

02286100 SOUTH NEW RIVER CANAL AT S-13, NEAR DAVIE, FL

LOCATION.--Lat 26°03'57", long 80°12'32", in SW ¼ sec.25, T.50 S., R.41 E., Broward County, Hydrologic Unit 03090202, 18 ft from north bank, 150 ft upstream from pump station S-13, 300 ft west of U.S. Highway 441, and 1.5 mi east of Davie.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--March 1957 to September 2004. Discontinued.

REVISED RECORDS.--WDR FL-87-2A, 1962-86 (maximum daily reverse flow); WDR FL-95-2A, 1994; WDR FL-99-2A, 1996-98.

GAGE.--Electronic data logger for upstream with water-stage shaft encoder for downstream. Prior to July 20, 1999, water-stage recorders. Prior to October 25, 2001, electronic data logger for gate recorder. Datum of gage is National Geodetic vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow is affected by tide and is occasionally reversed. Negative figures indicate reverse flow. Flow is regulated by pumpage and operation of gate at S-13. Flow is affected by regulation of control-structure 13A, 5 mi upstream, and by upstream withdrawals from the canal during the growing season and pumpage into the canal during high water. Discharge is computed from relation between head and gate-opening at S-13. The discharge published represents gate discharge computed by U.S. Geological Survey combined with pump discharge computed by South Florida Water Management District unless otherwise noted. The South Florida Water Management District determined that the previous rating used to compute pump discharge needed revision. The pump rating was revised during 1999. They revised their pump discharge for the water years 1995 through 1999. Prior to 1995 the accuracy of the pump discharge combined with our gate discharge can not be determined. Downstream stage is basically tidal, but at times is affected by gate operation and pumping at S-13. The downstream stage record published is the maximum and minimum elevation for each calendar day. Prior to October 1, 2001, the downstream stage record published is the maximum and minimum tide event for each calendar day. Prior to 1998 tidal stages were published under station number 02286101. Prior to September 30, 1984, deflection vane and prior to September 30, 1985, electromagnetic velocity meter at same site. During the 2003 water year auxiliary gage data from South Florida Water Management was used all year.

COOPERATION.--Gate-opening and pump records provided by South Florida Water Management District.

ANNUAL MEAN AND ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 37 complete water years of discharge (1958-86, 1988, 1990, 1999-2004).

EXTREME UPSTREAM STAGES FOR PERIOD OF RECORD.--Maximum gage height, 5.04 ft Oct. 15, 1999; minimum, -0.79 ft July 14, 1961.

EXTREME UPSTREAM STAGES FOR CURRENT YEAR.--Maximum gage height, 2.23 ft Feb. 1; minimum, 0.06 ft Sept. 3.

EXTREME DOWNSTREAM STAGES FOR PERIOD OF RECORD.--Maximum gage height, 4.33 ft Oct. 15, 1999; minimum, -1.97 ft Apr. 28, 1963.

EXTREME DOWNSTREAM STAGES FOR CURRENT YEAR.--Maximum gage height, 3.00 ft Sept. 25; minimum -1.22 ft Apr. 15.

