

Water-Data Report 2008

**02102908 FLAT CREEK NEAR INVERNESS, NC**

Cape Fear Basin  
Upper Cape Fear Subbasin

LOCATION.--Lat 35°10'58", long 79°10'39" referenced to North American Datum of 1983, Hoke County, NC, Hydrologic Unit 03030004, on left bank 15 ft downstream of culvert on Manchester Road, Fort Bragg military reservation, 0.4 mi upstream from mouth, and 3.6 mi east of Inverness.

DRAINAGE AREA.--7.63 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WDR NC-72-1: 1968-70(M). WDR NC-81-1: Drainage area. WDR-US-2006: 1969-2005(M,P)

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records good. Some diurnal fluctuation at low flow during growing season. Minimum discharge some years affected by regulation from unknown source. Minimum discharge for current water year also occurred August 7.

## 02102908 FLAT CREEK NEAR INVERNESS, NC—Continued

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

| Day          | Oct   | Nov   | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1            | 3.0   | 6.9   | 6.0   | 12    | 11    | 7.8   | 16    | 7.4   | 4.2   | 2.5   | 4.9   | 7.5   |
| 2            | 3.1   | 6.4   | 6.0   | 9.9   | 12    | 7.5   | 9.5   | 6.9   | 4.4   | 2.3   | 3.4   | 6.4   |
| 3            | 3.5   | 6.1   | 6.5   | 9.1   | 8.7   | 7.2   | 8.1   | 6.4   | 4.1   | 2.3   | 2.8   | 5.9   |
| 4            | 3.8   | 6.0   | 5.9   | 8.8   | 8.0   | 7.9   | 8.5   | 6.1   | 3.9   | 2.3   | 2.6   | 5.3   |
| 5            | 3.7   | 5.8   | 6.0   | 8.7   | 7.8   | 16    | 25    | 6.5   | 3.5   | 2.6   | 2.6   | 5.5   |
| 6            | 4.2   | 5.7   | 5.9   | 8.6   | 7.6   | 9.7   | 23    | 8.2   | 3.3   | 4.5   | 2.2   | 278   |
| 7            | 4.0   | 5.4   | 5.8   | 8.2   | 7.6   | 13    | 13    | 6.3   | 3.5   | 10    | 3.4   | 63    |
| 8            | 3.5   | 5.6   | 6.0   | 8.1   | 7.2   | 20    | 11    | 6.1   | 2.9   | 5.4   | 8.2   | 28    |
| 9            | 3.1   | 5.7   | 6.1   | 8.1   | 7.0   | 12    | 9.5   | 7.0   | 2.7   | 9.7   | 4.6   | 18    |
| 10           | 3.4   | 5.5   | 6.0   | 8.9   | 6.9   | 9.4   | 9.0   | 6.1   | 2.7   | 6.4   | 3.3   | 49    |
| 11           | 3.3   | 5.5   | 5.9   | 10    | 6.7   | 8.7   | 8.5   | 8.6   | 2.7   | 20    | 12    | 41    |
| 12           | 3.1   | 5.8   | 6.0   | 9.1   | 6.8   | 8.3   | 9.6   | 8.8   | 3.3   | 9.3   | 5.7   | 23    |
| 13           | 3.1   | 5.6   | 6.2   | 8.1   | 13    | 7.9   | 12    | 6.4   | 3.1   | 5.5   | 12    | 19    |
| 14           | 3.2   | 5.7   | 6.2   | 7.9   | 14    | 7.6   | 9.3   | 5.7   | 3.0   | 4.6   | 17    | 17    |
