## 03599500 DUCK RIVER AT COLUMBIA, TN

LOCATION.--Lat 35°37'04", long 87°01'56", Maury County, Hydrologic Unit 06040003, on right bank 4 ft downstream from bridge on former U.S. Highway 31, 2 blocks north of public square in Columbia, 2.4 mi upstream from Rutherford Creek, and at mile 132.8.

DRAINAGE AREA.--1,208 $mi^2$.

PERIOD OF RECORD.--October 1904 to December 1908, April 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site, 1887-95, 1911 (fragmentary), 1947-71, published in reports of U.S. Weather Bureau. Discharge records furnished by Tennessee Valley Authority, 1983-1991.

REVISED RECORD.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Data collection platform. Datum of gage is 535.33 ft above NGVD of 1929, supplementary adjustment of 1955. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.37 ft higher prior to Oct. 1, 1933.

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. Maximum discharge prior to regulation, 61,500 $ft^3/s$, Mar. 17, 1973; maximum gage height, 51.75 ft Feb. 14, 1948; no flow Oct. 22, 1922, caused by regulation by power plant .75 mi upstream. Flow regulated by Normandy Lake (station 03596460) since January 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1902, reached a stage of 48.0 ft, present datum, discharge, 50,700 $ft^3/s$.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,400 $ft^3/s$, Feb. 7, gage height, 39.19 ft; minimum discharge, 223 $ft^3/s$, Oct. 22, 23, 24.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 475 | 443 | 3,090 | 2,920 | 1,370 | 1,430 | 872 | 529 | 1,440 | 6,390 | 559 | 599 |
| 2 | 405 | 435 | 2,200 | 2,220 | 1,220 | 4,940 | 771 | 542 | 1,450 | 5,500 | 517 | 590 |
| 3 | 365 | 429 | 1,780 | 1,880 | 1,280 | 6,530 | 679 | 606 | 1,030 | 3,890 | 398 | 546 |
| 4 | 340 | 424 | 1,560 | 1,540 | 1,420 | 4,670 | 605 | 889 | 1,220 | 2,840 | 346 | 565 |
| 5 | 321 | 436 | 1,440 | 1,590 | 11,500 | 3,940 | 551 | 926 | 1,680 | 3,860 | 319 | 628 |
| 6 | 311 | 514 | 1,400 | 3,440 | 30,600 | 12,800 | 510 | 785 | 914 | 3,710 | 357 | 464 |
| 7 | 299 | 531 | 1,180 | 3,320 | 34,600 | 18,200 | 475 | 589 | 644 | 3,210 | 491 | 416 |
| 8 | 293 | 526 | 996 | 2,250 | 30,600 | 11,700 | 458 | 510 | 511 | 5,610 | 411 | 1,190 |
| 9 | 282 | 517 | 904 | 2,030 | 13,600 | 6,220 | 442 | 452 | 516 | 4,670 | 339 | 1,100 |
| 10 | 275 | 515 | 1,080 | 1,920 | 6,490 | 4,930 | 429 | 425 | 572 | 3,250 | 300 | 688 |
| 11 | 276 | 511 | 2,180 | 1,730 | 5,430 | 4,110 | 413 | 1,020 | 540 | 2,680 | 290 | 358 |
| 12 | 264 | 507 | 2,510 | 1,550 | 4,860 | 2,650 | 838 | 3,160 | 496 | 2,220 | 298 | 278 |
| 13 | 257 | 448 | 1,800 | 1,210 | 4,810 | 2,070 | 5,490 | 1,240 | 473 | 1,310 | 305 | 252 |
| 14 | 259 | 426 | 1,560 | 986 | 4,420 | 1,510 | 11,300 | 884 | 1,360 | 1,220 | 325 | 242 |
| 15 | 254 | 430 | 1,500 | 921 | 3,550 | 1,180 | 7,650 | 1,150 | 1,500 | 2,710 | 308 | 247 |
| 16 | 249 | 505 | 1,430 | 956 | 4,430 | 1,090 | 4,370 | 1,420 | 1,470 | 2,710 | 276 | 279 |
| 17 | 259 | 581 | 1,330 | 941 | 5,130 | 1,600 | 2,720 | 1,560 | 1,560 | 1,830 | 259 | 3,650 |
| 18 | 259 | 916 | 1,430 | 1,860 | 5,870 | 1,640 | 2,020 | 1,230 | 1,080 | 1,610 | 250 | 8,170 |
| 19 | 255 | 2,020 | 1,430 | 2,960 | 5,620 | 1,320 | 1,670 | 957 | 844 | 1,480 | 240 | 3,560 |
| 20 | 251 | 2,400 | 1,300 | 2,320 | 4,780 | 1,230 | 1,470 | 637 | 695 | 1,100 | 360 | 1,620 |
| 21 | 245 | 1,960 | 1,170 | 1,690 | 4,010 | 1,100 | 1,200 | 527 | 548 | 779 | 679 | 1,150 |
| 22 | 243 | 1,460 | 1,080 | 1,430 | 3,270 | 1,020 | 1,010 | 454 | 650 | 619 | 1,520 | 879 |
| 23 | 232 | 1,240 | 1,060 | 1,260 | 2,690 | 931 | 938 | 391 | 4,500 | 494 | 805 | 696 |
| 24 | 225 | 1,770 | 1,750 | 1,140 | 2,320 | 828 | 924 | 346 | 6,710 | 400 | 567 | 570 |
| 25 | 230 | 2,560 | 2,580 | 2,630 | 2,060 | 758 | 852 | 319 | 7,190 | 524 | 562 | 489 |
| 26 | 260 | 2,140 | 1,960 | 6,040 | 1,680 | 699 | 739 | 294 | 16,400 | 958 | 1,720 | 431 |
| 27 | 281 | 1,490 | 1,590 | 4,730 | 1,560 | 653 | 897 | 273 | 20,000 | 1,070 | 1,090 | 389 |
| 28 | 284 | 5,990 | 1,390 | 3,110 | 1,480 | 618 | 1,010 | 261 | 9,940 | 671 | 688 | 358 |
| 29 | 313 | 10,400 | 1,280 | 2,470 | 1,350 | 646 | 765 | 252 | 5,480 | 529 | 620 | 332 |
| 30 | 443 | 5,780 | 1,900 | 1,870 | --- | 779 | 612 | 251 | 4,540 | 441 | 555 | 312 |
| 31 | 455 | --- | 3,900 | 1,550 | --- | 858 | --- | 732 | --- | 411 | 495 | --- |
| TOTAL | 9,160 | 48,304 | 51,760 | 66,464 | 202,000 | 102,650 | 52,680 | 23,611 | 95,953 | 68,696 | 16,249 | 31,048 |
| MEAN | 295 | 1,610 | 1,670 | 2,144 | 6,966 | 3,311 | 1,756 | 762 | 3,198 | 2,216 | 524 | 1,035 |
| MAX | 475 | 10,400 | 3,900 | 6,040 | 34,600 | 18,200 | 11,300 | 3,160 | 20,000 | 6,390 | 1,720 | 8,170 |
| MIN | 225 | 424 | 904 | 921 | 1,220 | 618 | 413 | 251 | 473 | 400 | 240 | 242 |
| (†) | -3,700 | -8,300 | -1,200 | -1,300 | 300 | 6,400 | 9,200 | 200 | 400 | -600 | -700 | -3,500 |
| MEAN(‡) | 176 | 1,333 | 1,631 | 2,102 | 6,976 | 3,518 | 2,063 | 768 | 3,212 | 2,197 | 502 | 918 |
| CFSM(†) | 0.15 | 1.10 | 1.35 | 1.74 | 5.77 | 2.91 | 1.71 | 0.64 | 2.66 | 1.82 | 0.42 | 0.76 |
| IN.(‡) | 0.17 | 1.23 | 1.56 | 2.01 | 6.23 | 3.36 | 1.91 | 0.73 | 2.97 | 2.10 | 0.48 | 0.85 |

