

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC

LOCATION.--Lat 35°45'30", long 78°34'58", Wake County, Hydrologic Unit 03020201, at bridge on Secondary Road 2544, 0.9 mi upstream from Big Branch, and 3.5 mi southeast of Raleigh.

DRAINAGE AREA.--29.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 190.8 ft above NGVD of 1929. Satellite and telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from computation of peak flow through culvert; maximum gage height, 17.03 ft, from high-water mark in gage shelter. Minimum discharge for period of record also occurred on Aug. 5, 6, 7, 8, 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|--------|-------|
| 1 | 3.8 | e4.6 | e6.3 | 6.9 | 20 | 10 | 636 | e4.5 | 13 | 14 | 1.8 | 351 |
| 2 | 4.2 | e4.5 | e6.1 | 6.0 | 14 | 45 | 90 | e4.4 | 20 | 7.1 | 1.7 | 61 |
| 3 | e4.1 | e4.6 | e6.1 | 12 | 12 | 67 | 39 | e4.2 | e1.6 | 4.4 | e1.0 | 26 |
| 4 | e3.9 | e4.6 | e6.1 | 23 | 11 | 33 | 25 | e8.0 | e1.3 | 3.1 | e0.74 | 16 |
| 5 | e3.8 | e4.5 | e6.1 | 25 | 11 | 21 | 19 | e7.1 | e1.2 | 3.1 | e0.65 | 11 |
| 6 | 59 | e4.5 | e6.1 | 130 | 10 | 17 | 17 | e5.4 | 5.8 | 17 | e0.62 | 8.5 |
| 7 | 29 | e4.4 | e6.1 | 154 | 171 | 16 | 15 | e4.0 | 30 | 6.0 | e0.54 | 6.4 |
| 8 | 14 | e4.4 | e6.1 | 49 | 75 | 15 | 14 | e3.4 | 8.3 | 3.4 | e0.50 | 5.0 |
| 9 | 8.3 | e4.4 | e6.1 | 25 | 38 | 15 | 13 | e3.2 | 3.6 | 2.7 | e0.50 | 4.2 |
| 10 | 6.9 | e4.3 | e9.2 | 21 | 31 | 13 | 48 | e3.1 | 2.4 | 9.8 | e0.50 | 3.8 |
| 11 | 5.6 | e4.3 | 219 | 19 | 26 | 12 | 29 | e3.2 | 2.0 | 88 | e0.50 | 3.3 |
| 12 | e5.0 | e4.2 | 53 | 16 | 20 | 11 | 20 | e2.8 | 1.8 | 23 | e0.50 | 2.9 |
| 13 | e4.5 | e4.2 | 24 | 42 | 18 | 16 | 16 | e3.0 | 1.7 | 9.5 | e0.50 | 2.4 |
| 14 | 48 | e4.2 | 15 | 19 | 16 | 16 | 15 | e3.5 | 1.6 | 14 | e0.50 | 7.7 |
| 15 | 145 | e4.2 | 12 | 14 | 15 | 13 | 15 | e2.8 | 1.6 | 10 | 21 | 33 |
| 16 | 33 | e4.1 | 8.5 | 11 | 15 | 13 | 12 | e2.4 | 1.5 | 6.2 | 46 | 136 |
| 17 | 17 | e4.2 | 7.8 | 8.9 | 15 | 28 | 11 | e2.3 | 1.5 | 3.6 | 38 | 41 |
| 18 | 10 | e4.2 | 27 | 8.5 | 13 | 26 | 10 | e3.0 | 1.5 | 2.3 | 54 | 19 |
| 19 | 7.9 | e4.3 | 13 | 103 | 13 | 18 | 9.9 | e2.4 | 1.5 | 29 | 109 | 13 |
| 20 | 7.1 | e4.4 | 9.6 | 455 | 13 | 21 | 11 | e2.1 | 1.6 | 14 | 62 | 10 |
| 21 | e6.2 | e4.4 | 6.9 | 104 | 13 | 44 | 9.7 | e1.9 | 1.5 | 11 | 22 | 7.6 |