| 15           | 3.1   | 6.4   | 6.5   | 7.5   | 9.2   | 9.9   | 8.6   | 5.6   | 16    | 4.8   | 7.4   | 15    |
| 16           | 3.2   | 6.6   | 33    | 7.4   | 8.1   | 24    | 7.9   | 7.0   | 7.4   | 3.7   | 5.9   | 15    |
| 17           | 3.3   | 5.8   | 15    | 10    | 7.7   | 12    | 7.6   | 5.9   | 4.7   | 3.3   | 6.6   | 24    |
| 18           | 5.1   | 6.0   | 9.0   | 11    | 13    | 9.4   | 7.3   | 5.2   | 3.8   | 3.5   | 7.8   | 17    |
| 19           | 6.5   | 5.8   | 8.1   | 12    | 10    | 9.0   | 7.1   | 5.8   | 3.4   | 5.5   | 5.2   | 14    |
| 20           | 4.6   | 5.8   | 7.7   | 15    | 8.2   | 13    | 7.4   | 5.2   | 5.2   | 7.0   | 4.4   | 13    |
| 21           | 3.8   | 5.8   | 8.3   | 9.9   | 7.7   | 9.3   | 7.9   | 8.8   | 8.8   | 4.2   | 3.9   | 13    |
| 22           | 3.6   | 5.8   | 8.2   | 9.1   | 15    | 8.4   | 9.6   | 5.9   | 5.8   | 3.2   | 3.9   | 13    |
| 23           | 3.7   | 5.7   | 8.3   | 9.2   | 12    | 8.0   | 8.0   | 5.0   | 5.2   | 3.2   | 3.6   | 12    |
| 24           | 5.5   | 5.5   | 10    | 8.7   | 9.2   | 7.7   | 7.4   | 5.1   | 5.4   | 4.2   | 3.3   | 12    |
| 25           | 9.5   | 5.9   | 7.9   | 8.1   | 8.7   | 7.5   | 6.9   | 5.1   | 4.0   | 3.4   | 3.4   | 12    |
| 26           | 28    | 7.4   | 13    | 8.1   | 9.9   | 7.4   | 6.6   | 4.6   | 3.4   | 3.3   | 5.1   | 29    |
| 27           | 55    | 8.4   | 12    | 8.0   | 10    | 7.2   | 6.7   | 4.3   | 3.1   | 4.4   | 15    | 22    |
| 28           | 16    | 6.7   | 8.6   | 7.8   | 8.4   | 7.0   | 14    | 4.6   | 3.0   | 7.4   | 98    | 15    |
| 29           | 9.2   | 6.4   | 8.9   | 7.6   | 8.0   | 7.0   | 13    | 7.0   | 2.7   | 4.3   | 19    | 13    |
| 30           | 7.7   | 6.3   | 19    | 8.5   | ---   | 7.1   | 8.5   | 5.1   | 2.6   | 3.4   | 12    | 12    |
| 31           | 7.2   | ---   | 26    | 8.0   | ---   | 10    | ---   | 4.6   | ---   | 3.2   | 9.1   | ---   |
| <b>Total</b> | 223.0 | 182.0 | 294.0 | 281.4 | 269.4 | 306.9 | 306.5 | 191.3 | 131.8 | 159.4 | 298.3 | 817.6 |
| <b>Mean</b>  | 7.19  | 6.07  | 9.48  | 9.08  | 9.29  | 9.90  | 10.2  | 6.17  | 4.39  | 5.14  | 9.62  | 27.3  |
| <b>Max</b>   | 55    | 8.4   | 33    | 15    | 15    | 24    | 25    | 8.8   | 16    | 20    | 98    | 278   |
| <b>Min</b>   | 3.0   | 5.4   | 5.8   | 7.4   | 6.7   | 7.0   | 6.6   | 4.3   | 2.6   | 2.3   | 2.2   | 5.3   |
| <b>Cfs/m</b> | 0.94  | 0.80  | 1.24  | 1.19  | 1.22  | 1.30  | 1.34  | 0.81  | 0.58  | 0.67  | 1.26  | 3.57  |
| <b>In.</b>   | 1.09  | 0.89  | 1.43  | 1.37  | 1.31  | 1.50  | 1.49  | 0.93  | 0.64  | 0.78  | 1.45  | 3.99  |

