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Water-Data Report 2009

**02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, NC**

Cape Fear Basin  
Deep Subbasin

LOCATION.--Lat 35°39'35", long 79°24'06" referenced to North American Datum of 1983, Chatham County, NC, Hydrologic Unit 03030003, on right bank, 200 ft upstream from bridge on U.S. Highway 421, 1.5 mi east of Mount Vernon Springs, and 4 mi upstream from mouth.

DRAINAGE AREA.--15.5 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--June 1958 to September 1981, January 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 446.5 ft above North American Vertical Datum of 1988. Satellite telemetry at streamgage.

REMARKS.--No estimated daily discharges. Records fair. Maximum discharge for period of record from rating curve extended above 2,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow. No flow occurs at times most years.

**02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, NC—Continued**

**DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009  
DAILY MEAN 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>     | 1.0        | 0.49       | 13         | 5.3        | 4.1        | 334        | 9.1        | 1.2        | 0.90       | 0.08       | 0.04       | 0.02       |
| <b>2</b>     | 0.87       | 0.49       | 4.9        | 5.0        | 4.0        | 109        | 8.6        | 1.2        | 0.65       | 0.06       | 0.04       | 0.01       |
| <b>3</b>     | 0.63       | 0.46       | 3.0        | 5.5        | 7.4        | 32         | 36         | 1.3        | 0.41       | 0.04       | 0.04       | 0.01       |
| <b>4</b>     | 0.45       | 0.50       | 2.5        | 8.9        | 6.2        | 19         | 16         | 1.4        | 0.65       | 0.03       | 0.03       | 0.01       |
| <b>5</b>     | 0.38       | 0.67       | 2.2        | 10         | 4.3        | 14         | 9.8        | 1.7        | 10         | 0.03       | 0.03       | 0.01       |
| <b>6</b>     | 0.30       | 0.60       | 2.0        | 264        | 3.8        | 10         | 8.4        | 2.4        | 4.4        | 0.03       | 0.05       | 0.01       |
| <b>7</b>     | 0.50       | 0.56       | 2.0        | 69         | 3.8        | 9.0        | 7.0        | 2.1        | 2.0        | 0.03       | 0.04       | 0.01       |
| <b>8</b>     | 0.29       | 0.62       | 2.2        | 30         | 3.7        | 7.7        | 5.9        | 2.0        | 1.4        | 0.02       | 0.03       | 0.01       |
| <b>9</b>     | 0.17       | 0.66       | 2.1        | 15         | 3.4        | 6.6        | 5.3        | 1.8        | 1.0        | 0.02       | 0.02       | 0.01       |
| <b>10</b>    | 0.14       | 0.61       | 3.4        | 11         | 3.3        | 5.5        | 4.9        | 1.8        | 0.79       | 0.02       | 0.02       | 0.00       |
| <b>11</b>    | 0.10       | 0.72       | 113        | 9.5        | 3.4        | 5.2        | 12         | 1.8        | 0.66       | 0.02       | 0.01       | 0.00       |
| <b>12</b>    | 0.09       | 0.86       | 79         | 7.8        | 5.0        | 4.5        | 6.8        | 1.9        | 0.56       | 0.02       | 0.01       | 0.00       |
| <b>13</b>    | 0.12       | 0.91       | 17         | 6.6        | 3.0        | 5.5        | 5.4        | 1.8        | 0.62       | 0.16       | 0.01       | 0.00       |
| <b>14</b>    | 0.18       | 1.5        | 9.3        | 6.0        | 2.5        | 43         | 80         | 1.5        | 0.73       | 0.22       | 0.05       | 0.00       |
| <b>15</b>    | 0.17       | 5.5        | 7.0        | 5.3        | 2.5        | 118        | 41         | 1.3        | 0.44       | 0.12       | 0.12       | 0.00       |
| <b>16</b>    | 0.15       | 3.0        | 5.7        | 4.5        | 2.5        | 63         | 10         | 1.5        | 0.71       | 0.07       | 0.08       | 0.00       |
| <b>17</b>    | 0.21       | 1.7        | 4.9        | 3.8        | 2.4        | 33         | 5.2        | 1.9        | 1.8        | 0.03       | 0.05       | 0.00       |
| <b>18</b>    | 0.58       | 1.3        | 4.3        | 4.3        | 12         | 18         | 3.1        | 2.2        | 5.5        | 2.1        | 0.03       | 0.00       |
| <b>19</b>    | 0.43       | 1.1        | 3.8        | 4.7        | 12         | 13         | 2.4        | 1.9        | 3.5        | 0.96       | 0.02       | 0.00       |
| <b>20</b>    | 0.35       | 1.0        | 3.9        | 5.1        | 6.5        | 56         | 4.8        | 1.4        | 1.6        | 0.28       | 0.02       | 0.00       |
| <b>21</b>    | 0.33       | 0.92       | 154        | 4.4        | 4.7        | 18         | 3.3        | 1.3        | 1.1        | 0.11       | 0.02       | 0.00       |
| <b>22</b>    | 0.33       | 0.82       | 34         | 4.0        | 4.1        | 12         | 2.5        | 1.2        | 0.76       | 0.06       | 0.02       | 0.00       |
| <b>23</b>    | 0.33       | 0.82       | 15         | 4.7        | 3.6        | 9.3        | 2.0        | 0.94       | 0.57       | 0.04       | 0.02       | 0.00       |
| <b>24</b>    | 0.37       | 0.83       | 11         | 5.2        | 3.3        | 7.6        | 1.6        | 0.85       | 0.44       | 0.04       | 0.02       | 0.01       |
| <b>25</b>    | 0.37       | 1.0        | 16         | 4.3        | 3.2        | 6.6        | 1.5        | 0.80       | 0.34       | 0.03       | 0.01       | 0.01       |
| <b>26</b>    | 0.42       | 0.97       | 13         | 3.7        | 3.1        | 8.9        | 1.7        | 1.0        | 0.23       | 0.03       | 0.01       | 0.01       |
| <b>27</b>    | 0.42       | 1.1        | 9.9        | 3.4        | 3.2        | 13         | 1.4        | 1.4        | 0.16       | 0.03       | 0.01       | 0.01       |
| <b>28</b>    | 0.44       | 1.1        | 8.9        | 5.6        | 19         | 31         | 1.1        | 1.6        | 0.12       | 0.03       | 0.01       | 0.01       |
| <b>29</b>    | 0.46       | 1.1        | 8.2        | 12         | ---        | 74         | 1.2        | 3.6        | 0.14       | 0.03       | 0.19       | 0.01       |
| <b>30</b>    | 0.46       | 13         | 6.9        | 6.9        | ---        | 18         | 1.4        | 2.0        | 0.11       | 0.03       | 0.10       | 0.01       |
| <b>31</b>    | 0.44       | ---        | 6.1        | 5.1        | ---        | 11         | ---        | 1.3        | ---        | 0.03       | 0.04       | ---        |
| <b>Total</b> | 11.48      | 44.91      | 568.2      | 540.6      | 140.0      | 1,115.4    | 299.4      | 50.09      | 42.29      | 4.80       | 1.19       | 0.17       |
| <b>Mean</b>  | 0.37       | 1.50       | 18.3       | 17.4       | 5.00       | 36.0       | 9.98       | 1.62       | 1.41       | 0.15       | 0.04       | 0.01       |
| <b>Max</b>   | 1.0        | 13         | 154        | 264        | 19         | 334        | 80         | 3.6        | 10         | 2.1        | 0.19       | 0.02       |
| <b>Min</b>   | 0.09       | 0.46       | 2.0        | 3.4        | 2.4        | 4.5        | 1.1        | 0.80       | 0.11       | 0.02       | 0.01       | 0.00       |
| <b>Cfsm</b>  | 0.02       | 0.10       | 1.18       | 1.13       | 0.32       | 2.32       | 0.64       | 0.10       | 0.09       | 0.01       | 0.00       | 0.00       |
| <b>In.</b>   | 0.03       | 0.11       | 1.36       | 1.30       | 0.34       | 2.68       | 0.72       | 0.12       | 0.10       | 0.01       | 0.00       | 0.00       |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2009 <sup>a</sup>, BY WATER YEAR (WY)**

