

02289032 LEVEE 4 BELOW STRUCTURE G-88, NEAR CLEWISTON, FL

LOCATION.--Lat 26°19'52", long 80°52'48", in NW ¼ sec.7, T.48 S., R.35 E., Broward County, Hydrologic Unit 03090202, approximately 1,050 ft below structure G-88, 3.0 mi northeast of Snake Road and 35 mi south of Clewiston, FL.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May to July 1992 (gage height only), August 1992 to current year.

GAGE.--Satellite data collection platform with water-stage shaft encoder and acoustic doppler velocity meter. Prior to October 18, 2001, satellite data collection platform with water-stage shaft encoder and acoustic velocity meter. Acoustic doppler velocity meter installed January 10, 2001. The acoustic velocity meter and acoustic doppler velocity meter were run in tandem for the period of January 10, 2001 to October 18, 2001. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Flow affected by operation of G-88, pump station S-8, and by agricultural pumping. Flow reversal occurs at times, during agricultural activity. Discharge computed from relations between stage vs. area and index velocity vs. mean channel velocity. Gage height records revised -0.04 ft May 1992 through September 1994, based upon revised elevation for BM L-4-6 from 22.578 ft to 22.543 ft. Discharge was not revised. Revised records are available in the files of the U.S. Geological Survey. The elevation of BM L-4-6 was revised by South Florida Water Management for a second time, elevation is now 22.380 ft. Gage height records for the 1992 - 1994 water years are now in error +0.21 ft in the files of the U.S. Geological Survey due to the revised elevation of BM L-4-6. Gage height records for the 1995-1996 water years are now in error +0.25 ft in the files of the U.S. Geological Survey due to the revised elevation of BM L-4-6.

ANNUAL MEAN AND ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 5 complete water years of discharge (1994, 1996-97, 2001-2002).

EXTREME STAGES FOR PERIOD OF RECORD.--Maximum gage height, 14.72 ft July 12, 2002; minimum, 8.11 ft May 17, 2002.