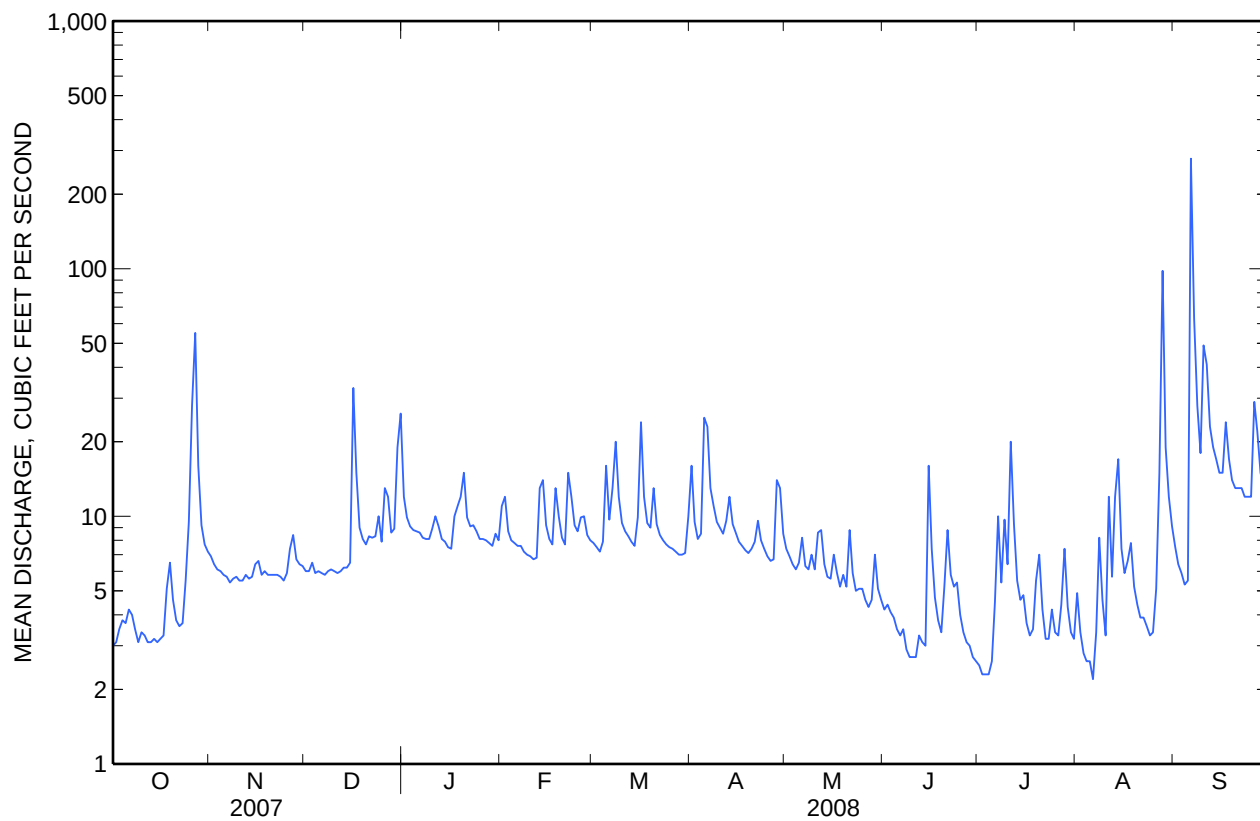
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2008, BY WATER YEAR (WY)

|             | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Mean</b> | 10.1   | 10.9   | 11.7   | 13.4   | 14.4   | 14.5   | 12.9   | 10.4   | 10.3   | 10.2   | 9.54   | 10.4   |
| <b>Max</b>  | 19.9   | 20.5   | 19.5   | 20.2   | 32.0   | 28.5   | 39.7   | 18.9   | 25.3   | 24.5   | 21.7   | 27.3   |
| <b>(WY)</b> | (1972) | (1980) | (1973) | (1975) | (1973) | (1998) | (1973) | (1973) | (1995) | (1989) | (2003) | (2008) |
| <b>Min</b>  | 5.13   | 5.02   | 5.16   | 7.30   | 7.00   | 6.47   | 5.11   | 3.67   | 3.19   | 2.90   | 2.74   | 3.50   |
| <b>(WY)</b> | (2002) | (2002) | (2002) | (2001) | (2002) | (2002) | (2002) | (2002) | (2002) | (2002) | (2002) | (2007) |

