

02146300 IRWIN CREEK NEAR CHARLOTTE, NC

LOCATION.--Lat 35°11'52", long 80°54'16", Mecklenburg County, Hydrologic Unit 03050103, on left bank at sewage-disposal plant of city of Charlotte, 2,200 ft upstream from Southern Railway bridge, 0.7 mi upstream from Taggart Creek, and 4.2 mi southwest of city hall, Charlotte.

DRAINAGE AREA.--30.7 mi².

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as "Sugar (Irwin) Creek at Charlotte".

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 590.87 ft above North American Vertical Datum of 1988. Radio telemetry at station.

REMARKS.--Records good, except those for estimated daily discharges which are poor. Maximum discharge for period of record from rating curve extended above 7,500 ft³/s on basis of step-backwater computation. Minimum discharge for period of record also occurred July 14, 1986. Minimum discharge for current water year also occurred Oct. 7, 8.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936, reached a stage of about 17.3 ft at site 400 ft downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam, 5 mi upstream. Flood of Jan. 6, 1962, reached a stage of 14.32 ft, from floodmarks; discharge, 4,120 ft³/s. Flood of April 11, 1962, reached a stage of 15.18 ft, from floodmarks; discharge, 4,740 ft³/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|---------|---------|-------|------|-------|-------|-------|-------|-------|-------|-------|------|
| 1 | 7.7 | 11 | 10 | 32 | 29 | 106 | 44 | 22 | 48 | 27 | 27 | 38 |
| 2 | 8.1 | 11 | 10 | 19 | 22 | 116 | 36 | 37 | 31 | 314 | 20 | 16 |
| 3 | 8.0 | 9.8 | 10 | 50 | 22 | 43 | 28 | 30 | 175 | 37 | 79 | 15 |
| 4 | 6.7 | 10 | 27 | 19 | 73 | 29 | 26 | 25 | 91 | 26 | 596 | 25 |
| 5 | 7.3 | 98 | 353 | 17 | 30 | 39 | 39 | 28 | 36 | 24 | 437 | 17 |
| 6 | 5.2 | 148 | 47 | 19 | 40 | 596 | 41 | 281 | 49 | 22 | 66 | 16 |
| 7 | 6.0 | 20 | 31 | 20 | 132 | 64 | 691 | 53 | 1,340 | 25 | 38 | 14 |
| 8 | 6.6 | 15 | 23 | 16 | 30 | 39 | 125 | 34 | 448 | 24 | 99 | 16 |
| 9 | 6.5 | 13 | 19 | 18 | 23 | 31 | 382 | 26 | 302 | 79 | 117 | 17 |
| 10 | 6.1 | 12 | 17 | 17 | 50 | 30 | 1,370 | 23 | 60 | 31 | 92 | 17 |
| 11 | 583 | 73 | 125 | e17 | 23 | 26 | 191 | 23 | 48 | 113 | 49 | 15 |
| 12 | 20 | 325 | 28 | e16 | 21 | 24 | 69 | 21 | 51 | 43 | 70 | 16 |
| 13 | 405 | 52 | 359 | e14 | 19 | 23 | 48 | 18 | 39 | 333 | 72 | 13 |
| 14 | 31 | 23 | 66 | 15 | 29 | 21 | 40 | 18 | 38 | 47 | 389 | 13 |
| 15 | 138 | 17 | 31 | 14 | 30 | 88 | 36 | 307 | 37 | 26 | 72 | 14 |
| 16 | 400 | 244 | 24 | 17 | 30 | 396 | 34 | 68 | 321 | 23 | 87 | 12 |
| 17 | 26 | 134 | 21 | 22 | 54 | 55 | 31 | 26 | 139 | 196 | 29 | 12 |
| 18 | 16 | 36 | 17 | 16 | 62 | 68 | 355 | 48 | 288 | 27 | 25 | 12 |
| 19 | 14 | 23 | 16 | 16 | 34 | 49 | 147 | 35 | 132 | 89 | 26 | 12 |
| 20 | 12 | 18 | 82 | 15 | 26 | 1,890 | 54 | 22 | 48 | 31 | 21 | 11 |
| 21 | 32 | 15 | 21 | 20 | 21 | 107 | 48 | 304 | 36 | 51 | 20 | 11 |
| 22 | 39 | 14 | 15 | 16 | 313 | 58 | 40 | 2,100 | 32 | 35 | 95 | 74 |
| 23 | 10 | 15 | 15 | 30 | 72 | 47 | 38 | 185 | 34 | 27 | 23 | 150 |
| 24 | 10 | 13 | 552 | 21 | 32 | 41 | 29 | 84 | 34 | 21 | 18 | 18 |
| 25 | 11 | 11 | 244 | 19 | 26 | 37 | 58 | 343 | 31 | 20 | 17 | 18 |
| 26 | 15 | 12 | 45 | 20 | 59 | 34 | 63 | 123 | 24 | 43 | 17 | 16 |
| 27 | 10 | 12 | 30 | 20 | 171 | 36 | 34 | 383 | 24 | 23 | 17 | 18 |
| 28 | 104 | 10 | 24 | 17 | 60 | 32 | 28 | 52 | 38 | 17 | 17 | 30 |
| 29 | 45 | 10 | 21 | 28 | --- | 29 | 26 | 40 | 22 | 104 | 16 | 14 |
| 30 | 21 | 11 | 19 | 221 | --- | 215 | 23 | 35 | 23 | 147 | 22 | 13 |
| 31 | 13 | --- | 18 | 55 | --- | 50 | --- | 153 | --- | 47 | 46 | --- |
| TOTAL | 2,023.2 | 1,415.8 | 2,320 | 856 | 1,533 | 4,419 | 4,174 | 4,947 | 4,019 | 2,072 | 2,719 | 683 |
| MEAN | 65.3 | 47.2 | 74.8 | 27.6 | 54.8 | 143 | 139 | 160 | 134 | 66.8 | 87.7 | 22.8 |
| MAX | 583 | 325 | 552 | 221 | 313 | 1,890 | 1,370 | 2,100 | 1,340 | 333 | 596 | 150 |
| MIN | 5.2 | 9.8 | 10 | 14 | 19 | 21 | 23 | 18 | 22 | 17 | 16 | 11 |
| CFSM | 2.13 | 1.54 | 2.44 | 0.90 | 1.78 | 4.64 | 4.53 | 5.20 | 4.36 | 2.18 | 2.86 | 0.74 |
| IN. | 2.45 | 1.72 | 2.81 | 1.04 | 1.86 | 5.35 | 5.06 | 5.99 | 4.87 | 2.51 | 3.29 | 0.83 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MEAN | 37.6 | 35.8 | 40.6 | 57.8 | 62.8 | 70.7 | 44.9 | 42.1 | 37.5 | 35.1 | 34.2 | 32.5 |
| MAX | 157 | 137 | 107 | 123 | 124 | 161 | 139 | 204 | 134 | 215 | 118 | 135 |
| (WY) | (1991) | (1986) | (1984) | (1993) | (1979) | (1993) | (2003) | (1975) | (2003) | (1997) | (1995) | (1975) |
| MIN | 7.35 | 9.32 | 10.2 | 13.4 | 20.1 | 18.5 | 14.9 | 14.0 | 6.95 | 6.67 | 7.97 | 6.00 |
| (WY) | (2001) | (1982) | (1966) | (1981) | (2002) | (1985) | (1981) | (1986) | (1986) | (1986) | (1987) | (1983) |

