | ---    | 2.2     | 1.7     | ---    |       |
| TOTAL       | 1701.00 | 1462.7   | 3387.6 | 1606 | 2879 | 1697 | 830.0 | 2453 | 1171.6 | 1357.10 | 1668.73 | 453.11 |       |
| MEAN        | 54.9    | 48.8     | 109    | 51.8 | 103  | 54.7 | 27.7  | 79.1 | 39.1   | 43.8    | 53.8    | 15.1   |       |
| MAX         | 450     | 613      | 866    | 350  | 631  | 478  | 165   | 896  | 610    | 491     | 542     | 294    |       |
| MIN         | .00     | 3.0      | 3.6    | 28   | 30   | 20   | 4.2   | 14   | 1.1    | .41     | .32     | .51    |       |
| CFSM        | 1.42    | 1.26     | 2.82   | 1.34 | 2.67 | 1.42 | .72   | 2.05 | 1.01   | 1.13    | 1.39    | .39    |       |
| IN.         | 1.64    | 1.41     | 3.26   | 1.55 | 2.77 | 1.64 | .80   | 2.36 | 1.13   | 1.31    | 1.61    | .44    |       |
| WTR YR 1985 | TOTAL   | 20666.84 |        | MEAN | 56.6 | MAX  | 896   | MIN  | .00    | CFSM    | 1.47    | IN.    | 19.92 |

07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: May 1984 to current year.

INSTRUMENTATION.--Sediment pumping sampler since May 1984.

REMARKS.--No flow October 1-5.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,460 mg/L, May 27, 1984; minimum daily mean, 0 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 18,500, tons May 27, 1984; minimum, 0 ton, many days each year.

EXTREMES FOR CURRENT PERIOD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,070 mg/L, July 6; minimum daily mean, 0 mg/L, October 1-5.

SEDIMENT LOADS: Maximum daily, 11,900 tons, May 1; minimum, 0 ton, October 1-5.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|-------|------|---|---|-----------------------------|-------|-------|---|---|-----------------------------|
| OCT   |      |   |   |                             |       |       |   |   |                             |
| 09... | 1300 | 75  | 110   | 19.0                        | MAR   | 20... | 1145  | 30  | 440                         |
| 10... | 0950 | 51  | 106   | 18.5                        | 26... | 1600  | 20  | 350   | 8.0                         |
| 12... | 1235 | 17  | 120   | 19.5                        | APR   | 04... | 1245  | 22  | 443                         |
| 16... | 1510 | 37  | 220   | 21.0                        | 10... | 1400  | 16  | 270   | 11.5                        |
| 19... | 1230 | 170   | 140   | 18.0                        | 16... | 1130  | 15  | 320   | 16.0                        |
| NOV   |      |   |   |                             |       |       |   |   |                             |
| 01... | 1300 | 43  | 300   | 19.5                        | MAY   | 07... | 1715  | 36  | 380                         |
| 02... | 1215 | 34  | 200   | 14.5                        | 08... | 1630  | 45  | 280   | 22.5                        |
| 09... | 1140 | 11  | 380   | 15.0                        | 16... | 1200  | 22  | 300   | 20.0                        |
| 15... | 1200 | 27  | 240   | 10.0                        | 22... | 1400  | 301   | 235   | 19.0                        |
| 21... | 1105 | 21  | 270   | 5.0                         | JUN   | 14... | 1000  | 20  | 210                         |
| 23... | 1230 | 20  | 350   | 5.0                         | 27... | 1810  | 4.4   | 310   | 28.0                        |
| 29... | 1245 | 24  | 320   | 7.0                         | JUL   | 17... | 1425  | 3.0   | 210                         |
| 30... | 0930 | 13  | 280   | 8.0                         | 24... | 1350  | 1.6   | 330   | 28.0                        |
| DEC   |      |   |   |                             |       |       |   |   |                             |
| 06... | 1330 | 18  | 385   | .0                          | AUG   | 02... | 1200  | 6.0   | 195                         |
| 13... | 1440 | 13  | 480   | 14.0                        | 21... | 1035  | 11  | 85  | 21.0                        |
| 20... | 1315 | 31  | 280   | 9.0                         | 23... | 1100  | 92  | 210   | 22.0                        |
| 27... | 1600 | 13  | 540   | 9.0                         | 23... | 1200  | 227   | 145   | 21.0                        |
| JAN   |      |   |   |                             |       |       |   |   |                             |
| 07... | 1415 | 42  | 330   | 3.0                         | 23... | 1300  | 283   | 125   | 21.0                        |
| 14... | 1045 | 33  | 440   | 1.0                         | 23... | 1340  | 284   | 120   | 21.0                        |
| FEB   |      |   |   |                             |       |       |   |   |                             |
| 21... | 1100 | 61  | 320   | 5.0                         | 24... | 1055  | 1570  | 120   | 21.0                        |
| 22... | 1300 | 58  | 360   | 9.0                         | SEP   | 06... | 1130  | 34  | 210                         |
| 26... | 1330 | 52  | 370   | 10.0                        | 13... | 1130  | 2.6   | 280   | 21.0                        |
| MAR   |      |   |   |                             |       |       |   |   |                             |
| 05... | 1215 | 47  | 350   | 8.0                         | 24... | 1330  | 2.1   | 305   | 21.5                        |
| 14... | 1220 | 46  | 390   | 11.0                        |       |       |   |   |                             |

## OBION RIVER BASIN

07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      |                                     | NOVEMBER                   |                                      |                                     |                            | DECEMBER                             |                                     |
| 1       | .00                        | 0                                    | .00                                 | 52                         | 277                                  | 81                                  | 3.6                        | 37                                   | .36                                 |
| 2       | .00                        | 0                                    | .00                                 | 56                         | 478                                  | 117                                 | 5.9                        | 90                                   | 1.4                                 |
| 3       | .00                        | 0                                    | .00                                 | 17                         | 170                                  | 7.8                                 | 5.8                        | 84                                   | 1.3                                 |
| 4       | .00                        | 0                                    | .00                                 | 18                         | 180                                  | 8.7                                 | 6.5                        | 63                                   | 1.1                                 |
| 5       | .00                        | 0                                    | .00                                 | 18                         | 163                                  | 7.9                                 | 16                         | 61                                   | 2.6                                 |
| 6       | 450                        | ---                                  | ---                                 | 15                         | 169                                  | 6.8                                 | 21                         | 65                                   | 3.7                                 |
| 7       | 140                        | ---                                  | ---                                 | 12                         | 128                                  | 4.1                                 | 12                         | 31                                   | 1.0                                 |
| 8       | 90                         | ---                                  | ---                                 | 11                         | 98                                   | 2.9                                 | 11                         | 28                                   | .83                                 |
| 9       | 67                         | 272                                  | 49                                  | 11                         | 74                                   | 2.2                                 | 8.9                        | 26                                   | .62                                 |
| 10      | 50                         | 235                                  | 32                                  | 15                         | 154                                  | 6.7                                 | 12                         | 35                                   | 1.1                                 |
| 11      | 35                         | 228                                  | 22                                  | 7.3                        | 111                                  | 2.2                                 | 9.9                        | 25                                   | .67                                 |
| 12      | 18                         | 225                                  | 11                                  | 8.7                        | 88                                   | 2.1                                 | 11                         | 25                                   | .74                                 |
| 13      | 14                         | 211                                  | 8.0                                 | 9.7                        | 72                                   | 1.9                                 | 13                         | 34                                   | 1.2                                 |
| 14      | 20                         | 199                                  | 11                                  | 11                         | 58                                   | 1.7                                 | 18                         | 55                                   | 2.7                                 |
| 15      | 30                         | 170                                  | 14                                  | 15                         | 71                                   | 2.9                                 | 15                         | 54                                   | 2.2                                 |
| 16      | 36                         | 408                                  | 49                                  | 5.0                        | 75                                   | 1.0                                 | 15                         | 40                                   | 1.6                                 |
| 17      | 43                         | 928                                  | 123                                 | 3.0                        | 79                                   | .64                                 | 45                         | 617                                  | 382                                 |
| 18      | 29                         | 575                                  | 45                                  | 613                        | 1840                                 | 4790                                | 808                        | 2620                                 | 7780                                |
| 19      | 116                        | 1450                                 | 703                                 | 94                         | 570                                  | 145                                 | 228                        | 730                                  | 691                                 |
| 20      | 47                         | 840                                  | 308                                 | 49                         | 250                                  | 33                                  | 121                        | 760                                  | 648                                 |
| 21      | 199                        | 1070                                 | 1170                                | 21                         | 97                                   | 5.5                                 | 696                        | 1200                                 | 2550                                |
| 22      | 38                         | 560                                  | 57                                  | 13                         | 66                                   | 2.3                                 | 94                         | 290                                  | 74                                  |
| 23      | 34                         | 500                                  | 46                                  | 20                         | 51                                   | 2.8                                 | 29                         | 149                                  | 12                                  |
| 24      | 27                         | 215                                  | 16                                  | 32                         | 68                                   | 5.9                                 | 52                         | 402                                  | 108                                 |
| 25      | 19                         | 149                                  | 7.6                                 | 39                         | 49                                   | 5.2                                 | 28                         | 260                                  | 20                                  |
| 26      | 24                         | 161                                  | 10                                  | 34                         | 57                                   | 5.2                                 | 16                         | 150                                  | 6.5                                 |
| 27      | 31                         | 151                                  | 13                                  | 182                        | 928                                  | 645                                 | 14                         | 103                                  | 3.9                                 |
| 28      | 38                         | 156                                  | 16                                  | 45                         | 200                                  | 24                                  | 13                         | 86                                   | 3.0                                 |
| 29      | 37                         | 159                                  | 16                                  | 24                         | 53                                   | 3.4                                 | 12                         | 80                                   | 2.6                                 |
| 30      | 32                         | 98                                   | 8.5                                 | 12                         | 42                                   | 1.4                                 | 866                        | 1830                                 | 6870                                |
| 31      | 37                         | 78                                   | 7.8                                 | ---                        | ---                                  | ---                                 | 181                        | 999                                  | 625                                 |
| TOTAL   | 1701.00                    | ---                                  | ---                                 | 1462.7                     | ---                                  | 5926.24                             | 3387.6                     | ---                                  | 19799.12                            |
| JANUARY |                            |                                      |                                     | FEBRUARY                   |                                      |                                     |                            | MARCH                                |                                     |
| 1       | 350                        | 1980                                 | 2560                                | 46                         | 380                                  | 47                                  | 48                         | 72                                   | 9.3                                 |
| 2       | 52                         | 300                                  | 42                                  | 44                         | 168                                  | 20                                  | 48                         | 68                                   | 8.8                                 |
| 3       | 43                         | 219                                  | 25                                  | 37                         | 129                                  | 13                                  | 45                         | 46                                   | 5.6                                 |
| 4       | 44                         | 190                                  | 23                                  | 36                         | 110                                  | 11                                  | 67                         | 381                                  | 89                                  |
| 5       | 41                         | 161                                  | 18                                  | 38                         | 90                                   | 9.2                                 | 49                         | 130                                  | 17                                  |
| 6       | 41                         | 131                                  | 15                                  | 39                         | 75                                   | 7.9                                 | 42                         | 66                                   | 7.5                                 |
| 7       | 44                         | 115                                  | 14                                  | 34                         | 60                                   | 5.5                                 | 42                         | 55                                   | 6.2                                 |
| 8       | 43                         | 119                                  | 14                                  | 30                         | 29                                   | 2.3                                 | 66                         | 398                                  | 191                                 |
| 9       | 39                         | 109                                  | 11                                  | 31                         | 24                                   | 2.0                                 | 88                         | 1140                                 | 419                                 |
| 10      | 48                         | 148                                  | 19                                  | 295                        | 1720                                 | 4610                                | 52                         | 200                                  | 28                                  |
| 11      | 38                         | 111                                  | 11                                  | 631                        | 1730                                 | 4670                                | 51                         | 95                                   | 13                                  |
| 12      | 33                         | 86                                   | 7.7                                 | 118                        | 450                                  | 143                                 | 46                         | 81                                   | 10                                  |
| 13      | 31                         | 80                                   | 6.7                                 | 102                        | 400                                  | 110                                 | 44                         | 59                                   | 7.0                                 |
| 14      | 33                         | 47                                   | 4.2                                 | 91                         | 78                                   | 19                                  | 49                         | 51                                   | 6.7                                 |
| 15      | 31                         | 33                                   | 2.8                                 | 82                         | 45                                   | 10                                  | 42                         | 35                                   | 4.0                                 |
| 16      | 31                         | 32                                   | 2.7                                 | 81                         | 38                                   | 8.3                                 | 40                         | 34                                   | 3.7                                 |
| 17      | 42                         | 67                                   | 7.6                                 | 127                        | 191                                  | 82                                  | 38                         | 32                                   | 3.3                                 |
| 18      | 37                         | 62                                   | 6.2                                 | 160                        | 354                                  | 223                                 | 34                         | 29                                   | 2.7                                 |
| 19      | 34                         | 72                                   | 6.6                                 | 107                        | 261                                  | 80                                  | 32                         | 25                                   | 2.2                                 |
| 20      | 29                         | 72                                   | 5.6                                 | 77                         | 180                                  | 37                                  | 30                         | 24                                   | 1.9                                 |
| 21      | 29                         | 60                                   | 4.7                                 | 66                         | 150                                  | 27                                  | 37                         | 45                                   | 4.5                                 |
| 22      | 30                         | 57                                   | 4.6                                 | 59                         | 110                                  | 18                                  | 42                         | 110                                  | 12                                  |
| 23      | 30                         | 55                                   | 4.5                                 | 160                        | 1050                                 | 1840                                | 31                         | 82                                   | 6.9                                 |
| 24      | 33                         | 69                                   | 6.1                                 | 184                        | 1420                                 | 1290                                | 26                         | 58                                   | 4.1                                 |
| 25      | 34                         | 71                                   | 6.5                                 | 58                         | 310                                  | 49                                  | 22                         | 38                                   | 2.3                                 |
| 26      | 28                         | 72                                   | 5.4                                 | 52                         | 120                                  | 17                                  | 20                         | 28                                   | 1.5                                 |
| 27      | 29                         | 80                                   | 6.3                                 | 48                         | 98                                   | 13                                  | 23                         | 35                                   | 2.2                                 |
| 28      | 30                         | 71                                   | 5.8                                 | 46                         | 81                                   | 10                                  | 23                         | 35                                   | 2.2                                 |
| 29      | 29                         | 79                                   | 6.2                                 | ---                        | ---                                  | ---                                 | 20                         | 29                                   | 1.6                                 |
| 30      | 54                         | 725                                  | 426                                 | ---                        | ---                                  | ---                                 | 22                         | 269                                  | 31                                  |
| 31      | 196                        | 2120                                 | 1850                                | ---                        | ---                                  | ---                                 | 478                        | 2980                                 | 8280                                |
| TOTAL   | 1606                       | ---                                  | 5128.2                              | 2879                       | ---                                  | 13374.2                             | 1697                       | ---                                  | 9184.2                              |

07026400 SOUTH REELFOOT CREEK NEAR CLAYTON, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 37                         | 390                                  | 39                                  | 896                        | 4030                                 | 11900                               | 21                         | 89                                   | 5.0                                 |
| 2     | 26                         | 190                                  | 13                                  | 331                        | 1330                                 | 1980                                | 23                         | 81                                   | 5.0                                 |
| 3     | 23                         | 91                                   | 5.7                                 | 73                         | 450                                  | 89                                  | 21                         | 72                                   | 4.1                                 |
| 4     | 20                         | 85                                   | 4.6                                 | 49                         | 300                                  | 40                                  | 17                         | 52                                   | 2.4                                 |
| 5     | 34                         | 690                                  | 101                                 | 38                         | 170                                  | 17                                  | 21                         | 439                                  | 120                                 |
| 6     | 22                         | 200                                  | 12                                  | 31                         | 140                                  | 12                                  | 37                         | 790                                  | 160                                 |
| 7     | 16                         | 93                                   | 4.0                                 | 146                        | 2350                                 | 3540                                | 54                         | ---                                  | ---                                 |
| 8     | 13                         | 83                                   | 2.9                                 | 75                         | 1960                                 | 493                                 | 28                         | ---                                  | ---                                 |
| 9     | 14                         | 72                                   | 2.7                                 | 34                         | 1100                                 | 101                                 | 23                         | ---                                  | ---                                 |
| 10    | 15                         | 66                                   | 2.7                                 | 28                         | 600                                  | 45                                  | 15                         | ---                                  | ---                                 |
| 11    | 16                         | 61                                   | 2.6                                 | 27                         | 400                                  | 29                                  | 610                        | ---                                  | ---                                 |
| 12    | 16                         | 58                                   | 2.5                                 | 32                         | 825                                  | 100                                 | 69                         | ---                                  | ---                                 |
| 13    | 13                         | 52                                   | 1.8                                 | 31                         | 650                                  | 54                                  | 37                         | 610                                  | 61                                  |
| 14    | 53                         | 655                                  | 189                                 | 26                         | 850                                  | 60                                  | 22                         | 270                                  | 16                                  |
| 15    | 24                         | 552                                  | 40                                  | 48                         | 1270                                 | 244                                 | 17                         | 140                                  | 6.4                                 |
| 16    | 15                         | 97                                   | 3.9                                 | 21                         | 250                                  | 14                                  | 12                         | 100                                  | 3.2                                 |
| 17    | 10                         | 58                                   | 1.6                                 | 20                         | 170                                  | 9.2                                 | 33                         | 954                                  | 160                                 |
| 18    | 6.7                        | 49                                   | .89                                 | 21                         | 125                                  | 7.1                                 | 20                         | 400                                  | 22                                  |
| 19    | 6.4                        | 50                                   | .86                                 | 18                         | 95                                   | 4.6                                 | 5.6                        | 182                                  | 2.8                                 |
| 20    | 7.3                        | 52                                   | 1.0                                 | 19                         | 65                                   | 3.3                                 | 4.4                        | 155                                  | 1.8                                 |
| 21    | 4.2                        | 45                                   | .51                                 | 21                         | 45                                   | 2.6                                 | 5.6                        | 120                                  | 1.8                                 |
| 22    | 5.4                        | 41                                   | .60                                 | 266                        | 2520                                 | 2610                                | 32                         | 1110                                 | 150                                 |
| 23    | 49                         | 1070                                 | 747                                 | 51                         | 590                                  | 81                                  | 1.8                        | 350                                  | 1.7                                 |
| 24    | 57                         | 1200                                 | 394                                 | 30                         | 341                                  | 28                                  | 1.1                        | 190                                  | .56                                 |
| 25    | 25                         | 190                                  | 13                                  | 22                         | 291                                  | 17                                  | 1.4                        | 170                                  | .64                                 |
| 26    | 23                         | 190                                  | 12                                  | 17                         | 242                                  | 11                                  | 2.4                        | 150                                  | .97                                 |
| 27    | 165                        | 1600                                 | 1010                                | 15                         | 195                                  | 7.9                                 | 8.9                        | 321                                  | 23                                  |
| 28    | 56                         | 445                                  | 76                                  | 14                         | 152                                  | 5.7                                 | 10                         | 634                                  | 30                                  |
| 29    | 32                         | 180                                  | 16                                  | 14                         | 130                                  | 4.9                                 | 1.3                        | 400                                  | 1.4                                 |
| 30    | 26                         | 180                                  | 13                                  | 18                         | 109                                  | 5.3                                 | 8.1                        | 569                                  | 27                                  |
| 31    | ---                        | ---                                  | ---                                 | 21                         | 96                                   | 5.4                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 830.0                      | ---                                  | 2713.86                             | 2453                       | ---                                  | 21521.0                             | 1162.6                     | ---                                  | ---                                 |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 19                         | 905                                  | 150                                 | 2.9                        | 135                                  | 1.1                                 | 2.5                        | 71                                   | .48                                 |
| 2     | 11                         | 632                                  | 32                                  | 4.5                        | 121                                  | 1.5                                 | 1.6                        | 60                                   | .26                                 |
| 3     | .59                        | 300                                  | .48                                 | 3.3                        | 105                                  | .94                                 | 1.0                        | 50                                   | .14                                 |
| 4     | 2.0                        | 200                                  | 1.1                                 | 3.4                        | 88                                   | .81                                 | 4.2                        | 70                                   | .79                                 |
| 5     | 403                        | 1800                                 | 7980                                | 182                        | 3240                                 | 3240                                | 294                        | 2240                                 | 3100                                |
| 6     | 491                        | 4070                                 | 7690                                | 45                         | 1300                                 | 158                                 | 41                         | 340                                  | 38                                  |
| 7     | 129                        | 800                                  | 279                                 | 5.0                        | 1100                                 | 15                                  | 18                         | 140                                  | 6.8                                 |
| 8     | 30                         | 410                                  | 33                                  | 2.8                        | 950                                  | 7.2                                 | 11                         | 120                                  | 3.6                                 |
| 9     | 16                         | 275                                  | 12                                  | 3.6                        | 790                                  | 7.7                                 | 5.9                        | 100                                  | 1.6                                 |
| 10    | 40                         | 2040                                 | 599                                 | 33                         | 1800                                 | 278                                 | 3.9                        | 85                                   | .90                                 |
| 11    | 48                         | 1250                                 | 194                                 | 6.6                        | 600                                  | 11                                  | 3.2                        | 95                                   | .82                                 |
| 12    | 27                         | 450                                  | 33                                  | .32                        | 191                                  | .17                                 | .51                        | 51                                   | .07                                 |
| 13    | 7.3                        | 350                                  | 6.9                                 | .50                        | 179                                  | .24                                 | 2.6                        | 32                                   | .22                                 |
| 14    | 1.7                        | 250                                  | 1.1                                 | .51                        | 162                                  | .22                                 | 2.1                        | 29                                   | .16                                 |
| 15    | 37                         | 1860                                 | 803                                 | 119                        | 2800                                 | 2070                                | 1.9                        | 29                                   | .15                                 |
| 16    | 48                         | 2080                                 | 444                                 | 236                        | 3780                                 | 4340                                | 2.1                        | 26                                   | .15                                 |
| 17    | 4.4                        | 500                                  | 5.9                                 | 22                         | 600                                  | 36                                  | 2.8                        | 29                                   | .22                                 |
| 18    | 3.0                        | 212                                  | 1.7                                 | 8.6                        | 400                                  | 9.3                                 | 3.2                        | 33                                   | .29                                 |
| 19    | 2.8                        | 195                                  | 1.5                                 | 4.1                        | 250                                  | 2.8                                 | 3.0                        | 40                                   | .32                                 |
| 20    | 2.6                        | 178                                  | 1.2                                 | 88                         | 2500                                 | 1190                                | 3.4                        | 48                                   | .44                                 |
| 21    | 2.1                        | 155                                  | .88                                 | 10                         | 225                                  | 6.1                                 | 3.0                        | 41                                   | .33                                 |
| 22    | 1.9                        | 130                                  | .67                                 | 4.3                        | 93                                   | 1.1                                 | 3.0                        | 39                                   | .32                                 |
| 23    | 1.2                        | 105                                  | .34                                 | 106                        | 1640                                 | 813                                 | 3.4                        | 38                                   | .35                                 |
| 24    | 1.2                        | 80                                   | .26                                 | 542                        | 2870                                 | 7790                                | 2.1                        | 38                                   | .22                                 |
| 25    | .41                        | 56                                   | .06                                 | 146                        | 2420                                 | 1220                                | 3.2                        | 40                                   | .35                                 |
| 26    | 8.2                        | 426                                  | 20                                  | 43                         | 800                                  | 93                                  | 8.4                        | 85                                   | 1.9                                 |
| 27    | 9.8                        | 400                                  | 11                                  | 20                         | 500                                  | 27                                  | 3.2                        | 61                                   | .53                                 |
| 28    | 1.9                        | 190                                  | .97                                 | 12                         | 300                                  | 9.7                                 | 3.0                        | 58                                   | .47                                 |
| 29    | 1.7                        | 178                                  | .82                                 | 7.6                        | 100                                  | 2.1                                 | 3.9                        | 53                                   | .56                                 |
| 30    | 3.1                        | 165                                  | 1.4                                 | 5.0                        | 84                                   | 1.1                                 | 12                         | 95                                   | 3.1                                 |
| 31    | 2.2                        | 151                                  | .90                                 | 1.7                        | 80                                   | .37                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 1357.10                    | ---                                  | 18306.18                            | 1668.73                    | ---                                  | 21333.45                            | 453.11                     | ---                                  | 3163.54                             |



## OBION RIVER BASIN

07026640 RUNNING SLOUGH NEAR LEDFORD, KY

LOCATION.--Lat 36°32'28", long 89°18'59", Fulton County, Hydrologic Unit 08010202, on county road on the right bank, 1.1 mi northwest of Ledford.

DRAINAGE AREA.--10.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Sept. 12-19. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 278 ft<sup>3</sup>/s, May 7, 1984, gage height, 8.86 ft; maximum gage height, 8.98 ft May 19, 1983; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date  | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|-------|------|-----------------------------------|---------------------|
| Dec. 21 | 2015 | 155                               | 7.84                | May 2 | 0015 | 169                               | 7.94                |
| Apr. 27 | 2030 | *230                              | *8.41               |       |      |                                   |                     |

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR    | MAY    | JUN   | JUL   | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-----|-----|
| 1     | .00   | .00   | 11    | 86    | 7.2   | 13    | 38     | 164    | .00   | 3.2   | .00 | .00 |
| 2     | .00   | .00   | 9.8   | 67    | 8.7   | 19    | 25     | 157    | .00   | 41    | .00 | .00 |
| 3     | .00   | .00   | 9.6   | 51    | 6.3   | 24    | 15     | 113    | .00   | 11    | .00 | .00 |
| 4     | .00   | .00   | 10    | 41    | 5.7   | 30    | 12     | 79     | .00   | .40   | .00 | .00 |
| 5     | .00   | .00   | 11    | 39    | 5.9   | 36    | 15     | 58     | .00   | .00   | .00 | .00 |
| 6     | .00   | .00   | 11    | 39    | 6.2   | 37    | 20     | 40     | .00   | .65   | .00 | .00 |
| 7     | .00   | .00   | 10    | 41    | 6.0   | 37    | 24     | 25     | .00   | 8.8   | .00 | .00 |
| 8     | .00   | .00   | 10    | 42    | 4.8   | 40    | 22     | 13     | .00   | 2.3   | .00 | .00 |
| 9     | .00   | .00   | 9.5   | 40    | 3.9   | 54    | 21     | 5.3    | .00   | .19   | .00 | .00 |
| 10    | .00   | .00   | 9.2   | 38    | 8.4   | 53    | 21     | 2.4    | .00   | .00   | .00 | .00 |
| 11    | .00   | .00   | 8.6   | 35    | 57    | 51    | 22     | 1.3    | 6.1   | .00   | .00 | .00 |
| 12    | .00   | .00   | 7.8   | 25    | 59    | 48    | 22     | 1.9    | 24    | .00   | .00 | .00 |
| 13    | .00   | .00   | 7.6   | 18    | 50    | 45    | 20     | 3.0    | 13    | .00   | .00 | .00 |
| 14    | .00   | .00   | 8.2   | 14    | 39    | 45    | 33     | 1.5    | 2.6   | .00   | .00 | .00 |
| 15    | .00   | .00   | 9.7   | 12    | 30    | 43    | 57     | 1.5    | .05   | .00   | .00 | .00 |
| 16    | .49   | .00   | 9.6   | 10    | 22    | 39    | 46     | 13     | .00   | .00   | .00 | .00 |
| 17    | 17    | .00   | 6.8   | 10    | 22    | 36    | 34     | 8.4    | 1.3   | .00   | .00 | .00 |
| 18    | 15    | 1.4   | 5.3   | 14    | 38    | 32    | 23     | 1.8    | 7.3   | .00   | .00 | .00 |
| 19    | 11    | 2.4   | 23    | 15    | 49    | 34    | 13     | .04    | 5.3   | .00   | .00 | .00 |
| 20    | 6.1   | 1.5   | 20    | 7.9   | 52    | 31    | 7.6    | .00    | 1.2   | .00   | .00 | .00 |
| 21    | 16    | .09   | 101   | 4.5   | 45    | 29    | 3.6    | .00    | .07   | .00   | .00 | .00 |
| 22    | 9.0   | .00   | 137   | 3.9   | 34    | 34    | 3.3    | 14     | .31   | .00   | .00 | .00 |
| 23    | 3.4   | .00   | 94    | 3.9   | 28    | 35    | 9.7    | 25     | .94   | .00   | .00 | .00 |
| 24    | .49   | .00   | 68    | 4.2   | 53    | 30    | 67     | 14     | 1.5   | .00   | .00 | .00 |
| 25    | .00   | .00   | 52    | 4.9   | 39    | 23    | 45     | 4.4    | .56   | .00   | .00 | .00 |
| 26    | .00   | .00   | 39    | 4.2   | 24    | 16    | 28     | .66    | .00   | .00   | .00 | .00 |
| 27    | .00   | 3.5   | 29    | 3.6   | 12    | 9.7   | 145    | .13    | .00   | .00   | .00 | .00 |
| 28    | .00   | 11    | 20    | 3.1   | 7.9   | 9.6   | 208    | .00    | .00   | .00   | .00 | .00 |
| 29    | .00   | 17    | 14    | 2.6   | ---   | 7.7   | 154    | .00    | .00   | .00   | .00 | .00 |
| 30    | .00   | 14    | 57    | 2.9   | ---   | 5.5   | 122    | .00    | .00   | .00   | .00 | .00 |
| 31    | .00   | ---   | 85    | 6.4   | ---   | 33    | ---    | .00    | ---   | .00   | .00 | --- |
| TOTAL | 78.48 | 50.89 | 903.7 | 689.1 | 724.0 | 979.5 | 1276.2 | 747.33 | 64.23 | 67.54 | .00 | .00 |
| MEAN  | 2.53  | 1.70  | 29.2  | 22.2  | 25.9  | 31.6  | 42.5   | 24.1   | 2.14  | 2.18  | .00 | .00 |
| MAX   | 17    | 17    | 137   | 86    | 59    | 54    | 208    | 164    | 24    | 41    | .00 | .00 |
| MIN   | .00   | .00   | 5.3   | 2.6   | 3.9   | 5.5   | 3.3    | .00    | .00   | .00   | .00 | .00 |
| CFSM  | .23   | .16   | 2.70  | 2.06  | 2.40  | 2.93  | 3.94   | 2.23   | .20   | .20   | .00 | .00 |
| IN.   | .27   | .18   | 3.11  | 2.37  | 2.49  | 3.37  | 4.40   | 2.57   | .22   | .23   | .00 | .00 |

WTR YR 1985 TOTAL 5580.97 MEAN 15.3 MAX 208 MIN .00 CFSM 1.42 IN. 19.22

07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: JULY 1982 to October 1983, April 1984 to current year.

INSTRUMENTATION.--Sediment pumping sampler July 1982 to October 1983, April 1984 to current year.

REMARKS.--No flow many days.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,070 mg/L, April 24, 1985; minimum daily mean, 0 mg/L, many days each year.

SEDIMENT LOADS: Maximum daily, 453 tons, May 1, 1985; minimum daily, 0 ton, many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,070 mg/L, April 24; minimum daily mean, 0 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 453 tons, May 1; minimum daily, 0 ton, many days.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|-------|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| OCT   |      |   |   |                             | MAR   |      |   |   |                             |
| 19... | 1400 | 12  | 160   | 18.5                        | 05... | 1100 | 37  | 440   | 10.0                        |
| NOV   |      |   |   |                             | 14... | 1450 | 46  | 430   | 13.0                        |
| 29... | 1655 | 17  | 420   | 8.5                         | 21... | 1100 | 29  | 450   | 11.0                        |
| DEC   |      |   |   |                             | 27... | 0900 | 12  | 500   | 12.0                        |
| 06... | 1145 | 11  | 360   | 2.0                         | APR   |      |   |   |                             |
| 28... | 1240 | 21  | 335   | 12.0                        | 05... | 1400 | 15  | 520   | 17.0                        |
| JAN   |      |   |   |                             | 11... | 1430 | 22  | 380   | 14.0                        |
| 08... | 1315 | 41  | 420   | 2.0                         | 16... | 1330 | 46  | 365   | 17.0                        |
| 14... | 1315 | 14  | 580   | 2.0                         | MAY   |      |   |   |                             |
| FEB   |      |   |   |                             | 07... | 1815 | 21  | 300   | 22.0                        |
| 13... | 1345 | 50  | 220   | .0                          | 16... | 1515 | 16  | 350   | 20.0                        |
| 21... | 1510 | 43  | 120   | 4.0                         | 23... | 1155 | 27  | 340   | 17.0                        |
| 27... | 0900 | 13  | 390   | 8.0                         | JUL   |      |   |   |                             |
|       |      |   |   |                             | 03... | 0900 | 13  | 110   | 22.0                        |

## OBION RIVER BASIN

07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER |                            |                                      | NOVEMBER                            |                            |                                      | DECEMBER                            |                            |                                      |                                     |
| 1       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 11                         | 18                                   | .53                                 |
| 2       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 9.8                        | 12                                   | .32                                 |
| 3       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 9.6                        | 12                                   | .31                                 |
| 4       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 10                         | 18                                   | .49                                 |
| 5       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 11                         | 21                                   | .62                                 |
| 6       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 11                         | 20                                   | .59                                 |
| 7       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 10                         | 19                                   | .51                                 |
| 8       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 10                         | 19                                   | .51                                 |
| 9       | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 9.5                        | 18                                   | .46                                 |
| 10      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 9.2                        | 18                                   | .45                                 |
| 11      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 8.6                        | 18                                   | .42                                 |
| 12      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 7.8                        | 17                                   | .36                                 |
| 13      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 7.6                        | 18                                   | .37                                 |
| 14      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 8.2                        | 21                                   | .46                                 |
| 15      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 9.7                        | 25                                   | .65                                 |
| 16      | .49                        | 45                                   | .17                                 | .00                        | 0                                    | .00                                 | 9.6                        | 27                                   | .70                                 |
| 17      | 17                         | 146                                  | 6.5                                 | .00                        | 0                                    | .00                                 | 6.8                        | 22                                   | .40                                 |
| 18      | 15                         | 109                                  | 4.4                                 | 1.4                        | 15                                   | .06                                 | 5.3                        | 48                                   | .69                                 |
| 19      | 11                         | 110                                  | 3.3                                 | 2.4                        | 52                                   | .34                                 | 23                         | 219                                  | 14                                  |
| 20      | 6.1                        | 90                                   | 1.5                                 | 1.5                        | 45                                   | .18                                 | 20                         | 165                                  | 8.9                                 |
| 21      | 16                         | 129                                  | 5.6                                 | .09                        | 29                                   | .00                                 | 101                        | 336                                  | 95                                  |
| 22      | 9.0                        | 108                                  | 2.6                                 | .00                        | 0                                    | .00                                 | 137                        | 284                                  | 105                                 |
| 23      | 3.4                        | 69                                   | .63                                 | .00                        | 0                                    | .00                                 | 94                         | 109                                  | 28                                  |
| 24      | .49                        | 25                                   | .03                                 | .00                        | 0                                    | .00                                 | 68                         | 101                                  | 19                                  |
| 25      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 52                         | 69                                   | 9.7                                 |
| 26      | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | 39                         | 58                                   | 6.1                                 |
| 27      | .00                        | 0                                    | .00                                 | 3.5                        | 30                                   | .28                                 | 29                         | 48                                   | 3.8                                 |
| 28      | .00                        | 0                                    | .00                                 | 11                         | 43                                   | 1.3                                 | 20                         | 39                                   | 2.1                                 |
| 29      | .00                        | 0                                    | .00                                 | 17                         | 27                                   | 1.2                                 | 14                         | 30                                   | 1.1                                 |
| 30      | .00                        | 0                                    | .00                                 | 14                         | 20                                   | .76                                 | 57                         | 179                                  | 36                                  |
| 31      | .00                        | 0                                    | .00                                 | ---                        | ---                                  | ---                                 | 85                         | 279                                  | 64                                  |
| TOTAL   | 78.48                      | ---                                  | 24.73                               | 50.89                      | ---                                  | 4.12                                | 903.7                      | ---                                  | 401.54                              |
| JANUARY |                            |                                      | FEBRUARY                            |                            |                                      | MARCH                               |                            |                                      |                                     |
| 1       | 86                         | 172                                  | 40                                  | 7.2                        | 140                                  | 2.7                                 | 13                         | 36                                   | 1.3                                 |
| 2       | 67                         | 108                                  | 20                                  | 8.7                        | 145                                  | 3.4                                 | 19                         | 49                                   | 2.5                                 |
| 3       | 51                         | 72                                   | 9.9                                 | 6.3                        | 128                                  | 2.2                                 | 24                         | 58                                   | 3.8                                 |
| 4       | 41                         | 45                                   | 5.0                                 | 5.7                        | 112                                  | 1.8                                 | 30                         | 30                                   | 2.4                                 |
| 5       | 39                         | 31                                   | 3.3                                 | 5.9                        | 104                                  | 1.7                                 | 36                         | 38                                   | 3.7                                 |
| 6       | 39                         | 28                                   | 2.9                                 | 6.2                        | 95                                   | 1.6                                 | 37                         | 38                                   | 3.8                                 |
| 7       | 41                         | 25                                   | 2.8                                 | 6.0                        | 91                                   | 1.5                                 | 37                         | 35                                   | 3.5                                 |
| 8       | 42                         | 23                                   | 2.6                                 | 4.8                        | 88                                   | 1.1                                 | 40                         | 58                                   | 6.3                                 |
| 9       | 40                         | 22                                   | 2.4                                 | 3.9                        | 82                                   | .89                                 | 54                         | 138                                  | 20                                  |
| 10      | 38                         | 23                                   | 2.4                                 | 8.4                        | 91                                   | 2.1                                 | 53                         | 110                                  | 16                                  |
| 11      | 35                         | 24                                   | 2.3                                 | 57                         | 161                                  | 25                                  | 51                         | 85                                   | 12                                  |
| 12      | 25                         | 26                                   | 1.8                                 | 59                         | 90                                   | 14                                  | 48                         | 65                                   | 8.4                                 |
| 13      | 18                         | 28                                   | 1.4                                 | 50                         | 30                                   | 4.1                                 | 45                         | 50                                   | 6.1                                 |
| 14      | 14                         | 28                                   | 1.1                                 | 39                         | 18                                   | 1.9                                 | 45                         | 19                                   | 2.3                                 |
| 15      | 12                         | 25                                   | .81                                 | 30                         | 15                                   | 1.2                                 | 43                         | 18                                   | 2.1                                 |
| 16      | 10                         | 23                                   | .62                                 | 22                         | 13                                   | .77                                 | 39                         | 17                                   | 1.8                                 |
| 17      | 10                         | 18                                   | .49                                 | 22                         | 20                                   | 1.2                                 | 36                         | 14                                   | 1.4                                 |
| 18      | 14                         | 30                                   | 1.1                                 | 38                         | 52                                   | 5.3                                 | 32                         | 19                                   | 1.6                                 |
| 19      | 15                         | 41                                   | 1.7                                 | 49                         | 55                                   | 7.3                                 | 34                         | 72                                   | 6.6                                 |
| 20      | 7.9                        | 29                                   | .62                                 | 52                         | 40                                   | 5.6                                 | 31                         | 60                                   | 5.0                                 |
| 21      | 4.5                        | 28                                   | .34                                 | 45                         | 25                                   | 3.0                                 | 29                         | 47                                   | 3.7                                 |
| 22      | 3.9                        | 25                                   | .26                                 | 34                         | 18                                   | 1.7                                 | 34                         | 89                                   | 8.2                                 |
| 23      | 3.9                        | 26                                   | .27                                 | 28                         | 60                                   | 4.5                                 | 35                         | 117                                  | 11                                  |
| 24      | 4.2                        | 29                                   | .33                                 | 53                         | 466                                  | 69                                  | 30                         | 100                                  | 8.1                                 |
| 25      | 4.9                        | 28                                   | .37                                 | 39                         | 225                                  | 24                                  | 23                         | 84                                   | 5.2                                 |
| 26      | 4.2                        | 29                                   | .33                                 | 24                         | 90                                   | 5.8                                 | 16                         | 71                                   | 3.1                                 |
| 27      | 3.6                        | 28                                   | .27                                 | 12                         | 50                                   | 1.6                                 | 9.7                        | 60                                   | 1.6                                 |
| 28      | 3.1                        | 24                                   | .20                                 | 7.9                        | 30                                   | .64                                 | 9.6                        | 45                                   | 1.2                                 |
| 29      | 2.6                        | 25                                   | .18                                 | ---                        | ---                                  | ---                                 | 7.7                        | 30                                   | .62                                 |
| 30      | 2.9                        | 25                                   | .20                                 | ---                        | ---                                  | ---                                 | 5.5                        | 23                                   | .34                                 |
| 31      | 6.4                        | 120                                  | 2.1                                 | ---                        | ---                                  | ---                                 | 33                         | 168                                  | 15                                  |
| TOTAL   | 689.1                      | ---                                  | 108.09                              | 724.0                      | ---                                  | 195.60                              | 979.5                      | ---                                  | 168.66                              |

07026640 RUNNING SLOUGH NEAR LEDFORD, KY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL |                            |                                      | MAY                                 |                            |                                      | JUNE                                |                            |                                      |                                     |
| 1     | 38                         | 189                                  | 19                                  | 164                        | 1060                                 | 453                                 | .00                        | 0                                    | .00                                 |
| 2     | 25                         | 160                                  | 11                                  | 157                        | 550                                  | 233                                 | .00                        | 0                                    | .00                                 |
| 3     | 15                         | 133                                  | 5.4                                 | 113                        | 370                                  | 113                                 | .00                        | 0                                    | .00                                 |
| 4     | 12                         | 113                                  | 3.7                                 | 79                         | 225                                  | 48                                  | .00                        | 0                                    | .00                                 |
| 5     | 15                         | 108                                  | 4.4                                 | 58                         | 175                                  | 27                                  | .00                        | 0                                    | .00                                 |
| 6     | 20                         | 95                                   | 5.1                                 | 40                         | 122                                  | 13                                  | .00                        | 0                                    | .00                                 |
| 7     | 24                         | 85                                   | 5.5                                 | 25                         | 115                                  | 7.8                                 | .00                        | 0                                    | .00                                 |
| 8     | 22                         | 75                                   | 4.5                                 | 13                         | 105                                  | 3.7                                 | .00                        | 0                                    | .00                                 |
| 9     | 21                         | 69                                   | 3.9                                 | 5.3                        | 93                                   | 1.3                                 | .00                        | 0                                    | .00                                 |
| 10    | 21                         | 65                                   | 3.7                                 | 2.4                        | 82                                   | .53                                 | .00                        | 0                                    | .00                                 |
| 11    | 22                         | 63                                   | 3.7                                 | 1.3                        | 70                                   | .25                                 | 6.1                        | 96                                   | 3.0                                 |
| 12    | 22                         | 58                                   | 3.4                                 | 1.9                        | 75                                   | .38                                 | 24                         | 239                                  | 15                                  |
| 13    | 20                         | 51                                   | 2.8                                 | 3.0                        | 65                                   | .53                                 | 13                         | 245                                  | 8.6                                 |
| 14    | 33                         | 109                                  | 9.7                                 | 1.5                        | 53                                   | .21                                 | 2.6                        | 188                                  | 1.3                                 |
| 15    | 57                         | 119                                  | 18                                  | 1.5                        | 44                                   | .18                                 | .05                        | 85                                   | .01                                 |
| 16    | 46                         | 99                                   | 12                                  | 13                         | 112                                  | 3.9                                 | .00                        | 0                                    | .00                                 |
| 17    | 34                         | 82                                   | 7.5                                 | 8.4                        | 70                                   | 1.6                                 | 1.3                        | 50                                   | 1.19                                |
| 18    | 23                         | 66                                   | 4.1                                 | 1.8                        | 41                                   | .20                                 | 7.3                        | 141                                  | 2.8                                 |
| 19    | 13                         | 53                                   | 1.9                                 | .04                        | 15                                   | .00                                 | 5.3                        | 98                                   | 1.4                                 |
| 20    | 7.6                        | 41                                   | .84                                 | .00                        | 0                                    | .00                                 | 1.2                        | 40                                   | .13                                 |
| 21    | 3.6                        | 32                                   | .31                                 | .00                        | 0                                    | .00                                 | .07                        | 9                                    | .00                                 |
| 22    | 3.3                        | 28                                   | .25                                 | 14                         | 262                                  | 14                                  | .31                        | 29                                   | .02                                 |
| 23    | 9.7                        | 134                                  | 10                                  | 25                         | 280                                  | 19                                  | .94                        | 40                                   | .10                                 |
| 24    | 67                         | 1070                                 | 194                                 | 14                         | 200                                  | 7.6                                 | 1.5                        | 63                                   | .26                                 |
| 25    | 45                         | 760                                  | 92                                  | 4.4                        | 125                                  | 1.5                                 | .56                        | 40                                   | .06                                 |
| 26    | 28                         | 440                                  | 33                                  | .66                        | 40                                   | .07                                 | .00                        | 0                                    | .00                                 |
| 27    | 145                        | 837                                  | 342                                 | .13                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 28    | 208                        | 600                                  | 337                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 29    | 154                        | 300                                  | 125                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 30    | 122                        | 429                                  | 156                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 31    | ---                        | ---                                  | ---                                 | .00                        | 0                                    | .00                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 1276.2                     | ---                                  | 1419.70                             | 747.33                     | ---                                  | 949.75                              | 64.23                      | ---                                  | 32.87                               |
| JULY  |                            |                                      | AUGUST                              |                            |                                      | SEPTEMBER                           |                            |                                      |                                     |
| 1     | 3.2                        | 50                                   | .43                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 2     | 41                         | 558                                  | 62                                  | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 3     | 11                         | 285                                  | 8.5                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 4     | .40                        | 80                                   | .09                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 5     | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 6     | .65                        | 74                                   | .50                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 7     | 8.8                        | 154                                  | 3.6                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 8     | 2.3                        | 130                                  | .84                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 9     | .19                        | 35                                   | .02                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 10    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 11    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 12    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 13    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 14    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 15    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 16    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 17    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 18    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 19    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 20    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 21    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 22    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 23    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 24    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 25    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 26    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 27    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 28    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 29    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 30    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 |
| 31    | .00                        | 0                                    | .00                                 | .00                        | 0                                    | .00                                 | ---                        | ---                                  | ---                                 |
| TOTAL | 67.54                      | ---                                  | 75.98                               | 0.00                       | ---                                  | 0.00                                | 0.00                       | ---                                  | 0.00                                |

TOTAL LOAD FOR YEAR: 3381.04



## OBION RIVER BASIN

07026690 REELFOOT LAKE NEAR PHILLIPPY, TN

LOCATION.--Lat 36°27'59", long 89°20'56", Lake County, Hydrologic Unit 08010202, 1.85 mi southeast of Phillippy and 3.0 mi northeast of New Markham.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No record: Oct. 1-2, 5-8. Records good. Lake level was lowered manually beginning May 27, 1985. Manual lowering of lake stopped July 9, 1985.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.85 ft, May 8, 1984; minimum, 9.71 ft, Aug. 2, 3, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.42 ft, Jan. 1; minimum, 9.71 ft, Aug. 2, 3.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN   | MEAN  | MAX      | MIN   | MEAN  | MAX      | MIN   | MEAN  | MAX     | MIN   | MEAN  |
|-------|---------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|
|       | OCTOBER |       |       | NOVEMBER |       |       | DECEMBER |       |       | JANUARY |       |       |
| 1     | ---     | ---   | ---   | 12.00    | 11.88 | 11.93 | 12.07    | 12.04 | 12.05 | 13.42   | 13.36 | 13.40 |
| 2     | ---     | ---   | ---   | 11.93    | 11.87 | 11.89 | 12.07    | 12.02 | 12.04 | 13.36   | 13.27 | 13.31 |
| 3     | 10.06   | 10.05 | 10.06 | 11.91    | 11.89 | 11.90 | 12.01    | 12.01 | 12.01 | 13.27   | 13.20 | 13.24 |
| 4     | 10.05   | 10.04 | 10.05 | 11.91    | 11.90 | 11.91 | 12.01    | 11.96 | 11.98 | 13.27   | 13.20 | 13.23 |
| 5     | ---     | ---   | ---   | 11.90    | 11.84 | 11.87 | 11.98    | 11.94 | 11.96 | 13.20   | 13.10 | 13.14 |
| 6     | ---     | ---   | ---   | 11.84    | 11.82 | 11.83 | 12.00    | 11.97 | 11.99 | 13.09   | 13.02 | 13.05 |
| 7     | ---     | ---   | ---   | 11.84    | 11.82 | 11.83 | 12.05    | 12.00 | 12.03 | 13.02   | 12.93 | 12.97 |
| 8     | ---     | ---   | ---   | 11.84    | 11.82 | 11.83 | 12.04    | 12.02 | 12.03 | 12.93   | 12.89 | 12.91 |
| 9     | 11.20   | 11.19 | 11.20 | 11.90    | 11.84 | 11.88 | 12.04    | 12.01 | 12.02 | 12.89   | 12.87 | 12.88 |
| 10    | 11.19   | 11.17 | 11.18 | 11.91    | 11.85 | 11.88 | 12.05    | 12.01 | 12.03 | 12.88   | 12.82 | 12.86 |
| 11    | 11.20   | 11.19 | 11.20 | 11.86    | 11.80 | 11.83 | 12.03    | 12.01 | 12.01 | 12.81   | 12.70 | 12.76 |
| 12    | 11.20   | 11.19 | 11.19 | 11.80    | 11.79 | 11.79 | 12.08    | 12.04 | 12.06 | 12.70   | 12.62 | 12.66 |
| 13    | 11.20   | 11.16 | 11.19 | 11.80    | 11.79 | 11.79 | 12.08    | 12.06 | 12.06 | 12.62   | 12.53 | 12.58 |
| 14    | 11.19   | 11.18 | 11.19 | 11.84    | 11.80 | 11.82 | 12.08    | 12.07 | 12.07 | 12.53   | 12.44 | 12.49 |
| 15    | 11.23   | 11.18 | 11.21 | 11.87    | 11.82 | 11.85 | 12.07    | 12.05 | 12.06 | 12.44   | 12.33 | 12.38 |
| 16    | 11.34   | 11.21 | 11.24 | 11.82    | 11.79 | 11.80 | 12.10    | 12.07 | 12.08 | 12.33   | 12.24 | 12.27 |
| 17    | 11.34   | 11.32 | 11.33 | 11.82    | 11.79 | 11.80 | 12.12    | 12.04 | 12.06 | 12.24   | 12.16 | 12.20 |
| 18    | 11.43   | 11.35 | 11.38 | 11.98    | 11.82 | 11.91 | 12.42    | 12.11 | 12.21 | 12.16   | 12.10 | 12.13 |
| 19    | 11.49   | 11.45 | 11.49 | 12.14    | 12.00 | 12.10 | 12.60    | 12.44 | 12.54 | 12.10   | 12.06 | 12.08 |
| 20    | 11.66   | 11.49 | 11.55 | 12.14    | 12.12 | 12.13 | 12.68    | 12.59 | 12.61 | 12.08   | 12.07 | 12.08 |
| 21    | 11.77   | 11.67 | 11.71 | 12.12    | 12.07 | 12.09 | 13.08    | 12.70 | 12.89 | 12.07   | 11.95 | 12.00 |
| 22    | 11.81   | 11.77 | 11.79 | 12.07    | 12.03 | 12.04 | 13.12    | 13.08 | 13.11 | 11.95   | 11.91 | 11.92 |
| 23    | 11.81   | 11.79 | 11.80 | 12.02    | 11.98 | 12.00 | 13.11    | 13.05 | 13.08 | 11.91   | 11.85 | 11.88 |
| 24    | 11.82   | 11.81 | 11.82 | 11.98    | 11.93 | 11.95 | 13.05    | 12.98 | 13.03 | 11.85   | 11.83 | 11.83 |
| 25    | 11.82   | 11.82 | 11.82 | 11.93    | 11.88 | 11.91 | 12.98    | 12.96 | 12.97 | 11.83   | 11.79 | 11.81 |
| 26    | 11.82   | 11.81 | 11.81 | 11.91    | 11.87 | 11.89 | 12.96    | 12.93 | 12.94 | 11.79   | 11.74 | 11.76 |
| 27    | 11.84   | 11.81 | 11.83 | 12.03    | 11.90 | 11.97 | 12.92    | 12.88 | 12.90 | 11.74   | 11.73 | 11.73 |
| 28    | 11.84   | 11.82 | 11.83 | 12.11    | 12.03 | 12.08 | 12.92    | 12.88 | 12.90 | 11.73   | 11.70 | 11.71 |
| 29    | 11.83   | 11.83 | 11.83 | 12.13    | 12.11 | 12.12 | 12.92    | 12.89 | 12.90 | 11.70   | 11.70 | 11.70 |
| 30    | 11.86   | 11.83 | 11.85 | 12.11    | 12.07 | 12.09 | 13.18    | 12.88 | 13.03 | 11.78   | 11.70 | 11.72 |
| 31    | 11.88   | 11.85 | 11.86 | ---      | ---   | ---   | 13.38    | 13.19 | 13.28 | 11.80   | 11.78 | 11.79 |
| MONTH | ---     | ---   | ---   | 12.14    | 11.79 | 11.92 | 13.38    | 11.94 | 12.42 | 13.42   | 11.70 | 12.40 |

## OBION RIVER BASIN

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07026690 REELFOOT LAKE NEAR PHILLIPPY, TN--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX   | MIN   | MEAN  | MAX   | MIN   | MEAN   | MAX   | MIN   | MEAN      | MAX   | MIN   | MEAN  |
|----------|-------|-------|-------|-------|-------|--------|-------|-------|-----------|-------|-------|-------|
| FEBRUARY |       |       | MARCH |       |       | APRIL  |       |       | MAY       |       |       |       |
| 1        | 11.81 | 11.80 | 11.81 | 12.10 | 12.04 | 12.07  | 12.36 | 12.33 | 12.35     | 12.80 | 12.57 | 12.65 |
| 2        | 11.92 | 11.81 | 11.87 | 12.04 | 11.95 | 11.99  | 12.33 | 12.28 | 12.30     | 12.99 | 12.81 | 12.93 |
| 3        | 11.93 | 11.92 | 11.93 | 11.95 | 11.89 | 11.92  | 12.29 | 12.25 | 12.28     | 12.99 | 12.88 | 12.94 |
| 4        | 11.96 | 11.93 | 11.95 | 11.93 | 11.89 | 11.92  | 12.33 | 12.26 | 12.30     | 12.88 | 12.77 | 12.83 |
| 5        | 12.00 | 11.97 | 11.98 | 11.89 | 11.84 | 11.87  | 12.36 | 12.31 | 12.33     | 12.76 | 12.66 | 12.71 |
| 6        | 12.01 | 12.00 | 12.01 | 11.84 | 11.79 | 11.81  | 12.31 | 12.23 | 12.27     | 12.66 | 12.54 | 12.60 |
| 7        | 12.04 | 12.01 | 12.03 | 11.82 | 11.78 | 11.80  | 12.23 | 12.17 | 12.19     | 12.53 | 12.43 | 12.47 |
| 8        | 12.05 | 12.04 | 12.04 | 11.86 | 11.81 | 11.83  | 12.17 | 12.12 | 12.14     | 12.43 | 12.34 | 12.39 |
| 9        | 12.06 | 12.05 | 12.06 | 11.98 | 11.86 | 11.91  | 12.12 | 12.08 | 12.10     | 12.34 | 12.24 | 12.29 |
| 10       | 12.18 | 12.06 | 12.10 | 12.06 | 11.98 | 12.02  | 12.09 | 12.07 | 12.08     | 12.24 | 12.18 | 12.20 |
| 11       | 12.51 | 12.19 | 12.34 | 12.15 | 12.06 | 12.11  | 12.07 | 12.05 | 12.06     | 12.18 | 12.14 | 12.16 |
| 12       | 12.58 | 12.52 | 12.56 | 12.11 | 12.07 | 12.08  | 12.05 | 12.02 | 12.03     | 12.16 | 12.12 | 12.15 |
| 13       | 12.58 | 12.53 | 12.56 | 12.10 | 12.07 | 12.09  | 12.02 | 11.99 | 12.01     | 12.12 | 12.08 | 12.10 |
| 14       | 12.53 | 12.44 | 12.48 | 12.12 | 12.09 | 12.10  | 12.11 | 11.99 | 12.06     | 12.11 | 12.07 | 12.08 |
| 15       | 12.43 | 12.33 | 12.38 | 12.12 | 12.11 | 12.12  | 12.15 | 12.11 | 12.13     | 12.11 | 12.09 | 12.10 |
| 16       | 12.33 | 12.29 | 12.30 | 12.12 | 12.11 | 12.12  | 12.14 | 12.13 | 12.14     | 12.09 | 12.04 | 12.07 |
| 17       | 12.29 | 12.27 | 12.28 | 12.11 | 12.04 | 12.07  | 12.13 | 12.12 | 12.12     | 12.04 | 11.97 | 12.00 |
| 18       | 12.41 | 12.29 | 12.34 | 12.07 | 12.05 | 12.06  | 12.12 | 12.11 | 12.11     | 11.97 | 11.94 | 11.96 |
| 19       | 12.51 | 12.41 | 12.46 | 12.10 | 12.07 | 12.08  | 12.11 | 12.08 | 12.10     | 11.94 | 11.91 | 11.93 |
| 20       | 12.52 | 12.51 | 12.52 | 12.08 | 12.04 | 12.06  | 12.08 | 12.04 | 12.06     | 11.91 | 11.87 | 11.89 |
| 21       | 12.52 | 12.49 | 12.50 | 12.05 | 12.00 | 12.02  | 12.04 | 12.00 | 12.02     | 11.87 | 11.83 | 11.85 |
| 22       | 12.49 | 12.43 | 12.46 | 12.04 | 12.00 | 12.02  | 12.01 | 11.99 | 12.00     | 12.00 | 11.88 | 11.94 |
| 23       | 12.49 | 12.42 | 12.44 | 12.09 | 12.04 | 12.07  | 12.09 | 12.01 | 12.04     | 12.05 | 12.01 | 12.04 |
| 24       | 12.52 | 12.48 | 12.51 | 12.08 | 12.03 | 12.06  | 12.09 | 12.07 | 12.08     | 12.04 | 12.01 | 12.03 |
| 25       | 12.52 | 12.43 | 12.48 | 12.03 | 12.00 | 12.01  | 12.09 | 12.08 | 12.09     | 12.01 | 11.95 | 11.99 |
| 26       | 12.43 | 12.32 | 12.39 | 12.02 | 12.00 | 12.01  | 12.12 | 12.07 | 12.08     | 11.96 | 11.91 | 11.94 |
| 27       | 12.32 | 12.20 | 12.25 | 12.11 | 12.02 | 12.08  | 12.34 | 12.12 | 12.22     | 11.91 | 11.84 | 11.88 |
| 28       | 12.20 | 12.11 | 12.15 | 12.19 | 12.11 | 12.15  | 12.54 | 12.35 | 12.46     | 11.83 | 11.72 | 11.78 |
| 29       | ---   | ---   | ---   | 12.16 | 12.09 | 12.13  | 12.56 | 12.54 | 12.55     | 11.72 | 11.63 | 11.67 |
| 30       | ---   | ---   | ---   | 12.12 | 12.05 | 12.07  | 12.56 | 12.47 | 12.54     | 11.63 | 11.55 | 11.58 |
| 31       | ---   | ---   | ---   | 12.36 | 12.13 | 12.24  | ---   | ---   | ---       | 11.55 | 11.44 | 11.50 |
| MONTH    | 12.58 | 11.80 | 12.26 | 12.36 | 11.78 | 12.03  | 12.56 | 11.99 | 12.17     | 12.99 | 11.44 | 12.15 |
| DAY      | MAX   | MIN   | MEAN  | MAX   | MIN   | MEAN   | MAX   | MIN   | MEAN      | MAX   | MIN   | MEAN  |
| JUNE     |       |       | JULY  |       |       | AUGUST |       |       | SEPTEMBER |       |       |       |
| 1        | 11.43 | 11.31 | 11.37 | 9.86  | 9.80  | 9.82   | 9.81  | 9.76  | 9.80      | 10.55 | 10.55 | 10.55 |
| 2        | 11.31 | 11.22 | 11.26 | 9.90  | 9.83  | 9.86   | 9.77  | 9.71  | 9.74      | 10.55 | 10.53 | 10.54 |
| 3        | 11.21 | 11.10 | 11.15 | 9.93  | 9.91  | 9.92   | 9.73  | 9.71  | 9.72      | 10.54 | 10.52 | 10.53 |
| 4        | 11.09 | 11.00 | 11.05 | 9.92  | 9.88  | 9.91   | 9.79  | 9.73  | 9.75      | 10.55 | 10.52 | 10.53 |
| 5        | 11.00 | 10.88 | 10.94 | 9.88  | 9.83  | 9.86   | 9.93  | 9.77  | 9.87      | 10.63 | 10.52 | 10.59 |
| 6        | 10.88 | 10.83 | 10.84 | 10.10 | 9.82  | 9.90   | 10.00 | 9.94  | 9.96      | 10.63 | 10.60 | 10.62 |
| 7        | 10.83 | 10.72 | 10.79 | 10.68 | 10.13 | 10.44  | 10.03 | 10.00 | 10.02     | 10.62 | 10.61 | 10.61 |
| 8        | 10.74 | 10.62 | 10.69 | 10.76 | 10.69 | 10.74  | 10.03 | 10.03 | 10.03     | 10.61 | 10.56 | 10.58 |
| 9        | 10.66 | 10.56 | 10.62 | 10.73 | 10.62 | 10.68  | 10.03 | 10.01 | 10.03     | 10.59 | 10.57 | 10.58 |
| 10       | 10.57 | 10.52 | 10.53 | 10.61 | 10.51 | 10.57  | 10.01 | 10.00 | 10.01     | 10.58 | 10.52 | 10.56 |
| 11       | 10.85 | 10.57 | 10.67 | 10.51 | 10.44 | 10.47  | 10.00 | 9.97  | 9.99      | 10.52 | 10.49 | 10.50 |
| 12       | 11.25 | 10.87 | 11.11 | 10.43 | 10.36 | 10.40  | 9.97  | 9.96  | 9.97      | 10.49 | 10.47 | 10.48 |
| 13       | 11.25 | 11.19 | 11.23 | 10.36 | 10.28 | 10.33  | 9.96  | 9.96  | 9.96      | 10.47 | 10.41 | 10.44 |
| 14       | 11.18 | 11.05 | 11.12 | 10.28 | 10.15 | 10.22  | 9.96  | 9.96  | 9.96      | 10.46 | 10.43 | 10.44 |
| 15       | 11.04 | 10.91 | 10.98 | 10.17 | 10.06 | 10.12  | 10.03 | 9.96  | 9.99      | 10.47 | 10.46 | 10.46 |
| 16       | 10.90 | 10.79 | 10.85 | 10.12 | 10.02 | 10.07  | 10.05 | 10.03 | 10.04     | 10.46 | 10.45 | 10.46 |
| 17       | 10.82 | 10.74 | 10.79 | 10.01 | 9.94  | 9.97   | 10.09 | 10.05 | 10.06     | 10.48 | 10.45 | 10.47 |
| 18       | 10.81 | 10.78 | 10.80 | 9.95  | 9.93  | 9.94   | 10.10 | 10.09 | 10.10     | 10.46 | 10.44 | 10.46 |
| 19       | 10.78 | 10.69 | 10.74 | 9.94  | 9.93  | 9.93   | 10.09 | 10.06 | 10.07     | 10.44 | 10.41 | 10.42 |
| 20       | 10.69 | 10.62 | 10.66 | 9.96  | 9.93  | 9.94   | 10.06 | 10.02 | 10.03     | 10.42 | 10.41 | 10.42 |
| 21       | 10.61 | 10.53 | 10.57 | 9.96  | 9.92  | 9.94   | 10.02 | 10.02 | 10.02     | 10.41 | 10.39 | 10.40 |
| 22       | 10.53 | 10.47 | 10.50 | 9.93  | 9.91  | 9.92   | 10.03 | 10.02 | 10.02     | 10.43 | 10.41 | 10.42 |
| 23       | 10.46 | 10.39 | 10.43 | 9.91  | 9.87  | 9.89   | 10.11 | 10.03 | 10.07     | 10.45 | 10.41 | 10.43 |
| 24       | 10.38 | 10.28 | 10.34 | 9.88  | 9.87  | 9.87   | 10.47 | 10.12 | 10.31     | 10.41 | 10.36 | 10.38 |
| 25       | 10.27 | 10.20 | 10.24 | 9.88  | 9.88  | 9.88   | 10.76 | 10.48 | 10.66     | 10.40 | 10.36 | 10.37 |
| 26       | 10.24 | 10.14 | 10.17 | 9.89  | 9.89  | 9.89   | 10.77 | 10.76 | 10.77     | 10.41 | 10.39 | 10.40 |
| 27       | 10.15 | 9.99  | 10.09 | 9.89  | 9.82  | 9.85   | 10.76 | 10.69 | 10.73     | 10.39 | 10.39 | 10.39 |
| 28       | 10.07 | 9.98  | 10.02 | 9.82  | 9.81  | 9.82   | 10.69 | 10.61 | 10.65     | 10.39 | 10.36 | 10.38 |
| 29       | 9.97  | 9.89  | 9.94  | 9.81  | 9.81  | 9.81   | 10.61 | 10.60 | 10.60     | 10.37 | 10.36 | 10.36 |
| 30       | 9.89  | 9.82  | 9.86  | 9.81  | 9.81  | 9.81   | 10.60 | 10.59 | 10.60     | 10.41 | 10.37 | 10.40 |
| 31       | ---   | ---   | ---   | 9.81  | 9.81  | 9.81   | 10.60 | 10.55 | 10.57     | ---   | ---   | ---   |
| MONTH    | 11.43 | 9.82  | 10.68 | 10.76 | 9.80  | 10.05  | 10.77 | 9.71  | 10.13     | 10.63 | 10.36 | 10.47 |

## OBION RIVER BASIN

07026795 INDIAN CREEK NEAR SAMBURG, TN

LOCATION.--Lat 36°22'59", long 89°20'32", Obion County, Hydrologic Unit 08010202, on left bank upstream from a bridge on county road, 0.6 mi northeast of the four-way stop on State Highway 22 in Samburg.

DRAINAGE AREA.--8.01 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1982 to October 1983, September 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-5. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,090 ft<sup>3</sup>/s, May 12, 1983, gage height, 9.87 ft; no flow several days each year.

