

## 02282700 MIDDLE RIVER CANAL AT S-36, NEAR FORT LAUDERDALE, FL

LOCATION.--Lat 26°10'22", long 80°10'47", in NW ¼ sec.20, T.49 S., R.42 E., Broward County, Hydrologic Unit 03090202, 20 ft from south bank, 120 ft upstream from salinity-control structure S-36, 1.5 mi east of bridge on U.S. Highway 441, and 5 mi west of Fort Lauderdale.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1955 to September 1961 (gage heights only), October 1961 to current year.

GAGE.--Electronic data logger with water-stage shaft encoder for upstream and downstream. Electronic data logger for gate opening. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to October 1, 1993, both upstream and downstream gage heights at datum, 0.21 ft lower. Discharge not affected by the change in datum. Electromagnetic velocity meter and deflection vane recorder at same site prior to October 1, 1985.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow is at times affected by tide and occasionally reversed. Flow is regulated by operation of salinity-control structure 36. Discharge computed from the relationship of gate opening versus head difference. Records of gage heights prior to October 1961 are available in files of the U.S. Geological Survey. Starting in the 2002 water year, the downstream record published is maximum and minimum stage for each calendar day. Prior to the 2002 water year, daily mean was published.

COOPERATION.--Gage height and S-36 gate-operation records provided by South Florida Water Management District upon request.

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 35 complete water years of discharge (1962-90, 1998-2003).

EXTREME UPSTREAM STAGES FOR PERIOD OF RECORD.--Maximum gage height, 7.59 ft (present datum) Dec. 27, 1958; minimum, -0.32 ft (present datum) June 28, 1958.

EXTREME UPSTREAM STAGES FOR CURRENT YEAR.--Maximum gage height, 5.13 ft Nov. 3, Feb. 1; minimum, 2.09 ft Apr. 9.

EXTREME DOWNSTREAM STAGES FOR CURRENT YEAR.--Maximum gage height, 3.80 ft Sept. 25; minimum, -0.82 ft June 30.

UPSTREAM  
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	3.62	4.84	4.84	4.76	4.28	4.22	4.32	4.02	4.03	4.29	4.21	4.08
2	3.97	4.89	4.81	4.76	4.01	4.25	4.26	3.99	4.01	4.30	3.37	3.55
3	4.58	3.94	4.77	4.74	4.49	4.27	4.21	4.05	3.97	4.32	3.73	3.56
4	4.77	3.55	4.80	4.74	4.53	4.29	4.17	4.22	3.97	4.36	3.71	3.63
5	4.87	3.57	4.78	4.73	4.51	4.30	4.12	4.20	3.96	4.34	3.76	3.86
6	4.92	3.59	4.37	4.72	4.52	4.33	4.06	4.17	3.90	4.34	4.04	3.40
7	4.95	3.49	4.62	4.69	4.51	4.35	4.04	4.13	3.87	4.42	4.01	3.34
8	4.96	3.89	4.70	4.66	4.42	4.33	4.03	4.09	3.82	4.52	3.95	3.56
9	4.97	3.65	4.73	4.66	4.34	4.31	3.89	4.03	3.82	4.55	4.07	4.03
10	4.97	3.59	4.79	4.66	4.29	4.30	4.00	3.99	3.83	4.56	4.38	3.52
11	4.96	3.70	4.85	4.64	4.23	4.27	3.97	3.93	3.80	4.58	4.53	3.42
12	4.97	3.64	4.85	4.62	4.18	4.26	4.08	3.89	3.77	4.62	4.66	3.70
13	4.96	3.68	4.84	4.61	4.10	4.25	4.35	3.85	3.72	4.65	4.30	3.71
14	4.97	4.41	4.94	4.60	4.06	4.23	4.58	3.82	3.65	4.47	3.59	3.63
15	4.95	4.62	5.08	4.59	4.04	4.25	4.54	3.79	3.62	4.28	4.22	3.63
16	4.92	4.74	5.07	4.58	4.01	4.27	4.50	3.77	3.69	4.21	4.39	3.63
17	4.91	4.81	4.84	4.55	4.08	4.28	4.46	3.74	3.77	4.16	4.50	3.61
18	4.92	4.86	4.35	4.58	4.27	4.24	4.43	3.72	3.83	4.14	4.62	3.63
19	4.90	4.92	4.66	4.64	4.31	4.22	4.38	3.71	3.86	4.21	4.65	3.80
20	4.87	4.95	4.74	4.62	4.35	4.15	4.35	3.69	3.91	4.35	4.65	4.19
21	4.85	4.94	4.77	4.62	4.40	4.15	4.32	3.66	3.95	4.34	4.69	4.64
22	4.86	4.93	4.79	4.63	4.42	4.13	4.27	3.77	4.03	4.33	4.74	4.72
23	4.85	4.92	4.81	4.62	4.42	4.07	4.23	3.87	4.04	4.27	4.78	3.98
24	4.81	4.93	4.84	4.63	4.42	4.04	4.20	3.94	4.01	4.21	4.72	3.42
25	4.78	4.93	4.84	4.66	3.91	4.04	4.15	3.99	4.01	4.18	4.39	3.58
26	4.80	4.92	4.83	4.70	3.24	4.16	4.12	4.02	4.08	4.12	4.42	3.93
27	4.81	4.90	4.81	4.73	3.71	4.31	4.11	4.03	4.13	4.07	4.32	3.89
28	4.81	4.90	4.79	4.71	4.07	4.40	4.06	4.05	4.18	4.05	4.31	3.63
29	4.77	4.88	4.78	4.65	4.14	4.44	4.03	4.04	4.22	4.04	4.62	3.46
30	4.41	4.85	4.78	4.59	---	4.40	4.04	4.04	4.25	4.05	4.77	3.38
31	4.74	---	4.78	4.39	---	4.36	---	4.03	---	4.12	4.81	---
TOTAL	148.40	132.43	148.25	144.08	122.26	131.87	126.27	122.24	117.70	133.45	133.91	112.11
MEAN	4.79	4.41	4.78	4.65	4.22	4.25	4.21	3.94	3.92	4.30	4.32	3.74
MAX	4.97	4.95	5.08	4.76	4.53	4.44	4.58	4.22	4.25	4.65	4.81	4.72
MIN	3.62	3.49	4.35	4.39	3.24	4.04	3.89	3.66	3.62	4.04	3.37	3.34