| 22 | e5.7 | e4.3 | 5.5 | 57 | 13 | 28 | 9.1 | e1.8 | 1.6 | 4.2 | 9.8 | 5.7 |
| 23 | e5.4 | e4.4 | 5.0 | 278 | 12 | 18 | 8.2 | e1.8 | 1.5 | 5.6 | 5.1 | 4.4 |
| 24 | e5.2 | e17 | 11 | 291 | 12 | 14 | 7.8 | e1.8 | 1.6 | 8.1 | 2.7 | 3.7 |
| 25 | e5.0 | e16 | 8.1 | 112 | 12 | 13 | e8.0 | e1.7 | 1.6 | 39 | 2.0 | 3.0 |
| 26 | e4.9 | e10 | 6.7 | 50 | 12 | 23 | e7.1 | e1.6 | 5.5 | 68 | 67 | 4.3 |
| 27 | e4.6 | e7.5 | 6.9 | 29 | 13 | 82 | e6.1 | e1.5 | 22 | 23 | 35 | 5.1 |
| 28 | e4.6 | e6.8 | 6.5 | 22 | 12 | 34 | e5.2 | e1.4 | 31 | 9.9 | 43 | 7.7 |
| 29 | e4.6 | e6.6 | 6.6 | 19 | --- | 22 | e5.2 | e1.3 | 156 | 5.3 | 17 | 4.9 |
| 30 | e4.5 | e6.6 | 6.3 | 16 | --- | 17 | e4.7 | e1.6 | 32 | 3.1 | 145 | 3.5 |
| 31 | e4.6 | --- | 5.9 | 14 | --- | 86 | --- | e2.7 | --- | 2.2 | 237 | --- |
| TOTAL | 475.4 | 170.7 | 528.6 | 2140.3 | 656 | 807 | 1136.0 | 93.9 | 357.8 | 449.6 | 926.15 | 811.1 |
| MEAN | 15.34 | 5.690 | 17.05 | 69.04 | 23.43 | 26.03 | 37.87 | 3.029 | 11.93 | 14.50 | 29.88 | 27.04 |
| MAX | 145 | 17 | 219 | 455 | 171 | 86 | 636 | 8.0 | 156 | 88 | 237 | 351 |
| MIN | 3.8 | 4.1 | 5.0 | 6.0 | 10 | 10 | 4.7 | 1.3 | 1.2 | 2.2 | 0.50 | 2.4 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|------|-------|-------|-------|-------|-------|-------|-------|
| MEAN | 24.60 | 18.74 | 25.18 | 57.70 | 41.74 | 54.39 | 37.75 |
| MAX | 45.5 | 26.9 | 34.1 | 106 | 98.0 | 123 | 65.2 |
| (WY) | 1997 | 1997 | 1999 | 1998 | 1998 | 1998 | 1997 |
| MIN | 9.04 | 5.69 | 15.2 | 13.9 | 21.9 | 26.0 | 20.9 |
| (WY) | 2001 | 2002 | 2001 | 2001 | 1999 | 2002 | 1999 |

SUMMARY STATISTICS

| | FOR 2001 CALENDAR YEAR | FOR 2002 WATER YEAR | WATER YEARS 1996 - 2002 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL | 11197.9 | 8552.55 | |
| ANNUAL MEAN | 30.68 | 23.43 | 35.80 |
| HIGHEST ANNUAL MEAN | | | 47.7 |
| LOWEST ANNUAL MEAN | | | 23.4 |
| HIGHEST DAILY MEAN | 973 | Jun 17 | 3600 |
| LOWEST DAILY MEAN | 3.8 | Sep 16 | 0.50 |
| ANNUAL SEVEN-DAY MINIMUM | 4.1 | Sep 13 | 0.50 |
| MAXIMUM PEAK FLOW | | | 998 |
| MAXIMUM PEAK STAGE | | | 9.24 |
| INSTANTANEOUS LOW FLOW | | NOT DETERMINED | 17.03* |
| 10 PERCENT EXCEEDS | 54 | | 63 |
| 50 PERCENT EXCEEDS | 11 | | 15 |
| 90 PERCENT EXCEEDS | 4.6 | | 1.8 |

e Estimated.

* See REMARKS.

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC--Continued

