## 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 $mi^2$, includes 15 $mi^2$ 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.--Data collection platform. Datum of gage is 541.04 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, nonrecording gage at site 2.8 mi downstream at datum 7.85 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

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 $ft^3/s$ and maximum (*):

| Date | Time | Discharge ($ft^3/s$) | Gage height (ft) | Date | Time | Discharge ($ft^3/s$) | Gage height (ft) |
|---|---|---|---|---|---|---|---|
| Oct 19 | 1030 | 11,900 | 16.16 | Dec 10 | 0230 | 9,560 | 14.25 |
| Dec 1 | 1530 | *13,700 | *17.29 | Dec 23 | 1330 | 9,070 | 13.78 |
| Dec 8 | 0330 | 11,900 | 16.15 | Jan 8 | 1230 | 9,230 | 13.93 |

Minimum discharge, 19 $ft^3/s$, Aug. 12, 13, 14, 15.

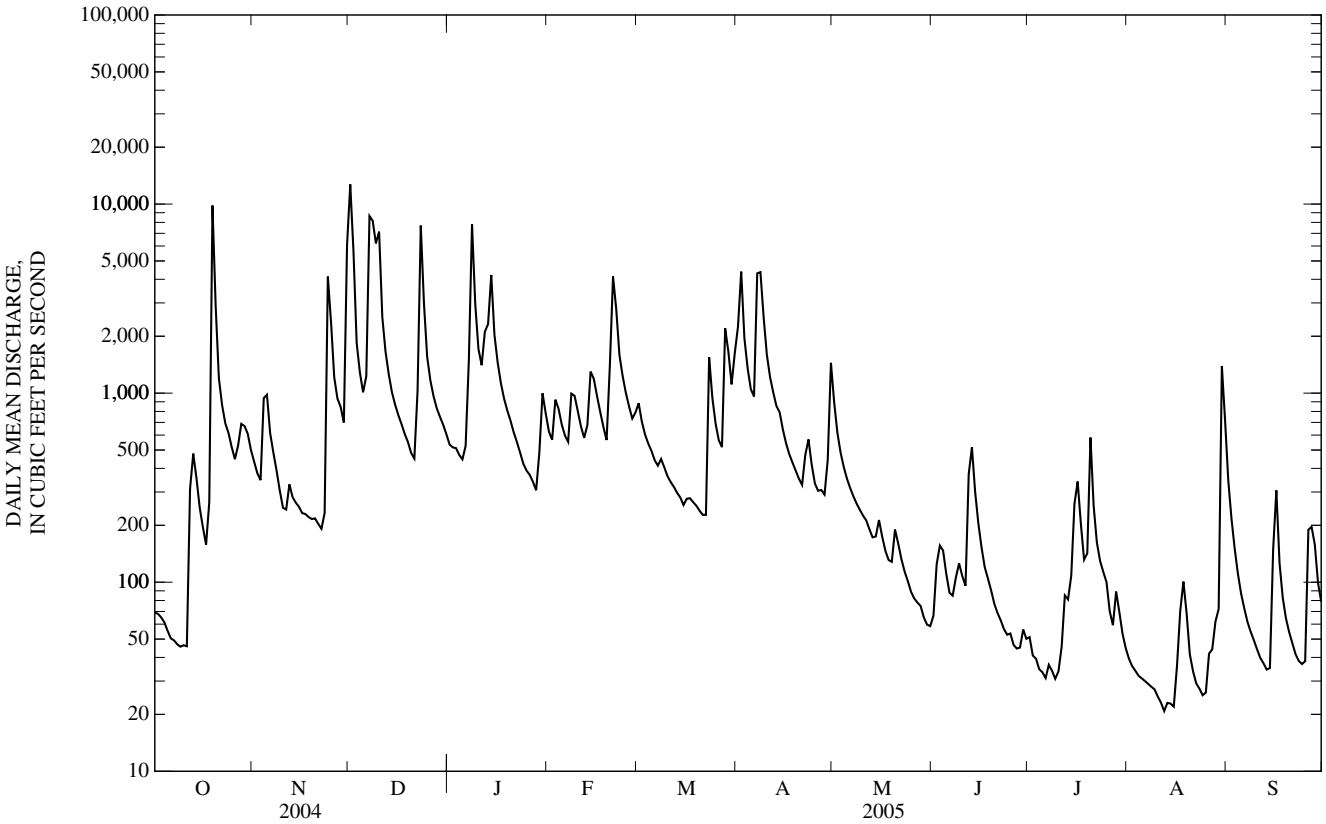
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 69 | 434 | 12,700 | 535 | 626 | 884 | 2,250 | 898 | 67 | 51 | 39 | 346 |
| 2 | 68 | 377 | 5,640 | 517 | 567 | 706 | 4,390 | 620 | 124 | 41 | e36 | 217 |
| 3 | 65 | 346 | 1,840 | 512 | 924 | 604 | 1,950 | 487 | 156 | 39 | e34 | 150 |
| 4 | 61 | 940 | 1,280 | 471 | 826 | 541 | 1,350 | 407 | 147 | 35 | e32 | 111 |
| 5 | 55 | e980 | 1,010 | 446 | 683 | 495 | 1,050 | 353 | 110 | 33 | e31 | 87 |
| 6 | 50 | e614 | 1,230 | 526 | 597 | 442 | 960 | 315 | 88 | 31 | e30 | 73 |
| 7 | 49 | e485 | 8,640 | 1,480 | 553 | 413 | 4,300 | 285 | 85 | 37 | e29 | 62 |
| 8 | 47 | e390 | 8,160 | 7,830 | 994 | 448 | 4,360 | 261 | 106 | 34 | e28 | 55 |
| 9 | 46 | e306 | 6,200 | 2,970 | 968 | 405 | 2,530 | 242 | 126 | 31 | 27 | 49 |
| 10 | 46 | e248 | 7,140 | 1,710 | 804 | 364 | 1,600 | 226 | 108 | 34 | 25 | 44 |
| 11 | 46 | e242 | 2,520 | 1,410 | 665 | 339 | 1,220 | 212 | 96 | 46 | 23 | 40 |
| 12 | 311 | e329 | 1,660 | 2,110 | 580 | 319 | 1,010 | 191 | 373 | 85 | 21 | 37 |
| 13 | 479 | e282 | 1,260 | 2,320 | 678 | 297 | 854 | 173 | 517 | 81 | 23 | 34 |
| 14 | 356 | e263 | 1,010 | 4,210 | 1,300 | 281 | 792 | 175 | 301 | 108 | 23 | 35 |
| 15 | 249 | e250 | 869 | 2,030 | 1,190 | 256 | 643 | 213 | 205 | 259 | 22 | 149 |
| 16 | 196 | 232 | 765 | 1,450 | 966 | 276 | 543 | 174 | 153 | 341 | 36 | 306 |
| 17 | 158 | 229 | 685 | 1,130 | 796 | 278 | 476 | 146 | 120 | 203 | 70 | 126 |