EXTREME STAGES FOR CURRENT YEAR.--Maximum gage height, 14.58 ft Oct. 3; minimum, 10.45 ft May 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1 | --- | 12.65 | 12.30 | 13.18 | 13.01 | 13.79 | 11.68 | --- | 10.96 | 12.28 | 14.02 | 13.58 |
| 2 | 14.57 | 12.60 | 12.25 | 13.14 | 13.07 | 13.36 | 11.66 | 11.40 | 11.40 | 12.26 | 13.96 | --- |
| 3 | 14.57 | 12.97 | 12.10 | 13.18 | 13.07 | 13.27 | 11.57 | 11.43 | 12.82 | 12.28 | 13.76 | 13.72 |
| 4 | 14.54 | 13.52 | 12.19 | 13.23 | 13.08 | 13.44 | 11.49 | 11.51 | 12.53 | 12.27 | --- | 13.63 |
| 5 | 14.37 | 13.79 | 12.26 | 13.22 | 13.21 | --- | 11.43 | 11.46 | 12.30 | 12.27 | 13.77 | --- |
| 6 | 14.12 | 13.78 | 12.28 | 13.18 | 13.37 | 13.52 | 11.17 | 11.32 | 12.25 | 12.30 | 13.78 | 14.04 |
| 7 | 14.04 | 13.78 | 12.29 | 12.81 | 13.79 | 13.24 | 11.00 | 11.32 | 12.16 | 12.27 | 13.73 | 14.27 |
| 8 | 14.30 | 13.81 | 12.31 | 12.58 | 13.56 | 13.11 | 10.80 | 11.38 | 12.06 | 12.31 | 13.72 | --- |
| 9 | 14.28 | 13.86 | 12.35 | 12.44 | 13.54 | 13.02 | --- | 11.28 | 11.83 | 12.39 | 13.73 | 14.50 |
| 10 | 14.37 | 13.66 | 12.38 | 12.92 | 13.24 | 12.95 | 10.71 | --- | 11.98 | 12.42 | 13.66 | 14.52 |
| 11 | 14.40 | 13.50 | 12.40 | 13.18 | 13.09 | 12.86 | 10.73 | --- | 12.02 | 12.42 | 13.62 | 14.50 |
| 12 | 14.40 | 13.28 | 12.35 | 13.15 | 13.03 | 12.78 | 10.91 | 11.20 | 12.04 | --- | 13.55 | 14.45 |
| 13 | --- | 12.98 | 12.38 | 12.82 | 13.05 | 12.71 | 11.15 | 11.05 | --- | --- | 13.46 | 14.36 |
| 14 | 14.27 | 12.82 | 12.51 | 12.82 | 13.48 | 12.64 | 11.37 | 11.06 | 12.20 | 12.28 | 13.75 | 14.32 |
| 15 | 14.21 | 12.84 | 12.65 | 12.52 | 13.58 | 12.56 | 12.14 | 11.53 | 13.08 | 12.20 | 13.95 | 14.31 |
| 16 | 14.21 | 12.87 | 12.71 | 12.27 | 13.69 | 12.50 | 12.62 | 11.51 | 13.43 | 12.17 | 13.87 | 14.26 |
| 17 | 13.70 | 12.85 | 12.83 | 12.00 | 13.40 | 12.46 | 12.25 | 11.39 | 13.54 | 12.62 | 13.58 | 14.18 |
| 18 | 13.43 | 12.79 | 12.93 | 11.85 | 13.27 | 12.41 | 12.03 | --- | 13.55 | 13.27 | 13.57 | 13.96 |
| 19 | 13.25 | 12.62 | 13.02 | 12.10 | 13.18 | 12.36 | 11.90 | 11.27 | 13.71 | 12.79 | 13.68 | 13.89 |
| 20 | 13.10 | --- | 13.08 | 13.39 | 13.03 | 12.30 | 11.56 | 11.18 | 13.76 | 12.91 | --- | 13.84 |
| 21 | 12.99 | 12.57 | 13.10 | 12.96 | 12.96 | 12.23 | 11.33 | 11.00 | 13.70 | --- | 13.64 | 13.83 |
| 22 | 12.94 | 12.33 | 13.04 | 12.67 | 12.94 | 12.19 | 11.37 | 11.13 | 13.41 | --- | 13.86 | 13.84 |
| 23 | 12.93 | 12.28 | 13.08 | 12.42 | 12.84 | 12.13 | 12.00 | 11.09 | 12.97 | 13.80 | 13.60 | 13.85 |
| 24 | 12.92 | --- | 13.12 | 12.30 | 12.79 | 12.08 | 12.37 | 11.17 | 12.76 | 13.80 | 13.48 | 13.84 |
| 25 | 12.82 | 12.01 | 13.14 | 12.24 | 13.18 | 12.03 | 12.79 | 11.04 | 12.62 | 13.79 | 13.45 | 13.80 |
| 26 | 12.70 | 12.00 | 13.20 | --- | 13.28 | 11.97 | 12.87 | --- | --- | 13.72 | --- | 13.81 |
| 27 | 12.62 | 12.08 | 13.18 | 12.63 | 13.25 | 11.91 | 12.40 | 10.99 | 12.37 | 13.79 | --- | 14.12 |
| 28 | 12.61 | 12.16 | 13.16 | 13.51 | 13.59 | 11.88 | --- | 10.90 | 12.32 | 13.83 | 13.54 | 14.16 |
| 29 | 12.68 | 12.18 | 13.17 | 13.04 | 13.79 | 11.87 | 12.09 | 10.80 | 12.33 | 13.47 | --- | 14.11 |
| 30 | 12.69 | 12.19 | 13.23 | 13.05 | --- | 11.85 | 11.92 | --- | --- | 13.61 | 13.58 | 14.16 |
| 31 | 12.68 | --- | 13.15 | 13.14 | --- | 11.77 | --- | 10.93 | --- | 13.91 | 13.69 | --- |
| TOTAL | --- | --- | 394.14 | --- | 384.36 | --- | --- | --- | --- | --- | --- | --- |
| MEAN | --- | --- | 12.71 | --- | 13.25 | --- | --- | --- | --- | --- | --- | --- |
| MAX | --- | --- | 13.23 | --- | 13.79 | --- | --- | --- | --- | --- | --- | --- |
| MIN | --- | --- | 12.10 | --- | 12.79 | --- | --- | --- | --- | --- | --- | --- |