02282700 MIDDLE RIVER CANAL AT S-36, NEAR FORT LAUDERDALE, 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	224	0.00	0.00	0.00	e283	0.00	0.00	0.00	0.00	0.00	228	348
2	91	0.00	0.00	0.00	e305	0.00	0.00	0.00	0.00	0.00	570	254
3	0.00	386	0.00	0.00	e334	0.00	0.00	0.00	0.00	0.00	278	154
4	0.00	280	0.00	0.00	e338	0.00	0.00	0.00	0.00	0.00	272	190
5	0.00	234	54	0.00	e334	0.00	0.00	0.00	0.00	0.00	125	398
6	0.00	233	150	0.00	e335	0.00	0.00	0.00	0.00	1.3	146	514
7	0.00	224	0.00	0.00	e343	0.00	0.00	0.00	0.00	0.00	144	400
8	0.00	224	0.00	0.00	e345	0.00	0.00	0.00	0.00	0.00	146	271
9	0.00	484	0.00	0.00	e340	0.00	---	0.00	0.00	0.00	56	342
10	0.00	329	0.00	0.00	e336	0.00	0.00	0.00	0.00	0.00	0.00	402
11	0.00	225	0.00	0.00	e330	0.00	0.00	0.00	0.00	0.00	0.00	229
12	0.00	212	0.00	0.00	e329	0.00	0.00	0.00	0.00	0.60	0.00	146
13	0.00	142	0.00	0.00	e330	0.00	0.00	0.00	0.00	0.00	288	146
14	0.00	0.00	0.00	0.00	e322	0.00	0.00	0.00	0.00	0.00	200	141
15	0.00	0.00	0.00	0.00	e316	0.00	0.00	0.00	0.00	0.00	0.00	144
16	0.00	0.00	0.00	0.00	e314	0.00	0.00	0.00	0.00	0.00	0.00	147
17	0.00	0.00	101	0.00	e152	0.00	0.00	0.00	0.00	0.00	0.00	139
18	0.00	0.00	131	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63
20	0.00	0.00	0.00	e10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	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	355
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140	256
25	0.00	0.00	0.00	0.00	e783	0.00	0.00	0.00	0.00	0.00	208	180
26	0.00	0.00	0.00	0.00	e925	0.00	0.00	0.00	0.00	0.00	162	201
27	0.00	0.00	0.00	0.00	e218	0.00	0.00	0.00	0.00	0.00	159	230
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97	236
29	106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238
30	133	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	236
31	0.00	---	0.00	e1.8	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	554.00	2,973.00	436.00	11.80	7,312.00	0.00	---	0.00	0.00	1.90	3,219.00	6,492.00
MEAN	17.9	99.1	14.1	0.38	252	0.00	---	0.00	0.00	0.06	104	216
MAX	224	484	150	10	925	0.00	---	0.00	0.00	1.3	570	514
MIN	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00
AC-FT	1,100	5,900	865	23	14,500	0.00	---	0.00	0.00	3.8	6,380	12,880

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.9	70.9	34.1	30.3	35.0	31.5	30.8	40.4	101	87.1	98.7	104
MAX	277	332	161	123	252	246	220	249	306	226	308	336
(WY)	(1984)	(1995)	(1999)	(1979)	(2004)	(1983)	(1979)	(1979)	(1999)	(1980)	(1982)	(1983)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1962)	(1962)	(1962)	(1962)	(1962)	(1962)	(1963)	(1962)	(1963)	(1963)	(1963)	(1967)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

WATER YEARS 1962 - 2004

ANNUAL TOTAL	18,139.90	
ANNUAL MEAN	49.7	61.2
HIGHEST ANNUAL MEAN		197
LOWEST ANNUAL MEAN		1.44
HIGHEST DAILY MEAN	828	1,490
LOWEST DAILY MEAN	0.00	-402
ANNUAL SEVEN-DAY MINIMUM	0.00	-53
ANNUAL RUNOFF (AC-FT)	35,980	44,310
10 PERCENT EXCEEDS	198	205
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00

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.