## 02102908 FLAT CREEK NEAR INVERNESS, NC—Continued

## SUMMARY STATISTICS

|                                 | Calendar Year 2007 |        | Water Year 2008  |        | Water Years 1968 - 2008 |              |
|---------------------------------|--------------------|--------|------------------|--------|-------------------------|--------------|
| <b>Annual total</b>             | 3,060.4            |        | 3,461.6          |        |                         |              |
| <b>Annual mean</b>              | 8.38               |        | 9.46             |        | 11.6                    |              |
| <b>Highest annual mean</b>      |                    |        |                  |        | 20.2                    | 1973         |
| <b>Lowest annual mean</b>       |                    |        |                  |        | 5.00                    | 2002         |
| <b>Highest daily mean</b>       | 55                 | Oct 27 | 278              | Sep 6  | 278                     | Sep 6, 2008  |
| <b>Lowest daily mean</b>        | 2.1                | Sep 12 | 2.2              | Aug 6  | 0.94                    | Aug 13, 2002 |
| <b>Annual seven-day minimum</b> | 2.4                | Sep 6  | 2.5              | Jun 29 | 1.3                     | Aug 8, 2002  |
| <b>Maximum peak flow</b>        |                    |        | 668              | Sep 6  | 668                     | Sep 6, 2008  |
| <b>Maximum peak stage</b>       |                    |        | 8.20             | Sep 6  | 8.20                    | Sep 6, 2008  |
| <b>Instantaneous low flow</b>   |                    |        | <sup>a</sup> 1.7 | Aug 6  | <sup>a</sup> 0.38       | Aug 14, 2002 |
| <b>Annual runoff (cfsm)</b>     | 1.10               |        | 1.24             |        | 1.52                    |              |
| <b>Annual runoff (inches)</b>   | 14.92              |        | 16.88            |        | 20.60                   |              |
| <b>10 percent exceeds</b>       | 13                 |        | 15               |        | 19                      |              |
| <b>50 percent exceeds</b>       | 6.7                |        | 7.2              |        | 9.4                     |              |
| <b>90 percent exceeds</b>       | 3.1                |        | 3.3              |        | 5.2                     |              |

<sup>a</sup>See Remarks.

**02102908 FLAT CREEK NEAR INVERNESS, NC—Continued****CLIMATOLOGICAL RECORDS**

PERIOD OF RECORD.--April 2000 to current year.

INSTRUMENTATION.--Tipping-bucket raingage. Satellite telemetry at station.