EXTREMES FOR CURRENT YEAR.-- Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum: (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Oct. 6  | 1400 | *1,060                            | *6.67               | Feb. 23 | 2200 | 227                               | 3.57                |
| Nov. 18 | 0915 | 429                               | 4.67                | Mar. 31 | 0145 | 540                               | 5.12                |
| Dec. 18 | 0045 | 568                               | 5.23                | May 1   | 1630 | 615                               | 5.41                |
| Dec. 30 | 0730 | 599                               | 5.35                | May 7   | 1815 | 753                               | 5.84                |
| Feb. 10 | 2130 | 249                               | 3.70                | June 11 | 1700 | 304                               | 3.98                |

No flow Oct. 1-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |       |
|-------------|--------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | .00    | 3.2     | 3.3   | 42    | 15    | 7.2   | 8.9   | 185   | 2.5   | 1.4   | .53   | .71   |       |
| 2           | .00    | 3.3     | 3.1   | 10    | 13    | 7.1   | 6.7   | 36    | 2.4   | 1.4   | .47   | .67   |       |
| 3           | .00    | 1.7     | 3.0   | 7.7   | 8.9   | 6.2   | 6.1   | 13    | 2.1   | 1.3   | .40   | .66   |       |
| 4           | .00    | 2.0     | 2.8   | 8.4   | 8.9   | 10    | 5.7   | 8.1   | 2.0   | 1.3   | .49   | .69   |       |
| 5           | .00    | 1.8     | 3.3   | 6.7   | 8.8   | 8.1   | 13    | 6.2   | 2.0   | 1.4   | 11    | 19    |       |
| 6           | 244    | 1.8     | 3.9   | 6.1   | 6.6   | 6.3   | 7.5   | 4.7   | 4.4   | 5.5   | .83   | 1.4   |       |
| 7           | 6.5    | 1.7     | 3.0   | 6.1   | 4.7   | 6.4   | 5.7   | 101   | 3.5   | 1.5   | .61   | 1.1   |       |
| 8           | 2.8    | 1.9     | 3.1   | 6.3   | 4.3   | 8.1   | 4.9   | 18    | 2.1   | 1.2   | .48   | .94   |       |
| 9           | 2.1    | 2.0     | 3.2   | 5.6   | 4.4   | 12    | 4.5   | 8.3   | 1.7   | 1.1   | .43   | .93   |       |
| 10          | 1.8    | 3.1     | 3.2   | 6.8   | 50    | 7.3   | 4.3   | 6.5   | 18    | 1.1   | .78   | .92   |       |
| 11          | 3.5    | 2.6     | 2.9   | 6.6   | 78    | 7.4   | 4.5   | 5.5   | 60    | 1.1   | .68   | .95   |       |
| 12          | 3.7    | 2.7     | 3.0   | 4.9   | 23    | 5.7   | 4.7   | 5.5   | 13    | 1.1   | .45   | .98   |       |
| 13          | 4.7    | 2.8     | 2.9   | 4.9   | 14    | 5.5   | 4.3   | 4.4   | 4.4   | 1.0   | .37   | .86   |       |
| 14          | 5.0    | 2.9     | 3.1   | 5.3   | 11    | 6.9   | 31    | 6.1   | 3.3   | .94   | .35   | .86   |       |
| 15          | 6.3    | 4.9     | 2.9   | 5.2   | 9.8   | 5.3   | 11    | 6.7   | 2.8   | 1.2   | 14    | .96   |       |
| 16          | 5.7    | 3.7     | 2.8   | 5.3   | 9.3   | 5.1   | 6.6   | 3.7   | 2.4   | 1.6   | 4.9   | .95   |       |
| 17          | 7.1    | 3.5     | 8.4   | 9.6   | 16    | 4.9   | 5.2   | 3.4   | 6.1   | .88   | 1.2   | .95   |       |
| 18          | 4.3    | 92      | 136   | 7.8   | 28    | 4.5   | 4.4   | 3.2   | 4.3   | .81   | .85   | .90   |       |
| 19          | 18     | 9.8     | 35    | 7.3   | 24    | 4.7   | 3.9   | 2.9   | 2.3   | .79   | .78   | .88   |       |
| 20          | 13     | 4.5     | 29    | 6.6   | 20    | 4.8   | 3.4   | 2.7   | 1.9   | .79   | .79   | .83   |       |
| 21          | 20     | 3.5     | 93    | 6.7   | 17    | 6.1   | 3.1   | 2.9   | 1.6   | .75   | .74   | .83   |       |
| 22          | 1.6    | 3.1     | 18    | 7.3   | 13    | 8.9   | 2.9   | 56    | 7.0   | .72   | .72   | .86   |       |
| 23          | 1.5    | 2.8     | 9.5   | 7.2   | 38    | 6.4   | 7.6   | 12    | 2.0   | .71   | 5.7   | 1.0   |       |
| 24          | 1.3    | 2.8     | 9.4   | 7.4   | 33    | 5.1   | 7.8   | 7.0   | 1.6   | .67   | 29    | 1.1   |       |
| 25          | 1.1    | 2.5     | 8.4   | 6.9   | 12    | 4.5   | 3.8   | 5.1   | 1.5   | .64   | 9.6   | 1.3   |       |
| 26          | .89    | 2.6     | 6.5   | 5.1   | 9.9   | 4.4   | 4.1   | 4.0   | 1.5   | 1.1   | 1.4   | 1.3   |       |
| 27          | .82    | 41      | 5.3   | 5.7   | 8.0   | 5.5   | 38    | 3.5   | 3.1   | .77   | .99   | .79   |       |
| 28          | 1.2    | 9.2     | 4.7   | 6.2   | 6.9   | 5.1   | 12    | 3.2   | 2.2   | .60   | .86   | .74   |       |
| 29          | 1.4    | 5.0     | 3.5   | 5.5   | ---   | 4.6   | 6.4   | 3.1   | 1.5   | .58   | .82   | .71   |       |
| 30          | 1.3    | 4.0     | 144   | 12    | ---   | 5.8   | 4.9   | 2.8   | 1.4   | .57   | .79   | 2.0   |       |
| 31          | 1.5    | ---     | 25    | 26    | ---   | 74    | ---   | 2.7   | ---   | .55   | .74   | ---   |       |
| TOTAL       | 361.11 | 228.4   | 585.2 | 265.2 | 495.5 | 263.9 | 236.9 | 533.2 | 164.6 | 47.67 | 91.75 | 46.77 |       |
| MEAN        | 11.6   | 7.61    | 18.9  | 8.55  | 17.7  | 8.51  | 7.90  | 17.2  | 5.49  | 1.54  | 2.96  | 1.56  |       |
| MAX         | 244    | 92      | 144   | 42    | 78    | 74    | 38    | 185   | 60    | 14    | 29    | 19    |       |
| MIN         | .00    | 1.7     | 2.8   | 4.9   | 4.3   | 4.4   | 2.9   | 2.7   | 1.4   | .55   | .35   | .66   |       |
| CFSM        | 1.45   | .95     | 2.36  | 1.07  | 2.21  | 1.06  | .99   | 2.15  | .69   | .19   | .37   | .19   |       |
| IN.         | 1.68   | 1.06    | 2.72  | 1.23  | 2.30  | 1.23  | 1.10  | 2.48  | .76   | .22   | .43   | .22   |       |
| WTR YR 1985 | TOTAL  | 3320.20 |       | MEAN  | 9.10  | MAX   | 244   | MIN   | .00   | CFSM  | 1.14  | IN.   | 15.42 |

## OBION RIVER BASIN

235

07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN

LOCATION.--Lat 36°21'09", long 89°25'07", Lake County, Hydrologic Unit 08010202, at Middle Landing in Reelfoot Lake State Park, 0.4 mi east of Blue Bank, 0.8 mi west of the spillway and 3.3 mi southeast of Tiptonville.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No record: Jan. 20-24, Jan. 31-Feb. 10, Feb. 12-16. Records good. Lake level was lowered manually beginning May 27, 1985. Manual lowering of lake stopped July 9, 1985.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.65 ft, from recorded range in stage, about Apr. 26, 1973; minimum, 9.59 ft, July 6, 7, 8, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of about 17.0 ft, at spillway, present datum, from information by local resident. Minimum stage at spillway, 9.30 ft, Nov. 20, 21, 1953 at a datum of 270.29 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.57 ft, Jan. 3; minimum 9.59 ft, July 6, 7, 8.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX   | MIN   | MEAN     | MAX   | MIN   | MEAN     | MAX   | MIN   | MEAN    | MAX   | MIN   | MEAN  |
|---------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|-------|
| OCTOBER |       |       | NOVEMBER |       |       | DECEMBER |       |       | JANUARY |       |       |       |
| 1       | 10.30 | 10.27 | 10.29    | 12.28 | 11.99 | 12.11    | 12.21 | 12.21 | 12.21   | 13.54 | 13.28 | 13.43 |
| 2       | 10.27 | 10.24 | 10.26    | 12.31 | 12.20 | 12.25    | 12.25 | 12.18 | 12.20   | 13.56 | 13.54 | 13.55 |
| 3       | 10.24 | 10.23 | 10.23    | 12.19 | 12.12 | 12.15    | 12.24 | 12.20 | 12.21   | 13.57 | 13.48 | 13.53 |
| 4       | 10.23 | 10.23 | 10.23    | 12.12 | 12.08 | 12.11    | 12.24 | 12.20 | 12.22   | 13.49 | 13.32 | 13.40 |
| 5       | 10.23 | 10.23 | 10.23    | 12.12 | 12.09 | 12.11    | 12.26 | 12.22 | 12.24   | 13.35 | 13.24 | 13.30 |
| 6       | 10.82 | 10.23 | 10.68    | 12.12 | 12.06 | 12.09    | 12.30 | 12.17 | 12.20   | 13.24 | 13.06 | 13.15 |
| 7       | 10.89 | 10.81 | 10.83    | 12.06 | 12.01 | 12.03    | 12.18 | 12.08 | 12.14   | 13.09 | 13.06 | 13.08 |
| 8       | 10.99 | 10.89 | 10.94    | 12.03 | 12.00 | 12.02    | 12.18 | 12.14 | 12.16   | 13.13 | 13.10 | 13.11 |
| 9       | 11.09 | 11.00 | 11.05    | 12.01 | 11.88 | 11.96    | 12.18 | 12.14 | 12.17   | 13.12 | 13.09 | 13.10 |
| 10      | 11.21 | 11.09 | 11.12    | 12.03 | 11.90 | 11.97    | 12.21 | 12.15 | 12.19   | 13.10 | 13.04 | 13.07 |
| 11      | 11.25 | 11.21 | 11.22    | 12.07 | 12.02 | 12.06    | 12.21 | 12.18 | 12.20   | 13.04 | 12.90 | 12.97 |
| 12      | 11.32 | 11.25 | 11.28    | 12.08 | 12.06 | 12.07    | 12.19 | 12.11 | 12.16   | 12.91 | 12.76 | 12.81 |
| 13      | 11.37 | 11.32 | 11.33    | 12.06 | 12.04 | 12.05    | 12.23 | 12.17 | 12.20   | 12.76 | 12.56 | 12.70 |
| 14      | 11.38 | 11.37 | 11.38    | 12.04 | 11.98 | 12.01    | 12.25 | 12.20 | 12.24   | 12.56 | 12.52 | 12.54 |
| 15      | 11.39 | 11.36 | 11.38    | 12.08 | 11.96 | 12.03    | 12.25 | 12.19 | 12.23   | 12.53 | 12.48 | 12.50 |
| 16      | 11.52 | 11.39 | 11.42    | 12.11 | 12.07 | 12.09    | 12.19 | 12.10 | 12.15   | 12.48 | 12.30 | 12.40 |
| 17      | 11.55 | 11.50 | 11.52    | 12.12 | 12.07 | 12.08    | 12.30 | 12.16 | 12.19   | 12.30 | 12.19 | 12.25 |
| 18      | 11.54 | 11.49 | 11.53    | 12.32 | 12.12 | 12.24    | 12.42 | 12.33 | 12.37   | 12.18 | 12.13 | 12.15 |
| 19      | 11.67 | 11.47 | 11.63    | 12.38 | 12.31 | 12.34    | 12.57 | 12.42 | 12.50   | 12.28 | 12.13 | 12.19 |
| 20      | 11.83 | 11.67 | 11.72    | 12.35 | 12.32 | 12.33    | 12.72 | 12.58 | 12.62   | ---   | ---   | ---   |
| 21      | 11.95 | 11.81 | 11.88    | 12.32 | 12.27 | 12.30    | 12.88 | 12.65 | 12.75   | ---   | ---   | ---   |
| 22      | 12.05 | 11.96 | 12.00    | 12.27 | 12.22 | 12.25    | 13.07 | 12.90 | 13.01   | ---   | ---   | ---   |
| 23      | 12.13 | 12.04 | 12.09    | 12.22 | 12.17 | 12.20    | 13.11 | 13.07 | 13.09   | ---   | ---   | ---   |
| 24      | 12.09 | 12.06 | 12.07    | 12.17 | 12.14 | 12.15    | 13.36 | 13.09 | 13.16   | ---   | ---   | ---   |
| 25      | 12.06 | 12.04 | 12.05    | 12.14 | 12.07 | 12.10    | 13.25 | 13.13 | 13.18   | 11.96 | 11.93 | 11.94 |
| 26      | 12.05 | 12.03 | 12.04    | 12.06 | 11.94 | 12.03    | 13.14 | 13.08 | 13.10   | 11.92 | 11.90 | 11.91 |
| 27      | 12.05 | 12.00 | 12.04    | 12.15 | 11.95 | 12.10    | 13.07 | 13.04 | 13.06   | 11.90 | 11.88 | 11.89 |
| 28      | 12.13 | 12.04 | 12.07    | 12.16 | 12.12 | 12.14    | 13.03 | 12.90 | 12.98   | 11.88 | 11.86 | 11.87 |
| 29      | 12.13 | 12.10 | 12.11    | 12.20 | 12.14 | 12.17    | 12.98 | 12.87 | 12.94   | 11.90 | 11.88 | 11.89 |
| 30      | 12.13 | 12.10 | 12.11    | 12.23 | 12.17 | 12.20    | 13.28 | 12.96 | 13.18   | 11.98 | 11.90 | 11.92 |
| 31      | 12.14 | 12.12 | 12.13    | ---   | ---   | ---      | 13.39 | 13.24 | 13.35   | ---   | ---   | ---   |
| MONTH   | 12.14 | 10.23 | 11.38    | 12.38 | 11.88 | 12.12    | 13.39 | 12.08 | 12.54   | ---   | ---   | ---   |



## OBION RIVER BASIN

07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX   | MIN   | MEAN  | MAX   | MIN   | MEAN  | MAX    | MIN   | MEAN  | MAX       | MIN   | MEAN  |
|----------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-----------|-------|-------|
| FEBRUARY |       |       |       | MARCH |       |       | APRIL  |       |       | MAY       |       |       |
| 1        | ---   | ---   | ---   | 12.15 | 12.07 | 12.10 | 12.38  | 12.27 | 12.32 | 12.65     | 12.47 | 12.56 |
| 2        | ---   | ---   | ---   | 12.07 | 11.99 | 12.03 | 12.38  | 12.34 | 12.36 | 12.80     | 12.67 | 12.74 |
| 3        | ---   | ---   | ---   | 11.99 | 11.85 | 11.92 | 12.35  | 12.31 | 12.34 | 12.86     | 12.80 | 12.83 |
| 4        | ---   | ---   | ---   | 11.88 | 11.67 | 11.80 | 12.32  | 12.14 | 12.23 | 12.80     | 12.72 | 12.76 |
| 5        | ---   | ---   | ---   | 11.93 | 11.87 | 11.90 | 12.28  | 12.09 | 12.21 | 12.72     | 12.60 | 12.66 |
| 6        | ---   | ---   | ---   | 11.94 | 11.91 | 11.92 | 12.31  | 12.28 | 12.30 | 12.62     | 12.54 | 12.58 |
| 7        | ---   | ---   | ---   | 11.91 | 11.83 | 11.88 | 12.34  | 12.30 | 12.32 | 12.59     | 12.49 | 12.52 |
| 8        | ---   | ---   | ---   | 12.04 | 11.85 | 11.93 | 12.33  | 12.29 | 12.31 | 12.52     | 12.40 | 12.47 |
| 9        | ---   | ---   | ---   | 12.07 | 12.01 | 12.04 | 12.30  | 12.26 | 12.28 | 12.40     | 12.33 | 12.36 |
| 10       | ---   | ---   | ---   | 12.15 | 12.07 | 12.11 | 12.26  | 12.20 | 12.22 | 12.33     | 12.33 | 12.33 |
| 11       | 12.44 | 12.38 | 12.41 | 12.31 | 12.08 | 12.13 | 12.21  | 12.18 | 12.20 | 12.33     | 12.28 | 12.30 |
| 12       | ---   | ---   | ---   | 12.31 | 12.25 | 12.27 | 12.20  | 12.17 | 12.19 | 12.28     | 12.24 | 12.26 |
| 13       | ---   | ---   | ---   | 12.31 | 12.25 | 12.27 | 12.17  | 12.16 | 12.17 | 12.27     | 12.21 | 12.25 |
| 14       | ---   | ---   | ---   | 12.35 | 12.32 | 12.33 | 12.27  | 12.16 | 12.22 | 12.26     | 12.19 | 12.22 |
| 15       | ---   | ---   | ---   | 12.37 | 12.34 | 12.35 | 12.29  | 12.26 | 12.27 | 12.25     | 12.21 | 12.23 |
| 16       | ---   | ---   | ---   | 12.35 | 12.31 | 12.33 | 12.29  | 12.28 | 12.28 | 12.21     | 12.15 | 12.19 |
| 17       | 12.43 | 12.39 | 12.40 | 12.36 | 12.30 | 12.33 | 12.28  | 12.27 | 12.27 | 12.23     | 12.17 | 12.20 |
| 18       | 12.52 | 12.43 | 12.47 | 12.30 | 12.23 | 12.27 | 12.26  | 12.19 | 12.23 | 12.19     | 12.13 | 12.16 |
| 19       | 12.57 | 12.53 | 12.55 | 12.23 | 12.15 | 12.19 | 12.22  | 12.17 | 12.20 | 12.13     | 12.07 | 12.10 |
| 20       | 12.53 | 12.50 | 12.52 | 12.24 | 12.20 | 12.21 | 12.19  | 12.16 | 12.17 | 12.07     | 12.02 | 12.05 |
| 21       | 12.50 | 12.46 | 12.48 | 12.31 | 12.23 | 12.28 | 12.17  | 12.13 | 12.16 | 12.11     | 12.02 | 12.03 |
| 22       | 12.46 | 12.38 | 12.43 | 12.29 | 12.24 | 12.26 | 12.15  | 12.06 | 12.11 | 12.22     | 12.13 | 12.18 |
| 23       | 12.41 | 12.24 | 12.33 | 12.23 | 12.17 | 12.20 | 12.20  | 12.01 | 12.11 | 12.18     | 12.16 | 12.17 |
| 24       | 12.43 | 12.34 | 12.39 | 12.26 | 12.18 | 12.20 | 12.20  | 12.17 | 12.18 | 12.17     | 12.16 | 12.16 |
| 25       | 12.42 | 12.39 | 12.41 | 12.25 | 12.19 | 12.22 | 12.22  | 12.20 | 12.21 | 12.15     | 12.10 | 12.13 |
| 26       | 12.40 | 12.33 | 12.36 | 12.19 | 12.14 | 12.16 | 12.25  | 12.19 | 12.21 | 12.10     | 12.01 | 12.05 |
| 27       | 12.39 | 12.27 | 12.33 | 12.13 | 12.03 | 12.07 | 12.34  | 12.25 | 12.29 | 12.02     | 11.89 | 11.94 |
| 28       | 12.26 | 12.15 | 12.21 | 12.06 | 11.90 | 12.00 | 12.43  | 12.34 | 12.40 | 11.89     | 11.79 | 11.85 |
| 29       | ---   | ---   | ---   | 12.17 | 12.05 | 12.11 | 12.45  | 12.43 | 12.44 | 11.80     | 11.67 | 11.74 |
| 30       | ---   | ---   | ---   | 12.26 | 12.16 | 12.19 | 12.50  | 12.45 | 12.46 | 11.67     | 11.53 | 11.60 |
| 31       | ---   | ---   | ---   | 12.26 | 12.06 | 12.15 | ---    | ---   | ---   | 11.54     | 11.46 | 11.49 |
| MONTH    | ---   | ---   | ---   | 12.37 | 11.67 | 12.13 | 12.50  | 12.01 | 12.26 | 12.86     | 11.46 | 12.23 |
| DAY      | MAX   | MIN   | MEAN  | MAX   | MIN   | MEAN  | MAX    | MIN   | MEAN  | MAX       | MIN   | MEAN  |
| JUNE     |       |       |       | JULY  |       |       | AUGUST |       |       | SEPTEMBER |       |       |
| 1        | 11.47 | 11.37 | 11.43 | 9.92  | 9.82  | 9.88  | 10.02  | 9.95  | 9.96  | 10.83     | 10.78 | 10.81 |
| 2        | 11.37 | 11.26 | 11.32 | 9.82  | 9.74  | 9.79  | 10.06  | 10.02 | 10.05 | 10.79     | 10.77 | 10.78 |
| 3        | 11.28 | 11.21 | 11.24 | 9.74  | 9.65  | 9.71  | 10.01  | 9.96  | 9.98  | 10.77     | 10.73 | 10.75 |
| 4        | 11.21 | 11.10 | 11.14 | 9.65  | 9.61  | 9.63  | 9.96   | 9.96  | 9.96  | 10.73     | 10.68 | 10.71 |
| 5        | 11.09 | 11.01 | 11.06 | 9.62  | 9.61  | 9.61  | 10.10  | 9.96  | 10.03 | 10.79     | 10.68 | 10.74 |
| 6        | 11.02 | 10.93 | 10.98 | 9.60  | 9.59  | 9.60  | 10.12  | 10.11 | 10.12 | 10.80     | 10.78 | 10.79 |
| 7        | 10.93 | 10.85 | 10.89 | 9.60  | 9.59  | 9.59  | 10.14  | 10.12 | 10.14 | 10.82     | 10.80 | 10.81 |
| 8        | 10.85 | 10.75 | 10.80 | 9.64  | 9.59  | 9.63  | 10.17  | 10.14 | 10.16 | 10.83     | 10.81 | 10.82 |
| 9        | 10.74 | 10.66 | 10.69 | 9.69  | 9.64  | 9.68  | 10.19  | 10.16 | 10.17 | 10.83     | 10.79 | 10.81 |
| 10       | 10.68 | 10.57 | 10.62 | 9.83  | 9.69  | 9.75  | 10.19  | 10.17 | 10.19 | 10.85     | 10.80 | 10.81 |
| 11       | 10.74 | 10.58 | 10.66 | 9.91  | 9.81  | 9.87  | 10.21  | 10.19 | 10.21 | 10.85     | 10.84 | 10.85 |
| 12       | 10.79 | 10.70 | 10.73 | 9.99  | 9.93  | 9.96  | 10.22  | 10.17 | 10.20 | 10.85     | 10.82 | 10.83 |
| 13       | 10.80 | 10.75 | 10.77 | 10.05 | 9.98  | 10.02 | 10.18  | 10.15 | 10.17 | 10.84     | 10.82 | 10.83 |
| 14       | 10.83 | 10.80 | 10.82 | 10.10 | 10.05 | 10.08 | 10.17  | 10.15 | 10.16 | 10.82     | 10.74 | 10.77 |
| 15       | 10.83 | 10.81 | 10.82 | 10.20 | 10.10 | 10.14 | 10.22  | 10.15 | 10.18 | 10.74     | 10.71 | 10.73 |
| 16       | 10.83 | 10.82 | 10.83 | 10.24 | 10.19 | 10.22 | 10.32  | 10.22 | 10.27 | 10.71     | 10.70 | 10.71 |
| 17       | 10.89 | 10.79 | 10.84 | 10.23 | 10.22 | 10.23 | 10.32  | 10.26 | 10.30 | 10.70     | 10.65 | 10.68 |
| 18       | 10.85 | 10.78 | 10.81 | 10.22 | 10.21 | 10.22 | 10.27  | 10.24 | 10.26 | 10.65     | 10.61 | 10.63 |
| 19       | 10.78 | 10.71 | 10.74 | 10.21 | 10.19 | 10.20 | 10.26  | 10.24 | 10.25 | 10.64     | 10.61 | 10.63 |
| 20       | 10.71 | 10.62 | 10.66 | 10.19 | 10.15 | 10.18 | 10.30  | 10.26 | 10.28 | 10.63     | 10.61 | 10.62 |
| 21       | 10.62 | 10.52 | 10.56 | 10.16 | 10.13 | 10.15 | 10.27  | 10.22 | 10.26 | 10.62     | 10.59 | 10.61 |
| 22       | 10.55 | 10.47 | 10.49 | 10.17 | 10.15 | 10.16 | 10.22  | 10.21 | 10.22 | 10.59     | 10.52 | 10.56 |
| 23       | 10.47 | 10.40 | 10.43 | 10.17 | 10.15 | 10.16 | 10.29  | 10.21 | 10.24 | 10.59     | 10.52 | 10.54 |
| 24       | 10.39 | 10.33 | 10.36 | 10.16 | 10.09 | 10.13 | 10.54  | 10.29 | 10.46 | 10.60     | 10.56 | 10.59 |
| 25       | 10.34 | 10.25 | 10.30 | 10.10 | 10.06 | 10.08 | 10.61  | 10.50 | 10.59 | 10.63     | 10.56 | 10.58 |
| 26       | 10.25 | 10.15 | 10.23 | 10.14 | 10.07 | 10.11 | 10.70  | 10.61 | 10.65 | 10.62     | 10.59 | 10.61 |
| 27       | 10.23 | 10.14 | 10.18 | 10.17 | 10.15 | 10.17 | 10.78  | 10.70 | 10.74 | 10.59     | 10.55 | 10.58 |
| 28       | 10.15 | 10.10 | 10.14 | 10.15 | 10.11 | 10.14 | 10.82  | 10.78 | 10.80 | 10.55     | 10.51 | 10.54 |
| 29       | 10.09 | 9.99  | 10.05 | 10.11 | 10.05 | 10.08 | 10.83  | 10.81 | 10.82 | 10.52     | 10.47 | 10.50 |
| 30       | 9.99  | 9.89  | 9.95  | 10.05 | 9.96  | 10.01 | 10.83  | 10.80 | 10.82 | 10.64     | 10.47 | 10.55 |
| 31       | ---   | ---   | ---   | 9.96  | 9.95  | 9.96  | 10.83  | 10.81 | 10.82 | ---       | ---   | ---   |
| MONTH    | 11.47 | 9.89  | 10.68 | 10.24 | 9.59  | 9.97  | 10.83  | 9.95  | 10.31 | 10.85     | 10.47 | 10.69 |

## OBION RIVER BASIN

237

07027010 RUNNING REELFOOT BAYOU NEAR OWL CITY, TN

LOCATION.--Lat 36°19'53", long 89°24'02", Obion County, Hydrologic Unit 08010202, at bridge on county road 1.5 mi downstream of the spillway at Reelfoot Lake and 1.6 mi east of Owl City.

DRAINAGE AREA.--247 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1982 to October 1983, April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 264.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Aug. 31 to Sept. 6. Records fair except for estimated daily discharges, which are poor. Flow is regulated by a spillway located 1.5 mi upstream of gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft<sup>3</sup>/s May 18, 1983, gage height 17.97 ft; no flow part of each day September 15-16, 1984, due to construction work in channel.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge 1,660 ft<sup>3</sup>/s, Jan. 5, gage height, 16.38 ft; minimum 0.96 ft<sup>3</sup>/s, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT    | NOV      | DEC   | JAN   | FEB   | MAR  | APR  | MAY   | JUN   | JUL    | AUG   | SEP   |
|-------------|--------|----------|-------|-------|-------|------|------|-------|-------|--------|-------|-------|
| 1           | 1.5    | 19       | 221   | 1490  | 30    | 1120 | 250  | 1250  | 630   | 338    | 2.5   | 2.5   |
| 2           | 1.5    | 181      | 220   | 1510  | 30    | 1080 | 415  | 1470  | 588   | 326    | 2.6   | 2.4   |
| 3           | 1.5    | 272      | 223   | 1570  | 30    | 1010 | 397  | 1450  | 561   | 313    | 2.2   | 2.3   |
| 4           | 1.5    | 246      | 217   | 1650  | 30    | 645  | 337  | 1420  | 541   | 304    | 2.2   | 2.3   |
| 5           | 1.6    | 245      | 222   | 1660  | 31    | 402  | 327  | 1380  | 529   | 340    | 7.2   | 20    |
| 6           | 637    | 235      | 206   | 1640  | 34    | 398  | 364  | 1330  | 527   | 411    | 3.3   | 2.2   |
| 7           | 139    | 111      | 64    | 1420  | 35    | 84   | 372  | 1360  | 502   | 298    | 2.0   | 2.0   |
| 8           | 11     | 9.2      | 59    | 787   | 36    | 24   | 366  | 1380  | 479   | 298    | 1.9   | 1.8   |
| 9           | 7.4    | 9.3      | 61    | 662   | 37    | 34   | 348  | 1030  | 456   | 246    | 2.8   | 1.7   |
| 10          | 9.4    | 11       | 63    | 1040  | 102   | 27   | 321  | 396   | 382   | 8.0    | 4.4   | 1.6   |
| 11          | 12     | 11       | 65    | 1500  | 955   | 29   | 306  | 359   | 442   | 3.4    | 3.8   | 1.4   |
| 12          | 13     | 11       | 62    | 1500  | 1340  | 37   | 306  | 343   | 370   | 3.0    | 3.1   | 1.6   |
| 13          | 13     | 12       | 62    | 1460  | 1310  | 34   | 293  | 335   | 322   | 2.4    | 2.7   | 2.0   |
| 14          | 10     | 14       | 281   | 1410  | 1290  | 49   | 356  | 277   | 320   | 2.6    | 2.5   | 1.3   |
| 15          | 11     | 17       | 310   | 1350  | 1130  | 97   | 362  | 251   | 323   | 2.7    | 22    | 1.3   |
| 16          | 9.9    | 18       | 287   | 1260  | 450   | 367  | 346  | 316   | 322   | 2.7    | 11    | 1.3   |
| 17          | 11     | 20       | 304   | 1230  | 136   | 379  | 336  | 315   | 370   | 2.5    | 3.8   | 1.5   |
| 18          | 11     | 258      | 1110  | 1010  | 189   | 350  | 315  | 297   | 501   | 2.6    | 2.5   | 2.2   |
| 19          | 43     | 369      | 807   | 586   | 747   | 321  | 297  | 277   | 487   | 2.6    | 2.4   | 1.8   |
| 20          | 25     | 693      | 967   | 571   | 1370  | 319  | 286  | 261   | 475   | 2.6    | 2.3   | 3.3   |
| 21          | 114    | 669      | 1300  | 573   | 1370  | 342  | 276  | 251   | 461   | 2.5    | 3.1   | 2.3   |
| 22          | 18     | 622      | 1280  | 488   | 1340  | 368  | 149  | 528   | 462   | 2.4    | 1.6   | 1.9   |
| 23          | 97     | 578      | 1270  | 451   | 1310  | 329  | 66   | 454   | 439   | 2.8    | 18    | 1.6   |
| 24          | 270    | 542      | 1280  | 428   | 1400  | 327  | 81   | 431   | 422   | 2.5    | 66    | 1.5   |
| 25          | 242    | 503      | 1300  | 409   | 1330  | 334  | 104  | 511   | 412   | 2.5    | 4.9   | 1.2   |
| 26          | 110    | 446      | 1250  | 382   | 1290  | 283  | 152  | 471   | 405   | 2.6    | 2.7   | 1.2   |
| 27          | 12     | 620      | 951   | 373   | 1260  | 102  | 252  | 778   | 413   | 2.7    | 2.8   | 1.3   |
| 28          | 14     | 465      | 532   | 205   | 1190  | 91   | 517  | 837   | 385   | 2.6    | 2.7   | 1.2   |
| 29          | 15     | 254      | 483   | 37    | ---   | 100  | 800  | 781   | 367   | 2.6    | 2.8   | 1.1   |
| 30          | 12     | 216      | 940   | 35    | ---   | 113  | 806  | 719   | 351   | 2.7    | 2.8   | 1.5   |
| 31          | 13     | ---      | 1190  | 79    | ---   | 272  | ---  | 665   | ---   | 2.6    | 2.6   | ---   |
| TOTAL       | 1887.3 | 7676.5   | 17587 | 28766 | 19802 | 9467 | 9903 | 21923 | 13244 | 2937.6 | 197.2 | 71.3  |
| MEAN        | 60.9   | 256      | 567   | 928   | 707   | 305  | 330  | 707   | 441   | 94.8   | 6.36  | 2.38  |
| MAX         | 637    | 693      | 1300  | 1660  | 1400  | 1120 | 806  | 1470  | 630   | 411    | 66    | 20    |
| MIN         | 1.5    | 9.2      | 59    | 35    | 30    | 24   | 66   | 251   | 320   | 2.4    | 1.6   | 1.1   |
| CFSM        | .25    | 1.04     | 2.30  | 3.76  | 2.86  | 1.23 | 1.34 | 2.86  | 1.79  | .38    | .03   | .01   |
| IN.         | .28    | 1.16     | 2.65  | 4.33  | 2.98  | 1.43 | 1.49 | 3.30  | 1.99  | .44    | .03   | .01   |
| WTR YR 1985 | TOTAL  | 133461.9 | MEAN  | 366   | MAX   | 1660 | MIN  | 1.1   | CFSM  | 1.48   | IN.   | 20.10 |

## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°16'31", long 88°58'36", Hardeman County, Hydrologic Unit 08010208, on left bank 25 ft upstream of bridge on State Highway 18, 250 ft upstream from Illinois Central Gulf Railroad bridge, 0.6 mi downstream from Spring Creek, and 1.5 mi northeast of Bolivar and at mile 135.1.

DRAINAGE AREA.--1,480 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 323.49 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 30-31, Mar. 12 and Sept. 21-30. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--56 years, 2,432 ft<sup>3</sup>/s, 22.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft<sup>3</sup>/s Mar. 18, 1973, gage height, 21.66 ft from rating curve extended above 34,000 ft<sup>3</sup>/s; minimum, 78 ft<sup>3</sup>/s Sept. 2, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 17 | 1200 | *7,120                            | *14.96              |      |      |                                   |                     |

Minimum discharge, 285 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY         | OCT   | NOV    | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 296   | 2260   | 4050  | 3140  | 3280   | 5340  | 2290  | 5020  | 891   | 2090  | 666   | 625   |
| 2           | 298   | 2350   | 3890  | 3170  | 3520   | 5500  | 2570  | 5200  | 772   | 1480  | 546   | 558   |
| 3           | 304   | 3170   | 3740  | 3220  | 3560   | 5380  | 2580  | 5860  | 690   | 904   | 460   | 533   |
| 4           | 307   | 3730   | 3550  | 3280  | 3560   | 4950  | 2540  | 6150  | 623   | 696   | 418   | 563   |
| 5           | 311   | 3530   | 3290  | 3220  | 3670   | 4510  | 2430  | 5960  | 577   | 860   | 384   | 631   |
| 6           | 365   | 2830   | 2980  | 3140  | 3880   | 3860  | 2320  | 5440  | 534   | 1160  | 382   | 676   |
| 7           | 640   | 1940   | 2650  | 3050  | 4030   | 3100  | 2200  | 5050  | 521   | 1110  | 386   | 648   |
| 8           | 1360  | 1370   | 2360  | 3040  | 4030   | 2510  | 2030  | 5220  | 523   | 825   | 390   | 636   |
| 9           | 1550  | 1130   | 2040  | 2990  | 4060   | 2090  | 1850  | 4720  | 641   | 620   | 390   | 685   |
| 10          | 1680  | 1700   | 1850  | 2950  | 4290   | 1880  | 1630  | 4520  | 702   | 527   | 365   | 691   |
| 11          | 1440  | 2770   | 1660  | 2990  | 5450   | 1780  | 1410  | 4480  | 658   | 459   | 343   | 890   |
| 12          | 1090  | 3460   | 1530  | 3120  | 6350   | 1660  | 1260  | 4350  | 635   | 419   | 340   | 781   |
| 13          | 882   | 3540   | 1420  | 3170  | 6640   | 1600  | 1190  | 4150  | 586   | 398   | 337   | 607   |
| 14          | 746   | 3010   | 1340  | 3160  | 6850   | 1570  | 1160  | 3780  | 545   | 375   | 353   | 516   |
| 15          | 644   | 2270   | 1280  | 3000  | 6910   | 1500  | 1340  | 3130  | 523   | 348   | 386   | 453   |
| 16          | 578   | 1770   | 1230  | 2740  | 6980   | 1440  | 1720  | 2270  | 507   | 333   | 485   | 419   |
| 17          | 556   | 1680   | 1170  | 2710  | 7090   | 1370  | 1990  | 1670  | 518   | 324   | 1040  | 396   |
| 18          | 827   | 2060   | 1150  | 3010  | 6980   | 1300  | 1990  | 1260  | 973   | 474   | 1800  | 379   |
| 19          | 1100  | 3630   | 1140  | 3240  | 6470   | 1240  | 1780  | 1020  | 1550  | 518   | 2220  | 375   |
| 20          | 1070  | 4280   | 2250  | 3280  | 5830   | 1190  | 1480  | 912   | 1900  | 484   | 2130  | 370   |
| 21          | 1000  | 4540   | 4350  | 3280  | 5230   | 1180  | 1210  | 855   | 1640  | 398   | 1760  | 362   |
| 22          | 1080  | 4490   | 5140  | 3210  | 4610   | 1520  | 1040  | 1410  | 1130  | 347   | 1270  | 326   |
| 23          | 1810  | 4410   | 5120  | 3050  | 3980   | 1960  | 1060  | 1650  | 1020  | 325   | 879   | 325   |
| 24          | 2820  | 4450   | 4840  | 2730  | 4140   | 2240  | 2980  | 1650  | 950   | 355   | 1080  | 325   |
| 25          | 3420  | 4540   | 4780  | 2480  | 4470   | 2300  | 4070  | 1470  | 848   | 345   | 1870  | 323   |
| 26          | 3500  | 4560   | 4700  | 2160  | 4930   | 2220  | 4610  | 1170  | 905   | 376   | 2190  | 350   |
| 27          | 3450  | 4490   | 4640  | 1930  | 5010   | 2080  | 4520  | 953   | 941   | 538   | 2300  | 400   |
| 28          | 3460  | 4610   | 4480  | 1860  | 5080   | 1950  | 4650  | 830   | 1640  | 1050  | 1990  | 360   |
| 29          | 3940  | 4510   | 4180  | 1950  | ---    | 1850  | 4830  | 922   | 2100  | 1470  | 1420  | 340   |
| 30          | 3850  | 4310   | 3850  | 2300  | ---    | 1780  | 4950  | 954   | 2270  | 1200  | 917   | 400   |
| 31          | 3240  | ---    | 3420  | 2800  | ---    | 1870  | ---   | 988   | ---   | 825   | 716   | ---   |
| TOTAL       | 47614 | 97390  | 94070 | 89370 | 140880 | 74720 | 71680 | 93014 | 28313 | 21633 | 30213 | 14943 |
| MEAN        | 1536  | 3246   | 3035  | 2883  | 5031   | 2410  | 2389  | 3000  | 944   | 698   | 975   | 498   |
| MAX         | 3940  | 4610   | 5140  | 3280  | 7090   | 5500  | 4950  | 6150  | 2270  | 2090  | 2300  | 890   |
| MIN         | 296   | 1130   | 1140  | 1860  | 3280   | 1180  | 1040  | 830   | 507   | 324   | 337   | 323   |
| CFSM        | 1.04  | 2.19   | 2.05  | 1.95  | 3.40   | 1.63  | 1.61  | 2.03  | .64   | .47   | .66   | .34   |
| IN.         | 1.20  | 2.45   | 2.36  | 2.25  | 3.54   | 1.88  | 1.80  | 2.34  | .71   | .54   | .76   | .38   |
| CAL YR 1984 | TOTAL | 988546 | MEAN  | 2701  | MAX    | 24900 | MIN   | 296   | CFSM  | 1.82  | IN.   | 24.85 |
| WTR YR 1985 | TOTAL | 803840 | MEAN  | 2202  | MAX    | 7090  | MIN   | 296   | CFSM  | 1.49  | IN.   | 20.20 |

## HATCHIE RIVER BASIN

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07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1968, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1980 to September 1982, October 1983 to current year.

WATER TEMPERATURE: June 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1980.

REMARKS.--Interruptions in the record were due to malfunctions of the instruments. Unpublished records of miscellaneous specific conductance and temperature are available in files of Subdistrict office. The water-quality monitor does not register below 0.0°C, monitor readings of 0.0°C may indicate lower temperatures.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 380 microsiemens, Sept. 5, 6, 1985; minimum, 28 microsiemens, Apr. 18, 1982.

WATER TEMPERATURE: Maximum, 31.5°C, July 15, 16, 1980; minimum recorded, 0.0°C, Dec. 23, 1983 to Jan. 3, 1984, several days in 1985, minimum observed, -0.5°C, Jan. 3, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 380 microsiemens, Sept. 5, 6; minimum, 43 microsiemens, July 15.

WATER TEMPERATURE: Maximum, 30.0°C, July 13-15; minimum, 0.0°C, several days.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>CAC03) | HARD-<br>NESS<br>(MG/L<br>AS<br>CAC03) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CAC03) |
|--------------|------|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|---|---|--|--|
| OCT<br>25... | 1100 | 3400  | 6.5                            | 15.5                        | --   | 50                           | --                                  | --   | 3600  | 4500  | 14                                     | 2  |
| JAN<br>17... | 1000 | 2690  | 6.2                            | 2.5                         | 760  | 5.5                          | 12.6                                | 93   | 2400  | 8200  | 25                                     | 9  |
| APR<br>18... | 0900 | 2010  | 6.8                            | 17.5                        | 761  | 2.4                          | 7.4                                 | 77   | K280  | K600  | 22                                     | 2  |
| JUL<br>18... | 1100 | 415   | 6.9                            | 27.0                        | 758  | 20                           | 6.4                                 | 81   | K16   | 190   | 21                                     | 0  |

| DATE         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CAC03) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) |
|--------------|--|--|--|-------------------|---|---|---|---|---|---|--|---|
| OCT<br>25... | 3.7  | 1.1  | 3.4  | 31                | .4                                      | 2.3   | 12  | 7.3   | 7.9   | 4.4   | <.10   | 7.2   |
| JAN<br>17... | 7.1  | 1.7  | 4.1  | 25                | .4                                      | 1.2   | 16  | 20  | 9.4   | 6.0   | <.10   | 9.1   |
| APR<br>18... | 6.0  | 1.6  | 3.6  | 25                | .3                                      | 1.4   | 20  | 6.1   | 11  | 5.1   | <.10   | 7.9   |
| JUL<br>18... | 5.3  | 1.8  | 8.5  | 45                | .8                                      | 1.5   | 24  | 5.9   | 7.4   | 10  | .20  | 10  |

| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) |
|--------------|--|--|---|---|---|---|---|--|---|--|--|---|
| OCT<br>25... | --   | 38   | .05   | 350   | .26   | .020  | .03   | .30  | .050  | .030   | .040   | .12   |
| JAN<br>17... | 59   | 49   | .08   | 429   | .25   | .190  | .24   | .50  | .080  | .020   | .010   | .03   |
| APR<br>18... | 51   | 50   | .07   | 277   | .11   | .240  | .31   | 1.3  | .060  | .030   | .020   | .06   |
| JUL<br>18... | 72   | 61   | .10   | 81  | .30   | .790  | 1.0   | 1.0  | .020  | <.010  | .010   | .03   |

K--Results based on non-ideal colony count.



## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|---|--|--|--|--|---|--|--|--|--|--|--|
| OCT<br>25... | 120   | <1   | 41   | <.5  | 1  | --  | <3   | 9  | 410  | 3  | <4   | 170  |
| JAN<br>17... | 60  | <1   | 36   | <.5  | 1  | <1  | <3   | 4  | 480  | 5  | <4   | 100  |
| APR<br>18... | 70  | <1   | 64   | <.5  | <1   | <1  | <3   | 2  | 600  | 4  | <4   | 71   |
| JUL<br>18... | 20  | <1   | 33   | 1.0  | <1   | <1  | <3   | 2  | 150  | 2  | <4   | 330  |

| DATE         | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM |
|--------------|--|---|--|---|--|--|--|--|---|---|---|
| OCT<br>25... | .1   | <10   | 7  | <1  | --   | 37   | <6   | 20   | 73  | 670   | 93  |
| JAN<br>17... | .2   | <10   | 2  | <1  | <1   | 56   | <6   | 9  | 33  | 240   | 87  |
| APR<br>18... | .1   | <10   | 2  | <1  | <1   | 55   | <6   | 9  | 36  | 195   | 84  |
| JUL<br>18... | .2   | <10   | 3  | <1  | <1   | 62   | <6   | 7  | 38  | 43  | 87  |

## HATCHIE RIVER BASIN

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07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY     | MAX | MIN | MEAN     | MAX | MIN | MEAN     | MAX | MIN | MEAN    | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER |     |     | NOVEMBER |     |     | DECEMBER |     |     | JANUARY |     |     |      |
| 1       | 166 | 90  | 109      |     |     |          | --- | --- | ---     | 80  | 79  | 79   |
| 2       | 219 | 176 | 204      |     |     |          | --- | --- | ---     | 80  | 79  | 80   |
| 3       | 226 | 218 | 221      |     |     |          | --- | --- | ---     | 81  | 79  | 80   |
| 4       | 225 | 189 | 219      |     |     |          | --- | --- | ---     | 80  | 79  | 80   |
| 5       | 185 | 104 | 137      |     |     |          | --- | --- | ---     | 81  | 80  | 81   |
| 6       | 140 | 84  | 111      |     |     |          | --- | --- | ---     | 82  | 81  | 82   |
| 7       | 132 | 68  | 88       |     |     |          | --- | --- | ---     | 85  | 83  | 84   |
| 8       | 90  | 51  | 71       |     |     |          | --- | --- | ---     | 86  | 85  | 85   |
| 9       | 72  | 46  | 56       |     |     |          | --- | --- | ---     | 87  | 86  | 86   |
| 10      | 86  | 70  | 76       |     |     |          | --- | --- | ---     | 88  | 87  | 87   |
| 11      | 93  | 81  | 87       |     |     |          | --- | --- | ---     | 89  | 88  | 89   |
| 12      | 94  | 77  | 83       |     |     |          | 101 | 91  | 95      | 91  | 90  | 90   |
| 13      | 110 | 77  | 89       |     |     |          | 92  | 72  | 80      | 92  | 91  | 91   |
| 14      | 122 | 87  | 103      |     |     |          | 83  | 72  | 75      | 94  | 93  | 94   |
| 15      | 131 | 103 | 116      |     |     |          | 77  | 72  | 75      | 95  | 94  | 95   |
| 16      | 112 | 95  | 104      |     |     |          | 79  | 70  | 73      | 96  | 95  | 95   |
| 17      | 101 | 78  | 84       |     |     |          | 72  | 70  | 71      | 98  | 96  | 97   |
| 18      | 100 | 86  | 95       |     |     |          | 72  | 70  | 71      | 99  | 96  | 98   |
| 19      | 87  | 74  | 79       |     |     |          | 89  | 73  | 78      | 100 | 98  | 99   |
| 20      | 91  | 68  | 81       |     |     |          | 118 | 93  | 103     | 96  | 95  | 96   |
| 21      | 113 | 73  | 95       |     |     |          | 95  | 88  | 93      | 95  | 93  | 94   |
| 22      | 87  | 78  | 82       |     |     |          | 89  | 85  | 87      | 93  | 92  | 93   |
| 23      | 93  | 77  | 84       |     |     |          | 90  | 55  | 72      | 92  | 90  | 91   |
| 24      | 85  | 79  | 82       |     |     |          | 59  | 56  | 57      | 98  | 89  | 90   |
| 25      | --- | --- | ---      |     |     |          | 62  | 59  | 61      | 89  | 87  | 88   |
| 26      | --- | --- | ---      |     |     |          | 65  | 62  | 64      | 87  | 86  | 87   |
| 27      | --- | --- | ---      |     |     |          | 69  | 66  | 68      | 86  | 85  | 86   |
| 28      | --- | --- | ---      |     |     |          | 80  | 69  | 71      | 86  | 84  | 85   |
| 29      | --- | --- | ---      |     |     |          | 75  | 72  | 73      | 86  | 84  | 85   |
| 30      | --- | --- | ---      |     |     |          | 76  | 74  | 75      | 99  | 84  | 91   |
| 31      | --- | --- | ---      |     |     |          | 78  | 77  | 78      | 102 | 98  | 101  |
| MONTH   | --- | --- | ---      |     |     |          | --- | --- | ---     | 102 | 79  | 89   |

| DAY      | MAX | MIN | MEAN  | MAX | MIN | MEAN  | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY |     |     | MARCH |     |     | APRIL |     |     | MAY  |     |     |      |
| 1        | 103 | 101 | 102   | --- | --- | ---   | 93  | 83  | 85   | 105 | 95  | 98   |
| 2        | 102 | 101 | 101   | --- | --- | ---   | 94  | 83  | 86   | 103 | 94  | 97   |
| 3        | 101 | 100 | 100   | --- | --- | ---   | 95  | 84  | 89   | 98  | 93  | 94   |
| 4        | 100 | 99  | 99    | --- | --- | ---   | 98  | 86  | 92   | 100 | 83  | 92   |
| 5        | 100 | 98  | 98    | --- | --- | ---   | 98  | 86  | 90   | 98  | 82  | 90   |
| 6        | 97  | 95  | 96    | --- | --- | ---   | 95  | 83  | 86   | 97  | 83  | 89   |
| 7        | --- | --- | ---   | --- | --- | ---   | 93  | 82  | 86   | 101 | 88  | 93   |
| 8        | --- | --- | ---   | --- | --- | ---   | 92  | 82  | 84   | 108 | 94  | 97   |
| 9        | --- | --- | ---   | --- | --- | ---   | 94  | 82  | 85   | 98  | 97  | 98   |
| 10       | --- | --- | ---   | --- | --- | ---   | 96  | 84  | 88   | 98  | 96  | 97   |
| 11       | --- | --- | ---   | --- | --- | ---   | 94  | 84  | 88   | 104 | 92  | 96   |
| 12       | --- | --- | ---   | --- | --- | ---   | 85  | 84  | 85   | 104 | 93  | 98   |
| 13       | --- | --- | ---   | 92  | 82  | 86    | 94  | 84  | 88   | 105 | 94  | 100  |
| 14       | --- | --- | ---   | 83  | 82  | 83    | 93  | 82  | 85   | 112 | 99  | 105  |
| 15       | --- | --- | ---   | 92  | 82  | 84    | 90  | 79  | 82   | 113 | 101 | 104  |
| 16       | --- | --- | ---   | 93  | 83  | 86    | 87  | 77  | 80   | 117 | 104 | 109  |
| 17       | --- | --- | ---   | 84  | 82  | 83    | 99  | 80  | 88   | 113 | 109 | 111  |
| 18       | --- | --- | ---   | 93  | 82  | 85    | 106 | 88  | 96   | 121 | 109 | 113  |
| 19       | --- | --- | ---   | 93  | 82  | 86    | 107 | 88  | 99   | 119 | 108 | 112  |
| 20       | --- | --- | ---   | 86  | 83  | 84    | 100 | 88  | 94   | 118 | 107 | 111  |
| 21       | --- | --- | ---   | 89  | 84  | 86    | 95  | 85  | 88   | 145 | 111 | 120  |
| 22       | --- | --- | ---   | 111 | 91  | 106   | 94  | 85  | 87   | 153 | 132 | 140  |
| 23       | --- | --- | ---   | 105 | 78  | 91    | 133 | 87  | 100  | 138 | 119 | 128  |
| 24       | --- | --- | ---   | 89  | 77  | 81    | 124 | 95  | 107  | 137 | 118 | 125  |
| 25       | --- | --- | ---   | 90  | 77  | 81    | 102 | 85  | 94   | 126 | 106 | 118  |
| 26       | --- | --- | ---   | 95  | 81  | 86    | 98  | 84  | 87   | 119 | 104 | 108  |
| 27       | --- | --- | ---   | 95  | 85  | 87    | 95  | 88  | 91   | 115 | 103 | 106  |
| 28       | --- | --- | ---   | 97  | 85  | 91    | 102 | 90  | 95   | 118 | 102 | 108  |
| 29       | --- | --- | ---   | 98  | 85  | 91    | 102 | 91  | 96   | 132 | 119 | 124  |
| 30       | --- | --- | ---   | 95  | 84  | 88    | 106 | 93  | 99   | 138 | 122 | 129  |
| 31       | --- | --- | ---   | 87  | 84  | 86    | --- | --- | ---  | 144 | 127 | 134  |
| MONTH    | --- | --- | ---   | --- | --- | ---   | 133 | 77  | 90   | 153 | 82  | 108  |

## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX  | MIN | MEAN | MAX  | MIN | MEAN | MAX    | MIN | MEAN | MAX       | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
|       | JUNE |     |      | JULY |     |      | AUGUST |     |      | SEPTEMBER |     |      |
| 1     | 137  | 107 | 123  | 59   | 49  | 52   | 135    | 114 | 123  | 103       | 95  | 98   |
| 2     | 118  | 106 | 112  | 63   | 50  | 55   | 156    | 131 | 142  | 94        | 87  | 92   |
| 3     | 121  | 107 | 112  | 77   | 54  | 63   | 153    | 110 | 127  | 106       | 89  | 93   |
| 4     | 138  | 116 | 126  | 91   | 65  | 74   | 113    | 103 | 106  | 169       | 95  | 119  |
| 5     | 158  | 133 | 143  | 96   | 83  | 86   | 103    | 100 | 101  | 380       | 123 | 225  |
| 6     | 168  | 143 | 153  | 89   | 76  | 80   | 114    | 103 | 108  | 380       | 127 | 229  |
| 7     | 163  | 154 | 159  | 78   | 64  | 71   | 130    | 113 | 119  | 250       | 103 | 157  |
| 8     | 165  | 124 | 147  | 61   | 47  | 55   | 160    | 132 | 143  | 238       | 90  | 145  |
| 9     | 123  | 107 | 115  | 68   | 47  | 55   | 186    | 150 | 163  | 250       | 104 | 172  |
| 10    | 121  | 108 | 113  | 60   | 47  | 52   | 178    | 113 | 143  | 241       | 108 | 162  |
| 11    | 129  | 114 | 120  | 71   | 46  | 54   | 136    | 100 | 108  | 248       | 119 | 143  |
| 12    | 135  | 124 | 129  | 115  | 67  | 89   | 145    | 98  | 112  | 332       | 122 | 171  |
| 13    | 156  | 135 | 143  | 119  | 53  | 83   | 157    | 117 | 137  | 130       | 125 | 127  |
| 14    | 158  | 138 | 145  | 55   | 45  | 49   | 197    | 161 | 172  | 131       | 100 | 117  |
| 15    | 133  | 86  | 103  | 105  | 43  | 54   | 226    | 197 | 212  | 99        | 95  | 97   |
| 16    | 86   | 76  | 82   | 158  | 113 | 139  | 237    | 226 | 232  | 99        | 93  | 95   |
| 17    | 102  | 74  | 79   | 185  | 158 | 165  | 226    | 171 | 199  | 112       | 99  | 105  |
| 18    | 111  | 103 | 108  | 163  | 135 | 150  | 171    | 146 | 159  | 142       | 113 | 123  |
| 19    | 108  | 99  | 104  | 160  | 134 | 141  | 151    | 119 | 134  | 169       | 144 | 154  |
| 20    | 115  | 98  | 103  | 136  | 51  | 87   | 124    | 120 | 123  | 195       | 169 | 181  |
| 21    | 114  | 100 | 103  | 54   | 45  | 48   | 126    | 117 | 120  | 215       | 196 | 202  |
| 22    | 101  | 95  | 98   | 112  | 57  | 68   | 127    | 121 | 123  | 232       | 200 | 218  |
| 23    | 100  | 85  | 92   | 192  | 125 | 170  | 128    | 119 | 125  | 197       | 120 | 171  |
| 24    | 86   | 76  | 82   | 218  | 196 | 201  | 173    | 121 | 131  | 116       | 95  | 104  |
| 25    | 93   | 75  | 82   | 221  | 208 | 214  | 159    | 110 | 123  | 243       | 114 | 140  |
| 26    | 82   | 67  | 76   | 229  | 225 | 227  | 292    | 111 | 152  | 258       | 152 | 202  |
| 27    | 75   | 65  | 67   | 229  | 93  | 164  | 293    | 103 | 127  | 162       | 157 | 159  |
| 28    | 63   | 51  | 56   | 96   | 83  | 90   | 110    | 103 | 105  | 152       | 95  | 110  |
| 29    | 62   | 53  | 54   | 89   | 84  | 86   | 174    | 106 | 117  | 94        | 84  | 89   |
| 30    | 56   | 50  | 52   | 105  | 93  | 97   | 170    | 110 | 124  | 125       | 87  | 91   |
| 31    | ---  | --- | ---  | 110  | 105 | 107  | 126    | 102 | 111  | ---       | --- | ---  |
| MONTH | 168  | 50  | 106  | 229  | 43  | 101  | 293    | 98  | 136  | 380       | 84  | 143  |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY   | MAX     | MIN  | MEAN | MAX      | MIN  | MEAN | MAX      | MIN  | MEAN | MAX     | MIN  | MEAN |
|-------|---------|------|------|----------|------|------|----------|------|------|---------|------|------|
|       | OCTOBER |      |      | NOVEMBER |      |      | DECEMBER |      |      | JANUARY |      |      |
| 1     | 16.0    | 14.5 | 15.5 | 19.5     | 19.5 | 19.5 | 9.0      | 8.5  | 9.0  | 14.5    | 12.5 | 14.0 |
| 2     | 15.5    | 14.0 | 15.0 | 19.5     | 16.5 | 18.0 | 9.0      | 8.5  | 8.5  | 12.5    | 10.5 | 11.5 |
| 3     | 16.0    | 14.0 | 15.0 | 16.5     | 14.5 | 15.5 | 9.0      | 7.5  | 8.0  | 10.0    | 6.0  | 8.5  |
| 4     | 16.0    | 15.0 | 15.5 | 15.5     | 14.5 | 15.0 | 7.5      | 6.5  | 7.0  | 6.0     | 4.5  | 5.5  |
| 5     | 16.5    | 15.0 | 16.0 | 15.0     | 14.5 | 15.0 | 6.5      | 6.0  | 6.5  | 4.5     | 3.5  | 4.0  |
| 6     | 17.0    | 16.0 | 16.5 | 14.5     | 13.5 | 13.5 | 6.0      | 4.5  | 5.5  | 3.5     | 3.0  | 3.0  |
| 7     | 18.0    | 16.5 | 17.0 | 13.5     | 12.5 | 13.0 | 4.5      | 4.0  | 4.0  | 3.5     | 2.5  | 3.0  |
| 8     | 18.5    | 17.5 | 18.0 | 13.0     | 12.5 | 13.0 | 4.5      | 3.5  | 4.0  | 3.5     | 2.5  | 3.0  |
| 9     | 19.0    | 18.0 | 18.5 | 14.0     | 13.0 | 13.5 | 5.0      | 4.0  | 4.5  | 4.0     | 3.0  | 3.5  |
| 10    | 19.0    | 18.5 | 19.0 | 15.0     | 13.5 | 14.5 | 6.0      | 5.0  | 5.5  | 4.5     | 4.0  | 4.0  |
| 11    | 19.0    | 18.5 | 19.0 | 13.5     | 12.0 | 13.0 | 6.0      | 5.5  | 6.0  | 4.5     | 3.5  | 4.0  |
| 12    | 19.5    | 18.5 | 19.0 | 12.0     | 10.5 | 11.5 | 8.0      | 6.0  | 7.0  | 3.0     | 2.5  | 3.0  |
| 13    | 20.0    | 19.0 | 19.5 | 10.5     | 10.0 | 10.0 | 10.0     | 8.0  | 9.0  | 2.5     | 2.0  | 2.5  |
| 14    | 20.5    | 19.5 | 20.0 | 10.0     | 9.0  | 9.5  | 11.5     | 10.0 | 11.0 | 3.0     | 2.0  | 2.5  |
| 15    | 21.0    | 19.5 | 20.5 | 10.5     | 10.0 | 10.0 | 12.0     | 11.5 | 11.5 | 2.5     | 1.5  | 2.0  |
| 16    | 21.0    | 20.0 | 20.5 | 10.5     | 9.5  | 10.0 | 13.0     | 12.0 | 12.5 | 2.0     | 1.5  | 2.0  |
| 17    | 20.5    | 20.0 | 20.5 | 9.5      | 8.5  | 9.0  | 14.0     | 13.0 | 13.5 | 2.5     | 2.0  | 2.5  |
| 18    | 20.5    | 19.5 | 20.0 | 9.5      | 9.5  | 9.5  | 14.5     | 14.0 | 14.0 | 3.5     | 2.5  | 3.0  |
| 19    | 20.5    | 20.0 | 20.5 | 9.5      | 8.5  | 9.0  | 14.0     | 14.0 | 14.0 | 3.5     | 2.5  | 3.0  |
| 20    | 20.5    | 19.5 | 20.0 | 8.5      | 7.0  | 8.0  | 14.0     | 12.5 | 13.0 | 2.5     | .5   | 1.5  |
| 21    | 20.0    | 19.5 | 19.5 | 7.0      | 6.0  | 6.5  | 14.0     | 12.5 | 13.5 | 1.0     | .5   | .5   |
| 22    | 19.5    | 18.5 | 19.0 | 6.5      | 5.5  | 6.0  | 13.5     | 10.5 | 12.0 | 1.0     | .5   | .5   |
| 23    | 18.5    | 16.0 | 16.5 | 6.5      | 5.0  | 6.0  | 10.5     | 9.0  | 10.0 | 1.0     | .0   | .5   |
| 24    | 16.0    | 15.5 | 15.5 | 6.5      | 5.0  | 6.0  | 11.5     | 10.0 | 10.5 | 1.5     | .5   | 1.0  |
| 25    | 17.0    | 15.0 | 16.0 | 7.5      | 6.0  | 6.5  | 10.5     | 8.0  | 9.0  | 1.5     | .5   | 1.0  |
| 26    | 17.5    | 16.5 | 17.0 | 10.0     | 7.5  | 8.5  | 8.0      | 7.0  | 7.5  | 1.0     | .5   | 1.0  |
| 27    | 18.0    | 17.0 | 17.5 | 10.5     | 10.0 | 10.5 | 10.5     | 8.0  | 9.0  | 1.0     | 1.0  | 1.0  |
| 28    | 19.0    | 18.0 | 18.5 | 10.0     | 8.5  | 9.0  | 12.0     | 10.0 | 11.0 | 1.5     | 1.0  | 1.0  |
| 29    | 19.5    | 19.0 | 19.0 | 8.5      | 7.0  | 8.0  | 13.0     | 11.5 | 12.0 | 1.5     | .5   | 1.0  |
| 30    | 19.5    | 18.5 | 19.0 | 9.5      | 8.5  | 9.0  | 13.5     | 12.0 | 13.0 | 2.0     | 1.0  | 1.5  |
| 31    | 20.0    | 19.0 | 19.5 | ---      | ---  | ---  | 14.5     | 13.0 | 13.5 | 2.5     | 1.0  | 2.0  |
| MONTH | 21.0    | 14.0 | 18.0 | 19.5     | 5.0  | 11.0 | 14.5     | 3.5  | 9.5  | 14.5    | .0   | 3.0  |

## HATCHIE RIVER BASIN

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07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DAY      | MAX  | MIN  | MEAN | MAX   | MIN  | MEAN | MAX   | MIN  | MEAN | MAX  | MIN  | MEAN |
|----------|------|------|------|-------|------|------|-------|------|------|------|------|------|
| FEBRUARY |      |      |      | MARCH |      |      | APRIL |      |      | MAY  |      |      |
| 1        | 1.0  | .5   | .5   | 11.5  | 10.5 | 11.0 | 17.0  | 15.5 | 16.0 | 21.0 | 20.5 | 20.5 |
| 2        | 1.0  | .0   | .5   | 13.0  | 11.0 | 12.0 | 16.0  | 14.5 | 15.5 | 20.0 | 18.5 | 19.5 |
| 3        | .5   | .0   | .0   | 13.5  | 11.5 | 12.5 | 16.5  | 14.5 | 15.5 | 19.0 | 18.0 | 18.5 |
| 4        | .0   | .0   | .0   | 13.5  | 13.0 | 13.5 | 17.0  | 15.5 | 16.0 | 19.0 | 17.5 | 18.5 |
| 5        | .0   | .0   | .0   | 13.0  | 10.5 | 12.0 | 16.5  | 15.5 | 16.0 | 19.5 | 18.5 | 19.0 |
| 6        | .5   | .0   | .0   | 12.0  | 9.5  | 11.0 | 16.0  | 14.5 | 15.5 | 20.5 | 19.0 | 19.5 |
| 7        | .5   | .0   | .0   | 12.5  | 10.0 | 11.0 | 16.5  | 15.0 | 15.5 | 20.5 | 20.0 | 20.5 |
| 8        | .5   | .0   | .0   | 13.0  | 11.5 | 12.0 | 15.5  | 14.5 | 15.0 | 20.5 | 19.5 | 20.0 |
| 9        | .5   | .0   | .0   | 14.0  | 12.5 | 13.0 | 15.0  | 13.5 | 14.5 | 20.0 | 19.0 | 19.5 |
| 10       | 2.0  | .5   | 1.0  | 13.0  | 12.5 | 13.0 | 15.0  | 13.5 | 14.0 | 19.0 | 18.5 | 19.0 |
| 11       | 2.5  | .5   | 1.5  | 14.0  | 12.5 | 13.5 | 15.5  | 14.0 | 14.5 | 20.0 | 18.5 | 19.0 |
| 12       | 1.5  | .0   | .5   | 14.5  | 13.5 | 14.0 | 15.0  | 14.5 | 15.0 | 21.5 | 20.0 | 20.5 |
| 13       | 2.0  | .0   | 1.0  | 15.0  | 13.0 | 14.0 | 16.0  | 14.5 | 15.5 | 22.0 | 21.0 | 21.5 |
| 14       | 3.5  | 1.5  | 2.5  | 14.5  | 13.5 | 14.0 | 16.0  | 15.5 | 16.0 | 22.5 | 21.5 | 22.0 |
| 15       | 3.5  | 2.0  | 2.5  | 14.0  | 12.5 | 13.0 | 16.0  | 15.5 | 16.0 | 22.0 | 21.5 | 22.0 |
| 16       | 4.0  | 1.5  | 2.5  | 13.5  | 12.5 | 13.0 | 16.0  | 15.5 | 15.5 | 22.5 | 21.0 | 21.5 |
| 17       | 6.0  | 3.0  | 4.5  | 13.5  | 12.5 | 13.0 | 17.5  | 15.5 | 16.5 | 22.0 | 21.0 | 21.5 |
| 18       | 6.0  | 5.0  | 5.5  | 13.0  | 11.5 | 12.5 | 18.5  | 16.5 | 17.5 | 21.5 | 20.0 | 21.0 |
| 19       | 6.5  | 5.5  | 6.0  | 13.0  | 11.5 | 12.5 | 19.5  | 17.5 | 18.5 | 21.5 | 20.0 | 20.5 |
| 20       | 8.5  | 5.5  | 7.0  | 12.5  | 12.0 | 12.5 | 20.5  | 18.5 | 19.5 | 21.5 | 20.0 | 21.0 |
| 21       | 9.5  | 7.0  | 8.5  | 12.0  | 11.5 | 12.0 | 21.0  | 19.5 | 20.5 | 21.5 | 20.0 | 21.0 |
| 22       | 11.5 | 9.0  | 10.0 | 12.0  | 11.5 | 11.5 | 21.5  | 20.0 | 21.0 | 21.0 | 19.5 | 20.5 |
| 23       | 13.5 | 10.5 | 12.0 | 12.5  | 11.5 | 12.0 | 21.0  | 19.0 | 20.5 | 20.5 | 19.0 | 20.0 |
| 24       | 14.0 | 13.0 | 13.5 | 13.5  | 11.5 | 12.5 | 19.5  | 18.0 | 18.5 | 21.0 | 19.0 | 20.0 |
| 25       | 13.5 | 11.5 | 12.5 | 13.5  | 12.0 | 12.5 | 20.0  | 17.5 | 18.5 | 21.5 | 19.5 | 20.5 |
| 26       | 13.0 | 11.0 | 12.0 | 14.5  | 12.0 | 13.5 | 20.0  | 18.5 | 19.0 | 22.0 | 20.0 | 21.0 |
| 27       | 12.5 | 11.0 | 12.0 | 14.5  | 14.0 | 14.0 | 20.0  | 19.5 | 19.5 | 22.5 | 21.0 | 21.5 |
| 28       | 11.5 | 9.5  | 10.5 | 16.5  | 14.5 | 15.5 | 20.0  | 19.0 | 19.5 | 23.0 | 21.0 | 22.0 |
| 29       | ---  | ---  | ---  | 17.5  | 16.5 | 17.0 | 21.0  | 19.5 | 20.0 | 23.0 | 21.5 | 22.5 |
| 30       | ---  | ---  | ---  | 18.0  | 17.0 | 17.5 | 21.5  | 20.5 | 21.0 | 24.0 | 22.5 | 23.0 |
| 31       | ---  | ---  | ---  | 18.0  | 17.0 | 17.5 | ---   | ---  | ---  | 24.5 | 23.0 | 24.0 |
| MONTH    | 14.0 | .0   | 4.5  | 18.0  | 9.5  | 13.0 | 21.5  | 13.5 | 17.0 | 24.5 | 17.5 | 20.5 |

| DAY   | MAX  | MIN  | MEAN | MAX  | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
| JUNE  |      |      |      | JULY |      |      | AUGUST |      |      | SEPTEMBER |      |      |
| 1     | 25.5 | 23.5 | 24.5 | 23.5 | 22.0 | 22.5 | 27.5   | 25.5 | 26.5 | 26.5      | 25.0 | 25.5 |
| 2     | 26.5 | 24.5 | 25.5 | 24.0 | 22.5 | 23.0 | 27.0   | 25.5 | 26.5 | 26.5      | 25.0 | 25.5 |
| 3     | 27.0 | 25.0 | 26.0 | 25.5 | 23.0 | 24.0 | 26.0   | 25.5 | 25.5 | 26.0      | 25.0 | 25.5 |
| 4     | 28.0 | 25.5 | 27.0 | 25.5 | 24.0 | 24.5 | 27.0   | 25.0 | 26.0 | 25.5      | 24.5 | 25.0 |
| 5     | 28.0 | 26.5 | 27.5 | 25.5 | 24.5 | 25.0 | 26.0   | 25.0 | 25.5 | 25.0      | 24.5 | 25.0 |
| 6     | 28.0 | 26.5 | 27.5 | 25.0 | 24.0 | 24.5 | 25.5   | 24.5 | 25.0 | 26.0      | 24.5 | 25.0 |
| 7     | 27.5 | 26.0 | 26.5 | 25.5 | 24.0 | 25.0 | 26.5   | 24.5 | 25.5 | 26.5      | 24.5 | 25.5 |
| 8     | 26.0 | 25.5 | 25.5 | 26.5 | 24.5 | 25.5 | 27.0   | 25.0 | 26.0 | 26.5      | 25.0 | 25.5 |
| 9     | 26.5 | 24.5 | 25.5 | 27.5 | 25.0 | 26.0 | 27.5   | 25.5 | 26.5 | 26.5      | 25.0 | 26.0 |
| 10    | 27.0 | 25.5 | 26.0 | 28.0 | 26.0 | 27.0 | 27.5   | 25.5 | 26.5 | 27.0      | 25.5 | 26.0 |
| 11    | 26.5 | 25.5 | 26.0 | 28.5 | 26.0 | 27.5 | 28.0   | 26.0 | 27.0 | 26.5      | 26.0 | 26.0 |
| 12    | 25.5 | 24.5 | 25.0 | 29.0 | 26.5 | 28.0 | 28.5   | 26.0 | 27.0 | 26.0      | 25.0 | 25.5 |
| 13    | 24.5 | 22.5 | 23.5 | 30.0 | 27.0 | 28.5 | 28.5   | 26.0 | 27.5 | 25.0      | 23.5 | 24.5 |
| 14    | 24.5 | 22.0 | 23.0 | 30.0 | 27.5 | 29.0 | 29.0   | 27.0 | 27.5 | 23.5      | 22.5 | 23.0 |
| 15    | 24.5 | 22.5 | 23.5 | 30.0 | 28.0 | 29.0 | 28.0   | 27.0 | 27.5 | 22.5      | 21.5 | 22.0 |
| 16    | 25.5 | 23.0 | 24.0 | 29.5 | 28.0 | 28.5 | 27.0   | 24.5 | 26.0 | 22.5      | 20.5 | 21.5 |
| 17    | 25.0 | 23.5 | 24.0 | 29.0 | 26.5 | 28.0 | 25.0   | 24.0 | 24.5 | 22.5      | 20.5 | 21.5 |
| 18    | 23.5 | 21.5 | 23.0 | 29.0 | 26.0 | 27.5 | 24.5   | 24.0 | 24.5 | 22.5      | 20.5 | 21.5 |
| 19    | 23.0 | 22.0 | 22.5 | 28.5 | 26.5 | 27.5 | 25.0   | 24.0 | 24.5 | 22.5      | 21.0 | 21.5 |
| 20    | 23.0 | 21.5 | 22.0 | 29.0 | 26.5 | 28.0 | 25.0   | 24.5 | 24.5 | 22.5      | 20.5 | 21.5 |
| 21    | 23.5 | 22.0 | 23.0 | 29.0 | 27.0 | 28.0 | 25.5   | 24.5 | 25.0 | 22.5      | 21.0 | 21.5 |
| 22    | 23.5 | 23.0 | 23.0 | 28.0 | 27.0 | 27.5 | 26.0   | 24.5 | 25.5 | 23.0      | 21.0 | 22.0 |
| 23    | 24.5 | 22.5 | 23.5 | 28.0 | 26.5 | 27.0 | 25.5   | 24.5 | 25.0 | 22.5      | 21.5 | 22.0 |
| 24    | 26.0 | 23.5 | 24.5 | 27.5 | 26.0 | 26.5 | 24.5   | 22.5 | 23.5 | 21.5      | 20.0 | 21.0 |
| 25    | 26.5 | 24.5 | 25.5 | 27.0 | 26.0 | 26.5 | 23.0   | 22.0 | 22.5 | 21.0      | 19.0 | 20.0 |
| 26    | 27.0 | 25.0 | 26.0 | 26.5 | 25.5 | 26.0 | 22.5   | 22.0 | 22.0 | 20.5      | 18.5 | 19.5 |
| 27    | 26.5 | 25.0 | 25.5 | 25.0 | 24.5 | 25.0 | 23.0   | 22.0 | 22.5 | 19.5      | 18.5 | 19.0 |
| 28    | 25.5 | 23.5 | 24.5 | 25.0 | 24.0 | 24.5 | 23.5   | 22.0 | 23.0 | 18.5      | 17.5 | 18.0 |
| 29    | 23.5 | 23.0 | 23.0 | 24.5 | 23.5 | 24.0 | 24.5   | 23.0 | 23.5 | 18.5      | 17.0 | 18.0 |
| 30    | 23.0 | 22.5 | 22.5 | 25.0 | 24.0 | 24.5 | 25.5   | 24.0 | 24.5 | 18.0      | 17.0 | 18.0 |
| 31    | ---  | ---  | ---  | 26.0 | 24.5 | 25.5 | 26.5   | 24.5 | 25.5 | ---       | ---  | ---  |
| MONTH | 28.0 | 21.5 | 24.5 | 30.0 | 22.0 | 26.0 | 29.0   | 22.0 | 25.0 | 27.0      | 17.0 | 22.5 |



## LOOSAHATCHIE RIVER BASIN

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN

LOCATION.--Lat 35°18'37", long 89°38'23", Shelby County, Hydrologic Unit 08010209, on left bank 20 ft downstream from bridge on U.S. Highways 70 and 79, 1.5 mi upstream from Beaver Creek, 1.5 mi northeast of Arlington, and at mile 30.4.

DRAINAGE AREA.--262 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 8-13, Jan. 5-30, Feb. 12-25, and Apr. 7-9. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--16 years, 365 ft<sup>3</sup>/s, 18.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft<sup>3</sup>/s, Mar. 13, 1975, gage height, 24.96 ft; minimum, 66 ft<sup>3</sup>/s, Apr. 6, 7, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Apr. 24 | 0145 | *5,330                            | *18.46              |      |      |                                   |                     |

Minimum discharge, 72 ft<sup>3</sup>/s, Oct. 2, 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN  | FEB   | MAR  | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|-------|-------|------|-------|------|-------|------|------|------|------|------|
| 1     | 73   | 154   | 148   | 884  | 1020  | 207  | 694   | 449  | 135  | 168  | 90   | 121  |
| 2     | 73   | 1050  | 132   | 359  | 319   | 195  | 222   | 231  | 130  | 97   | 89   | 119  |
| 3     | 73   | 215   | 124   | 192  | 245   | 181  | 163   | 172  | 126  | 94   | 87   | 117  |
| 4     | 73   | 147   | 117   | 184  | 217   | 177  | 146   | 151  | 123  | 92   | 87   | 126  |
| 5     | 73   | 128   | 129   | 180  | 385   | 199  | 140   | 144  | 122  | 92   | 156  | 141  |
| 6     | 80   | 114   | 220   | 180  | 1020  | 168  | 150   | 139  | 121  | 1400 | 158  | 116  |
| 7     | 163  | 111   | 157   | 205  | 741   | 154  | 137   | 292  | 121  | 218  | 93   | 113  |
| 8     | 95   | 111   | 140   | 185  | 291   | 153  | 129   | 1090 | 132  | 137  | 86   | 244  |
| 9     | 83   | 112   | 138   | 180  | 232   | 150  | 115   | 266  | 120  | 122  | 84   | 499  |
| 10    | 83   | 3600  | 136   | 405  | 447   | 146  | 110   | 172  | 116  | 116  | 84   | 138  |
| 11    | 455  | 871   | 134   | 330  | 2880  | 142  | 110   | 151  | 124  | 124  | 125  | 119  |
| 12    | 268  | 252   | 132   | 220  | 1300  | 180  | 109   | 142  | 124  | 112  | 107  | 113  |
| 13    | 132  | 181   | 134   | 190  | 800   | 155  | 107   | 133  | 115  | 109  | 85   | 109  |
| 14    | 118  | 156   | 130   | 170  | 540   | 156  | 109   | 137  | 113  | 107  | 82   | 107  |
| 15    | 113  | 789   | 127   | 160  | 400   | 173  | 120   | 128  | 113  | 114  | 82   | 107  |
| 16    | 109  | 457   | 126   | 160  | 320   | 147  | 112   | 124  | 113  | 184  | 250  | 105  |
| 17    | 352  | 196   | 130   | 440  | 290   | 137  | 107   | 121  | 210  | 106  | 497  | 105  |
| 18    | 134  | 2320  | 127   | 270  | 270   | 129  | 103   | 118  | 862  | 101  | 123  | 102  |
| 19    | 152  | 3030  | 132   | 180  | 350   | 131  | 101   | 116  | 165  | 100  | 102  | 101  |
| 20    | 135  | 492   | 2900  | 150  | 300   | 129  | 99    | 115  | 118  | 99   | 97   | 100  |
| 21    | 502  | 241   | 2090  | 130  | 270   | 289  | 98    | 166  | 110  | 99   | 94   | 100  |
| 22    | 385  | 185   | 1080  | 125  | 250   | 720  | 96    | 1560 | 295  | 98   | 91   | 100  |
| 23    | 2460 | 165   | 338   | 120  | 900   | 295  | 1150  | 282  | 417  | 97   | 89   | 100  |
| 24    | 1220 | 155   | 241   | 117  | 3200  | 210  | 4700  | 170  | 129  | 96   | 1720 | 99   |
| 25    | 244  | 149   | 301   | 115  | 900   | 167  | 1220  | 149  | 115  | 96   | 1190 | 99   |
| 26    | 161  | 149   | 183   | 113  | 430   | 149  | 309   | 141  | 257  | 103  | 227  | 110  |
| 27    | 137  | 588   | 157   | 113  | 287   | 186  | 278   | 136  | 107  | 176  | 160  | 103  |
| 28    | 127  | 689   | 148   | 250  | 225   | 234  | 293   | 142  | 146  | 102  | 141  | 99   |
| 29    | 118  | 260   | 140   | 280  | ---   | 187  | 204   | 462  | 102  | 99   | 133  | 98   |
| 30    | 116  | 176   | 144   | 500  | ---   | 165  | 173   | 179  | 144  | 108  | 128  | 627  |
| 31    | 111  | ---   | 238   | 2290 | ---   | 2610 | ---   | 142  | ---  | 92   | 123  | ---  |
| TOTAL | 8418 | 17243 | 10573 | 9377 | 18829 | 8421 | 11604 | 7920 | 5125 | 4858 | 6660 | 4337 |
| MEAN  | 272  | 575   | 341   | 302  | 672   | 272  | 387   | 255  | 171  | 157  | 215  | 145  |
| MAX   | 2460 | 3600  | 2900  | 2290 | 3200  | 2610 | 4700  | 1560 | 862  | 1400 | 1720 | 627  |
| MIN   | 73   | 111   | 117   | 113  | 217   | 129  | 96    | 115  | 102  | 92   | 82   | 98   |
| CFSM  | 1.04 | 2.19  | 1.30  | 1.15 | 2.56  | 1.04 | 1.48  | .97  | .65  | .60  | .82  | .55  |
| IN.   | 1.20 | 2.45  | 1.50  | 1.33 | 2.67  | 1.20 | 1.65  | 1.12 | .73  | .69  | .95  | .62  |

|             |       |        |      |     |     |      |     |    |      |      |     |       |
|-------------|-------|--------|------|-----|-----|------|-----|----|------|------|-----|-------|
| CAL YR 1984 | TOTAL | 145629 | MEAN | 398 | MAX | 6130 | MIN | 73 | CFSM | 1.52 | IN. | 20.68 |
| WTR YR 1985 | TOTAL | 113365 | MEAN | 311 | MAX | 4700 | MIN | 73 | CFSM | 1.19 | IN. | 16.10 |

## WOLF RIVER BASIN

245

07031650 WOLF RIVER AT GERMANTOWN, TN

LOCATION.--Lat 35°06'59", long 89°48'05", Shelby County, Hydrologic Unit 08010210, on left bank at bridge on Germantown Road at Germantown, 3.6 mi downstream from Grays Creek, 6.4 mi upstream from Fletcher Creek, and at mile 18.9.

DRAINAGE AREA.--699 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year. Published as "near Germantown" prior to 1978.

GAGE.--Water-stage recorder. Datum of gage is 235.76 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Estimated daily discharges: Feb. 2 and Sept. 16-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--16 years, 1,036 ft<sup>3</sup>/s, 20.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft<sup>3</sup>/s, Mar. 14, 1975, gage height; 27.98 ft, minimum, 190 ft<sup>3</sup>/s, Sept. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base of 7,000 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Apr. 24 | 0245 | *8,470                         | *15.15           | No other peak greater than base discharge. |      |                                |                  |

Minimum discharge, 278 ft<sup>3</sup>/s, Oct. 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 281   | 668   | 806   | 1050  | 1220  | 1670  | 1300  | 1290  | 483   | 899   | 580   | 408   |
| 2     | 280   | 1090  | 784   | 965   | 1020  | 1180  | 1030  | 1270  | 443   | 571   | 505   | 375   |
| 3     | 279   | 1190  | 744   | 852   | 846   | 880   | 812   | 1060  | 450   | 442   | 430   | 354   |
| 4     | 281   | 1180  | 675   | 792   | 695   | 785   | 711   | 898   | 395   | 385   | 386   | 339   |
| 5     | 281   | 1060  | 655   | 783   | 774   | 774   | 682   | 942   | 377   | 445   | 616   | 342   |
| 6     | 432   | 784   | 720   | 775   | 1130  | 707   | 671   | 1040  | 358   | 719   | 500   | 354   |
| 7     | 553   | 654   | 634   | 820   | 1210  | 645   | 602   | 1030  | 351   | 1180  | 389   | 352   |
| 8     | 669   | 587   | 588   | 901   | 1000  | 612   | 535   | 906   | 351   | 1070  | 374   | 400   |
| 9     | 800   | 539   | 559   | 764   | 860   | 587   | 487   | 1040  | 355   | 608   | 356   | 664   |
| 10    | 1070  | 2370  | 541   | 1070  | 891   | 567   | 470   | 1030  | 497   | 450   | 407   | 497   |
| 11    | 1220  | 1270  | 524   | 1010  | 2640  | 547   | 457   | 924   | 620   | 438   | 409   | 385   |
| 12    | 970   | 1180  | 522   | 821   | 2290  | 527   | 442   | 975   | 397   | 370   | 370   | 355   |
| 13    | 862   | 880   | 507   | 675   | 2430  | 517   | 431   | 1000  | 366   | 347   | 355   | 344   |
| 14    | 693   | 818   | 497   | 612   | 2210  | 520   | 430   | 890   | 347   | 330   | 341   | 328   |
| 15    | 542   | 1130  | 488   | 580   | 1990  | 513   | 479   | 699   | 339   | 332   | 336   | 332   |
| 16    | 470   | 937   | 479   | 583   | 1540  | 500   | 534   | 570   | 330   | 316   | 493   | 348   |
| 17    | 561   | 762   | 472   | 1000  | 1150  | 473   | 506   | 501   | 381   | 302   | 704   | 340   |
| 18    | 532   | 2110  | 459   | 942   | 875   | 460   | 494   | 445   | 1120  | 300   | 637   | 335   |
| 19    | 574   | 2390  | 490   | 815   | 907   | 450   | 496   | 417   | 1270  | 302   | 617   | 330   |
| 20    | 561   | 2650  | 3970  | 679   | 806   | 437   | 493   | 398   | 1290  | 314   | 537   | 325   |
| 21    | 1200  | 2520  | 3180  | 585   | 736   | 957   | 471   | 449   | 1160  | 317   | 543   | 320   |
| 22    | 1270  | 2340  | 3660  | 551   | 671   | 1210  | 441   | 1470  | 1000  | 316   | 566   | 315   |
| 23    | 3730  | 2010  | 2950  | 503   | 934   | 841   | 2470  | 957   | 1020  | 324   | 502   | 310   |
| 24    | 2350  | 1530  | 2480  | 490   | 3840  | 670   | 4520  | 998   | 902   | 292   | 845   | 305   |
| 25    | 2860  | 1080  | 1790  | 493   | 3170  | 598   | 2230  | 858   | 651   | 321   | 887   | 300   |
| 26    | 2490  | 818   | 1140  | 469   | 2860  | 573   | 1850  | 686   | 670   | 530   | 813   | 320   |
| 27    | 2270  | 1230  | 861   | 476   | 2550  | 622   | 1520  | 573   | 563   | 937   | 796   | 300   |
| 28    | 1810  | 1320  | 741   | 682   | 2110  | 638   | 1370  | 506   | 594   | 660   | 648   | 290   |
| 29    | 1270  | 1290  | 675   | 750   | ---   | 594   | 1160  | 561   | 810   | 572   | 555   | 350   |
| 30    | 999   | 948   | 628   | 769   | ---   | 653   | 1030  | 616   | 981   | 596   | 518   | 600   |
| 31    | 791   | ---   | 644   | 1710  | ---   | 2410  | ---   | 576   | ---   | 617   | 460   | ---   |
| TOTAL | 32951 | 39335 | 33863 | 23967 | 43355 | 23117 | 29124 | 25575 | 18871 | 15602 | 16475 | 10917 |
| MEAN  | 1063  | 1311  | 1092  | 773   | 1548  | 746   | 971   | 825   | 629   | 503   | 531   | 364   |
| MAX   | 3730  | 2650  | 3970  | 1710  | 3840  | 2410  | 4520  | 1470  | 1290  | 1180  | 887   | 664   |
| MIN   | 279   | 539   | 459   | 469   | 671   | 437   | 430   | 398   | 330   | 292   | 336   | 290   |
| CFSM  | 1.52  | 1.88  | 1.56  | 1.11  | 2.21  | 1.07  | 1.39  | 1.18  | .90   | .72   | .76   | .52   |
| IN.   | 1.75  | 2.09  | 1.80  | 1.28  | 2.31  | 1.23  | 1.55  | 1.36  | 1.00  | .83   | .88   | .58   |

| CAL YR 1984 | TOTAL | 405658 | MEAN | 1108 | MAX | 16000 | MIN | 274 | CFSM | 1.59 | IN. | 21.59 |
|-------------|-------|--------|------|------|-----|-------|-----|-----|------|------|-----|-------|
| WTR YR 1985 | TOTAL | 313152 | MEAN | 858  | MAX | 4520  | MIN | 279 | CFSM | 1.23 | IN. | 16.67 |

## MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN  
(National stream-quality accounting network station)

LOCATION.--Lat 35°07'37", long 90°04'25", Shelby County, Hydrologic Unit 08010100, on left bank 50 ft downstream from Harahan Bridge at Memphis, 1.3 mi downstream from Beale Street gage, 3.5 mi downstream from Wolf River, 62.4 mi upstream from St. Francis River, and at mile 734.8.