02289032 LEVEE 4 BELOW STRUCTURE G-88, NEAR CLEWISTON, FL-Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|---------|--------|--------|--------|-------|--------|---------|--------|--------|--------|-------|------|
| 1 | e216 | 17 | -0.69 | -22 | 14 | 59 | -15 | e3.9 | -43 | 24 | 62 | 87 |
| 2 | 224 | 14 | -16 | -27 | 41 | 47 | -8.6 | 15 | -13 | 23 | 91 | e127 |
| 3 | 219 | -15 | 1.3 | -17 | 50 | 36 | -14 | 3.0 | -8.5 | 21 | 107 | 95 |
| 4 | 207 | 5.3 | 0.35 | -8.8 | 46 | 42 | -10 | -3.3 | -0.84 | 24 | e114 | 46 |
| 5 | 165 | 33 | -7.6 | -12 | 46 | e35 | -18 | 3.5 | -1.1 | 14 | 110 | --- |
| 6 | 125 | 44 | -4.0 | -17 | 43 | 13 | -2.9 | -17 | 14 | 8.7 | 109 | --- |
| 7 | 82 | 46 | -6.7 | -4.8 | 35 | 9.4 | -5.0 | -19 | 16 | -3.5 | 111 | --- |
| 8 | 67 | 51 | -8.1 | 7.7 | 33 | -0.01 | -12 | -17 | 12 | 22 | 104 | e249 |
| 9 | 50 | 55 | 3.1 | -18 | 45 | 9.0 | e-13 | -9.4 | 11 | 42 | 94 | 262 |
| 10 | 46 | 52 | -5.7 | -31 | 32 | 4.4 | -13 | e-23 | 13 | 36 | 72 | 260 |
| 11 | 49 | 48 | -12 | -20 | 32 | 25 | 10 | e-17 | 17 | 16 | 57 | 257 |
| 12 | 34 | 38 | 13 | -2.4 | 5.4 | 29 | -2.0 | -19 | 14 | e17 | 61 | 240 |
| 13 | e29 | -8.3 | 26 | -39 | 1.2 | 26 | -7.0 | 3.0 | e18 | e15 | 72 | 203 |
| 14 | 39 | 16 | 19 | -28 | 24 | 21 | -17 | -29 | 7.0 | -1.5 | 144 | 191 |
| 15 | 34 | 23 | 22 | -24 | -17 | 23 | -41 | -6.9 | -9.8 | -6.2 | 173 | 204 |
| 16 | 57 | 26 | 30 | -16 | -1.4 | -6.4 | 0.13 | -5.0 | 3.9 | 2.1 | 131 | 191 |
| 17 | 44 | 24 | 22 | 2.1 | 8.5 | -7.8 | 5.6 | -3.2 | 8.8 | -29 | 75 | 164 |
| 18 | 21 | 20 | 27 | -11 | -2.0 | 23 | 18 | e-9.1 | -0.21 | -0.65 | 84 | 115 |
| 19 | 16 | -11 | 38 | -51 | 20 | 19 | 8.3 | -16 | -14 | 6.3 | 102 | 112 |
| 20 | 15 | e-0.61 | 44 | -15 | 9.3 | 19 | 3.1 | 44 | -7.5 | -16 | e98 | 89 |
| 21 | 6.7 | 8.7 | 46 | -15 | -6.1 | -2.6 | 7.0 | -28 | -11 | e45 | 84 | 103 |
| 22 | -15 | -4.2 | 27 | -28 | 7.8 | -7.3 | -32 | -26 | 21 | e65 | 113 | 114 |
| 23 | -9.8 | 12 | 5.2 | e-13 | 21 | 13 | -49 | -27 | 32 | 46 | 78 | 112 |
| 24 | 24 | e-5.7 | -21 | -10 | 10 | 17 | -40 | -29 | 36 | 49 | 65 | 109 |
| 25 | 16 | -23 | -26 | 12 | 1.0 | 20 | -20 | -3.3 | 23 | 25 | 62 | 72 |
| 26 | 17 | 14 | -6.5 | e-15 | 16 | 19 | -2.8 | e-44 | e21 | 17 | e74 | 68 |
| 27 | 11 | 16 | -15 | -51 | 14 | 17 | -30 | -29 | 23 | 36 | e74 | 152 |
| 28 | 11 | -5.6 | -15 | -25 | 40 | 23 | e-23 | -49 | 8.6 | 62 | 71 | --- |
| 29 | 3.0 | -4.2 | -7.7 | 11 | 51 | 8.9 | -6.6 | -53 | 14 | 63 | e68 | --- |
| 30 | 20 | 11 | -7.0 | -2.6 | --- | -4.6 | 12 | e-41 | e23 | 67 | 89 | --- |
| 31 | 18 | --- | -31 | 17 | --- | -8.0 | --- | -52 | --- | 45 | 104 | --- |
| TOTAL | 1,840.9 | 496.39 | 133.96 | -473.8 | 619.7 | 520.99 | -317.77 | -554.3 | 218.85 | 752.95 | 2,853 | --- |
| MEAN | 59.4 | 16.5 | 4.32 | -15.3 | 21.4 | 16.8 | -10.6 | -17.9 | 7.29 | 24.3 | 92.0 | --- |
| MAX | 224 | 55 | 46 | 17 | 51 | 59 | 18 | 15 | 36 | 67 | 173 | --- |
| MIN | -15 | -23 | -31 | -51 | -17 | -8.0 | -49 | -53 | -43 | -29 | 57 | --- |
| AC-FT | 3,650 | 985 | 266 | -940 | 1,230 | 1,030 | -630 | -1,100 | 434 | 1,490 | 5,660 | --- |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