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	---	---	1.27	1.22	1.60	1.60	1.73	1.61	1.49	1.70	1.62	1.44
2	---	---	1.25	1.17	1.36	1.29	1.74	1.71	1.46	1.73	1.49	0.71
3	---	---	1.27	1.22	1.31	1.23	1.74	1.69	1.43	1.64	0.85	0.23
4	---	---	1.25	1.18	1.31	1.28	1.74	1.65	1.42	1.65	0.59	0.27
5	---	---	1.29	1.17	1.31	1.30	1.72	1.62	1.43	1.64	0.83	0.57
6	---	---	1.25	1.22	1.37	1.27	1.70	1.59	1.46	1.58	0.53	0.58
7	---	---	1.26	1.22	1.34	1.23	1.69	1.61	1.52	1.64	0.79	0.72
8	---	---	1.32	1.25	1.29	1.26	1.69	1.61	1.58	1.67	1.32	1.26
9	---	---	1.23	1.27	1.29	1.30	1.67	1.62	1.60	1.73	1.43	1.24
10	---	---	1.23	1.28	1.29	1.32	1.68	1.62	1.66	1.57	1.56	1.21
11	---	---	1.24	1.30	1.32	1.30	1.70	1.62	1.52	1.64	1.56	1.27
12	---	---	1.24	1.28	1.29	1.31	1.65	1.62	1.67	1.68	1.52	1.29
13	---	1.72	1.26	1.27	1.26	1.31	1.61	1.63	1.72	1.72	0.97	1.29
14	---	1.60	1.27	1.30	1.24	1.32	1.60	1.59	1.71	1.70	1.22	1.32
15	---	1.45	1.25	1.30	1.28	1.33	1.63	1.65	1.56	1.63	1.21	1.30
16	---	1.36	1.24	1.30	1.30	1.37	---	1.62	1.65	1.58	1.43	1.26
17	---	1.34	1.25	1.30	1.39	1.35	1.63	1.63	1.67	1.62	1.59	1.31
18	---	1.35	1.24	1.33	1.36	1.34	1.62	1.61	1.69	1.62	1.61	1.34
19	---	1.33	1.27	1.30	1.39	1.36	1.63	1.62	1.69	1.60	1.60	1.39
20	---	1.37	1.30	1.31	1.43	1.64	1.63	1.58	1.69	1.58	1.60	1.42
21	---	1.38	1.30	1.31	1.43	1.60	1.63	1.60	1.65	1.56	1.59	1.50
22	---	1.36	1.33	1.32	1.43	1.60	1.68	1.66	1.66	1.60	1.60	1.65
23	---	1.35	1.34	1.31	1.39	1.61	1.70	1.71	1.59	1.61	1.59	1.62
24	---	1.48	1.34	1.30	1.36	1.62	1.74	1.72	1.64	1.60	1.62	1.22
25	---	1.36	1.30	1.30	1.51	1.64	1.63	1.67	1.61	1.59	1.54	0.25
26	---	1.29	1.28	1.30	1.83	1.72	1.72	1.64	1.62	1.61	1.59	0.57
27	---	1.30	1.31	1.26	1.61	1.69	1.76	1.61	1.68	1.58	1.57	0.66
28	---	1.29	1.34	1.19	1.52	1.67	1.56	1.59	1.64	1.38	1.60	1.40
29	---	1.29	1.32	1.17	1.65	1.75	1.70	1.56	1.72	1.61	1.59	1.46
30	---	1.28	1.26	1.19	---	1.60	1.74	1.54	1.58	1.60	1.59	1.58
31	---	---	1.23	1.23	---	1.68	---	1.51	---	1.58	1.60	---
TOTAL	---	---	39.53	39.07	40.46	44.89	---	50.31	48.01	50.24	42.80	33.33
MEAN	---	---	1.28	1.26	1.40	1.45	---	1.62	1.60	1.62	1.38	1.11
MAX	---	---	1.34	1.33	1.83	1.75	---	1.72	1.72	1.73	1.62	1.65
MIN	---	---	1.23	1.17	1.24	1.23	---	1.51	1.42	1.38	0.53	0.23