DRAINAGE AREA.--932,800 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

## PERIOD OF RECORD.--

Discharge: January 1933 to current year. Monthly discharge only for some periods, published in WSP 1311.  
Gage heights: October 1934 to September 1951 and October 1952 to September 1980 in reports of Geological Survey.  
Since November 1871, at Beale Street gage, in reports of Mississippi River Commission, December 1890 to August 1932 at Beale Street gage, September 1932 to December 1934 at nonrecording gage 1,000 ft downstream, and since December 1934 at water-stage recorder at present site, in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 183.91 ft above National Geodetic Vertical Datum of 1929.  
Prior to Apr. 16, 1934, Beale Street nonrecording gage 1.3 mi upstream at present datum. Apr. 16 to Dec. 21, 1934, nonrecording gage 1,000 ft downstream at present datum.

REMARKS.--Flow regulated by many locks, dams, and reservoirs.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 474,200 ft<sup>3</sup>/s, 343,600,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980,000 ft<sup>3</sup>/s, Feb. 8, 1937; maximum gage height, 48.69 ft, Feb. 10, 1937; minimum discharge, 79,200 ft<sup>3</sup>/s, Aug. 26, 1936; minimum gage height, -5.70 ft, Sept. 21, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1937, 46.55 ft, Apr. 9, 1913, at Beale Street gage or about 45.2 ft at present site.

NOTE.--Records for 1982, 1983, 1984, and 1985 water years were not available in time for inclusion in this report. These records will be published in a subsequent report.

## MISSISSIPPI RIVER MAIN STEM

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07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1973 to current year.

## PERIOD DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1973 to September 1981.

WATER TEMPERATURES: February 1973 to September 1981.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 571 microsiemens, July 30, 1977; minimum daily, 174 microsiemens, Feb. 7, 1979.

WATER TEMPERATURES: Maximum daily, 32.0°C, July 22, 24, 1981; minimum daily, 0.0°C, Jan. 12-14, 17, 18, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | TUR-<br>BID-<br>ITY<br>(NTU) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | COLI-<br>FORM,<br>FECAL,<br>0.7<br>UM-MF<br>(COLS./<br>100 ML) | STREP-<br>TOCOCCI<br>FECAL,<br>KF AGAR<br>(COLS.<br>PER<br>100 ML) | HARD-<br>NESS<br>(MG/L<br>AS<br>CaCO3) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|-------------------------------------|--|--|--|--|
| OCT<br>23... | 1300 | 339000  | 420   | 8.0                            | 14.0                        | 771  | 60                           | 8.0                                 | 77   | K4700  | K12000   | 140                                    |
| JAN<br>24... | 1430 | 439000  | 400   | 7.9                            | .5                          | 765  | 15                           | 12.9                                | 89   | 260  | 390  | 170                                    |
| APR<br>16... | 1400 | 1020000   | 340   | 7.9                            | 14.5                        | 769  | 60                           | 8.2                                 | 80   | 190  | 190  | 140                                    |
| JUL<br>23... | 1200 | 276000  | 438   | 8.2                            | 29.0                        | 759  | 9.0                          | 8.0                                 | 105  | 270  | 250  | 180                                    |

| DATE         | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CaCO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS Ca) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS Mg) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS Na) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CaCO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS Cl) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|--|--|--|--|-------------------|---|---|---|---|---|---|--|
| OCT<br>23... | 32   | 36   | 13   | 25   | 27                | .9                                      | 3.4   | 112   | 2.2   | 75  | 17  | .30  |
| JAN<br>24... | 43   | 46   | 14   | 16   | 17                | .5                                      | 2.8   | 130   | 3.2   | 54  | 18  | .20  |
| APR<br>16... | 39   | 38   | 12   | 11   | 14                | .4                                      | 3.4   | 106   | 2.6   | 47  | 16  | .20  |
| JUL<br>23... | 51   | 45   | 16   | 22   | 21                | .7                                      | 3.2   | 128   | 1.6   | 66  | 19  | .30  |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
|--------------|---|--|---|---|---|---|---|---|--|---|--|--|
| OCT<br>23... | 5.8   | 258  | 240   | .35   | 236000  | .70   | .110  | .14   | .80  | .190  | .120   | .130   |
| JAN<br>24... | 7.9   | 248  | 240   | .34   | 294000  | 2.0   | .160  | .21   | .30  | --  | .120   | .050   |
| APR<br>16... | 6.2   | 205  | 200   | .28   | 565000  | 1.9   | .090  | .12   | 2.9  | .110  | .030   | .050   |
| JUL<br>23... | 3.1   | 289  | 250   | .39   | 215000  | 1.0   | <.010   | .01   | .70  | .140  | .070   | .070   |

K--Results based on non-ideal colony count.



## MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | PHOS-<br>PHATE,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS PO4) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|--|
| OCT<br>23... | .40   | 40  | 2  | 67   | --   | <1   | 1   | <3   | 3  | 53   | <1   | 9  |
| JAN<br>24... | .15   | 10  | <1   | 63   | <.5  | <1   | 1   | <3   | 2  | 17   | 5  | <4   |
| APR<br>16... | .15   | 20  | <1   | 64   | <.5  | <1   | <1  | <3   | 3  | 25   | 4  | <4   |
| JUL<br>23... | .21   | 20  | 2  | 74   | <.5  | <1   | 9   | <3   | 4  | <3   | 2  | 29   |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>& FINER<br>THAN<br>.062 MM |
|--------------|--|--|---|--|---|--|--|--|--|---|---|---|
| OCT<br>23... | 11   | <.1  | <10   | 2  | <1  | <1   | 200  | <6   | 10   | 208                                       | 190000  | 93  |
| JAN<br>24... | 17   | <.1  | <10   | 3  | <1  | <1   | 180  | <6   | 6  | 121                                       | 143000  | 38  |
| APR<br>16... | 12   | .1   | <10   | 10   | <1  | <1   | 140  | <6   | 15   | 82  | 226000  | 92  |
| JUL<br>23... | <1   | <.1  | <10   | 4  | <1  | <1   | 230  | <6   | 13   | --  | --  | --  |

## NONCONNAH CREEK BASIN

249

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN

LOCATION.--Lat 35°02'59", long 89°49'08", Shelby County, Hydrologic Unit 08010211, on left bank at downstream side of bridge on Winchester Road, 2.6 mi south of Germantown, and at mile 17.3.

DRAINAGE AREA.--68.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-1964, 1969; October 1969 to current year.

REVISED RECORDS.--WRD TN 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 262.92 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Estimated daily discharges: Jan. 9 and May 21-31. Records poor. No record Oct. 1 to Nov. 29, Jan. 9 to Mar. 19 and May 21 to Sept. 30. Loss of record was due to construction work in the channel and the lack of a suitable alternate site to locate orifice for the manometer.

AVERAGE DISCHARGE.--15 years, 107 ft<sup>3</sup>/s, 21.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,680 ft<sup>3</sup>/s, Mar. 12, 1975, gage height, 27.11 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge, 4,160 ft<sup>3</sup>/s, Apr. 23, gage height, 16.96 ft; minimum recorded discharge, .45 ft<sup>3</sup>/s, May 20. Both the maximum and minimum discharges may have been exceeded during periods of no record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
MEAN VALUES

| DAY   | OCT | NOV | DEC    | JAN | FEB | MAR | APR    | MAY     | JUN | JUL | AUG | SEP |
|-------|-----|-----|--------|-----|-----|-----|--------|---------|-----|-----|-----|-----|
| 1     |     | --- | 20     | 186 |     | --- | 52     | 365     |     |     |     |     |
| 2     |     | --- | 11     | 60  |     | --- | 20     | 81      |     |     |     |     |
| 3     |     | --- | 7.2    | 29  |     | --- | 12     | 19      |     |     |     |     |
| 4     |     | --- | 5.6    | 38  |     | --- | 8.7    | 8.2     |     |     |     |     |
| 5     |     | --- | 20     | 58  |     | --- | 31     | 5.3     |     |     |     |     |
| 6     |     | --- | 58     | 80  |     | --- | 22     | 3.4     |     |     |     |     |
| 7     |     | --- | 17     | 148 |     | --- | 11     | 4.0     |     |     |     |     |
| 8     |     | --- | 13     | 135 |     | --- | 8.2    | 54      |     |     |     |     |
| 9     |     | --- | 9.8    | 64  |     | --- | 6.7    | 13      |     |     |     |     |
| 10    |     | --- | 8.7    | --- |     | --- | 5.6    | 5.5     |     |     |     |     |
| 11    |     | --- | 6.4    | --- |     | --- | 5.3    | 3.8     |     |     |     |     |
| 12    |     | --- | 5.6    | --- |     | --- | 4.8    | 3.3     |     |     |     |     |
| 13    |     | --- | 5.2    | --- |     | --- | 4.5    | 3.6     |     |     |     |     |
| 14    |     | --- | 5.2    | --- |     | --- | 5.0    | 45      |     |     |     |     |
| 15    |     | --- | 4.3    | --- |     | --- | 6.8    | 23      |     |     |     |     |
| 16    |     | --- | 3.5    | --- |     | --- | 6.8    | 3.2     |     |     |     |     |
| 17    |     | --- | 3.8    | --- |     | --- | 4.0    | 1.6     |     |     |     |     |
| 18    |     | --- | 3.3    | --- |     | --- | 3.7    | 1.2     |     |     |     |     |
| 19    |     | --- | 45     | --- |     | 3.2 | 2.9    | .96     |     |     |     |     |
| 20    |     | --- | 2000   | --- |     | 2.4 | 2.1    | .58     |     |     |     |     |
| 21    |     | --- | 392    | --- |     | 391 | 1.7    | 110     |     |     |     |     |
| 22    |     | --- | 155    | --- |     | 335 | 1.8    | 300     |     |     |     |     |
| 23    |     | --- | 55     | --- |     | 76  | 1360   | 20      |     |     |     |     |
| 24    |     | --- | 36     | --- |     | 33  | 908    | 10      |     |     |     |     |
| 25    |     | --- | 23     | --- |     | 19  | 73     | 7.5     |     |     |     |     |
| 26    |     | --- | 16     | --- |     | 15  | 20     | 6.0     |     |     |     |     |
| 27    |     | --- | 13     | --- |     | 46  | 64     | 5.0     |     |     |     |     |
| 28    |     | --- | 12     | --- |     | 34  | 80     | 8.0     |     |     |     |     |
| 29    |     | --- | 11     | --- |     | 19  | 19     | 6.0     |     |     |     |     |
| 30    |     | --- | 26     | --- |     | 98  | 101    | 4.5     |     |     |     |     |
| 31    |     | --- | 26     | --- |     | 651 | ---    | 4.0     |     |     |     |     |
| TOTAL |     | --- | 3003.6 | --- |     | --- | 2851.6 | 1125.64 |     |     |     |     |
| MEAN  |     | --- | 96.9   | --- |     | --- | 95.1   | 36.3    |     |     |     |     |
| MAX   |     | --- | 2000   | --- |     | --- | 1360   | 365     |     |     |     |     |
| MIN   |     | --- | 3.3    | --- |     | --- | 1.7    | .58     |     |     |     |     |
| CFSM  |     | --- | 1.42   | --- |     | --- | 1.39   | .53     |     |     |     |     |
| IN.   |     | --- | 1.64   | --- |     | --- | 1.56   | .61     |     |     |     |     |

## 07032222 JOHNS CREEK TRIBUTARY AT HOLMES ROAD NEAR MEMPHIS, TN

LOCATION.--Lat 35°00'20", long 89°52'16", Shelby County, Hydrologic Unit 08010211, on left bank at upstream side of bridge at Holmes Road, 1,200 ft east of St. Louis-San Francisco Railroad, 2.0 mi east of U.S. Highway 78, and 2.2 mi southeast of Memphis city limits.

DRAINAGE AREA.--5.83 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1975 to June 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 304 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-16. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--9 years, (water years 1976-84), 9.46 ft<sup>3</sup>/s, 22.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft<sup>3</sup>/s, May 2, 1984; maximum gage height, 12.99 ft May 22, 1979; no flow several days, 1982-1985 water years.

EXTREMES FOR CURRENT PERIOD.--October 1984 to June 1985: Peak discharges greater than base discharge of 850 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|---------|------|--------------------------------|------------------|
| Mar. 30 | 2340 | 941                            | 4.98             | Apr. 23 | 2020 | *1,060                         | *5.40            |

No flow several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO JUNE 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL  | AUG  | SEP |       |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|------|------|-----|-------|
| 1           | .09    | 44      | 1.9    | 45     | 1.2    | .18    | 5.3    | 21     | .63    |      |      |     |       |
| 2           | .12    | 12      | 1.2    | 1.3    | 1.0    | .14    | 2.5    | 3.2    | .63    |      |      |     |       |
| 3           | .14    | 1.0     | .94    | .57    | .55    | .10    | 1.8    | 1.7    | .68    |      |      |     |       |
| 4           | .13    | .65     | .69    | .63    | .46    | 4.1    | 1.4    | 1.1    | .74    |      |      |     |       |
| 5           | .22    | .56     | 11     | .86    | 26     | .71    | 3.0    | 1.0    | .81    |      |      |     |       |
| 6           | 23     | .40     | 7.7    | 1.4    | 31     | .16    | 1.7    | .85    | .85    |      |      |     |       |
| 7           | 5.0    | .39     | 1.6    | 23     | 4.6    | .12    | 1.1    | 2.1    | .85    |      |      |     |       |
| 8           | .90    | .39     | 1.2    | 5.3    | .99    | .10    | .86    | 31     | .89    |      |      |     |       |
| 9           | .40    | .77     | .99    | 1.8    | .85    | .08    | .84    | 1.9    | .95    |      |      |     |       |
| 10          | 10     | 10      | .92    | 72     | 39     | .08    | .77    | 1.2    | 1.1    |      |      |     |       |
| 11          | 60     | .78     | .74    | 3.0    | 136    | .08    | .77    | .96    | 2.2    |      |      |     |       |
| 12          | 5.0    | .43     | .76    | .93    | 10     | .08    | .77    | .89    | .86    |      |      |     |       |
| 13          | 1.7    | .35     | .77    | .54    | 5.7    | .08    | .77    | .96    | .56    |      |      |     |       |
| 14          | 1.1    | .35     | .78    | .50    | 3.8    | .08    | .77    | 39     | .59    |      |      |     |       |
| 15          | 2.0    | 1.2     | .72    | .37    | 1.4    | .08    | .83    | 5.0    | .69    |      |      |     |       |
| 16          | 28     | .62     | .71    | 12     | .80    | .08    | .90    | 1.0    | .81    |      |      |     |       |
| 17          | 30     | .38     | .77    | 18     | .61    | .09    | .70    | .79    | 95     |      |      |     |       |
| 18          | 1.6    | 262     | .76    | 1.6    | .50    | .08    | .76    | .64    | 4.2    |      |      |     |       |
| 19          | 9.8    | 23      | 7.7    | .71    | 5.6    | .08    | .74    | .61    | .01    |      |      |     |       |
| 20          | 77     | 3.2     | 314    | .34    | 1.5    | .09    | .87    | .56    | .00    |      |      |     |       |
| 21          | 147    | 1.4     | 16     | .18    | .84    | 116    | .61    | 73     | .00    |      |      |     |       |
| 22          | 84     | .95     | 5.4    | .16    | .68    | 6.7    | .58    | 48     | .02    |      |      |     |       |
| 23          | 420    | .79     | 1.2    | .17    | 150    | .52    | 349    | 3.1    | .04    |      |      |     |       |
| 24          | 15     | .77     | .79    | .24    | 110    | .31    | 73     | 1.1    | .02    |      |      |     |       |
| 25          | 3.4    | .80     | .62    | .31    | 1.6    | .14    | 5.2    | .75    | .06    |      |      |     |       |
| 26          | 1.3    | .88     | .44    | .23    | .62    | .10    | 2.3    | .63    | .00    |      |      |     |       |
| 27          | .82    | 82      | .40    | 18     | .28    | 3.6    | 8.4    | .63    | .00    |      |      |     |       |
| 28          | .64    | 4.9     | .35    | 24     | .21    | .43    | 4.5    | .76    | .00    |      |      |     |       |
| 29          | .55    | 2.3     | .35    | 2.6    | ---    | .20    | 1.7    | .70    | .00    |      |      |     |       |
| 30          | .49    | 2.0     | .40    | 22     | ---    | 65     | 28     | .63    | .00    |      |      |     |       |
| 31          | .53    | ---     | 2.2    | 50     | ---    | 114    | ---    | .63    | ---    |      |      |     |       |
| TOTAL       | 929.93 | 459.26  | 384.00 | 307.74 | 535.79 | 313.59 | 500.44 | 245.39 | 113.19 |      |      |     |       |
| MEAN        | 30.0   | 15.3    | 12.4   | 9.93   | 19.1   | 10.1   | 16.7   | 7.92   | 3.77   |      |      |     |       |
| MAX         | 420    | 262     | 314    | 72     | 150    | 116    | 349    | 73     | 95     |      |      |     |       |
| MIN         | .09    | .35     | .35    | .16    | .21    | .08    | .58    | .56    | .00    |      |      |     |       |
| CFSM        | 5.15   | 2.62    | 2.13   | 1.70   | 3.28   | 1.73   | 2.86   | 1.36   | .65    |      |      |     |       |
| IN.         | 5.93   | 2.93    | 2.45   | 1.96   | 3.42   | 2.00   | 3.19   | 1.57   | .72    |      |      |     |       |
| CAL YR 1984 | TOTAL  | 6068.89 |        | MEAN   | 16.6   | MAX    | 420    | MIN    | .00    | CFSM | 2.85 | IN. | 38.72 |

## NONCONNAH CREEK BASIN

251

07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°02'05", long 89°53'10", Shelby County, Hydrologic Unit 08010211, on right bank at upstream side of Raines Road, 500 ft west of Mendenhall Road, and 1.0 mi south of Winchester Road in Memphis.

DRAINAGE AREA.--19.4 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1975 to April 1982 and June 1984 to July 1985 (discontinued).

REVISED RECORDS.--WRD TN-80-1: 1975-79 (P).

GAGE.--Water-stage recorder. Elevation of gage is 276 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 1-4, 1984, Oct. 10-11, 1984 and May 13-21, 1985. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--6 years (water years 1976-81), 31.3 ft<sup>3</sup>/s, 21.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,220 ft<sup>3</sup>/s, Apr. 16, 1982, gage height, 18.26 ft; minimum, 0.04 ft<sup>3</sup>/s, Sept. 12, 13, 1977, July 1, 2, 1985.

EXTREMES FOR CURRENT PERIOD.--June 1984 to July 1985: Peak discharges greater than base discharge of 2,600 ft<sup>3</sup>/s and maximum (\*):

| Date          | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date          | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------------|------|-----------------------------------|---------------------|---------------|------|-----------------------------------|---------------------|
| Aug. 10, 1984 | 1210 | 2,640                             | 11.85               | Mar. 31, 1985 | 0005 | 3,400                             | 13.06               |
| Feb. 23, 1985 | 2245 | 3,430                             | 13.11               | Apr. 23, 1985 | 2030 | *3,580                            | *13.33              |

Minimum discharge, 0.04 ft<sup>3</sup>/s, July 1, 2, 1985.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR JUNE 1984 TO SEPTEMBER 1984  
MEAN VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN    | JUL    | AUG     | SEP   |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|---------|-------|
| 1     |     |     |     |     |     |     |     |     | .68    | .57    | 16      | .69   |
| 2     |     |     |     |     |     |     |     |     | .64    | .64    | 1.7     | .48   |
| 3     |     |     |     |     |     |     |     |     | .68    | .64    | .59     | 5.1   |
| 4     |     |     |     |     |     |     |     |     | .64    | .43    | 53      | 1.2   |
| 5     |     |     |     |     |     |     |     |     | .64    | 1.5    | 2.3     | .99   |
| 6     |     |     |     |     |     |     |     |     | 63     | .90    | 7.9     | 1.1   |
| 7     |     |     |     |     |     |     |     |     | 52     | .50    | 1.3     | .50   |
| 8     |     |     |     |     |     |     |     |     | 3.3    | .43    | .65     | .19   |
| 9     |     |     |     |     |     |     |     |     | 1.8    | .64    | .37     | 11    |
| 10    |     |     |     |     |     |     |     |     | 1.4    | .72    | 383     | 1.9   |
| 11    |     |     |     |     |     |     |     |     | 1.3    | 16     | 329     | 1.2   |
| 12    |     |     |     |     |     |     |     |     | 1.5    | 335    | 15      | .78   |
| 13    |     |     |     |     |     |     |     |     | 4.6    | 4.1    | 3.6     | .48   |
| 14    |     |     |     |     |     |     |     |     | 2.1    | 2.5    | 1.9     | .52   |
| 15    |     |     |     |     |     |     |     |     | 1.2    | 1.6    | 1.1     | .45   |
| 16    |     |     |     |     |     |     |     |     | .90    | 10     | .70     | .30   |
| 17    |     |     |     |     |     |     |     |     | .72    | 20     | .47     | .31   |
| 18    |     |     |     |     |     |     |     |     | .86    | 2.9    | .33     | .38   |
| 19    |     |     |     |     |     |     |     |     | .80    | 1.5    | 127     | .47   |
| 20    |     |     |     |     |     |     |     |     | .90    | 1.1    | 7.2     | .50   |
| 21    |     |     |     |     |     |     |     |     | .94    | .72    | 2.9     | .54   |
| 22    |     |     |     |     |     |     |     |     | .80    | .57    | 122     | .55   |
| 23    |     |     |     |     |     |     |     |     | .80    | .64    | 9.6     | 1.1   |
| 24    |     |     |     |     |     |     |     |     | .72    | .50    | 3.3     | 2.7   |
| 25    |     |     |     |     |     |     |     |     | .64    | .77    | 1.9     | .66   |
| 26    |     |     |     |     |     |     |     |     | .57    | .39    | 1.3     | .65   |
| 27    |     |     |     |     |     |     |     |     | .72    | 8.8    | .99     | .48   |
| 28    |     |     |     |     |     |     |     |     | .64    | .71    | .77     | .46   |
| 29    |     |     |     |     |     |     |     |     | 1.0    | .27    | .65     | .50   |
| 30    |     |     |     |     |     |     |     |     | .72    | .23    | 1.3     | .44   |
| 31    |     |     |     |     |     |     |     |     | ---    | .39    | 1.0     | ---   |
| TOTAL |     |     |     |     |     |     |     |     | 147.21 | 415.66 | 1098.82 | 36.62 |
| MEAN  |     |     |     |     |     |     |     |     | 4.91   | 13.4   | 35.4    | 1.22  |
| MAX   |     |     |     |     |     |     |     |     | 63     | 335    | 383     | 11    |
| MIN   |     |     |     |     |     |     |     |     | .57    | .23    | .33     | .19   |
| CFSM  |     |     |     |     |     |     |     |     | .25    | .69    | 1.82    | .06   |
| IN.   |     |     |     |     |     |     |     |     | .28    | .80    | 2.11    | .07   |



## NONCONNAH CREEK BASIN

07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO JULY 1985  
MEAN VALUES

| DAY   | OCT     | NOV    | DEC    | JAN   | FEB    | MAR    | APR    | MAY   | JUN    | JUL | AUG | SEP |
|-------|---------|--------|--------|-------|--------|--------|--------|-------|--------|-----|-----|-----|
| 1     | .52     | 66     | 5.9    | 152   | 11     | 4.0    | 36     | 44    | 1.4    | .11 |     |     |
| 2     | .72     | 42     | 4.9    | 13    | 7.7    | 3.4    | 11     | 9.5   | 1.2    | .05 |     |     |
| 3     | .80     | 6.0    | 4.4    | 7.9   | 4.9    | 2.7    | 5.9    | 5.9   | 1.5    | .12 |     |     |
| 4     | .76     | 5.3    | 3.9    | 14    | 4.7    | 30     | 4.6    | 4.2   | 1.6    | .09 |     |     |
| 5     | 1.5     | 3.6    | 37     | 18    | 55     | 15     | 13     | 3.4   | 1.7    | .15 |     |     |
| 6     | 73      | 2.6    | 22     | 25    | 60     | 5.9    | 5.5    | 3.0   | 1.6    | 15  |     |     |
| 7     | 24      | 2.0    | 6.5    | 80    | 16     | 4.8    | 3.5    | 8.0   | 1.7    | .16 |     |     |
| 8     | 4.6     | 2.1    | 5.8    | 40    | 7.2    | 4.4    | 2.9    | 46    | 1.3    | .07 |     |     |
| 9     | 1.9     | 26     | 5.2    | 18    | 7.4    | 3.8    | 2.4    | 5.5   | 1.1    | .07 |     |     |
| 10    | 11      | 128    | 4.7    | 163   | 202    | 3.2    | 2.3    | 3.8   | 1.9    | .53 |     |     |
| 11    | 152     | 7.2    | 4.4    | 19    | 220    | 3.4    | 2.2    | 3.1   | 22     | --- |     |     |
| 12    | 28      | 4.2    | 4.3    | 8.3   | 38     | 3.3    | 2.1    | 2.4   | 3.4    | --- |     |     |
| 13    | 6.7     | 3.2    | 4.3    | 6.3   | 25     | 2.9    | 6.0    | 3.2   | .88    | --- |     |     |
| 14    | 4.8     | 2.9    | 4.2    | 6.2   | 15     | 5.5    | 4.3    | 44    | .66    | --- |     |     |
| 15    | 8.7     | 17     | 4.1    | 5.0   | 7.5    | 3.0    | 3.1    | 8.0   | .57    | --- |     |     |
| 16    | 3.8     | 5.4    | 3.8    | 29    | 5.3    | 2.5    | 2.4    | 3.8   | .70    | --- |     |     |
| 17    | 52      | 3.7    | 3.6    | 50    | 4.4    | 2.1    | 1.8    | 2.3   | 134    | --- |     |     |
| 18    | 9.1     | 512    | 3.7    | 13    | 6.0    | 2.0    | 1.7    | 1.7   | 55     | --- |     |     |
| 19    | 27      | 66     | 34     | 7.2   | 33     | 2.1    | 1.7    | 1.5   | 2.3    | --- |     |     |
| 20    | 122     | 12     | 674    | 4.3   | 8.3    | 2.1    | 4.4    | 1.4   | .86    | --- |     |     |
| 21    | 269     | 7.1    | 66     | 3.4   | 5.6    | 315    | 1.5    | 96    | .35    | --- |     |     |
| 22    | 159     | 5.5    | 26     | 4.0   | 4.4    | 79     | 1.6    | 185   | 1.1    | --- |     |     |
| 23    | 789     | 4.7    | 8.8    | 4.9   | 546    | 17     | 1070   | 12    | .70    | --- |     |     |
| 24    | 36      | 4.3    | 8.5    | 5.5   | 368    | 11     | 171    | 4.9   | .21    | --- |     |     |
| 25    | 12      | 4.0    | 6.2    | 4.6   | 30     | 7.4    | 18     | 3.3   | 52     | --- |     |     |
| 26    | 6.7     | 3.9    | 4.7    | 2.8   | 13     | 6.3    | 9.2    | 2.5   | 10     | --- |     |     |
| 27    | 4.9     | 179    | 4.2    | 34    | 6.1    | 48     | 32     | 1.9   | .86    | --- |     |     |
| 28    | 3.8     | 17     | 4.0    | 67    | 4.4    | 13     | 15     | 4.7   | .37    | --- |     |     |
| 29    | 3.3     | 8.1    | 3.6    | 20    | ---    | 8.0    | 6.7    | 3.1   | .17    | --- |     |     |
| 30    | 3.1     | 7.0    | 6.5    | 72    | ---    | 207    | 43     | 1.6   | .19    | --- |     |     |
| 31    | 2.6     | ---    | 41     | 60    | ---    | 503    | ---    | 1.5   | ---    | --- |     |     |
| TOTAL | 1822.30 | 1157.8 | 1020.2 | 957.4 | 1715.9 | 1320.8 | 1484.8 | 521.2 | 301.32 | --- |     |     |
| MEAN  | 58.8    | 38.6   | 32.9   | 30.9  | 61.3   | 42.6   | 49.5   | 16.8  | 10.0   | --- |     |     |
| MAX   | 789     | 512    | 674    | 163   | 546    | 503    | 1070   | 185   | 134    | --- |     |     |
| MIN   | .52     | 2.0    | 3.6    | 2.8   | 4.4    | 2.0    | 1.5    | 1.4   | .17    | --- |     |     |
| CFSM  | 3.03    | 1.99   | 1.70   | 1.59  | 3.16   | 2.20   | 2.55   | .87   | .52    | --- |     |     |
| IN.   | 3.49    | 2.22   | 1.96   | 1.84  | 3.29   | 2.53   | 2.85   | 1.00  | .58    | --- |     |     |

## NONCONNAH CREEK BASIN

253

07032248 CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°06'02", long 90°00'43", Shelby County, Hydrologic Unit 08010211, on left bank 40 ft upstream from bridge on East Person Avenue, 0.4 mi east of Elvis Presley Boulevard, 0.6 mi south of South Parkway East in Memphis, and at mile 2.8.

DRAINAGE AREA.--4.98 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1974 to June 1985 (discontinued).

REVISED RECORDS.--WRD TN-83-1 (M).

GAGE.--Water-stage recorder. Elevation of gage is 243 ft above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: October 18-December 3. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--9 years (water years 1976-84), 10.9 ft<sup>3</sup>/s, 29.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft<sup>3</sup>/s, Apr. 17, 1982, gage height, 14.39 ft; no flow part of each day, Jan. 20, 21, 1985, result of cold weather regulation.

EXTREMES FOR CURRENT PERIOD.--October 1984 to June 1985: Peak discharges greater than base discharge of 1,400 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--------|------|-----------------------------------|---------------------|
| Apr. 23 | 0750 | *2,390                            | *11.76              | Jun 10 | 1740 | 2,200                             | 11.37               |

No flow part of each day, Jan. 20, 21, result of cold weather regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO JUNE 1985  
MEAN VALUES

| DAY   | OCT    | NOV   | DEC   | JAN    | FEB   | MAR   | APR   | MAY   | JUN   | JUL | AUG | SEP |
|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-----|-----|-----|
| 1     | 3.6    | 21    | 2.1   | 11     | 2.1   | 3.4   | 2.4   | 30    | 2.6   |     |     |     |
| 2     | 3.9    | 7.0   | 2.1   | 1.7    | 2.1   | 2.8   | 2.5   | 3.7   | 2.7   |     |     |     |
| 3     | 4.2    | 4.0   | 2.1   | 1.9    | 1.5   | 2.6   | 2.7   | 2.5   | 2.9   |     |     |     |
| 4     | 4.1    | 3.8   | 2.1   | 3.4    | 2.1   | 7.4   | 2.6   | 1.9   | 3.0   |     |     |     |
| 5     | 5.1    | 3.5   | 16    | 4.9    | 11    | 2.8   | 12    | 2.0   | 3.1   |     |     |     |
| 6     | 77     | 3.2   | 2.8   | 5.1    | 9.0   | 2.7   | 1.8   | 2.5   | 2.8   |     |     |     |
| 7     | 7.8    | 3.0   | 2.4   | 5.4    | 3.4   | 3.2   | 2.0   | 8.3   | 14    |     |     |     |
| 8     | 4.0    | 2.8   | 2.3   | 2.3    | 2.9   | 3.4   | 2.4   | 5.4   | 1.9   |     |     |     |
| 9     | 3.9    | 35    | 2.3   | 1.9    | 2.8   | 3.3   | 2.7   | 2.9   | 1.4   |     |     |     |
| 10    | 23     | 25    | 2.5   | 14     | 45    | 3.1   | 2.7   | 2.8   | 155   |     |     |     |
| 11    | 29     | 3.0   | 2.8   | 2.1    | 18    | 2.9   | 2.7   | 2.5   | 15    |     |     |     |
| 12    | 4.6    | 2.8   | 2.7   | 2.4    | 5.6   | 3.3   | 2.6   | 2.9   | 4.2   |     |     |     |
| 13    | 3.4    | 2.6   | 2.6   | 2.7    | 3.3   | 3.2   | 2.4   | 5.5   | 4.4   |     |     |     |
| 14    | 3.6    | 2.5   | 2.8   | 2.3    | 2.7   | 9.6   | 7.8   | 2.9   | 4.5   |     |     |     |
| 15    | 27     | 5.1   | 2.9   | 2.4    | 2.6   | 3.2   | 3.7   | 3.0   | 4.2   |     |     |     |
| 16    | 17     | 2.4   | 2.6   | 18     | 2.5   | 3.1   | 2.9   | 3.0   | 4.7   |     |     |     |
| 17    | 5.3    | 2.3   | 2.8   | 4.3    | 2.4   | 2.8   | 2.8   | 2.5   | 51    |     |     |     |
| 18    | 9.0    | 30    | 3.3   | 2.6    | 4.2   | 3.0   | 3.0   | 2.1   | 24    |     |     |     |
| 19    | 30     | 2.3   | 26    | 2.5    | 4.6   | 3.1   | 3.0   | 1.9   | 4.4   |     |     |     |
| 20    | 110    | 2.2   | 153   | .75    | 2.3   | 3.0   | 2.5   | 2.4   | 4.7   |     |     |     |
| 21    | 150    | 2.2   | 15    | .97    | 2.4   | 76    | 3.1   | 97    | 4.2   |     |     |     |
| 22    | 90     | 2.1   | 3.2   | 2.6    | 2.3   | 5.2   | 4.2   | 18    | 7.8   |     |     |     |
| 23    | 315    | 2.1   | 2.2   | 3.2    | 96    | 3.2   | 313   | 3.4   | 3.8   |     |     |     |
| 24    | 60     | 2.0   | 3.4   | 3.2    | 6.1   | 2.8   | 16    | 3.2   | 4.3   |     |     |     |
| 25    | 12     | 2.0   | 2.3   | 3.1    | 3.1   | 2.9   | 3.7   | 3.2   | 40    |     |     |     |
| 26    | 9.0    | 2.0   | 2.4   | 2.8    | 3.0   | 3.2   | 3.7   | 3.3   | 4.8   |     |     |     |
| 27    | 6.0    | 20    | 2.5   | 18     | 2.7   | 19    | 11    | 3.4   | 3.9   |     |     |     |
| 28    | 5.3    | 2.3   | 2.5   | 4.7    | 2.7   | 2.9   | 2.9   | 19    | 4.2   |     |     |     |
| 29    | 4.8    | 2.2   | 2.3   | 2.5    | ---   | 2.9   | 2.7   | 2.9   | 4.0   |     |     |     |
| 30    | 5.0    | 2.1   | 4.4   | 41     | ---   | 83    | 6.7   | 2.6   | 6.0   |     |     |     |
| 31    | 5.3    | ---   | 11    | 5.4    | ---   | 8.1   | ---   | 3.1   | ---   |     |     |     |
| TOTAL | 1037.9 | 202.5 | 289.4 | 179.12 | 249.2 | 281.1 | 434.2 | 249.8 | 393.5 |     |     |     |
| MEAN  | 33.5   | 6.75  | 9.34  | 5.78   | 8.90  | 9.07  | 14.5  | 8.06  | 13.1  |     |     |     |
| MAX   | 315    | 35    | 153   | 41     | 96    | 83    | 313   | 97    | 155   |     |     |     |
| MIN   | 3.4    | 2.0   | 2.1   | .75    | 2.1   | 2.6   | 1.8   | 1.9   | 1.4   |     |     |     |
| CFSM  | 6.73   | 1.36  | 1.88  | 1.16   | 1.79  | 1.82  | 2.91  | 1.62  | 2.63  |     |     |     |
| IN.   | 7.75   | 1.51  | 2.16  | 1.34   | 1.86  | 2.10  | 3.24  | 1.87  | 2.94  |     |     |     |

CAL YR 1984 TOTAL 4194.8 MEAN 11.5 MAX 315 MIN 1.5 CFSM 2.31 IN. 31.33

## MISSISSIPPI RIVER BASIN

07032260 CYPRESS CREEK AT NEELY ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°01'36", long 90°03'23", Shelby County, Hydrologic Unit 08010211, on right bank at downstream end of bridge on Neely Road, 1.8 mi west of U.S. Highway 51 and 1.1 mi southeast of U.S. Highway 61 in Memphis.

DRAINAGE AREA.--3.18 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1975 to June 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 244 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 1 to Dec. 13, Dec. 25 to Jan. 8 and Apr. 1-3. Records are fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--9 years, (water years 1976-84), 4.46 ft<sup>3</sup>/s, 19.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,830 ft<sup>3</sup>/s, Apr. 11, 1979, gage height, 12.72 ft; no flow for several days each year.

EXTREMES FOR CURRENT PERIOD.--October 1984 to July 1985: Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

| Date    | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) | Date                                       | Time | Discharge (ft <sup>3</sup> /s) | Gage height (ft) |
|---------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| Apr. 23 | 0820 | *647                           | *7.11            | No other peak greater than base discharge. |      |                                |                  |

No flow part of each day Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO JUNE 1985  
MEAN VALUES

| DAY         | OCT    | NOV     | DEC   | JAN   | FEB    | MAR   | APR    | MAY   | JUN   | JUL  | AUG  | SEP |       |
|-------------|--------|---------|-------|-------|--------|-------|--------|-------|-------|------|------|-----|-------|
| 1           | .06    | 1.6     | .09   | 3.0   | 6.0    | .51   | .75    | 2.8   | .14   |      |      |     |       |
| 2           | .03    | .07     | .09   | .65   | 1.9    | .45   | .65    | .25   | .10   |      |      |     |       |
| 3           | .02    | .07     | .09   | .70   | .82    | .47   | .59    | .22   | .12   |      |      |     |       |
| 4           | .02    | .07     | .10   | 2.5   | 1.1    | 2.3   | .57    | .22   | .09   |      |      |     |       |
| 5           | .10    | .07     | .81   | 2.7   | 6.4    | .51   | 4.2    | .17   | .08   |      |      |     |       |
| 6           | 37     | .07     | .09   | 2.9   | 2.8    | .45   | .54    | .20   | .07   |      |      |     |       |
| 7           | 1.8    | .07     | .09   | .85   | 1.5    | .47   | .54    | 12    | .70   |      |      |     |       |
| 8           | .03    | .07     | .09   | .59   | 1.1    | .49   | .54    | 2.4   | .08   |      |      |     |       |
| 9           | .02    | 15      | .08   | .59   | .51    | .50   | .54    | .26   | .08   |      |      |     |       |
| 10          | 1.9    | 10      | .08   | 5.9   | 32     | .54   | .54    | .22   | .15   |      |      |     |       |
| 11          | 9.8    | .08     | .08   | .57   | 13     | .50   | .51    | .20   | 1.6   |      |      |     |       |
| 12          | .29    | .08     | .07   | .49   | 2.0    | .49   | .49    | .14   | .10   |      |      |     |       |
| 13          | .05    | .08     | .08   | .55   | .85    | .49   | .50    | .27   | .10   |      |      |     |       |
| 14          | .05    | .08     | .08   | .45   | .62    | 1.2   | 1.2    | .16   | .09   |      |      |     |       |
| 15          | .12    | .36     | .08   | .43   | .54    | .45   | 1.1    | .14   | .10   |      |      |     |       |
| 16          | 20     | .08     | .11   | 5.7   | .54    | .45   | .49    | .12   | .06   |      |      |     |       |
| 17          | 1.7    | .08     | .15   | 1.1   | .49    | .45   | .44    | .12   | 14    |      |      |     |       |
| 18          | 3.6    | 11      | .14   | .51   | .79    | .45   | .49    | .12   | .81   |      |      |     |       |
| 19          | 9.2    | .09     | 15    | .52   | 1.2    | .51   | .47    | .10   | .06   |      |      |     |       |
| 20          | 40     | .09     | 57    | 1.4   | .44    | .49   | .45    | .11   | .06   |      |      |     |       |
| 21          | 58     | .09     | 2.3   | 6.9   | .43    | 21    | .40    | 23    | .06   |      |      |     |       |
| 22          | 29     | .09     | .50   | 5.0   | .42    | .96   | .90    | 2.4   | .14   |      |      |     |       |
| 23          | 109    | .08     | .34   | 2.5   | 40     | 1.7   | 105    | .23   | .06   |      |      |     |       |
| 24          | .78    | .08     | .45   | .54   | 3.8    | .75   | 2.9    | .16   | .04   |      |      |     |       |
| 25          | .29    | .08     | .32   | .48   | .58    | .58   | .29    | .15   | 5.1   |      |      |     |       |
| 26          | .17    | .08     | .40   | .66   | .49    | .62   | .22    | .15   | .08   |      |      |     |       |
| 27          | .13    | 5.3     | .45   | 6.8   | .45    | 7.4   | 4.6    | .16   | .06   |      |      |     |       |
| 28          | .06    | .08     | .45   | 1.4   | .45    | .71   | .22    | .22   | .03   |      |      |     |       |
| 29          | .05    | .09     | .40   | .63   | ---    | .59   | .22    | .16   | .04   |      |      |     |       |
| 30          | .06    | .09     | 1.0   | 14    | ---    | 40    | .62    | .12   | .53   |      |      |     |       |
| 31          | .06    | ---     | 4.5   | 4.2   | ---    | 7.7   | ---    | .14   | ---   |      |      |     |       |
| TOTAL       | 323.39 | 45.17   | 85.51 | 75.21 | 121.22 | 94.18 | 130.97 | 47.11 | 24.73 |      |      |     |       |
| MEAN        | 10.4   | 1.51    | 2.76  | 2.43  | 4.33   | 3.04  | 4.37   | 1.52  | .82   |      |      |     |       |
| MAX         | 109    | 15      | 57    | 14    | 40     | 40    | 105    | 23    | 14    |      |      |     |       |
| MIN         | .02    | .07     | .07   | .43   | .42    | .45   | .22    | .10   | .03   |      |      |     |       |
| CFSM        | 3.27   | .47     | .87   | .76   | 1.36   | .96   | 1.37   | .48   | .26   |      |      |     |       |
| IN.         | 3.78   | .53     | 1.00  | .88   | 1.42   | 1.10  | 1.53   | .55   | .29   |      |      |     |       |
| CAL YR 1984 | TOTAL  | 1752.96 |       | MEAN  | 4.79   | MAX   | 112    | MIN   | .01   | CFSM | 1.51 | IN. | 20.51 |

## LOOSAHATCHIE RIVER BASIN

255

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

The data given in the following tables include a description of the station and a table showing time, gage height, discharge, and rainfall for the two highest peaks that occurred during the year. The time given corresponds with the first column of data or the first blank (\*). Information is available on some lower peaks, but is not published herein.

07030300 LOOSAHATCHIE RIVER TRIBUTARY AT ST. ELMO ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°13'56", long 89°58'51", Shelby County, Hydrologic Unit 08010209, 150 ft downstream from culvert under St. Elmo Road, and 200 ft north from intersection of St. Elmo Road and Brookmeade Street.

DRAINAGE AREA.--0.82 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1974 to July 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is about 240 ft above National Geodetic Vertical Datum Of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 840 ft<sup>3</sup>/s, May 3, 1979, gage height, 11.10 ft.

MAXIMUM FOR CURRENT PERIOD.--October 1984 to July 1985: Maximum discharge, 507 ft<sup>3</sup>/s, Apr.23, gage height, 8.64 ft.

3/30/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |     |     |     |    |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
| <2005> | 20* | 20  | 20  | 20  | 20  | 20  | 20  | 24 | 70  | 80  | 69  | 72  |
| <2105> | 119 | 193 | 225 | 286 | 267 | 200 | 135 | 97 | 81  | 70  | 63  | 59  |
| <2205> | 50  | 41  | 38  | 40  | 42  | 37  | 32  | 37 | 108 | 171 | 137 | 117 |
| <2305> | 97  | 80  | 71  | 61  | 61  | 54  | 41  | 36 | 31  | 27  | 25  | 22  |

3/30/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1905> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.02 |
| <2005> | 0.00 | 0.03 | 0.00 | 0.03 | 0.03 | 0.03 | 0.07 | 0.03 | 0.03 | 0.03 | 0.10 | 0.12 |
| <2105> | 0.30 | 0.10 | 0.08 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| <2205> | 0.00 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.37 | 0.04 | 0.01 | 0.00 | 0.00 |

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0305> | 20  | 20  | 24  | 25  | 29  | 29  | 29  | 29  | 29  | 27  | 27  | 27  |
| <0405> | 28  | 35  | 42  | 43  | 43  | 43  | 50  | 76  | 83  | 67  | 52  | 43  |
| <0505> | 40  | 35  | 31  | 28  | 25  | 25  | 25  | 26  | 26  | 26  | 25  | 23  |
| <0605> | 22  | 22  | 22  | 22  | 27  | 41  | 81  | 86  | 85  | 91  | 93  | 121 |
| <0705> | 231 | 256 | 315 | 321 | 287 | 228 | 174 | 149 | 129 | 109 | 93  | 79  |
| <0805> | 70  | 63  | 50  | 44  | 36  | 29  | 25  | 23  | 22  | 20  | 20  | 20  |
| <1705> | 75  | 197 | 248 | 423 | 474 | 507 | 507 | 487 | 441 | 408 | 373 | 302 |
| <1805> | 235 | 176 | 125 | 105 | 91  | 82  | 80  | 72  | 70  | 69  | 69  | 69  |
| <1905> | 70  | 70  | 68  | 67  | 67  | 67  | 67  | 67  | 67  | 67  | 67  | 67  |
| <2005> | 67  | 67  | 67  | 67  | 64  | 59  | 50  | 44  | 38  | 32  | 29  | 25  |
| <2105> | 23  | 22  | 25  | 52  | 66  | 68  | 59  | 49  | 42  | 41  | 49  | 70  |
| <2205> | 88  | 81  | 79  | 78  | 76  | 71  | 64  | 57  | 47  | 39  | 33  | 31  |
| <2305> | 26  | 24  | 22  | 21  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 |
| <0305> | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 |
| <0405> | 0.02 | 0.02 | 0.04 | 0.03 | 0.04 | 0.02 | 0.02 | 0.02 | 0.05 | 0.09 | 0.01 | 0.01 |
| <0505> | 0.02 | 0.02 | 0.00 | 0.01 | 0.02 | 0.00 | 0.02 | 0.03 | 0.00 | 0.01 | 0.02 | 0.00 |
| <0605> | 0.01 | 0.00 | 0.02 | 0.03 | 0.02 | 0.00 | 0.02 | 0.09 | 0.04 | 0.05 | 0.04 | 0.06 |
| <0705> | 0.01 | 0.08 | 0.37 | 0.07 | 0.06 | 0.11 | 0.03 | 0.01 | 0.02 | 0.04 | 0.01 | 0.00 |
| <0805> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <1605> | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| <1705> | 0.00 | 0.05 | 0.11 | 0.18 | 0.20 | 0.14 | 0.12 | 0.13 | 0.09 | 0.09 | 0.05 | 0.05 |
| <1805> | 0.02 | 0.04 | 0.01 | 0.31 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 0.03 |
| <1905> | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 |
| <2005> | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 |
| <2205> | 0.05 | 0.06 | 0.03 | 0.01 | 0.04 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |



## LOOSAHATCHIE RIVER BASIN

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07030358 TODD CREEK AT STEELE AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°13'13", long 90°00'53", Shelby County, Hydrologic Unit 08010209, at downstream side of bridge on Steele Avenue, 0.5 mi north of Frayser Boulevard, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--2.47 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1983 to July 1985 (discontinued).

GAGE.--water-stage recorder. Elevation of gage is about 240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 2,470 ft<sup>3</sup>/s, Apr. 23, 1985, gage height, 9.83 ft.

MAXIMUM FOR CURRENT PERIOD.--October 1984 to July 1985: Maximum discharge, 2,470 ft<sup>3</sup>/s, Apr. 23, gage height, 9.83 ft.

10/11/84

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |      |      |      |     |     |     |     |     |     |     |     |
|--------|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| <1705> | 63* | 63   | 63   | 63   | 63  | 63  | 63  | 63  | 63  | 63  | 63  | 422 |
| <1805> | 762 | 1100 | 1160 | 1100 | 932 | 732 | 549 | 384 | 266 | 178 | 136 | 118 |
| <1905> | 105 | 96   | 86   | 81   | 78  | 73  | 68  | 63  | 66  | 66  | 66  | 66  |

10/11/84

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1705> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.25 | 0.12 | 0.16 |
| <1805> | 0.11 | 0.04 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <1905> | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0305> | 56   | 56   | 56   | 56   | 74   | 96   | 96   | 99   | 100  | 99   | 100  | 96   |
| <0405> | 97   | 96   | 96   | 104  | 119  | 124  | 120  | 131  | 136  | 161  | 173  | 138  |
| <0505> | 122  | 111  | 101  | 93   | 89   | 84   | 78   | 81   | 75   | 76   | 75   | 76   |
| <0605> | 72   | 70   | 70   | 69   | 78   | 92   | 116  | 129  | 161  | 197  | 192  | 233  |
| <0705> | 400  | 601  | 867  | 1030 | 1090 | 1080 | 968  | 817  | 676  | 559  | 452  | 329  |
| <0805> | 251  | 188  | 153  | 138  | 127  | 114  | 107  | 97   | 89   | 82   | 81   | 75   |
| <0905> | 72   | 63   | 59   | 58   | 57   | 57   | 57   | 57   | 57   | 57   | 57   | 57   |
| <1705> | 57   | 278  | 684  | 1150 | 1650 | 2000 | 2300 | 2440 | 2470 | 2410 | 2270 | 2090 |
| <1805> | 1860 | 1560 | 1240 | 948  | 689  | 518  | 404  | 310  | 249  | 214  | 190  | 188  |
| <1905> | 190  | 180  | 172  | 180  | 177  | 183  | 187  | 177  | 183  | 190  | 185  | 183  |
| <2005> | 183  | 183  | 188  | 182  | 172  | 169  | 150  | 138  | 129  | 116  | 118  | 107  |
| <2105> | 103  | 93   | 105  | 114  | 119  | 140  | 144  | 150  | 136  | 124  | 131  | 143  |
| <2205> | 160  | 202  | 237  | 242  | 238  | 210  | 188  | 160  | 150  | 140  | 124  | 124  |
| <2305> | 115  | 105  | 92   | 89   | 89   | 84   | 80   | 78   | 72   | 69   | 68   | 64   |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 |
| <0305> | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 |
| <0405> | 0.02 | 0.02 | 0.04 | 0.03 | 0.04 | 0.02 | 0.02 | 0.02 | 0.05 | 0.09 | 0.01 | 0.01 |
| <0505> | 0.02 | 0.02 | 0.00 | 0.01 | 0.02 | 0.00 | 0.02 | 0.03 | 0.00 | 0.01 | 0.02 | 0.00 |
| <0605> | 0.01 | 0.00 | 0.02 | 0.03 | 0.02 | 0.00 | 0.02 | 0.09 | 0.04 | 0.05 | 0.04 | 0.06 |
| <0705> | 0.01 | 0.08 | 0.37 | 0.07 | 0.06 | 0.11 | 0.03 | 0.01 | 0.02 | 0.04 | 0.01 | 0.00 |
| <1605> | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| <1705> | 0.00 | 0.05 | 0.11 | 0.18 | 0.20 | 0.14 | 0.12 | 0.13 | 0.09 | 0.09 | 0.05 | 0.05 |
| <1805> | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 0.03 |
| <1905> | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 |
| <2005> | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 |
| <2205> | 0.05 | 0.06 | 0.03 | 0.01 | 0.04 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |



## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07031694 HARRINGTON CREEK TRIBUTARY AT ELMORE PARK ROAD AT BARTLETT, TN

LOCATION.--Lat 35°12'08", long 89°51'26", Shelby County, Hydrologic Unit 08010210, 25 ft upstream from culvert under Elmore Park Road, 750 ft south of Stage Road, and 1.0 mi east of Bartlett.

DRAINAGE AREA.--0.33 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 266 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 293 ft<sup>3</sup>/s, July 22, 1980, gage height, 18.84 ft.

MAXIMUM FOR CURRENT YEAR.--Maximum discharge, 246 ft<sup>3</sup>/s, Apr. 23, gage height, 17.22 ft.

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |     |     |     |     |     |     |     |     |     |     |     |
|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0105> | 3.0* | 3.7 | 4.2 | 4.1 | 3.6 | 3.2 | 3.0 | 3.0 | 3.0 | 3.9 | 4.8 | 5.1 |
| <0205> | 4.6  | 3.9 | 3.5 | 3.2 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| <0305> | 4.7  | 10  | 13  | 14  | 16  | 18  | 19  | 19  | 19  | 19  | 19  | 19  |
| <0405> | 19   | 21  | 22  | 23  | 24  | 24  | 24  | 25  | 26  | 31  | 39  | 41  |
| <0505> | 35   | 32  | 34  | 37  | 39  | 37  | 32  | 27  | 23  | 22  | 21  | 19  |
| <0605> | 16   | 14  | 12  | 10  | 9.8 | 9.2 | 11  | 19  | 22  | 21  | 18  | 16  |
| <0705> | 14   | 12  | 10  | 9.5 | 26  | 89  | 123 | 130 | 130 | 116 | 98  | 77  |
| <0805> | 60   | 50  | 41  | 34  | 29  | 25  | 22  | 19  | 17  | 14  | 12  | 11  |
| <0905> | 10   | 9.3 | 8.8 | 8.2 | 7.2 | 6.7 | 6.4 | 6.3 | 5.5 | 5.1 | 4.8 | 4.7 |
| <1005> | 4.5  | 4.4 | 4.0 | 3.7 | 3.7 | 3.6 | 3.6 | 3.5 | 3.3 | 3.0 | 3.0 | 2.9 |
| <1705> | 3.0  | 3.0 | 3.0 | 12  | 76  | 159 | 212 | 232 | 237 | 242 | 245 | 246 |
| <1805> | 234  | 207 | 156 | 109 | 80  | 65  | 55  | 49  | 46  | 44  | 43  | 42  |
| <1905> | 41   | 41  | 40  | 38  | 37  | 38  | 41  | 42  | 42  | 42  | 42  | 43  |
| <2005> | 45   | 45  | 46  | 46  | 44  | 40  | 37  | 32  | 29  | 26  | 23  | 21  |
| <2105> | 19   | 17  | 16  | 15  | 14  | 15  | 15  | 15  | 14  | 12  | 12  | 11  |
| <2205> | 10   | 9.7 | 9.7 | 9.7 | 9.7 | 11  | 13  | 13  | 12  | 11  | 10  | 9.7 |
| <2305> | 9.0  | 8.2 | 7.8 | 7.1 | 6.7 | 6.4 | 6.3 | 5.8 | 5.8 | 8.7 | 18  | 18  |

4/24/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0005> | 17  | 15  | 14  | 12  | 10  | 10  | 8.5 | 7.9 | 7.6 | 7.2 | 6.7 | 6.1 |
| <0105> | 5.9 | 5.8 | 5.7 | 5.2 | 5.0 | 4.8 | 4.6 | 4.4 | 4.2 | 4.0 | 4.0 | 3.9 |
| <0205> | 3.8 | 3.6 | 3.6 | 3.5 | 3.5 | 3.4 | 3.2 | 3.2 | 3.1 | 3.0 | 3.0 | 3.0 |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0005> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 |
| <0105> | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| <0205> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.05 | 0.03 | 0.02 |
| <0305> | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.04 | 0.03 |
| <0405> | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.04 | 0.04 | 0.05 | 0.05 | 0.03 | 0.01 | 0.01 |
| <0505> | 0.03 | 0.05 | 0.05 | 0.03 | 0.03 | 0.01 | 0.00 | 0.00 | 0.02 | 0.00 | 0.01 | 0.00 |
| <0605> | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.03 | 0.02 | 0.03 | 0.01 | 0.00 | 0.01 | 0.00 |
| <0705> | 0.00 | 0.00 | 0.00 | 0.12 | 0.24 | 0.12 | 0.06 | 0.08 | 0.03 | 0.03 | 0.02 | 0.01 |
| <0805> | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| <1705> | 0.02 | 0.01 | 0.13 | 0.18 | 0.26 | 0.28 | 0.13 | 0.06 | 0.14 | 0.13 | 0.10 | 0.02 |
| <1805> | 0.01 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 |
| <1905> | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 0.03 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 |
| <2005> | 0.03 | 0.02 | 0.03 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| <2205> | 0.01 | 0.00 | 0.00 | 0.01 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2305> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.03 | 0.00 | 0.01 |

7/26/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <1105> | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 13  | 15  | 10  | 7.5 |
| <1205> | 6.9 | 7.2 | 6.5 | 5.7 | 4.5 | 4.1 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| <1905> | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.6 | 9.0 |
| <2005> | 17  | 20  | 20  | 20  | 30  | 112 | 168 | 188 | 198 | 188 | 157 | 115 |
| <2105> | 77  | 54  | 42  | 33  | 27  | 22  | 19  | 17  | 16  | 14  | 12  | 11  |
| <2205> | 9.3 | 7.8 | 6.5 | 5.7 | 5.0 | 4.5 | 4.0 | 3.7 | 3.4 | 3.4 | 3.2 | 3.2 |

7/26/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1105> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.02 | 0.00 | 0.02 | 0.00 | 0.01 |
| <1205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| <1905> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| <2005> | 0.00 | 0.02 | 0.03 | 0.08 | 0.32 | 0.26 | 0.12 | 0.09 | 0.06 | 0.04 | 0.02 | 0.01 |
| <2105> | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 |

## WOLF RIVER BASIN

259

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07031695 HARRINGTON CREEK TRIBUTARY AT HAWTHORNE ROAD AT BARTLETT, TN

LOCATION.--Lat 35°11'43", long 89°51'29", Shelby County, Hydrologic Unit 08010210, 25 ft downstream from culvert under Hawthorne Road, 30 ft west of Elmore Park Road, and 1 mi southeast of Bartlett.

DRAINAGE AREA.--0.21 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to July 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 392 ft<sup>3</sup>/s, July 22, 1980, gage height, 12.64 ft.

MAXIMUM FOR CURRENT PERIOD.--October 1984 to July 1985: Maximum discharge, 140 ft<sup>3</sup>/s, Apr. 23, gage height, 10.23 ft.

3/30/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |       |      |      |      |      |      |      |      |      |     |     |     |
|--------|-------|------|------|------|------|------|------|------|------|-----|-----|-----|
| <2005> | 0.00* | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.2 | 1.3 | 1.5 |
| <2105> | 2.5   | 4.9  | 8.2  | 16   | 20   | 37   | 70   | 61   | 57   | 51  | 35  | 25  |
| <2205> | 22    | 21   | 19   | 16   | 15   | 11   | 12   | 24   | 40   | 36  | 26  | 22  |
| <2305> | 21    | 17   | 14   | 12   | 6.0  | 5.4  | 7.2  | 4.9  | 4.9  | 6.0 | 4.4 | 4.9 |

3/30/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1905> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| <2005> | 0.03 | 0.01 | 0.01 | 0.02 | 0.04 | 0.05 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.05 |
| <2105> | 0.03 | 0.05 | 0.10 | 0.12 | 0.09 | 0.14 | 0.15 | 0.13 | 0.03 | 0.01 | 0.00 | 0.00 |
| <2205> | 0.07 | 0.03 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.20 | 0.15 | 0.00 | 0.01 | 0.01 |
| <2305> | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |      |      |      |      |     |     |     |     |     |     |     |
|--------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| <0305> | 0.00 | 0.00 | 0.00 | 0.00 | 1.5  | 1.7 | 2.0 | 2.2 | 2.5 | 2.5 | 3.1 | 3.5 |
| <0405> | 4.4  | 5.4  | 4.4  | 5.4  | 4.9  | 6.0 | 6.0 | 6.8 | 6.8 | 7.7 | 8.7 | 6.8 |
| <0505> | 6.8  | 7.2  | 6.0  | 7.2  | 7.7  | 7.7 | 6.8 | 6.0 | 5.4 | 6.8 | 6.8 | 6.4 |
| <0605> | 4.9  | 4.9  | 5.4  | 5.4  | 5.4  | 4.9 | 4.4 | 4.9 | 4.9 | 5.4 | 4.9 | 5.4 |
| <0705> | 3.9  | 3.9  | 3.9  | 3.5  | 3.9  | 6.8 | 18  | 37  | 60  | 58  | 56  | 53  |
| <0805> | 41   | 25   | 23   | 21   | 20   | 14  | 8.2 | 6.8 | 6.8 | 4.9 | 6.8 | 6.0 |
| <0905> | 4.9  | 3.9  | 5.4  | 4.9  | 4.9  | 4.9 | 3.5 | 3.5 | 3.5 | 2.8 | 3.1 | 2.8 |
| <1705> | 0.00 | 0.00 | 0.00 | 0.00 | 0.71 | 15  | 68  | 85  | 79  | 122 | 131 | 140 |
| <1805> | 108  | 82   | 70   | 69   | 63   | 48  | 27  | 24  | 21  | 21  | 20  | 18  |
| <1905> | 18   | 16   | 13   | 12   | 9.8  | 9.2 | 11  | 14  | 15  | 15  | 15  | 16  |
| <2005> | 20   | 20   | 17   | 20   | 17   | 16  | 13  | 9.2 | 7.2 | 7.7 | 9.2 | 8.2 |
| <2105> | 6.8  | 4.4  | 3.1  | 4.4  | 3.5  | 4.9 | 3.9 | 4.9 | 3.9 | 3.9 | 3.5 | 3.9 |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0205> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.05 | 0.04 |
| <0305> | 0.02 | 0.04 | 0.03 | 0.03 | 0.04 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 |
| <0405> | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.06 | 0.08 | 0.01 | 0.02 | 0.03 |
| <0505> | 0.01 | 0.06 | 0.04 | 0.03 | 0.00 | 0.00 | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| <0605> | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.04 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| <0705> | 0.01 | 0.00 | 0.00 | 0.07 | 0.22 | 0.14 | 0.11 | 0.12 | 0.05 | 0.05 | 0.01 | 0.01 |
| <0805> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <1605> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| <1705> | 0.00 | 0.00 | 0.04 | 0.21 | 0.27 | 0.31 | 0.19 | 0.10 | 0.19 | 0.13 | 0.17 | 0.04 |
| <1805> | 0.02 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 |
| <1905> | 0.02 | 0.02 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 |
| <2005> | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |



## WOLF RIVER BASIN

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07031697 HARRINGTON CREEK TRIBUTARY AT STAGE ROAD AT BARTLETT, TN

LOCATION.--Lat 35°12'20", long 89°53'05", Shelby County, Hydrologic Unit 08010210, 30 ft upstream from culvert under Stage Lane, 300 ft west of Chaucer Lane, and 1 mi west of Bartlett.

DRAINAGE AREA.--0.91 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 255 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 960 ft<sup>3</sup>/s, Aug. 22, 1979, gage height, 11.79 ft.

MAXIMUM FOR CURRENT YEAR.--Maximum discharge, 587 ft<sup>3</sup>/s, Apr. 23, gage height, 10.81 ft.

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |    |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|
| <0305> | 22* | 22  | 22  | 22  | 24 | 25  | 26  | 26  | 26  | 26  | 26  | 26  |
| <0405> | 26  | 26  | 28  | 31  | 33 | 33  | 34  | 37  | 42  | 46  | 49  | 49  |
| <0505> | 49  | 45  | 42  | 40  | 39 | 39  | 39  | 39  | 38  | 35  | 32  | 31  |
| <0605> | 29  | 27  | 25  | 24  | 23 | 23  | 23  | 23  | 30  | 37  | 38  | 36  |
| <0705> | 32  | 28  | 27  | 27  | 46 | 118 | 186 | 195 | 172 | 147 | 123 | 101 |
| <0805> | 87  | 71  | 58  | 49  | 42 | 37  | 33  | 30  | 27  | 25  | 24  | 23  |
| <1705> | 22  | 22  | 22  | 22  | 83 | 244 | 409 | 536 | 587 | 559 | 467 | 366 |
| <1805> | 278 | 200 | 143 | 108 | 89 | 75  | 62  | 54  | 47  | 44  | 44  | 44  |
| <1905> | 46  | 46  | 46  | 46  | 45 | 45  | 45  | 45  | 45  | 45  | 45  | 45  |
| <2005> | 45  | 46  | 47  | 47  | 47 | 46  | 44  | 40  | 36  | 33  | 30  | 28  |
| <2105> | 26  | 25  | 24  | 23  | 22 | 22  | 22  | 22  | 24  | 24  | 23  | 23  |
| <2205> | 23  | 23  | 23  | 24  | 28 | 30  | 30  | 29  | 27  | 25  | 24  | 23  |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0005> | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 |
| <0105> | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| <0205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.03 | 0.05 | 0.03 | 0.03 |
| <0305> | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 |
| <0405> | 0.03 | 0.03 | 0.03 | 0.02 | 0.06 | 0.03 | 0.06 | 0.05 | 0.03 | 0.05 | 0.01 | 0.02 |
| <0505> | 0.02 | 0.04 | 0.02 | 0.06 | 0.03 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 |
| <0605> | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.08 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 |
| <0705> | 0.00 | 0.02 | 0.13 | 0.17 | 0.13 | 0.06 | 0.05 | 0.04 | 0.04 | 0.02 | 0.02 | 0.01 |
| <1605> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| <1705> | 0.12 | 0.06 | 0.26 | 0.21 | 0.29 | 0.24 | 0.15 | 0.04 | 0.09 | 0.14 | 0.03 | 0.02 |
| <1805> | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.04 | 0.02 | 0.03 | 0.02 |
| <1905> | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 |
| <2005> | 0.03 | 0.02 | 0.02 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 |
| <2205> | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2305> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 |

7/26/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |    |    |    |    |     |     |     |     |     |    |    |    |
|--------|----|----|----|----|-----|-----|-----|-----|-----|----|----|----|
| <2005> | 18 | 18 | 18 | 28 | 106 | 229 | 252 | 180 | 113 | 77 | 58 | 46 |
| <2105> | 38 | 33 | 28 | 24 | 23  | 23  | 23  | 23  | 23  | 23 | 22 | 22 |

7/26/85

## UNIT RAINFALL, INCREMENTAL, (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1905> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.09 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| <2005> | 0.01 | 0.06 | 0.13 | 0.25 | 0.35 | 0.15 | 0.03 | 0.03 | 0.03 | 0.03 | 0.01 | 0.01 |
| <2105> | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 |

## WOLF RIVER BASIN

261

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07031699 COLUMN BRANCH AT RALEIGH-LAGRANGE ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°11'58", long 89°54'37", Shelby County, Hydrologic Unit 08010210, on downstream wingwall of culvert under Raleigh-LaGrange Road, 0.7 mi east of Jackson Avenue, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--1.87 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to July 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 6,960 ft<sup>3</sup>/s, Apr. 23, 1985, gage height, 12.94 ft.

MAXIMUM FOR CURRENT PERIOD.--October 1984 to July 1985: Maximum discharge, 6,960 ft<sup>3</sup>/s, Apr. 23, gage height, 12.94 ft.

10/ 6/84

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |      |      |      |      |      |     |     |     |     |      |      |
|--------|------|------|------|------|------|------|-----|-----|-----|-----|------|------|
| <1105> | --*  | --   | --   | --   | --   | --   | --  | 17  | 21  | 24  | 27   | 27   |
| <1205> | 27   | 27   | 27   | 27   | 27   | 28   | 30  | 35  | 42  | 53  | 69   | 85   |
| <1305> | 107  | 127  | 130  | 126  | 126  | 126  | 140 | 172 | 256 | 761 | 1280 | 1320 |
| <1405> | 1370 | 1950 | 2350 | 2210 | 1750 | 1270 | 949 | 718 | 528 | 452 | 382  | 373  |
| <1505> | 356  | 348  | 345  | 350  | 353  | 365  | 348 | 359 | 337 | 313 | 275  | 233  |
| <1605> | 218  | 218  | 210  | 206  | 206  | 208  | 200 | 185 | 172 | 162 | 146  | 132  |
| <1705> | 111  | 90   | 73   | 61   | 51   | 43   | 38  | 34  | 30  | 27  | 24   | 23   |
| <1805> | 21   | 19   | 18   | 16   | 16   | 14   | 13  | 13  | 12  | 11  | 11   | 11   |

10/ 6/84

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1005> | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 |
| <1105> | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.02 |
| <1205> | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.06 | 0.02 | 0.05 |
| <1305> | 0.04 | 0.03 | 0.08 | 0.14 | 0.03 | 0.02 | 0.03 | 0.04 | 0.13 | 0.06 | 0.02 | 0.04 |
| <1405> | 0.06 | 0.03 | 0.04 | 0.05 | 0.03 | 0.03 | 0.04 | 0.03 | 0.02 | 0.04 | 0.03 | 0.03 |
| <1505> | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.01 |
| <1605> | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0105> | 16   | 26   | 30   | 30   | 30   | 30   | 28   | 25   | 22   | 20   | 18   | 17   |
| <0205> | 16   | 15   | --   | --   | --   | --   | --   | --   | --   | --   | --   | --   |
| <0305> | --   | 15   | 27   | 42   | 63   | 75   | 86   | 90   | 91   | 90   | 90   | 90   |
| <0405> | 95   | 104  | 121  | 164  | 174  | 196  | 206  | 240  | 273  | 315  | 315  | 315  |
| <0505> | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  |
| <0605> | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 315  | 176  |
| <0705> | 162  | 174  | 628  | 691  | 4100 | 5220 | 5140 | 4600 | 4550 | 4540 | 1530 | 1370 |
| <0805> | 1370 | 1340 | 356  | 240  | 178  | 162  | 152  | 141  | 66   | 57   | 51   | 49   |
| <0905> | 46   | 43   | 42   | 42   | 27   | 25   | 23   | 22   | 21   | 19   | 18   | 18   |
| <1005> | 17   | 17   | 17   | 17   | 17   | 17   | 16   | 16   | 16   | 16   | 16   | 16   |
| <1705> | 16   | 16   | 31   | 427  | 2670 | 4790 | 6450 | 6580 | 6960 | 6940 | 6490 | 6270 |
| <1805> | 6230 | 2360 | 2220 | 2130 | 771  | 756  | 747  | 365  | 318  | 287  | 305  | 310  |
| <1905> | 334  | 348  | 348  | 348  | 348  | 353  | 353  | 348  | 345  | 345  | 345  | 370  |
| <2005> | 362  | 379  | 376  | 373  | 367  | 321  | 275  | 227  | 174  | 165  | 154  | 146  |
| <2105> | 84   | 71   | 64   | 58   | 55   | 57   | 68   | 87   | 95   | 87   | 74   | 66   |
| <2205> | 62   | 61   | 70   | 114  | 171  | 167  | 162  | 159  | 154  | 151  | 151  | 151  |
| <2305> | 151  | 146  | 43   | 43   | 42   | 42   | 34   | 34   | 34   | 34   | 34   | 34   |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0005> | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 |
| <0105> | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| <0205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.03 | 0.05 | 0.03 | 0.03 |
| <0305> | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 |
| <0405> | 0.03 | 0.03 | 0.03 | 0.02 | 0.06 | 0.03 | 0.06 | 0.05 | 0.03 | 0.05 | 0.01 | 0.02 |
| <0505> | 0.02 | 0.04 | 0.02 | 0.06 | 0.03 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 |
| <0605> | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.08 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 |
| <0705> | 0.00 | 0.02 | 0.13 | 0.17 | 0.13 | 0.06 | 0.05 | 0.04 | 0.04 | 0.02 | 0.02 | 0.01 |
| <0805> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <1505> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.01 |
| <1605> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| <1705> | 0.12 | 0.06 | 0.26 | 0.21 | 0.29 | 0.24 | 0.15 | 0.04 | 0.09 | 0.14 | 0.03 | 0.02 |
| <1805> | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.04 | 0.02 | 0.03 | 0.02 |
| <1905> | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 |
| <2005> | 0.03 | 0.02 | 0.02 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 |
| <2205> | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2305> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.02 | 0.01 | 0.00 | 0.00 |

## WOLF RIVER BASIN

## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION

07031773 LICK CREEK AT JEFFERSON AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°08'20", long 89°59'30", Shelby County, Hydrologic Unit 08010210, 20 ft upstream from culvert under Jefferson Avenue, 600 ft west of Cooper Street, 1,060 ft south of Poplar Avenue, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--1.00 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1975 to July 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 258 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft<sup>3</sup>/s, Aug. 10, 1978, gage height, 11.60 ft.

MAXIMUM FOR CURRENT PERIOD.--October 1984 to July 1985: Maximum discharge, 598 ft<sup>3</sup>/s, Apr. 23, gage height, 6.98 ft.

10/11/84

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |     |     |     |     |     |     |     |     |     |     |     |
|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <1705> | 3.8* | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 34  | 234 | 362 | 399 | 383 | 304 |
| <1805> | 206  | 150 | 105 | 80  | 70  | 60  | 50  | 44  | 39  | 30  | 31  | 27  |
| <1905> | 25   | 22  | 20  | 19  | 17  | 16  | 15  | 14  | 12  | 11  | 11  | 10  |
| <2005> | 9.4  | 6.4 | 7.7 | 7.1 | 6.6 | 6.2 | 4.3 | 5.7 | 4.7 | 4.1 | 2.7 | 2.7 |

10/11/84

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1705> | 0.00 | 0.00 | 0.00 | 0.04 | 0.13 | 0.15 | 0.19 | 0.15 | 0.03 | 0.00 | 0.00 | 0.00 |
| <1805> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |

4/23/85

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0205> | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 13  | 20  |
| <0305> | 27  | 31  | 27  | 25  | 24  | 21  | 20  | 18  | 17  | 16  | 16  | 16  |
| <0405> | 16  | 17  | 23  | 33  | 52  | 74  | 85  | 93  | 96  | 88  | 78  | 68  |
| <0505> | 57  | 50  | 51  | 63  | 69  | 68  | 57  | 47  | 44  | 41  | 37  | 31  |
| <0605> | 26  | 22  | 19  | 18  | 21  | 31  | 39  | 41  | 38  | 31  | 26  | 24  |
| <0705> | 26  | 37  | 66  | 108 | 163 | 213 | 266 | 313 | 352 | 380 | 395 | 398 |
| <0805> | 368 | 307 | 235 | 175 | 131 | 95  | 64  | 39  | 29  | 25  | 21  | 18  |
| <0905> | 15  | 13  | 12  | 10  | 10  | 9.1 | 8.2 | 7.4 | 6.9 | 6.6 | 6.6 | 6.6 |
| <1705> | 6.4 | 6.4 | 7.7 | 27  | 329 | 457 | 543 | 590 | 598 | 593 | 590 | 572 |
| <1805> | 537 | 490 | 431 | 350 | 246 | 160 | 115 | 93  | 86  | 84  | 81  | 78  |
| <1905> | 76  | 74  | 71  | 71  | 71  | 71  | 73  | 75  | 77  | 78  | 80  | 80  |
| <2005> | 79  | 78  | 78  | 76  | 73  | 70  | 59  | 52  | 45  | 38  | 35  | 32  |
| <2105> | 30  | 27  | 26  | 25  | 25  | 24  | 23  | 22  | 21  | 20  | 19  | 17  |
| <2205> | 16  | 15  | 14  | 14  | 13  | 13  | 13  | 12  | 12  | 12  | 12  | 12  |
| <2305> | 12  | 12  | 12  | 12  | 12  | 13  | 47  | 99  | 238 | 322 | 274 | 205 |

4/24/85

|        |     |     |    |    |    |    |    |    |    |    |    |    |
|--------|-----|-----|----|----|----|----|----|----|----|----|----|----|
| <0005> | 151 | 116 | 97 | 85 | 85 | 82 | 80 | 78 | 75 | 72 | 70 | 68 |
| <0105> | 66  | 64  | 61 | 58 | 55 | 53 | 50 | 49 | 48 | 47 | 46 | 44 |
| <0205> | 44  | 43  | 42 | 41 | 40 | 40 | 39 | 39 | 38 | 38 | 37 | 37 |
| <0305> | 37  | 36  | 36 | 36 | 35 | 34 | 34 | 34 | 33 | 33 | 32 | 32 |
| <0405> | 32  | 31  | 31 | 31 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 |
| <0505> | 28  | 27  | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 |
| <0605> | 25  | 24  | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 |
| <0705> | 22  | 22  | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 |
| <0805> | 20  | 20  | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 |

4/23/85

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0005> | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.00 | 0.01 | 0.00 | 0.01 |
| <0105> | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <0205> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.02 | 0.01 | 0.03 | 0.02 |
| <0305> | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.03 | 0.01 | 0.02 |
| <0405> | 0.02 | 0.05 | 0.08 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 |
| <0505> | 0.02 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| <0605> | 0.01 | 0.01 | 0.01 | 0.05 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.02 | 0.00 | 0.04 |
| <0705> | 0.09 | 0.13 | 0.15 | 0.11 | 0.07 | 0.07 | 0.06 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 |
| <0805> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <1705> | 0.00 | 0.13 | 0.23 | 0.22 | 0.13 | 0.07 | 0.06 | 0.05 | 0.04 | 0.03 | 0.03 | 0.01 |
| <1805> | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 |
| <1905> | 0.01 | 0.00 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
| <2005> | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| <2105> | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2205> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <2305> | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.14 | 0.14 | 0.12 | 0.01 | 0.01 | 0.00 | 0.00 |

## NONCONNAH CREEK BASIN

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## FLOOD-HYDROGRAPH RAINFALL-RUNOFF STATION STATION

07032246 DAYS CREEK AT SHELBY DRIVE AT MEMPHIS, TN

LOCATION.--Lat 35°01'14", long 90°00'37", Shelby County, Hydrologic Unit 08010211, 75 ft upstream from culvert under Shelby Drive, 0.5 mi west of I-55, 0.9 mi east of U.S. 51 (Elvis Presley Boulevard), and 3.4 mi upstream from mouth.

DRAINAGE AREA.--2.63 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to December 1984 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 259 ft above National Geodetic Vertical Datum of 1929, from topographic map.

MAXIMUM FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft<sup>3</sup>/s, Apr. 16, 1982, gage height, 10.05 ft.

MAXIMUM FOR CURRENT PERIOD.--October to December 1984: Maximum discharge, 653 ft<sup>3</sup>/s, Nov. 9, gage height, 6.11 ft.