| 18 | 265 | 221 | 608 | 935 | 662 | 265 | 429 | 131 | 104 | 132 | 101 | 83 |
| 19 | 9,820 | 216 | 551 | 810 | 565 | 254 | 390 | 128 | 90 | 142 | 68 | 64 |
| 20 | 2,880 | 218 | 483 | 716 | 1,380 | 239 | 353 | 190 | 77 | 582 | 42 | 54 |
| 21 | 1,200 | 204 | 451 | 621 | 4,140 | 227 | 327 | 160 | 69 | 252 | 34 | 48 |
| 22 | 863 | 192 | 1,030 | 551 | 2,780 | 227 | 471 | 132 | 63 | 162 | 29 | 42 |
| 23 | 692 | 232 | 7,690 | 485 | 1,590 | 1,550 | 569 | 114 | 56 | 129 | 27 | 38 |
| 24 | 615 | 4,140 | 2,970 | 424 | 1,230 | 943 | 418 | 101 | 53 | 113 | 25 | 37 |
| 25 | 518 | 2,370 | 1,550 | 390 | 1,000 | 691 | 333 | 89 | 54 | 100 | 26 | 38 |
| 26 | 447 | 1,210 | 1,170 | 369 | 851 | 564 | 304 | 82 | 47 | 70 | 42 | 189 |
| 27 | 529 | 936 | 961 | 340 | 734 | 518 | 307 | 78 | 45 | 59 | 44 | 196 |
| 28 | 688 | 846 | 832 | 306 | 790 | 2,200 | 291 | 75 | 45 | 89 | 62 | 158 |
| 29 | 670 | 699 | 748 | 483 | --- | 1,660 | 443 | 65 | 56 | 70 | 72 | 99 |
| 30 | 610 | 6,110 | 680 | 998 | --- | 1,110 | 1,450 | 60 | 50 | 53 | 1,390 | 79 |
| 31 | 501 | --- | 606 | 781 | --- | 1,630 | --- | 59 | --- | 45 | 719 | --- |
| TOTAL | 22,649 | 24,541 | 82,939 | 39,866 | 29,439 | 19,426 | 36,363 | 6,842 | 3,691 | 3,487 | 3,210 | 3,046 |
| MEAN | 731 | 818 | 2,675 | 1,286 | 1,051 | 627 | 1,212 | 221 | 123 | 112 | 104 | 102 |
| MAX | 9,820 | 6,110 | 12,700 | 7,830 | 4,140 | 2,200 | 4,390 | 898 | 517 | 582 | 1,390 | 346 |
| MIN | 46 | 192 | 451 | 306 | 553 | 227 | 291 | 59 | 45 | 31 | 21 | 34 |
| CFSM | 1.79 | 2.00 | 6.56 | 3.15 | 2.58 | 1.54 | 2.97 | 0.54 | 0.30 | 0.28 | 0.25 | 0.25 |
| IN. | 2.07 | 2.24 | 7.56 | 3.63 | 2.68 | 1.77 | 3.32 | 0.62 | 0.34 | 0.32 | 0.29 | 0.28 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2005, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEAN | 125 | 375 | 856 | 1,152 | 1,311 | 1,320 | 871 | 583 | 285 | 144 | 114 | 125 |
| MAX | 953 | 1,678 | 3,952 | 4,305 | 3,606 | 4,263 | 2,579 | 3,232 | 1,834 | 827 | 663 | 1,685 |
| (WY) | (1976) | (1987) | (1927) | (1937) | (1950) | (1975) | (1927) | (1984) | (1928) | (1989) | (1926) | (1979) |
| MIN | 1.90 | 10.4 | 32.3 | 40.5 | 90.2 | 167 | 138 | 38.7 | 13.1 | 15.6 | 5.76 | 1.28 |
| (WY) | (1932) | (1940) | (1940) | (1940) | (1941) | (1941) | (1967) | (1941) | (1988) | (1954) | (1954) | (1948) |