02286100 SOUTH NEW RIVER CANAL AT S-13, NEAR DAVIE, 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	208	150	107	212	373	226	0.00	10	0.00	0.00	323	171
2	139	127	94	206	280	234	0.00	0.00	0.00	0.00	539	171
3	113	194	90	196	250	236	0.00	49	0.00	34	446	18
4	124	120	86	201	189	218	0.00	58	0.00	68	333	81
5	152	151	72	215	216	193	0.00	50	0.00	35	301	179
6	153	145	93	189	264	225	0.00	145	0.00	56	304	247
7	143	125	67	199	304	205	0.00	162	0.00	34	207	238
8	201	187	65	176	286	197	0.00	126	0.00	0.00	206	369
9	181	236	94	329	288	193	0.00	121	0.00	0.00	164	320
10	168	195	94	217	276	195	0.00	117	0.00	44	159	281
11	165	157	89	189	269	190	0.00	112	68	0.00	151	218
12	156	90	87	195	274	189	48	112	0.00	0.00	145	210
13	155	185	109	191	267	182	215	50	0.00	0.00	207	207
14	147	174	118	186	258	179	197	62	32	53	144	196
15	147	183	105	175	251	198	96	73	17	36	189	209
16	152	186	110	183	253	192	84	43	0.00	58	108	211
17	139	185	154	182	223	166	65	83	0.00	45	99	180
18	133	157	196	188	210	156	78	49	0.00	53	106	182
19	132	169	220	211	182	142	25	54	0.00	123	98	172
20	123	151	210	190	211	105	41	65	0.00	140	95	165
21	118	142	185	170	218	132	38	53	32	164	103	146
22	102	136	179	197	228	134	36	0.00	93	147	96	178
23	59	143	178	198	224	118	0.00	0.00	91	121	122	202
24	85	71	204	188	221	64	36	0.00	31	108	184	229
25	86	123	212	186	179	0.00	0.00	0.00	47	112	244	109
26	71	108	211	190	180	0.00	0.00	0.00	38	92	206	169
27	90	117	201	186	216	44	0.00	0.00	34	122	157	253
28	94	119	190	197	202	0.00	54	0.00	0.00	120	139	232
29	196	113	201	188	184	0.00	0.00	0.00	0.00	117	152	345
30	154	111	204	99	---	67	30	0.00	45	91	144	424
31	144	---	198	147	---	0.00	---	0.00	---	159	117	---
TOTAL	4,230	4,450	4,423	5,976	6,976	4,380.00	1,043.00	1,594.00	528.00	2,132.00	5,988	6,312
MEAN	136	148	143	193	241	141	34.8	51.4	17.6	68.8	193	210
MAX	208	236	220	329	373	236	215	162	93	164	539	424
MIN	59	71	65	99	179	0.00	0.00	0.00	0.00	0.00	95	18
AC-FT	8,390	8,830	8,770	11,850	13,840	8,690	2,070	3,160	1,050	4,230	11,880	12,520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

	187	157	139	148	138	128	97.7	119	196	184	178	195
MEAN	187	157	139	148	138	128	97.7	119	196	184	178	195
MAX	394	459	472	465	328	419	371	339	404	371	443	510
(WY)	(1965)	(1970)	(1961)	(1961)	(1983)	(1970)	(1957)	(1969)	(1984)	(1958)	(1966)	(1960)
MIN	43.2	9.49	5.25	4.10	0.00	2.35	0.00	0.00	17.6	36.0	26.5	62.2
(WY)	(1990)	(1990)	(1989)	(1990)	(1990)	(1971)	(1965)	(1965)	(2004)	(1971)	(1971)	(1989)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1957 - 2004

ANNUAL TOTAL	55,513.00		48,032.00			
ANNUAL MEAN	152		131		161	
HIGHEST ANNUAL MEAN					320	
LOWEST ANNUAL MEAN					51.9	
HIGHEST DAILY MEAN	599	May 28	539	Aug 2	2,460	Dec 27, 1986
LOWEST DAILY MEAN	0.00	Jan 21	0.00	Mar 25	-128	Sep 6, 1965
ANNUAL SEVEN-DAY MINIMUM	20	Jan 26	0.00	Mar 31	-9.3	Mar 26, 1974
ANNUAL RUNOFF (AC-FT)	110,100		95,270		116,300	
10 PERCENT EXCEEDS	234		227		340	
50 PERCENT EXCEEDS	148		140		133	
90 PERCENT EXCEEDS	60		0.00		0.00	

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.