10/16/84

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |      |     |     |     |     |     |     |     |     |     |     |     |
|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <2005> | 1.7* | 1.7 | 2.0 | 3.1 | 7.1 | 12  | 27  | 82  | 122 | 157 | 233 | 319 |
| <2105> | 418  | 481 | 488 | 505 | 532 | 537 | 539 | 534 | 515 | 493 | 468 | 438 |
| <2205> | 409  | 374 | 337 | 303 | 273 | 244 | 213 | 187 | 165 | 149 | 133 | 120 |
| <2305> | 111  | 101 | 94  | 87  | 82  | 76  | 73  | 68  | 63  | 60  | 56  | 53  |

10/17/84

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0005> | 50  | 47  | 44  | 41  | 38  | 36  | 33  | 31  | 30  | 28  | 27  | 25  |
| <0105> | 24  | 22  | 21  | 20  | 19  | 18  | 17  | 16  | 16  | 15  | 15  | 14  |
| <0205> | 14  | 13  | 13  | 12  | 12  | 11  | 11  | 11  | 11  | 10  | 10  | 9.6 |
| <0305> | 9.6 | 9.2 | 9.2 | 8.7 | 8.7 | 8.3 | 8.3 | 7.9 | 7.9 | 7.5 | 7.5 | 7.5 |

10/16/84

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <1905> | 0.00 | 0.00 | 0.02 | 0.08 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 |
| <2005> | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.05 | 0.03 | 0.03 | 0.02 | 0.05 | 0.04 |
| <2105> | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |

11/09/84

## UNIT DISCHARGE (CUBIC FEET/SECOND)

&lt;TIME&gt;

|        |    |    |     |     |     |     |     |     |     |     |     |     |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <2305> | 15 | 61 | 208 | 321 | 426 | 524 | 602 | 633 | 650 | 653 | 653 | 653 |
|--------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

11/10/84

|        |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <0005> | 640 | 624 | 605 | 587 | 559 | 527 | 491 | 460 | 434 | 408 | 384 | 361 |
| <0105> | 337 | 317 | 300 | 285 | 270 | 255 | 240 | 225 | 212 | 200 | 192 | 191 |
| <0205> | 188 | 186 | 186 | 187 | 192 | 206 | 220 | 228 | 243 | 260 | 273 | 278 |
| <0305> | 280 | 280 | 278 | 272 | 265 | 259 | 253 | 247 | 239 | 232 | 226 | 222 |
| <0405> | 220 | 217 | 214 | 210 | 208 | 204 | 200 | 195 | 190 | 183 | 177 | 170 |
| <0505> | 164 | 158 | 153 | 149 | 144 | 138 | 132 | 127 | 122 | 118 | 114 | 109 |
| <0605> | 105 | 100 | 97  | 93  | 89  | 85  | 82  | 80  | 76  | 73  | 71  | 68  |
| <0705> | 66  | 63  | 61  | 59  | 56  | 55  | 52  | 51  | 49  | 47  | 45  | 44  |
| <0805> | 42  | 41  | 39  | 38  | 36  | 35  | 34  | 33  | 32  | 31  | 30  | 30  |
| <0905> | 29  | 28  | 27  | 26  | 26  | 25  | 25  | 24  | 23  | 23  | 22  | 22  |
| <1005> | 21  | 21  | 21  | 20  | 19  | 19  | 19  | 18  | 18  | 18  | 17  | 17  |
| <1105> | 17  | 16  | 16  | 16  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  |
| <1205> | 14  | 14  | 14  | 14  | 14  | 14  | 13  | 13  | 13  | 13  | 13  | 13  |
| <1305> | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 11  | 11  | 11  | 11  | 11  |
| <1405> | 11  | 11  | 11  | 11  | 11  | 11  | 11  | 11  | 10  | 10  | 10  | 10  |

11/09/84

## UNIT RAINFALL, INCREMENTAL (INCHES)

&lt;TIME&gt;

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <2205> | 0.01 | 0.06 | 0.31 | 0.14 | 0.25 | 0.12 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 |
| <2305> | 0.01 | 0.00 | 0.02 | 0.03 | 0.02 | 0.01 | 0.00 | 0.02 | 0.02 | 0.03 | 0.01 | 0.00 |

11/10/84

|        |      |      |      |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| <0005> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.01 | 0.01 |
| <0105> | 0.00 | 0.12 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.17 | 0.14 | 0.02 | 0.01 | 0.00 |
| <0205> | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 | 0.03 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.02 |
| <0305> | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| <0405> | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |



As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

#### Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from current meter or indirect measurements of peak flow. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

#### Annual maximum discharge at crest-stage partial-record stations during water year 1985

| Station No.            | Station Name  | Location  | Drainage area (mi <sup>2</sup> ) | Period of record    | Annual Maximum |                  |                                 |
|------------------------|---|---|----------------------------------|---------------------|----------------|------------------|---------------------------------|
|                        |   |   |                                  |                     | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Mobile River Basin     |   |   |                                  |                     |                |                  |                                 |
| *02384900              | Coahulla Creek near Cleveland, TN                       | Lat 35°07'00", long 84°50'18", Bradley County, at bridge on State Highway 74, 2.5 miles southeast of intersection of State Highways 74 and 60 at Cleveland. Datum of gage is 828.3 ft National Geodetic Vertical Datum of 1929. | 4.35                             | 1955-85             | 2- 1-85        | 5.56             | 216                             |
| Green River Basin      |   |   |                                  |                     |                |                  |                                 |
| 03313600               | West Fork Drakes Creek tributary near Fountain Head, TN | Lat 36°33'34", long 86°27'26", Sumner County, at culvert under county road, 2.3 miles northeast of Fountain Head, and 0.4 mile upstream from mouth.   | 0.95                             | 1967-85             | 1985           | <4.82            | <137                            |
| Cumberland River Basin |   |   |                                  |                     |                |                  |                                 |
| 03409000               | White Oak Creek at Sunbright, TN                        | Lat 36°14'38", long 84°40'14", Morgan County, at bridge on U.S. Highway 27 in Sunbright. Datum of gage is 1,294.05 ft above National Geodetic Vertical Datum of 1929.   | 13.5                             | 1934, 1955-82, 1985 | 1985           | <5.30            | -                               |
| 03417700               | Mathews Branch tributary near Livingston, TN            | Lat 36°20'04", long 85°20'23", Overton County, at culvert under State Highway 42, 3.0 miles south of intersection of State Highways 85 and 42, 2.9 miles southwest of Livingston.   | 0.49                             | 1955-85             | 1985           | <2.58            | <75                             |
| 03418201               | Doe Creek at Gainesboro, TN                             | Lat 36°21'23", long 85°39'20", Jackson County, at bridge on Highway 56, at Gainesboro. Datum of gage is 519.37 ft National Geodetic Vertical Datum of 1929.   | 5.72                             | 1978-85             | 1985           | <3.77            | -                               |
| 03420360               | Mud Creek tributary No. 2 near Summitville, TN          | Lat 35°36'10", long 86°01'33", Coffee County, at culvert under county road, 3.5 miles northwest of Summitville, and 0.7 mile upstream from mouth.   | 2.28                             | 1967-85             | 11-27-84       | 4.32             | 236                             |
| 03420600               | Owen Branch near Centertown, TN                         | Lat 35°42'30", long 85°53'05", Warren County, at bridge on U.S. Highway 70-S, 2.4 miles southeast of Centertown.  | 4.60                             | 1955-85             | 1985           | <2.10            | -                               |

See footnotes at end of the table.

## Annual Maximum

| Station No.                       | Station Name                                       | Location   | Drainage area (mi <sup>2</sup> ) | Period of record                     | Date     | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
|-----------------------------------|--|--|----------------------------------|--------------------------------------|----------|------------------|---------------------------------|
| Cumberland River Basin--Continued |  |  |                                  |                                      |          |                  |                                 |
| 03421200                          | Charles Creek near McMinnville, TN                 | Lat 35°43'00", long 85°46'05", Warren County, at bridge on county road at Faulkner Springs, 2.7 miles north of McMinnville.  | 31.1                             | 1955-85                              | 1985     | <7.15            | <1,780                          |
| 03425500                          | Spring Creek near Lebanon, TN                      | Lat 36°10'49", long 86°14'29", Wilson County, at bridge on Eastover Road, 3.4 miles southeast of Lebanon. Datum of gage is 556.08 ft National Geodetic Vertical Datum of 1929.   | 35.3                             | 1955-61*, 1962-85                    | 11-27-84 | 7.74             | 4,140                           |
| 03425700                          | Spencer Creek near Lebanon, TN                     | Lat 36°14'20", long 86°24'03", Wilson County, at bridge on county road, 100 ft north of junction of county road and U.S. Highway 70, 6.5 miles west of square in Lebanon.  | 3.32                             | 1955-85                              | 11-27-84 | 4.11             | 254                             |
| 03426000                          | Drake Creek above Hendersonville, TN               | Lat 36°13'32", long 86°31'40", Sumner County, at bridge on Long Hollow Pike, 4.5 miles north of Hendersonville. Datum of gage is 503.06 ft National Geodetic Vertical Datum of 1929.                                     | 19.2                             | 1965-61*, 1962-85                    | 1985     | <4.89            | <1,210                          |
| 03426874                          | Brawleys Fork below Bradyville, TN                 | Lat 35°44'44", long 86°10'14", Cannon County, at bridge on Bradyville Pike, 0.5 mile northwest of Bradyville.  | 15.4                             | 1983-85                              | 11-18-84 | 25.37            | 2,220                           |
| 034269424                         | Reed Creek near Bradyville, TN                     | Lat 35°44'44", long 86°12'31", Rutherford County, at bridge on Bradyville Pike, 2.4 miles northwest of Bradyville.   | 3.52                             | 1983-85                              | 11-18-84 | 2.57             | -                               |
| 03428043                          | Lytle Creek at Sanbyrne Drive at Murfreesboro, TN  | Lat 35°49'38", long 86°23'28", Rutherford County, at bridge on Sanbyrne Drive, 1 mile south of intersection of Highways 41 and 231 in Murfreesboro. Datum of gage is 591.91 ft National Geodetic Vertical Datum of 1929. | 17.6                             | 1978-85                              | 11-27-84 | .77              | -                               |
| 03430118                          | McCrory Creek at Ironwood Drive at Donelson, TN    | Lat 36°09'07", long 86°39'02", Davidson County, at bridge under Ironwood Drive, 1.3 miles southeast of intersection of U.S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson.                                     | 7.31                             | 1977-85a                             | 11-27-84 | 4.36             | 400                             |
| 03430400                          | Mill Creek at Nolensville, TN                      | Lat 35°57'32", long 86°40'31", Williamson County, at bridge on Sunset Road, 0.6 mile northwest of Nolensville. Datum of gage is 586.18 ft National Geodetic Vertical Datum of 1929.                                      | 12.0                             | 1965-85                              | 11-27-84 | 5.35             | 1,710                           |
| 03431000                          | Mill Creek near Antioch, TN                        | Lat 36°04'54", long 86°40'50", Davidson County, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch. Datum of gage is 472.57 ft National Geodetic Vertical Datum of 1929.                                   | 64.0                             | 1954-61*, 1962-63, 1964-75*, 1976-85 | 11-27-84 | 11.31            | 3,670                           |
| 03431040                          | Sevenmile Creek at Blackman Road, at Nashville, TN | Lat 36°04'21", long 86°44'00", Davidson County, at bridge on Blackman Road, 7.0 miles southeast of State capitol in Nashville.   | 12.2                             | 1965-85                              | 1985     | <8.01            | -                               |

See footnotes at end of the table.

|                                   |   |  |                                  |                  | Annual Maximum |                  |                                 |
|-----------------------------------|---|--|----------------------------------|------------------|----------------|------------------|---------------------------------|
| Station No.                       | Station Name  | Location   | Drainage area (mi <sup>2</sup> ) | Period of record | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Cumberland River Basin--Continued |   |  |                                  |                  |                |                  |                                 |
| 03431060                          | Mill Creek at Thompson Lane, near Woodbine, TN                          | Lat 36°07'04", long 86°43'08", Davidson County, at bridge on Thompson Lane, 1.5 miles northeast of intersection of Thompson Lane and Nolensville Road (U.S. Highway 31-A, 41-A) in Woodbine. Datum of gage is 432.55 ft National Geodetic Vertical Datum of 1929.                      | 93.4                             | 1965-85          | 11-28-84       | 10.52            | 5,320                           |
| 03431062                          | Mill Creek tributary at Glenrose Avenue, at Woodbine, TN                | Lat 36°07'02", long 86°43'37", Davidson County, at culvert under Glenrose Avenue, 1.1 miles northeast of intersection of Nolensville Road and Thompson Lane in Woodbine, and 750 ft upstream from mouth.   | 1.17                             | 1977-85a         | 7-10-85        | 3.36             | 129                             |
| 03431120                          | West Fork Browns Creek at General Bates Drive, at Nashville, TN         | Lat 36°06'29", long 86°47'07", Davidson County, at bridge on General Bates Drive, 4.0 miles south of State capitol in Nashville. Datum of gage is 499.94 ft National Geodetic Vertical Datum of 1929.  | 3.30                             | 1965-85          | 11-27-84       | 2.93             | 150                             |
| 03431240                          | East Fork Browns Creek at Baird-Ward Printing Company, at Nashville, TN | Lat 36°06'33", long 86°46'00", Davidson County, at bridge on access road to Baird-Ward Printing Co., Plant No. 1, 500 ft west of 100-Oaks Shopping Center, and 4.0 miles southeast of State capitol in Nashville. Datum of gage is 497.91 ft National Geodetic Vertical Datum of 1929. | 1.58                             | 1965-85          | 11-27-84       | 1.83             | 57                              |
| 03431340                          | Browns Creek at Factory Street, at Nashville, TN                        | Lat 36°08'26", long 86°45'31", Davidson County, at bridge on Factory Street, 800 ft downstream from Louisville and Nashville Railroad bridge, and 2.3 miles southeast of State capitol in Nashville. Datum of gage is 418.92 ft National Geodetic Vertical Datum of 1929.              | 13.2                             | 1965-85          | (b)            | (b)              | -                               |
| 03431490                          | Pages Branch at Avondale, TN  | Lat 36°12'22", long 86°46'24", Davidson County, at culvert under Trinity Lane, 900 ft east of intersection of Interstate 65 and Trinity Lane at Avondale, 0.9 mile upstream from mouth.  | 2.01                             | 1977-85a         | 11-27-84       | 3.52             | 184                             |
| 03431520                          | Claylick Creek at Lickton, TN   | Lat 36°18'02", long 86°48'37", Davidson County, at bridge on Lickton Road in Lickton, 1,200 ft upstream from mouth.  | 4.13                             | 1965-85          | 11-28-84       | 4.35             | 480                             |
| 03431550                          | Earthman Fork at Whites Creek, TN                                       | Lat 36°15'55", long 86°49'51", Davidson County, at bridge on Whites Creek Pike in town of Whites Creek, 1,800 ft upstream from mouth.  | 6.29                             | 1965-85          | 11-28-84       | 5.53             | 702                             |
| 03431573                          | Ewing Creek at Richmond Hill Drive at Parkwood, TN                      | Lat 36°13'50", long 86°46'28", Davidson County, at bridge on Richmond Hill Drive, 1.0 mile southeast of parkwood.  | 2.17                             | 1976-85          | 1985           | <491.93          | -                               |
| 03431575                          | Ewing Creek at Brick Church Pike at Parkwood, TN                        | Lat 36°13'58", long 86°46'54", Davidson County, at bridge Brick Church Pike, 0.4 mile upstream from North Fork, 0.8 mile South of Parkwood.  | 3.02                             | 1976-85          | 1985           | <474.26          | -                               |

See footnotes at end of the table.

| Station No.                       | Station Name  | Location   | Drainage area (mi <sup>2</sup> ) | Period of record     | Annual Maximum |                  |                                 |
|-----------------------------------|---|--|----------------------------------|----------------------|----------------|------------------|---------------------------------|
|                                   |   |  |                                  |                      | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Cumberland River Basin--Continued |   |  |                                  |                      |                |                  |                                 |
| 03431578                          | Ewing Creek at Gwynwood Drive near Jordania, TN             | Lat 36°13'58", long 86°47'32"<br>Davidson County, at bridge on county road, 0.3 mile downstream from North Fork, 3.4 miles northeast of Bordeaux, 4.5 miles northeast of Jordonia, and at mile 2.1.  | 9.98                             | 1976-85              | 2-11-85        | 458.23           | -                               |
| 03431581                          | Ewing Creek below Knight Road, near Bordeaux, TN            | Lat 36°13'55", long 86°48'14",<br>Davidson County, at downstream side of bridge on Knight Road, 3.0 miles northeast of Bordeaux. Datum of gage is National Geodetic Vertical Datum of 1929.  | 13.3                             | 1976-85              | 2-11-85        | 445.68           | -                               |
| 03431677                          | Sugartree Creek at YMCA Access Road, at Green Hills, TN     | Lat 36°06'13", long 86°49'12",<br>Davidson County, at bridge on YMCA Access Road, .5 mile southwest of Hillsboro High School, at Green Hills.  | 1.51                             | 1976-85              | 6-25-85        | 543.14           | -                               |
| 03431679                          | Sugartree Creek at Abbott Martin Road, at Green Hill, TN    | Lat 36°06'23", long 86°49'17",<br>Davidson County, at bridge on Abbott Martin Road, at intersection of Bedford Avenue and Abbott Martin Road, at Green Hills.  | 2.19                             | 1976-85              | 6-25-85        | 529.78           | -                               |
| *03432925                         | Little Harpeth River at Granny White Pike, at Brentwood, TN | Lat 36°01'30", long 86°49'09",<br>Williamson County, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood. Datum of gage is 618.29 ft National Geodetic Vertical Datum of 1929.  | 22.0                             | 1978-85              | 11-27-84       | 7.59             | 847                             |
| 03434590                          | Jones Creek near Burns, TN                                  | Lat 36°06'15", long 87°19'05"<br>Dickson County, at bridge on Rock Church road, 3.5 miles north of Burns and at mile 21.9.   | 13.3                             | 1984-85              | 1985           | <4.49            | <640                            |
| 03434616                          | Hall Branch near Charlotte, TN                              | Lat 36°11'48", long 87°20'30"<br>Dickson County, at Culvert under State Highway 48, 1.4 miles north of Charlotte and at mile 2.6.  | 0.50                             | 1984-85              | 1985           | <7.69            | -                               |
| 034350021                         | Bartons Creek near Cumberland Furnance, TN                  | Lat 36°15'02", long 87°20'00"<br>Dickson County, at bridge on Slayton road, 1.9 miles southeast of Cumberland Furnance.  | 22.29                            | 1984-85              | 1985           | <10.23           | -                               |
| 0343500213                        | Bartons Creek Tributary near Stayton, TN                    | Lat 36°15'19", long 87°19'12"<br>Dickson County, at Culvert under Jackson Lane road, 1.5 miles southeast of Stayton 2.5 miles southeast of Cumberland Furnance.  | 0.51                             | 1984-85              | 4-27-85        | 10.76            | -                               |
| 03435030                          | Red River near Portland, TN                                 | Lat 36°33'24", long 86°34'14",<br>Sumner County, at county road bridge, 1.5 miles upstream from Austin Branch, 3.5 miles southwest of Portland and at mile 93.0.   | 15.1                             | 1966-75*,<br>1976-85 | 11-28-84       | 7.25             | 915                             |
| 03436505                          | Cummings Creek nr Dotsonville, TN                           | Lat 36°29'18", long 87°28'06"<br>Montgomery County, at bridge on Dotsonville road, 1.1 miles northeast of Dotsonville.   | 2.65                             | 1984-85              | 4-27-85        | 6.65             | -                               |
| 03436700                          | Yellow Creek near Shiloh, TN                                | Lat 36°20'55", long 87°32'20",<br>Montgomery County, at bridge on State Highway 13, 2.6 miles west of Shiloh, 3.0 miles downstream from Leatherwood Creek, 9.0 miles east of Erin. Datum of gage is 390.13 ft. National Geodetic Vertical Datum of 1929. | 124                              | 1957-80*,<br>1982-85 | 1985           | <9.12            | <2,590                          |

See footnotes at end of the table.



| Station No.           | Station Name                             | Location  | Drainage area (mi <sup>2</sup> ) | Period of record  | Annual Maximum |                  |                                 |
|-----------------------|--|---|----------------------------------|-------------------|----------------|------------------|---------------------------------|
|                       |  |   |                                  |                   | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Tennessee River Basin |  |   |                                  |                   |                |                  |                                 |
| 03461230              | Caney Creek near Cosby, TN               | Lat 35°47'03", long 83°12'11", Cocke County, at culvert under State Highway 32, 3.3 miles southeast of Cosby.   | 1.62                             | 1967-85           | 2- 1-85        | 4.07             | 82                              |
| 03465607              | Cherokee Creek near Embreeville, TN      | Lat 36°12'24", long 82°29'23", Washington County, at culvert on county road, 0.5 mile southeast of Mayday, 1.4 miles northwest of Kansas City and at mile 1.3.                              | 22.9                             | 1984-85           | 7-25-85        | 13.22            | -                               |
| *03465780             | Clear Fork near Fairview, TN             | Lat 36°19'33", long 82°33'47", Washington County, at Culvert on State Highway 81, 2.0 miles southwest of Sulfur Springs, and at mile 3.8.   | 10.5                             | 1983-85           | 2- 1-85        | 4.08             | -                               |
| *03466295             | Camp Creek at Camp Creek, TN             | Lat 36°05'39", long 82°45'37", Greene County, at bridge on County road at Camp Creek, 6.2 miles northeast of Nolichucky Dam.  | 9.99                             | 1983-85           | 6-12-85        | 6.57             | -                               |
| 03466865              | Roaring Fork North of Greeneville, TN    | Lat 36°12'45", long 82°50'15", Greene County, at bridge on county road, 2.3 miles northwest of Bradburn Hill and at mile 7.3.   | 16.1                             | 1983-85           | 2- 1-85        | 7.12             | -                               |
| 03466890              | Lick Creek near Albany, TN               | Lat 36° 14'54", long 82°55'34", Greene County, at State Highway 70 bridge, 0.3 mile downstream from Puncheon Camp Creek, 1 mile northwest of Albany, and at mile 33.7.                      | 172                              | 1984-85           | 2- 1-85        | 10.39            | -                               |
| 03469110              | Ramsey Creek near Pittman Center, TN     | Lat 35°45'33", long 83°20'49", Sevier County, at culvert under State Highway 73, 1.5 miles southeast of Pittman Center.   | 2.18                             | 1967-85           | 2- 1-85        | 4.92             | 111                             |
| *03476960             | Indian Creek at Childress, TN            | Lat 36°25'38", long 82°15'54", Sullivan County, at bridge on U.S. Highway 19, 3.3 miles South of Bluff City and at mile 4.6.  | 6.79                             | 1983-85           | 2- 1-85        | 9.18             | -                               |
| *03478615             | Evans Creek near Blountville, TN         | Lat 36°31'19", long 82°18'12", Sullivan County, at State Highway 37 bridge, 1.5 miles southeast of Blountville.   | 2.50                             | 1983-85           | 2- 1-85        | 11.24            | -                               |
| 03481600              | Corn Creek at Mountain City, TN          | Lat 36°29'23", long 81°48'52", Johnson County, at bridge on county road, 600 ft north of junction of county road and U.S. Highway 421, 1 mile northwest of Mountain City.                   | 5.34                             | 1959-61, 1963-85  | 1985           | <2.14            | <47                             |
| 03482000              | Roan Creek near Neva, TN                 | Lat 36°22'37", long 81°53'14", Johnson County, on right bank on Butler-Neva road, 1.7 miles southwest of Neva. Datum of gage is 2,103.11 ft above National Geodetic Vertical Datum of 1929. | 102                              | 1943-55*, 1959-85 | 2- 1-85        | 4.16             | 1,070                           |
| 03487507              | Horse Creek at Sullivan Gardens, TN      | Lat 36°28'13", long 82°35'52", Sullivan County, at bridge on Country road, 2.5 miles southwest of Vernon Heights and at mile 7.3.   | 26.0                             | 1983-85           | 2- 1-85        | 13.14            | -                               |
| 03491200              | Big Creek tributary near Rogersville, TN | Lat 36°25'30", long 82°57'17", Hawkins County, at culvert under county road, 300 ft upstream from mouth, 2.8 miles northeast of Rogersville.  | 2.00                             | 1955-85           | 2- 1-85        | 3.30             | 62                              |

See footnotes at end of the table.

| Station No.                      | Station Name                                 | Location  | Drainage area (mi <sup>2</sup> ) | Period of record  | Annual Maximum |                  |                                 |
|----------------------------------|--|---|----------------------------------|-------------------|----------------|------------------|---------------------------------|
|                                  |  |   |                                  |                   | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Tennessee River Basin--Continued |  |   |                                  |                   |                |                  |                                 |
| 03491490                         | Dodson Creek Trib-utary near Rogersville, TN | Lat 36°21'19", long 82°57'03", Hawkins County, at bridge on County road, 1.4 miles northwest of Enterprise and at mile 0.5.   | 0.32                             | 1983-85           | 6-12-85        | 3.97             | -                               |
| 03498700                         | Nails Creek near Knoxville, TN               | Lat 35°52'49", long 83°46'47", Sevier County, at culvert under State Highway 71, 0.8 mile southeast of Shooks Gap, 10.5 miles southeast of Knoxville.   | 0.36                             | 1955-85           | 2- 1-85        | 2.48             | 34                              |
| 03519610                         | Baker Creek Trib-utary near Binfield, TN     | Lat 35°41'56", long 84°02'46", Blount County, at culvert under county road, 1.5 miles east of Binfield.   | 2.10                             | 1966-77, 1979-85  | 2- 1-85        | 3.50             | 54                              |
| 03519640                         | Baker Creek near Greenback, TN               | Lat 35°40'21", long 86°46'28", Blount County, at county road Bridge, 1.0 mile upstream from Little Baker Creek, 3.4 miles east of Greenback, and at mile 15.0. Datum of gage is 845.01 ft above National Geodetic Vertical Datum of 1929. | 16.0                             | 1965-75*, 1976-85 | 2- 1-85        | 6.65             | 458                             |
| 03534000                         | Coal Creek at Lake City, TNC                 | Lat 36°13'14", long 84°09'27" Anderson County, at bridge on U.S. Highway 25-W, at Lake City. Datum of Gage is 842.91 ft above National Geodetic Vertical Datum of 1929.   | 24.5                             | 1932-34*, 1955-85 | 8-26-85        | 5.68             | 3,060                           |
| 03535180                         | Willow Fork near Halls Crossroads, TN        | Lat 36°05'59", long 83°54'27", Knox County, at culvert under Quarry Road, 1.7 miles northeast of Halls Crossroads. Datum of gage is 1,027.82 ft above National Geodetic Vertical Datum of 1929.   | 3.23                             | 1967-85           | 8-25-85        | 6.58             | 353                             |
| 03538130                         | Caney Creek near Kingston, TN                | Lat 35°51'53", long 84°23'07", Roane County, 1.5 miles up-stream from mouth, 2.4 miles northeast of intersection of U.S. Highway 70 and Buttermilk Road, 7.5 miles east of Kingston.  | 5.55                             | 1962-85           | 8-18-85        | 7.23             | 1,450                           |
| 03538200                         | Poplar Creek near Oliver Springs, TN         | Lat 36°01'20", long 84°18'37", Anderson County, at bridge on State Highway 61, 0.9 mile downstream from Brushy Fork, 2.5 miles southeast of Oliver Springs, 4 miles upstream from Indian Creek.   | 55.9                             | 1954-85           | 8-18-85        | 12.84            | 2,410                           |
| 03538600                         | Obed River at Crossville, TN                 | Lat 35°57'27", long 85°03'00", Cumberland County, at bridge on former U.S. Highway 70-S, 0.5 mile southwest of junction of U.S. Highways 70-S and 70-N, 1.5 miles northwest of Crossville.  | 12.0                             | 1955-85           | 11-19-84       | 5.24             | 410                             |
| 03538900                         | Self Creek near Big Lick, TN                 | Lat 35°47'54", long 85°02'33", Cumberland County, at culvert under county road, 1.3 miles southwest of Big Lick.  | 3.80                             | 1968-85           | 1985           | <2.92            | <64                             |
| 03541100                         | Bitter Creek near Camp Austin, TN            | Lat 36°00'53", long 84°31'33", Morgan County, at culvert under U.S. Highway 27, 3.0 miles southeast of Camp Austin.   | 5.53                             | 1967-85           | 8-26-85        | 4.66             | 351                             |
| 03555900                         | Coker Creek near Ironsburg, TN               | Lat 35°13'05", long 84°20'28", Monroe County, at bridge on State Highway 68, 4.2 miles southwest of Coker Creek.  | 22.4                             | 1983-85           | 2- 1-85        | 3.18             | -                               |
| *03566200                        | Brymer Creek near McDonald, TN               | Lat 35°07'20", long 84°57'00", Bradley County, at bridge on U.S. Highways 11 and 64, 1.9 miles east of McDonald.  | 9.68                             | 1955-85           | 2- 1-85        | 4.33             | 355                             |

See footnotes at end of the table.

| Station No.                      | Station Name  | Location   | Drainage area (mi <sup>2</sup> ) | Period of record  | Annual Maximum      |                  |                                 |
|----------------------------------|---|--|----------------------------------|---|---------------------|------------------|---------------------------------|
|                                  |   |  |                                  |   | Date                | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Tennessee River Basin--Continued |   |  |                                  |   |                     |                  |                                 |
| 03566599                         | North Chickamauga Creek at Greens Mill, near Hixson, TN | Lat 35°10'30", long 85°13'40", Hamilton County, at bridge on Boy Scout Road, 2.3 miles north of Hixson.  | 99.5                             | 1925,1944<br>1953-56,<br>1980-85                                  | 2- 1-85             | 27.10            | -                               |
| 03569168                         | Stringers Branch at Leawood Drive, at Red Bank, TN      | Lat 35°07'00", long 85°17'28", Hamilton County, at bridge on Leawood Drive at Red Bank.  | 1.54                             | 1980-85   | 8-24-85             | 21.81            | -                               |
| 03570800                         | Little Brush Creek near Dunlap, TN                      | Lat 35°24'15", long 85°23'18", Sequatchie County, at bridge on former State Highway 8, 1.5 miles north of Dunlap.  | 15.4                             | 1959-85   | 2- 1-85             | 6.31             | 1,520                           |
| 03571500                         | Little Sequatchie River at Sequatchie, TN               | Lat 35°07'47", long 85°35'10", Marion County, at Highway 27 bridge, 1.0 mile northeast of Sequatchie.  | 116                              | 1925,1929,<br>1930,<br>1932-34*,<br>1944,1951-54,<br>1965,1979-85 | 1985                | <7.76            | -                               |
| 03571730                         | Standifer Branch at Jasper, TN                          | Lat 35°04'22", long 85°36'56", Marion County, at bridge on U.S. Highways 41, 64, and 72, 0.6 mile east of courthouse, 0.8 mile above Town Creek, at Jasper.  | 15.3                             | 1982-85   | 1985                | <13.53           | -                               |
| 03571800                         | Battle Creek near Monteagle, TN                         | Lat 35°08'03", long 85°46'15", Marion County, at bridge on former U.S. Highways 41 and 64, 9.2 miles southeast of Monteagle. Datum of gage is 621.51 ft National Geodetic Vertical Datum of 1929.            | 50.4                             | 1955-85   | 1985                | <7.00            | <2,660                          |
| 03581500                         | West Fork Mulberry Creek at Mulberry, TN                | Lat 35°12'34", long 86°27'46", Lincoln County, at old bridge 1,000 ft downstream from State Highway 50, 0.2 mile southwest of Mulberry. Datum of gage is 687.72 ft National Geodetic Vertical Datum of 1929. | 41.2                             | 1954-62*,<br>1963-66,<br>1967-68*,<br>1969-85                     | 11-28-84            | 11.63            | 4,670                           |
| 03583200                         | Chicken Creek at McBurg, TN                             | Lat 35°11'03", long 86°48'47", Lincoln County, at bridge on county highway R7374 in McBurg.  | 7.66                             | 1955-85   | 11-28-84            | 3.81             | 796                             |
| 03583300                         | Richland Creek near Cornersville, TN                    | Lat 35°19'10", long 86°52'20", Marshall County, at bridge on U.S. Highway 31-A, 3.4 miles southwest of Cornersville. Datum of gage is 754.28 ft National Geodetic Vertical Datum of 1929.                    | 47.5                             | 1962-68*,<br>1969-85  | 11-28-84            | 11.44            | 3,340                           |
| 035944242                        | Owl creek at Lexington, TN                              | Lat 35°38'26", long 88°22'13", Henderson County, on State Highway 20, 1.37 miles east of Lexington.  | 2.50                             | 1984-85   | 10-16-84<br>4-24-85 | 12.61            | -                               |
| 03597000                         | Garrison Fork at Fairfield, TN                          | Lat 35°33'59", long 86°17'00", Bedford County, at bridge on county road, 0.1 mile east of Fairfield. Datum of gage is 800.25 ft National Geodetic Vertical Datum of 1929.                                    | 66.3                             | 1954-58*,<br>1959-66,<br>1967-68*,<br>1970-85                     | 11-28-84            | 13.82            | 4,720                           |
| 03597300                         | Wartrace Creek above Bell Buckle, TN                    | Lat 35°37'45", long 86°21'22", Bedford County, at culvert under county road, 2.7 miles north of Bell Buckle.   | 4.99                             | 1966-85   | 11-28-84            | 6.48             | 824                             |
| 03599200                         | East Rock Creek at Farmington, TN                       | Lat 35°30'05", long 86°42'50", Marshall County, at culvert, on old State Highway 64, 0.2 mile west of Farmington.  | 43.1                             | 1954-85   | 11-28-84            | 10.41            | 3,620                           |
| 03602170                         | West Piney River at Hwy 70 near Dickson, TN             | Lat 36°05'21", long 87°28'12", Dickson County, at U.S. Highway 70 bridge, 4.0 miles west of Dickson.   | 2.16                             | 1984-85   | 1985                | <22.83           | <192                            |

See footnotes at end of the table.

| Station No.                      | Station Name                                     | Location   | Drainage area (mi <sup>2</sup> ) | Period of record      | Annual Maximum |                  |                                 |
|----------------------------------|--|--|----------------------------------|-----------------------|----------------|------------------|---------------------------------|
|                                  |  |  |                                  |                       | Date           | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| Tennessee River Basin--Continued |  |  |                                  |                       |                |                  |                                 |
| 03604070                         | Coon Creek tributary near Hohenwald, TN          | Lat 35°34'07", long 87°40'02", Perry County, at culvert under State Highway 20, 7 miles northwest of Hohenwald.  | 0.51                             | 1967-85               | 5- 7-85        | 4.67             | 140                             |
| 03604080                         | Hugh Hollow Branch near Hohenwald, TN            | Lat 35°34'59", long 87°40'36", Perry County, at culvert under State Highway 20, 8 miles northwest of Hohenwald.  | 1.52                             | 1967-85               | 5- 7-85        | 3.35             | 250                             |
| 03604090                         | Coon Creek above Chop Hollow, near Hohenwald, TN | Lat 35°35'19", long 87°41'09", Perry County, at bridge on State Highway 20, 9 miles northwest of Hohenwald.  | 6.02                             | 1967-85               | 5- 7-85        | 3.29             | 178                             |
| 03604590                         | Blue Creek near New Hope, TN                     | Lat 36°03'52", long 87°38'58", Humphreys County, at County road bridge, 1.8 miles northwest of New Hope, 3.1 miles southeast of McEwen and at mile 3.9.  | 13.2                             | 1984-85               | 1985           | <16.04           | -                               |
| 03604595                         | Little Blue Creek tributary near Gorman, TN      | Lat 36°19'44", long 87°42'13", Humpherys County, at Culvert under county road, 1.8 miles south of Gorman, 44 miles southwest of McEwen and at mile 0.3   | 0.62                             | 1984-85               | 1985           | <18.67           | -                               |
| 03605880                         | Cane Creek at Stewart, TN                        | Lat 36°19'09", long 87°50'21", Houston County, at bridge on County road, 200 ft north of inter-section of County road and state highway 147 at mile 7.0. | 4.12                             | 1984-85               | 5-22-85        | 17.14            | -                               |
| 07024225                         | Neil Ditch near Henry, TN                        | Lat 36°10'19", long 88°23'33", Henry County, located on county road 2.68 miles southeast of Henry and 1.58 miles north of Henry-Carroll county line.     | 4.07                             | 1984-85               | 5- 8-85        | 11.03            | -                               |
| 07024370                         | Little Reedy Creek near Huntingdon, TN           | Lat 35°55'44", long 88°29'50" Carroll County, located on U.S. Highway 70, 0.62 mile southwest of Leach and 5.58 miles northeast of Cedar Grove.          | 0.91                             | 1984-85               | -              | -                | -                               |
| 07028600                         | Cain Creek tributary near Trenton, TN            | Lat 35°56'17", long 88°56'27", Gibson County, at culvert under U.S. Highway 45-W, 2.9 miles south of square in Trenton.                                  | 0.95                             | 1955-57, 1959-85      | 9-26-85        | 7.17             | 547                             |
| 07028700                         | Cain Creek near Trenton, TN                      | Lat 35°57'56", long 88°57'14", Gibson County, at bridge on U.S. Highway 54, 1.6 miles southwest of Trenton.  | 14.4                             | 1954-85               | 9-26-85        | 8.80             | 345                             |
| 07029090                         | Lewis Creek near Dyersburg, TN                   | Lat 36°03'14", long 89°21'42", Dyer County, at bridge on U.S. Highway 51, 2.1 miles northeast of square in Dyersburg.                                    | 25.5                             | 1955-78, 1980-83 1985 | 10- 6-84       | 18.56            | 3,560                           |

\* Also a low-flow partial-record station.

\* Operated as a continuous-record gaging station.

a Operated as a flood hydrograph station.

b Unknown; gage out of operation for about six months due to bridge construction.

c Published as at Coal Creek prior to 1935.



## Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1985

| Station No.            | Station name   | Location   | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record          | Measurements  |                                   |
|------------------------|--|--|--|---------------------------------|---|-----------------------------------|
|                        |  |  |  |                                 | Date  | Discharge<br>(ft <sup>3</sup> /s) |
| MOBILE RIVER BASIN     |  |  |  |                                 |   |                                   |
| *02384900              | Coahulla Creek near<br>Cleveland, TN                   | Lat 35°07'00", long 84°50'18",<br>Bradley County, at bridge on<br>State Highway 74, 2.5 miles<br>southeast of intersection of<br>State Highways 60 and 74 in<br>Cleveland.                         | 4.35                                   | 1975-81,<br>1983-85             | 6- 3-85<br>7- 9-85<br>8-21-85                       | .55<br>1.5<br>.72                 |
| GREEN RIVER BASIN      |  |  |  |                                 |   |                                   |
| 03312287               | Long Fork Creek<br>near Galen, TN                      | Lat 36°34'37", long 85°56'23",<br>Macon County, at secondary road,<br>1.4 miles east of Galen.   | 22.0                                   | 1980-81,<br>1983-85             | 5-28-85<br>7- 9-85                                  | 10<br>4.5                         |
| 03312295               | White Oak Creek<br>at White Oak, TN                    | Lat 36°35'35", long 85°58'40",<br>Macon County, at secondary road,<br>0.8 mile east of White Oak.  | 20.6                                   | 1980-81,<br>1983-85             | 5-28-85<br>6-23-85<br>7- 9-85                       | 13<br>11<br>8.8                   |
| 03312413               | Puncheon Creek near<br>Green Valley, TN                | Lat 36°35'42", long 86°01'15",<br>Macon County, at ford below<br>Spring Creek and Lick Branch,<br>1.1 miles northeast of Spring<br>Creek Church.   | 9.3                                    | 1980-81,<br>1983-85             | 5-28-85<br>7- 8-85                                  | 6.0<br>1.7                        |
| 03312457               | Long Creek at<br>Long Creek, TN                        | Lat 36°33'48", long 86°05'30",<br>Macon County, at secondary road<br>just below Johns Creek, 0.5<br>mile north of Long Creek.  | 15.5                                   | 1980-81,<br>1983-85             | 5-28-85<br>6-23-85                                  | 4.5<br>3.5                        |
| 03313640               | West Fork Drakes<br>Creek below<br>Portland, TN        | Lat 36°36'31", long 86°28'31",<br>Sumner County, at county road<br>bridge, 0.7 mile northeast of<br>Portland water treatment plant,<br>2.6 miles northeast of Portland.                            | 57.5                                   | 1983-85                         | 8- 9-85   | 4.6                               |
| CUMBERLAND RIVER BASIN |  |  |  |                                 |   |                                   |
| 03415960               | Wolf River at Wolf<br>River, TN                        | Lat 36°32'14", long 84°57'09",<br>Pentress County, at county road<br>bridge, 200 ft east of junction<br>with State Highway 28 - U.S.<br>Highway 127, 0.4 mile south of<br>Pall Mall Post Office.   | 41.0                                   | 1979-81,<br>1983-85             | 10- 4-84<br>5-30-85<br>7-10-85                      | 3.7<br>16<br>6.8                  |
| 03415975               | Rotten Fork Wolf<br>River near Pall<br>Mall, TN        | Lat 36°32'20", long 84°56'56",<br>Pentress County, 0.25 mile above<br>Wolf River, at John W. Painter<br>Memorial Bridge, 1.3 miles south-<br>east of Pall Mall.                                    | 21.6                                   | 1979-81,<br>1983-85             | 10- 4-84<br>5-30-85<br>7-10-85                      | .67<br>5.2<br>1.3                 |
| 03418180               | Blackburn Fork near<br>Dodson Branch, TN               | Lat 36°20'53", long 85°34'00",<br>Jackson County, at bridge on<br>State Highway 135, 3.1 miles<br>northwest of Dodson Branch, and<br>at mile 0.24.   | 61.0                                   | 1974-76,<br>1978-81,<br>1983-85 | 10- 3-84<br>5-29-85<br>7- 9-85                      | 12<br>19<br>14                    |
| 03418935               | Beaverdam Creek at<br>Latana Road<br>near Bellview, TN | Lat 35°44'07", long 85°11'43",<br>Bledsoe County, Hydrologic<br>Unit 05130108, 1.2 miles<br>southwest of Bellview, 2.8<br>miles southwest of Winesap,<br>3.1 miles southeast of<br>Herbert Domain. | 17.0                                   | 1979-81,<br>1983-85             | 3-12-85<br>6- 4-85<br>6-22-85<br>7-11-85<br>9- 3-85 | 17<br>12<br>7.4<br>.77<br>4.3     |
| 03418950               | Bee Creek near<br>Herbert Domain, TN                   | Lat 35°46'24", long 85°13'58",<br>Cumberland County, at Old Rocky<br>Ford, on county road, 100 feet<br>below Little Cane Creek, 1.1<br>miles northeast of Herbert<br>Domain.                       | 59.6                                   | 1985                            | 6-22-85<br>7-11-85<br>9- 3-85                       | 36<br>7.1<br>18                   |

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                       | Station name  | Location  | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record                     | Measurements  |  |
|-----------------------------------|---|---|--|--|---|--|
|                                   |   |   |  |  | Date  | Discharge<br>(ft <sup>3</sup> /s)            |
| CUMBERLAND RIVER BASIN--Continued |   |   |  |  |   |  |
| 03418995                          | Glade Creek near<br>Lonewood, TN                                    | Lat 35°45'35", long 85°15'57",<br>Bledsoe County line, Hydro-<br>logic Unit 05130108, 1.2 miles<br>above confluence of Bee Creek,<br>1.7 miles west of Herbert Domain,<br>and 2.3 miles east of Lonewood. | 39.1                                   | 1979-81,<br>1983-85                        | 3-12-85<br>7-11-85  | 32<br>3.8                                    |
| 03419270                          | Calfkiller River<br>near Taylors, TN                                | Lat 36°01'53", long 85°20'10",<br>White County, at bridge on<br>State Highway 84, 1.9 miles<br>northeast of Taylors, and at<br>mile 34.7.   | 37.7                                   | 1975-76,<br>1978-81,<br>1983-85            | 3-12-85<br>5-29-85<br>7-11-85   | 169<br>22<br>8.6                             |
| 03420116                          | Rocky River at Rocky<br>River Road at<br>Riverview, TN              | Lat 35°42'04", long 85°34'40",<br>Van Buren County, on Rocky River<br>Road 3.0 miles south of Rocky<br>River Road-State Highway 30<br>intersection.   | 72.0                                   | 1979-81,<br>1983-85                        | 6- 4-85<br>7-11-85<br>9- 3-85   | 13<br>21<br>18                               |
| 03420230                          | Scott Creek at<br>Irving College, TN                                | Lat 35°34'17", long 85°42'42",<br>Warren County, Hydrologic<br>Unit 05130107, at State High-<br>way 56 bridge, 1.0 mile south of<br>Irving College, and 0.6 mile<br>above mouth.                          | 34.1                                   | 1979-81,<br>1983-85                        | 10-16-84<br>6- 4-85   | 3.8<br>5.7                                   |
| 03420440                          | South Prong Barren<br>Fork Near Trousdale,<br>TN                    | Lat 35°40'41", long 85°57'06",<br>Warren County, at county road<br>bridge, 3.8 miles southwest of<br>Centertown, 0.9 mile northwest of<br>Trousdale.  | 65.3                                   | 1983-85                                    | 10-16-84<br>6- 3-85<br>7-25-85  | 11<br>15<br>11                               |
| 03420470                          | North Prong Barren<br>Fork at Oak Grove,<br>TN                      | Lat 35°42'40", long 85°57'25",<br>Warren County, at county road<br>bridge, 2.3 miles southwest of<br>Centertown, 0.9 mile northeast of<br>Oak Grove and at mile 2.9                                       | 29.8                                   | 1983-85                                    | 10-16-84<br>6- 3-85<br>7-25-85<br>8-20-85<br>9- 4-85                      | 14<br>13<br>12<br>17<br>15                   |
| 03420720                          | Hickory Creek near<br>Viola, TN                                     | Lat 35°34'32", long 85°51'02",<br>Warren County, at State Highway<br>108 bridge, 2.9 miles north of<br>Viola.   | 58.2                                   | 1954,<br>1979-81,<br>1983-85               | 10-17-84<br>6- 4-85<br>7-26-85<br>9- 4-85                                 | 13<br>6.7<br>11<br>11                        |
| 03421150                          | Charles Creek at<br>Daylight, TN                                    | Lat 35°44'32", long 85°51'12",<br>Warren County, at county road<br>bridge, 2.5 miles north of Bethany,<br>0.3 mile southeast of Daylight.   | 13.8                                   | 1983-85                                    | 10-16-84<br>6- 5-85<br>7-25-85<br>8-20-85<br>9- 4-85                      | 5.1<br>2.5<br>2.3<br>5.2<br>2.8              |
| 03421390                          | Mountain Creek at<br>Dibrell, TN                                    | Lat 35°47'53", long 85°45'58",<br>Warren County, 75 ft below county<br>bridge, 1.8 miles east-southeast<br>of Dibrell.  | 42.7                                   | 1962-63<br>1966, 1968,<br>1972,<br>1983-85 | 10-16-84<br>6- 4-85<br>7-26-85  | 12<br>16<br>15                               |
| 03424825                          | Brush Creek at<br>Brush Creek, TN                                   | Lat 36°07'03", long 86°01'20",<br>Smith County, at State Highway<br>53 bridge, 0.3 mile east of<br>Brush Creek.   |  | 1983-85                                    | 10- 3-84<br>5-31-85<br>7- 8-85  | <.01<br>.29<br>.26                           |
| 03425275                          | Goose Creek at<br>Hillsdale, TN                                     | Lat 36°26'46", long 86°03'50",<br>Macon County, at secondary<br>road in Hillsdale.  | 27.4                                   | 1980-81,<br>1983-85                        | 5-28-85<br>6-23-85<br>7- 8-85   | 10<br>7.9<br>3.8                             |
| 03431570                          | Whites Creek near<br>Jordonia, TN                                   | Lat 36°13'34", long 86°49'21",<br>Davidson County, at bridge on<br>county road, 0.2 mile upstream<br>from Ewing Creek, 2.7 miles<br>Northeast of Jordonia, and at<br>mile 6.3.                            | 35.9                                   | 1974-76,<br>1978-81,<br>1983-85            | 10- 5-84  | 2.8  |
| *03432925                         | Little Harpeth River<br>at Granny White<br>Pike at Brentwood,<br>TN | Lat 36°01'30", long 86°49'09",<br>Williamson County, at bridge on<br>Granny White Pike, 2.0 miles<br>southwest of Brentwood, and at<br>mile 1.1.  | 22.0                                   | 1978-85                                    | 3-20-85<br>6-10-85<br>7-15-85<br>8- 9-85<br>8-19-85<br>9- 3-85<br>9-18-85 | 14<br>2.3<br>.49<br>1.3<br>9.3<br>1.6<br>.59 |

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                       | Station name  | Location   | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record               | Measurements   |                                   |
|-----------------------------------|---|--|--|--------------------------------------|--|-----------------------------------|
|                                   |   |  |  |                                      | Date   | Discharge<br>(ft <sup>3</sup> /s) |
| CUMBERLAND RIVER BASIN--Continued |   |  |  |                                      |  |                                   |
| 03433660                          | South Harpeth River<br>at Fernvale, TN                    | Lat 35°57'15", long 87°04'43",<br>Williamson County, at new county<br>road bridge, at Fernvale, 3.1<br>miles southeast of Fairview, and<br>at mile 14.0.   | 27.6                                   | 1974-75,<br>1978-85                  | 3-20-85<br>7-12-85<br>9- 3-85                        | 29<br>13<br>14                    |
| 03433902                          | Big Turnbull Creek<br>near Liberty<br>Hill, TN            | Lat 35°57'59", long 87°11'56",<br>Williamson County, at county<br>road bridge, 1.5 miles southeast<br>of Liberty Hill.   | 11.3                                   | 1981,<br>1983-85                     | 3-20-85<br>7-15-85<br>9- 3-85                        | 12<br>3.9<br>3.8                  |
| 03434560                          | Trace Creek near<br>White Bluff, TN                       | Lat 36°07'06", long 87°11'49",<br>Dickson County, at county road<br>bridge, 1.5 miles northeast of<br>White Bluff, and at mile 3.5   | 1.99                                   | 1974-75,<br>1978-85                  | 10- 2-84<br>5-29-85<br>7-16-85                       | 1.4<br>2.1<br>1.7                 |
| 03434620                          | Town Branch near<br>Charlotte, TN                         | Lat 36°10'44", long 87°18'15",<br>Dickson County, at bridge on<br>Old Ashland City road, 2.0 miles<br>east of Charlotte, and at mile<br>1.5.   | 8.33                                   | 1974-76,<br>1978-85                  | 10- 2-84<br>3-15-85<br>5-29-85<br>7-19-85<br>9- 5-85 | .26<br>5.5<br>3.8<br>.36<br>.33   |
| 034350028                         | Bartons Creek above<br>Louise Creek near<br>Southside, TN | Lat 36°21'17", long 87°16'48",<br>Montgomery County, just above<br>Louise Creek, 20 ft above County<br>road bridge, 1.7 miles southeast<br>of Southside.   | 96.4                                   | 1962-64,<br>1983-85                  | 10- 3-84<br>7-18-85                                  | 8.8<br>13                         |
| *034351113                        | Honey Run Creek below<br>Cross Plains, TN                 | Lat 36°32'31", long 86°42'14",<br>Robertson County, at Empson bridge<br>on county road 0.4 miles above<br>mouth of Empson branch, 0.6 miles<br>southwest of Cross Plains.                            | 25.8                                   | 1985                                 | 4-18-85<br>8- 9-85<br>8-14-85<br>9-12-85             | 12<br>2.2<br>1.1<br>4.0           |
| 03435320                          | Red River at<br>Adams, TN                                 | Lat 36°35'37", long 87°03'33",<br>Robertson County, at bridge<br>on Keysburg road, 0.9 mile<br>north of Adams.   | 594                                    | 1937,<br>1983-85                     | 7-25-85  | 105                               |
| 03436460                          | Little West Fork Red<br>River near New<br>Providence, TN  | Lat 36°35'31", long 87°23'23",<br>Montgomery County, at bridge<br>on Peachers Mill Road, 3.0 miles<br>north of New Providence.   | 179.0                                  | 1964,<br>1974,<br>1978-85            | 10- 1-84<br>7-19-85                                  | 22<br>35                          |
| TENNESSEE RIVER BASIN             |   |  |  |                                      |  |                                   |
| 03454850                          | Long Creek near<br>Del Rio, TN                            | Lat 35°56'53", long 83°03'12",<br>Cocke County, at bridge on U.S.<br>Highways 25 and 70, 2.5 miles<br>northwest of Del Rio, and at<br>mile 0.1.  | 11.7                                   | 1953-54<br>1975-81,<br>1983-85       | 3-10-85  | 5.6                               |
| 034611996                         | Crying Creek<br>above Cosby, TN                           | Lat 35°46'54", long 83°13'01",<br>Cocke County, at culvert on road<br>to Cosby Creek Campground in<br>Great Smoky Mountain National<br>Park, 2.4 miles Southeast of<br>Cosby and 150 ft above mouth. | 2.94                                   | 1983-85                              | 3-19-85<br>7-17-85<br>9-26-85                        | 4.3<br>1.0<br>1.3                 |
| 03461266                          | Greenbrier Creek<br>at Cosby, TN                          | Lat 35°48'12", long 83°14'52",<br>Cocke County, near mouth at<br>bridge on State Highway 32,<br>0.9 mile northwest of inter-<br>section of State Highway 73<br>and 32, 0.9 mile south of Cosby.      | 4.96                                   | 1978-81<br>1983-85                   | 3-19-85<br>7-17-85                                   | 6.8<br>2.4                        |
| 03461450                          | English Creek<br>near Newport, TN                         | Lat 35°54'47", long 83°12'42",<br>Cocke County, at bridge on<br>State Highway 32, 0.9 mile<br>downstream from Laurel Branch,<br>3.7 miles southwest of Newport<br>and at mile 3.5                    | 9.74                                   | 1983-85                              | 3-19-85<br>7-17-85<br>9-26-85                        | 6.7<br>2.0<br>1.6                 |
| 03464815                          | South Indian Creek<br>near Erwin, TN                      | Lat 36°07'38", long 82°26'45",<br>Unicoi County, 0.1 mile<br>above mouth, near Erwin.  | 81.0                                   | 1972,<br>1974,<br>1978-81<br>1983-85 | 3-19-85<br>7-18-85                                   | 68<br>24                          |

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                      | Station name                             | Location   | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record                            | Measurements                  |                                   |
|----------------------------------|--|--|--|---|-------------------------------|-----------------------------------|
|                                  |  |  |  |   | Date                          | Discharge<br>(ft <sup>3</sup> /s) |
| TENNESSEE RIVER BASIN--Continued |  |  |  |   |                               |                                   |
| *03465780                        | Clear Fork near<br>Fairview, TN          | Lat 36°19'33", long 82°33'47",<br>Washington County, at culvert<br>on State Highway 81, 2.0 miles<br>southwest of Sulpher Springs at<br>mile 3.8.                                | 10.5                                   | 1983-85   | 3-20-85<br>7-18-85<br>9-25-85 | 6.6<br>1.6<br>1.2                 |
| 03466099                         | Jockey Creek at<br>Limestone, TN         | Lat 36°13'31", long 82°38'06",<br>Washington County, 0.25 mile<br>west of Limestone, at county<br>road bridge 400 ft above mouth.  | 19.0                                   | 1954,<br>1972-73<br>1976-77<br>1979-81<br>1983-85 | 3-20-85                       | 15                                |
| *03466295                        | Camp Creek at<br>Camp Creek, TN          | Lat 36°05'39", long 82°45'37",<br>Greene County, at bridge on<br>county road at Camp Creek,<br>2.0 miles southeast of Jones<br>Bridge, 6.2 miles northeast<br>of Nolichucky Dam. | 9.99                                   | 1961,<br>1983-85                                  | 3-20-85<br>7-19-85<br>9-25-85 | 27<br>11<br>10                    |
| 03466870                         | Roaring Fork near<br>Greeneville, TN     | Lat 36°13'18", long 82°52'05",<br>Greene County, at county road<br>bridge, 0.4 mile southeast of<br>Bales Chapel, and 4.5 miles<br>northwest of Greeneville.                     | 20.6                                   | 1975-81<br>1983-85                                | 3-20-85<br>7-19-85            | 11<br>3.2                         |
| 03466880                         | Roaring Fork near<br>Mosheim, TN         | Lat 36°14'38", long 82°53'37",<br>Greene County, at first bridge<br>upstream from the mouth, and 4.5<br>miles northeast of Mosheim.  | 46.4                                   | 1975-81<br>1983-85                                | 3-20-85<br>7-19-85            | 21<br>6.7                         |
| 03467490                         | Bent Creek near<br>Springvale, TN        | Lat 30°43'47", long 83°37'43",<br>Hamblen County, at bridge<br>0.6 mile above mouth, 2.4<br>miles southeast of Springvale.   | 41.2                                   | 1954,<br>1959,<br>1975-81,<br>1983-85             | 3-19-85<br>7-17-85            | 16<br>4.6                         |
| 03469185                         | Middle Creek near<br>Pigeon Forge, TN    | Lat 35°48'15", long 83°32'20",<br>Sevier County, at bridge on<br>county road (Middle Creek<br>Road) 4.5 miles southeast of<br>Sevierville and at mile 6.6.                       | 5.37                                   | 1983-85   | 3-19-85<br>7-17-85            | 1.8<br>.35                        |
| 03469610                         | Cove Creek at<br>Hatchertown, TN         | Lat 35°43'47", long 83°37'43",<br>Sevier County, at culvert on<br>county road, 7.8 miles<br>southwest of Pigeon Forge,<br>and at mile 6.3.                                       | 2.64                                   | 1983-85   | 3-19-85<br>7-17-85<br>9-26-85 | 7.1<br>2.8<br>2.2                 |
| 03470120                         | Boyds Creek near<br>Providence, TN       | Lat 35°51'45", long 83°46'12",<br>Sevier County, at bridge on<br>U.S. Highway 411, 1.4 miles<br>northeast of Providence and<br>at mile 14.3.                                     | 0.60                                   | 1983-85   | 3-19-85<br>7-17-85            | .64<br>.11                        |
| 03476515                         | Beidleman Creek near<br>Caywood Ford, TN | Lat 36°31'28", long 82°07'53",<br>Sullivan County, at second<br>bridge upstream from mouth,<br>0.7 mile north of Caywood Ford<br>and 2.4 miles west of South<br>Holston Dam.     | 27.4                                   | 1975-81,<br>1983-85                               | 3-19-85<br>7-18-85<br>9-25-85 | 21<br>12<br>8.3                   |
| *03476960                        | Indian Creek at<br>Childress, TN         | Lat 36°25'38", long 82°15'54",<br>Sullivan County, at bridge on<br>U.S. Highway 19, 3.3 miles<br>south of Bluff City and at<br>mile 4.6  | 6.79                                   | 1983-85   | 3-19-85<br>7-18-85            | 1.2<br>.58                        |
| *03478615                        | Evans Creek near<br>Blountville, TN      | Lat 35°31'19", long 82°18'12",<br>Sullivan County, at State<br>Highway 37 bridge, 1.5 miles<br>southeast of Blountville.   | 2.50                                   | 1932,<br>1983-85                                  | 3-19-85<br>7-18-85            | 1.7<br>1.1                        |
| 03491493                         | Dodson Creek near<br>Rogersville, TN     | Lat 36°20'49", long 82°57'07",<br>Hawkins County, at State<br>Highway 70 bridge, 6.8 miles<br>southeast of Rogersville.  | 7.46                                   | 1961,<br>1983-85                                  | 3-20-85<br>7-19-85            | 2.3<br>.40                        |
| 03518630                         | Morgan Branch at<br>Tellico Plains, TN   | Lat 35°22'27", long 84°18'08",<br>Monroe County, at bridge on<br>State Highway 68, 3.8 miles<br>northeast of Jalapa and at<br>mile 1.5.  | 2.11                                   | 1983-85   | 3-19-85<br>7-19-85            | 2.4<br>.65                        |



Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                      | Station name   | Location  | Drainage area (mi <sup>2</sup> ) | Period of record                            | Measurements   |                                |
|----------------------------------|--|---|----------------------------------|---|--|--------------------------------|
|                                  |  |   |                                  |   | Date   | Discharge (ft <sup>3</sup> /s) |
| TENNESSEE RIVER BASIN--Continued |  |   |                                  |   |  |                                |
| 03520107                         | Pond Creek near Adolphus, TN                             | Lat 35°42'20", long 84°27'35", Loudon County, 150 ft below county road bridge, 2.5 miles southwest of Prospect, 3.1 miles southwest of Adolphus, and 3.6 miles northwest of Philadelphia. | 30.8                             | 1953, 1975-77, 1979-81, 1983-85             | 3-20-85<br>7-19-85                                   | 23<br>8.0                      |
| 03555882                         | Barney Creek near Coker Creek, TN                        | Lat 35°14'29", long 84°19'04", Monroe County, at bridge on State Highway 68, 1.6 miles northeast of Ironsburg and 75 ft above mouth.  | 4.29                             | 1983-85                                     | 3-19-85<br>7-19-85                                   | 2.8<br>1.3                     |
| 03566253                         | Greasy Creek near Hopewell, TN                           | Lat 35°12'17", long 84°53'11", Bradley County, at bridge on Eureka Road, 0.2 mile north of Hopewell, 3.9 miles north of Cleveland, and at mile 0.9.                                       | 3.12                             | 1979-81, 1983-85                            | 3-20-85<br>7-19-85<br>9-27-85                        | .81<br>.22<br>.11              |
| *03566200                        | Brymer Creek near McDonald, TN                           | Lat 35°07'20", long 84°57'00", Bradley County, at bridge on U.S. Highways 11 and 64, 1.9 miles east of McDonald.  | 9.68                             | 1983-85                                     | 6- 3-85<br>7- 9-85<br>8-21-85                        | 2.2<br>2.0<br>2.2              |
| 03574702                         | Flint River at Lincoln, TN                               | Lat 35°00'42", long 86°30'06", Lincoln County, at county road bridge, 0.4 mile southeast of Lincoln.  | 52.2                             | 1952, 1983-85                               | 10- 4-84<br>3-12-85<br>7-18-85                       | 7.4<br>45<br>11                |
| 03582205                         | Norris Creek below Howell, TN                            | Lat 35°13'33", long 86°33'56", Lincoln County, at bridge on U.S. Highway 231, 2.6 miles east of Howell, 5.1 miles north of Fayetteville, and at mile 8.4.                                 | 15.1                             | 1952, 1975, 1978-81, 1983-85                | 10- 4-84<br>3-15-85<br>6-10-85<br>7-18-85<br>8-19-85 | .02<br>14<br>.98<br>.28<br>2.4 |
| 03593115                         | Lick Creek near Michie, TN                               | Lat 35°04'30", long 88°25'47", McNairy County, at county road bridge, 1.7 miles north of Michie and at mile 11.2.   | 9.93                             | 1982-85                                     | 4-18-85<br>7-24-85<br>8-13-85<br>9-19-85             | 1.5<br>.43<br>.25<br>.13       |
| 03601100                         | Big Bigby Creek at Needmore, TN                          | Lat 35°32'43", long 87°14'05", Maury County, at county road bridge (Needmore Bridge), at Needmore, 1.2 miles downstream from West Fork, and 1.7 miles west of Mount Pleasant.             | 48.3                             | 1934, 1969, 1972-73, 1975, 1978-81, 1983-85 | 10-10-84<br>3-13-85<br>6-11-85<br>7-17-85<br>8-20-85 | 9.8<br>70<br>16<br>12<br>21    |
| 03602192                         | West Piney River near Dickson, TN                        | Lat 36°01'40", long 87°27'00", Dickson County, at State Highway 48 bridge, 2.3 miles northeast of Oak Grove, and at mile 1.2.   | 21.2                             | 1950-52, 1962-63, 1965, 1979-81, 1983-85    | 5-29-85<br>7-10-85<br>7-11-85<br>7-24-85<br>9- 4-85  | 16<br>12<br>12<br>9.8<br>9.3   |
| 03602194                         | West Piney River below State Highway 48 near Dickson, TN | Lat 36°00'43", long 87°26'33", Dickson County, at mouth, 5.4 miles southwest of Dickson.  | 25.7                             | 1981, 1984-85                               | 10- 3-84<br>5-29-85<br>7-11-85<br>7-24-85<br>9- 4-85 | 8.2<br>19<br>13<br>11<br>10    |
| 03602209                         | Piney River near Oak Grove, TN                           | Lat 36°00'36", long 87°26'38", Dickson County, 2.2 miles east of Oak Grove.   | 44.1                             | 1984-85                                     | 10- 3-84<br>7-24-85<br>9- 4-85                       | 12<br>16<br>12                 |
| 03602230                         | Piney River above Pinewood, TN                           | Lat 35°57'11", long 87°27'53", Hickman County, at county road crossing, 0.7 miles below mouth of Plumders Creek, 2.8 miles north of Pinewood and at mile 17.2.                            | 77.5                             | 1984-85                                     | 5-30-85<br>7-12-85<br>9- 5-85                        | 47<br>34<br>26                 |
| 03602265                         | Piney River at Pinewood, TN                              | Lat 35°54'37", long 87°28'04", Hickman County, at county road crossing, 200 ft below mouth of Little Spring Creek, at Pinewood and at mile 13.5.  | 150                              | 1984-85                                     | 5-30-85<br>7-11-85<br>9- 5-85                        | 100<br>75<br>61                |
| 03604750                         | Birdsong Creek at Holladay, TN                           | Lat 35°52'53", long 88°08'39", Benton County, at bridge on State Highway 69, 0.7 mile north of Holladay.  | 15.7                             | 1975-78, 1980-85                            | 7-25-85<br>9-20-85                                   | 9.7<br>1.6                     |

\* Also crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                      | Station name                                   | Location   | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record                   | Measurements                             |                                   |
|----------------------------------|--|--|--|--|--|-----------------------------------|
|                                  |  |  |  |  | Date                                     | Discharge<br>(ft <sup>3</sup> /s) |
| TENNESSEE RIVER BASIN--Continued |  |  |  |  |  |                                   |
| 03605968                         | Whiteoak Creek near<br>Concord, TN             | Lat 36°14'22", long 87°47'06",<br>Humphreys County, at Collins Ford<br>bridge, 11.5 miles north of<br>Waverly.   | 54.5                                   | 1953-54,<br>1956,<br>1983-85             | 6-11-85<br>7-18-85                       | 31<br>21                          |
| 03606020                         | Hurricane Creek near<br>Stewart, TN            | Lat 36°20'46", long 87°51'03",<br>Stewart County, at county road<br>bridge, 1.9 miles north of<br>Stewart and at mile 7.7.   | 13.4                                   | 1983-85                                  | 6-11-85<br>7-16-85                       | 7.0<br>4.0                        |
| 03606125                         | Standing Rock Creek<br>near Fort Henry, TN     | Lat 36°26'13", long 87°59'57",<br>Stewart County, at point of<br>flow into Kentucky Lake, 4.9<br>miles south of Fort Henry.  | 22.6                                   | 1956-57,<br>1983-85                      | 6-11-85<br>7-18-85                       | 18<br>9.4                         |
| 03606350                         | Big Sandy River at<br>Westport, TN             | Lat 35°53'34", long 88°18'32",<br>Carroll County, at county road<br>bridge, 0.3 mile southeast of<br>Westport, and at mile 43.4.   | 110                                    | 1975-78,<br>1980-85                      | 7-25-85<br>9-20-85                       | 45<br>39                          |
| 03607225                         | Holly Fork Creek<br>at Nobles, TN              | Lat 36°21'01", long 88°13'46",<br>Henry County, at bridge on<br>U.S. Highway 79 (revised),<br>0.6 mile southwest of Nobles.  | 26.8                                   | 1982-83,<br>1985                         | 9-19-85                                  | 9.4                               |
| OBION RIVER BASIN                |  |  |  |  |  |                                   |
| 07024760                         | Spring Creek near<br>Greenfield, TN            | Lat 36°11'24", long 88°45'53",<br>Weakley County, at bridge on<br>State Highway 54, 3.2 miles<br>northeast of Greenfield, and<br>at mile 2.3.  | 93.4                                   | 1955,<br>1975-78,<br>1980-85             | 4-17-85<br>7-25-85<br>9-18-85            | 52<br>27<br>24                    |
| 07025190                         | Mud Creek near<br>Sharon, TN                   | Lat 36°15'59", long 88°50'05",<br>Weakley County, at bridge on<br>U.S. Highway 45-E, 2.2 miles<br>north of Sharon, and at mile<br>11.0.  | 45.6                                   | 1958,<br>1975-78,<br>1980-85             | 7-25-85<br>9-19-85                       | .90<br>.83                        |
| 07025300                         | North Fork Obion<br>River at Jones<br>Mill, TN | Lat 36°26'46", long 88°27'57",<br>Henry County, at county road<br>bridge at Jones Mill, and<br>at mile 42.8.   | 83.7                                   | 1958-61,<br>1964,<br>1975-78,<br>1980-85 | 7-25-85<br>9-20-85                       | 51<br>44                          |
| 07026100                         | Reeds Creek near<br>Trimble, TN                | Lat 36°10'48", long 89°15'15",<br>Dyer County, at county road<br>bridge, 0.4 mile north of<br>Locust Grove, 4.0 miles<br>southwest of Trimble, and at<br>mile 1.6.                                   | 51.8                                   | 1975-78,<br>1980-85                      | 4-17-85<br>7-23-85<br>7-30-85<br>9-18-85 | 7.6<br>4.5<br>1.4<br>2.4          |
| 07027270                         | Tar Creek at Oak<br>Grove, TN                  | Lat 35°24'02", long 88°34'54",<br>Chester County, at bridge on<br>Finger Road, 0.3 mile south<br>of Oak Grove.   | 16.4                                   | 1982-85                                  | 7-24-85<br>9-19-85                       | 5.2<br>5.2                        |
| 07027280                         | Jacks Creek at<br>Jacks Creek, TN              | Lat 35°28'16", long 88°31'21",<br>Chester County, at bridge on<br>State Highway 100, at town of<br>Jacks Creek, and at mile 8.5.   | 17.9                                   | 1975-78,<br>1980-85                      | 7-24-85<br>9-19-85                       | 3.0<br>2.9                        |
| 07027750                         | Nixon Creek near<br>Nutbush, TN                | Lat 35°41'59", long 89°16'36",<br>Haywood County, 1.6 miles<br>northeast of Christmasville,<br>at county road bridge, 7.2<br>miles east of Nutbush, and<br>at mile 6.60.                             | 42.5                                   | 1976-78,<br>1980-81,<br>1983-85          | 7-23-85<br>7-30-85                       | .50<br>.65                        |
| HATCHIE RIVER BASIN              |  |  |  |  |  |                                   |
| 07029450                         | Cub Creek near<br>Hebron, TN                   | Lat 35°10'28", long 88°54'50",<br>Hardeman County, at county<br>road bridge, 0.3 mile south-<br>east of State Highway 125,<br>1.4 miles north of Hebron,<br>and 7.8 miles northwest of<br>Middleton. | 15.0                                   | 1980-85                                  | 4-18-85<br>7-24-85                       | 9.6<br>1.7                        |

## Low-flow partial-record stations

Discharge measurements made at low-flow partial-record stations during water year 1985--Continued

| Station No.                    | Station name                     | Location   | Drainage<br>area<br>(mi <sup>2</sup> ) | Period<br>of<br>record | Measurements       |                                   |
|--------------------------------|----------------------------------|--|--|------------------------|--------------------|-----------------------------------|
|                                |                                  |  |  |                        | Date               | Discharge<br>(ft <sup>3</sup> /s) |
| HATCHIE RIVER BASIN--Continued |                                  |  |  |                        |                    |                                   |
| 07030160                       | Indian Creek at<br>Gilt Edge, TN | Lat 35°33'09", long 89°49'20",<br>Tipton County, at bridge on<br>State Highway 59, 0.02 mile<br>east of Gilt Edge. | 65.9                                   | 1976-78,               | 7-23-85            | 2.3                               |
|                                |                                  |  |  | 1980-81                | 7-30-85            | 4.7                               |
|                                |                                  |  |  | 1983-85                | 9-18-85            | .87                               |
| WOLF RIVER BASIN               |                                  |  |  |                        |                    |                                   |
| 07030940                       | Grays Creek near<br>Cordova, TN  | Lat 35°09'47", long 89°44'25",<br>Shelby County, at bridge on<br>Macon Road 2.2 miles north-<br>east of Cordova.   | 31.2                                   | 1982-85                | 7-23-85<br>9-19-85 | 0<br>.04                          |

## Springs

In 1931 a study of large springs in Tennessee was made and the results published in WSP 713. From 1950 to 1954 a more detailed study, including some of these springs, was made. Results of this study and all subsequent spring measurements were published annually in WSP's from 1950 to 1960. Since 1960 results of measurements have been published in annual State reports. Measurements made in the 1985 water year are given in the following table.

## Discharge measurement of springs during water year 1985

| Site number<br>and name   | Location  | Tributary to  | Date | Discharge<br>(gpm) |
|---|---|---|------|--------------------|
| Dickson County  |   |   |      |                    |
| 03436635<br>Ruskin Cave<br>Spring at<br>Ruskin, TN                    | Lat 36°09'39", long 87°31'14",<br>at mouth of Ruskin Cave, at<br>Ruskin 9.5 miles northwest<br>of Dickson.      | Yellow Creek to<br>Cumberland River   | 7- 3 | 470                |
|   |   |   | 7-17 | 420                |
|   |   |   | 8- 9 | 300                |
|   |   |   | 8-15 | 280                |
|   |   |   | 9- 3 | 350                |
|   |   |   | 9-11 | 300                |
|   |   |   | 9-18 | 270                |
| 03434615<br>Baker Spring<br>near Charlotte, TN                        | Lat 36°10'54", long 87°19'00",<br>1.3 miles east of Charlotte<br>at north edge of State<br>Highway 49.          | Town Branch to<br>Jones Creek to<br>Harpeth River to<br>Cumberland River                    | 4- 9 | 346                |
|   |   |   | 5- 3 | 543                |
|   |   |   | 6- 5 | 189                |
|   |   |   | 7- 8 | 171                |
| Hickman County  |   |   |      |                    |
| 03602323<br>McFarlin Spring<br>near Wrigley, TN                       | Lat 35°53'00", long 87°22'12",<br>1.8 miles southwest of<br>Wrigley.  | Unnamed tributary<br>to Mill Creek to<br>Piney River to<br>Duck River to<br>Tennessee River | 5-22 | 377                |
|   |   |   | 6- 5 | 332                |
|   |   |   | 6-21 | 337                |
|   |   |   | 7- 8 | 301                |
|   |   |   | 8-20 | 278                |
| Lawrence County   |   |   |      |                    |
| 03588220<br>Callahan Branch<br>Spring near<br>Leoma, TN               | Lat 35°10'44", long 87°20'47",<br>1.4 miles north of Leoma,<br>4.3 miles south of<br>Lawrenceburg.              | Callahan Branch to<br>Shoal Creek to<br>Tennessee River                                     | 4- 9 | 281                |
|   |   |   | 5- 2 | 287                |
|   |   |   | 6- 4 | 216                |
|   |   |   | 7- 9 | 243                |
|   |   |   | 8-20 | 137                |
| Macon County  |   |   |      |                    |
| 03312235<br>Sabins Spring<br>near Red Boiling<br>Springs, TN          | Lat 36°30'40", long 85°50'49",<br>1.5 miles south of Red Boiling<br>Springs at left bank of Salt<br>Lick Creek. | Salt Lick Creek to<br>Barren River to<br>Green River  | 5- 1 | 2,500              |
|   |   |   | 6- 6 | 1,060              |
|   |   |   | 8-22 | 830                |
| 03312240<br>Cordelle Hudson<br>Spring near Red<br>Boiling Springs, TN | Lat 36°30'48", long 85°50'20",<br>1.5 miles southeast of Red<br>Boiling Springs.                                | Unnamed tributary to<br>Salt Lick Creek to<br>Barren River to<br>Green River                | 4- 8 | 1,030              |
|   |   |   | 5- 1 | 516                |
|   |   |   | 6- 6 | 265                |
|   |   |   | 8-22 | 153                |
| 03312250<br>Red Boiling<br>Springs at Red<br>Boiling Springs, TN      | Lat 36°32'12", long 85°51'06",<br>0.3 mile northwest of Red<br>Boiling Springs.                                 | Salt Lick Creek to<br>Barren River to<br>Green River  | 4- 8 | 539                |
|   |   |   | 6- 6 | 416                |
|   |   |   | 7-10 | 430                |
|   |   |   | 8-22 | 434                |
| 03312410<br>Horace White<br>Spring near<br>Lafayette, TN              | Lat 36°35'01", long 86°02'38",<br>4.0 miles northeast of<br>Lafayette, 4.6 miles west of<br>Galen.              | Spring Creek to<br>Puncheon Creek to<br>Barren River to<br>Green River                      | 4- 8 | 2,020              |
|   |   |   | 5- 1 | 1,340              |
|   |   |   | 6- 6 | 705                |
|   |   |   | 7-10 | 520                |
|   |   |   | 8-22 | 650                |
| 03312420<br>Adams Spring near<br>Lafayette, TN                        | Lat 36°37'20", long 85°58'35",<br>7.0 miles north of Lafayette,<br>3.1 miles northwest of Galen.                | Unnamed tributary to<br>Puncheon Creek to<br>Barren River to<br>Green River                 | 4- 8 | 597                |
|   |   |   | 5- 1 | 592                |
|   |   |   | 6- 6 | 498                |
|   |   |   | 7-10 | 445                |
|   |   |   | 8-22 | 366                |
| Union County  |   |   |      |                    |
| 03494980<br>Phipps Spring<br>near Luttrell, TN                        | Lat 36°14'20", long 83°43'09",<br>2.8 miles northeast of<br>Luttrell, 4.6 miles east of<br>Maynardville.        | Unnamed tributary to<br>Flat Creek to<br>Holston River to<br>Tennessee River                | 4- 4 | 121                |
|   |   |   | 5-10 | 108                |
|   |   |   | 8-29 | 64                 |
| 03534930<br>Dyer Spring<br>near Luttrell, TN                          | Lat 36°13'54", long 83°44'36",<br>2.1 miles north of Luttrell,<br>3.3 miles southeast of<br>Maynardville.       | Bullrun Creek to<br>Clinch River to<br>Tennessee River                                      | 4- 4 | 157                |
|   |   |   | 5-10 | 99                 |
|   |   |   | 6-26 | 109                |
| 03534940<br>Big Spring near<br>Maynardville, TN                       | Lat 36°13'05", long 83°45'41",<br>3.0 miles southeast of<br>Maynardville, 1.7 miles<br>northwest of Luttrell.   | Unnamed tributary to<br>Bullrun Creek to<br>Clinch River to<br>Tennessee River              | 4- 4 | 76                 |
|   |   |   | 4-19 | 96                 |
|   |   |   | 5-10 | 126                |
|   |   |   | 6-26 | 81                 |
|   |   |   | 8-29 | 65                 |



Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous site. Data not available for inclusion in the 1984 data report are published herein.