| | 245 | 67.9 | 71.1 | 52.7 | 28.7 | 15.2 | -8.31 | -15.0 | 59.4 | 101 | 70.4 | 221 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MEAN | 245 | 67.9 | 71.1 | 52.7 | 28.7 | 15.2 | -8.31 | -15.0 | 59.4 | 101 | 70.4 | 221 |
| MAX | 756 | 242 | 438 | 290 | 69.7 | 86.0 | 37.4 | 79.5 | 186 | 218 | 133 | 676 |
| (WY) | (1996) | (1995) | (1995) | (1995) | (1998) | (1998) | (1997) | (1997) | (1999) | (1994) | (1994) | (1995) |
| MIN | 17.2 | -6.15 | -0.25 | -15.3 | -6.28 | -30.1 | -65.2 | -74.7 | -23.4 | 11.4 | 8.39 | 40.7 |
| (WY) | (2003) | (1998) | (2001) | (2004) | (1996) | (1999) | (1999) | (1993) | (2000) | (1993) | (2000) | (2000) |

SUMMARY STATISTICS

ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN
ANNUAL SEVEN-DAY MINIMUM
ANNUAL RUNOFF (AC-FT)
10 PERCENT EXCEEDS
50 PERCENT EXCEEDS
90 PERCENT EXCEEDS

WATER YEARS 1992 - 2004

70.8
126
28.3
995
-214
-127
51,310
177
26
-10

1996
2001
Oct 21, 1995
May 20, 2000
May 21, 1998

e Estimated

The period of record statistics were computed from complete water year's of record. See the annual mean and annual runoff (ac-ft) summary statistics section of the manuscript.