03433500 HARPETH RIVER AT BELLEVUE, TN—Continued

| SUMMARY STATISTICS | FOR 2004 CALENDAR YEAR | | FOR 2005 WATER YEAR | | WATER YEARS 1920 - 2005 | |
|---|---|---|---|---|---|---|
| ANNUAL TOTAL | 312,273 | | 275,499 | | | |
| ANNUAL MEAN | 853 | | 755 | | 601 | |
| HIGHEST ANNUAL MEAN | | | | | 1,157 | 1973 |
| LOWEST ANNUAL MEAN | | | | | 137 | 1941 |
| HIGHEST DAILY MEAN | 18,400 | Feb 6 | 12,700 | Dec 1 | 32,400 | Mar 13, 1975 |
| LOWEST DAILY MEAN | 46 | Oct 9 | 21 | Aug 12 | 0.00 | Oct 5, 1922 |
| ANNUAL SEVEN-DAY MINIMUM | 48 | Oct 5 | 23 | Aug 9 | 0.07 | Oct 4, 1922 |
| MAXIMUM PEAK FLOW | | | 13,700 | Dec 1 | 40,000 | Feb 13, 1948 |
| MAXIMUM PEAK STAGE | | | 17.29 | Dec 1 | a24.34 | Feb 13, 1948 |
| INSTANTANEOUS LOW FLOW | | | c19 | Aug 12 | b0.00 | Oct 5, 1922 |
| ANNUAL RUNOFF (CFSM) | 2.09 | | 1.85 | | 1.47 | |
| ANNUAL RUNOFF (INCHES) | 28.47 | | 25.12 | | 20.03 | |
| 10 PERCENT EXCEEDS | 1,470 | | 1,570 | | 1,380 | |
| 50 PERCENT EXCEEDS | 386 | | 307 | | 196 | |
| 90 PERCENT EXCEEDS | 91 | | 41 | | 18 | |

a From floodmarks.
b Also occurred Oct. 6-10, 1922.
c Also occurred Aug. 13, 14, 15.
e Estimated