## TENNESSEE RIVER BASIN

03534880 - UNION VALLEY QUARRY NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE      | TIME | SPECIFIC CONDUCTANCE (US/CM)              | PH (STANDARD UNITS)                        | TEMPERATURE (DEG C)                       | HARDNESS (MG/L AS CAC03)                   | HARDNESS, NONCARBONATE (MG/L AS CAC03)        | CALCIUM DIS-SOLVED (MG/L AS CA)        | MAGNESIUM, DIS-SOLVED (MG/L AS MG)   | SODIUM, DIS-SOLVED (MG/L AS NA)           | PERCENT SODIUM                                  |  |
|-----------|------|---|--|---|--|---|--|--------------------------------------|---|---|--|
| SEP 27... | 1230 | 600                                       | 7.7  | 14.0                                      | 280  | 130   | 73                                     | 24                                   | 11  | 8   |  |
|           |      | SODIUM ADSORPTION RATIO                   | POTASSIUM, DIS-SOLVED (MG/L AS K)          | ALKALINITY FIELD (MG/L AS CAC03)          | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)    | SULFATE DIS-SOLVED (MG/L AS SO4)              | CHLORIDE, DIS-SOLVED (MG/L AS CL)      | FLUORIDE, DIS-SOLVED (MG/L AS F)     | SILICA, DIS-SOLVED (MG/L AS SIO2)         | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) |
| SEP 27... | .3   |   | 3.5  | 150                                       | 5.8  | 150   | 5.5                                    | .60                                  | 7.0                                       | 398   | 360  |
|           |      | SOLIDS, DIS-SOLVED (TONS PER AC-FT)       | NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)   | NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)  | NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | PHOSPHORUS, DIS-SOLVED (MG/L AS P)     | PHOSPHORUS, DIS-SOLVED (MG/L AS P)   | PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS)                      | BARIUM, TOTAL RECOVERABLE (UG/L AS BA)         |
| SEP 27... | .54  |   | 3.7  | .030                                      | .04  | .10   | <.010                                  | <.010                                | <.010                                     | <1  | 100  |
|           |      | BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD)     | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)  | COBALT, TOTAL RECOVERABLE (UG/L AS CO)     | COPPER, TOTAL RECOVERABLE (UG/L AS CU)        | IRON, TOTAL RECOVERABLE (UG/L AS FE)   | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LITHIUM TOTAL RECOVERABLE (UG/L AS LI)    | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)       | MERCURY TOTAL RECOVERABLE (UG/L AS HG)         |
| SEP 27... | <10  |   | <1   | <1  | <1   | 1   | 80                                     | 3                                    | 20  | 20  | .2   |
|           |      | SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)  | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) | VANADIUM, DIS-SOLVED (UG/L AS V)           | ZINC, TOTAL RECOVERABLE (UG/L AS ZN)          | URANIUM NATURAL DIS-SOLVED (UG/L AS U) | CARBON, ORGANIC TOTAL (MG/L AS C)    | CARBON, ORGANIC DIS-SOLVED (MG/L AS C)    | CYANIDE TOTAL (MG/L AS CN)                      |  |
| SEP 27... |      | <1  | 4  | 900                                       | <1   | 20  | 3.0                                    | 1.0                                  | .70                                       | <.01  |  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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## TENNESSEE RIVER BASIN--Continued

03535076 - SCARBORO CREEK AT OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                                | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)               | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                     | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                           | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)          | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)            | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               |   |
|--------------|------|---|---|---|---|--|---|--|--|---|---|--|---|
| SEP<br>26... | 0830 | <.01  | 128   | 7.2   | 18.0  | 740  | 8.6   | 94   | 66   | 6   | 16  | 6.4  |   |
| DATE         | TIME | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)            | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)              | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2)       | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| SEP<br>26... | 4.8  | 13  | .3  | 2.3   | 60  | 7.3  | 5.4   | 1.1  | <.10   | 22  | 90  | 94   |   |
| DATE         | TIME | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)          | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)     | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)             |
| SEP<br>26... | .12  | <.10  | .030  | .04   | <.10  | .020   | 1   | 100  | <10  | <1  | <1  | 4  |   |
| DATE         | TIME | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU) | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)         | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                     | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)      | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                 |
| SEP<br>26... | 2    | 1400  | 5   | <10   | 80  | <.1  | <1  | 1  | 60   | <1  | 10  | <.01   |   |

## TENNESSEE RIVER BASIN--Continued

03535080 - SCARBORO CREEK BELOW OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                 | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                | PH<br>(STAND-<br>ARD<br>UNITS)                                  | TEMPER-<br>ATURE<br>(DEG C)                                   | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)            | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)           | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                  | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)          | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|---|---|--|---|---|---|--|---|---|---|---|
| SEP<br>26... | 1400  | .02   | 825  | 7.2   | 17.0  | 743   | 5.2  | 55  | 330   | 0   | 72  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                    | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)           | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)     | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>26... | 37  | 30  | 16   | .7  | 16  | 372   | 45   | 14  | 49  | .20   | 12  |
| DATE         | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)               |
| SEP<br>26... | 460   | .63   | .03  | .43   | 8.20  | 11  | 10   | <.010   | <.010   | <.010   | 2   |
| DATE         | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)         | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)              | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)   | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) |   |
| SEP<br>26... | 400   | <10   | <1   | <1  | 3   | 1   | 1600   | 4   | <10   | 730   |   |
| DATE         | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)  | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)           | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)             | CARBON,<br>ORGANIC<br>TOTAL<br>SOLVED<br>(MG/L<br>AS C) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)  | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                             |   |
| SEP<br>26... | .4  | <1  | 1  | 220   | <1  | <10   | 1.0  | 8.3   | 8.2   | <.01  |   |

## TENNESSEE RIVER BASIN--Continued

03535082 - UNNAMED SPRING TO SCARBORO CRK AT OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)              | PH<br>(STAND-<br>ARD<br>UNITS)                                | TEMPER-<br>ATURE<br>(DEG C)                                   | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)            | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                          | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                   | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               |   |
|--------------|------|---|--|---|---|---|--|--|---|--|--|--|---|
| SEP<br>26... | 1045 | .05   | 445  | 7.0   | 15.5  | 743   | 3.7  | 38   | 230   | 0  | 76   | 10   |   |
| DATE         | TIME | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)            | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)             | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| SEP<br>26... | 3.7  | 3   | .1   | 1.9   | 232   | 45  | 14   | 6.1  | <.10  | 9.4  | 270  | 260  |   |
| DATE         | TIME | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)              | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>TOTAL<br>(MG/L<br>AS P)  | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)            | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)            | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)     |
| SEP<br>26... | .37  | .04   | 1.1  | .030  | .04   | .20   | <.010  | <.010  | <.010   | <1   | 100  | <10  |   |
| DATE         | TIME | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)           | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE) | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO)   | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR)     |
| SEP<br>26... | <1   | <1  | 2  | 1   | 1100  | 3   | 10   | 120  | <.1   | <1   | 1  | 120  |   |
| DATE         | TIME | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)      | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)          | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137)     | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137)        | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS SR/<br>YT-90)  | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)                  | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)             | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                 |
| SEP<br>26... | <1   | 10  | <4.2   | <.9   | 2.5   | .5  | 2.1  | .5   | 1.2   | .80  | .80  | <.01   |   |



## TENNESSEE RIVER BASIN--Continued

03535084 - SCARBORO CREEK TRIB AT OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                | PH<br>(STAND-<br>ARD<br>UNITS)                                  | TEMPER-<br>ATURE<br>(DEG C)                                   | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                  | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)          | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|--|---|--|---|---|---|--|--|---|---|---|
| SEP<br>26... | 1215   | .07   | 405  | 7.6   | 16.5  | 743   | 10.0   | 105  | 210   | 0   | 62  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)     | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>26... | 13   | 4.1   | 4  | .1  | 1.6   | 212   | 10   | 10   | 8.0   | <.10  | 8.9   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)              | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>TOTAL<br>(MG/L<br>AS P)  | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)               |
| SEP<br>26... | 224  | 230   | .30  | .04   | .70   | <.010   | .20  | <.010  | <.010   | <.010   | 1   |
| DATE         | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)            | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)     | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)              | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)          | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) |   |
| SEP<br>26... | 100  | <10   | <1   | <1  | <1  | 1   | 230  | 4  | 10  | 120   |   |
| DATE         | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)            | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                          | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)         | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)             | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)                  | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)  | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                             |   |
| SEP<br>26... | .1   | <1  | 1  | 110   | <1  | 40  | 1.0  | 2.4  | .70   | <.01  |   |

## TENNESSEE RIVER BASIN--Continued

03535087 - UNNAMED SPRING NO. 2 TO SCARBORO CRK NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)          | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                 | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|--|---|---|--|---|---|--|--|--|--|---|
| SEP<br>26... | 1450   | .07   | 290   | 7.1  | 16.0  | 744   | 9.4  | 98   | 160  | 0  | 34  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>AS<br>CACO3)                      | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)          | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>26... | 19   | .60   | 0   | .0   | .70   | 166   | 26   | 3.3  | 1.5  | <.10   | 8.9   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |   |
| SEP<br>26... | 164  | 170   | .22   | .03  | .28   | <.010   | .10  | <.010  | <.010  | <.010  |   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)  | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)  | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |   |
| SEP<br>26... | 1  | 100   | <10   | <1   | <1  | <1  | <1   | 100  | 3  | 10   |   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |   |
| SEP<br>26... | 30   | <.1   | <1  | 1  | 40  | 1   | <10  | 1.1  | 5.5  | <.01   |   |

## TENNESSEE RIVER BASIN--Continued

03535090 - UNNAMED SPRING NO.1 TO SCARBORO CRK NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                                     | TEMPER-<br>ATURE<br>(DEG C)                                     | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                     | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)              | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3)     | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                    | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                       |   |
|--------------|------|---|---|--|---|---|---|--|---|--|---|---|---|
| SEP<br>26... | 1545 | .09   | 310   | 7.2  | 15.5  | 9.4   | 170   | 0  | 35  | 19   | .60   | 0   |   |
| DATE         |      | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)           | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)               | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)               | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)       |
| SEP<br>26... | .0   | .90   | 174   | 21   | 3.2   | 1.5   | <.10  | 8.8  | 173   | 170  | .24   | .04   |   |
| DATE         |      | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)                     | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                 | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)          | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)            | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)      | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU) |
| SEP<br>26... | .23  | <.010   | <.01  | <.010  | <.010   | <1  | <100  | <10  | <1  | <1   | 1   | <1  |   |
| DATE         |      | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)         | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)            | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)          | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)                 | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)               | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)  | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                     |
| SEP<br>26... | 200  | 4   | 10  | 20   | <.1   | <1  | 1   | 50   | <1  | 10   | .30   | <.01  |   |

## TENNESSEE RIVER BASIN--Continued

03535105 - UNNAMED SPR ABV KIRBY CEM NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                 | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|--|---|---|--|---|---|--|--|--|--|---|
| SEP<br>27... | 0850   | .08   | 275   | 7.2  | 13.5  | 744   | 6.2  | 61   | 140  | 0  | 31  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>27... | 15   | .60   | 0   | .0   | 1.0   | 140   | 17   | 2.2  | 1.2  | .10  | 8.7   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)           | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |   |
| SEP<br>27... | 147  | 140   | .20   | .03  | .37   | <.010   | .60  | <.010  | <.010  | <.010  |   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)          | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)  | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |   |
| SEP<br>27... | 1  | 100   | <10   | <1   | <1  | <1  | <1   | 100  | 1  | 10   |   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |   |
| SEP<br>27... | 20   | <.1   | <1  | 1  | 40  | 1   | <10  | .9   | 1.1  | <.01   |   |



## TENNESSEE RIVER BASIN--Continued

03535110 - SCARBORO CREEK TRIBUTARY NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                    | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                   | PH<br>(STAND-<br>ARD<br>UNITS)                                  | TEMPER-<br>ATURE<br>(DEG C)                                      | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)            | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                           | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)                   | HARD-<br>NESS<br>(MG/L<br>AS<br>CAC03)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CAC03) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)            |  |
|--------------|------|--|---|---|--|---|---|---|--|--|---|--|
| SEP<br>27... | 1045 | .25  | 275   | 7.5   | 18.0   | 746   | 7.2   | 78  | 140  | 0  | 31  |  |
| DATE         |      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CAC03)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)          | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)      | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              |
| SEP<br>27... | 14   | 4.0  | 6   | .2  | 1.1  | 140   | 8.6   | 3.7   | 1.9  | .10  | 7.0   |  |
| DATE         |      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)         | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>27... | 153  | 150  | .21   | .10   | .19  | .050  | .06   | <.10  | <.010  | <.010  | .010  |  |
| DATE         |      | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)         | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)              | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)        | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI) |  |
| SEP<br>27... | 2    | 100  | <10   | <1  | <1   | 1   | 1   | 470   | 2  | 10   |   |  |
| DATE         |      | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)           | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)             | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)       | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                     |  |
| SEP<br>27... | 30   | <.1  | <1  | 1   | 50   | <1  | 10  | 1.5   | .80  | <.01   |   |  |

## TENNESSEE RIVER BASIN--Continued

03535120 - UNNAMED SPRING AT KIRBY CEMETARY NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                 | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                   | PH<br>(STAND-<br>ARD<br>UNITS)                                  | TEMPER-<br>ATURE<br>(DEG C)                                      | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)            | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                           | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION                       | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                   |
|--------------|------|---|---|---|--|---|---|--|---|--|--|
| SEP<br>27... | 1030 | .01   | 460   | 6.9   | 14.0   | 746   | 16.9  | 168  | 250   | 0  | 83   |
| DATE         |      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)            | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)         | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)          | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             |
| SEP<br>27... | 9.5  | 3.1   | 3   | .0  | .80  | 246   | 60  | 11   | 5.4   | <.10   |  |
| DATE         |      | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)               | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-PT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)         | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>27... | 8.0  | 270   | .36   | .00   | .90  | <.010   | .20   | .010   | <.010   | .010   |  |
| DATE         |      | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE) | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)        | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |
| SEP<br>27... | 1    | 100   | <10   | <1  | <1   | <1  | 1   | 890  | 6   | 10   |  |
| DATE         |      | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)         | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)       | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |
| SEP<br>27... | 120  | <.1   | <1  | 1   | 160  | <1  | 10  | .90  | .70   | <.01   |  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## TENNESSEE RIVER BASIN--Continued

03535598 - MCCOY BRANCH NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)       | PH<br>(STAND-<br>ARD<br>UNITS)                                | TEMPER-<br>ATURE<br>(DEG C)                                   | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)               | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                         | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                            | HARD-<br>NESS<br>(MG/L<br>CACO3)                               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)           | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                |
|--------------|------|--|---|---|---|--|---|---|--|--|--|--|---|
| SEP<br>27... | 1345 | 1.8  | 250   | 8.8   | 19.0  | 743  | 9.5   | 105   | 110  | 31   | 32   | 7.0  |   |
| DATE         | TIME | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                   | PERCENT<br>SODIUM                                       | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)     | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                   | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2)                | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| SEP<br>27... | 3.3  | 6  | .1  | 3.2   | 78  | .2   | 50  | 3.6   | .30  | 6.0  | 166  | 150  |   |
| DATE         | TIME | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)            | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)       | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)        | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)            | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)        | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)  | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)            |   |
| SEP<br>27... | .23  | .81  | 3.2   | <.010   | .50   | .040   | .020  | 110   | 100  | <10  | <1   |  |   |
| DATE         | TIME | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)     | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE) | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR)    |   |
| SEP<br>27... | <1   | <1   | 1   | 390   | 3   | 70   | 20  | <.1   | 8  | 35   | 250  |  |   |
| DATE         | TIME | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)             | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)   | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137)        | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90)  | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS SR/<br>YT-90) | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)           | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                |   |
| SEP<br>27... | 23   | 10   | <4.3  | .8  | 2.6   | .7   | 2.2   | .6  | 2.2  | 2.7  | <.01   |  |   |

## TENNESSEE RIVER BASIN--Continued

03535636 - WALKER BR TRIB NR MT VERNON CEM NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>(PER-<br>CENT<br>SATUR-<br>ATION)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                        | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|--|---|---|--|---|---|--|---|---|--|---|
| SEP<br>27... | 0940   | .05   | 228   | 7.4  | 17.0  | 740   | 8.2  | 87  | 120   | 0  | 27  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                 | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)           | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>27... | 13   | .50   | 0   | .0   | .90   | 124   | 9.6  | 2.3   | 1.2   | <.10   | 8.6   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>TOTAL<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |   |
| SEP<br>27... | 129  | 130   | .18   | .02  | <.10  | <.010   | .10  | <.010   | <.010   | <.010  |   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)         | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |   |
| SEP<br>27... | 1  | <100  | <10   | <1   | <1  | <1  | 1  | 290   | 3   | 10   |   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)        | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)        | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |   |
| SEP<br>27... | 110  | <.1   | <1  | 1  | 30  | <1  | 10   | .9  | 3.0   | <.01   |   |



## TENNESSEE RIVER BASIN--Continued

03535639 - UNNAMED SPR BELOW MT VERNON CEM NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                  | PH<br>(STAND-<br>ARD<br>UNITS)                                      | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)    | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                           | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         |
|--------------|---|---|--|---|---|---|---|--|--|--|
| SEP<br>27... | 1320  | .17   | 230  | 7.1   | 16.5  | 743   | 8.2   | 86   | 130  | 3  |
| DATE         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                    | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)    | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                       | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)     | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)        | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            |
| SEP<br>27... | 32  | 11  | 1.7  | 3   | .0  | 1.0   | 122   | 19   | 7.5  | 3.2  |
| DATE         | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)       | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)       | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)  | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>27... | .30   | 8.0   | 136  | 140   | .19   | .06   | .13   | <.010  | .10  | .020   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)    | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)             | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)          | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |
| SEP<br>27... | 1   | 100   | <10  | <1  | <1  | 2   | 1   | 80   | 3  | <10  |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)     | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO)    | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)      | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)         | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)             | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |
| SEP<br>27... | 20  | <.1   | <1   | 1   | 40  | <1  | <10   | 1.0  | 1.5  | <.01   |

## TENNESSEE RIVER BASIN--Continued

03535641 - UNNAMED SPR NR MT VERNON CEM NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                  | PH<br>(STAND-<br>ARD<br>UNITS)                                      | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)    | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                           | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         |
|--------------|---|---|--|---|---|---|---|--|--|--|
| SEP<br>27... | 1415  | .02   | 270  | 6.9   | 14.5  | 743   | 5.4   | 54   | 140  | 7  |
| DATE         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                    | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)    | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                       | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)     | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)        | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            |
| SEP<br>27... | 35  | 12  | 1.7  | 3   | .0  | .90   | 130   | 32   | 7.2  | 3.3  |
| DATE         | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)       | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)       | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)  | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>27... | .30   | 7.8   | 144  | 150   | .20   | .00   | <.10  | <.010  | .20  | .020   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)    | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)             | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)          | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |
| SEP<br>27... | 1   | 100   | <10  | <1  | <1  | 1   | 1   | 170  | 5  | 10   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                         | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO)    | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)      | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)         | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)             | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |
| SEP<br>27... | 30  | <.1   | <1   | 1   | 50  | <1  | <10   | 1.0  | .90  | <.01   |

## TENNESSEE RIVER BASIN--Continued

03535643 - UNNAMED SPR TO WALKER BR TRIB NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                    | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                   | PH<br>(STAND-<br>ARD<br>UNITS)                          | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)             | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)                   | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)          |   |
|--------------|------|--|---|---|---|--|---|---|--|--|---|---|
| SEP<br>27... | 1115 | .04  | 265   | 7.2   | 15.5  | 743  | 9.4   | 97  | 150  | 4  | 36  |   |
| DATE         |      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                       | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)              | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)    | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>27... | 15   | .60  | 0   | .0  | .80   | 148  | 18  | 5.2   | 1.2  | <.10   | 8.8   |   |
| DATE         |      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)    | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)            | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  |   |
| SEP<br>27... | 160  | 160  | 160   | .22   | .02   | <.10   | .010  | .01   | .10  | <.010  | <.010   |   |
| DATE         |      | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)     | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                 | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)         | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)  | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB) |   |
| SEP<br>27... | .010 | 1  | 100   | <10   | <1  | <1   | 3   | 1   | 80   | 2  |   |   |
| DATE         |      | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)            | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)     | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)              | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                   |   |
| SEP<br>27... | <10  | 30   | <.1   | <1  | 1   | 80   | <1  | <10   | 3.4  | <.01   |   |   |

## TENNESSEE RIVER BASIN--Continued

03535648 - WALKER BRANCH TRIB NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION)     | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                 | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      |
|--------------|--|---|---|--|---|---|---|--|--|--|---|
| SEP<br>27... | 1510   | .14   | 233   | 7.9  | 18.0  | 742   | 9.4   | 102  | 130  | 0  | 34  |
| DATE         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINEITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)            | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>27... | 12   | 1.6   | 3   | .0   | 1.0   | 134   | 3.3   | 7.0  | 2.8  | .20  | 8.2   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |   |
| SEP<br>27... | 150  | 150   | .20   | .06  | <.10  | .040  | .05   | .20  | .020   | .010   |   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)         | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)              | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)  | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |   |
| SEP<br>27... | 1  | 100   | <10   | <1   | <1  | 1   | 1   | 300  | 4  | <10  |   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)           | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)             | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |   |
| SEP<br>27... | 10   | <.1   | <1  | 1  | 70  | <1  | <10   | 1.1  | 3.2  | <.01   |   |



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## TENNESSEE RIVER BASIN--Continued

03538253 - BEAR CRK NR MT VERNON CEMETERY NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)            | PH<br>(STAND-<br>ARD<br>UNITS)                             | TEMPER-<br>ATURE<br>(DEG C)                                    | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)            | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                        | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION)   | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                          | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                    | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|--|--|--|--|---|--|---|--|---|---|--|--|
| SEP<br>26... | 1130   | .04  | 7.0  | 17.0   | 743   | 5.0  |   | 53   | 2700  | 820   | 150  | 170  |
| DATE         | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                    | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)        | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)             | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)               | NITRO-<br>GEN,<br>NO2+NO3<br>SOLVED<br>(MG/L<br>AS N)            | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) |  |  |
| SEP<br>26... | 12   | 1  | 20   | 250  | 120   | 1.3  | 2.7   | 610  | .520  | .67   |  |  |
| DATE         | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)                | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)       | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)    | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)         |  |  |
| SEP<br>26... | .20  | <.010  | <.010  | <.010  | 1   | 400  | <10   | 33   | <1  | 10  |  |  |
| DATE         | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)      | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)      | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)    | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)  | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)              |  |  |
| SEP<br>26... | 4  | 210  | 2  | 30   | 9200  | .4   | <1  | 1  | 1900  | 2   |  |  |
| DATE         | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137)    | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137)     | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>YT-90) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>YT-90)      | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)           | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)          | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                             |  |  |
| SEP<br>26... | 20   | 1300   | 8.4  | 1200   | 130   | 1100   | 120   | 870  | 8.6   | .07   |  |  |

## TENNESSEE RIVER BASIN--Continued

03538256 - BEAR CREEK AT BEAR CREEK ROAD NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE      | TIME | STREAM-FLOW,<br>INSTANTANEOUS<br>(CFS)            | PH<br>(STANDARD<br>UNITS)                         | TEMPERATURE<br>(DEG C)                              | BARO-METRIC<br>PRESSURE<br>(MM OF<br>HG)                  | OXYGEN,<br>DIS-SOLVED<br>(MG/L)                      | OXYGEN,<br>DIS-SOLVED<br>SATURATION<br>(%)            | HARD-NESS<br>(MG/L AS<br>CaCO3)                         | HARD-NESS,<br>NONCARBONATE<br>(MG/L AS<br>CaCO3)         | CALCIUM<br>DIS-SOLVED<br>(MG/L AS<br>Ca)          | MAGNESIUM,<br>DIS-SOLVED<br>(MG/L AS<br>Mg)         |  |
|-----------|------|---|---|---|---|--|---|---|--|---|---|--|
| SEP 26... | 0850 | <.01  | 7.2   | 17.0  | 742   | 7.2  | 77  | 1400  | 1300   | 470   | 67  |  |
| DATE      | TIME | SODIUM,<br>DIS-SOLVED<br>(MG/L AS Na)             | PERCENT<br>SODIUM                                 | SODIUM<br>ADSORPTION<br>RATIO                       | POTASSIUM,<br>DIS-SOLVED<br>(MG/L AS K)                   | ALKALINITY<br>LAB (MG/L<br>AS CaCO3)                 | CARBON<br>DIOXIDE<br>DIS-SOLVED<br>(MG/L AS CO2)      | SULFATE<br>DIS-SOLVED<br>(MG/L AS SO4)                  | CHLORIDE,<br>DIS-SOLVED<br>(MG/L AS CL)                  | FLUORIDE,<br>DIS-SOLVED<br>(MG/L AS F)            | SILICA,<br>DIS-SOLVED<br>(MG/L AS<br>SiO2)          | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-SOLVED<br>(MG/L) |
| SEP 26... | 66   | 9   | .8  | 7.6   | 137   | 17   | 88  | 64  | 1.2  | 2.4   | 1230  |  |
| DATE      | TIME | NITROGEN,<br>NO2+NO3<br>DIS-SOLVED<br>(MG/L AS N) | NITROGEN,<br>AMMONIA<br>DIS-SOLVED<br>(MG/L AS N) | NITROGEN,<br>AMMONIA<br>DIS-SOLVED<br>(MG/L AS NH4) | NITROGEN,<br>AMMONIA +<br>ORGANIC<br>TOTAL<br>(MG/L AS N) | PHOSPHORUS,<br>TOTAL<br>(MG/L AS P)                  | PHOSPHORUS,<br>DIS-SOLVED<br>(MG/L AS P)              | PHOSPHORUS,<br>ORTHO,<br>DIS-SOLVED<br>(MG/L AS P)      | ARSENIC<br>TOTAL<br>(UG/L AS AS)                         | BARIUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS BA)   | BERYLLIUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS BE)  | CADMIUM<br>TOTAL<br>RECOVERABLE<br>(UG/L AS CD)            |
| SEP 26... | 380  | .100  | .13   | .10   | <.010   | <.010  | <.010   | 1   | 900  | <10   | 1   |  |
| DATE      | TIME | CHROMIUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS CR) | COBALT,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS CO)   | COPPER,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS CU)     | IRON,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS FE)             | LEAD,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS PB)        | LITHIUM<br>TOTAL<br>RECOVERABLE<br>(UG/L AS LI)       | MANGANESE,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS MN)      | MERCURY<br>TOTAL<br>RECOVERABLE<br>(UG/L AS HG)          | SELENIUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS SE) | MOLYBDENUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS MO) | STRONTIUM,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS SR)         |
| SEP 26... | <1   | 2   | 1   | 260   | 4   | 10   | 50  | .2  | <1   | 1   | 1300  |  |
| DATE      | TIME | VANADIUM,<br>DIS-SOLVED<br>(UG/L AS V)            | ZINC,<br>TOTAL<br>RECOVERABLE<br>(UG/L AS ZN)     | GROSS<br>ALPHA,<br>DIS-SOLVED<br>(UG/L AS<br>U-NAT) | GROSS<br>ALPHA,<br>SUSP. TOTAL<br>(UG/L AS<br>U-NAT)      | GROSS<br>BETA,<br>DIS-SOLVED<br>(PCI/L AS<br>CS-137) | GROSS<br>BETA,<br>SUSP. TOTAL<br>(PCI/L AS<br>CS-137) | GROSS<br>BETA,<br>DIS-SOLVED<br>(PCI/L AS SR/<br>YT-90) | GROSS<br>BETA,<br>SUSP. TOTAL<br>(PCI/L AS SR/<br>YT-90) | URANIUM<br>NATURAL<br>DIS-SOLVED<br>(UG/L AS U)   | CARBON,<br>ORGANIC<br>DIS-SOLVED<br>(MG/L AS C)     | CYANIDE<br>TOTAL<br>(MG/L AS CN)                           |
| SEP 26... | 1    | 10  | 66  | 37  | 49  | 280  | 42  | 240   | 890  | 6.9   | .06   |  |

## TENNESSEE RIVER BASIN--Continued

03538257 - UNNAMED SPR TO BEAR CRK AT BEAR CRK RD NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)            | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                                | TEMPER-<br>ATURE<br>(DEG C)  | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)           | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                         | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)           | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)           |
|--------------|--|--|---|---|--|--|---|--|--|--|--|--|
| SEP<br>26... | 1245   | .03  | 320   | 7.3   | 13.5   | 743  | 8.4   | 83   | 170  | 5  | 37   | 20   |
| DATE         | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                   | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                  | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)        | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                   | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)                | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| SEP<br>26... | .50  | 0  | .0  | .70   | 170  | 16   | 3.5   | 1.5  | .20  | 8.6  | 176  | 170  |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)            | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)          | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)           | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)            | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)           | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)          | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)    | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)        |
| SEP<br>26... | .24  | .01  | 1.9   | <.010   | .10  | <.010  | <.010   | <.010  | 1  | 200  | <10  | <1   |
| DATE         | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)    | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE) | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR)    | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)             |
| SEP<br>26... | <1   | <1   | <1  | 340   | 1  | 10   | 50  | <.1  | <1   | 1  | 50   | 1  |
| DATE         | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)          | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137)   | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137)        | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS SR/<br>YT-90)  | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)         | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)                  | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)           | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                |  |
| SEP<br>26... | <10  | <6.1   | <.4   | <2.6  | <.4  | <2.2   | <.4   | 1.1  | 5.2  | 1.2  | <.01   |  |

## TENNESSEE RIVER BASIN--Continued

03538259 - UNNAMED SPR TO BR CRK NR CO LINE NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | PH<br>(STAND-<br>ARD<br>UNITS)                          | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)             | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION                    | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)           | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)           |
|--------------|------|---|---|---|--|---|---|--|--|--|--|
| SEP<br>26... | 1445 | .05   | 6.9   | 13.0  | 744  | 4.2   | 41  | 390  | 160  | 120  | 23   |
| DATE         |      | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                       | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)              | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                 | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)     | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              |
| SEP<br>26... | 14   |   | 7   | .3  | 3.1  | 230   | 56  | 34   | 23   | .50  | 8.8  |
| DATE         |      | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)    | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)            | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>26... | 360  | .50   | .05   | 35  | .280   | .36   | .40   | <.010  | <.010  | <.010  |  |
| DATE         |      | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                 | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)         | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)  | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)  | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |
| SEP<br>26... | 1    | 200   | <10   | <1  | <1   | <1  | 1   | 350  | 6  | 30   |  |
| DATE         |      | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)     | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)              | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                            |
| SEP<br>26... | 200  | .4  | <1  | 1   | 250  | <1  | <10   | 250  | 2.0  | .01  |  |



## TENNESSEE RIVER BASIN--Continued

03538261 - BEAR CREEK SPRING NO 1 NEAR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                                  | TEMPER-<br>ATURE<br>(DEG C)  | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)        | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                      | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3)    | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                   | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                     | PERCENT<br>SODIUM   |
|--------------|------|--|---|---|--|---|---|---|--|---|--|---|
| SEP<br>26... | 1030 | .12  | 675   | 7.8   | 13.5   | 743   | 330   | 120   | 94   | 22  | 10   | 6   |
| DATE         |      | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                        | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)               | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)         | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)              | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               |
| SEP<br>26... |      | .3   | 2.0   | 201   | 6.2  | 24  | 19  | .30   | 7.8  | 300   | .41  | .10   |
| DATE         |      | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)  | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)                 | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)        | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)  | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)         |
| SEP<br>26... | 27   | .010   | .01   | <.10  | <.010  | <.010   | <.010   | <.010   | <1   | 200   | <10  | <1  |
| DATE         |      | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)         | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)              | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)       | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)     | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) |
| SEP<br>26... | 10   | <1   | 2   | 160   | 4  | 60  | 10  | <.1   | <1   | <1  | 200  |   |
| DATE         |      | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)             | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)         | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT)      | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT)         | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90)  | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS SR/<br>YT-90) | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)              | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)           | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                             |
| SEP<br>26... |      | <1   | 20  | 110   | 2.6  | 63  | 31  | 54  | 29   | 160   | 21   | .01   |

## TENNESSEE RIVER BASIN--Continued

03538262 - BEAR CRK BELOW COUNTY LINE NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                   | PH<br>(STAND-<br>ARD<br>UNITS)                          | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)             | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                             | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)                   | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)          |
|--------------|------|--|---|---|---|--|---|---|--|--|---|
| SEP<br>26... | 1200 | .09  | 700   | 7.8   | 14.0  | 744  | 8.8   | 88  | 320  | 130  | 93  |
| DATE         |      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)           | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                       | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)              | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                 | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)          | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)    |
| SEP<br>26... | 22   | 9.5  | 6   | .2  | 2.0   | 198  | 6.1   | 23  | 18   | .30  |   |
| DATE         |      | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)    | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS NH4) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>TOTAL<br>(MG/L<br>AS P)                  | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  |
| SEP<br>26... | 7.7  | 290  | .40   | .07   | 27  | .030   | .04   | <.10  | <.010  | <.010  |   |
| DATE         |      | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                 | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)         | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)        | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB) |
| SEP<br>26... | .010 | <1   | 200   | <10   | <1  | <1   | <1  | <1  | 1  | 530  | 2   |
| DATE         |      | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)     | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)  | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)              | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)       | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                   |
| SEP<br>26... | 100  | 50   | <.1   | <1  | 1   | 210  | <1  | 10  | 6.4  | <.01   |   |

## TENNESSEE RIVER BASIN--Continued

03538264 - BEAR CRK BELOW BEAR CRK RD BRIDGE NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)       | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)           | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                  | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)           | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)            |
|--------------|---|---|---|--|---|--|---|--|--|---|---|
| SEP<br>26... | 1330  | .08   | 650   | 8.1  | 16.0  | 745  | 300   | 84   | 87   | 20  | 9.4   |
| DATE         | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                 | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)     | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)                | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                  | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)     | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)           | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)      | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)     |
| SEP<br>26... | 6   | .2  | 2.7   | 216  | 3.3   | 23   | 18  | .30  | 6.4  | 300   | .40   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)               | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                     | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)  | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)         | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)      | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)  | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)               | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI) |
| SEP<br>26... | .06   | 1   | 200   | <10  | <1  | <1   | <1  | 1  | 520  | 3   | 170   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG) | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)              | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)             | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)   | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)       | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                 |   |
| SEP<br>26... | 60  | <.1   | <1  | 1  | 200   | <1   | 30  | 150  | 3.0  | .01   |   |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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## TENNESSEE RIVER BASIN--Continued

035382655 - BEAR CRK TRIB AT CO RD NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)          | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)           |
|--------------|--|--|---|--|---|---|--|--|---|--|
| SEP<br>27... | 1230   | .01  | 300   | 7.1  | 15.0  | 743   | 140  | 0  | 34  | 14   |
| DATE         | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                       | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)              | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)               | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)       | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                      | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)    | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)    | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              |
| SEP<br>27... | 7.0  | 9  | .3  | 2.4  | 154   | 24  | 9.1  | 1.4  | <.10  | 20   |
| DATE         | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)   | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) |
| SEP<br>27... | 171  | 180  | .23   | .00  | <.10  | <.010   | .20  | .050   | .050  | .050   |
| DATE         | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                                | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)        | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)  | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB) | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        |
| SEP<br>27... | 1  | 200  | <10   | <1   | <1  | <1  | 1  | 390  | 3   | 10   |
| DATE         | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN)    | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>(UG/L<br>AS SE)                      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                   |  |
| SEP<br>27... | 160  | <.1  | <1  | 1  | <10   | <1  | 40   | 4.0  | <.01  |  |



## TENNESSEE RIVER BASIN--Continued

03538266 - BEAR CRK TRIB ABV BR CRK RD NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME   | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)         | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                                | TEMPER-<br>ATURE<br>(DEG C)  | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)        | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                          | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3)   | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                   | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        |
|--------------|--|---|---|---|--|---|---|--|--|--|---|
| SEP<br>27... | 0830   | .01   | 215   | 7.9   | 14.5   | 745   | 98  | 0  | 25   | 8.6  | 6.9   |
| DATE         | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                 | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)               | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)             | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)             | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| SEP<br>27... | 13   | .3  | 2.8   | 104   | 2.5  | 8.7   | 3.4   | .10  | 19   | 130  | 140   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)            | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)       | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)        | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)  | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                            | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)        | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)    | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)             |
| SEP<br>27... | .18  | .00   | <.10  | <.010   | .20  | .020  | .020  | <1   | 100  | <10  | <1  |
| DATE         | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR) | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO) | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)       | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)         | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)              | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)     | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)        | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE) | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO)   | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR)     |
| SEP<br>27... | <1   | <1  | 1   | 260   | 3  | 10  | 10  | <.1  | <1   | 1  | 100   |
| DATE         | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)             | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)   | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>ALPHA,<br>SUSP.<br>TOTAL<br>(UG/L<br>AS<br>U-NAT)    | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137)        | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90)  | GROSS<br>BETA,<br>SUSP.<br>TOTAL<br>(PCI/L<br>AS SR/<br>YT-90) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)         | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                                |   |
| SEP<br>27... | <1   | <10   | <2.3  | <.4   | 3.6  | .5  | 3.1   | .4   | 5.7  | <.01   |   |

## TENNESSEE RIVER BASIN--Continued

03538268 - BEAR CRK ABV WHITE WING RD NR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                    | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)                   | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                   | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)    |   |
|--------------|------|--|---|--|---|---|--|--|--|---|---|
| SEP<br>26... | 1430 | <.01   | 460   | 8.4  | 16.0  | 746   | 230  | 45   | 61   | 18  |   |
| DATE         | TIME | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                       | PERCENT<br>SODIUM   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                          | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)             | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)             | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2)            | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)      | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)               |
| SEP<br>26... | 5.0  | 5  | .1  | 2.1  | 182   | 1.4   | 14   | 11   | .20  | 6.8   |   |
| DATE         | TIME | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITU-<br>ENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)              | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)         | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             |
| SEP<br>26... | 266  | 230  | .36   | 14   | <.010   | .10   | <.010  | <.010  | <.010  | <.010   | 1   |
| DATE         | TIME | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)            | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE)     | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)        | LEAD,<br>TOTAL<br>RECCV-<br>ERABLE<br>(UG/L<br>AS PB)          | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) |
| SEP<br>26... | 100  | <10  | <1  | <1   | 1   | 1   | 100  | 5  | 110  | 70  |   |
| DATE         | TIME | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)            | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)      | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)       | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)         | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                     |   |
| SEP<br>26... | <.1  | <1   | 1   | 110  | <1  | <10   | 100  | 4.8  | <.01   |   |   |

## TENNESSEE RIVER BASIN--Continued

03538269 - BEAR CREEK SPRING NO 2 NEAR OAK RIDGE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)                     | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)               | PH<br>(STAND-<br>ARD<br>UNITS)                                   | TEMPER-<br>ATURE<br>(DEG C)                                     | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                                | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION)           | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)                  | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3)         | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                    |   |
|--------------|------|---|---|--|---|---|--|---|---|--|---|---|
| SEP<br>26... | 1530 | .14   | 315   | 7.6  | 13.0  | 747   | 9.3  | 90  | 160   | 1  | 39  |   |
| DATE         |      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                    | PERCENT<br>SODIUM  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | ALKA-<br>LINITY<br>FIELD<br>AS<br>CACO3)                           | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)           | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)            | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)              | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) |
| SEP<br>26... | 16   | 1.1   | 1   | .0   | .90   | 162   | 7.9  | 2.2   | 1.9   | <.10   | 8.1   |   |
| DATE         |      | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)             | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY)                | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS N) | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS,<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>TOTAL<br>(UG/L<br>AS AS)                             |   |
| SEP<br>26... | 170  | .23   | .06   | .27  | <.010   | .20   | <.010  | <.010   | <.010   | <.010  | 1   |   |
| DATE         |      | BARIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BA)             | BERYL-<br>LIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS BE) | CADMIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CD)          | CHRO-<br>MIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CR)  | COBALT,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CO)       | COPPER,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS CU)            | IRON,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS FE)   | LEAD,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS PB)   | LITHIUM<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS LI)        | MANGA-<br>NESE,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MN) |   |
| SEP<br>26... | 100  | <10   | <1  | <1   | 1   | 2   | 310  | 4   | 10  | 20   |   |   |
| DATE         |      | MERCURY<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS HG)             | SELE-<br>NIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SE)  | MOLYB-<br>DENUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS MO) | STRON-<br>TIUM,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V)            | ZINC,<br>TOTAL<br>RECOV-<br>ERABLE<br>(UG/L<br>AS ZN)              | URANIUM<br>NATURAL<br>DIS-<br>SOLVED<br>(UG/L<br>AS U)  | CARBON,<br>ORGANIC<br>TOTAL<br>SOLVED<br>(MG/L<br>AS C) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C)         | CYANIDE<br>TOTAL<br>(MG/L<br>AS CN)                             |   |
| SEP<br>26... | <.1  | <1  | 1   | 50   | <1  | 20  | 5.4  | .30   | .50   | <.01   |   |   |

## GREEN RIVER BASIN

03312235 - SABINS SPRING NEAR RED BOILING SPRINGS, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| AUG<br>22... | 1545  | 1.8   | 160  | 6.4   | 16.5  | .30   | 78   | 5  | 22   | 5.5   | 1.3   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)     | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2)      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| AUG<br>22... | 3   | .0  | .90  | 73  | 56  | 4.8   | <.10   | 7.5  | 92   | 92  | .13   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)           | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| AUG<br>22... | .45   | .56   | 20   | <1  | <1  | 24  | <.5  | 1  | <1   | <1  | 3   |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)           | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| AUG<br>22... | 8   | <1  | 5  | .2  | <1  | <1  | <1   | <1   | 31   | 13  | .50   |



## GREEN RIVER BASIN--Continued

03312250 - RED BOILING SPRING AT RED BOILING SPRINGS, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>10... | 1500  | .96   | 248  | 7.3   | 14.5  | 1.0   | 120  | 2  | 34   | 7.8   | 2.4   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)            | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>10... | 4   | .1  | 1.0  | 115   | 11  | 2.6   | .10  | 8.1  | 145  | 130   | .20   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)                 | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>10... | .38   | 1.9   | 20   | <1  | <1  | 24  | <.5  | 1  | 2  | 3   | <1  |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)                 | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| JUL<br>10... | 5   | 2   | 66   | <.1   | <1  | 5   | <1   | <1   | 32   | 17  | 26  |

## GREEN RIVER BASIN--Continued

03312410 - HORACE WHITE SPRING NEAR LAFAYETTE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>10... | 1000  | 1.2   | 300  | 7.5   | 14.0  | .90   | 140  | 16   | 39   | 9.3   | 1.7   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)            | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>10... | 3   | .0  | .90  | 120   | 7.3   | 14  | <.10   | 7.8  | 158  | 150   | .21   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)                 | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>10... | .51   | 1.8   | <10  | <1  | <1  | 36  | <.5  | <1   | <1   | 4   | 2   |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)                 | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| JUL<br>10... | 10  | 2   | 4  | <.1   | <1  | 3   | <1   | <1   | 54   | 11  | 29  |

## GREEN RIVER BASIN--Continued

03312420 - ADAMS SPRING NEAR LAFAYETTE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>10... | 1200  | .99   | 260  | 7.5   | 15.0  | .80   | 130  | 14   | 39   | 6.9   | 1.3   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)            | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>10... | 2   | .0  | .80  | 112   | 6.8   | 4.1   | <.10   | 7.8  | 146  | 130   | .20   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)                 | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>10... | .39   | 2.1   | 20   | <1  | <1  | 32  | <.5  | <1   | <1   | 3   | 2   |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)                 | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          |   |
| JUL<br>10... | 5   | <1  | 2  | .1  | <1  | 4   | <1   | <1   | 42   | 7   |   |

## CUMBERLAND RIVER BASIN

03426750 - WILEY SPRING AT WOODBURY, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>LAB<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|--|--------------------------------|-----------------------------|------------------------------|--|--|--|--|--|-------------------|
| JUL<br>09... | 1800 | .52   | 311  | 7.6                            | 18.0                        | 1.5                          | 160                                    | 20   | 50   | 7.7  | 2.7  | 4                 |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) |
|--------------|---|---|---|---|---|--|---|--|---|---|---|
| JUL<br>09... | .0                                      | 1.3   | 137   | 6.7   | 17  | .60  | 7.4   | 194  | 170   | .26   | .27   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|---|--|--|--|--|---|--|--|--|
| JUL<br>09... | 1.1   | 10  | <1  | <1   | 26   | .5   | <1   | 1   | 3  | 2  | 5  |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) |
|--------------|--|--|--|---|--|---|--|--|--|---|
| JUL<br>09... | <1   | 1  | <.1  | <1  | 5  | <1  | <1   | 92   | 8  | 35  |



## CUMBERLAND RIVER BASIN--Continued

03434615 - BAKER SPRING NEAR CHARLOTTE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>08... | 1230  | .38   | 345  | 7.4   | 17.0  | .70   | 180  | 17   | 63   | 6.1   | 5.6   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)     | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>08... | 6   | .2  | 1.2  | 166   | 13  | 12  | .20  | 9.1  | 233  | 210   | .32   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)           | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>08... | .24   | .37   | 20   | <1  | <1  | 38  | <.5  | <1   | 2  | 4   | <1  |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)           | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| JUL<br>08... | 9   | 1   | 2  | <.1   | <1  | 3   | <1   | <1   | 140  | 7   | 40  |

## CUMBERLAND RIVER BASIN--Continued

03436635 - RUSKIN CAVE SPRING NEAR RUSKIN, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|-------|------|---|---|-----------------------------|
| JUL   |      |   |   |                             |
| 03... | 1325 | 1.0   | 290   | 14.5                        |
| 17... | 1145 | .94   | 290   | --                          |
| AUG   |      |   |   |                             |
| 09... | 1205 | .67   | 290   | 14.5                        |
| 15... | 1115 | .62   | 290   | 14.5                        |
| SEP   |      |   |   |                             |
| 03... | 1200 | .78   | 295   | 14.5                        |
| 11... | 1320 | .68   | 300   | 14.5                        |
| 18... | 1120 | .60   | 300   | 14.5                        |

## TENNESSEE RIVER BASIN

03534930 - DYER SPRING NEAR LUTTRELL, TN

| DATE         | TIME | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|--------------------------------|-----------------------------|------------------------------|--|--|--|--|--|-------------------|
| AUG<br>29... | 1215 | 410   | 7.7                            | 15.0                        | .40                          | 210                                    | 0  | 43   | 25   | 3.3  | 3                 |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINIT<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|---|---|--|---|---|--|---|--|---|---|---|
| AUG<br>29... | .1                                      | 1.2   | 240  | 9.3   | 5.4   | <.10   | 8.4   | 223  | 230   | .30   | 1.2   |

| DATE         | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|--|--|--|--|---|--|--|--|
| AUG<br>29... | 20  | <1  | <1   | 37   | <.5  | 1  | <1  | 2  | 2  | <3   |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) |
|--------------|--|--|--|---|--|---|--|--|--|---|
| AUG<br>29... | 4  | 1  | <.1  | <1  | 2  | <1  | <1   | 35   | 13   | 1.1   |

## TENNESSEE RIVER BASIN--Continued

03534940 - BIG SPRING NEAR MAYNARDVILLE, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| AUG<br>29... | 1015  | .14   | 360  | 6.8   | 14.0  | .40   | 210  | 0  | 43   | 26  | .90   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LILITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| AUG<br>29... | 0   | .0  | 1.3  | 220   | 68  | 3.1   | <.10   | 9.0  | 213  | 220   | .29   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)           | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| AUG<br>29... | .08   | .99   | 10   | <1  | <1  | 26  | <.5  | <1   | <1   | <1  | 1   |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)           | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          |   |
| AUG<br>29... | 4   | 6   | <1   | <.1   | <1  | 1   | <1   | <1   | 25   | 8   |   |

## TENNESSEE RIVER BASIN--Continued

03588220 - CALLAHAN BRANCH SPRING NEAR LEOMA, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>LAB<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|--|--------------------------------|-----------------------------|------------------------------|--|--|--|--|--|-------------------|
| JUL<br>09... | 0800 | .55   | 144  | 6.4                            | 15.5                        | .70                          | 66                                     | 14   | 20   | 4.0  | 2.0  | 6                 |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) |
|--------------|---|---|---|---|---|--|---|--|---|---|---|
| JUL<br>09... | .1                                      | .40   | 53  | 41  | 2.1   | <.10   | 8.1   | 96   | 73  | .13   | .14   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|---|--|--|--|--|---|--|--|--|
| JUL<br>09... | 1.9   | <10   | <1  | <1   | 25   | <.5  | <1   | <1  | 5  | 2  | 9  |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) |
|--------------|--|--|--|---|--|---|--|--|--|---|
| JUL<br>09... | 3  | <1   | <.1  | <1  | 3  | <1  | <1   | 39   | 50   | 15  |



## TENNESSEE RIVER BASIN--Continued

035941365 - COLLINWOOD WATER DEPT SPRING NEAR COLLINWOOD, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>09... | 1030  | .30   | 108  | 6.9   | 14.5  | .60   | 44   | 0  | 13   | 2.8   | 1.2   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>09... | 6   | .0  | .40  | 47  | 11  | 2.4   | <.10   | 7.9  | 65   | 58  | .09   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)           | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>09... | .05   | .28   | <10  | <1  | <1  | 26  | <.5  | <1   | <1   | 7   | 2   |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)           | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| JUL<br>09... | <3  | 3   | <1   | <.1   | <1  | 6   | <1   | <1   | 32   | 19  | 11  |

## TENNESSEE RIVER BASIN--Continued

03602316 - MILL CREEK BELOW NORTH FORK NEAR WRIGLEY, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME  | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS)               | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)    | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)        |
|--------------|---|---|--|---|---|---|--|--|--|---|---|
| JUL<br>08... | 1530  | 4.8   | 203  | 7.2   | 23.0  | 1.3   | 110  | 0  | 39   | 4.2   | 1.7   |
| DATE         | PERCENT<br>SODIUM                                 | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)            | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| JUL<br>08... | 3   | .0  | .80  | 114   | 14  | 2.0   | .10  | 7.9  | 136  | 130   | .19   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)                 | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)                | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                        | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        |
| JUL<br>08... | 1.8   | .22   | 30   | <1  | <1  | 26  | <.5  | <1   | 4  | 2   | <1  |
| DATE         | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)        | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)                 | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)               | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                          | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)       |
| JUL<br>08... | 17  | 3   | 8  | <.1   | 1   | 1   | <1   | <1   | 77   | 7   | 27  |

## TENNESSEE RIVER BASIN--Continued

03602323 - MCFARLIN SPRING NEAR WRIGLEY, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|------------------------------|--|--|--|--|--|
| JUN<br>21... | 1030 | .75   | 210   | 7.5                            | 17.0                        | 5.5                          | 99                                     | 0  | 32   | 4.5  | 1.3  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>LAB<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SOLIDS,<br>SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>DAY) |
|--------------|-------------------|---|---|---|---|---|--|--|--|--|---|---|
| JUN<br>21... | 3                 | .0                                      | .50   | 99  | 6.1   | 2.3   | <.10   | 6.9  | 117  | 110  | .16   | .24   |

| DATE         | AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|-------|---|---|--|--|--|--|---|--|--|--|
| JUN<br>21... | .19   | 10  | <1  | <1   | 17   | 1.1  | <1   | 3   | <1   | 1  | 5  |

| DATE         | AS PB) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) |
|--------------|--------|--|--|--|---|--|---|--|--|--|---|
| JUN<br>21... | 2      | <1   | .2   | <1   | 3   | <1   | <1  | 47   | 5  | 3.2  |   |

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|--|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| MOBILE RIVER BASIN                                   |      |   |   |                             |              |      |   |   |                             |
| 02384900 - COAHULLA CREEK NR CLEVELAND, TN           |      |   |   |                             |              |      |   |   |                             |
| JUN<br>03...   | 1215 | .55   | 400   | 24.0                        | AUG<br>21... | 1105 | .72   | 580   | 23.5                        |
| JUL<br>09...   | 1250 | 1.5   | 760   | 24.0                        |              |      |   |   |                             |
| GREEN RIVER BASIN                                    |      |   |   |                             |              |      |   |   |                             |
| 03312287 - LONG FORK NEAR GALEN, TN                  |      |   |   |                             |              |      |   |   |                             |
| MAY<br>28...   | 1700 | 10  | 172   | 22.0                        | JUL<br>09... | 1415 | 4.5   | 128   | 20.0                        |
| 03312295 - WHITE OAK CREEK AT WHITE OAK, TN          |      |   |   |                             |              |      |   |   |                             |
| MAY<br>28...   | 1615 | 13  | 165   | 21.5                        | JUL<br>09... | 1500 | 8.8   | 185   | 26.0                        |
| JUN<br>23...   | 1410 | 11  | 175   | 26.0                        |              |      |   |   |                             |
| 03312413 - PUNCHEON CREEK NEAR GREEN VALLEY, TN      |      |   |   |                             |              |      |   |   |                             |
| MAY<br>28...   | 1525 | 6.0   | 161   | 17.5                        | JUL<br>08... | 1610 | 1.7   | 200   | 23.0                        |
| 03312457 - LONG CREEK AT LONG CREEK, TN              |      |   |   |                             |              |      |   |   |                             |
| MAY<br>28...   | 1410 | 4.5   | 177   | 20.5                        | JUN<br>23... | 1220 | 3.5   | 193   | 23.0                        |
| 03313640 - WEST FORK DRAKES CREEK BELOW PORTLAND, TN |      |   |   |                             |              |      |   |   |                             |
| AUG<br>09...   | 1130 | 4.6   | --  | 24.0                        |              |      |   |   |                             |
| CUMBERLAND RIVER BASIN                               |      |   |   |                             |              |      |   |   |                             |
| 03407908 - NEW RIVER AT CORDELL, TN                  |      |   |   |                             |              |      |   |   |                             |
| OCT<br>25...   | 1440 | 266   | --  | 17.5                        | MAY<br>01... | 1200 | 103   | --  | 19.0                        |
| NOV<br>30...   | 1350 | 645   | --  | 5.0                         | JUN<br>05... | 1020 | 77  | --  | 25.5                        |
| JAN<br>03...   | 1100 | 992   | --  | 4.0                         | JUL<br>18... | 1105 | 102   | --  | 25.0                        |
| FEB<br>21...   | 1200 | 716   | --  | 7.5                         | AUG<br>28... | 1145 | 545   | --  | 22.0                        |
| MAR<br>26...   | 1200 | 325   | --  | 8.5                         |              |      |   |   |                             |
| 03414500 - EAST FORK OBEY RIVER NEAR JAMESTOWN, TN   |      |   |   |                             |              |      |   |   |                             |
| OCT<br>04...   | 0930 | 5.9   | --  | 13.0                        | APR<br>23... | 1230 | 195   | --  | 14.5                        |
| NOV<br>15...   | 0929 | 110   | --  | 9.5                         | MAY<br>30... | 0954 | 72  | 212   | 17.5                        |
| DEC<br>04...   | 1500 | 302   | --  | 7.5                         | JUL<br>10... | 1640 | 15  | --  | 27.0                        |
| JAN<br>30...   | 1150 | 171   | --  | 4.5                         | AUG<br>15... | 1637 | 42  | --  | 22.5                        |
| MAR<br>13...   | 1215 | 463   | --  | 8.5                         |              |      |   |   |                             |
| 03415960 - WOLF RIVER AT WOLF RIVER, TN              |      |   |   |                             |              |      |   |   |                             |
| OCT<br>04...   | 1120 | 3.7   | 170   | 13.5                        | JUL<br>10... | 1340 | 6.8   | 200   | 20.0                        |
| MAY<br>30...   | 1105 | 16  | 133   | 15.5                        |              |      |   |   |                             |
| 03415975 - ROTTEN FORK WOLF RIVER NEAR PALL MALL, TN |      |   |   |                             |              |      |   |   |                             |
| OCT<br>04...   | 1045 | .67   | 300   | 16.5                        | JUL<br>10... | 1430 | 1.3   | 275   | 31.0                        |
| MAY<br>30...   | 1150 | 5.2   | 205   | 22.5                        |              |      |   |   |                             |



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| CUMBERLAND RIVER BASIN--Continued                           |      |   |   |                             |              |      |   |   |                             |
| 03416000 - WOLF RIVER NEAR BYRDSTOWN, TN                    |      |   |   |                             |              |      |   |   |                             |
| OCT<br>04...  | 1300 | 7.0   | --  | 14.0                        | DEC<br>05... | 1000 | 98  | --  | 6.0                         |
| NOV<br>15...  | 1150 | 38  | --  | 8.0                         |              |      |   |   |                             |
| 03417500 - CUMBERLAND RIVER AT CELINA, TN                   |      |   |   |                             |              |      |   |   |                             |
| JUN<br>20...  | 1100 | 5510  | --  | 13.0                        | AUG<br>14... | 1030 | 8950  | --  | 13.0                        |
| 03418070 - ROARING RIVER ABOVE GAINESBORO, TN               |      |   |   |                             |              |      |   |   |                             |
| NOV<br>14...  | 1416 | 2.2   | --  | 12.5                        | MAR<br>12... | 1545 | 284   | --  | 13.0                        |
| DEC<br>06...  | 1040 | 134   | --  | 5.0                         | APR<br>24... | 1510 | 27  | --  | 20.0                        |
| JAN<br>29...  | 1445 | 33  | --  | 3.5                         | MAY<br>03... | 1245 | 2.1   | --  | 18.0                        |
| 03418180 - BLACKBURN FORK NEAR DODSON BRANCH, TN            |      |   |   |                             |              |      |   |   |                             |
| OCT<br>03...  | 1250 | 12  | 210   | 18.0                        | JUL<br>09... | 0905 | 14  | 230   | 22.0                        |
| MAY<br>29...  | 1530 | 19  | 217   | 23.0                        |              |      |   |   |                             |
| 03418935 - BEAVERDAM CR AT LANTANA RD NEAR BELLVIEW, TN     |      |   |   |                             |              |      |   |   |                             |
| MAR<br>12...  | 1445 | 17  | --  | 9.0                         | JUL<br>11... | 1010 | .77   | 60  | 20.0                        |
| JUN<br>04...  | 0900 | 12  | 60  | 18.0                        | SEP<br>03... | 1050 | 4.3   | 50  | 19.5                        |
| 22...   | 1230 | 7.4   | 35  | 17.0                        |              |      |   |   |                             |
| 03418950 - BEE CREEK AT HERBERT DOMAIN, TN                  |      |   |   |                             |              |      |   |   |                             |
| JUN<br>22...  | 1415 | 36  | 30  | 17.5                        | SEP<br>03... | 1230 | 18  | 48  | 21.0                        |
| JUL<br>11...  | 1115 | 7.1   | 45  | 23.0                        |              |      |   |   |                             |
| 03418995 - GLADE CREEK NEAR LONEWOOD, TN                    |      |   |   |                             |              |      |   |   |                             |
| MAR<br>12...  | 1615 | 32  | --  | 8.5                         | JUL<br>11... | 1230 | 3.8   | 86  | 24.0                        |
| 03419270 - CALFKILLER RIVER NEAR TAYLORS, TN                |      |   |   |                             |              |      |   |   |                             |
| MAR<br>12...  | 1230 | 169   | --  | 9.0                         | JUL<br>11... | 0755 | 8.6   | 152   | 19.0                        |
| MAY<br>29...  | 0720 | 22  | 256   | 15.5                        |              |      |   |   |                             |
| 03420116 - ROCKY RIVER AT ROCKY RIVER ROAD AT RIVERVIEW, TN |      |   |   |                             |              |      |   |   |                             |
| JUN<br>04...  | 0700 | 13  | 192   | 17.0                        | SEP<br>03... | 1515 | 18  | 185   | 19.0                        |
| JUL<br>11...  | 1430 | 21  | 188   | 18.0                        |              |      |   |   |                             |
| 03420230 - SCOTT CREEK AT IRVING COLLEGE, TN                |      |   |   |                             |              |      |   |   |                             |
| OCT<br>16...  | 1600 | 3.8   | 350   | 22.0                        | JUN<br>04... | 1653 | 5.7   | 328   | 22.5                        |
| 03420440 - SOUTH PRONG BARREN FORK NEAR TROUSDALE, TN       |      |   |   |                             |              |      |   |   |                             |
| OCT<br>16...  | 1242 | 11  | 120   | 18.0                        | JUL<br>25... | 1225 | 11  | 135   | 21.5                        |
| JUN<br>03...  | 1305 | 15  | 125   | 22.5                        |              |      |   |   |                             |
| 03420470 - NORTH PRONG BARREN FORK AT OAK GROVE, TN         |      |   |   |                             |              |      |   |   |                             |
| OCT<br>16...  | 1146 | 14  | 120   | 18.0                        | JUL<br>25... | 1030 | 12  | 111   | 19.0                        |
| JUN<br>03...  | 1415 | 13  | 146   | 23.5                        | AUG<br>20... | 1240 | 17  | 325   | 21.5                        |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| CUMBERLAND RIVER BASIN--Continued                             |      |   |   |                             |              |      |   |   |                             |
| 03420720 - HICKORY CREEK NEAR VIOLA, TN                       |      |   |   |                             |              |      |   |   |                             |
| OCT<br>17...  | 0810 | 13  | 440   | 18.0                        | JUL<br>26... | 1045 | 11  | 338   | 21.5                        |
| JUN<br>04...  | 1450 | 6.7   | 420   | 26.0                        | SEP<br>04... | 0815 | 11  | --  | 21.5                        |
| 03421150 - CHARLES CREEK AT DAYLIGHT, TN                      |      |   |   |                             |              |      |   |   |                             |
| OCT<br>16...  | 1344 | 5.1   | 160   | 17.5                        | AUG<br>20... | 1410 | 5.2   | 155   | 21.0                        |
| JUN<br>05...  | 1100 | 2.5   | 194   | 20.0                        | SEP<br>04... | 1045 | 2.8   | 175   | 20.5                        |
| JUL<br>25...  | 1340 | 2.3   | 185   | 21.0                        |              |      |   |   |                             |
| 03422500 - CANEY FORK NEAR ROCK ISLAND, TN                    |      |   |   |                             |              |      |   |   |                             |
| OCT<br>17...  | 1038 | 52  | --  | 18.0                        | APR<br>30... | 1200 | 1350  | --  | 18.5                        |
| FEB<br>20...  | 1500 | 7200  | --  | 4.5                         | AUG<br>21... | 0915 | 3160  | --  | 26.0                        |
| 03424825 - BRUSH CREEK AT BRUSH CREEK, TN                     |      |   |   |                             |              |      |   |   |                             |
| OCT<br>03...  | 0945 | <.01  | 400   | 13.0                        | JUL<br>08... | 0845 | .26   | 400   | 22.0                        |
| MAY<br>31...  | 1030 | .29   | 415   | 24.5                        |              |      |   |   |                             |
| 03425275 - GOOSE CREEK AT HILLSDALE, TN                       |      |   |   |                             |              |      |   |   |                             |
| MAY<br>28...  | 1300 | 10  | 317   | 18.5                        | JUL<br>08... | 1255 | 3.8   | 310   | 23.0                        |
| JUN<br>23...  | 1020 | 7.9   | 317   | 20.5                        |              |      |   |   |                             |
| 03426800 - EAST FORK STONES RIVER AT WOODBURY, TN             |      |   |   |                             |              |      |   |   |                             |
| OCT<br>10...  | 1130 | 10  | --  | 15.0                        | JUN<br>03... | 1215 | 12  | 303   | 23.0                        |
| DEC<br>03...  | 1415 | 53  | --  | 12.5                        | 05...        | 1300 | 11  | 280   | 23.0                        |
| JAN<br>25...  | 1100 | 37  | --  | 6.5                         | JUL<br>12... | 1358 | 31  | --  | 22.0                        |
| MAR<br>11...  | 1405 | 69  | --  | 13.0                        | AUG<br>22... | 1225 | 16  | --  | 21.0                        |
| APR<br>29...  | 1300 | 27  | --  | 18.5                        |              |      |   |   |                             |
| 03431517 - CUMMINGS BRANCH AT LICKTON, TN                     |      |   |   |                             |              |      |   |   |                             |
| SEP<br>04...  | 1210 | .08   | --  | 25.0                        |              |      |   |   |                             |
| 03431570 - WHITES CREEK NEAR JORDONIA, TN                     |      |   |   |                             |              |      |   |   |                             |
| OCT<br>05...  | 1200 | 2.8   | --  | 14.0                        |              |      |   |   |                             |
| 03431700 - RICHLAND CREEK AT CHARLOTTE AVE., AT NASHVILLE, TN |      |   |   |                             |              |      |   |   |                             |
| OCT<br>02...  | 1015 | 2.3   | --  | 12.5                        | APR<br>24... | 1244 | 21  | --  | 19.0                        |
| NOV<br>13...  | 1410 | 20  | --  | 11.0                        | JUN<br>06... | 1220 | 2.6   | --  | 24.0                        |
| DEC<br>27...  | 1035 | 34  | --  | 12.0                        | JUL<br>08... | 1310 | 1.3   | --  | 27.5                        |
| FEB<br>07...  | 1255 | 53  | --  | 4.0                         | AUG<br>13... | 1340 | 1.8   | --  | 28.0                        |
| MAR<br>19...  | 1530 | 13  | --  | 15.0                        |              |      |   |   |                             |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| CUMBERLAND RIVER BASIN--Continued                                     |      |   |   |                             |       |      |   |   |                             |
| 03431800 - SYCAMORE CREEK NEAR ASHLAND CITY, TN                       |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | MAY   |      |   |   |                             |
| 01...   | 1020 | 23  | --  | 13.0                        | 06... | 1215 | 95  | --  | 22.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 05...   | 1120 | 88  | --  | 14.0                        | 13... | 1430 | 86  | --  | 16.0                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 17...   | 0930 | 64  | --  | 14.0                        | 19... | 1418 | 24  | --  | 26.5                        |
| JAN   |      |   |   |                             | AUG   |      |   |   |                             |
| 25...   | 1425 | 105   | --  | 2.0                         | 08... | 1154 | 33  | --  | 24.0                        |
| MAR   |      |   |   |                             | SEP   |      |   |   |                             |
| 19...   | 1320 | 99  | --  | 10.5                        | 03... | 1415 | 24  | --  | 25.5                        |
| 03432350 - HARPETH RIVER AT FRANKLIN, TN                              |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 10...   | 1015 | 2.3   | --  | 19.5                        | 22... | 0945 | 84  | --  | 19.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 08...   | 1245 | 170   | --  | 11.0                        | 14... | 0930 | 12  | --  | 19.5                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 17...   | 1500 | 94  | --  | 15.0                        | 03... | 1430 | 8.3   | --  | 23.5                        |
| JAN   |      |   |   |                             | AUG   |      |   |   |                             |
| 15...   | 1205 | 143   | --  | 2.0                         | 15... | 1200 | 1.8   | --  | 25.5                        |
| 16...   | 1310 | 107   | --  | 2.0                         | 15... | 1300 | 2.5   | --  | 25.5                        |
| FEB   |      |   |   |                             | 19... | 1130 | 35  | --  | 23.5                        |
| 06...   | 1600 | 1000  | --  | 7.0                         | 26... | 1230 | 11  | --  | 21.0                        |
| 14...   | 1415 | 684   | --  | 4.0                         |       |      |   |   |                             |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 19...   | 0930 | 92  | --  | 10.5                        |       |      |   |   |                             |
| 03432925 - LITTLE HARPETH RIVER AT GRANNY WHITE PIKE AT BRENTWOOD, TN |      |   |   |                             |       |      |   |   |                             |
| MAR   |      |   |   |                             | AUG   |      |   |   |                             |
| 20...   | 0935 | 14  | --  | 11.5                        | 19... | 0905 | 9.3   | --  | 22.0                        |
| JUN   |      |   |   |                             | SEP   |      |   |   |                             |
| 10...   | 0930 | 2.3   | 480   | 22.5                        | 03... | 1310 | 1.6   | 500   | 24.0                        |
| JUL   |      |   |   |                             | 18... | 1135 | .59   | 465   | 18.5                        |
| 15...   | 0835 | 49  | --  | 24.5                        |       |      |   |   |                             |
| AUG   |      |   |   |                             |       |      |   |   |                             |
| 09...   | 1119 | 1.3   | 525   | 24.5                        |       |      |   |   |                             |
| 03433500 - HARPETH RIVER AT BELLEVUE, TN                              |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 01...   | 1030 | 8.7   | --  | 12.0                        | 22... | 1315 | 206   | --  | 21.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 08...   | 1000 | 346   | --  | 14.0                        | 14... | 1400 | 51  | --  | 19.5                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 17...   | 1045 | 266   | --  | 14.0                        | 11... | 1330 | 31  | --  | 29.0                        |
| FEB   |      |   |   |                             | AUG   |      |   |   |                             |
| 07...   | 1550 | 1610  | --  | 6.0                         | 16... | 1300 | 12  | --  | 24.5                        |
| 08...   | 1150 | 1330  | --  | 7.0                         | 28... | 1245 | 36  | --  | 24.0                        |
| 14...   | 1200 | 1760  | --  | 4.0                         |       |      |   |   |                             |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 14...   | 1040 | 345   | --  | 7.0                         |       |      |   |   |                             |
| 03433660 - SOUTH HARPETH RIVER AT FERNVALE, TN                        |      |   |   |                             |       |      |   |   |                             |
| MAR   |      |   |   |                             | SEP   |      |   |   |                             |
| 20...   | 1158 | 28  | --  | 11.0                        | 03... | 0915 | 14  | 240   | 24.0                        |
| JUL   |      |   |   |                             |       |      |   |   |                             |
| 12...   | 1000 | 13  | 240   | 24.0                        |       |      |   |   |                             |
| 03433902 - BIG TURNBULL CREEK NEAR LIBERTY HILL, TN                   |      |   |   |                             |       |      |   |   |                             |
| MAR   |      |   |   |                             | SEP   |      |   |   |                             |
| 20...   | 1335 | 12  | --  | 12.5                        | 03... | 1045 | 3.8   | 238   | 23.0                        |
| JUL   |      |   |   |                             |       |      |   |   |                             |
| 15...   | 1115 | 3.9   | 200   | 25.0                        |       |      |   |   |                             |
| 03434500 - HARPETH RIVER NEAR KINGSTON SPRINGS, TN                    |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | MAY   |      |   |   |                             |
| 01...   | 1430 | 69  | --  | 15.0                        | 28... | 1100 | 249   | --  | 22.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 08...   | 1230 | 555   | --  | 11.0                        | 24... | 1330 | 164   | --  | 9.5                         |
| DEC   |      |   |   |                             | AUG   |      |   |   |                             |
| 14...   | 1320 | 549   | --  | 13.0                        | 29... | 1000 | 113   | --  | 23.5                        |
| MAR   |      |   |   |                             | JUL   |      |   |   |                             |
| 19...   | 1300 | 505   | --  | 10.0                        | 29... | 1130 | 83  | --  | 26.0                        |
| APR   |      |   |   |                             |       |      |   |   |                             |
| 19...   | 1130 | 488   | --  | 19.0                        |       |      |   |   |                             |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| CUMBERLAND RIVER BASIN--Continued                               |      |   |   |                             |              |      |   |   |                             |
| 03434560 - TRACE CREEK NEAR WHITE BLUFF, TN                     |      |   |   |                             |              |      |   |   |                             |
| OCT<br>02...  | 0915 | 1.3   | --  | 9.0                         | JUL<br>16... | 1030 | 1.7   | 250   | 23.5                        |
| MAY<br>29...  | 1045 | 2.1   | 280   | 17.0                        |              |      |   |   |                             |
| 03434620 - TOWN BRANCH NEAR CHARLOTTE, TN                       |      |   |   |                             |              |      |   |   |                             |
| OCT<br>02...  | 1210 | .25   | --  | 12.0                        | JUL<br>19... | 1015 | .30   | 349   | 25.5                        |
| MAR<br>15...  | 1320 | 5.5   | --  | 15.5                        | SEP<br>05... | 1205 | .33   | 352   | 24.0                        |
| MAY<br>29...  | 1155 | 3.7   | 320   | 21.0                        |              |      |   |   |                             |
| 034350028 - BARTONS CREEK ABOVE LOUISE CREEK NEAR SOUTHSIDE, TN |      |   |   |                             |              |      |   |   |                             |
| OCT<br>03...  | 1000 | 8.8   | --  | 15.0                        | JUL<br>18... | 1724 | 13  | 289   | 27.5                        |
| 03435320 - RED RIVER AT ADAMS, TN                               |      |   |   |                             |              |      |   |   |                             |
| JUL<br>25...  | 1000 | 105   | 435   | 26.0                        |              |      |   |   |                             |
| 03435770 - SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN         |      |   |   |                             |              |      |   |   |                             |
| OCT<br>11...  | 1405 | 8.0   | --  | 20.0                        | APR<br>26... | 1100 | 20  | --  | 17.0                        |
| NOV<br>09...  | 1350 | 37  | --  | 12.0                        | JUN<br>13... | 1215 | 96  | --  | 15.0                        |
| DEC<br>17...  | 1410 | 46  | --  | 13.0                        | JUL<br>23... | 1017 | 726   | --  | 24.5                        |
| JAN<br>17...  | 1420 | 88  | --  | 4.0                         | AUG<br>26... | 1330 | 19  | --  | 21.5                        |
| MAR<br>19...  | 1150 | 56  | --  | 8.0                         |              |      |   |   |                             |
| 03436000 - SULPHUR FORK RED RIVER NEAR ADAMS, TN                |      |   |   |                             |              |      |   |   |                             |
| OCT<br>11...  | 1125 | 33  | --  | 20.0                        | APR<br>30... | 1335 | 218   | --  | 15.0                        |
| NOV<br>09...  | 0930 | 102   | --  | 10.0                        | JUN<br>13... | 1101 | 380   | --  | 15.0                        |
| DEC<br>18...  | 1235 | 142   | --  | 13.0                        | JUL<br>24... | 1300 | 30  | --  | 26.0                        |
| JAN<br>25...  | 1230 | 186   | --  | 4.0                         | AUG<br>27... | 1217 | 537   | --  | 27.0                        |
| MAR<br>19...  | 0945 | 172   | --  | 8.0                         |              |      |   |   |                             |
| 03436100 - RED RIVER AT PORT ROYAL, TN                          |      |   |   |                             |              |      |   |   |                             |
| OCT<br>12...  | 1100 | 161   | --  | 18.0                        | JUN<br>12... | 1640 | 2620  | --  | 21.0                        |
| DEC<br>18...  | 0940 | 749   | --  | 13.0                        | JUL<br>22... | 1350 | 166   | --  | 28.0                        |
| JAN<br>24...  | 1250 | 921   | --  | 1.0                         | AUG<br>27... | 1630 | 447   | --  | 27.0                        |
| MAR<br>27...  | 1030 | 811   | --  | 13.0                        | SEP<br>12... | 1515 | 144   | --  | 24.5                        |
| APR<br>30...  | 1045 | 914   | --  | 17.0                        |              |      |   |   |                             |
| 03436460 - LITTLE WEST FORK RED RIVER NEAR NEW PROVIDENCE, TN   |      |   |   |                             |              |      |   |   |                             |
| OCT<br>01...  | 1345 | 22  | --  | 14.0                        | JUL<br>19... | 1115 | 35  | 355   | 24.5                        |
| 03436635 - RUSKIN CAVE SPRING AT RUSKIN, TN                     |      |   |   |                             |              |      |   |   |                             |
| JUL<br>03...  | 1325 | 1.04  | 290   | 14.5                        | SEP<br>03... | 1200 | .77   | 295   | 14.5                        |
| 17...   | 1145 | .93   | 290   | --                          | 11...        | 1320 | .66   | 300   | 14.5                        |
| AUG<br>09...  | 1205 | .66   | 290   | 14.5                        | 18...        | 1120 | .60   | 300   | 14.5                        |
| 15...   | 1115 | .62   | 290   | 14.5                        |              |      |   |   |                             |