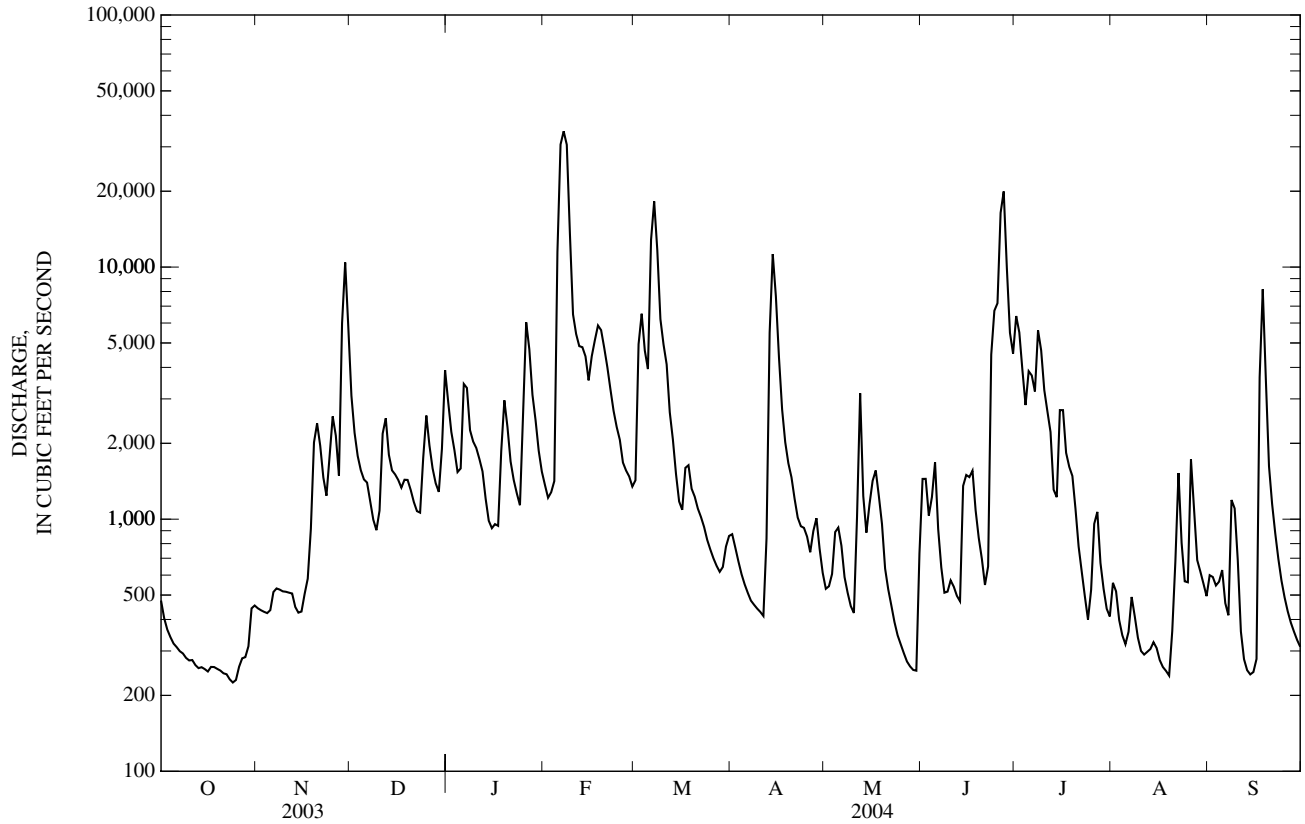
CAL YR 2003 MEAN(‡) 2501 CFSM(‡) 2.07 IN.(‡) 28.18
WTR YR2004 MEAN(‡) 2092 CFSM(‡) 1.73 IN.(‡) 23.58

