

Water-Data Report 2007

**0214266000 MCDOWELL CREEK NEAR CHARLOTTE, NC**

Santee Basin  
Upper Catawba Subbasin

LOCATION.--Lat 35°23'23", long 80°55'16" referenced to North American Datum of 1983, Mecklenburg County, NC, Hydrologic Unit 03050101, on right bank at downstream side of bridge at Secondary Road 2074, 2.1 mi downstream of Torrence Creek, 2.8 mi south of Hicks Crossroads, 12.1 mi northwest of city hall, Charlotte.

DRAINAGE AREA.--26.3 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--November 1996 to current year. Streamflow data for November 1996 to September 1997 previously published in U.S. Geological Survey Open-File Report 98-67.

GAGE.--Water-stage recorder. Datum of gage is 644.87 ft, above North American Vertical Datum of 1988. Radio telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for current water year and period of record affected by regulation of unknown origin.

## 0214266000 MCDOWELL CREEK NEAR CHARLOTTE, NC—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

[e, estimated]

| Day          | Oct   | Nov     | Dec   | Jan   | Feb  | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   |
|--------------|-------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 1            | 4.9   | 8.0     | 19    | 60    | 34   | 146   | 17    | 10    | 4.1   | 23    | 5.7   | 6.1   |
| 2            | 4.8   | 8.1     | 14    | 29    | 38   | 1,020 | 20    | 9.7   | 4.6   | 7.2   | 4.7   | 5.3   |
| 3            | 5.0   | 7.5     | 13    | 19    | 20   | 104   | 14    | 9.5   | 21    | 6.5   | 3.4   | 5.1   |
| 4            | 4.8   | 6.8     | 13    | 16    | 15   | 42    | 13    | 14    | 9.7   | 6.2   | 4.8   | 4.6   |
| 5            | 4.6   | 7.6     | 14    | 45    | 14   | 30    | 11    | 13    | 7.3   | 5.8   | 3.1   | 4.3   |
| 6            | 5.5   | 6.8     | 15    | 60    | 13   | 28    | 10    | 13    | 6.0   | 5.1   | 3.3   | 3.9   |
| 7            | 5.3   | 57      | 13    | 148   | 13   | 23    | 10    | 10    | 5.8   | 4.3   | 3.1   | 4.4   |
| 8            | 12    | 114     | 12    | 359   | 11   | 19    | 9.2   | 9.8   | 5.3   | 5.6   | 2.5   | 4.0   |
| 9            | 7.5   | 24      | 12    | e86   | 11   | 18    | 10    | 9.3   | 17    | 21    | 3.3   | 3.0   |
| 10           | 5.9   | 15      | 11    | e42   | 11   | 18    | 8.8   | 8.8   | 7.4   | 61    | 2.0   | 3.3   |
| 11           | 5.2   | 13      | 10    | e30   | 10   | 16    | 13    | 8.1   | 7.4   | 32    | 2.7   | 3.4   |
| 12           | 90    | 85      | 10    | e22   | 11   | 15    | 62    | 23    | 7.7   | 9.8   | 3.0   | 3.4   |
| 13           | 9.8   | 19      | 10    | e19   | 49   | 16    | 14    | 15    | 5.9   | 8.2   | 2.3   | 2.9   |