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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|--|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| CUMBERLAND RIVER BASIN--Continued                  |      |   |   |                             |       |      |   |   |                             |
| 03436690 - YELLOW CREEK AT ELLIS MILLS, TN         |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAR   |      |   |   |                             |
| 03...  | 1415 | 22  | --  | 15.0                        | 14... | 1220 | 199   | --  | 12.0                        |
| NOV  |      |   |   |                             | MAY   |      |   |   |                             |
| 08...  | 1530 | 84  | --  | 13.0                        | 08... | 1020 | 166   | --  | 16.0                        |
| DEC  |      |   |   |                             | JUN   |      |   |   |                             |
| 13...  | 1415 | 93  | --  | 13.0                        | 11... | 1545 | 50  | --  | 25.0                        |
| JAN  |      |   |   |                             | JUL   |      |   |   |                             |
| 31...  | 1230 | 539   | --  | 7.0                         | 03... | 1155 | 59  | 305   | 21.5                        |
| FEB  |      |   |   |                             | 17... | 0930 | 39  | --  | 22.0                        |
| 13...  | 1300 | 579   | --  | 7.0                         | AUG   |      |   |   |                             |
| 15...  | 1315 | 367   | --  | 9.0                         | 21... | 1318 | 90  | --  | 22.0                        |
| 19...  | 1220 | 334   | --  | 10.0                        |       |      |   |   |                             |
| 03436700 - YELLOW CREEK NEAR SHILOH, TN            |      |   |   |                             |       |      |   |   |                             |
| JUL  |      |   |   |                             | SEP   |      |   |   |                             |
| 03...  | 1015 | 79  | 305   | 21.0                        | 03... | 1040 | 43  | 290   | 23.5                        |
| 17...  | 0945 | 42  | 272   | 23.0                        | 11... | 1115 | 35  | 290   | 24.0                        |
| AUG  |      |   |   |                             | 18... | 1005 | 32  | 295   | 20.0                        |
| 09...  | 1035 | 36  | 285   | 24.5                        |       |      |   |   |                             |
| 15...  | 1000 | 32  | 285   | 25.5                        |       |      |   |   |                             |
| TENNESSEE RIVER BASIN                              |      |   |   |                             |       |      |   |   |                             |
| 03454850 - LONG CREEK NEAR DEL RIO, TN             |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 20...  | 0910 | 5.6   | 270   | 8.0                         |       |      |   |   |                             |
| 03455000 - FRENCH BROAD RIVER NEAR NEWPORT, TN     |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAR   |      |   |   |                             |
| 10...  | 1500 | 1020  | --  | 18.5                        | 26... | 1445 | 1880  | --  | 11.5                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 27...  | 1050 | 1040  | --  | 6.0                         | 26... | 0950 | 903   | --  | 26.0                        |
| JAN  |      |   |   |                             | SEP   |      |   |   |                             |
| 17...  | 1330 | 1440  | --  | 3.0                         | 10... | 0940 | 1360  | --  | 25.0                        |
| FEB  |      |   |   |                             |       |      |   |   |                             |
| 21...  | 1030 | 2570  | --  | 5.0                         |       |      |   |   |                             |
| 034611996 - CRYING CREEK ABOVE COSBY, TN           |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 19...  | 1220 | 4.3   | 13  | 6.0                         | 26... | 1120 | 1.3   | 17  | 15.0                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 17...  | 1210 | 1.0   | 20  | 18.5                        |       |      |   |   |                             |
| 03461200 - COSBY CREEK ABOVE COSBY, TN             |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 10...  | 1115 | 4.5   | --  | 14.5                        | 07... | 1450 | 7.9   | --  | 14.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 27...  | 1215 | 5.8   | --  | 8.5                         | 25... | 1405 | 5.4   | --  | 17.5                        |
| JAN  |      |   |   |                             | JUL   |      |   |   |                             |
| 16...  | 1415 | 12  | --  | 2.0                         | 31... | 1050 | 7.2   | --  | 18.5                        |
| FEB  |      |   |   |                             | SEP   |      |   |   |                             |
| 20...  | 1330 | 20  | --  | 6.0                         | 11... | 0945 | 8.1   | --  | 18.0                        |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 27...  | 0905 | 25  | --  | 6.0                         |       |      |   |   |                             |
| 03461266 - GREENBRIER CREEK AT HWY 32 AT COSBY, TN |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 19...  | 1315 | 6.8   | 27  | 8.0                         | 17... | 1255 | 2.4   | 44  | 20.5                        |
| 03461450 - ENGLISH CREEK NEAR NEWPORT, TN          |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 19...  | 1400 | 6.7   | 385   | 7.0                         | 26... | 1035 | 1.6   | 380   | 16.0                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 17...  | 1340 | 2.0   | 380   | 20.5                        |       |      |   |   |                             |
| 03464815 - SOUTH INDIAN CREEK NEAR ERWIN, TN       |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 19...  | 0950 | 68  | 52  | 4.0                         | 18... | 1520 | 24  | 92  | 21.5                        |

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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|--|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                 |      |   |   |                             |       |      |   |   |                             |
| 03465500 - NOLICHUCKY RIVER AT EMBREEVILLE, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 10...  | 1445 | 362   | --  | 20.0                        | 15... | 1125 | 954   | --  | 20.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 20...  | 1010 | 542   | --  | 6.0                         | 27... | 0940 | 472   | --  | 22.0                        |
| FEB  |      |   |   |                             | AUG   |      |   |   |                             |
| 28...  | 1345 | 2130  | --  | 9.0                         | 08... | 1220 | 709   | --  | 21.0                        |
| APR  |      |   |   |                             | SEP   |      |   |   |                             |
| 10...  | 1640 | 948   | --  | 11.0                        | 12... | 1130 | 457   | --  | 21.0                        |
| 03465780 - CLEAR FORK NEAR FAIRVIEW, TN          |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 20...  | 0920 | 6.6   | 385   | 8.5                         | 25... | 1515 | 1.2   | 460   | 21.0                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 18...  | 1030 | 1.6   | 470   | 21.0                        |       |      |   |   |                             |
| 03466099 - JOCKEY CREEK AT LIMESTONE, TN         |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 20...  | 1100 | 15  | 275   | 10.5                        |       |      |   |   |                             |
| 03466228 - SINKING CREEK AT AFTON, TN            |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 11...  | 0940 | 5.0   | --  | 14.0                        | 08... | 1015 | 6.5   | --  | 15.5                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 26...  | 0915 | 3.3   | --  | 6.0                         | 25... | 0945 | 9.2   | --  | 19.0                        |
| JAN  |      |   |   |                             | JUL   |      |   |   |                             |
| 17...  | 0925 | 5.6   | --  | 4.0                         | 30... | 1450 | 9.6   | --  | 21.5                        |
| FEB  |      |   |   |                             | SEP   |      |   |   |                             |
| 21...  | 1325 | 29  | --  | 8.0                         | 10... | 1310 | 4.0   | --  | 20.5                        |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 26...  | 1050 | 9.8   | --  | 11.0                        |       |      |   |   |                             |
| 03466295 - CAMP CREEK AT CAMP CREEK, TN          |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 20...  | 1020 | 27  | 140   | 12.0                        | 25... | 1630 | 10  | 175   | 17.0                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 19...  | 0800 | 11  | 170   | 14.0                        |       |      |   |   |                             |
| 03466870 - ROARING FORK NEAR GREENEVILLE, TN     |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 20...  | 1200 | 11  | 440   | 10.0                        | 19... | 0900 | 3.2   | 460   | 20.5                        |
| 03466880 - ROARING FORK NEAR MOSHEIM, TN         |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 20...  | 1220 | 21  | 460   | 10.5                        | 19... | 1000 | 6.7   | 510   | 23.0                        |
| 03467490 - BENT CREEK NEAR SPRINGVALE, TN        |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 19...  | 1510 | 16  | 315   | 10.5                        | 17... | 1510 | 4.6   | 450   | 24.5                        |
| 03469185 - MIDDLE CREEK NEAR PIGEON FORGE, TN    |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 19...  | 1520 | 1.8   | 175   | 13.0                        | 17... | 0915 | .35   | 325   | 22.0                        |
| 03469610 - COVE CREEK AT HATCHERTOWN, TN         |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 19...  | 1030 | 7.1   | 200   | 10.0                        | 26... | 1405 | 2.2   | 250   | 20.0                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 17...  | 1020 | 2.8   | 340   | 19.5                        |       |      |   |   |                             |
| 03470120 - BOYDS CREEK NEAR PROVIDENCE, TN       |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | JUL   |      |   |   |                             |
| 19...  | 0915 | .64   | 260   | 11.0                        | 17... | 0810 | .11   | 320   | 18.0                        |
| 03476515 - BEIDLEMAN CREEK NEAR CAYWOOD FORD, TN |      |   |   |                             |       |      |   |   |                             |
| MAR  |      |   |   |                             | SEP   |      |   |   |                             |
| 19...  | 1235 | 21  | 375   | 7.0                         | 25... | 1120 | 8.3   | 395   | 14.5                        |
| JUL  |      |   |   |                             |       |      |   |   |                             |
| 18...  | 1310 | 12  | 390   | 20.5                        |       |      |   |   |                             |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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|---|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                    |      |   |   |                             |              |      |   |   |                             |
| 03476960 - INDIAN CREEK AT CHILDRESS, TN            |      |   |   |                             |              |      |   |   |                             |
| MAR<br>19...  | 1135 | 1.2   | 180   | 9.5                         | JUL<br>18... | 1350 | .58   | 285   | 26.5                        |
| 03478615 - EVANS CREEK NEAR BLOUNTVILLE, TN         |      |   |   |                             |              |      |   |   |                             |
| MAR<br>19...  | 1345 | 1.7   | 435   | 10.5                        | JUL<br>18... | 1205 | 1.1   | 570   | 23.5                        |
| 03487550 - REEDY CREEK AT OREBANK, TN               |      |   |   |                             |              |      |   |   |                             |
| OCT<br>10...  | 0910 | 8.0   | --  | 17.0                        | MAY<br>16... | 0815 | 13  | --  | 19.0                        |
| 23...   | 1055 | 8.2   | --  | 17.0                        | JUN<br>27... | 1535 | 9.3   | --  | 22.0                        |
| NOV<br>21...  | 0840 | 11  | --  | 4.0                         | JUL<br>30... | 1200 | 53  | --  | 19.0                        |
| JAN<br>31...  | 1030 | 21  | --  | 1.5                         | AUG<br>07... | 1400 | 29  | --  | 18.5                        |
| FEB<br>27...  | 1210 | 60  | --  | 11.0                        | SEP<br>13... | 0905 | 9.7   | --  | 26.5                        |
| APR<br>11...  | 1035 | 24  | --  | 10.5                        |              |      |   |   |                             |
| 03490500 - HOLSTON RIVER AT SURGOINSVILLE, TN       |      |   |   |                             |              |      |   |   |                             |
| OCT<br>09...  | 1500 | 1310  | --  | 20.0                        | JUN<br>28... | 1000 | 2760  | --  | 24.5                        |
| NOV<br>21...  | 1240 | 2460  | --  | 10.5                        | AUG<br>08... | 1540 | 1890  | --  | 21.5                        |
| FEB<br>27...  | 1605 | 4970  | --  | 12.0                        | SEP<br>13... | 1230 | 2180  | --  | 19.0                        |
| APR<br>09...  | 1205 | 1860  | --  | 13.0                        |              |      |   |   |                             |
| 03491000 - BIG CREEK NEAR ROGERSVILLE, TN           |      |   |   |                             |              |      |   |   |                             |
| OCT<br>11...  | 0930 | 5.1   | --  | 16.0                        | JUN<br>28... | 1100 | 4.2   | --  | 20.0                        |
| NOV<br>19...  | 1505 | 162   | --  | 9.0                         | AUG<br>07... | 1000 | 4.6   | --  | 20.5                        |
| FEB<br>26...  | 1120 | 97  | --  | 12.5                        | SEP<br>11... | 1500 | 5.0   | --  | 24.0                        |
| APR<br>09...  | 1350 | 69  | --  | 10.5                        |              |      |   |   |                             |
| 03491200 - BIG CREEK TRIBUTARY NEAR ROGERSVILLE, TN |      |   |   |                             |              |      |   |   |                             |
| MAR<br>27...  | 0905 | 25  | --  | 6.0                         | JUL<br>31... | 1050 | 7.2   | --  | 18.5                        |
| 03491300 - BEECH CREEK AT KEPLER, TN                |      |   |   |                             |              |      |   |   |                             |
| OCT<br>09...  | 1030 | 3.9   | --  | 17.0                        | MAY<br>17... | 0950 | 12  | --  | 18.0                        |
| NOV<br>19...  | 1620 | 52  | --  | 8.5                         | JUN<br>26... | 1330 | 10  | --  | 23.5                        |
| DEC<br>12...  | 0945 | 9.8   | --  | 5.0                         | JUL<br>22... | 1515 | 3.2   | --  | 26.5                        |
| JAN<br>30...  | 1300 | 10  | --  | 1.0                         | AUG<br>07... | 1055 | 4.2   | --  | 21.0                        |
| FEB<br>26...  | 1145 | 96  | --  | 12.0                        | SEP<br>11... | 1615 | 3.3   | --  | 24.0                        |
| APR<br>11...  | 1555 | 37  | --  | 11.5                        |              |      |   |   |                             |
| 03491493 - DODSON CREEK NEAR ROGERSVILLE, TN        |      |   |   |                             |              |      |   |   |                             |
| MAR<br>20...  | 1320 | 2.3   | 290   | 8.5                         | JUL<br>19... | 1030 | .40   | 320   | 22.0                        |
| 03497300 - LITTLE RIVER ABOVE TOWNSEND, TN          |      |   |   |                             |              |      |   |   |                             |
| OCT<br>09...  | 1200 | 42  | --  | 16.0                        | MAY<br>07... | 1120 | 142   | --  | 15.0                        |
| NOV<br>26...  | 1325 | 81  | --  | 4.5                         | JUN<br>24... | 1245 | 92  | --  | 20.0                        |
| JAN<br>16...  | 1115 | 108   | --  | .5                          | JUL<br>31... | 1530 | 78  | --  | 23.0                        |
| FEB<br>20...  | 1020 | 336   | --  | 4.0                         | SEP<br>11... | 1430 | 58  | --  | 21.0                        |
| MAR<br>27...  | 1215 | 244   | --  | 9.0                         |              |      |   |   |                             |

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|--|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                     |      |   |   |                             |              |      |   |   |                             |
| 03498500 - LITTLE RIVER NEAR MARYVILLE, TN           |      |   |   |                             |              |      |   |   |                             |
| OCT<br>09...   | 1000 | 88  | --  | 17.0                        | MAY<br>07... | 0925 | 221   | --  | 18.0                        |
| NOV<br>26...   | 1515 | 132   | --  | 6.0                         | JUN<br>24... | 1010 | 147   | --  | 22.5                        |
| JAN<br>16...   | 0930 | 217   | --  | 2.0                         | AUG<br>01... | 1100 | 121   | --  | 24.0                        |
| MAR<br>15...   | 0900 | 376   | --  | 9.0                         | SEP<br>12... | 1030 | 90  | --  | 22.5                        |
| 03518630 - MORGAN BRANCH AT TELlico PLAINS, TN       |      |   |   |                             |              |      |   |   |                             |
| MAR<br>19...   | 1040 | 2.4   | --  | 13.0                        | JUL<br>19... | 1305 | .65   | 292   | 22.5                        |
| 03520170 - POND CREEK NEAR ADOLPHUS, TN              |      |   |   |                             |              |      |   |   |                             |
| MAR<br>20...   | 1605 | 23  | --  | 15.0                        | JUL<br>19... | 0830 | 8.0   | 240   | 23.5                        |
| 03528000 - CLINCH RIVER ABOVE TAZEWell, TN           |      |   |   |                             |              |      |   |   |                             |
| OCT<br>11...   | 1205 | 217   | --  | 19.5                        | JUN<br>26... | 1035 | 491   | --  | 25.0                        |
| MAR<br>13...   | 1250 | 1360  | --  | 10.5                        | SEP<br>11... | 1130 | 318   | --  | 26.0                        |
| APR<br>23...   | 1225 | 968   | --  | 21.5                        |              |      |   |   |                             |
| 03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TN   |      |   |   |                             |              |      |   |   |                             |
| OCT<br>05...   | 0845 | 9.7   | --  | 14.0                        | MAR<br>13... | 1020 | 57  | --  | 9.5                         |
| NOV<br>09...   | 1425 | 16  | --  | 10.0                        | APR<br>23... | 1100 | 41  | --  | 18.0                        |
| DEC<br>18...   | 1200 | 25  | --  | 11.0                        | JUL<br>15... | 1005 | 13  | --  | 23.5                        |
| FEB<br>06...   | 1130 | 171   | --  | 6.0                         | AUG<br>21... | 1135 | 12  | --  | 23.0                        |
| 03538225 - POPLAR CREEK NEAR OAK RIDGE, TN           |      |   |   |                             |              |      |   |   |                             |
| OCT<br>02...   | 1035 | 5.6   | --  | 12.5                        | MAR<br>06... | 1400 | 75  | --  | 10.0                        |
| NOV<br>08...   | 1100 | 17  | --  | 7.5                         | APR<br>12... | 1125 | 101   | --  | 15.5                        |
| DEC<br>21...   | 1150 | 180   | --  | 12.0                        | MAY<br>17... | 1105 | 31  | --  | 17.0                        |
| JAN<br>16...   | 1240 | 50  | --  | 5.0                         | JUN<br>26... | 1435 | 36  | --  | 20.0                        |
| 03538250 - EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN |      |   |   |                             |              |      |   |   |                             |
| OCT<br>02...   | 1415 | 16  | --  | 15.0                        | APR<br>12... | 1305 | 33  | --  | 15.0                        |
| DEC<br>20...   | 1130 | 28  | --  | 14.0                        | JUL<br>03... | 1035 | 24  | --  | 20.0                        |
| JAN<br>16...   | 1130 | 25  | --  | 5.0                         | AUG<br>17... | 1745 | 632   | --  | 22.0                        |
| MAR<br>04...   | 1050 | 28  | --  | 12.0                        | 19...        | 1015 | 63  | --  | 20.0                        |
| 03539800 - OBED RIVER NEAR LANCING, TN               |      |   |   |                             |              |      |   |   |                             |
| JAN<br>17...   | 1050 | 581   | --  | 4.0                         | JUL<br>16... | 1220 | 26  | --  | 27.0                        |
| MAY<br>08...   | 1040 | 296   | --  | 18.0                        | AUG<br>20... | 1220 | 463   | --  | 24.0                        |
| JUN<br>11...   | 1040 | 167   | --  | 24.5                        |              |      |   |   |                             |
| 03540500 - EMORY RIVER AT OAKDALE, TN                |      |   |   |                             |              |      |   |   |                             |
| OCT<br>03...   | 1210 | 24  | --  | 16.0                        | MAY<br>29... | 1150 | 139   | --  | 22.0                        |
| FEB<br>11...   | 1300 | 1750  | --  | 4.5                         | JUN<br>27... | 0945 | 63  | --  | 25.5                        |
| MAR<br>27...   | 1235 | 977   | --  | 10.0                        | JUL<br>29... | 1405 | 198   | --  | 25.0                        |



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                |      |   |   |                             |       |      |   |   |                             |
| 03543500 - SEWEE CREEK NEAR DECATUR, TN         |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | MAY   |      |   |   |                             |
| 12...   | 1145 | 35  | --  | 17.0                        | 02... | 0845 | 61  | --  | 17.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 20...   | 1315 | 100   | --  | 9.0                         | 18... | 1015 | 229   | --  | 20.0                        |
| DEC   |      |   |   |                             | AUG   |      |   |   |                             |
| 19...   | 1415 | 59  | --  | 13.5                        | 07... | 1125 | 29  | --  | 21.0                        |
| FEB   |      |   |   |                             | SEP   |      |   |   |                             |
| 08...   | 1200 | 243   | --  | 4.0                         | 12... | 1230 | 27  | --  | 22.0                        |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 21...   | 1330 | 68  | --  | 12.0                        |       |      |   |   |                             |
| 03555882 - BARNEY CREEK NEAR COKER CREEK, TN    |      |   |   |                             |       |      |   |   |                             |
| MAR   |      |   |   |                             | JUL   |      |   |   |                             |
| 19...   | 1130 | 2.8   | --  | 5.5                         | 19... | 1205 | 1.3   | 54  | 21.5                        |
| 03563000 - OCOEE RIVER AT EMF, TN               |      |   |   |                             |       |      |   |   |                             |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 15...   | 1455 | 1140  | --  | 12.0                        | 19... | 1310 | 1050  | --  | 20.0                        |
| FEB   |      |   |   |                             | AUG   |      |   |   |                             |
| 06...   | 1340 | 1150  | --  | 5.0                         | 01... | 1440 | 1310  | --  | 22.0                        |
| 03564500 - OCOEE RIVER AT PARKSVILLE, TN        |      |   |   |                             |       |      |   |   |                             |
| DEC   |      |   |   |                             | JUN   |      |   |   |                             |
| 19...   | 0845 | 2120  | --  | 10.0                        | 19... | 1605 | 1120  | --  | 22.5                        |
| 03565300 - SOUTH CHESTNUT CREEK NEAR BENTON, TN |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | JUN   |      |   |   |                             |
| 11...   | 1015 | 5.2   | --  | 18.0                        | 20... | 0945 | 6.1   | --  | 16.0                        |
| NOV   |      |   |   |                             | JUL   |      |   |   |                             |
| 16...   | 1005 | 9.5   | --  | 9.5                         | 02... | 0915 | 12  | --  | 19.5                        |
| DEC   |      |   |   |                             | 15... | 1140 | 5.6   | --  | 24.0                        |
| 19...   | 1140 | 7.6   | --  | 12.0                        | AUG   |      |   |   |                             |
| FEB   |      |   |   |                             | 02... | 0840 | 4.2   | --  | 22.0                        |
| 07...   | 1315 | 86  | --  | 5.0                         | 16... | 1325 | 3.0   | --  | 23.0                        |
| MAR   |      |   |   |                             | 29... | 1200 | 5.0   | --  | 22.0                        |
| 20...   | 1030 | 15  | --  | 9.0                         | SEP   |      |   |   |                             |
| MAY   |      |   |   |                             | 04... | 1130 | 3.8   | --  | 22.0                        |
| 01...   | 1105 | 12  | --  | 19.0                        | 10... | 1350 | 3.6   | --  | 23.0                        |
| 23...   | 1145 | 7.0   | --  | 19.0                        | 17... | 1330 | 3.2   | --  | 16.0                        |
| JUN   |      |   |   |                             | 25... | 1215 | 3.1   | --  | 16.5                        |
| 04...   | 0845 | 4.7   | --  | 22.0                        |       |      |   |   |                             |
| 03565500 - OOSTANAULA CREEK NEAR SANFORD, TN    |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | MAY   |      |   |   |                             |
| 11...   | 1300 | 38  | --  | 18.0                        | 01... | 1345 | 40  | --  | 18.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 16...   | 1240 | 37  | --  | 10.0                        | 20... | 1215 | 33  | --  | 17.0                        |
| DEC   |      |   |   |                             | AUG   |      |   |   |                             |
| 18...   | 1540 | 40  | --  | 13.0                        | 02... | 1035 | 17  | --  | 22.5                        |
| FEB   |      |   |   |                             | SEP   |      |   |   |                             |
| 07...   | 1030 | 143   | --  | 7.5                         | 11... | 1310 | 20  | --  | 22.0                        |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 20...   | 1330 | 58  | --  | 11.0                        |       |      |   |   |                             |
| 03566200 - BRYMER CREEK NEAR MCDONALD, TN       |      |   |   |                             |       |      |   |   |                             |
| JUN   |      |   |   |                             | AUG   |      |   |   |                             |
| 03...   | 1345 | 2.2   | 420   | 21.0                        | 21... | 1310 | 2.2   | 465   | 21.0                        |
| JUL   |      |   |   |                             |       |      |   |   |                             |
| 09...   | 1205 | 2.0   | 460   | 20.5                        |       |      |   |   |                             |
| 03566253 - GREASY CREEK AT HOPEWELL, TN         |      |   |   |                             |       |      |   |   |                             |
| MAR   |      |   |   |                             | SEP   |      |   |   |                             |
| 20...   | 0855 | .81   | --  | 7.0                         | 27... | 1045 | .11   | 355   | 15.5                        |
| JUL   |      |   |   |                             |       |      |   |   |                             |
| 19...   | 1010 | .22   | 258   | 22.0                        |       |      |   |   |                             |

## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|---|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                        |      |   |   |                             |       |      |   |   |                             |
| 03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TN            |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 12...   | 1230 | 9.9   | --  | 17.0                        | 24... | 1005 | 14  | --  | 17.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 07...   | 1145 | 8.0   | --  | 11.0                        | 03... | 1610 | 5.4   | --  | 24.5                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 11...   | 1140 | 19  | --  | 10.0                        | 09... | 1045 | 5.7   | --  | 20.5                        |
| JAN   |      |   |   |                             | AUG   |      |   |   |                             |
| 29...   | 1710 | 14  | --  | 6.0                         | 20... | 1300 | 5.5   | --  | 23.0                        |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 12...   | 1225 | 16  | --  | 14.0                        |       |      |   |   |                             |
| 03567500 - SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | MAY   |      |   |   |                             |
| 12...   | 1000 | 196   | --  | 18.0                        | 13... | 1350 | 1170  | --  | 18.0                        |
| NOV   |      |   |   |                             | 13... | 1500 | 1190  | --  | 18.0                        |
| 07...   | 1505 | 180   | --  | 13.5                        | 15... | 1215 | 567   | --  | 18.5                        |
| DEC   |      |   |   |                             | JUN   |      |   |   |                             |
| 11...   | 1420 | 414   | --  | 9.0                         | 04... | 0910 | 170   | --  | 23.5                        |
| JAN   |      |   |   |                             | JUL   |      |   |   |                             |
| 30...   | 1510 | 330   | --  | 4.5                         | 09... | 0825 | 147   | --  | 23.0                        |
| MAR   |      |   |   |                             | AUG   |      |   |   |                             |
| 12...   | 1510 | 367   | --  | 15.0                        | 20... | 1015 | 250   | --  | 23.5                        |
| APR   |      |   |   |                             |       |      |   |   |                             |
| 24...   | 1310 | 293   | --  | 19.0                        |       |      |   |   |                             |
| 03568000 - TENNESSEE RIVER AT CHATTANOOGA, TN           |      |   |   |                             |       |      |   |   |                             |
| JUL   |      |   |   |                             |       |      |   |   |                             |
| 31...   | 1545 | 41600   | --  | 28.5                        |       |      |   |   |                             |
| 03571000 - SEQUATCHIE RIVER NEAR WHITWELL, TN           |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 09...   | 1620 | 97  | --  | 17.0                        | 23... | 1520 | 576   | --  | 19.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 06...   | 1445 | 172   | --  | 14.0                        | 05... | 0935 | 197   | --  | 23.0                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 10...   | 1445 | 668   | --  | 11.0                        | 08... | 1610 | 133   | --  | 23.0                        |
| MAR   |      |   |   |                             | AUG   |      |   |   |                             |
| 11...   | 1415 | 512   | --  | 13.0                        | 19... | 1440 | 429   | --  | 23.0                        |
| 03574702 - FLINT RIVER AT LINCOLN, TN                   |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | JUL   |      |   |   |                             |
| 04...   | 1515 | 7.3   | 145   | 15.0                        | 18... | 1300 | 11  | 87  | 25.0                        |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 12...   | 1430 | 45  | --  | 14.5                        |       |      |   |   |                             |
| 03578000 - ELK RIVER NEAR PELHAM, TN                    |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 18...   | 1120 | 3.5   | --  | 18.0                        | 25... | 1010 | 72  | --  | 13.5                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 05...   | 1435 | 53  | --  | 14.5                        | 11... | 0800 | 9.7   | --  | 20.5                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 12...   | 1255 | 74  | --  | 9.5                         | 01... | 1130 | 6.0   | --  | 21.0                        |
| JAN   |      |   |   |                             | AUG   |      |   |   |                             |
| 31...   | 1045 | 149   | --  | 7.0                         | 22... | 0915 | 121   | --  | 17.0                        |
| MAR   |      |   |   |                             |       |      |   |   |                             |
| 13...   | 1240 | 91  | --  | 10.5                        |       |      |   |   |                             |
| 03582205 - NORRIS CREEK BELOW HOWELL, TN                |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | JUL   |      |   |   |                             |
| 04...   | 1700 | .02   | 440   | 17.0                        | 18... | 1405 | .28   | 375   | 25.0                        |
| MAR   |      |   |   |                             | AUG   |      |   |   |                             |
| 15...   | 1230 | 14  | --  | 15.0                        | 19... | 1355 | 2.4   | 440   | 24.0                        |
| JUN   |      |   |   |                             |       |      |   |   |                             |
| 10...   | 1500 | .98   | 390   | 24.0                        |       |      |   |   |                             |
| 03584500 - ELK RIVER NEAR PROSPECT, TN                  |      |   |   |                             |       |      |   |   |                             |
| OCT   |      |   |   |                             | APR   |      |   |   |                             |
| 04...   | 1250 | 508   | --  | 23.0                        | 30... | 1050 | 957   | --  | 20.0                        |
| NOV   |      |   |   |                             | JUN   |      |   |   |                             |
| 05...   | 1515 | 1460  | --  | 14.0                        | 11... | 0940 | 375   | --  | 25.0                        |
| DEC   |      |   |   |                             | JUL   |      |   |   |                             |
| 11...   | 1405 | 2180  | --  | 12.0                        | 18... | 1030 | 319   | --  | 30.0                        |
| JAN   |      |   |   |                             | AUG   |      |   |   |                             |
| 31...   | 1130 | 1700  | --  | 4.0                         | 19... | 1700 | 2010  | --  | 25.5                        |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE  | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|--|------|---|---|-----------------------------|-------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued             |      |   |   |                             |       |      |   |   |                             |
| 03588000 - SHOAL CREEK AT LAWRENCEBURG, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 03...  | 1745 | 24  | --  | 16.0                        | 02... | 1010 | 113   | --  | 16.5                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 06...  | 1430 | 53  | --  | 14.0                        | 13... | 0905 | 29  | --  | 10.0                        |
| FEB  |      |   |   |                             | JUL   |      |   |   |                             |
| 09...  | 1700 | 94  | --  | 4.0                         | 17... | 1445 | 31  | --  | 25.0                        |
| MAR  |      |   |   |                             | AUG   |      |   |   |                             |
| 14...  | 1550 | 57  | --  | 12.0                        | 20... | 1515 | 40  | --  | 23.5                        |
| 03588400 - CHISHOLM CREEK AT WESTPOINT, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 03...  | 1215 | 16  | --  | 15.0                        | 01... | 1425 | 80  | --  | 17.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 06...  | 0822 | 52  | --  | 13.5                        | 12... | 1210 | 34  | --  | 21.0                        |
| FEB  |      |   |   |                             | JUL   |      |   |   |                             |
| 10...  | 1245 | 116   | --  | 5.0                         | 16... | 1415 | 19  | --  | 24.0                        |
| MAR  |      |   |   |                             | AUG   |      |   |   |                             |
| 14...  | 1325 | 48  | --  | 11.0                        | 21... | 1345 | 35  | --  | 23.0                        |
| 03588500 - SHOAL CREEK AT IRON CITY, TN      |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | MAY   |      |   |   |                             |
| 03...  | 1030 | 139   | --  | 14.0                        | 01... | 1200 | 703   | --  | 17.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 06...  | 1120 | 429   | --  | 14.0                        | 12... | 1040 | 331   | --  | 26.0                        |
| DEC  |      |   |   |                             | JUL   |      |   |   |                             |
| 20...  | 1325 | 826   | --  | 12.0                        | 16... | 1015 | 178   | --  | 25.0                        |
| MAR  |      |   |   |                             | AUG   |      |   |   |                             |
| 14...  | 1125 | 429   | --  | 8.5                         | 21... | 1130 | 332   | --  | 22.5                        |
| 03596000 - DUCK RIVER BELOW MANCHESTER, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | APR   |      |   |   |                             |
| 18...  | 1345 | 41  | --  | 24.0                        | 25... | 1220 | 62  | --  | 19.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 05...  | 1045 | 133   | --  | 15.5                        | 11... | 1100 | 19  | --  | 24.0                        |
| DEC  |      |   |   |                             | JUL   |      |   |   |                             |
| 13...  | 1220 | 99  | --  | 11.5                        | 01... | 1500 | 31  | --  | 24.5                        |
| JAN  |      |   |   |                             | AUG   |      |   |   |                             |
| 31...  | 1300 | 301   | --  | 7.0                         | 22... | 1130 | 43  | --  | 22.5                        |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 14...  | 1120 | 106   | --  | 12.5                        |       |      |   |   |                             |
| 03598000 - DUCK RIVER NEAR SHELBYVILLE, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | APR   |      |   |   |                             |
| 05...  | 0945 | 173   | --  | 14.5                        | 29... | 1125 | 222   | --  | 20.0                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 05...  | 1045 | 761   | --  | 14.0                        | 10... | 1235 | 190   | --  | 24.5                        |
| DEC  |      |   |   |                             | JUL   |      |   |   |                             |
| 10...  | 1510 | 713   | --  | 10.0                        | 02... | 1030 | 197   | --  | 22.0                        |
| JAN  |      |   |   |                             | AUG   |      |   |   |                             |
| 30...  | 1345 | 266   | --  | 3.0                         | 12... | 1207 | 191   | --  | 26.0                        |
| MAR  |      |   |   |                             |       |      |   |   |                             |
| 12...  | 1010 | 344   | --  | 12.0                        |       |      |   |   |                             |
| 03600500 - BIG BIGBY CREEK AT SANDY HOOK, TN |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | APR   |      |   |   |                             |
| 03...  | 1445 | 4.6   | --  | 17.5                        | 30... | 1500 | 27  | --  | 19.5                        |
| NOV  |      |   |   |                             | JUN   |      |   |   |                             |
| 07...  | 1150 | 10  | --  | 14.0                        | 11... | 1240 | 9.4   | --  | 25.0                        |
| JAN  |      |   |   |                             | JUL   |      |   |   |                             |
| 31...  | 1530 | 39  | --  | 4.0                         | 17... | 0945 | 6.8   | --  | 24.0                        |
| MAR  |      |   |   |                             | AUG   |      |   |   |                             |
| 13...  | 1530 | 29  | --  | 14.5                        | 20... | 1035 | 9.1   | --  | 22.5                        |
| 03601100 - BIG BIGBY CREEK AT NEEDMORE, TN   |      |   |   |                             |       |      |   |   |                             |
| OCT  |      |   |   |                             | JUL   |      |   |   |                             |
| 10...  | 1655 | 9.8   | 400   | 17.0                        | 17... | 1115 | 12  | 275   | 24.0                        |
| MAR  |      |   |   |                             | AUG   |      |   |   |                             |
| 13...  | 1715 | 70  | --  | 13.5                        | 20... | 0835 | 21  | 350   | 24.0                        |
| JUN  |      |   |   |                             |       |      |   |   |                             |
| 11...  | 1330 | 16  | 290   | 25.5                        |       |      |   |   |                             |

## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|--|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                                 |      |   |   |                             |              |      |   |   |                             |
| 03602192 - WEST PINEY RIVER NEAR DICKSON, TN                     |      |   |   |                             |              |      |   |   |                             |
| MAY<br>21...   | 1548 | 16  | 234   | 19.0                        | JUL<br>24... | 1305 | 9.8   | 250   | 20.5                        |
| JUL<br>11...   | 1230 | 12  | 216   | 23.5                        | SEP<br>04... | 0948 | 9.3   | 232   | 22.5                        |
| 03602194 - WEST PINEY RIVER BELOW STATE HWY 48, NEAR DICKSON, TN |      |   |   |                             |              |      |   |   |                             |
| OCT<br>03...   | 1315 | 8.2   | 265   | 13.5                        | JUL<br>24... | 1140 | 10  | 250   | 19.5                        |
| MAY<br>29...   | 1650 | 19  | 225   | 19.0                        | SEP<br>04... | 1055 | 10  | 258   | 21.0                        |
| JUL<br>11...   | 1345 | 13  | 249   | 21.0                        |              |      |   |   |                             |
| 03602230 - PINEY RIVER ABOVE PINWOOD, TN                         |      |   |   |                             |              |      |   |   |                             |
| MAY<br>30...   | 0810 | 47  | 250   | 18.0                        | SEP<br>05... | 0813 | 25  | 282   | 22.0                        |
| JUL<br>12...   | 1000 | 34  | 265   | 23.0                        |              |      |   |   |                             |
| 03602265 - PINEY RIVER AT PINWOOD, TN                            |      |   |   |                             |              |      |   |   |                             |
| MAY<br>30...   | 1020 | 100   | 246   | 19.0                        | SEP<br>05... | 1030 | 60  | 260   | 22.0                        |
| JUL<br>11...   | 1230 | 75  | 250   | 24.0                        |              |      |   |   |                             |
| 03602500 - PINEY RIVER AT VERNON, TN                             |      |   |   |                             |              |      |   |   |                             |
| OCT<br>10...   | 1315 | 86  | --  | 21.5                        | APR<br>23... | 1320 | 188   | --  | 18.0                        |
| NOV<br>06...   | 1350 | 131   | --  | 12.0                        | JUN<br>04... | 1100 | 148   | --  | 18.0                        |
| DEC<br>10...   | 1620 | 203   | --  | 10.0                        | JUL<br>10... | 1130 | 120   | --  | 24.0                        |
| JAN<br>29...   | 1255 | 204   | --  | 4.0                         | 24...        | 0945 | 103   | --  | 22.5                        |
| MAR<br>15...   | 1245 | 279   | --  | 10.5                        | AUG<br>19... | 1256 | 114   | --  | 24.0                        |
| 03603000 - DUCK RIVER ABOVE HURRICANE MILLS, TN                  |      |   |   |                             |              |      |   |   |                             |
| OCT<br>11...   | 1115 | 933   | --  | 24.0                        | MAY<br>02... | 1250 | 4640  | --  | 18.0                        |
| NOV<br>08...   | 1200 | 3000  | --  | 12.0                        | 30...        | 1250 | 1270  | --  | 20.0                        |
| JAN<br>30...   | 1030 | 2110  | --  | 3.0                         | JUL<br>15... | 1530 | 710   | --  | 30.0                        |
| MAR<br>12...   | 1745 | 2920  | --  | 14.0                        | AUG<br>21... | 0900 | 1890  | --  | 24.0                        |
| 03604500 - BUFFALO RIVER NEAR LOBELVILLE, TN                     |      |   |   |                             |              |      |   |   |                             |
| OCT<br>10...   | 1615 | 639   | --  | 27.0                        | APR<br>25... | 0945 | 1860  | --  | 18.0                        |
| NOV<br>06...   | 1700 | 805   | --  | 12.0                        | MAY<br>28... | 1240 | 686   | --  | 21.0                        |
| DEC<br>12...   | 1330 | 904   | --  | 10.0                        | JUN<br>25... | 1300 | 744   | --  | 24.0                        |
| 21...  | 1250 | 1220  | --  | 14.0                        | 26...        | 1230 | 704   | --  | 26.0                        |
| JAN<br>29...   | 1555 | 782   | --  | 4.0                         | AUG<br>28... | 1115 | 766   | --  | 26.0                        |
| FEB<br>25...   | 1400 | 1690  | --  | 13.0                        | SEP<br>25... | 1230 | 389   | --  | 19.0                        |
| MAR<br>25...   | 1145 | 1210  | --  | 9.0                         |              |      |   |   |                             |
| 03605555 - TRACE CREEK ABOVE DENVER, TN                          |      |   |   |                             |              |      |   |   |                             |
| AUG<br>19...   | 1530 | 15  | --  | 27.0                        |              |      |   |   |                             |
| 03605968 - WHITEOAK CREEK NEAR CONCORD, TN                       |      |   |   |                             |              |      |   |   |                             |
| JUN<br>11...   | 1115 | 31  | 220   | 21.0                        | JUL<br>18... | 1430 | 21  | 230   | 28.0                        |



## MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) | DATE         | TIME | STREAM-<br>FLOW,<br>INSTAN-<br>TANEOUS<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | TEMPER-<br>ATURE<br>(DEG C) |
|--|------|---|---|-----------------------------|--------------|------|---|---|-----------------------------|
| TENNESSEE RIVER BASIN--Continued                   |      |   |   |                             |              |      |   |   |                             |
| 03606020 - HURRICANE CREEK NEAR STEWART, TN        |      |   |   |                             |              |      |   |   |                             |
| JUN<br>11...                                       | 1110 | 7.0   | 250   | 22.0                        | JUL<br>16... | 1555 | 4.0   | 170   | 26.0                        |
| 03606125 - STANDING ROCK CREEK NEAR FORT HENRY, TN |      |   |   |                             |              |      |   |   |                             |
| JUN<br>11...                                       | 1230 | 18  | 120   | 22.0                        | JUL<br>18... | 1200 | 9.4   | 154   | 26.0                        |

## CARTER COUNTY

361738082132900. Local number, Ct:H-1.

LOCATION.--Lat 36°17'38", long 82°13'29", Hydrologic Unit 06010103, 3.5 mi south of Elizabethton, 0.8 mi north of Gap Creek.

Owner: Gap Creek community.

AQUIFER: Bonaker dolomite of middle Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 24 in., depth 31 ft, casing information not available.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete tile, 2.50 ft above land-surface datum.

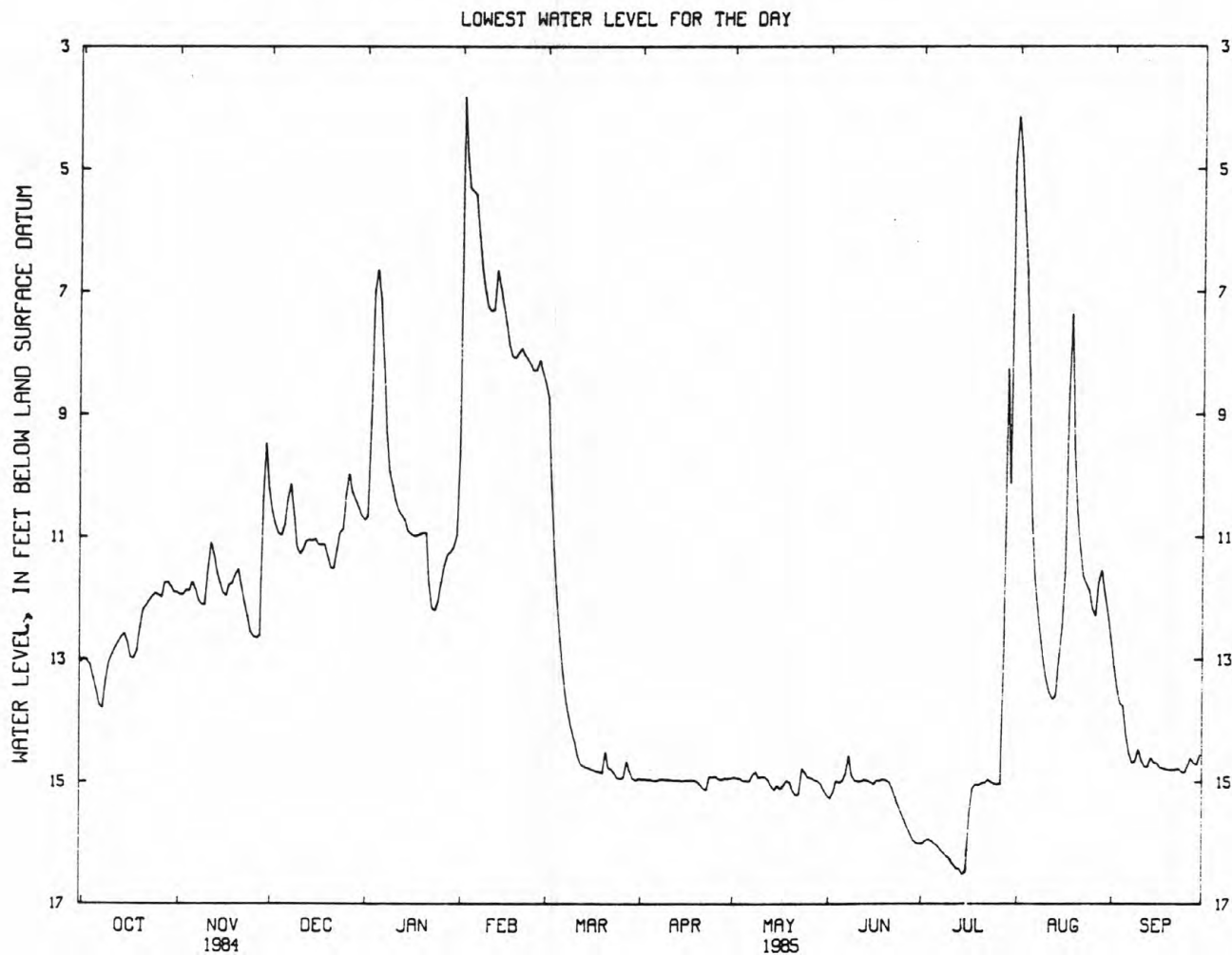
REMARKS.--Highest water level readings may be influenced for short periods by surface inflow.

PERIOD OF RECORD.--April 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.50 ft below land-surface datum, July 30, 1985; lowest, 26.01 ft below land-surface datum Dec. 22, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT   | NOV   | DEC   | JAN   | FEB  | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|---------------|---|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 5             | 13.30   | 11.88 | 10.98 | 6.63  | 5.36 | 12.04 | 14.97 | 14.99 | 15.01 | 15.97 | 8.33  | 13.77 |
| 10            | 13.04   | 12.11 | 11.17 | 10.16 | 7.24 | 14.16 | 14.97 | 14.94 | 14.98 | 16.23 | 13.09 | 14.47 |
| 15            | 12.57   | 11.76 | 11.06 | 10.90 | 7.20 | 14.77 | 14.99 | 15.14 | 15.00 | 16.51 | 12.96 | 14.69 |
| 20            | 12.48   | 11.62 | 11.33 | 10.93 | 7.99 | 14.86 | 15.00 | 15.01 | 14.97 | 15.05 | 9.49  | 14.81 |
| 25            | 11.92   | 12.56 | 10.88 | 12.05 | 8.28 | 14.94 | 14.93 | 14.85 | 15.50 | 15.03 | 11.87 | 14.85 |
| EOM           | 11.91   | 9.46  | 10.66 | 10.98 | 8.31 | 14.98 | 14.95 | 15.13 | 16.00 | 4.87  | 12.25 | 14.56 |
| WTR YEAR 1985 | HIGHEST 0.50 JULY 30, 1985 LOWEST 16.51 JULY 15, 1985 |       |       |       |      |       |       |       |       |       |       |       |



## GROUND-WATER LEVELS

## DAVIDSON COUNTY

360835086441100. Local number, Dv:L-10

LOCATION.--Lat 36°08'35", long 86°44'11", Hydrologic Unit 05130202, 220 ft south of Elm Hill Pike, 0.3 mi west of Louisville and Nashville Railroad crossing, 0.4 mi east of Fesslers Lane in Nashville.  
Owner: U. S. Geological Survey.

AQUIFER.--Carters and Lebanon Limestones of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6in., depth 262 ft, cased to 40 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 515 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.5 ft above land-surface datum.

REMARKS.--Records good.

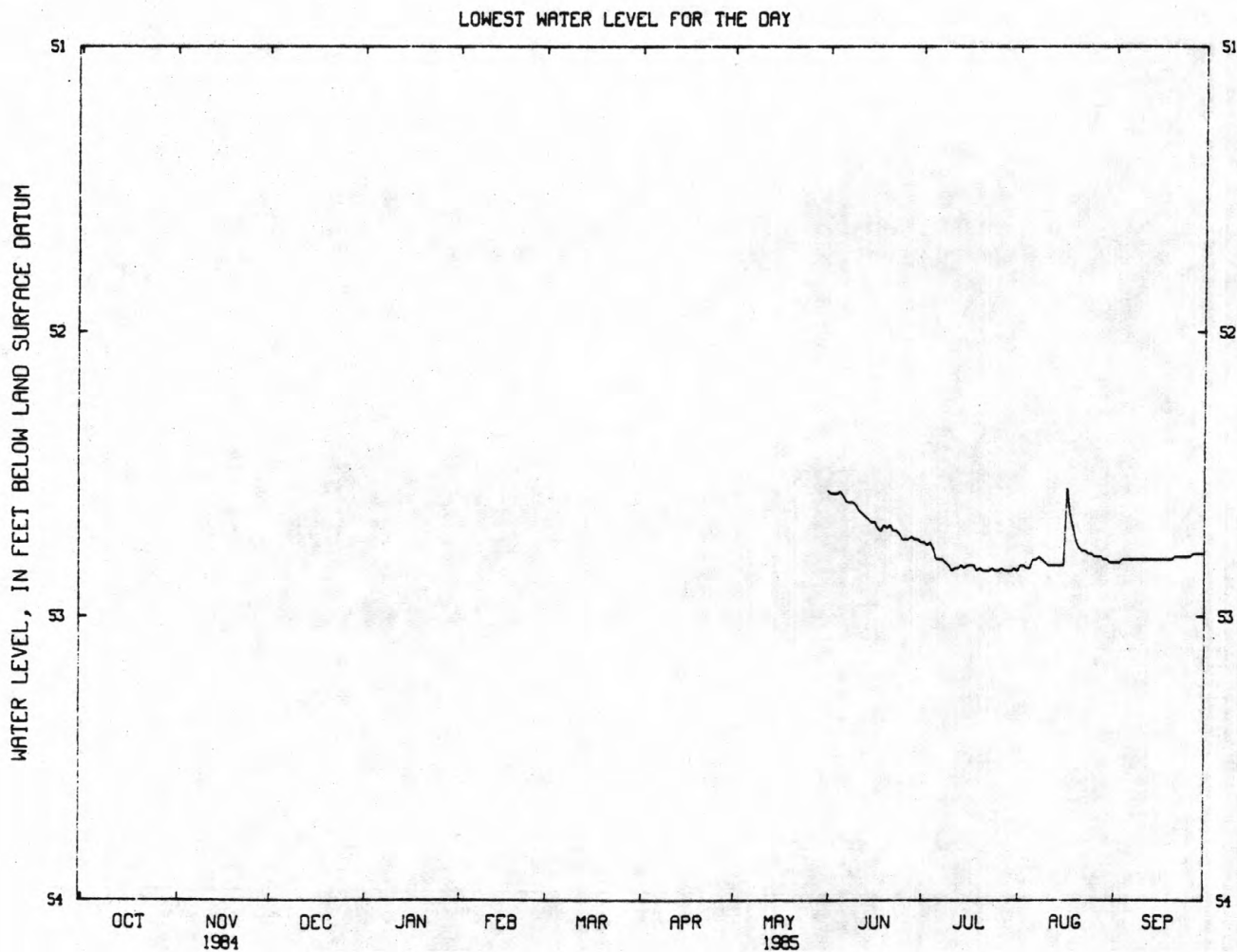
PERIOD OF RECORD.--June to September 1985.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 51.99 ft below land-surface datum, Aug. 17, 1985; lowest water level 52.84 ft below land-surface datum, many days July and August, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR JUNE 1985 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN   | JUL   | AUG   | SEP   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|
| 5   |     |     |     |     |     |     |     |     | 52.56 | 52.76 | 52.83 | 52.80 |
| 10  |     |     |     |     |     |     |     |     | 52.61 | 52.82 | 52.81 | 52.80 |
| 15  |     |     |     |     |     |     |     |     | 52.67 | 52.83 | 52.82 | 52.80 |
| 20  |     |     |     |     |     |     |     |     | 52.69 | 52.83 | 52.74 | 52.80 |
| 25  |     |     |     |     |     |     |     |     | 52.73 | 52.84 | 52.78 | 52.79 |
| EOM |     |     |     |     |     |     |     |     | 52.73 | 52.83 | 52.81 | 52.78 |

PERIOD JUNE TO SEPTEMBER 1985    HIGHEST 51.99    AUG 17, 1985    LOWEST 52.84 Many days July and August, 1985



## GROUND-WATER LEVELS

335

## DICKSON COUNTY

360429087233602. Local number, Di:F-19.

LOCATION.--Lat 36°04'29", long 87°23'36", Hydrologic Unit 06040003, on north side of State Highway 48, 0.4 mi northeast of State Highway 48 bridge over East Piney River at Dickson.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 387 ft, cased to 22 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 755 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of instrument shelf, 1.26 ft above land-surface datum.

REMARKS.--Records good. Water level affected by pumping of nearby well.

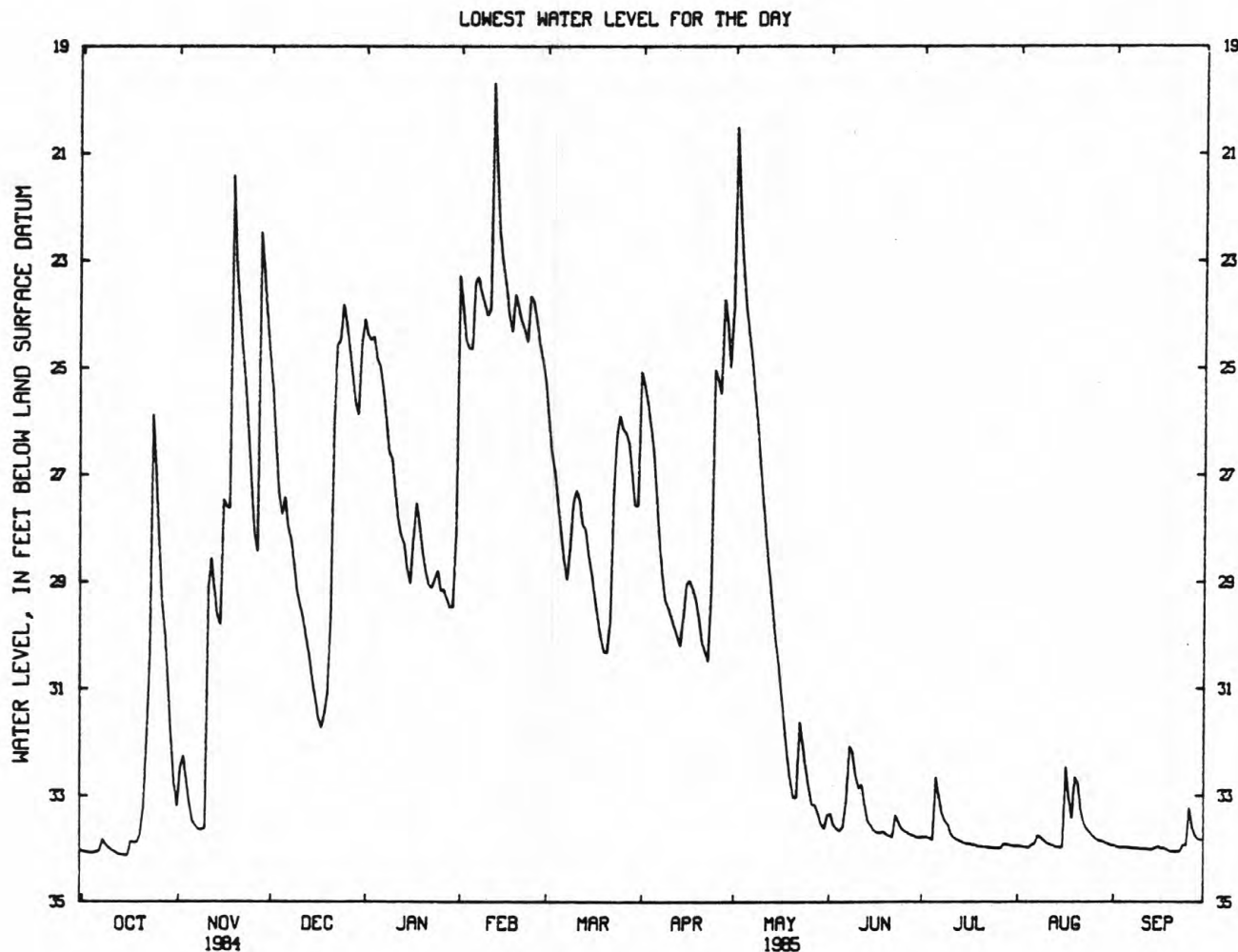
PERIOD OF RECORD.--July 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.52 ft below land-surface datum, Mar. 12, 13, 1975; lowest 34.13 ft below land-surface datum, Oct. 16, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 34.07 | 33.15 | 27.74 | 24.84 | 24.64 | 27.47 | 26.53 | 23.85 | 33.67 | 33.84 | 33.98 | 33.97 |
| 10  | 33.98 | 33.61 | 29.18 | 26.69 | 24.02 | 27.52 | 29.48 | 26.87 | 32.61 | 33.55 | 33.84 | 34.00 |
| 15  | 34.12 | 29.80 | 30.81 | 28.76 | 23.03 | 28.53 | 29.65 | 30.07 | 33.56 | 33.89 | 33.97 | 33.98 |
| 20  | 33.74 | 23.01 | 31.07 | 28.43 | 23.85 | 30.31 | 29.67 | 32.72 | 33.73 | 33.96 | 32.65 | 34.05 |
| 25  | 26.86 | 27.17 | 23.81 | 28.78 | 23.77 | 25.88 | 25.03 | 32.48 | 33.62 | 33.99 | 33.70 | 33.93 |
| EOM | 32.78 | 24.01 | 24.52 | 28.13 | 24.85 | 27.58 | 24.99 | 33.63 | 33.79 | 33.95 | 33.91 | 33.83 |

WTR YR 1985 HIGHEST 17.64 FEB 11, 1985 LOWEST 34.13 OCT 16, 1984





## GROUND-WATER LEVELS

## HAMILTON COUNTY

350234085181200. Local number, Hm:G-36.

LOCATION.--Lat 35°02'34", long 85°18'12", Hydrologic Unit 06020001, in Tennessee Valley Authority parking lot, Douglas Street in Chattanooga.  
Owner: Tennessee Valley Authority.

AQUIFER.--Knox Dolomite of Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 16 in. to 120 ft, 6 in. to 250 ft, cased to 27 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 670.3 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of instrument shelf, 1.5 ft above land-surface datum.

REMARKS.--The well has been pumped at rates up to 1,200 gal/min over a 68 hour period indicating a specific capacity of 20.4 [(gal/min)/ft]. No record Aug. 17-20, equipment failure.

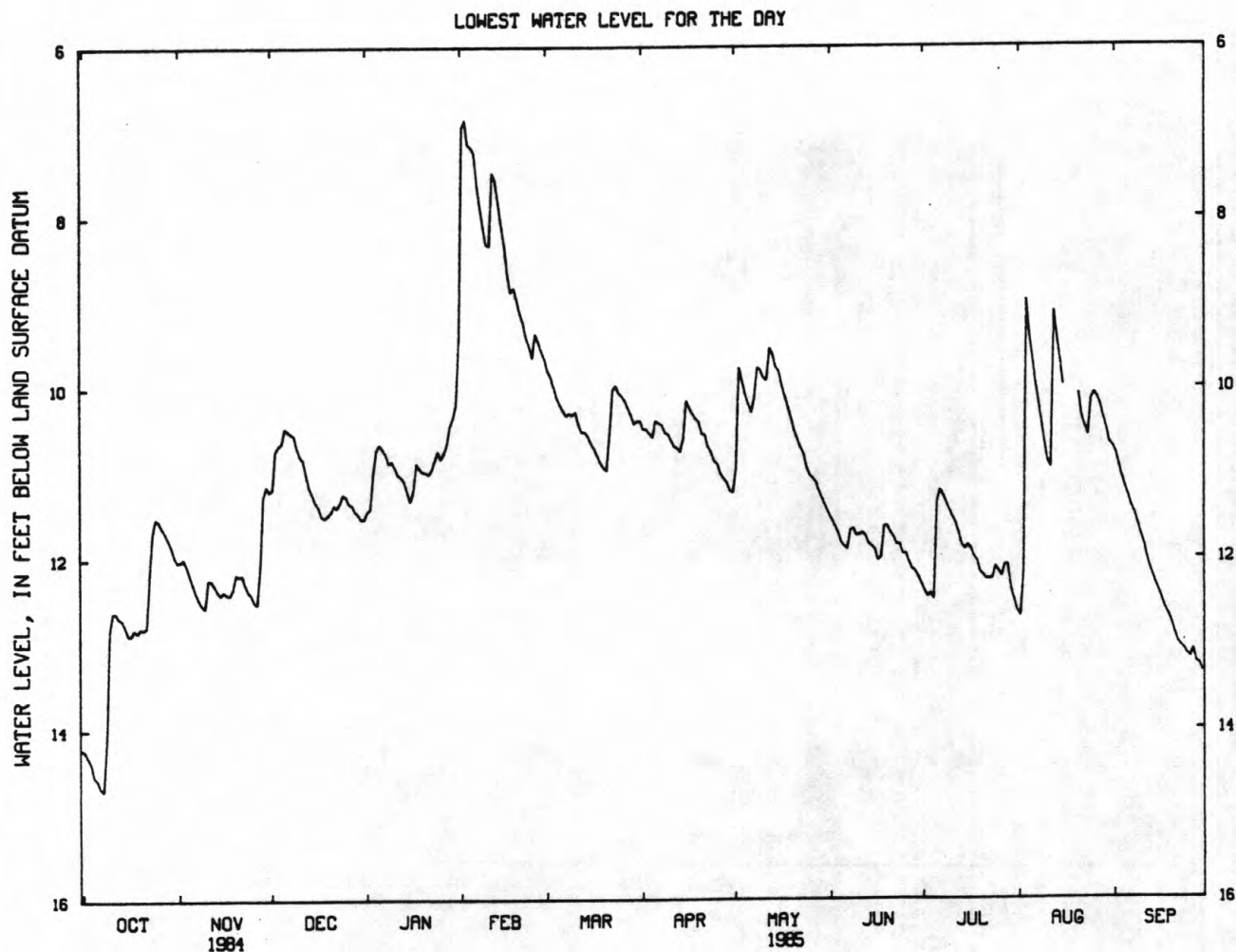
PERIOD OF RECORD.--April 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.35 ft below land-surface datum, Dec. 1, 1982; lowest, 14.71 ft below land-surface datum, Oct. 8, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB  | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 14.55 | 12.18 | 10.63 | 10.71 | 7.17 | 10.11 | 10.57 | 10.07 | 11.81 | 12.48 | 9.37  | 11.18 |
| 10  | 12.83 | 12.57 | 10.69 | 10.85 | 8.30 | 10.31 | 10.54 | 9.78  | 11.73 | 11.44 | 10.66 | 11.73 |
| 15  | 12.78 | 12.41 | 11.23 | 11.20 | 8.07 | 10.55 | 10.59 | 9.75  | 11.86 | 11.90 | 9.68  | 12.32 |
| 20  | 12.80 | 12.17 | 11.48 | 10.97 | 8.95 | 10.93 | 10.39 | 10.36 | 11.62 | 12.17 | ---   | 12.77 |
| 25  | 11.51 | 12.41 | 11.23 | 10.73 | 9.63 | 10.05 | 10.86 | 10.94 | 11.95 | 12.10 | 10.14 | 13.14 |
| EOM | 11.96 | 11.14 | 11.53 | 10.19 | 9.55 | 10.38 | 11.20 | 11.39 | 12.22 | 12.49 | 10.66 | 13.34 |

WTR YR 1985 HIGHEST 6.42 FEB 2, 1985 LOWEST 14.71 OCT 8, 1984



## HAMILTON COUNTY--Continued

351428085003600. Local number, Bm:O-15.

LOCATION.--Lat 35°14'28", long 85°00'36", Hydrologic Unit 06020001, at Smith Road and State Highway 58, near Snow Hill.

Owner: Savannah Valley Utility District.

AQUIFER.--Knox Dolomite of the Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 10 in., depth 262 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 735 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of back shelter panel, 8.00 ft above land-surface datum.

REMARKS.--Well previously published as "at Savannah Valley". Water level affected intermittently by pumping from municipal supply well 300 ft south. Negative values indicate water levels above land-surface. No record Oct. 1-10, equipment failure.

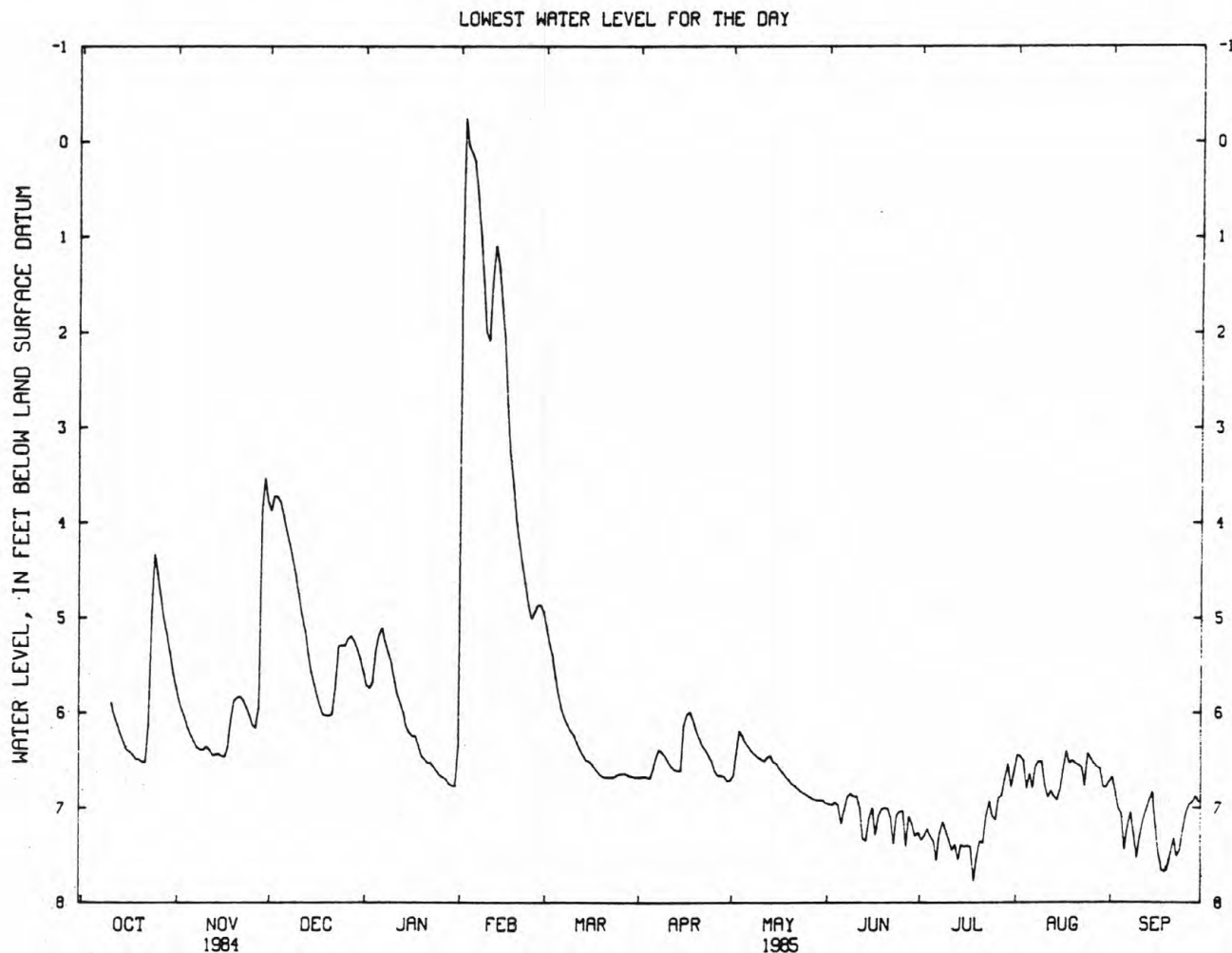
PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.40 ft above land-surface datum, May 31, 1979; lowest, 7.77 ft below land-surface datum, July 19, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 5   | ---  | 6.16 | 3.78 | 5.34 | .11  | 5.62 | 6.69 | 6.25 | 6.97 | 7.30 | 6.79 | 7.06 |
| 10  | ---  | 6.39 | 4.55 | 5.46 | 2.00 | 6.19 | 6.46 | 6.47 | 6.88 | 7.24 | 6.51 | 7.53 |
| 15  | 6.31 | 6.43 | 5.57 | 6.15 | 1.64 | 6.50 | 6.61 | 6.52 | 7.11 | 7.39 | 6.92 | 6.83 |
| 20  | 6.49 | 5.87 | 6.03 | 6.46 | 3.98 | 6.66 | 6.18 | 6.71 | 7.00 | 7.53 | 6.50 | 7.60 |
| 25  | 4.33 | 6.02 | 5.29 | 6.62 | 5.01 | 6.66 | 6.51 | 6.85 | 7.04 | 7.09 | 6.42 | 7.22 |
| EOM | 5.56 | 3.53 | 5.43 | 6.77 | 4.86 | 6.68 | 6.72 | 6.92 | 7.30 | 6.78 | 6.78 | 6.94 |

WTR YR 1985 HIGHEST -0.32 FEB 3, 1985 LOWEST 7.77 JULY 19, 1985



## GROUND-WATER LEVELS

## HUMPHREYS COUNTY

360020087573300. Local number, Hs:H-1.

LOCATION.--Lat 36°00'20", long 87°57'33", Hydrologic Unit 06040005, 100 ft north of Woodland Drive at New Johnsonville.  
Owner: A. M. Powers.

AQUIFER.--Camden Chert of early Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 187 ft, cased to 72 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--Records good.

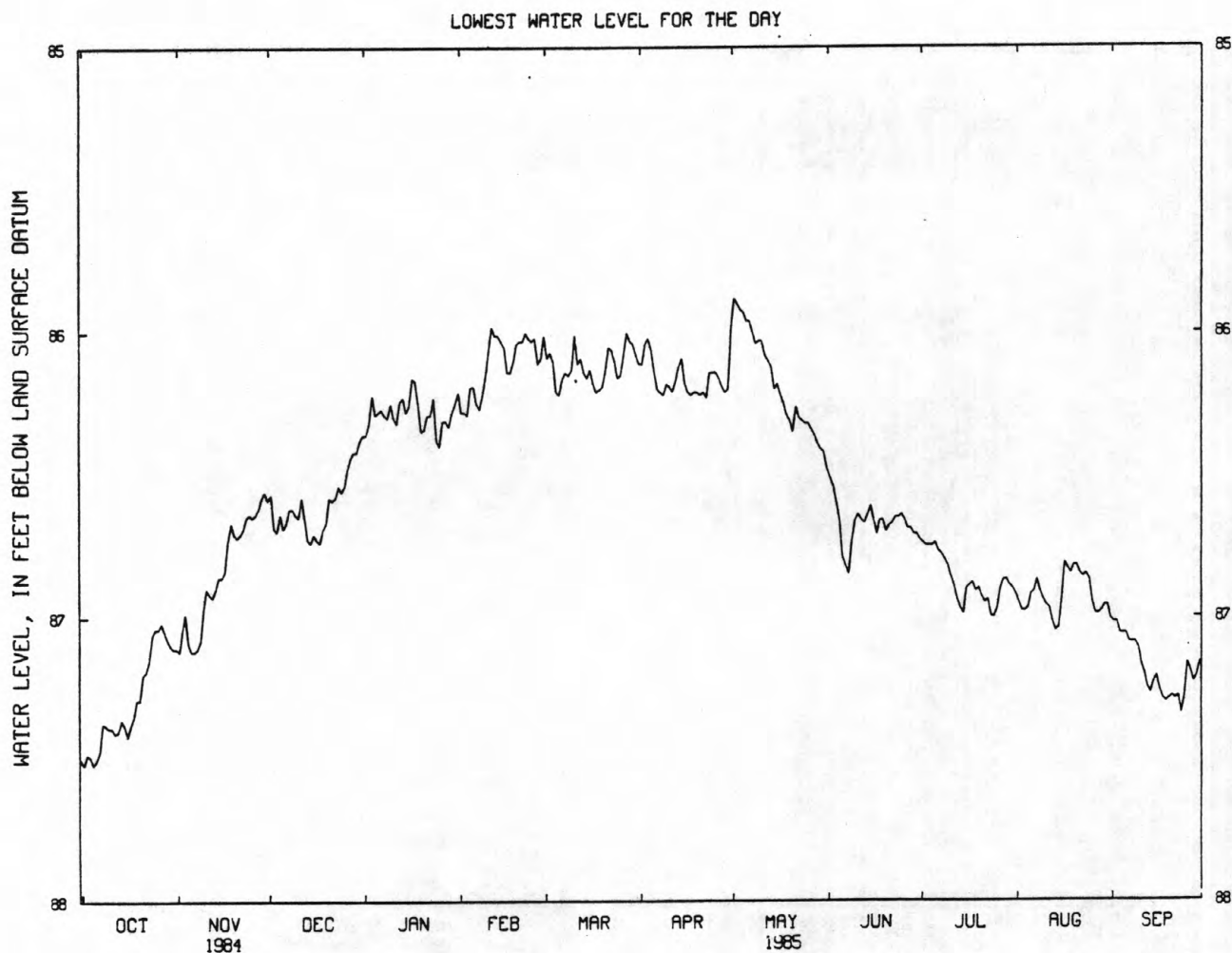
PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.31 ft below land-surface datum, May 25, 1983; lowest, 90.20 ft below land-surface datum, Nov. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 87.52 | 87.09 | 86.64 | 86.29 | 86.19 | 86.21 | 86.06 | 85.93 | 86.66 | 86.75 | 86.97 | 87.06 |
| 10  | 87.39 | 86.97 | 86.64 | 86.25 | 86.15 | 86.13 | 86.18 | 86.03 | 86.66 | 86.82 | 86.94 | 87.11 |
| 15  | 87.38 | 86.86 | 86.74 | 86.28 | 86.03 | 86.16 | 86.09 | 86.20 | 86.61 | 86.99 | 87.04 | 87.23 |
| 20  | 87.29 | 86.71 | 86.67 | 86.35 | 86.04 | 86.19 | 86.21 | 86.31 | 86.70 | 86.90 | 86.82 | 87.29 |
| 25  | 87.04 | 86.64 | 86.56 | 86.38 | 86.03 | 86.16 | 86.14 | 86.32 | 86.64 | 87.00 | 86.87 | 87.29 |
| EOM | 87.11 | 86.56 | 86.38 | 86.25 | 86.09 | 86.08 | 86.20 | 86.42 | 86.71 | 86.90 | 86.96 | 87.16 |

WTR YR 1985 HIGHEST 85.80 MAY 1, 1985 LOWEST 87.52 OCT 2, 1984



## LAUDERDALE COUNTY

353839089493500. Local number, Ld:F-4.

LOCATION.--Lat 35°38'39", long 89°49'35", Hydrologic Unit 08010208, 1.1 mi north of State Highway 87, at Fort Pillow State Park.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6 to 3 in., depth 879 ft, cased to 869 ft, screened 869 to 879 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 437.05 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft above land-surface datum.

REMARKS.--No record January 5 to March 15.

PERIOD OF RECORD.--April 1966 to current year.

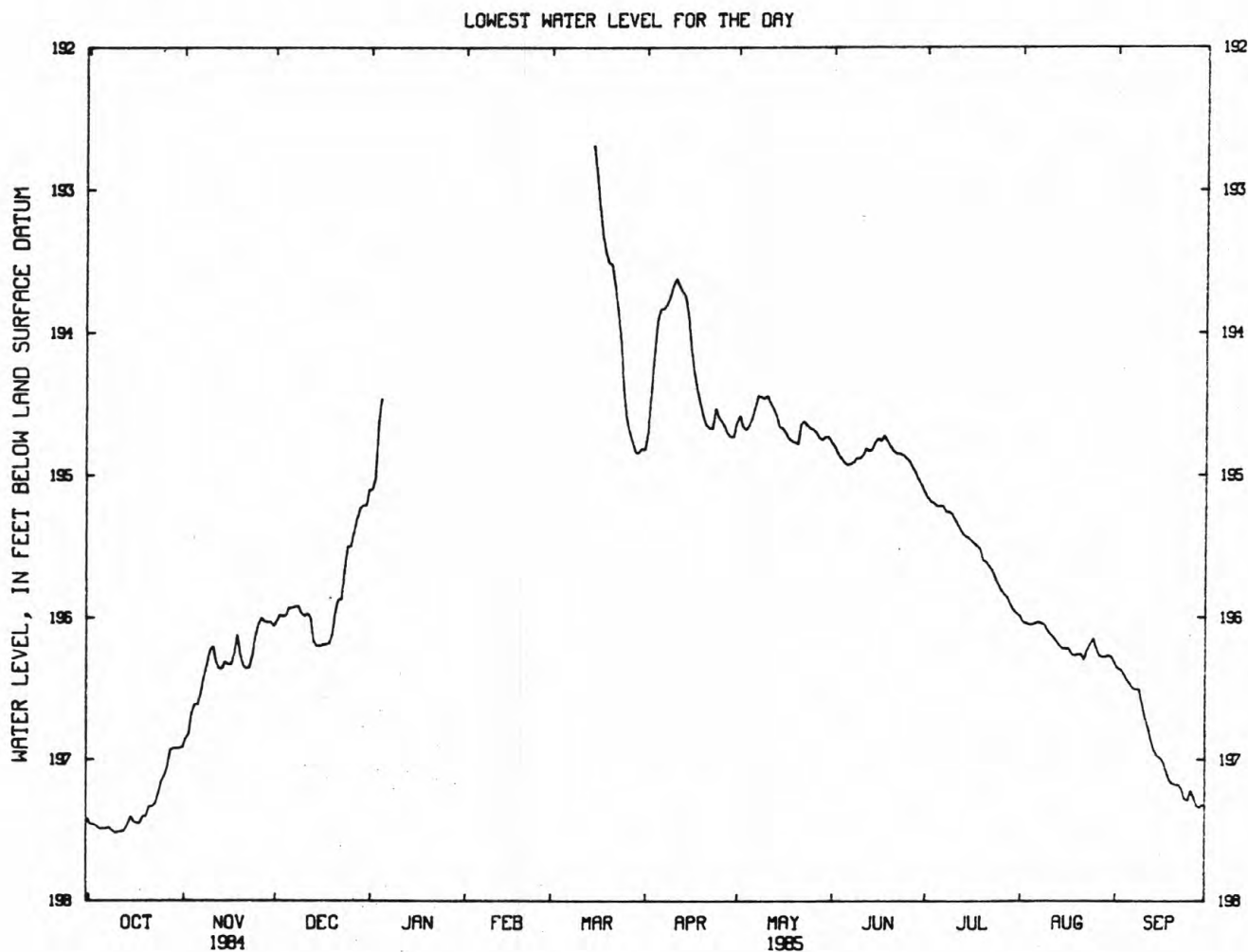
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 187.76 ft below land-surface datum, Apr. 7, 1975; lowest, 197.90 ft below land-surface datum, Oct. 16, 17, 18, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT    | NOV    | DEC    | JAN    | FEB | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|-----|--------|--------|--------|--------|--------|--------|--------|
| 5   | 197.49 | 196.61 | 195.98 | 194.46 |     | ---    | 193.91 | 194.65 | 194.91 | 195.22 | 196.05 | 196.44 |
| 10  | 197.52 | 196.23 | 195.97 | ---    |     | ---    | 193.67 | 194.46 | 194.88 | 195.28 | 196.09 | 196.61 |
| 15  | 197.40 | 196.31 | 196.20 | ---    |     | 192.69 | 193.87 | 194.66 | 194.77 | 195.44 | 196.22 | 196.98 |
| 20  | 197.40 | 196.26 | 196.12 | ---    |     | 193.51 | 194.59 | 194.77 | 194.80 | 195.60 | 196.26 | 197.17 |
| 25  | 197.15 | 196.12 | 195.50 | ---    |     | 194.40 | 194.59 | 194.67 | 194.88 | 195.77 | 196.15 | 197.29 |
| EOM | 196.92 | 196.03 | 195.21 | ---    |     | 194.81 | 194.73 | 194.73 | 195.07 | 195.97 | 196.28 | 197.32 |

WTR YEAR 1985 HIGHEST \*192.62 MAR 15, 1985 LOWEST 197.52 OCT 10, 1984

\* May have been higher during period of missing record.