(†) Change in contents, in cfs-days in Normandy Lake.
(‡) Adjusted for change in content.
NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEAN | 712 | 2,047 | 3,474 | 3,658 | 3,921 | 4,143 | 2,582 | 2,168 | 1,114 | 716 | 468 | 649 |
| MAX | 3,642 | 5,925 | 10,360 | 8,513 | 9,901 | 10,090 | 7,464 | 9,106 | 5,081 | 4,740 | 1,365 | 3,832 |
| (WY) | (1990) | (1987) | (1991) | (1979) | (1991) | (1980) | (1994) | (1983) | (1997) | (1989) | (1998) | (1979) |
| MIN | 160 | 236 | 418 | 273 | 953 | 1,104 | 325 | 244 | 167 | 220 | 172 | 150 |
| (WY) | (2000) | (1981) | (1981) | (1986) | (1978) | (1985) | (1986) | (1988) | (1988) | (1988) | (1999) | (1999) |

03599500 DUCK RIVER AT COLUMBIA, TN—Continued

| SUMMARY STATISTICS | FOR 2003 CALENDAR YEAR | | FOR 2004 WATER YEAR | | *WATER YEARS 1977 - 2004 | |
|---|---|---|---|---|---|---|
| ANNUAL TOTAL | 914,886 | | 768,575 | | | |
| ANNUAL MEAN | 2,507 | | 2,100 | | 2,135 | |
| HIGHEST ANNUAL MEAN | | | | | 3,282 | 1989 |
| LOWEST ANNUAL MEAN | | | | | 553 | 1981 |
| HIGHEST DAILY MEAN | 48,500 | May 8 | 34,600 | Feb 7 | 52,300 | Feb 20, 1991 |
| LOWEST DAILY MEAN | 199 | Sep 20 | 225 | Oct 24 | 86 | Oct 4, 1982 |
| ANNUAL SEVEN-DAY MINIMUM | 213 | Sep 15 | 240 | Oct 19 | 100 | Sep 28, 1982 |
| MAXIMUM PEAK FLOW | | | 35,400 | Feb 7 | 52,300 | Feb 20, 1991 |
| MAXIMUM PEAK STAGE | | | 39.19 | Feb 7 | 45.82 | Feb 20, 1991 |
| INSTANTANEOUS LOW FLOW | | | a223 | Oct 22 | 161 | Sep 12, 2002 |
| 10 PERCENT EXCEEDS | 4,410 | | 4,790 | | 4,930 | |
| 50 PERCENT EXCEEDS | 891 | | 1,020 | | 754 | |
| 90 PERCENT EXCEEDS | 260 | | 297 | | 191 | |

* Regulated period only.
a Also occurred Oct. 23, 24.