

Water-Data Report 2008

**02091814 NEUSE RIVER NEAR FORT BARNWELL, NC**

Neuse Basin  
Middle Neuse Subbasin

LOCATION.--Lat 35°18'50", long 77°18'10" referenced to North American Datum of 1983, Craven County, NC, Hydrologic Unit 03020202, on left bank 0.25 mi upstream from bridge on Secondary Road 1470, 1.5 mi upstream from Core Creek and 2.0 mi east of Fort Barnwell.

DRAINAGE AREA.--3,900 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1996 to current year, occasional measurements water years 1955-1995.

REVISED RECORDS.--WDR NC-02-1A: 2001 (daily discharges).

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges and periods October 2007 to December 2007 and June 2008 to August 2008, which are poor. Maximum gage height for period of record, from floodmarks. Flow regulated by Falls Lake (station 02087182) and is affected by both astronomical and wind tides.

## 02091814 NEUSE RIVER NEAR FORT BARNWELL, NC—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**  
[e, estimated]

| Day          | Oct    | Nov    | Dec    | Jan    | Feb    | Mar     | Apr     | May    | Jun    | Jul    | Aug    | Sep     |
|--------------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|---------|
| 1            | 460    | 3,260  | e440   | 3,350  | 1,280  | 3,790   | 1,760   | 4,100  | 1,160  | 472    | 727    | e2,400  |
| 2            | 456    | 2,580  | 448    | 3,440  | 1,280  | 3,670   | 1,760   | 4,470  | 1,130  | 484    | 654    | e2,800  |
| 3            | 419    | 1,800  | e420   | 3,970  | 1,390  | 3,440   | 2,110   | 4,920  | 1,070  | 452    | 661    | e2,000  |
| 4            | 381    | 1,190  | e410   | 4,490  | 1,660  | e3,190  | 3,010   | 5,280  | 975    | 514    | 569    | e1,750  |
| 5            | 418    | 960    | 422    | 4,680  | 2,310  | e3,080  | 3,850   | 5,450  | 902    | 692    | 590    | e1,600  |
| 6            | 451    | 841    | 374    | 4,220  | 2,610  | 3,320   | 5,260   | 5,140  | 874    | 598    | 524    | 1,180   |
| 7            | 430    | 717    | 359    | 3,210  | 2,430  | 3,910   | 6,280   | 4,340  | 851    | 528    | 524    | 1,340   |
| 8            | 391    | 648    | 369    | 2,410  | 2,070  | 4,770   | 7,170   | 3,820  | 810    | 442    | 481    | 1,880   |
| 9            | 404    | 604    | 393    | 1,890  | 1,840  | 5,360   | 7,890   | 3,410  | 755    | 526    | 461    | 2,550   |
| 10           | 384    | 568    | 391    | 1,590  | 1,620  | 6,050   | 8,510   | 2,920  | 666    | 1,040  | 461    | 3,370   |
| 11           | 415    | 545    | 369    | 1,480  | 1,390  | 6,590   | 8,890   | 2,460  | 571    | 1,330  | 501    | 3,840   |
| 12           | 361    | 535    | 375    | 1,390  | 1,270  | 7,310   | 9,150   | 2,370  | 619    | 1,260  | 463    | 4,350   |
| 13           | 385    | 496    | 409    | 1,310  | 1,490  | 7,700   | 9,170   | 2,230  | 617    | 1,260  | 661    | 4,970   |
| 14           | 349    | 468    | 446    | 1,250  | 1,830  | 8,100   | 8,820   | 2,060  | 665    | e1,390 | 777    | 5,320   |
| 15           | 341    | 436    | 481    | 1,160  | 2,060  | 7,720   | 7,650   | 1,970  | 647    | e1,420 | 696    | 5,640   |
| 16           | 335    | 450    | 746    | 1,070  | 2,300  | 6,790   | 6,450   | 1,970  | 618    | e1,270 | 728    | 5,870   |
| 17           | 316    | 435    | 719    | 1,050  | 2,870  | 5,770   | 5,610   | 1,820  | 640    | e1,110 | 626    | 5,720   |
| 18           | 356    | 455    | 1,090  | 1,080  | 3,710  | 5,300   | 4,960   | 1,640  | 657    | e1,120 | 665    | 5,380   |
| 19           | 312    | 437    | 1,310  | 1,090  | 4,610  | 5,240   | 4,320   | 1,510  | 744    | 1,110  | 698    | 4,890   |
| 20           | 304    | 471    | 1,600  | 1,280  | 5,110  | 5,370   | 3,690   | 1,530  | e780   | 947    | 722    | 4,340   |
| 21           | 331    | 499    | 1,550  | 1,480  | 5,580  | 5,180   | 3,300   | 1,710  | e720   | 819    | 693    | 4,020   |
| 22           | 337    | 463    | 1,370  | 1,780  | 5,940  | 4,830   | 3,020   | 1,880  | e700   | 763    | 702    | 3,870   |
| 23           | 289    | 451    | 1,240  | e1,990 | 6,030  | 4,290   | 2,980   | 1,890  | e650   | 787    | 655    | 3,680   |
| 24           | 312    | 406    | 1,130  | 2,090  | e5,910 | 3,720   | 3,110   | 1,770  | 600    | 882    | 593    | 3,390   |
| 25           | e520   | 385    | 1,020  | 1,940  | e5,650 | 3,230   | 3,110   | 1,690  | 621    | 833    | 555    | 3,130   |
| 26           | 618    | e370   | 1,020  | 1,770  | 5,230  | 2,830   | 3,100   | 1,510  | e820   | 869    | 583    | 3,640   |
| 27           | 945    | 402    | 1,260  | 1,630  | 4,700  | 2,450   | 3,000   | 1,360  | e840   | 992    | 498    | 3,930   |
| 28           | 1,310  | 425    | 2,080  | 1,500  | 4,260  | 2,140   | 3,410   | 1,240  | e750   | 1,000  | 776    | 4,280   |
| 29           | 1,950  | 451    | 2,600  | 1,400  | 3,940  | 1,910   | 3,540   | 1,240  | e650   | 956    | 989    | 4,460   |
| 30           | 2,630  | 426    | 3,060  | 1,350  | ---    | 1,790   | 3,720   | 1,210  | e550   | 906    | 1,140  | 4,640   |
| 31           | 3,180  | ---    | 3,360  | 1,250  | ---    | 1,790   | ---     | 1,170  | ---    | 805    | e1,600 | ---     |
| <b>Total</b> | 20,090 | 22,174 | 31,261 | 63,590 | 92,370 | 140,630 | 148,600 | 80,080 | 22,652 | 27,577 | 20,973 | 110,230 |
| <b>Mean</b>  | 648    | 739    | 1,008  | 2,051  | 3,185  | 4,536   | 4,953   | 2,583  | 755    | 890    | 677    | 3,674   |
| <b>Max</b>   | 3,180  | 3,260  | 3,360  | 4,680  | 6,030  | 8,100   | 9,170   | 5,450  | 1,160  | 1,420  | 1,600  | 5,870   |
| <b>Min</b>   | 289    | 370    | 359    | 1,050  | 1,270  | 1,790   | 1,760   | 1,170  | 550    | 442    | 461    | 1,180   |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2008, BY WATER YEAR (WY)