## LAUDERDALE COUNTY--Continued

354158089384300. Local number, Ld: G-12.

LOCATION.--Lat 35°41'58", long 89°38'43", Hydrologic Unit 08010208, 130 ft west of Glimp-Ripley Road, 0.1 mi northeast of State Highway 87 at Glimp.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 440 ft, cased to 420 ft, screened 420 to 440 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

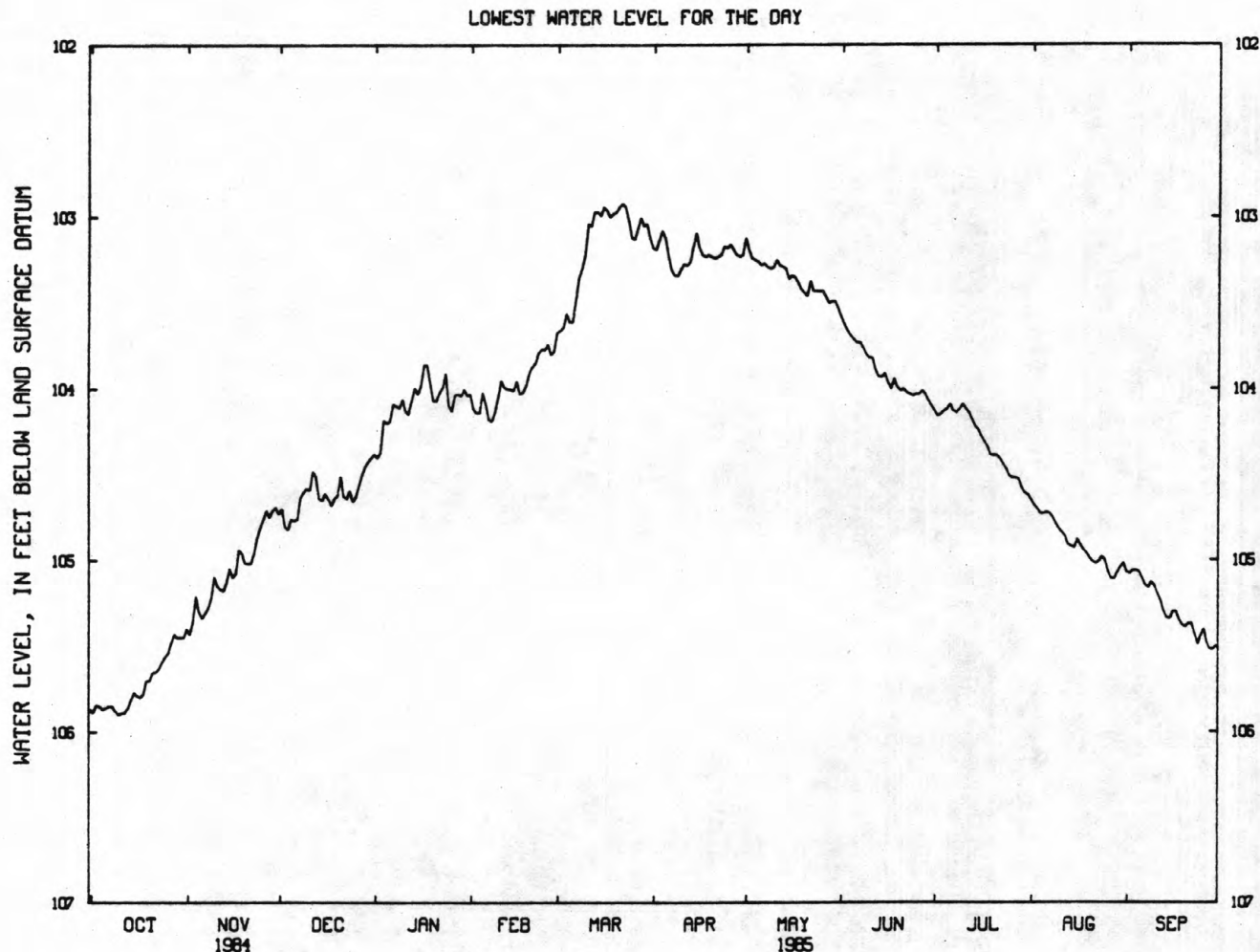
DATUM.--Elevation of land-surface datum is 360 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 2.70 ft above land-surface datum.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.02 ft below land-surface datum, May 29, 1983; lowest, 106.45 ft below land-surface datum, Oct. 29, 30, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT     | NOV    | DEC    | JAN          | FEB    | MAR    | APR    | MAY          | JUN    | JUL    | AUG    | SEP    |
|---------------|---------|--------|--------|--------------|--------|--------|--------|--------------|--------|--------|--------|--------|
| 5             | 105.87  | 105.30 | 104.76 | 104.20       | 104.02 | 103.61 | 103.12 | 103.26       | 103.71 | 104.12 | 104.73 | 105.07 |
| 10            | 105.90  | 105.10 | 104.58 | 104.06       | 104.05 | 103.22 | 103.30 | 103.29       | 103.82 | 104.09 | 104.82 | 105.15 |
| 15            | 105.77  | 105.05 | 104.65 | 104.03       | 104.01 | 102.99 | 103.09 | 103.36       | 103.91 | 104.24 | 104.93 | 105.34 |
| 20            | 105.70  | 105.02 | 104.62 | 104.07       | 103.91 | 102.97 | 103.23 | 103.44       | 104.01 | 104.39 | 104.99 | 105.39 |
| 25            | 105.56  | 104.81 | 104.66 | 104.10       | 103.77 | 103.12 | 103.18 | 103.43       | 104.03 | 104.51 | 105.00 | 105.44 |
| EOM           | 105.45  | 104.69 | 104.40 | 104.04       | 103.78 | 103.12 | 103.22 | 103.53       | 104.10 | 104.62 | 105.02 | 105.50 |
| WTR YEAR 1985 | HIGHEST |        | 102.82 | MAR 21, 1985 |        | LOWEST | 105.90 | OCT 10, 1984 |        |        |        |        |



## LAUDERDALE COUNTY--Continued

354357089271701. Local number, Ld:J-5.

LOCATION.--Lat 35°43'57", long 89°27'17", Hydrologic Unit 08010208, 50 ft southeast of Conner Church Road, 1.7 mi north of State Highway 19 and 2.5 mi northwest of Nutbush.  
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Cockfield Formation of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 277 ft, cased to 257 ft, screened 257 to 277 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

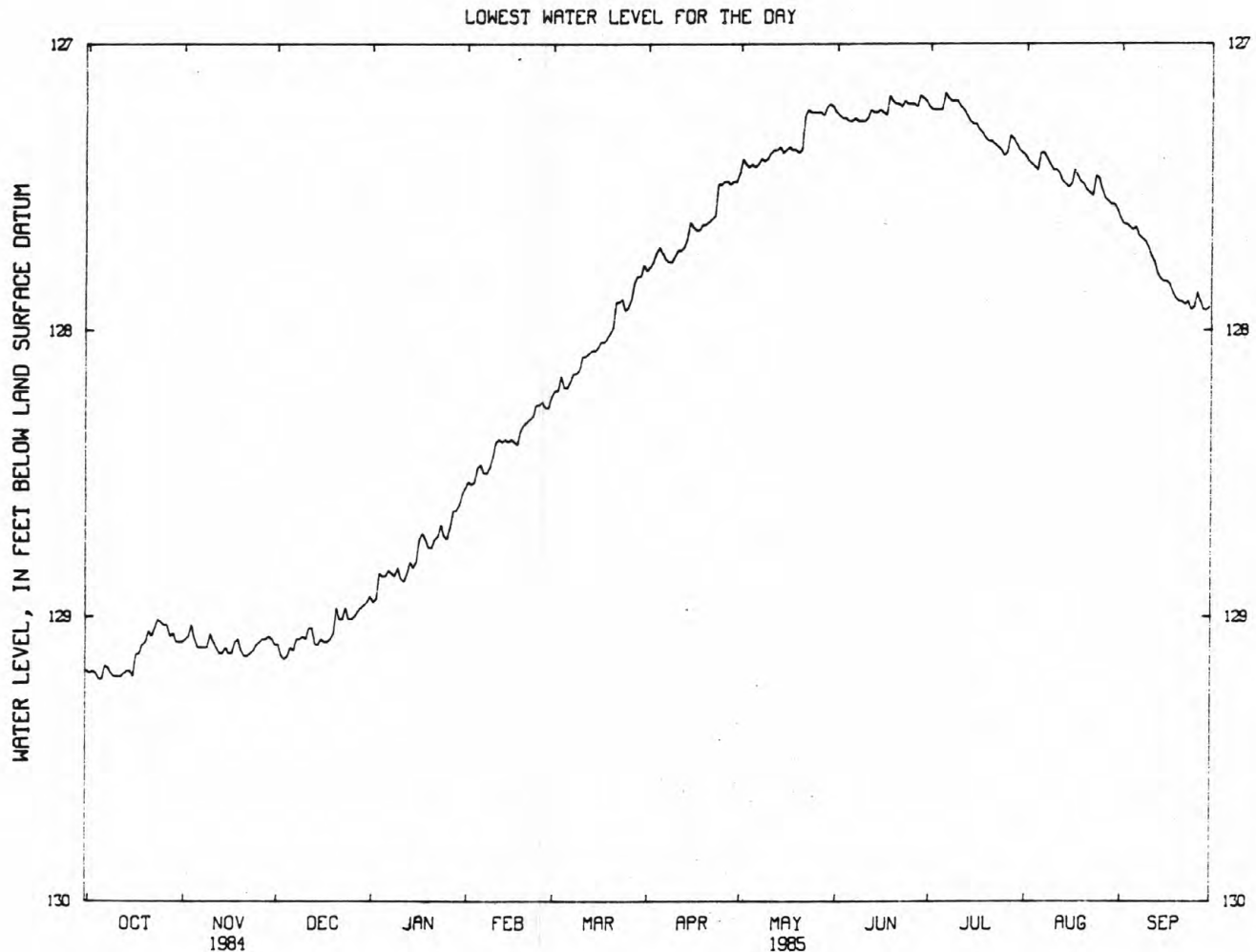
DATUM.--Elevation of land-surface datum is 469 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 127.14 ft below land-surface datum, July 6, 1985; lowest, 130.89 ft below land-surface datum, Nov. 15 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT     | NOV    | DEC    | JAN         | FEB    | MAR    | APR    | MAY            | JUN    | JUL    | AUG    | SEP    |
|---------------|---------|--------|--------|-------------|--------|--------|--------|----------------|--------|--------|--------|--------|
| 5             | 129.22  | 129.08 | 129.14 | 128.86      | 128.48 | 128.20 | 127.71 | 127.42         | 127.27 | 127.23 | 127.44 | 127.65 |
| 10            | 129.21  | 129.06 | 129.07 | 128.83      | 128.44 | 128.14 | 127.74 | 127.40         | 127.27 | 127.20 | 127.44 | 127.71 |
| 15            | 129.19  | 129.11 | 129.10 | 128.83      | 128.39 | 128.07 | 127.62 | 127.38         | 127.23 | 127.28 | 127.50 | 127.83 |
| 20            | 129.09  | 129.12 | 129.06 | 128.76      | 128.33 | 128.01 | 127.63 | 127.38         | 127.21 | 127.34 | 127.49 | 127.90 |
| 25            | 129.02  | 129.10 | 129.01 | 128.72      | 128.26 | 127.93 | 127.49 | 127.24         | 127.21 | 127.39 | 127.47 | 127.92 |
| EOM           | 129.09  | 129.08 | 128.95 | 128.57      | 128.27 | 127.77 | 127.48 | 127.22         | 127.20 | 127.38 | 127.58 | 127.92 |
| WTR YEAR 1985 | HIGHEST |        | 127.14 | JUL 6, 1985 |        | LOWEST | 129.22 | OCT 5, 6, 1984 |        |        |        |        |



## LAUDERDALE COUNTY--Continued

354552089455900. Local number, Ld:L-2.

LOCATION.--Lat 35°45'52", long 89°45'59", Hydrologic Unit 08010100, 70 ft south of State Highway 19, 1.2 mi east of Ashport.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Cockfield Formation of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 245 ft, cased to 225 ft, screened 225 to 245 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 239 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 2.00 ft above land-surface datum.

REMARKS.--Missing record July 2 to August 22.

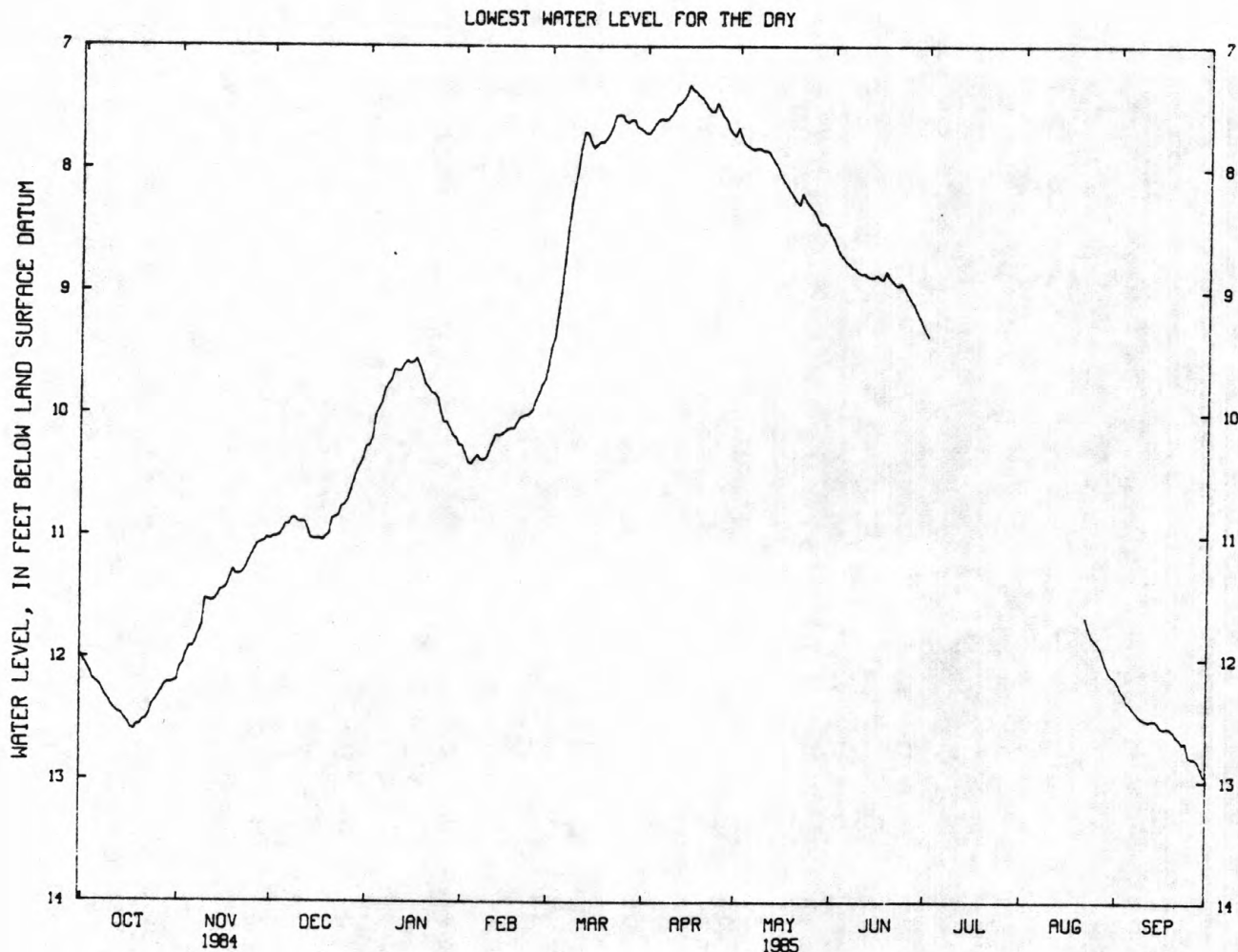
PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.02 ft below land-surface datum, May 12, 1983; lowest, 15.82 ft below land-surface datum, Jan. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR  | APR  | MAY  | JUN  | JUL | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|------|------|------|------|-----|-------|-------|
| 5   | 12.19 | 11.91 | 10.96 | 9.96  | 10.37 | 9.01 | 7.60 | 7.83 | 8.75 | --- | ---   | 12.35 |
| 10  | 12.36 | 11.52 | 10.89 | 9.64  | 10.30 | 8.00 | 7.52 | 7.85 | 8.85 | --- | ---   | 12.49 |
| 15  | 12.51 | 11.45 | 11.03 | 9.59  | 10.15 | 7.83 | 7.31 | 8.06 | 8.86 | --- | ---   | 12.52 |
| 20  | 12.56 | 11.32 | 10.99 | 9.76  | 10.03 | 7.71 | 7.46 | 8.26 | 8.91 | --- | ---   | 12.59 |
| 25  | 12.36 | 11.16 | 10.75 | 9.99  | 9.89  | 7.61 | 7.52 | 8.32 | 9.02 | --- | 11.84 | 12.80 |
| EOM | 12.20 | 11.02 | 10.37 | 10.26 | 9.72  | 7.69 | 7.73 | 8.52 | 9.27 | --- | 12.14 | 12.96 |

WTR YR 1985      HIGHEST 7.29    APR 14, 15, 1985      LOWEST 12.96    SEP 30, 1985



## LAUDERDALE COUNTY--Continued

355251089350500. Local number, Ld:S-2.

LOCATION.--Lat 35°52'51", long 89°35'05", Hydrologic Unit 08010100, about 0.7 mi east of Old Bed Forked Deer River, 3 mi west of Knob Creek.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Alluvial sand and gravel of Holocene and Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 100 ft, cased to 80 ft, screened 80 to 100 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 254 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.20 ft above land-surface datum.

REMARKS.--Negative values indicate water levels above land-surface. No record March 6 to April 15, and May 6 to June 19.

PERIOD OF RECORD.--October 1980 to current year.

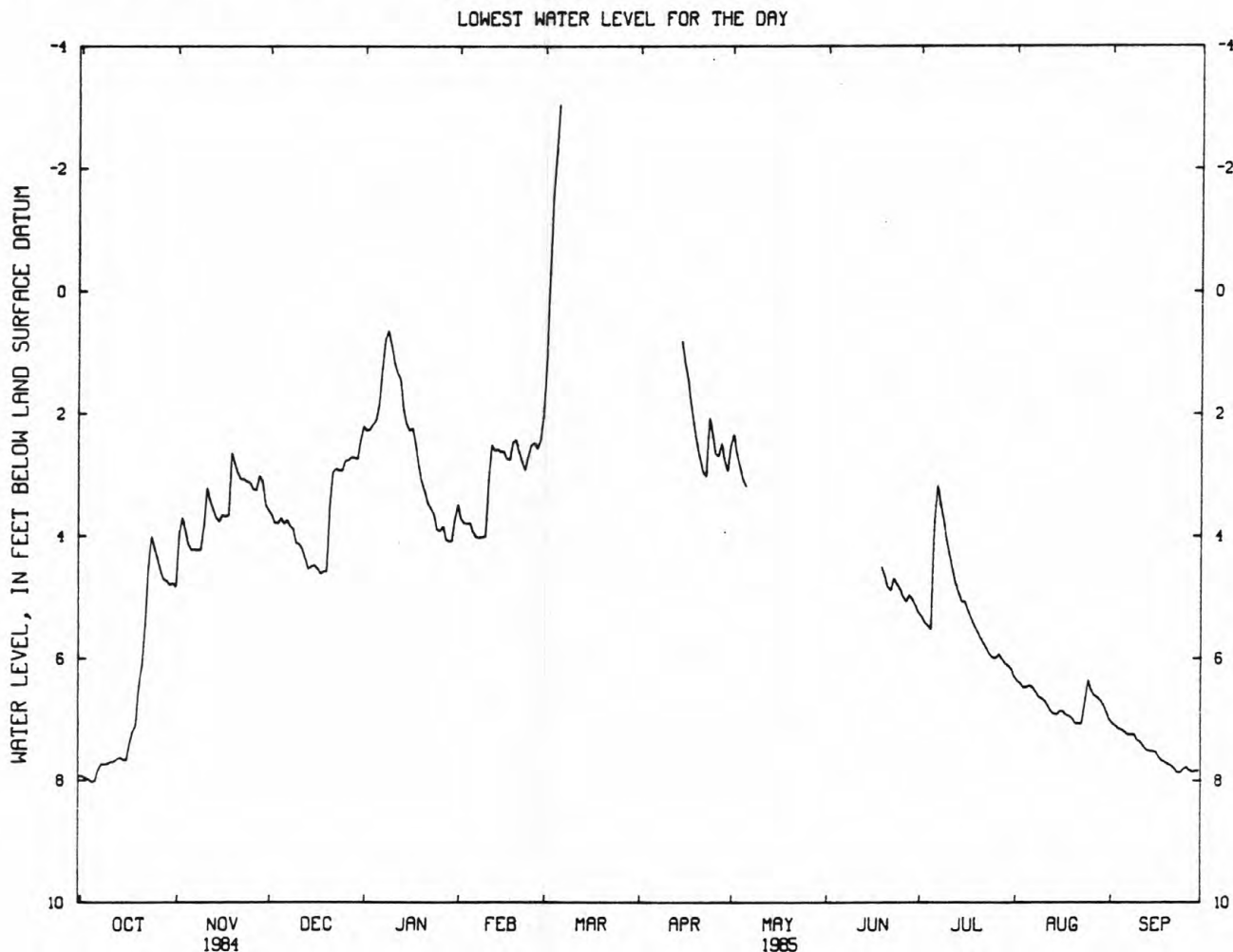
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.06 ft above land-surface datum, Dec. 11, 1982 and Mar. 6, 1985; lowest, 9.45 ft below land-surface datum, Oct. 16, 17, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT  | NOV  | DEC  | JAN  | FEB  | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-----|------|------|------|------|------|-------|------|------|------|------|------|------|
| 5   | 8.03 | 4.14 | 3.70 | 2.11 | 3.78 | -2.25 | ---  | 3.08 | ---  | 5.52 | 6.47 | 7.17 |
| 10  | 7.73 | 3.85 | 4.11 | .88  | 4.00 | ---   | ---  | ---  | ---  | 4.07 | 6.66 | 7.34 |
| 15  | 7.66 | 3.76 | 4.49 | 2.16 | 2.61 | ---   | .82  | ---  | ---  | 5.07 | 6.92 | 7.52 |
| 20  | 6.48 | 2.80 | 4.57 | 3.11 | 2.42 | ---   | 2.49 | ---  | 4.66 | 5.56 | 6.99 | 7.73 |
| 25  | 4.20 | 3.13 | 2.92 | 3.89 | 2.50 | ---   | 2.31 | ---  | 4.86 | 5.99 | 6.36 | 7.81 |
| EOM | 4.77 | 3.49 | 2.41 | 3.70 | 2.42 | ---   | 2.94 | ---  | 5.13 | 6.17 | 6.89 | 7.84 |

WTR YEAR 1985 HIGHEST \*-3.06 MAR 6, 1985 LOWEST 8.03 OCT 5, 1984

\* May have been higher during period of missing record.





## GROUND-WATER LEVELS

## MORGAN COUNTY

360543084343101.--Local number, Mg:F-5.

LOCATION.--Lat 36°05'43", long 84°34'31", Hydrologic Unit 06010208, 1.0 mi southeast of Wartburg.  
Owner: Plateau Utility District.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 394 ft, cased to 20 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface is 1,265 ft above National Geodetic Vertical Datum of 1929, from topographic map.  
Measuring point: Floor of recorder shelter, 2.40 ft above land surface datum.

REMARKS.--No record November 13, 1984.

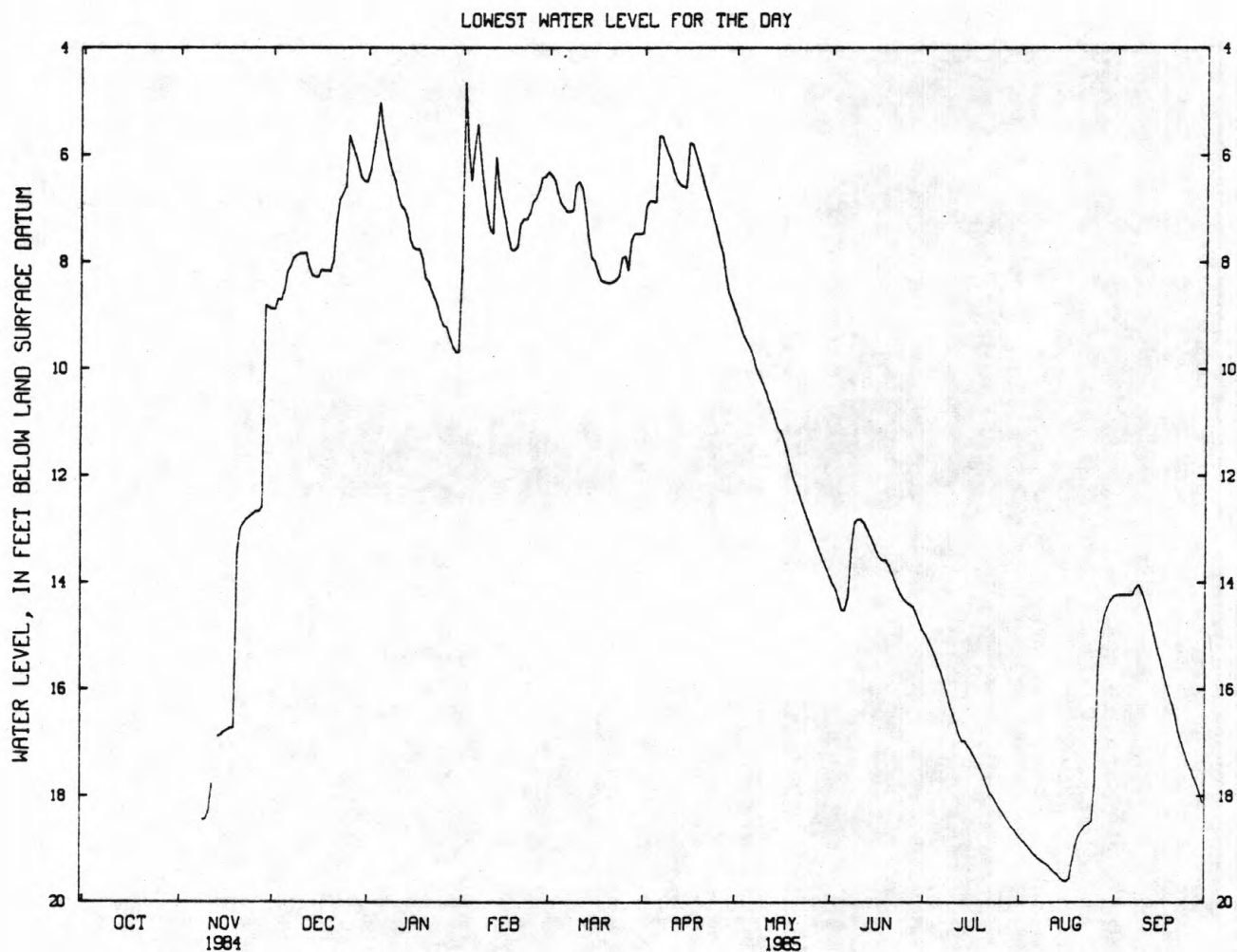
PERIOD OF RECORD.--November 1984 to September 1985.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.23 ft below land-surface datum, Jan. 4, 5, 1985; lowest, 19.61 ft below land-surface datum, Aug. 17, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, NOVEMBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT | NOV   | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-----|-------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 5   |     | ---   | 8.53 | 5.02 | 5.88 | 6.90 | 6.88 | 9.51  | 14.52 | 15.36 | 19.00 | 14.23 |
| 10  |     | 18.44 | 7.84 | 6.48 | 7.39 | 6.55 | 6.12 | 10.27 | 12.82 | 16.29 | 19.27 | 14.17 |
| 15  |     | 16.86 | 8.28 | 7.60 | 7.19 | 7.93 | 6.61 | 11.10 | 13.27 | 16.98 | 19.56 | 15.23 |
| 20  |     | 13.43 | 8.17 | 8.31 | 7.28 | 8.39 | 6.37 | 12.02 | 13.68 | 17.50 | 18.91 | 16.28 |
| 25  |     | 12.72 | 6.59 | 9.06 | 6.81 | 7.92 | 7.43 | 12.84 | 14.32 | 18.12 | 18.48 | 17.35 |
| EOM |     | 8.85  | 6.49 | 9.69 | 6.40 | 7.47 | 8.74 | 13.74 | 14.75 | 18.64 | 14.32 | 18.14 |

WTR YR 1985      HIGHEST 4.23    JAN 4, 5, 1985      LOWEST 19.61    AUG 17, 1985



## PUTNAM COUNTY

360521085432600. Local number, Pm:C-1.

LOCATION.--Lat 36°05'21", long 85°43'26", Hydrologic Unit 05130108, at Interstate 40 and State Highway 56, Silver Point.

Owner: Tennessee Department of Highways.

AQUIFER.--Port Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in., depth 175 ft, cased to 60 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 1,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of instrument shelf, 2.88 ft above land surface datum.

REMARKS.--Record good. No record July 27 to Aug. 13 and Aug. 27 to Sept. 30, equipment failure.

PERIOD OF RECORD.--March 1968 to current year.

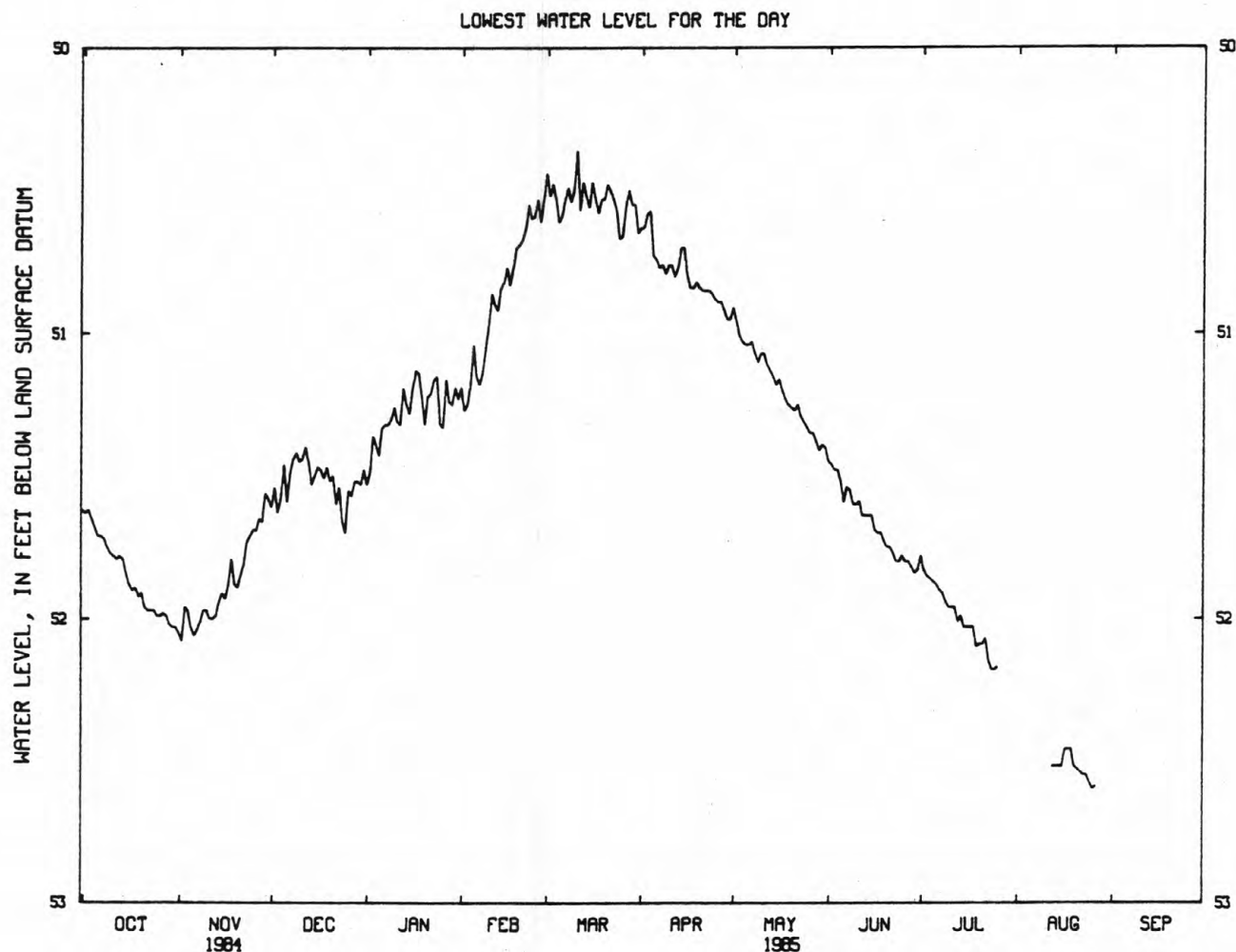
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.30 ft below land-surface datum, May 2, 1974; lowest, 53.56 ft below land-surface datum, Nov. 24, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 5   | 51.68 | 52.03 | 51.46 | 51.43 | 51.04 | 50.61 | 50.73 | 51.04 | 51.52 | 51.87 | ---   | --- |
| 10  | 51.77 | 51.97 | 51.45 | 51.26 | 50.97 | 50.50 | 50.76 | 51.07 | 51.60 | 51.96 | ---   | --- |
| 15  | 51.84 | 51.91 | 51.50 | 51.28 | 50.82 | 50.56 | 50.70 | 51.18 | 51.64 | 52.03 | 52.52 | --- |
| 20  | 51.91 | 51.89 | 51.52 | 51.32 | 50.69 | 50.53 | 50.84 | 51.26 | 51.75 | 52.09 | 52.52 | --- |
| 25  | 51.99 | 51.69 | 51.70 | 51.32 | 50.59 | 50.67 | 50.88 | 51.33 | 51.78 | 52.18 | 52.58 | --- |
| EOM | 52.03 | 51.58 | 51.48 | 51.23 | 50.53 | 50.65 | 50.95 | 51.40 | 51.83 | ---   | ---   | --- |

WTR YR 1985 HIGHEST 50.27 MAR 11, 1985 LOWEST \*52.60 AUG 26, 1985

\* May have been lower during period of missing record.



## GROUND-WATER LEVELS

## SEVIER COUNTY

353922083345600. Local number, Sv:E-2.

LOCATION.--Lat 35°39'22", long 83°34'56", Hydrologic Unit 06010201, 3.3 mi southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.

AQUIFER.--Elkmont Sandstone of Precambrian age.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 in., depth 220 ft, cased to 27 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Floor of recorder shelter 1.50 ft above land surface datum.

REMARKS.--Highest water level readings may be influenced for short periods by surface inflow.

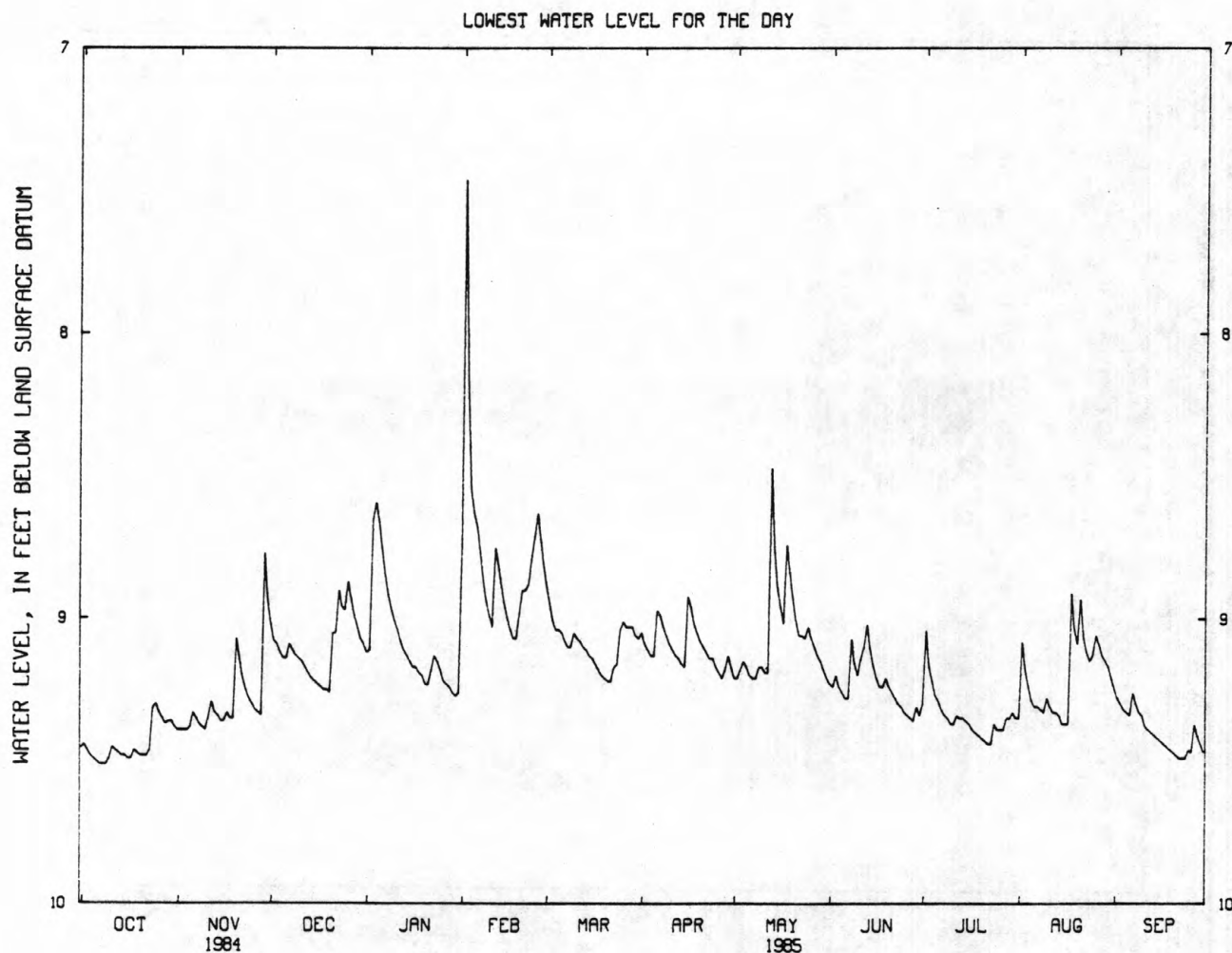
PERIOD OF RECORD.--May 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.58 ft below land surface datum, Feb. 1, 1985; lowest, 9.68 ft below land surface datum, Aug. 10, Sept. 16, 17, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 5   | 9.49 | 9.38 | 9.14 | 8.66 | 8.63 | 9.04 | 9.13 | 9.17 | 9.26 | 9.27 | 9.29 | 9.33 |
| 10  | 9.49 | 9.39 | 9.14 | 9.01 | 8.99 | 9.05 | 9.09 | 9.17 | 9.20 | 9.37 | 9.28 | 9.34 |
| 15  | 9.48 | 9.36 | 9.22 | 9.15 | 8.95 | 9.13 | 9.17 | 8.89 | 9.17 | 9.36 | 9.37 | 9.42 |
| 20  | 9.48 | 9.07 | 9.26 | 9.23 | 8.98 | 9.21 | 9.08 | 8.93 | 9.24 | 9.42 | 9.09 | 9.47 |
| 25  | 9.30 | 9.30 | 8.97 | 9.18 | 8.71 | 9.04 | 9.17 | 9.03 | 9.33 | 9.39 | 9.13 | 9.46 |
| EOM | 9.38 | 8.93 | 9.09 | 9.26 | 8.82 | 9.07 | 9.17 | 9.21 | 9.34 | 9.35 | 9.21 | 9.47 |

WTR YEAR 1985      HIGHEST 5.58    FEB 1, 1985      LOWEST 9.51    OCT 7-9, 1984



## SHELBY COUNTY

350514089553700. Local number, Sh:K-75.

LOCATION.--Lat 35°05'14", long 89°55'37", Hydrologic Unit 08010211, at Willowview Ave. and Getwell Road, Memphis.  
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Fluvial sand and gravel of Pleistocene age and possibly sand of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 91 ft, cased to 81 ft, screened 81 to 91 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.20 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. Missing record January 18 to February 4.

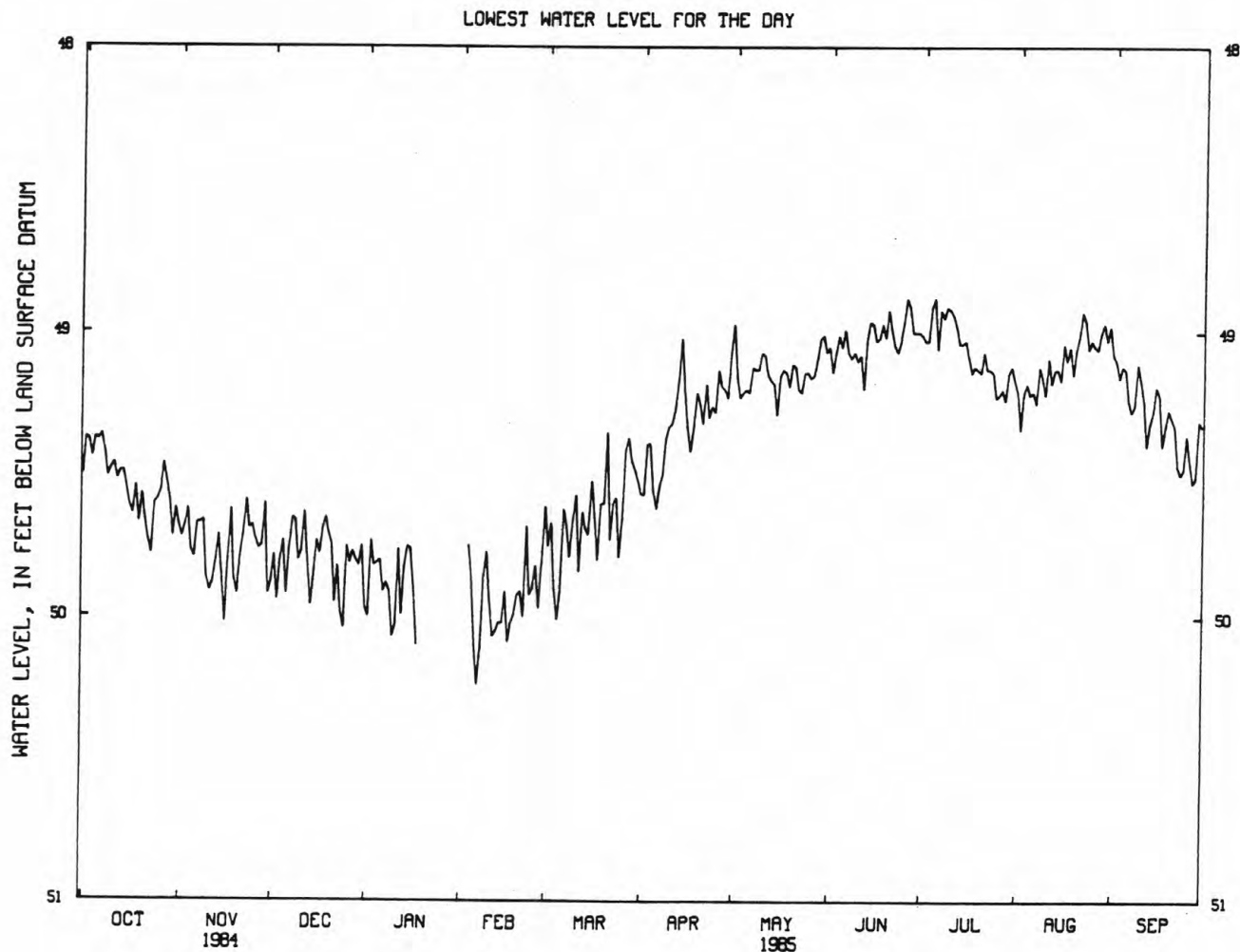
PERIOD OF RECORD.--August 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.28 ft below land-surface datum, Apr. 2, 1950; lowest, 50.79 ft below land-surface datum, Jan. 12, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 49.37 | 49.77 | 49.73 | 49.81 | 49.86 | 50.01 | 49.56 | 49.20 | 49.05 | 48.88 | 49.22 | 49.13 |
| 10  | 49.48 | 49.86 | 49.80 | 50.07 | 49.77 | 49.66 | 49.33 | 49.07 | 49.10 | 48.92 | 49.22 | 49.17 |
| 15  | 49.55 | 49.85 | 49.86 | 49.75 | 50.02 | 49.71 | 49.21 | 49.29 | 48.97 | 49.03 | 49.17 | 49.19 |
| 20  | 49.57 | 49.92 | 49.71 | ---   | 49.92 | 49.60 | 49.25 | 49.11 | 48.92 | 49.14 | 49.06 | 49.30 |
| 25  | 49.59 | 49.68 | 50.04 | ---   | 49.90 | 49.79 | 49.28 | 49.14 | 48.96 | 49.23 | 49.03 | 49.36 |
| EOM | 49.62 | 49.92 | 49.75 | ---   | 49.81 | 49.52 | 49.07 | 49.07 | 49.00 | 49.17 | 48.98 | 49.33 |

WTR YEAR 1985      HIGHEST 48.69      JUL 9, 1985      LOWEST 50.24      FEB 7, 1985





GROUND-WATER LEVELS  
SHELBY COUNTY--Continued

351435090005200. Local number, Sh:O-1.

LOCATION.--Lat 35°14'35", long 90°00'52", Hydrologic Unit 08010209, west side of O.K. Robertson Road 0.4 mi north of U.S. Highway 51, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 434 ft, cased to 424 ft, screened 424 to 434 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 228.70 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 4.30 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. No record December 27, April 11-25, May 8-20.

PERIOD OF RECORD.--September 1940 to current year.

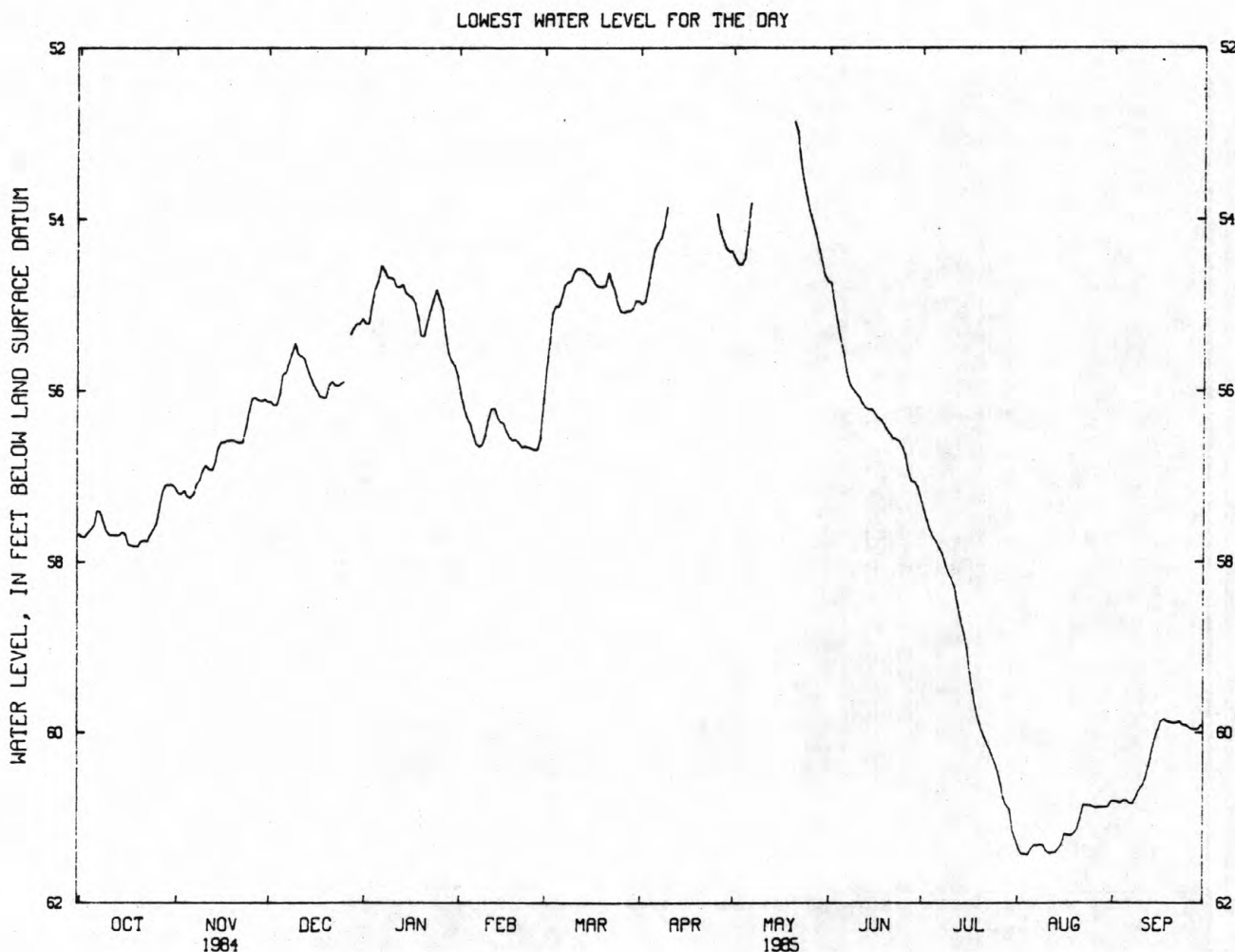
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.65 ft below land-surface datum, Sept. 3, 1940; lowest, 61.43 ft below land-surface datum, Aug. 5, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 57.62 | 57.24 | 56.04 | 54.80 | 56.38 | 55.01 | 54.52 | 54.46 | 55.40 | 57.71 | 61.43 | 60.79 |
| 10  | 57.65 | 56.93 | 55.45 | 54.68 | 56.52 | 54.72 | 53.85 | ---   | 56.03 | 58.13 | 61.32 | 60.67 |
| 15  | 57.65 | 56.66 | 55.85 | 54.86 | 56.37 | 54.63 | ---   | ---   | 56.22 | 58.83 | 61.36 | 60.07 |
| 20  | 57.82 | 56.58 | 56.08 | 55.36 | 56.57 | 54.79 | ---   | ---   | 56.46 | 59.87 | 61.18 | 59.88 |
| 25  | 57.62 | 56.25 | 55.91 | 54.82 | 56.67 | 54.99 | ---   | 53.73 | 56.66 | 60.35 | 60.85 | 59.91 |
| BOM | 57.10 | 56.10 | 55.22 | 55.71 | 56.57 | 54.95 | 54.38 | 54.67 | 57.13 | 61.16 | 60.86 | 59.91 |

WTR YEAR 1985      HIGHEST \*52.58      MAY 21, 1985      LOWEST 61.43      AUG 5, 1985

\* May have been higher during periods of missing record.



## SHELBY COUNTY--Continued

351320089535800. Local number, Sh:P-1.

LOCATION.--Lat 35°13'20", long 89°53'58", Hydrologic Unit 08010210, at Scheibler Road, 0.2 mi east of Yale Road, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 344 ft, cased to 334 ft, screened 334 to 344 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 299.80 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 3.00 ft above land-surface datum.

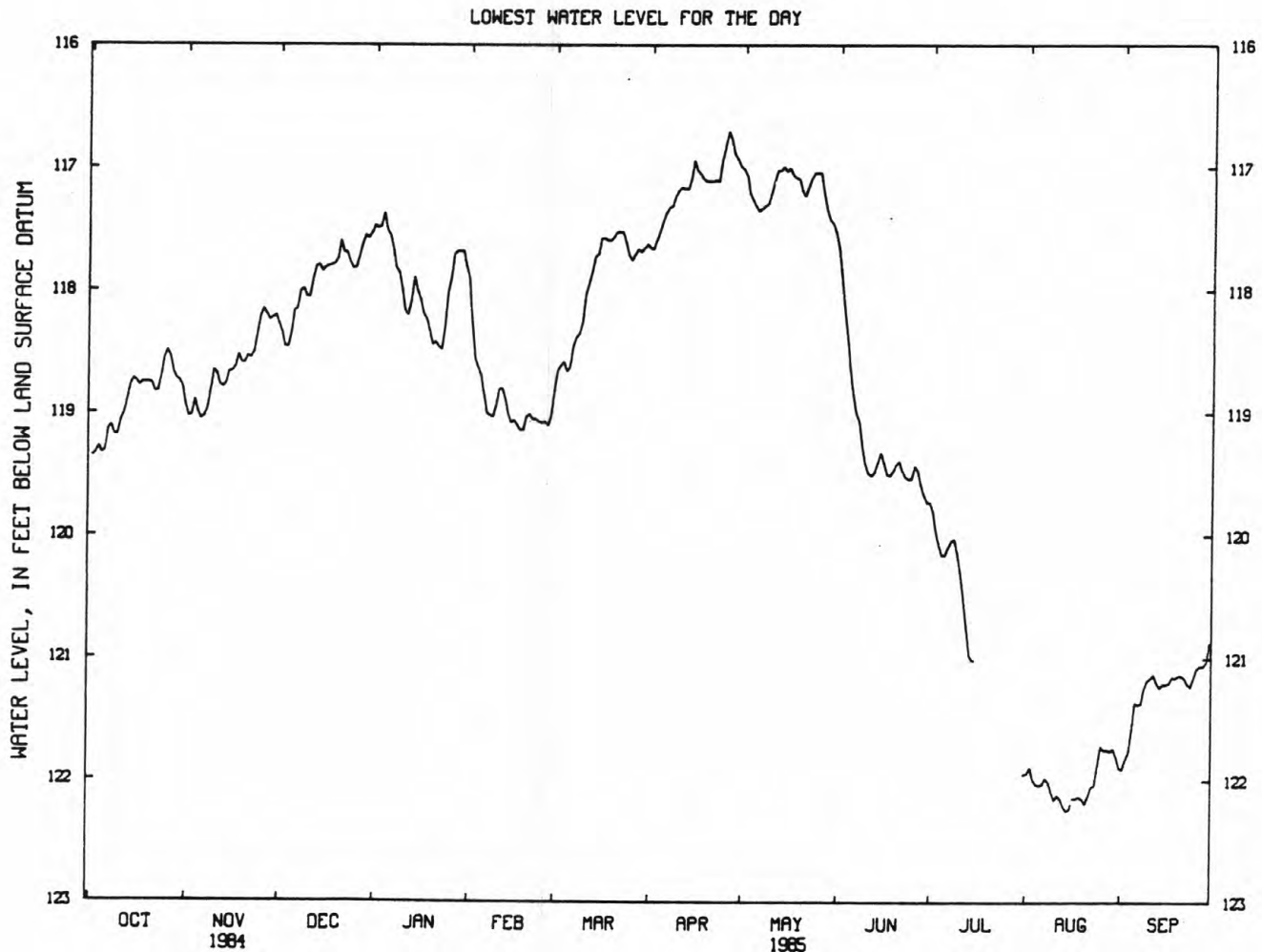
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply. No record October 1-2, July 15-30.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.33 ft below land-surface datum, Sept. 27, 1940; lowest, 122.36 ft below land-surface datum, Sept. 4, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT            | NOV    | DEC          | JAN    | FEB           | MAR    | APR          | MAY    | JUN    | JUL    | AUG    | SEP    |
|---------------|----------------|--------|--------------|--------|---------------|--------|--------------|--------|--------|--------|--------|--------|
| 5             | 119.33         | 118.99 | 118.35       | 117.51 | 118.69        | 118.66 | 117.43       | 117.31 | 118.65 | 120.16 | 122.03 | 121.59 |
| 10            | 119.18         | 118.65 | 118.05       | 117.99 | 118.94        | 118.26 | 117.18       | 117.20 | 119.42 | 120.15 | 122.09 | 121.18 |
| 15            | 118.72         | 118.66 | 117.84       | 118.00 | 119.08        | 117.70 | 116.94       | 117.03 | 119.32 | ---    | 122.25 | 121.21 |
| 20            | 118.75         | 118.59 | 117.74       | 118.44 | 119.03        | 117.56 | 117.11       | 117.19 | 119.42 | ---    | 122.15 | 121.14 |
| 25            | 118.55         | 118.21 | 117.82       | 118.02 | 119.08        | 117.71 | 116.82       | 117.04 | 119.54 | ---    | 121.87 | 121.16 |
| EOM           | 118.79         | 118.20 | 117.53       | 117.80 | 119.03        | 117.62 | 116.99       | 117.52 | 119.73 | 121.95 | 121.80 | 120.87 |
| WTR YEAR 1985 | HIGHEST 116.68 |        | APR 26, 1985 |        | LOWEST 122.25 |        | AUG 15, 1985 |        |        |        |        |        |



GROUND-WATER LEVELS  
SHELBY COUNTY--Continued

350735089593300. Local number, Sh:P-76.

LOCATION.--Lat 35°07'35", long 89°59'33", Hydrologic Unit 08010210, at Central Avenue and Tanglewood Street, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 12 in., depth 488 ft, cased to 428 ft, screened 428 to 488 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 286.70 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 1.30 ft above land-surface datum.

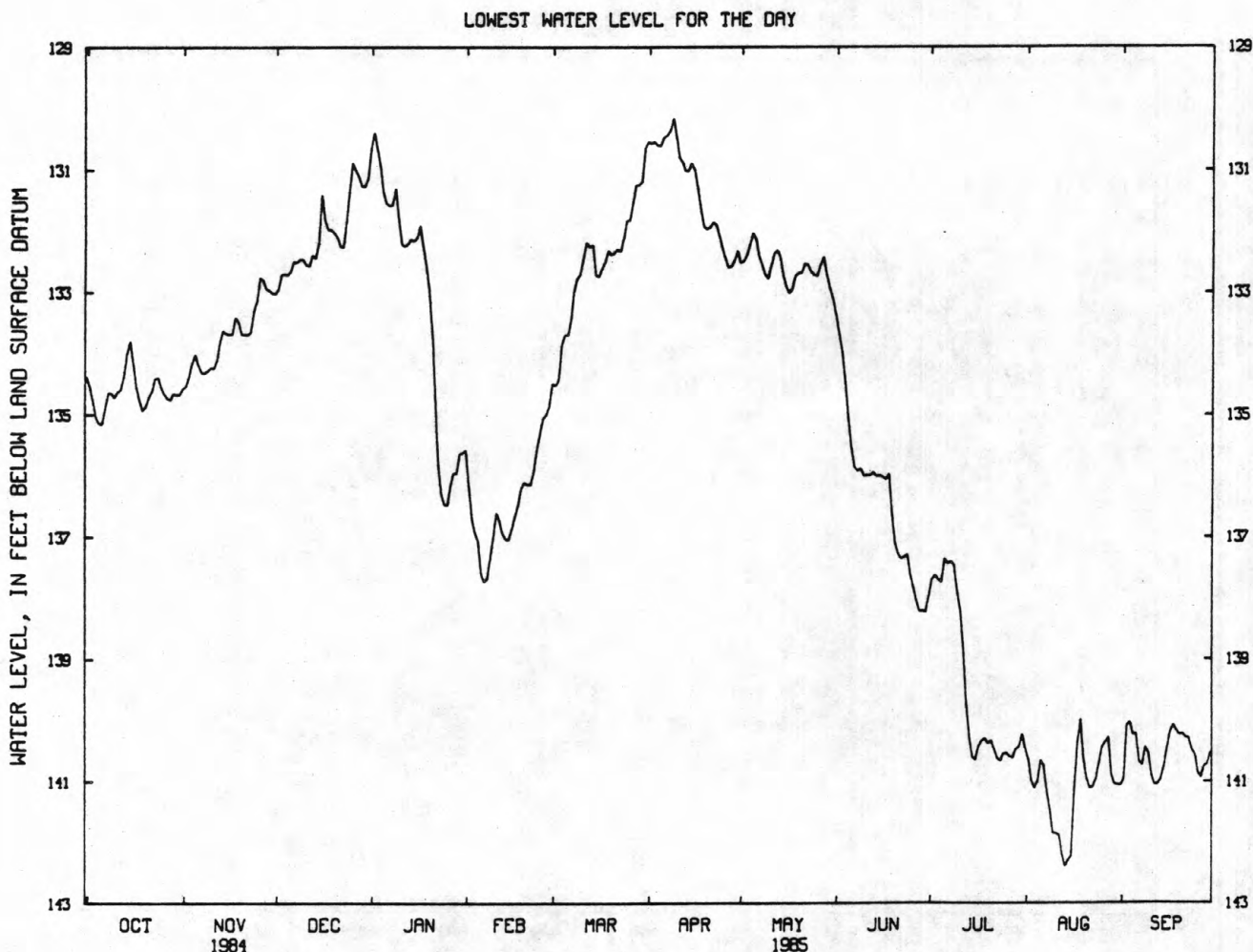
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1928 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft below land-surface datum, Apr. 3, 1933; lowest, 144.77 ft below land-surface datum, July 20-25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT            | NOV    | DEC         | JAN    | FEB           | MAR    | APR          | MAY    | JUN    | JUL    | AUG    | SEP    |
|---------------|----------------|--------|-------------|--------|---------------|--------|--------------|--------|--------|--------|--------|--------|
| 5             | 135.14         | 134.02 | 132.71      | 131.37 | 137.06        | 133.69 | 130.60       | 132.04 | 135.07 | 137.74 | 141.02 | 140.24 |
| 10            | 134.72         | 134.23 | 132.46      | 131.82 | 137.00        | 132.71 | 130.46       | 132.78 | 136.00 | 137.89 | 141.86 | 140.54 |
| 15            | 133.79         | 133.67 | 132.20      | 132.16 | 137.05        | 132.72 | 130.89       | 132.74 | 135.99 | 140.63 | 142.30 | 140.77 |
| 20            | 134.87         | 133.69 | 132.03      | 132.93 | 136.11        | 132.39 | 131.97       | 132.68 | 137.10 | 140.39 | 140.65 | 140.24 |
| 25            | 134.56         | 133.14 | 131.35      | 136.48 | 135.32        | 131.83 | 132.28       | 132.72 | 137.63 | 140.56 | 140.71 | 140.56 |
| EOM           | 134.67         | 133.01 | 131.15      | 135.62 | 134.86        | 130.63 | 132.32       | 133.10 | 138.23 | 140.23 | 141.06 | 140.53 |
| WTR YEAR 1985 | HIGHEST 130.04 |        | APR 9, 1985 |        | LOWEST 142.40 |        | AUG 14, 1985 |        |        |        |        |        |



## SHELBY COUNTY--Continued

350900089482300. Local number, Sh:Q-1.

LOCATION.--Lat 35°09'00", long 89°48'23", Hydrologic Unit 08010210, south of Macon Road, 0.6 mi west of Germantown Road, near Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 384 ft, cased to 375 ft, screened 375 to 384 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 330.40 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 2.40 ft above land-surface datum.

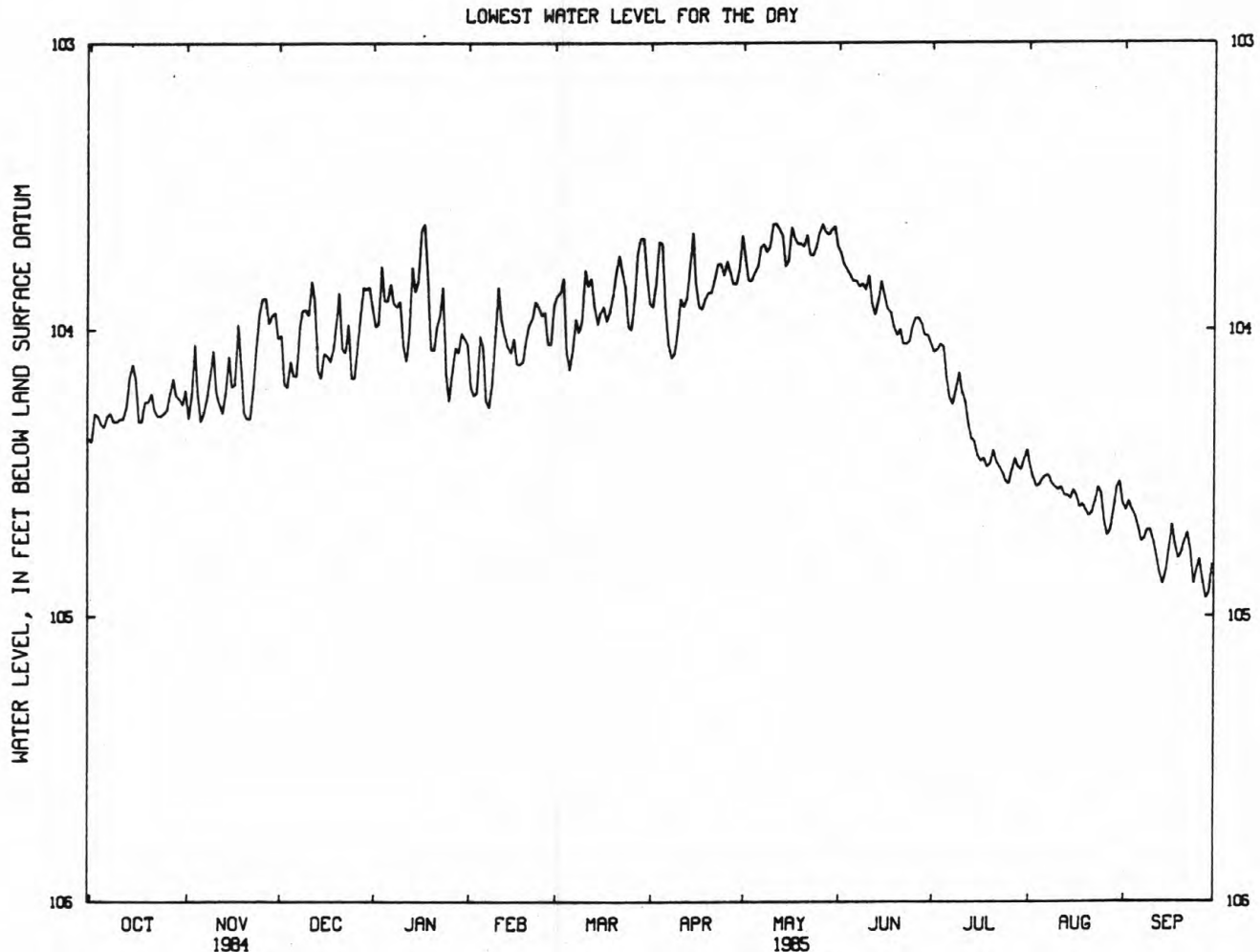
REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.08 ft below land-surface datum, Dec. 27, 1940; lowest 104.94 ft below land-surface datum, Sept. 28, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT     | NOV    | DEC    | JAN          | FEB    | MAR    | APR    | MAY          | JUN    | JUL    | AUG    | SEP    |
|---------------|---------|--------|--------|--------------|--------|--------|--------|--------------|--------|--------|--------|--------|
| 5             | 104.33  | 104.22 | 104.11 | 103.90       | 104.02 | 104.08 | 103.70 | 103.80       | 103.81 | 104.06 | 104.54 | 104.65 |
| 10            | 104.32  | 104.07 | 103.93 | 103.90       | 104.02 | 103.97 | 104.00 | 103.71       | 103.86 | 104.15 | 104.55 | 104.70 |
| 15            | 104.12  | 104.09 | 104.17 | 103.87       | 104.08 | 103.98 | 103.66 | 103.78       | 103.83 | 104.39 | 104.59 | 104.85 |
| 20            | 104.25  | 104.29 | 103.98 | 104.07       | 104.03 | 103.88 | 103.87 | 103.70       | 104.02 | 104.47 | 104.63 | 104.78 |
| 25            | 104.29  | 103.94 | 104.17 | 104.15       | 103.95 | 103.99 | 103.81 | 103.71       | 103.99 | 104.53 | 104.57 | 104.84 |
| DOM           | 104.26  | 103.94 | 103.85 | 104.03       | 104.05 | 103.81 | 103.79 | 103.64       | 104.02 | 104.45 | 104.53 | 104.82 |
| WTR YEAR 1985 | HIGHEST |        | 103.52 | JAN 18, 1985 |        | LOWEST | 104.94 | SEP 28, 1985 |        |        |        |        |





GROUND-WATER LEVELS  
CRITTENDEN COUNTY, AR

350958090173800. Local number, Ar:C-1.

LOCATION.--Lat 35°09'58", long 90°17'38", Hydrologic Unit 08020203, 450 ft west of Highway 147, 1.3 mi north of Lehi.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 622 ft, cased to 602 ft, screened 602 to 622 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 209 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.30 ft above land-surface datum.

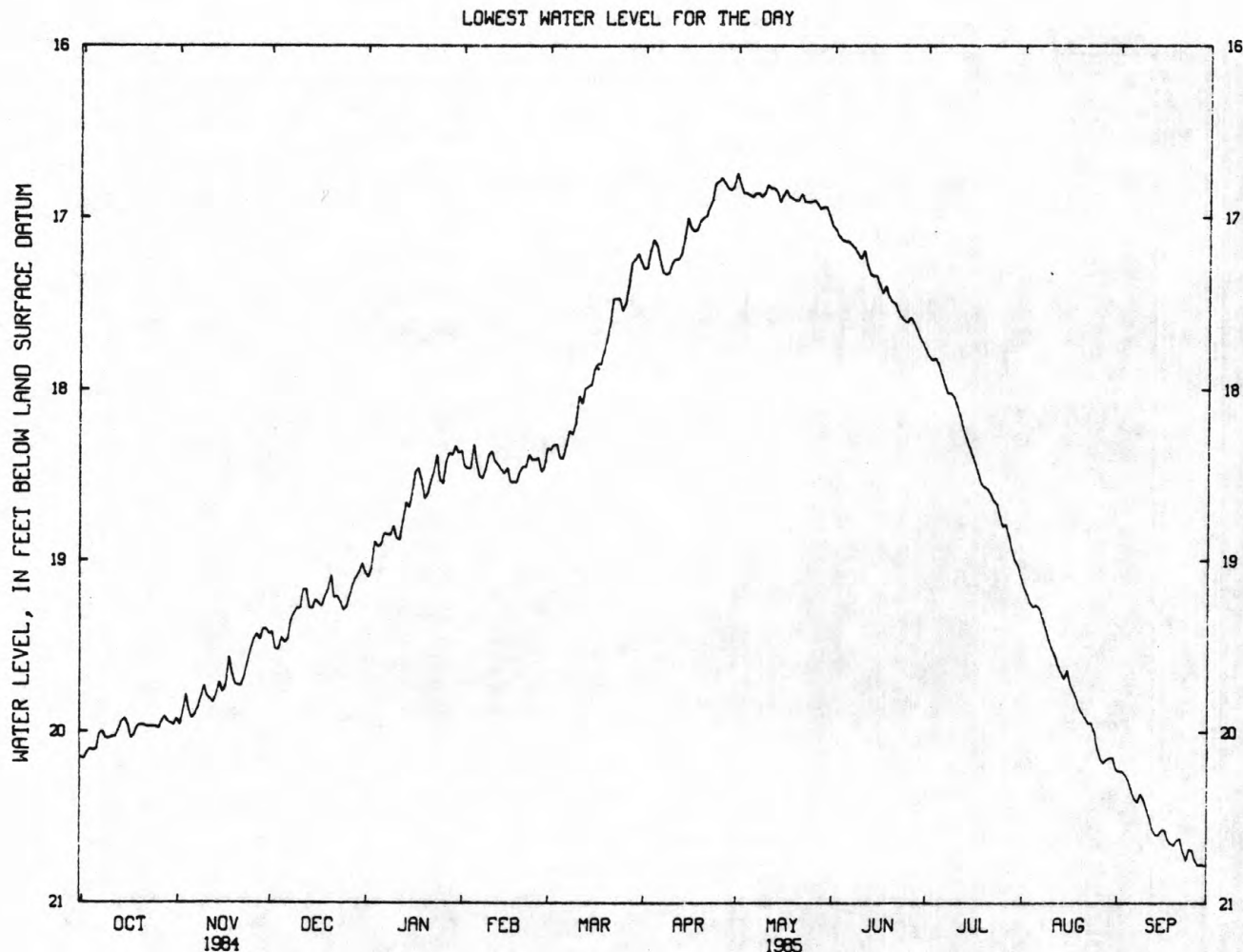
REMARKS.--Record good.

PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.29 ft below land-surface datum, June 11, 12, 13, 1983; lowest, 20.78 ft below land-surface datum, Sept. 28, 30, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY           | OCT           | NOV   | DEC          | JAN   | FEB          | MAR   | APR              | MAY   | JUN   | JUL   | AUG   | SEP   |
|---------------|---------------|-------|--------------|-------|--------------|-------|------------------|-------|-------|-------|-------|-------|
| 5             | 20.11         | 19.88 | 19.45        | 18.92 | 18.32        | 18.40 | 17.16            | 16.87 | 17.14 | 17.85 | 19.27 | 20.28 |
| 10            | 20.04         | 19.73 | 19.28        | 18.80 | 18.38        | 18.20 | 17.26            | 16.86 | 17.24 | 18.04 | 19.46 | 20.39 |
| 15            | 19.92         | 19.71 | 19.28        | 18.69 | 18.49        | 17.97 | 17.00            | 16.91 | 17.34 | 18.33 | 19.69 | 20.60 |
| 20            | 19.96         | 19.72 | 19.17        | 18.64 | 18.48        | 17.71 | 17.00            | 16.90 | 17.49 | 18.57 | 19.86 | 20.66 |
| 25            | 19.97         | 19.52 | 19.29        | 18.53 | 18.41        | 17.54 | 16.79            | 16.91 | 17.61 | 18.74 | 20.00 | 20.68 |
| EOM           | 19.96         | 19.40 | 19.02        | 18.37 | 18.45        | 17.26 | 16.82            | 16.99 | 17.73 | 19.03 | 20.15 | 20.78 |
| WTR YEAR 1985 | HIGHEST 16.64 |       | APR 23, 1985 |       | LOWEST 20.78 |       | SEP 28, 30, 1985 |       |       |       |       |       |



## 353

350344090130000. Local number, Ar:H-2.

LOCATION.--Lat 35°03'44", long 90°13'00", Hydrologic Unit 08020203, 0.7 mi east of Millers.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 502 ft, cased to 482 ft, screened 482 to 502 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

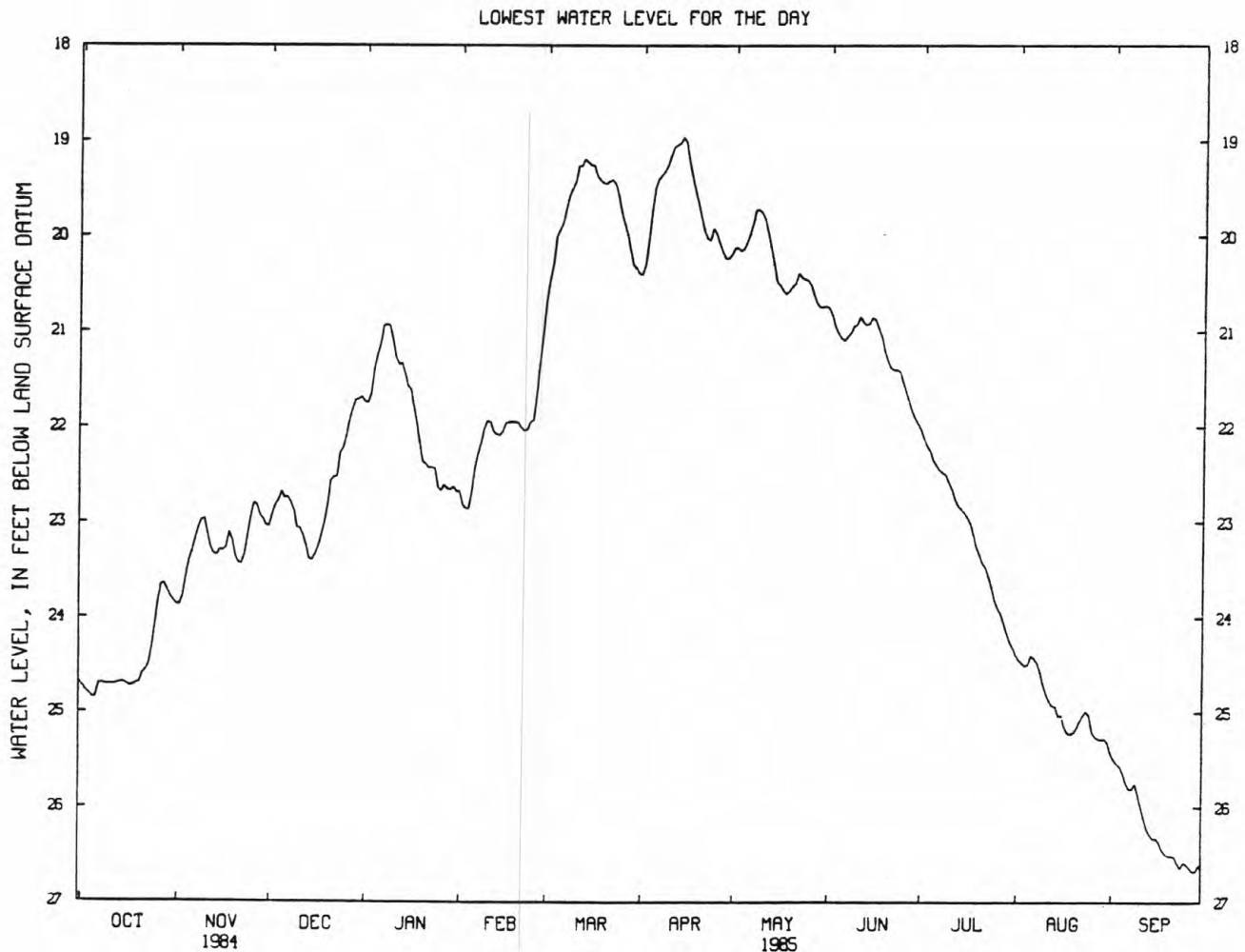
DATUM.--Elevation of land-surface datum is 211 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.28 ft below land-surface datum, May 30, 31, 1983; lowest, 26.68 ft below land-surface datum, Sept. 28, 1985.