|             | <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>Mean</b> | 7.43       | 7.30       | 11.6       | 23.8       | 28.8       | 29.4       | 18.6       | 8.44       | 6.50       | 7.21       | 6.89       | 7.32       |
| <b>Max</b>  | 56.6       | 43.1       | 53.4       | 80.4       | 81.0       | 74.8       | 67.1       | 39.1       | 48.0       | 66.6       | 55.3       | 75.2       |
| <b>(WY)</b> | (1972)     | (2007)     | (1973)     | (1978)     | (1960)     | (1998)     | (2003)     | (1978)     | (1973)     | (1975)     | (1964)     | (1996)     |
| <b>Min</b>  | 0.00       | 0.01       | 0.59       | 0.55       | 2.58       | 3.64       | 2.45       | 0.38       | 0.02       | 0.04       | 0.00       | 0.00       |
| <b>(WY)</b> | (2006)     | (2008)     | (2002)     | (2008)     | (2008)     | (2006)     | (1981)     | (2002)     | (2002)     | (2002)     | (2007)     | (1980)     |

**02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, NC—Continued****SUMMARY STATISTICS**

|                                 | Calendar Year 2008 |       | Water Year 2009 |        | Water Years 1958 - 2009 <sup>a</sup> |             |
|---------------------------------|--------------------|-------|-----------------|--------|--------------------------------------|-------------|
| <b>Annual total</b>             | 3,058.96           |       | 2,818.53        |        |                                      |             |
| <b>Annual mean</b>              | 8.36               |       | 7.72            |        | 13.7                                 |             |
| <b>Highest annual mean</b>      |                    |       |                 |        | 29.5                                 | 2003        |
| <b>Lowest annual mean</b>       |                    |       |                 |        | 3.84                                 | 1981        |
| <b>Highest daily mean</b>       | 566                | Sep 6 | 334             | Mar 1  | 1,570                                | Sep 6, 1996 |
| <b>Lowest daily mean</b>        | 0.00               | Aug 3 | 0.00            | Sep 10 | 0.00                                 | Sep 2, 1962 |
| <b>Annual seven-day minimum</b> | 0.00               | Aug 3 | 0.00            | Sep 10 | 0.00                                 | Sep 2, 1962 |
| <b>Maximum peak flow</b>        |                    |       | 910             | Mar 1  | b4,010                               | Sep 6, 1996 |
| <b>Maximum peak stage</b>       |                    |       | 6.19            | Mar 1  | 13.41                                | Sep 6, 1996 |
| <b>Instantaneous low flow</b>   |                    |       | b0.00           | Sep 10 | b0.00                                | Sep 2, 1962 |
| <b>Annual runoff (cfsm)</b>     | 0.539              |       | 0.498           |        | 0.881                                |             |
| <b>Annual runoff (inches)</b>   | 7.34               |       | 6.76            |        | 11.98                                |             |
| <b>10 percent exceeds</b>       | 13                 |       | 12              |        | 24                                   |             |
| <b>50 percent exceeds</b>       | 0.97               |       | 1.4             |        | 3.4                                  |             |
| <b>90 percent exceeds</b>       | 0.01               |       | 0.02            |        | 0.07                                 |             |

<sup>a</sup> See Period of Record.<sup>b</sup> See Remarks.