REMARKS.--Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

**PRECIPITATION, TOTAL, INCHES**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY SUM VALUES**

| <b>Day</b>   | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>1</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.54       | 0.00       | 0.03       | 0.00       | 0.02       | 0.00       | 0.02       | 0.00       |
| <b>2</b>     | 0.00       | 0.00       | 0.01       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.02       | 0.00       | 0.00       | 0.00       |
| <b>3</b>     | 0.01       | 0.00       | 0.03       | 0.00       | 0.00       | 0.00       | 0.11       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       |
| <b>4</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.73       | 0.44       | 0.01       | 0.00       | 0.03       | 0.00       | 0.00       |
| <b>5</b>     | 0.01       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 1.23       | 0.63       | 0.00       | 0.31       | 0.00       | 0.45       |
| <b>6</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.04       | 0.01       | 0.03       | 0.00       | 0.00       | 0.69       | 0.01       | 6.90       |
| <b>7</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.79       | 0.00       | 0.00       | 0.00       | 0.01       | 1.00       | 0.00       |
| <b>8</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.23       | 0.00       | 0.06       | 0.00       | 0.65       | 0.01       | 0.00       |
| <b>9</b>     | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.13       | 0.00       | 0.09       | 0.00       | 0.10       |
| <b>10</b>    | 0.11       | 0.00       | 0.00       | 0.19       | 0.02       | 0.00       | 0.00       | 0.00       | 0.00       | 0.92       | 0.25       | 1.96       |
| <b>11</b>    | 0.00       | 0.00       | 0.00       | 0.10       | 0.00       | 0.00       | 0.00       | 0.59       | 0.04       | 0.03       | 0.88       | 0.00       |
| <b>12</b>    | 0.00       | 0.00       | 0.00       | 0.00       | 0.08       | 0.00       | 0.50       | 0.01       | 0.00       | 0.00       | 0.00       | 0.00       |
| <b>13</b>    | 0.00       | 0.00       | 0.00       | 0.00       | 0.77       | 0.00       | 0.08       | 0.00       | 0.00       | 0.00       | 1.25       | 0.00       |
| <b>14</b>    | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.66       | 0.01       | 0.00       | 0.00       |
| <b>15</b>    | 0.00       | 0.09       | 1.87       | 0.00       | 0.00       | 1.23       | 0.00       | 0.10       | 1.33       | 0.00       | 0.07       | 0.00       |
| <b>16</b>    | 0.00       | 0.00       | 0.14       | 0.00       | 0.00       | 0.00       | 0.00       | 0.17       | 0.00       | 0.00       | 0.01       | 0.28       |
| <b>17</b>    | 0.00       | 0.00       | 0.00       | 0.44       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.25       | 0.78       |
| <b>18</b>    | 0.35       | 0.00       | 0.00       | 0.00       | 0.51       | 0.00       | 0.00       | 0.10       | 0.00       | 0.22       | 0.00       | 0.00       |
| <b>19</b>    | 0.12       | 0.00       | 0.00       | 0.52       | 0.00       | 0.33       | 0.00       | 0.00       | 0.00       | 1.05       | 0.00       | 0.00       |
| <b>20</b>    | 0.00       | 0.00       | 0.00       | 0.01       | 0.00       | 0.01       | 0.12       | 0.37       | 0.69       | 0.00       | 0.00       | 0.00       |
| <b>21</b>    | 0.00       | 0.00       | 0.17       | 0.01       | 0.34       | 0.00       | 0.32       | 0.00       | 0.06       | 0.00       | 0.00       | 0.00       |
| <b>22</b>    | 0.00       | 0.00       | 0.00       | 0.09       | 0.27       | 0.00       | 0.03       | 0.00       | 0.00       | 0.00       | 0.00       | 0.01       |
| <b>23</b>    | 0.00       | 0.00       | 0.28       | 0.03       | 0.00       | 0.00       | 0.00       | 0.00       | 0.52       | 0.26       | 0.00       | 0.00       |
| <b>24</b>    | 0.61       | 0.00       | 0.00       | 0.01       | 0.00       | 0.00       | 0.00       | 0.04       | 0.01       | 0.02       | 0.00       | 0.00       |
| <b>25</b>    | 0.11       | 0.08       | 0.01       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.06       | 0.54       |
| <b>26</b>    | 4.28       | 0.30       | 0.58       | 0.00       | 0.33       | 0.00       | 0.06       | 0.00       | 0.00       | 0.00       | 0.34       | 0.86       |
| <b>27</b>    | 0.46       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.40       | 0.00       | 0.00       | 0.91       | 3.77       | 0.01       |
| <b>28</b>    | 0.00       | 0.00       | 0.09       | 0.00       | 0.00       | 0.00       | 0.57       | 0.30       | 0.00       | 0.64       | 0.01       | 0.00       |
| <b>29</b>    | 0.00       | 0.00       | 0.01       | 0.00       | 0.00       | 0.00       | 0.01       | 0.00       | 0.00       | 0.00       | 0.51       | 0.00       |
| <b>30</b>    | 0.00       | 0.00       | 1.45       | 0.16       | ---        | 0.08       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.02       |
| <b>31</b>    | 0.00       | ---        | 0.01       | 0.00       | ---        | 0.76       | ---        | 0.00       | ---        | 0.10       | 0.00       | ---        |
| <b>Total</b> | 6.06       | 0.47       | 4.65       | 1.56       | 2.90       | 4.17       | 3.93       | 2.51       | 3.35       | 5.94       | 8.44       | 11.91      |

**02102908 FLAT CREEK NEAR INVERNESS, NC—Continued**