| 14           | 5.6   | 14      | 10    | e17   | 211  | 15    | 18    | 8.9   | 8.1   | 5.8   | 3.0   | 7.9   |
| 15           | 5.4   | 12      | 10    | 16    | 38   | 15    | 316   | 9.3   | 8.2   | 19    | 1.6   | 7.7   |
| 16           | 4.8   | 523     | 9.9   | 15    | 27   | 173   | 72    | 8.2   | 7.2   | 13    | 3.0   | 4.2   |
| 17           | 169   | 73      | 10    | 14    | 23   | 50    | 32    | 9.6   | 5.1   | 7.4   | 1.7   | 3.5   |
| 18           | 125   | 34      | 9.3   | 19    | 20   | 25    | 22    | 7.9   | 4.6   | 55    | 3.2   | 3.4   |
| 19           | 24    | 24      | 8.7   | 18    | 17   | 19    | 21    | 7.2   | 3.6   | 24    | 2.4   | 4.4   |
| 20           | 27    | 19      | 9.0   | 15    | 17   | 17    | 41    | 6.6   | 3.9   | 14    | 2.4   | 3.5   |
| 21           | 14    | 52      | 8.8   | 28    | 18   | 17    | 18    | 7.3   | 4.0   | 11    | 2.7   | 3.5   |
| 22           | 12    | 594     | 63    | 109   | 15   | 15    | 15    | 6.4   | 3.1   | 6.9   | 2.5   | 3.9   |
| 23           | 9.7   | 115     | 34    | 33    | 15   | 13    | 14    | 6.3   | 3.1   | 6.5   | 2.3   | 3.0   |
| 24           | 9.6   | 49      | 16    | e26   | 13   | 13    | 15    | 6.4   | 13    | 6.7   | 1.9   | 3.5   |
| 25           | 8.3   | 32      | 236   | e21   | 171  | 12    | 13    | 5.1   | 61    | 5.7   | 2.1   | 2.3   |
| 26           | 7.6   | 25      | 79    | e18   | 68   | 11    | 12    | 5.9   | 9.9   | 5.3   | 2.4   | 4.6   |
| 27           | 20    | 24      | 34    | e15   | 31   | 12    | 42    | 5.2   | 6.9   | 6.5   | 2.2   | 3.3   |
| 28           | 45    | 19      | 24    | e13   | 25   | 11    | 16    | 5.4   | 5.7   | 27    | 2.4   | 2.7   |
| 29           | 13    | 18      | 20    | e12   | ---  | 10    | 12    | 5.1   | 5.7   | 5.7   | 2.2   | 1.4   |
| 30           | 9.8   | 17      | 20    | 11    | ---  | 17    | 11    | 4.7   | 8.3   | 23    | 24    | 1.5   |
| 31           | 8.5   | ---     | 25    | 11    | ---  | 14    | ---   | 4.9   | ---   | 13    | 37    | ---   |
| <b>Total</b> | 683.6 | 2,015.8 | 792.7 | 1,346 | 959  | 1,954 | 902.0 | 273.6 | 270.6 | 451.2 | 142.9 | 118.0 |
| <b>Mean</b>  | 22.1  | 67.2    | 25.6  | 43.4  | 34.2 | 63.0  | 30.1  | 8.83  | 9.02  | 14.6  | 4.61  | 3.93  |
| <b>Max</b>   | 169   | 594     | 236   | 359   | 211  | 1,020 | 316   | 23    | 61    | 61    | 37    | 7.9   |
| <b>Min</b>   | 4.6   | 6.8     | 8.7   | 11    | 10   | 10    | 8.8   | 4.7   | 3.1   | 4.3   | 1.6   | 1.4   |
| <b>Cfsm</b>  | 0.84  | 2.55    | 0.97  | 1.65  | 1.30 | 2.40  | 1.14  | 0.34  | 0.34  | 0.55  | 0.18  | 0.15  |
| <b>In.</b>   | 0.97  | 2.85    | 1.12  | 1.90  | 1.36 | 2.76  | 1.28  | 0.39  | 0.38  | 0.64  | 0.20  | 0.17  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2007, BY WATER YEAR (WY)