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 24.85 | 23.41 | 22.68 | 21.24 | 22.68 | 19.93 | 19.49 | 20.06 | 21.07 | 22.35 | 24.49 | 25.64 |
| 10  | 24.71 | 22.97 | 23.06 | 21.09 | 21.94 | 19.43 | 19.15 | 19.75 | 20.92 | 22.58 | 24.71 | 25.88 |
| 15  | 24.69 | 23.29 | 23.40 | 21.58 | 22.05 | 19.25 | 19.01 | 20.48 | 20.85 | 22.90 | 25.04 | 26.33 |
| 20  | 24.69 | 23.36 | 22.81 | 22.37 | 21.96 | 19.45 | 19.80 | 20.52 | 21.31 | 23.34 | 25.21 | 26.51 |
| 25  | 24.08 | 22.94 | 22.22 | 22.64 | 21.93 | 19.75 | 19.97 | 20.46 | 21.53 | 23.82 | 25.03 | 26.58 |
| EOM | 23.83 | 23.04 | 21.69 | 22.68 | 21.02 | 20.39 | 20.19 | 20.73 | 21.97 | 24.32 | 25.32 | 26.61 |

|               |         |       |              |        |       |              |
|---------------|---------|-------|--------------|--------|-------|--------------|
| WTR YEAR 1985 | HIGHEST | 18.91 | APR 14, 1985 | LOWEST | 26.68 | SEP 28, 1985 |
|---------------|---------|-------|--------------|--------|-------|--------------|



## CRITTENDEN COUNTY, AR--Continued

351349090062800. Local number, Ar:O-1.

LOCATION.--Lat 35°13'49", long 90°06'28", Hydrologic Unit 08020203, 0.3 mi east of blacktop road, 0.8 mi north of St. Claire.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 497 ft, cased to 477 ft, screened 477 to 497 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 217 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Inside top of shelter base plate, 3.60 ft above land-surface datum.

REMARKS.--Missing record January 31 to February 6, and August 1 to August 30.

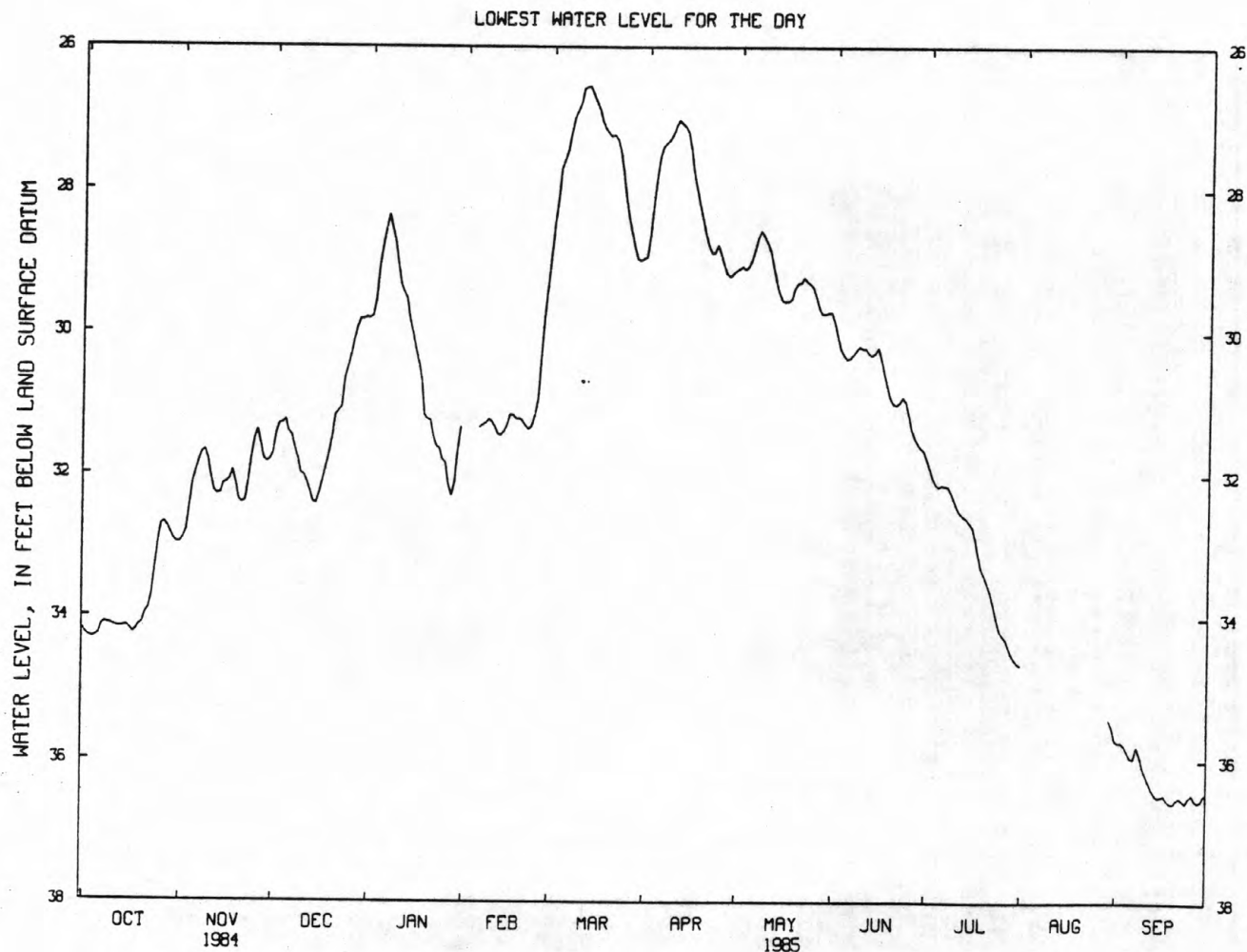
PERIOD OF RECORD.--May 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.42 ft, May 29, 30, 31, 1983; lowest, 36.59 ft below land-surface datum, Sept. 20, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
LOWEST WATER LEVEL FOR THE DAY

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5   | 34.29 | 32.12 | 31.23 | 28.79 | ---   | 27.58 | 27.53 | 28.97 | 30.36 | 32.16 | ---   | 35.86 |
| 10  | 34.12 | 31.79 | 31.99 | 29.05 | 31.25 | 26.79 | 27.10 | 28.74 | 30.21 | 32.35 | ---   | 36.08 |
| 15  | 34.14 | 32.14 | 32.41 | 30.02 | 31.30 | 26.77 | 27.43 | 29.54 | 30.19 | 32.66 | ---   | 36.50 |
| 20  | 34.10 | 32.37 | 31.50 | 31.22 | 31.24 | 27.25 | 28.62 | 29.30 | 30.98 | 33.40 | ---   | 36.59 |
| 25  | 32.97 | 31.50 | 30.49 | 31.79 | 30.94 | 28.10 | 28.90 | 29.36 | 31.14 | 34.17 | ---   | 36.50 |
| EOM | 32.97 | 31.80 | 29.80 | 31.33 | 29.35 | 28.96 | 29.13 | 29.71 | 31.64 | 34.63 | 35.51 | 36.46 |

WTR YEAR 1985      HIGHEST 26.46      MAR 11, 1985      LOWEST 36.59      SEP 20, 1985



## BRADLEY COUNTY

350503084505000. Local number, Br:E-1.

LOCATION.--Lat 35°05'03", long 84°50'50", Hydrologic Unit 03150101, on Trehwitt Road, 0.5 mi north of Goodwill Road, Cleveland.  
Owner: F. G. Trehwitt.

AQUIFER.--Shale of Conasauga Group of middle and late Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in., depth 25 ft, casing information not available.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of concrete casing at land-surface datum.

PERIOD OF RECORD.--February 1950 to November 1955, April 1964 to current year. Analog record February 1950 to November 1955, April 1964 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.38 ft below land-surface datum, Dec. 19, 1967; lowest recorded, 24.97 ft below land-surface datum, Dec. 7, 8, 1954; highest water level measured, 8.22 ft below land-surface datum, Apr. 5, 1977; lowest measured, 23.20 ft below land-surface datum, Dec. 12, 1978.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 10 | 20.86          | DEC 11 | 19.75          | MAR 12 | 12.90          | JUNE 3 | 16.54          | AUG 21 | 18.79          |

## CANNON COUNTY

354823086104400. Local number, Cn:D-1.

LOCATION.--Lat 35°48'23", long 86°10'44", Hydrologic Unit 05130203, on county road on Cannon County and Rutherford County lines, 1.5 mi south of Readyville.  
Owner: Ray Barker.

AQUIFER.--Lebanon Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter, 6 in., depth 30 ft, cased with steel to unknown depth, open end.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1967 to current year. Analog record April 1967 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.91 ft below land-surface datum, Mar. 11, 1968; lowest recorded, 19.38 ft below land-surface datum, Dec. 9, 10, 1968; highest water level measured, 12.14 ft below land-surface datum, Jan. 8, 1974; lowest measured, 18.07 ft below land-surface datum, June 27, 1980.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | WATER<br>LEVEL | DATE  | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|-------|----------------|-------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 1 | 16.13          | DEC 3 | 13.82          | JAN 25 | 14.12          | APR 29 | 15.93          | JUNE 3 | 16.45          | AUG 22 | 16.40          |



## DYER COUNTY

360200089280100. Local number, Dy:H-1.

LOCATION.--Lat 36°02'00", long 89°28'01", Hydrologic Unit 08010206, 4.0 mi west of Dyersburg on State Highway 20 at Finley.

Owner: U.S. Geological Survey.

AQUIFER.--Fluvial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in., depth 70 ft, cased to 60 ft, screened 60 to 70 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 278 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1955 to current year. Analog record April 1955 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.69 ft below land-surface datum, Feb. 28, 1962; lowest recorded, 18.93 ft below land-surface datum, Jan. 18-21, 1957; highest water level measured, 4.18 ft below land-surface datum, Apr. 13, 1979; lowest measured, 17.24 ft below land-surface datum, Jan. 27, 1981.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 16 | 15.12          | DEC 27 | 5.29           | MAR 15 | 5.41           | JUN 19 | 9.95           |
| NOV 8  | 9.47           | FEB 14 | 4.64           | MAY 7  | 6.80           | JUL 31 | 11.91          |

360147089230700. Local number, Dy:H-7.

LOCATION.--Lat 36°01'47", long 89°23'07", Hydrologic Unit 08010204, 500 ft east of U.S. Highway 51 and on south side of Illinois Central railroad, at Dyersburg.

Owner: City of Dyersburg.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 10 in., depth 656 ft, cased to 605 ft, screened 605 to 655 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 270.07 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 3.10 ft above land-surface datum.

PERIOD OF RECORD.--February 1954 to current year. Analog record February 1954 to February 1971, periodic measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.69 ft above land-surface datum, Mar. 1, 2, Apr. 19, 1962; lowest recorded, 17.1 ft below land-surface datum, Aug. 10, 1956; highest water level measured, 0.20 ft above land-surface datum, Mar. 20, 1975, lowest measured, 10.22 ft below land-surface datum, September 1972.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 16 | 5.50           | DEC 27 | 4.49           | MAR 15 | 4.31           | JUN 20 | 8.15           |
| NOV 8  | 6.24           | FEB 14 | 4.81           | MAY 7  | 7.08           | AUG 1  | 9.82           |

## FAYETTE COUNTY

352226089330101. Local number, Fa:R-1.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.2 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 1,025 ft, cased to 1,008 ft, screened 1,008 to 1,025 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.50 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--August 1949 to current year. Analog record August 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 64.89 ft below land-surface datum, Aug. 31, 1949; lowest recorded, 76.26 ft below land-surface datum, Dec. 5, 1970; highest water level measured, 73.61 ft below land-surface datum, Apr. 28, 1976; lowest measured, 80.25 ft below land-surface datum, Sept. 30, 1982.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|-------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| NOV 1 | 78.51          | DEC 31 | 78.64          | MAR 1  | 78.72          | MAY 1  | 78.77          | JUL 2  | 79.19          | AUG 29 | 79.49          |
| DEC 1 | 78.56          | FEB 5  | 78.56          | MAR 29 | 78.73          | MAY 31 | 78.86          | JUL 31 | 79.31          | SEP 26 | 79.68          |

352226089330102. Local number, Fa:R-2.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.1 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 365 ft, cased to 345 ft, screened 345 to 365 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.20 ft above National Geodetic Vertical Datum of 1929.  
Measuring point: Top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year. Analog record October 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.25 ft below land-surface datum, Mar. 10, 1952; lowest recorded, 42.12 ft below land-surface datum, Nov. 30, 1967; highest water level measured, 39.38 ft below land-surface datum, May 2, 1980; lowest measured, 41.67 ft below land-surface datum, December 1971.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE  | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|-------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| NOV 1 | 40.80          | DEC 31 | 40.53          | MAR 1  | 40.09          | MAY 1  | 39.77          | JUL 2  | 40.10          | AUG 29 | 40.36          |
| DEC 1 | 40.66          | FEB 5  | 40.22          | MAR 29 | 39.89          | MAY 31 | 39.79          | JUL 31 | 40.19          | SEP 26 | 40.43          |

## MADISON COUNTY

354223088380200. Local number, Md:N-1.

LOCATION.--Lat 35°42'23", long 88°38'02", Hydrologic Unit 08010205, 90 ft south of State Highway 20, about 0.4 mi east of Claybrook.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--McNairy Sand of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 659 ft, cased to 639 ft, screened 639 to 659 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 562.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--June 1949 to current year. Analog record June 1949 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 124.50 ft below land-surface datum, Mar. 10, 1952; lowest recorded, 129.13 ft below land-surface datum, Nov. 15, 1963; highest water level measured, 124.98 ft below land-surface datum, Apr. 8, 1980; lowest measured, 131.17 ft below land-surface datum, June 20, 1979.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 17 | 126.93      | DEC 21 | 126.44      | MAR 13 | 126.19      | JUN 11 | 126.37      |
| NOV 14 | 126.79      | FEB 8  | 126.47      | APR 24 | 126.12      | JUL 31 | 126.63      |

## SHELBY COUNTY

352112089571200. Local number, Sh:U-1.

LOCATION.--Lat 35°21'12", long 89°57'12", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.

Owner: Mrs. T. S. Welch

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 16 in., depth 1,558 ft, cased to 1,497 ft, screened 1,497 to 1,558 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 264.20 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage at Millington and Memphis.

PERIOD OF RECORD.--August 1946 to current year. Analog record March 1948 to January 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 35.5 ft below land-surface datum, Apr. 11, 1948; lowest recorded, 60.42 ft below land-surface datum, Dec. 20, 1970; highest water level measured, 33.20 ft, Apr. 21, 1947; lowest measured, 66.56 ft below land-surface datum, Aug. 29, 1985.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL | DATE   | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 2  | 64.20       | NOV 29 | 64.63       | FEB 5  | 65.49       | MAR 29 | 64.88       | MAY 30 | 65.12       | JUL 31 | 66.13       |
| OCT 31 | 64.50       | DEC 28 | 64.82       | FEB 28 | 65.41       | APR 30 | 65.24       | JUN 28 | 65.49       | AUG 29 | 66.56       |

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

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## SHELBY COUNTY--Continued

352112089571300. Local number, Sh:U-2.

LOCATION.--Lat 35°21'12", long 89°57'13", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.  
 Owner: Mrs. F. E. Byrd

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 12 in., depth 440 ft, cased to 360 ft, screened 360 to 440 ft.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 268.76 ft above National Geodetic Vertical Datum of 1929.  
 Measuring point: Top of casing, 1.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--June 1953 to current year. Analog record June 1953 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.59 ft below land-surface datum, June 29, 1953; lowest, 59.73 ft below land-surface datum, Sept. 29, 1983.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 2  | 59.37          | NOV 29 | 58.08          | FEB 5  | 57.44          | MAR 29 | 56.55          | MAY 30 | 56.04          | JUL 31 | 59.00          |
| OCT 31 | 58.72          | DEC 28 | 57.75          | FEB 28 | 57.49          | APR 30 | 56.27          | JUN 28 | 57.29          | AUG 29 | 59.37          |

## WILLIAMSON COUNTY

355505086541100. Local number, Wm:M-1.

LOCATION.--Lat 35°55'05", long 86°54'11", Hydrologic Unit 05130204, on Horton Lane, 0.8 mi west of Carter's Creek Road, near Franklin.  
 Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Knox Dolomite of late Cambrian and early Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 6 in., depth 1,160 ft, cased to 473 ft, open end.

INSTRUMENTATION.--Periodic measurements with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 712 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.80 ft above land-surface datum.

REMARKS.--Period of record low resulted from water-level measurements on the well during a 72 hour aquifer test.

PERIOD OF RECORD.--January 1950 to current year. Water-level recorder December 1951 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 84.21 ft below land-surface datum, Mar. 10, 1952; lowest recorded 87.11 ft below land-surface datum, Sept. 10, 1970; highest water level measured, 85.43 ft below land-surface datum, Feb. 19, 1974; lowest measured, 114.81 ft below land-surface datum, Jan. 31, 1950.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

| DATE   | WATER<br>LEVEL | DATE    | WATER<br>LEVEL | DATE   | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|--------|----------------|---------|----------------|--------|----------------|--------|----------------|
| APR 22 | 88.07          | JUNE 14 | 88.20          | AUG 15 | 88.44          | AUG 26 | 89.49          |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## CARROLL COUNTY

360747088310401 - CR:Q- 7 MCKENZIE

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>08... | 1400 | 340                                     | 33  | 5.4                            | 16.0                        | <1   | 8                                      | 0  | 2.1  | .70  | 3.2  | 44                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>08... | .5                                      | .60   | 8   | 62  | .3  | 1.7   | <.10   | 12  | 30   | 25  | .04   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>08... | <1   | 70   | <1   | <10   | <3   | <10  | 14   | 4  | 1  | <.1  | 12   |

## GIBSON COUNTY

354920088541101 - GB:B- 7 HUMBOLDT #4

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>07... | 1615 | 200                                     | 42  | 5.7                            | 16.5                        | 3  | 8                                      | 0  | 2.1  | .71  | 5.1  | 56                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>07... | .8                                      | .50   | 10  | 39  | .4  | 2.9   | <.10   | 16  | 40   | 34  | .05   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>07... | <1   | 45   | <1   | <10   | <3   | <10  | 9  | 3  | <1   | <.1  | <3   |

## QUALITY OF GROUND WATER

361

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

GIBSON COUNTY--Continued

355853088564601 - GB:G- 3 TRENTON #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>07... | 1400 | 189                                     | 160   | 5.9                            | 16.5                        | 2  | 31                                     | 5  | 7.6  | 2.8  | 17   | 54                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>07... | 1                                       | .70   | 26  | 63  | 14  | 13  | <.10   | 15  | 94   | 86  | .13   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>07... | <1   | 56   | <1   | <10   | <3   | <10  | 8  | 3  | 2  | <.1  | 5  |

355516088453201 - GB:H- 7 MILAN #4

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>07... | 1115 | 241                                     | 80  | 5.6                            | 17.0                        | <1   | 15                                     | 0  | 3.7  | 1.3  | 7.7  | 52                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>07... | .9                                      | .60   | 14  | 68  | 5.8   | 5.7   | <.10   | 17  | 58   | 50  | .08   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>07... | <1   | 37   | <1   | <10   | <3   | <10  | 5  | 4  | 2  | .2   | 4  |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## HARDEMAN COUNTY

350258088532901 - HR:G-11 MIDDLETON (#2)

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | TRITIUM<br>TOTAL<br>(PCI/L) | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | H-2/<br>H-1/<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MILL | O-18/<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|-----------------------------|---|---|---|
| AUG<br>15... | 1545 | 250                                     | 2.0                         | -11.5   | -27.5   | -5.0  |

## HENRY COUNTY

361804088194501 - HY:J- 1 PARIS (#1)

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINIT<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | H-2/<br>H-1/<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MILL | O-18/<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|--|---|---|---|---|
| AUG<br>17... | 0830 | 400                                     | 95  | 6.1                            | 17.5                        | 32   | 49  | -19.3   | -37.5   | -6.1  |

362642088200001 - HY:O- 14 PURYEAR #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>08... | 1615 | 135                                     | 65  | 5.6                            | 16.0                        | 1  | 10                                     | 0  | 2.5  | .87  | 8.7  | 65                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINIT<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|--|---|---|---|--|---|--|---|---|
| AUG<br>08... | 1                                       | .40   | 9  | 44  | 2.8   | 7.5   | <.10   | 17  | 50   | 45  | .07   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>08... | <1   | 60   | <1   | <10   | <3   | <10  | 11   | 4  | 3  | <.1  | 5  |

QUALITY OF GROUND WATER

363

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

LAKE COUNTY

362243089280302 - LK:G- 2 TIPTONVILLE #2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| AUG<br>10... | 1030 | 470                                     | 280   | 6.4                            | 19.5                        | 7  | 120                                    | 0  | 27   | 12   | 4.2  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| AUG<br>10... | 7                 | .2                                      | 7.2   | 152   | 117   | 7.3   | 1.5   | .10  | 12  | 180   | .22   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>10... | <1   | 480  | 2  | <10   | <3   | <10  | 13000                                      | 3  | 190  | <.1  | 8  |

MCMINN COUNTY

352518084460801 - MM:F- 11 ARCO HIWASSEE #1

| DATE         | TIME | SAM-<br>PLING<br>DEPTH<br>(FEET) | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|----------------------------------|---|---|--|--|--|--|--|-------------------|
| NOV<br>12... | 1200 | 5140                             | 8250                                    | 170000  | 15000                                  | 15000  | 4500   | 1000   | 42000  | 85                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|---|---|---|---|---|--|---|---|--|--|
| NOV<br>12... | 150                                     | 280   | 2900  | 74000   | 1.6   | 124000   | 120000  | 169   | 2400                                       | 11000  |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## MADISON COUNTY

353654088495701 - MD:G- 1 JACKSON

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO |
|--------------|------|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|---|
| JUL<br>24... | 1730 | 529                                     | 7.0                            | 18.0                        | 70   | 70                                     | 0  | 19   | 5.2  | 5.2  | 13                | .3                                      |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|--|---|--|---|---|---|--|
| JUL<br>24... | 6.2   | 15  | 24  | 1.7   | .10  | 35  | 120  | 150   | .16   | <10   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) |
|--------------|--|--|--|--|---|--|--|--|--|--|--|
| JUL<br>24... | 70   | <1.0   | 20   | <1   | <10   | 1  | 3600                                       | <1   | 18   | 130  | <.1  |

| DATE         | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | TRITIUM<br>TOTAL<br>(PCI/L) | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | H-2/<br>H-1/<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MILL | O-18/<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|--|---|--|--|--|--|-----------------------------|---|---|---|
| JUL<br>24... | <1  | <1   | <1  | <1   | 540  | 7  | 14   | <1.0                        | -17.0   | -38.0   | -6.2  |

353642088490101 - MD:G-278 JACKSON SOUTH #13

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>06... | 1630 | 159                                     | 240   | 5.5                            | 21.0                        | <1   | 61                                     | 39   | 15   | 5.8  | 15   | 33                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>06... | .9                                      | 2.9   | 22  | 135   | 44  | 14  | <.10   | 16  | 143  | 130   | .19   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>06... | 1  | 120  | <1   | <10   | <3   | <10  | 18   | 3  | 4  | <.1  | 24   |

## QUALITY OF GROUND WATER

365

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## MADISON COUNTY--Continued

354001088495601 - MD:M-564 JACKSON NORTH #7

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>06... | 1830 | 305                                     | 33  | 5.4                            | 16.0                        | <1   | 8                                      | 0  | 2.0  | .67  | 3.2  | 45                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>06... | .5                                      | .60   | 8   | 62  | .9  | 2.3   | <.10   | 14  | 32   | 29  | .04   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>06... | 1  | 38   | <1   | <10   | <3   | <10  | <3   | 4  | 1  | <.1  | <3   |

## MORGAN COUNTY

360753084432001 - MG:L- 10 HICKMAN

| DATE  | TIME | SAM-<br>PLING<br>DEPTH<br>(FEET) | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | FLOW<br>RATE<br>(GPM) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) |
|-------|------|----------------------------------|---|-----------------------|---|--------------------------------|-----------------------------|--|
| SEP   |      |                                  |   |                       |   |                                |                             |  |
| 20... | 1520 | --                               | 360                                     | 67                    | 192   | 7.7                            | 16.5                        | 32                                     |
| 21... | 1425 | --                               | 436                                     | 76                    | 128   | 7.6                            | 16.0                        | 26                                     |
| 21... | 1700 | --                               | 466                                     | 103                   | 458   | 8.3                            | 16.5                        | 17                                     |
| 24... | 1415 | 505                              | 560                                     | 450                   | 760   | 8.0                            | --                          | 7                                      |

| DATE  | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) |
|-------|--|--|--|--|-------------------|---|---|---|---|
| SEP   |  |  |  |  |                   |   |   |   |   |
| 20... | 0  | 8.9  | 2.3  | 28   | 64                | 2                                       | 2.1   | 80  | 3.1   |
| 21... | 0  | 7.3  | 1.9  | 13   | 49                | 1                                       | 2.8   | 57  | 2.8   |
| 21... | 0  | 4.8  | 1.3  | 100  | 92                | 11                                      | 1.6   | 181   | 1.7   |
| 24... | 0  | 1.8  | .52  | 180  | 98                | 31                                      | 2.1   | 302   | 5.8   |

| DATE  | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|-------|---|---|---|--|---|---|--|--|
| SEP   |   |   |   |  |   |   |  |  |
| 20... | 1.9   | 9.1   | 7.5   | 111  | 110   | .15   | 9  | 280  |
| 21... | 7.3   | 12  | 7.5   | 90   | 86  | .12   | 45   | 300  |
| 21... | 3.8   | 41  | 7.8   | 269  | 270   | .37   | 210  | 130  |
| 24... | 1.9   | 82  | 7.7   | 480  | 460   | .65   | 64   | 13   |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## OBION COUNTY

361218089003801 - OB:D- 7 KENTON #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| AUG<br>09... | 1545 | 600                                     | 117   | 6.4                            | 18.5                        | 2  | 45                                     | 0  | 10   | 4.9  | 3.7  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| AUG<br>09... | 15                | .2                                      | .90   | 59  | 45  | 2.4   | 1.5   | <.10   | 8.3   | 72  | .09   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>09... | <1   | 100  | 1  | <10   | <3   | <10  | 4600                                       | 3  | 64   | <.1  | 10   |

361955089181101 - OB:G- 4 HORNBEAK #2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>10... | 1230 | 140                                     | 495   | 7.1                            | 15.5                        | <1   | 280                                    | 0  | 59   | 32   | 6.8  | 5                 |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>10... | .2                                      | .50   | 298   | 46  | 4.4   | 2.3   | .30  | 13  | 300  | 300   | .41   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>10... | 1  | 130  | <1   | <10   | <3   | <10  | 21   | 4  | 1300   | <.1  | 5  |

QUALITY OF GROUND WATER

367

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

OBION COUNTY--Continued

362543089032102 - OB:O- 4 UNION CITY #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| AUG<br>10... | 0745 | 572                                     | 143   | 6.3                            | 17.0                        | 2  | 60                                     | 0  | 14   | 6.1  | 8.0  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| AUG<br>10... | 22                | .5                                      | 1.1   | 76  | 74  | 3.8   | 2.2   | <.10   | 13  | 95  | .13   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>10... | 1  | 160  | <1   | <10   | <3   | <10  | 1100                                       | 4  | 23   | <.1  | 5  |

ROANE COUNTY

354402084465001 - RN:L- 27 ARCO WRIGHT

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|--|--|--|--|--|
| AUG<br>01... | 1200 | 4890                                    | 1400                                   | 1300   | 560  | 3.3  | 90   |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|-------------------|---|---|---|---|--|--|
| AUG<br>01... | 12                | 1                                       | 37  | 150   | 7.9   | 30   | 190  |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

## SHELBY COUNTY

350540090061700 - SH:J- 84 CARGILL, INC., MEMPHIS, TN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>27... | 1500 | 415                                     | 162   | 6.6                            | 18.0                        | 1  | 72                                     | 0  | 17   | 7.2  | 7.7  | 19                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|
| AUG<br>27... | .4                                      | .70   | 88  | 43  | 5.3   | 3.0   | .10  | 9.2   | 95   | 100   | .13  |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>27... | <1   | 98   | <1   | <10   | <3   | <10  | 300  | 2  | 11   | <.1  | 4  |

350114090071701 - SH:J-146 MLGW-DAVIS

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>22... | 1330 | 446                                     | 142   | 6.3                            | 18.0                        | <1   | 56                                     | 0  | 12   | 6.3  | 7.8  | 23                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|--|
| AUG<br>22... | .5                                      | .70   | 70  | 68  | 3.3   | 3.5   | .10  | 13  | 85   | 89  | .12  | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|--|--|---|--|--|--|--|--|--|--|-----------------------------------|---|
| AUG<br>22... | 77   | <1   | <10   | <3   | <10  | 180  | 1  | 4  | <.1  | 7  | 62.1                              | -20.8   |

## QUALITY OF GROUND WATER

369

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

350446090013500 - SH:J-154 MLGW-ALLEN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| AUG<br>24... | 1500 | 370                                     | 136   | 6.3                            | 17.0                        | <1   | 51                                     | 0  | 12   | 5.1  | 8.1  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|-------------------|---|---|---|---|---|--|---|--|---|--|
| AUG<br>24... | 25                | .5                                      | 1.0   | 68  | 66  | 2.3   | <.10   | 12  | 78   | .11   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|
| AUG<br>24... | 100  | <1   | <10   | <3   | <10  | 740  | 2  | 14   | <.1  | 7  |

350518089554400 - SH:K- 73 MLGW-SHEAHAN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|
| AUG<br>20... | 1200 | 273                                     | 200   | 6.2                            | 17.0                        | <1   | 66                                     | 0  | 15   | 6.8  |

| DATE         | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|--|-------------------|---|---|---|---|---|---|--|
| AUG<br>20... | 14   | 31                | .8                                      | .80   | 66  | 81  | 25  | 9.2   | <.10   |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) |
|--------------|---|--|--|---|--|--|--|---|--|
| AUG<br>20... | 12  | 122  | 120  | .17   | <1   | 83   | <1   | <10   | <3   |

| DATE         | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | TRITIUM<br>TOTAL<br>(PCI/L) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|--|--|--|--|--|--|-----------------------------|-----------------------------------|---|
| AUG<br>20... | <10  | 1000                                       | 1  | 190  | <.1  | 42   | 60                          | 85.0                              | -21.2   |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

350218089511701 - SH:L- 36 MLGW-LICHTERMAN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|
| AUG<br>24... | 1130 | 567                                     | 82  | 6.3                            | 18.5                        | <1   | 34                                     | 0  | 8.7  | 3.0  |

| DATE         | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) |
|--------------|--|-------------------|---|---|---|---|---|---|--|
| AUG<br>24... | 3.4  | 18                | .3                                      | .40   | 39  | 38  | 4.8   | 1.2   | <.10   |

| DATE         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) |
|--------------|---|--|---|---|--|--|--|---|--|
| AUG<br>24... | 9.5   | 54   | 55  | .07   | <1   | 39   | <1   | <10   | <3   |

| DATE         | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | TRITIUM<br>TOTAL<br>(PCI/L) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|--|--|--|--|--|--|-----------------------------|-----------------------------------|---|
| AUG<br>24... | <10  | 170  | 2  | 3  | <.1  | 9  | 1.0                         | 58.1                              | -21.6   |

QUALITY OF GROUND WATER

371

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

350908090014601 - SH:O-169 MLGW-MALLORY

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CAC03) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CAC03) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| OCT<br>11... | 1700 | 2660                                    | 1690  | 7.8                            | 24.0                        | 2  | 7                                      | 0  | 1.9  | .57  | 380  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CAC03) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
|--------------|-------------------|---|---|---|---|---|---|--|---|--|---|
| OCT<br>11... | 99                | 64                                      | 2.1   | 755   | 23  | 5.1   | 8.0   | 5.0  | 12  | 1010   | 870   |

| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) |
|--------------|---|---|--|--|--|--|---|--|--|--|--|
| OCT<br>11... | 1.4   | 10  | 1  | 21   | <.5  | <1   | <10   | 2  | 46   | 3  | 61   |

| DATE         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | VANA-<br>DIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS V) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON<br>14<br>PERCENT<br>MODERN |
|--------------|--|--|---|--|---|--|--|--|--|-----------------------------------|
| OCT<br>11... | <1   | <.1  | 3   | <1   | <1  | <1   | 130  | <1   | 5  | .70                               |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

350913090100801 - SH:O-207 MLGW #12C

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>14... | 1100 | 758                                     | 130   | 6.2                            | 18.0                        | <1   | 54                                     | 0  | 13   | 5.2  | 8.6  | 26                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|--|
| AUG<br>14... | .5                                      | .60   | 66  | 81  | 2.6   | 2.6   | <.10   | 13  | 79   | 86  | .11  | 1  |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|--|--|---|--|--|--|--|--|--|--|-----------------------------------|---|
| AUG<br>14... | 94   | <1   | <10   | <3   | <10  | 470  | 3  | 8  | <.1  | 8  | 80.7                              | -20.3   |

350930089574501 - SH:P- 23 BUCKEYE

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|-----------------------------------|---|
| AUG<br>30... | 1030 | 1410                                    | 168   | 6.9                            | 22.5                        | 89  | 22  | 7.3                               | -15.1   |

350857089591401 - SH:P- 99 OVERTON PARK-2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | TRITIUM<br>TOTAL<br>(PCI/L) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|-----------------------------|-----------------------------------|---|
| AUG<br>28... | 1530 | 59.00                                   | 550   | 6.7                            | 17.5                        | 294   | 114   | 12                          | 79.1                              | -16.8   |

## QUALITY OF GROUND WATER

373

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

351440089572301 - SH:P-134 MORTON WELL FIELD

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>23... | 1230 | 460                                     | 119   | 6.3                            | 18.0                        | <1   | 46                                     | 0  | 11   | 4.5  | 5.4  | 20                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>23... | .4                                      | 1.3   | 57  | 55  | 4.0   | 2.6   | .10  | 9.5   | 71   | 74  | .10   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>23... | <1   | 110  | <1   | <10   | <3   | <10  | 1500                                       | 3  | 24   | <.1  | 9  |

351054089515302 - SH:Q- 64 MCCORD #255

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>29... | 1500 | 734                                     | 105   | 6.4                            | 19.0                        | 1  | 41                                     | 0  | 10   | 4.0  | 5.0  | 21                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>29... | .3                                      | .40   | 51  | 39  | 2.9   | 3.3   | <.10   | 8.5   | 76   | 65  | .10   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>29... | <1   | 32   | <1   | <10   | <3   | <10  | 170  | 1  | 3  | <.1  | 22   |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

SHELBY COUNTY--Continued

351703089575301 - SH:U- 20 GRACE CHEMICAL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| AUG<br>31... | 1000 | 551                                     | 270   | 6.6                            | 18.0                        | 1  | 130                                    | 0  | 27   | 14   | 8.7  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| AUG<br>31... | 13                | .3                                      | 1.9   | 156   | 76  | 2.8   | 6.2   | .10  | 9.2   | 170   | .22   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>31... | <1   | 370  | 1  | 10  | <3   | <10  | 5300                                       | 2  | 92   | .1   | 9  |

## WEAKLEY COUNTY

362032088504701 - WK:J- 10 MARTIN #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>09... | 1215 | 580                                     | 42  | 5.8                            | 16.5                        | 2  | 13                                     | 0  | 3.2  | 1.2  | 3.8  | 38                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>09... | .5                                      | .40   | 20  | 61  | 1.4   | 1.4   | <.10   | 10  | 33   | 33  | .04   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>09... | <1   | 64   | <1   | <10   | <3   | <10  | 7  | 4  | <1   | <.1  | 5  |

## QUALITY OF GROUND WATER

375

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

WEAKLEY COUNTY--Continued

361709088423501 - WK:K- 14 DRESDEN #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| AUG<br>09... | 1015 | 398                                     | 27  | 5.7                            | 16.5                        | 1  | 7                                      | 0  | 1.8  | .65  | 3.0  | 46                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| AUG<br>09... | .5                                      | .40   | 12  | 46  | 1.0   | 1.2   | <.10   | 9.2   | 24   | 25  | .03   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| AUG<br>09... | <1   | 40   | <1   | <10   | <3   | <10  | 57   | 5  | 1  | <.1  | <3   |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## CARROLL COUNTY

360046088371501 - CR:M- 2 CITY OF TREZEVANT #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| OCT<br>10... | 0915 | 175                                     | 73  | 5.7                            | 16.0                        | <1   | 15                                     | 2  | 3.9  | 1.3  | 6.5  | 48                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| OCT<br>10... | .8                                      | .40   | 13  | 50  | 5.0   | 5.3   | <.10   | 16  | 51   | 46  | .07   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>10... | <1   | 17   | <1   | <10   | <3   | <10  | <3   | 1  | <1   | <.1  | <3   |

## CROCKETT COUNTY

354232089051601 - CK:B- 4 CITY OF BELLS #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| NOV<br>06... | 1400 | 160                                     | 90  | 5.8                            | 16.0                        | 1  | 14                                     | 0  | 3.6  | 1.3  | 8.9  | 57                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| NOV<br>06... | 1                                       | .40   | 19  | 58  | 1.2   | 8.0   | <.10   | 17  | 56   | 52  | .08   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| NOV<br>06... | 20   | <1   | <10   | <3   | <10  | 6  | <1   | 1  | <.1  | 16   | 4  |

## QUALITY OF GROUND WATER

377

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

CROCKETT COUNTY--Continued

354703089070701 - CK:F- 6 CITY OF ALAMO #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| NOV<br>07... | 1210 | 213                                     | 77  | 5.9                            | 16.5                        | 2  | 18                                     | 0  | 4.2  | 1.7  | 5.5  | 40                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|--|---|--|
| NOV<br>07... | .6                                      | .60   | 27  | 66  | 3.5   | 2.3   | <.10   | 11  | 44   | 48   | .06   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| NOV<br>07... | 25   | <1   | <10   | <3   | <10  | 2600                                       | <1   | 58   | <.1  | 29   | 25   |

355437089144301 - CK:J- 4 CITY OF FRIENDSHIP (1967 WELL)

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| NOV<br>07... | 1545 | 330                                     | 373   | 6.1                            | 16.5                        | 2  | 82                                     | 15   | 20   | 7.7  | 44   | 54                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|--|---|--|
| NOV<br>07... | 2                                       | .90   | 67  | 103   | 39  | 38  | <.10   | 37  | 254  | 230  | .35   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| NOV<br>07... | 64   | <1   | <10   | <3   | <10  | 28   | 1  | <1   | <.1  | 120  | 3  |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DYER COUNTY

355758089201001 - DY:D- 5 CROCKETT CO. WIDE U.D. BONICORD #3A

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>11... | 1400 | 125                                     | 140   | 6.1                            | 16.0                        | <1   | 44                                     | 0  | 9.4  | 5.0  | 9.0  | 31                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>11... | .6                                      | .30   | 46  | 71  | 10  | 4.5   | .10  | 36  | 99   | 100   | .13   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>11... | 42   | <1   | <10   | <3   | <10  | 6  | <1   | <1   | <.1  | 14   | 8  |

360154089232501 - DY:H-41 DYERSBURG #8

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>11... | 0900 | 645                                     | 165   | 6.3                            | 19.0                        | <1   | 59                                     | 0  | 13   | 6.3  | 4.6  | 14                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>11... | .3                                      | 1.7   | 70  | 68  | 4.3   | 1.6   | .10  | 9.6   | 76   | 88  | .10   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>11... | 240  | 2  | <10   | <3   | <10  | 4700                                       | 1  | 63   | <.1  | 200  | 12   |

QUALITY OF GROUND WATER

379

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DYER COUNTY--Continued

360657089153101 - DY:J- 44 CITY OF NEWBERN #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| OCT<br>12... | 1240 | 144                                     | 198   | 6.1                            | 16.0                        | <1   | 71                                     | 16   | 16   | 7.6  | 11   | 25                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| OCT<br>12... | .6                                      | .60   | 55  | 85  | 17  | 9.8   | <.10   | 43  | 149  | 140   | .20   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>12... | <1   | 78   | <1   | 20  | <3   | <10  | 3  | 2  | <1   | <.1  | 3  |

361216089112802 - DY:P- 3 CITY OF TRIMBLE #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| OCT<br>11... | 1600 | 181                                     | 385   | 6.4                            | 16.5                        | <1   | 150                                    | 23   | 33   | 16   | 23   | 25                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| OCT<br>11... | .8                                      | .90   | 126   | 97  | 31  | 20  | <.10   | 21  | 237  | 220   | .32   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>11... | <1   | 83   | <1   | 20  | <3   | <10  | 200  | 3  | 6  | .1   | <3   |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## FAYETTE COUNTY

350253089323901 - FA:G- 3 ROSSVILLE #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>14... | 1010 | 174                                     | 33  | 5.7                            | 16.5                        | <1   | 7                                      | 0  | 1.9  | .64  | 3.8  | 51                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|--|
| DEC<br>14... | .6                                      | .40   | 12  | 46  | .3  | 2.2   | <.10   | 16  | 33   | 32  | .04  | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>14... | 22   | <1   | 20  | <3   | <10  | <3   | 2  | <1   | <.1  | 9  | 4  |

351317089310601 - FA:M-14 OAKLAND #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| FEB<br>25... | 0945 | 337                                     | 25  | 5.8                            | 17.0                        | <1   | 6                                      | 0  | 1.5  | .47  | 3.1  | 53                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|--|
| FEB<br>25... | .6                                      | .30   | 12  | 37  | .9  | 1.9   | <.10   | 14  | 29   | 29  | .04  | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| FEB<br>25... | 25   | <1   | <10   | <3   | <10  | 8  | 2  | 4  | <.1  | 7  | 11   |

## QUALITY OF GROUND WATER

381

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

PAYETTE COUNTY--Continued

351448089204601 - FA:O- 36 SOMERVILLE #4

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>13... | 1500 | 190                                     | 21  | 5.6                            | 16.5                        | <1   | 5                                      | 0  | 1.3  | .48  | 2.6  | 50                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>13... | .5                                      | .40   | 10  | 49  | .3  | 1.5   | <.10   | 14  | 24   | 27  | .03   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>13... | 20   | <1   | <10   | <3   | 10   | 8  | 1  | <1   | <.1  | 6  | 5  |

## HARDEMAN COUNTY

350300089110901 - HR:E- 3 GRAND JUNCTION #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>12... | 1115 | 260                                     | 28  | 5.7                            | 16.0                        | <1   | 7                                      | 0  | 1.6  | .69  | 2.7  | 44                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|---|---|--|
| DEC<br>12... | .5                                      | .60   | 8   | 31  | .3  | 2.8   | <.10   | 14  | 28  | .04   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>12... | 27   | <1   | <10   | <3   | <10  | 4  | 1  | <1   | <.1  | 14   | 3  |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## HARDEMAN COUNTY--Continued

351936089085801 - HR:N- 4 WHITEVILLE #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>13... | 1200 | 226                                     | 138   | 5.8                            | 16.5                        | <1   | 25                                     | 9  | 6.1  | 2.3  | 13   | 52                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>13... | 1                                       | 1.0   | 16  | 49  | 11  | 13  | <.10   | 15  | 88   | 71  | .12   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>13... | 47   | <1   | <10   | <3   | 10   | 5  | 1  | <1   | <.1  | 46   | 10   |

351625089013801 - HR:O- 8 WESTERN STATE HOSPITAL #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>12... | 1500 | 298                                     | 60  | 5.9                            | 16.5                        | <1   | 12                                     | 0  | 2.6  | 1.3  | 2.3  | 28                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>12... | .3                                      | .90   | 15  | 37  | 1.0   | 1.3   | <.10   | 13  | 30   | 31  | .04   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>12... | 29   | <1   | 10  | <3   | <10  | <3   | <1   | 7  | <.1  | 41   | 14   |

## QUALITY OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

HARDEMAN COUNTY--Continued

352125088571001 - HR:P- 5 TOONE #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| DEC<br>12... | 1700 | 131                                     | 27  | 5.7                            | 15.0                        | <1   | 6                                      | 0  | 1.4  | .61  | 3.0  | 50                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| DEC<br>12... | .5                                      | .40   | 8   | 31  | .3  | 3.1   | <.10   | 14  | 29   | 28  | .04   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| DEC<br>12... | 28   | <1   | <10   | <3   | 10   | 3  | 1  | <1   | .2   | 11   | 7  |

## HAYWOOD COUNTY

352734089240101 - HA:A- 6 CITY OF STANTON #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| NOV<br>09... | 1015 | 242                                     | 88  | 5.9                            | 16.5                        | 2  | 15                                     | 0  | 3.8  | 1.4  | 10   | 58                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| NOV<br>09... | 1                                       | .40   | 20  | 49  | 1.8   | 6.8   | <.10   | 14  | 60   | 50  | .08   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| NOV<br>09... | 24   | <1   | <10   | <3   | <10  | 12   | <1   | <1   | <.1  | 12   | 4  |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

HAYWOOD COUNTY--Continued

353523089154101 - HA:G- 4 CITY OF BROWNSVILLE #4

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| NOV<br>09... | 1400 | 310                                     | 60  | 5.8                            | 16.5                        | 1  | 11                                     | 0  | 2.8  | 1.0  | 5.7  | 52                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|--|
| NOV<br>09... | .8                                      | .30   | 18  | 55  | 1.0   | 2.5   | <.10   | 11  | 24   | 35  | .03  | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| NOV<br>09... | 21   | <1   | <10   | <3   | <10  | 6  | <1   | <1   | <.1  | 7  | 7  |

## HOUSTON COUNTY

361849087455502 - HU:F- 5 TENNESSEE RIDGE

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|--------------------------------|-----------------------------|--|------------------------------|--|--|--|--|--|-------------------|
| JUN<br>21... | 1430 | 105                                     | 7.4                            | 15.0                        | 15   | .40                          | 190                                    | 41   | 69   | 3.1  | 5.2  | 6                 |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|--|
| JUN<br>21... | .2                                      | .30   | 144   | 11  | 3.6   | 7.3   | <.10   | 8.0   | 209  | 180   | .28  |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|---|--|--|--|--|---|--|--|--|
| JUN<br>21... | .87   | 10  | <1  | <1   | 11   | <.5  | 1  | 7   | <1   | 4  | 6  |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) |
|--------------|--|--|--|---|--|---|--|--|--|---|--|
| JUN<br>21... | 5  | <1   | .3   | <1  | 3  | 1   | <1   | 87   | 33   | 1.8   | .02  |

## QUALITY OF GROUND WATER

385

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## LAKE COUNTY

361530089290301 - LK:E-19 CITY OF RIDGELY #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| OCT<br>11... | 1245 | 730                                     | 165   | 6.0                            | 22.0                        | <1   | 40                                     | 0  | 9.2  | 4.1  | 7.5  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| OCT<br>11... | 24                | .5                                      | 9.0   | 74  | 143   | 9.4   | 2.4   | <.10   | 18  | 110   | .14   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>11... | <1   | 400  | <1   | 10  | <3   | <10  | 10000                                      | 10   | 120  | <.1  | 13   |

## LAWRENCE COUNTY

352614087182501 - LN:R-15 SUMMERTOWN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|--|--|--|--|--|
| JUN<br>20... | 1800 | 105                                     | 95  | 6.7                            | 21.5                        | 10   | .50                          | 43                                     | 0  | 13   | 2.6  | 2.4  |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|--|---|---|
| JUN<br>20... | 11                | .2                                      | .60   | 52  | 20  | 2.3   | 3.1   | <.10   | 8.4   | 63   | 64  | .09   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|---|--|--|--|--|---|--|--|--|
| JUN<br>20... | .85   | 20  | <1  | <1   | 13   | <.5  | 6  | 6   | 1  | 4  | 16   |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) |
|--------------|--|--|--|---|--|---|--|--|--|---|--|
| JUN<br>20... | 6  | 2  | .4   | <1  | 7  | <1  | <1   | 45   | 34   | .80   | .02  |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## MORGAN COUNTY

360528084341401 - MG:F- 4 PLATEAU UD

| DATE         | TIME | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO |
|--------------|------|---|--------------------------------|-----------------------------|--|--|--|--|--|-------------------|---|
| OCT<br>24... | 0930 | 510   | 7.4                            | 15.0                        | 51                                     | 0  | 15   | 3.2  | 93   | 79                | 6                                       |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|---|---|---|---|---|---|--|---|---|--|--|
| OCT<br>24... | 2.1   | 160   | 12  | 58  | 72  | 6.2   | 319  | 350   | .43   | 68   | 130  |

360543084343101 - MG:F- 5 PLATEAU UD

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|-------------------|---|
| OCT<br>25... | 1430 | 394                                     | 180   | 6.2                            | 19.0                        | 68                                     | 38   | 18   | 5.6  | 7.1  | 18                | .4                                      |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|---|---|---|---|---|---|--|---|---|--|--|
| OCT<br>25... | 1.4   | 30  | 37  | 49  | 9.6   | 13  | 128  | 130   | .17   | 5400                                       | 550  |

360753084432001 - MG:L- 10 HICKMAN

| DATE         | TIME | SAM-<br>PLING<br>DEPTH<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|----------------------------------|---|--------------------------------|--|--|--|--|--|-------------------|
| OCT<br>03... | 1200 | 1040                             | 25000   | 8.3                            | 730                                    | 0  | 95   | 120  | 5000   | 94                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|---|
| OCT<br>03... | 82                                      | 18  | 7.2   | 8.8   | 8500  | 11  | 14100  | 14000   | 19.2  |

QUALITY OF GROUND WATER

387

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

OBION COUNTY

362024089094001 - OB:H-8 CITY OF TROY #3

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|
| OCT<br>11... | 1000 | 230                                     | 362   | 6.6                            | 16.0                        | <1   | 150                                    | 0  | 36   | 15   | 12   |

| DATE         | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO<br>(MG/L<br>AS K) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|-------------------|---|---|---|---|---|---|--|---|---|---|
| OCT<br>11... | 14                | .4  | 5.2   | 199   | 97  | 5.9   | 4.6   | .20  | 14  | 230   | .29   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>11... | 1  | 700  | <1   | 10  | <3   | <10  | 12000                                      | 9  | 300  | <.1  | <3   |

ROANE COUNTY

355447084184502 - RN:M-469-A ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>25... | 1006 | 201                                     | 900   | 10.4                           | 16.0                        | 480   | .0  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>25... | <.10  | 13   | 7.5   | 6.4  | .8   | 3.9  | 2590                        |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

ROANE COUNTY--Continued

355445084184304 - RN:M-5-439 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>29... | 1530 | 34.45                                   | 680   | 6.6                            | 19.0                        | 488   | 237   | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>29... | .89   | 14   | 37  | 31   | 1.9  | 4.0  | 59400000                    |

355447084184301 - RN:M-5-440 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|---|
| APR<br>29... | 1200 | 36.26                                   | 550   | 6.5                            | 21.0                        | 447   | 274   | 5.3   | .020  |

| DATE         | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS NO2) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|---|--|---|--|--|--|-----------------------------|
| APR<br>29... | .07   | 5.3   | 11   | 16  | 13   | 1.8  | 4.0  | 16700000                    |

355445084185503 - RN:M-5-458 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>24... | 1100 | 202                                     | 305   | 9.2                            | 17.5                        | 195   | .2  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>24... | <.10  | 5.1  | 7.9   | 6.8  | 1.8  | 4.0  | 1740                        |

## QUALITY OF GROUND WATER

389

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

ROANE COUNTY--Continued

355447084184307 - RN:M-5-459 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>23... | 1530 | 140                                     | 230   | 9.6                            | 17.0                        | 100   | .0  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>23... | <.10  | 3.8  | 26  | 22   | 9.1  | 3.1  | 8380                        |

355446084184301 - RN:M-5-460 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>23... | 1330 | 100                                     | 750   | 7.4                            | 17.5                        | 222   | 17  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>23... | <.10  | 14   | 21  | 18   | 3.5  | 2.5  | 208000                      |

355445084184102 - RN:M-5-461 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>26... | 1030 | 201                                     | 1050  | 10.2                           | 17.0                        | 864   | .0  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>26... | <.10  | 20   | 14  | 12   | 1.6  | 7.8  | 5730                        |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

ROANE COUNTY--Continued

355445084184103 - RN:M-5-462 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>26... | 1205 | 151                                     | 870   | 9.6                            | 17.5                        | 554   | .2  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>26... | <.10  | 14   | 7.7   | 6.7  | 1.2  | 5.0  | 2400                        |

355445084184202 - RN:M-5-464 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>26... | 1450 | 11.00                                   | 480   | 7.4                            | 19.5                        | 380   | 29  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>26... | <.10  | 47   | 540   | 460  | 270  | 10   | 492000000                   |

355457084184503 - RN:M-5-470 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>24... | 1615 | 151                                     | 1200  | 11.3                           | 16.5                        | 486   | .0  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>24... | <.10  | 14   | 20  | 17   | .6   | 6.5  | 4780                        |

## QUALITY OF GROUND WATER

391

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

ROANE COUNTY--Continued

355456084184601 - RN:M-5-471 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>24... | 1440 | 99.00                                   | 319   | 8.1                            | 17.0                        | 225   | 3.4   | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>24... | <.10  | 5.7  | 12  | 10   | 2.6  | 3.6  | 476000                      |

355456084184501 - RN:M-5-472 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>24... | 1240 | 20.00                                   | 590   | 6.9                            | 17.0                        | 610   | 149   | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>24... | <.10  | 150  | 1400  | 1200   | 610  | 4.8  | 9240000                     |

355453084183401 - RN:M-5-473 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>25... | 1136 | 200                                     | 1320  | 11.2                           | 17.5                        | 567   | .0  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>25... | <.10  | 18   | 12  | 10   | .6   | 3.8  | 1200                        |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

ROANE COUNTY--Continued

355453084183402 - RN:M-5-474 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>25... | 1215 | 151                                     | 640   | 9.5                            | 16.0                        | 301   | .2  | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>25... | <.10  | 90   | 520   | 450  | <.4  | 66   | 1120                        |

355453084183403 - RN:M-5-475 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>25... | 1430 | 100                                     | 345   | 8.7                            | 17.0                        | 260   | 1.0   | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>25... | <.10  | 7.0  | 4.5   | 3.9  | .7   | 7.9  | 9100                        |

355454084183401 - RN:M-5-476 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|---|
| APR<br>25... | 1610 | 30.00                                   | 560   | 6.5                            | 20.5                        | 475   | 291   | <.010   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) | CARBON,<br>ORGANIC<br>DIS-<br>SOLVED<br>(MG/L<br>AS C) | TRITIUM<br>TOTAL<br>(PCI/L) |
|--------------|---|--|---|--|--|--|-----------------------------|
| APR<br>25... | <.10  | 1500   | 23000   | 20000  | 11100  | 7.9  | 20000000                    |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## ROANE COUNTY--Continued

355421084193201 - RN:M-6-108 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|--|---|--|--|
| APR<br>29... | 1510 | 126                                     | 250   | 7.7                            | 18.5                        | 178   | 6.9   | 5.4  | 3.3   | 2.8  | .6   |

355420084193301 - RN:M-6-109 ORNL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | GROSS<br>ALPHA,<br>DIS-<br>SOLVED<br>(UG/L<br>AS<br>U-NAT) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS<br>CS-137) | GROSS<br>BETA,<br>DIS-<br>SOLVED<br>(PCI/L<br>AS SR/<br>YT-90) | STRON-<br>TIUM 90<br>DIS-<br>SOLVED<br>(PCI/L) |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|--|---|--|--|
| APR<br>30... | 1005 | 126                                     | 305   | 7.3                            | 16.0                        | 234   | 23  | 7.1  | 4.0   | 3.5  | <.4  |

## SCOTT COUNTY

362431084265701 - SC:K-102 ETC SNEEDSX

| DATE         | TIME | SAM-<br>PLING<br>DEPTH<br>(FEET) | FLOW<br>RATE<br>(GPM) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO |
|--------------|------|----------------------------------|-----------------------|--|--|--|--|--|-------------------|---|
| AUG<br>10... | 1330 | 737                              | 15                    | 5600                                   | 5600   | 1700   | 340  | 8500   | 77                | 51                                      |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|--------------|---|---|---|---|--|---|---|--|--|
| AUG<br>10... | 2.3   | 18  | 18000   | 4.2   | 34000  | 29000   | 46.2  | 250  | 5900   |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SCOTT COUNTY--Continued

363005084315201 - SC:0- 6 ONEIDA

| DATE         | TIME | DEPTH<br>BELOW<br>LAND<br>SURFACE<br>(WATER<br>LEVEL)<br>(FEET)     | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET)             | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)             | PH<br>(STAND-<br>ARD<br>UNITS)                       | TEMPER-<br>ATURE<br>(DEG C)                         | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS)            | TUR-<br>BID-<br>ITY<br>(NTU)                  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)               | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)         | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               |
|--------------|------|---|---|---|--|---|---|---|--|--|--|--|
| JUN<br>27... | 1030 | 7.70  | 62.00   | 203   | 5.9  | 14.0  | 10  | 20  | 87   | 0  | 24   | 6.6  |
| DATE         |      | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                   | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)  | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)           | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2)    | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) |
| JUN<br>27... | 5.3  | 11  | .3  | 1.6   | 91   | 222   | 12  | 3.3   | <.10   | 19   | 126  |  |
| DATE         |      | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)                 | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)  | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                       |
| JUN<br>27... | 130  | .17   | <.10  | <10   | <1   | <1  | 98  | <.5   | 2  | 5  | 5  |  |
| DATE         |      | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)                        | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)          | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)                 | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                         |
| JUN<br>27... | 1    | 6800  | 5   | 630   | <.1  | <1  | 6   | <1  | <1   | 82   | 48   |  |

## SHELBY COUNTY

350540090061700 - SH:J- 84 CARGILL, INC., MEMPHIS, TENN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET)      | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM)   | PH<br>(STAND-<br>ARD<br>UNITS)                    | TEMPER-<br>ATURE<br>(DEG C)                             | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS)  | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)              | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)      | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)               | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                        | PERCENT<br>SODIUM                                   |
|--------------|------|--|---|---|---|---|---|--|---|--|---|---|
| SEP<br>11... | 1330 | 415  | 183   | 6.4   | 18.0  | <1  | 78  | 0  | 18  | 8.0  | 8.1   | 18  |
| DATE         |      | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO      | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)           | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
| SEP<br>11... | .4   | .80  | 89  | 69  | 2.9   | 3.1   | .10   | 9.8  | 111   | 100  | .15   |   |
| DATE         |      | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)        | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)      | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)     | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)  | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)        | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)                   | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)        | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN)               | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)                        | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)          |
| SEP<br>11... | <1   | 72   | <1  | <10   | <3  | <10   | 700   | 1  | 11  | <.1  | <3  |   |

## QUALITY OF GROUND WATER

395

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

SHELBY COUNTY--Continued

350114090071701 - SH:J-146 MLGW-DAVIS

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>10... | 1130 | 446                                     | 150   | 6.3                            | 18.0                        | <1   | 60                                     | 0  | 13   | 6.6  | 7.7  | 22                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>10... | .4                                      | .90   | 72  | 70  | 3.1   | 3.6   | <.10   | 14  | 86   | 92  | .12   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>10... | <1   | 52   | <1   | <10   | <3   | <10  | 300  | 1  | 3  | <.1  | 5  |

350446090013500 - SH:J-154 MLGW-ALLEN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>10... | 1000 | 370                                     | 137   | 6.3                            | 18.0                        | 5  | 51                                     | 0  | 12   | 5.2  | 8.1  | 25                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>10... | .5                                      | 1.2   | 66  | 64  | 2.9   | 3.6   | <.10   | 13  | 94   | 86  | .13   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>10... | <1   | 76   | <1   | <10   | <3   | <10  | 790  | 1  | 12   | <.1  | 12   |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

SHELBY COUNTY--Continued

350518089554400 - SH:K- 73 MLGW-SHEAHAN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|----------------------------------|--|--|--|--|-------------------|
| SEP<br>10... | 1330 | 273                                     | 210   | 6.2                            | 18.0                        | 5  | 70                               | 2  | 16   | 7.2  | 14   | 30                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>10... | .8                                      | .90   | 68  | 83  | 25  | 8.9   | .10  | 12  | 123  | 130   | .17   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>10... | <1   | 57   | <1   | <10   | <3   | <10  | 970  | 3  | 180  | <.1  | 14   |

350516089553801 - SH:K- 74 SHEAHAN SOUTH WELL FIELD

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | TRITIUM<br>TOTAL<br>(PCI/L) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|-----------------------------|-----------------------------------|---|
| APR<br>25... | 1500 | 273                                     | 146   | 6.0                            | 17.0                        | 50  | 97  | 38                          | 84.5                              | -20.5   |

350218089511701 - SH:L- 36 MLGW-LICHTERMAN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|----------------------------------|--|--|--|--|-------------------|
| SEP<br>09... | 1330 | 567                                     | 85  | 6.3                            | 19.0                        | 5  | 36                               | 0  | 9.1  | 3.2  | 3.4  | 17                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>09... | .3                                      | .50   | 36  | 35  | 3.1   | 2.1   | <.10   | 10  | 63   | 53  | .09   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>09... | <1   | 22   | <1   | <10   | <3   | <10  | 180  | 2  | 3  | .1   | 9  |

## QUALITY OF GROUND WATER

397

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

SHELBY COUNTY-Continued

350230089512301 - SH:L- 37 MLGW-LICHTERMAN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | TRITIUM<br>TOTAL<br>(PCI/L) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|-----------------------------|-----------------------------------|---|
| APR<br>25... | 1200 | 382                                     | 88  | 6.0                            | 18.0                        | 32  | 62  | <1.0                        | 75.1                              | -21.0   |

350503089482201 - SH:L-83 GERMANTOWN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| FEB<br>25... | 1340 | 622                                     | 83  | 6.4                            | 18.5                        | 10   | 37                                     | 0  | 9.0  | 3.4  | 3.1  | 15                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| FEB<br>25... | .2                                      | .30   | 39  | 30  | 2.8   | 1.7   | <.10   | 9.5   | 54   | 53  | .07   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| FEB<br>25... | 40   | <1   | <10   | <3   | <10  | 230  | 1  | 10   | <.1  | 18   | 12   |

350235089394701 - SH:M-36 COLLIERVILLE PLANT #1 WELL #2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| MAR<br>07... | 1415 | 348                                     | 74  | 5.8                            | 17.5                        | 5  | 15                                     | 0  | 3.7  | 1.4  | 8.5  | 54                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| MAR<br>07... | 1                                       | .50   | 17  | 52  | 6.8   | 6.9   | <.10   | 14  | 54   | 52  | .07   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| MAR<br>07... | 26   | <1   | 10  | <3   | <10  | 6  | <1   | <1   | <.1  | 13   | <3   |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SHELBY COUNTY-Continued

350913090005801 - SH:O-223 MALLORY WELL FIELD

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | CARBON<br>14<br>PERCENT<br>MODERN | C-13/<br>C-12<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|------|---|---|--------------------------------|-----------------------------|---|---|-----------------------------------|---|
| APR<br>26... | 1330 | 772                                     | 138   | 6.2                            | 18.0                        | 68  | 83  | 77.4                              | -19.5   |

350917090012000 - SH:O-231 MLGW-MALLORY

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>11... | 1230 | 518                                     | 140   | 6.3                            | 18.0                        | <1   | 55                                     | 0  | 12   | 6.0  | 8.1  | 24                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>11... | .5                                      | 1.0   | 68  | 66  | 2.8   | 3.1   | <.10   | 15  | 95   | 90  | .13   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|---|--|---|--|--|--|--|--|--|--|
| SEP<br>11... | <1   | 74  | <1   | <10   | <3   | <10  | 1000                                       | 1  | 11   | .1   | 11   |

350930089574501 - SH:P- 23 BUCKEYE

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| MAR<br>07... | 1030 | 1410                                    | 169   | 6.9                            | 22.0                        | 10   | 8                                      | 0  | 1.8  | .80  | 38   | 90                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|--|
| MAR<br>07... | 6                                       | 1.2   | 88  | 21  | 4.6   | .80   | <.10   | 12  | 114  | 110   | .16   | <1   |

| DATE         | BARIIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|---|--|---|--|--|--|--|--|--|--|--|
| MAR<br>07... | 39  | <1   | <10   | <3   | <10  | 850  | <1   | 37   | <.1  | 76   | 4  |

## QUALITY OF GROUND WATER

399

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SHELBY COUNTY-Continued

351440089572301 - SH:P-134 MORTON WELL FIELD

| DATE         | TIME | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>11... | 1030 | 130   | 6.3                            | 18.0                        | <1   | 48                                     | 0  | 11   | 4.9  | 5.5  | 19                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>11... | .4                                      | 1.4   | 58  | 56  | 3.7   | 2.6   | <.10   | 10  | 70   | 75  | .10   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>11... | <1   | 87   | <1   | <10   | <3   | <10  | 1500                                       | 3  | 24   | <.1  | 6  |

351109089512901 - SH:Q- 40 MLGW-MCCORD

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>10... | 1430 | 441                                     | 133   | 6.1                            | 17.0                        | 5  | 42                                     | 0  | 9.6  | 4.3  | 7.5  | 28                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| SEP<br>10... | .5                                      | .90   | 46  | 71  | 6.7   | 5.2   | <.10   | 11  | 68   | 74  | .09   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>10... | <1   | 72   | <1   | <10   | <3   | <10  | 1400                                       | 2  | 20   | <.1  | 14   |



## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SHELBY COUNTY-Continued

351224089521501 - SH:Q- 60 BARTLETT

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| FEB<br>26... | 1345 | 491                                     | 100   | 6.0                            | 17.0                        | <1   | 30                                     | 0  | 6.8  | 3.1  | 9.7  | 41                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|--|---|--|
| FEB<br>26... | .8                                      | .40   | 41  | 79  | 6.1   | 3.7   | <.10   | 16  | 62   | 71   | .08   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| FEB<br>26... | 29   | <1   | <10   | <3   | <10  | 65   | 2  | 3  | <.1  | 22   | 6  |

351324089504501 - SH:Q-81 BARLETT #2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| FEB<br>26... | 1200 | 509                                     | 102   | 6.1                            | 18.0                        | <1   | 31                                     | 0  | 7.2  | 3.2  | 9.2  | 39                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|---|--|---|--|--|---|--|
| FEB<br>26... | .7                                      | .40   | 40  | 62  | 5.5   | 4.3   | <.10   | 14  | 63   | 68   | .09   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| FEB<br>26... | 39   | <1   | <10   | <3   | <10  | 260  | <1   | 3  | <.1  | 20   | <3   |

## QUALITY OF GROUND WATER

401

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

SHELBY COUNTY-Continued

351703089575301 - SH:U- 20 GRACE CHEMICAL

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| SEP<br>09... | 1030 | 551                                     | 280   | 6.6                            | 18.5                        | <1   | 130                                    | 0  | 28   | 15   | 8.9  | 13                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LINEITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|--|---|---|---|--|---|--|---|---|
| SEP<br>09... | .3                                      | .30   | 158  | 77  | 2.9   | 2.5   | .10  | 9.6   | 165  | 170   | .22   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| SEP<br>09... | <1   | 330  | 1  | <10   | <3   | <10  | 5400                                       | 2  | 94   | .4   | 11   |

352036089534501 - SH:U- 41 MILLINGTON

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| JAN<br>25... | 1030 | 399                                     | 343   | 6.7                            | 17.0                        | <1   | 160                                    | 0  | 35   | 18   | 14   | 16                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|--|---|--|---|---|--|
| JAN<br>25... | .5                                      | 1.9   | 68  | 5.9   | 3.7   | .20  | 14  | 191  | 200   | .26   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| JAN<br>25... | 230  | 1  | 10  | <3   | <10  | 4000                                       | 1  | 97   | .1   | 270  | 8  |

## QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SHELBY COUNTY-Continued

352034089534501 - SH:U-54 CITY OF MILLINGTON, NEW WELL #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CAC03) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CAC03) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| JAN<br>25... | 1215 | 1470                                    | 177   | 6.9                            | 23.0                        | 30   | 8                                      | 0  | 1.8  | .76  | 38   | 90                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|--|---|--|---|---|--|
| JAN<br>25... | 6                                       | 1.6   | 22  | 4.7   | 1.2   | .10  | 11  | 101  | 110   | .14   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| JAN<br>25... | 42   | <1   | <10   | <3   | <10  | 1500                                       | <1   | 41   | <.1  | 79   | <3   |

## TIPTON COUNTY

353346089385801 - TP:M-19 CITY OF COVINGTON #2

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CAC03) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CAC03) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| JAN<br>24... | 1400 | 520                                     | 121   | 6.2                            | 18.5                        | <1   | 48                                     | 0  | 12   | 4.3  | 7.5  | 25                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|--|---|--|---|---|--|
| JAN<br>24... | .5                                      | .90   | 72  | 2.6   | 3.3   | <.10   | 9.3   | 78   | 76  | .11   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| JAN<br>24... | 49   | <1   | 10  | <3   | <10  | 560  | <1   | 10   | <.1  | 41   | 10   |

## QUALITY OF GROUND WATER

403

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## TIPTON COUNTY-Continued

353333089424701 - TP:M-20 1ST U.D. OF TIPTON COUNTY #4

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| JAN<br>25... | 1540 | 582                                     | 147   | 6.3                            | 18.0                        | <1   | 52                                     | 0  | 12   | 5.3  | 7.3  | 23                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) |
|--------------|---|---|---|---|---|--|---|--|---|---|--|
| JAN<br>25... | .5                                      | 1.8   | 64  | 2.7   | 3.3   | <.10   | 10  | 80   | 86  | .11   | <1   |

| DATE         | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|---|--|--|--|--|--|--|--|--|
| JAN<br>25... | 200  | <1   | <10   | <3   | <10  | 3600                                       | 1  | 59   | <.1  | 160  | 5  |

## WEAKLEY COUNTY

360918088475801 - WK:E- 15 CITY OF GREENFIELD #1

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | PERCENT<br>SODIUM |
|--------------|------|---|---|--------------------------------|-----------------------------|--|--|--|--|--|--|-------------------|
| OCT<br>10... | 1345 | 385                                     | 52  | 5.7                            | 16.0                        | <1   | 13                                     | 0  | 3.2  | 1.1  | 4.8  | 45                |

| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|---|---|---|---|---|---|--|---|--|---|---|
| OCT<br>10... | .6                                      | .30   | 15  | 58  | 2.4   | 3.6   | <.10   | 13  | 38   | 37  | .05   |

| DATE         | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) |
|--------------|--|--|--|---|--|--|--|--|--|--|--|
| OCT<br>10... | <1   | 22   | <1   | <10   | <3   | <10  | 3  | 1  | <1   | <.1  | 6  |



QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

WILSON COUNTY

360548086083001 - WI:G- 41 WATERTOWN

| DATE         | TIME | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET) | SPE-<br>CIFIC<br>CON-<br>DUC-<br>TANCE<br>(US/CM) | PH<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>(DEG C) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(NTU) | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3) | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) |
|--------------|------|---|---|--------------------------------|-----------------------------|--|------------------------------|--|--|--|--|--|
| JUN<br>20... | 1030 | 257                                     | 550   | 7.3                            | 19.0                        | 5  | .50                          | 290                                    | 0  | 90   | 16   | 12   |

| DATE         | PERCENT<br>SODIUM<br>RATIO | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | ALKA-<br>LITY<br>FIELD<br>(MG/L<br>AS<br>CACO3) | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SiO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) |
|--------------|----------------------------|---|---|---|---|---|---|--|---|--|---|---|
| JUN<br>20... | 8                          | .3                                      | 2.0   | 350   | 34  | 48  | 10  | .30  | 6.1   | 347  | 390   | .47   |

| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL) | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD) | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR) | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO) | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) |
|--------------|---|---|---|--|--|--|--|---|--|--|--|
| JUN<br>20... | .12   | 10  | <1  | <1   | 120  | <.5  | 5  | 1   | <1   | 5  | 76   |

| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG) | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO) | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI) | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE) | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN) | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) |
|--------------|--|--|--|---|--|---|--|--|--|---|--|
| JUN<br>20... | 10   | 3  | .4   | <1  | 5  | <1  | <1   | 370  | 27   | 1.1   | .02  |

## QUALITY OF GROUND WATER

405

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

WILSON COUNTY--Continued

360550086075701 - WI:G- 44 WATERTOWN

| DATE         | TIME  | DEPTH<br>OF<br>WELL,<br>TOTAL<br>(FEET)              | PH<br>(STAND-<br>ARD<br>UNITS)                      | TEMPER-<br>ATURE<br>(DEG C)                             | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS)  | TUR-<br>BID-<br>ITY<br>(NTU)                         | HARD-<br>NESS<br>(MG/L<br>AS<br>CACO3)             | HARD-<br>NESS,<br>NONCAR-<br>BONATE<br>(MG/L<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)                | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                 | PERCENT<br>SODIUM |
|--------------|---|--|---|---|---|--|--|--|--|---|--|-------------------|
| JUN<br>20... | 1200  | 250  | 7.7   | 16.5  | <1  | .50  | 280  | 0  | 87   | 16  | 12   | 8                 |
| DATE         | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                       | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)  | ALKA-<br>LINITY<br>FIELD<br>(MG/L<br>AS<br>CACO3)   | CARBON<br>DIOXIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS CO2) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)  | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)      | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)          |                   |
| JUN<br>20... | .3  | 1.6  | 346   | 13  | 49  | 9.9  | .30  | 5.7  | 343  | 390   | .47  |                   |
| DATE         | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | ALUM-<br>INUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AL)  | ANTI-<br>MONY,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SB) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)            | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA)  | BERYL-<br>LIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BE) | CADMIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS CD)       | CHRO-<br>MIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CR)    | COBALT,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CO)                       | COPPER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS CU)                        | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)                   |                   |
| JUN<br>20... | <.10  | 20   | <1  | <1  | 140   | .8   | <1   | 5  | 1  | 4   | 180  |                   |
| DATE         | LEAD,<br>DIS-<br>SOLVED<br>(UG/L<br>AS PB)                    | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | MERCURY<br>DIS-<br>SOLVED<br>(UG/L<br>AS HG)        | MOLYB-<br>DENUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MO)   | NICKEL,<br>DIS-<br>SOLVED<br>(UG/L<br>AS NI)  | SELE-<br>NIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SE)  | SILVER,<br>DIS-<br>SOLVED<br>(UG/L<br>AS AG)       | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)   | ZINC,<br>DIS-<br>SOLVED<br>(UG/L<br>AS ZN)                         | CARBON,<br>ORGANIC<br>TOTAL<br>(MG/L<br>AS C)                       | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) |                   |
| JUN<br>20... | 2   | 4  | .2  | <1  | 7   | <1   | <1   | 320  | 11   | 1.7   | .01  |                   |



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## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

| Multiply inch-pound units                  | By   | To obtain SI units   |
|--|--|--|
| <i>Length</i>                              |  |  |
| inches (in)                                | $2.54 \times 10^1$<br>$2.54 \times 10^{-2}$                                | millimeters (mm)<br>meters (m)   |
| feet (ft)                                  | $3.048 \times 10^{-1}$   | meters (m)   |
| miles (mi)                                 | $1.609 \times 10^0$  | kilometers (km)  |
| <i>Area</i>                                |  |  |
| acres                                      | $4.047 \times 10^3$<br>$4.047 \times 10^{-1}$<br>$4.047 \times 10^{-3}$    | square meters (m <sup>2</sup> )<br>square hectometers (hm <sup>2</sup> )<br>square kilometers (km <sup>2</sup> )           |
| square miles (mi <sup>2</sup> )            | $2.590 \times 10^0$  | square kilometers (km <sup>2</sup> )   |
| <i>Volume</i>                              |  |  |
| gallons (gal)                              | $3.785 \times 10^0$<br>$3.785 \times 10^0$<br>$3.785 \times 10^{-3}$       | liters (L)<br>cubic decimeters (dm <sup>3</sup> )<br>cubic meters (m <sup>3</sup> )  |
| million gallons                            | $3.785 \times 10^3$<br>$3.785 \times 10^{-3}$                              | cubic meters (m <sup>3</sup> )<br>cubic hectometers (hm <sup>3</sup> )   |
| cubic feet (ft <sup>3</sup> )              | $2.832 \times 10^1$<br>$2.832 \times 10^{-2}$                              | cubic decimeters (dm <sup>3</sup> )<br>cubic meters (m <sup>3</sup> )  |
| acre-feet (acre-ft)                        | $1.233 \times 10^3$<br>$1.233 \times 10^{-3}$<br>$1.233 \times 10^{-6}$    | cubic meters (m <sup>3</sup> )<br>cubic hectometers (hm <sup>3</sup> )<br>cubic kilometers (km <sup>3</sup> )              |
| <i>Flow</i>                                |  |  |
| cubic feet per second (ft <sup>3</sup> /s) | $2.832 \times 10^1$<br>$2.832 \times 10^1$<br>$2.832 \times 10^{-2}$       | liters per second (L/s)<br>cubic decimeters per second (dm <sup>3</sup> /s)<br>cubic meters per second (m <sup>3</sup> /s) |
| gallons per minute (gal/min)               | $6.309 \times 10^{-2}$<br>$6.309 \times 10^{-2}$<br>$6.309 \times 10^{-5}$ | liters per second (L/s)<br>cubic decimeters per second (dm <sup>3</sup> /s)<br>cubic meters per second (m <sup>3</sup> /s) |
| million gallons per day                    | $4.381 \times 10^1$<br>$4.381 \times 10^{-2}$                              | cubic decimeters per second (dm <sup>3</sup> /s)<br>cubic meters per second (m <sup>3</sup> /s)                            |
| <i>Mass</i>                                |  |  |
| tons (short)                               | $9.072 \times 10^{-1}$   | megagrams (Mg) or metric tons  |

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