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| SUMMARY STATISTICS | FOR 2002 CALENDAR YEAR | | FOR 2003 WATER YEAR | | WATER YEARS 1962 - 2003 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|--------------|
| ANNUAL TOTAL | 13,324.4 | | 31,181.0 | | 44.4 | |
| ANNUAL MEAN | 36.5 | | 85.4 | | 85.4 | |
| HIGHEST ANNUAL MEAN | | | | | 24.0 | 2003 |
| LOWEST ANNUAL MEAN | | | | | 1981 | |
| HIGHEST DAILY MEAN | 614 | Jul 14 | 2,100 | May 22 | 5,010 | Jul 23, 1997 |
| LOWEST DAILY MEAN | 4.1 | Sep 13 | 5.2 | Oct 6 | 3.1 | Sep 25, 1983 |
| ANNUAL SEVEN-DAY MINIMUM | 5.3 | Sep 7 | 6.3 | Oct 4 | 3.5 | Oct 5, 1993 |
| MAXIMUM PEAK FLOW | | | 6,110 | Jun 7 | 11,600* | Jul 23, 1997 |
| MAXIMUM PEAK STAGE | | | 15.69 | Jun 7 | 20.38 | Jul 23, 1997 |
| INSTANTANEOUS LOW FLOW | | | 4.1* | Oct 6 | 2.8* | Jul 13, 1986 |
| ANNUAL RUNOFF (CFSM) | 1.19 | | 2.78 | | 1.45 | |
| ANNUAL RUNOFF (INCHES) | 16.15 | | 37.78 | | 19.64 | |
| 10 PERCENT EXCEEDS | 80 | | 193 | | 80 | |
| 50 PERCENT EXCEEDS | 13 | | 30 | | 18 | |
| 90 PERCENT EXCEEDS | 7.2 | | 13 | | 8.6 | |

e Estimated.
 * See REMARKS.