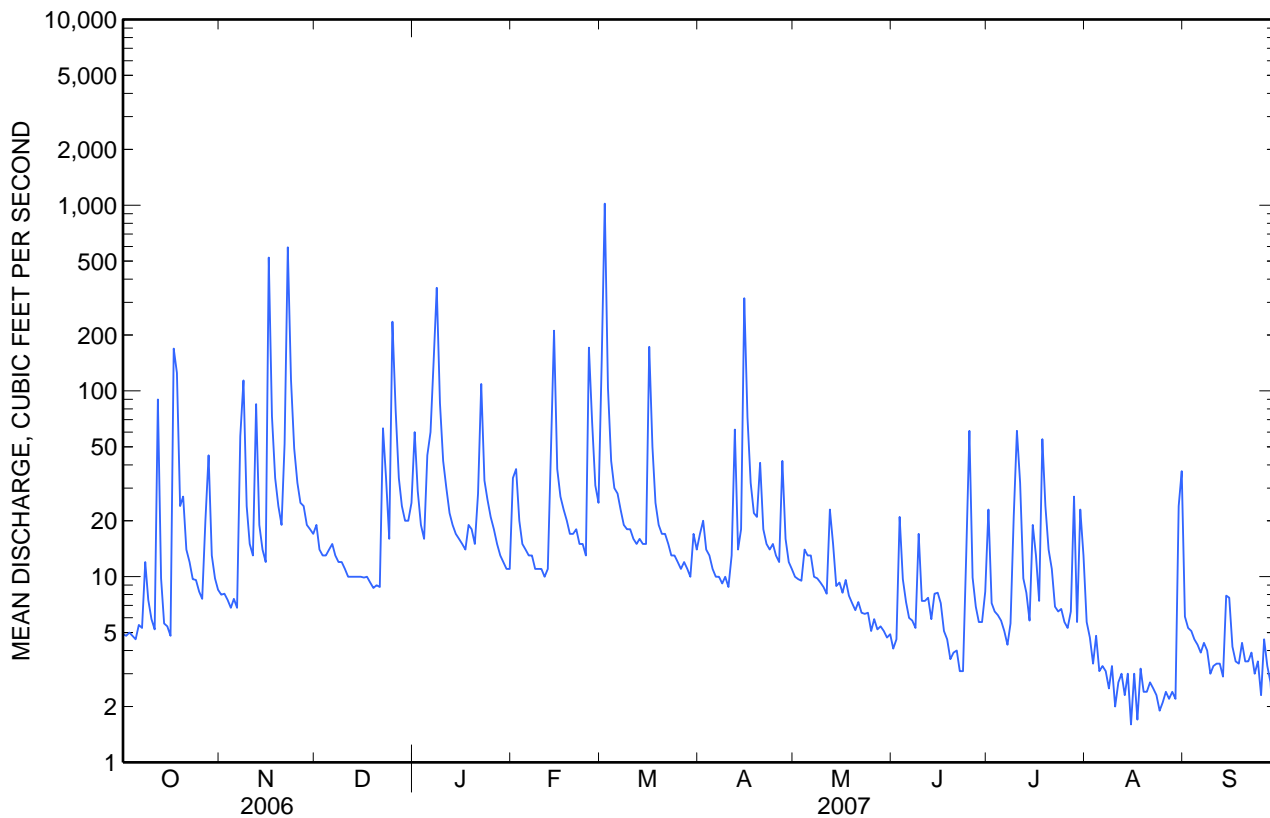
|             | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Mean</b> | 17.4   | 22.8   | 29.2   | 32.9   | 36.2   | 42.4   | 35.4   | 23.6   | 19.3   | 17.1   | 9.12   | 18.2   |
| <b>Max</b>  | 37.3   | 67.2   | 66.9   | 94.0   | 73.3   | 106    | 154    | 125    | 69.0   | 42.7   | 18.5   | 54.0   |
| <b>(WY)</b> | (2006) | (2007) | (2003) | (1998) | (1998) | (2003) | (2003) | (2003) | (2003) | (2003) | (2003) | (2004) |
| <b>Min</b>  | 3.63   | 3.21   | 6.40   | 10.2   | 15.4   | 12.1   | 8.61   | 8.83   | 5.20   | 4.68   | 2.50   | 3.12   |
| <b>(WY)</b> | (2001) | (2002) | (2002) | (2001) | (2001) | (1999) | (2002) | (2007) | (2000) | (1999) | (1999) | (2005) |