|             | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Mean</b> | 4,154  | 3,221  | 3,851  | 4,814  | 6,099  | 5,798  | 5,277  | 3,019  | 2,263  | 1,949  | 2,484  | 4,844  |
| <b>Max</b>  | 23,040 | 9,390  | 7,989  | 8,707  | 19,110 | 15,340 | 11,760 | 6,973  | 6,429  | 5,764  | 7,856  | 26,590 |
| <b>(WY)</b> | (2000) | (2007) | (2007) | (1998) | (1998) | (1998) | (1998) | (2003) | (2003) | (2003) | (2003) | (1999) |
| <b>Min</b>  | 648    | 732    | 952    | 1,501  | 1,988  | 1,638  | 1,318  | 893    | 573    | 788    | 594    | 593    |
| <b>(WY)</b> | (2008) | (2002) | (2002) | (2001) | (2001) | (2006) | (2006) | (2002) | (2002) | (2002) | (2007) | (2007) |

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## SUMMARY STATISTICS

|                                 | Calendar Year 2007 |        | Water Year 2008 |        | Water Years 1997 - 2008 |              |
|---------------------------------|--------------------|--------|-----------------|--------|-------------------------|--------------|
| <b>Annual total</b>             | 841,522            |        | 780,227         |        |                         |              |
| <b>Annual mean</b>              | 2,306              |        | 2,132           |        | 3,966                   |              |
| <b>Highest annual mean</b>      |                    |        |                 |        | 6,376                   |              |
| <b>Lowest annual mean</b>       |                    |        |                 |        | 1,766                   |              |
| <b>Highest daily mean</b>       | 13,300             | Jan 2  | 9,170           | Apr 13 | 57,000                  | Sep 20, 1999 |
| <b>Lowest daily mean</b>        | 289                | Oct 23 | 289             | Oct 23 | 289                     | Oct 23, 2007 |
| <b>Annual seven-day minimum</b> | 320                | Oct 18 | 320             | Oct 18 | 320                     | Oct 18, 2007 |
| <b>Maximum peak flow</b>        |                    |        | 9,660           | Apr 13 | 57,200                  | Sep 20, 1999 |
| <b>Maximum peak stage</b>       |                    |        | 9.97            | Apr 13 | <sup>a</sup> 22.75      | Sep 20, 1999 |
| <b>Instantaneous low flow</b>   |                    |        | 156             | Dec 4  | 41                      | Jul 11, 1999 |
| <b>10 percent exceeds</b>       | 6,260              |        | 5,230           |        | 8,340                   |              |
| <b>50 percent exceeds</b>       | 1,040              |        | 1,310           |        | 2,560                   |              |
| <b>90 percent exceeds</b>       | 422                |        | 426             |        | 770                     |              |

<sup>a</sup>See Remarks.