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SUMMARY STATISTICS

|                                 | Calendar Year 2006 |        | Water Year 2007   |        | Water Years 1997 - 2007 |              |
|---------------------------------|--------------------|--------|-------------------|--------|-------------------------|--------------|
| <b>Annual total</b>             | 9,452.6            |        | 9,909.4           |        |                         |              |
| <b>Annual mean</b>              | 25.9               |        | 27.1              |        | 24.9                    |              |
| <b>Highest annual mean</b>      |                    |        |                   |        | 62.4                    | 2003         |
| <b>Lowest annual mean</b>       |                    |        |                   |        | 10.6                    | 1999         |
| <b>Highest daily mean</b>       | 594                | Nov 22 | 1,020             | Mar 2  | 1,270                   | Apr 10, 2003 |
| <b>Lowest daily mean</b>        | 3.3                | Aug 4  | 1.4               | Sep 29 | 0.59                    | Sep 25, 1999 |
| <b>Annual seven-day minimum</b> | 4.0                | Jul 29 | 2.2               | Aug 23 | 0.99                    | Sep 20, 1999 |
| <b>Maximum peak flow</b>        |                    |        | 1,680             | Mar 2  | 2,690                   | May 22, 2003 |
| <b>Maximum peak stage</b>       |                    |        | 12.49             | Mar 2  | 13.55                   | May 22, 2003 |
| <b>Instantaneous low flow</b>   |                    |        | <sup>a</sup> 0.88 | Sep 29 | <sup>a</sup> 0.29       | Sep 23, 1999 |
| <b>Annual runoff (cfsm)</b>     | 0.985              |        | 1.03              |        | 0.948                   |              |
| <b>Annual runoff (inches)</b>   | 13.37              |        | 14.02             |        | 12.88                   |              |
| <b>10 percent exceeds</b>       | 42                 |        | 47                |        | 43                      |              |
| <b>50 percent exceeds</b>       | 12                 |        | 11                |        | 10                      |              |
| <b>90 percent exceeds</b>       | 5.4                |        | 3.4               |        | 3.5                     |              |

<sup>a</sup> See Remarks.



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## CLIMATOLOGICAL RECORDS

PERIOD OF RECORD.--November 1996 to current year. Records for period November 1996 to September 1998 published in USGS OFR 98-67, and 99-273.

INSTRUMENTATION.--Tipping-bucket raingage and electronic datalogger. Radio telemetry at station.

REMARKS.--Gage is operated as part of Charlotte/Mecklenburg Rainfall Runoff Network (CRN41). Frozen precipitation collected during February 2007 is not reflected in daily or monthly totals.

**PRECIPITATION, TOTAL, INCHES**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY SUM VALUES**

| Day          | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1            | 0.00 | 0.00 | 0.07 | 0.27 | ---  | 2.18 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2            | 0.00 | 0.00 | 0.00 | 0.00 | ---  | 0.46 | 0.01 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 3            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.50 | 0.00 | 0.00 | 0.00 |
| 4            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5            | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6            | 0.19 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7            | 0.02 | 0.87 | 0.00 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8            | 0.57 | 0.28 | 0.00 | 0.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9            | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.61 | 0.00 | 0.00 |
| 10           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 |
| 11           | 0.57 | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.57 | 0.00 | 0.26 | 0.04 | 0.00 | 0.00 |
| 12           | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13           | 0.00 | 0.00 | 0.00 | 0.00 | 1.34 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 14           | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 1.19 | 0.00 | 0.06 | 0.00 | 0.00 | 0.73 |
| 15           | 0.00 | 0.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.83 | 0.00 | 0.01 | 0.08 | 0.00 | 0.01 |
| 16           | 0.00 | 0.83 | 0.00 | 0.01 | 0.00 | 1.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17           | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 0.00 | 0.00 |
| 18           | 0.01 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.35 | 0.00 | 0.00 |
| 19           | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20           | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.06 | 0.01 | 0.00 | 0.00 |
| 21           | 0.00 | 1.17 | 0.03 | 0.69 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| 22           | 0.06 | 1.14 | 0.86 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24           | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.19 | 0.00 | 0.00 |
| 25           | 0.00 | 0.00 | 1.17 | 0.00 | 1.20 | 0.00 | 0.00 | 0.00 | 0.36 | 0.01 | 0.00 | 0.00 |
| 26           | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| 27           | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.61 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 |
| 28           | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29           | 0.00 | 0.00 | 0.00 | 0.00 | ---  | 0.04 | 0.00 | 0.00 | 0.04 | 0.00 | 0.60 | 0.00 |
| 30           | 0.00 | 0.01 | 0.00 | 0.00 | ---  | 0.00 | 0.00 | 0.00 | 0.25 | 0.08 | 0.98 | 0.00 |
| 31           | 0.00 | ---  | 0.29 | 0.00 | ---  | 0.00 | ---  | 0.00 | ---  | 0.00 | 0.02 | ---  |
| <b>Total</b> | 4.62 | 5.63 | 2.43 | 3.14 | ---  | 3.82 | 4.15 | 1.50 | 1.74 | 4.06 | 1.63 | 0.74 |

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