

02278600 WEST PALM BEACH CANAL BELOW S-5A-E, NEAR LOXAHATCHEE, FL

LOCATION.--Lat 26°41'05", long 80°21'50", in SE 1/4 sec.32, T.43 S., R.40 E., Palm Beach County, Hydrologic Unit 03090202, near left bank, 350 ft downstream from control structure 5A-E, and 6 mi west of Loxahatchee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--September 1955 to current year. Discontinued. Monthly discharge only for September 1955, published in WSP 1724. Records of gage heights prior to October 1961, are available in files of the U.S. Geological Survey.

GAGE.--South Florida Water Management District Moscad CR 10 RF data/telemetry system for West Palm Beach Canal east of Levee 8 Canal (east of S-5A-E structure and Levee 8 Canal). Datum of gage is National Geodetic Vertical Datum of 1929 (South Florida Water Management District bench mark). Satellite data collection platform with water-stage shaft encoder for Levee 8 Canal discontinued on November 19, 2001. Auxiliary water-stage recorder on West Palm Beach Canal 100 ft east from S-5A-E discontinued on January 14, 1999. Prior to October 1, 1981, datum of gage is 0.24 ft higher; from October 1, 1981 to June 22, 1994, datum of gage is -0.19 ft lower and from June 22, 1994 to October 1, 2001, datum of gage is .11 ft higher than present datum. The change in datum is based upon an adjustment to FCE 790 benchmark elevation surveyed by South Florida Water Management District.

REMARKS.--No estimated daily discharges. Records fair. Normal flow to east regulated at S-5A-E for irrigation and drainage. Flow diverted upstream from station through S-5A-S and by pumpage at S-5A. Flow materially affected by regulation of Cross Canal 1.5 mi upstream and gate structure S-352, 20 mi upstream. Negative figures indicate flow to the west. Discharge computed from relations between discharge, head, and gate openings at S-5A-E. Acoustic velocity meter installed May 1, 1991, along with satellite data collection platform. Acoustic velocity meter removed September 30, 1993. No discharge was computed using the acoustic velocity meter record. Starting in water year 2001, negative discharge is considered estimated, due to updated information provided to the U.S. Geological Survey, (USGS). Prior negative discharges are not marked estimated in the files or databases of USGS.

COOPERATION.--Gate-opening record provided by South Florida Water Management District.

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 46 complete water years of discharge (1956-89, 1991-92, 1994-98, 2000-04).

EXTREME STAGES FOR PERIOD OF RECORD.--Maximum gage height, 17.45 ft present datum, Oct. 16, 1999; minimum, 6.16 ft present datum, Sept. 9, 1965. See GAGE.

EXTREME STAGES FOR CURRENT YEAR.--Maximum gage height, 15.88 ft Sept. 26; minimum, 7.96 ft Oct. 20.

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	10.36	10.70	9.98	9.89	9.80	10.76	9.72	10.21	11.83	10.87	10.60	11.94
2	10.33	10.70	9.70	9.81	10.28	10.74	9.78	10.43	11.51	9.22	10.92	9.72
3	10.60	10.76	9.63	9.79	10.68	10.73	9.75	10.46	11.46	9.32	11.20	9.18
4	10.55	10.84	9.87	9.80	10.69	10.64	9.95	10.27	11.05	9.88	11.00	9.25
5	9.31	10.82	9.89	9.79	10.88	10.86	9.82	10.25	10.09	9.81	11.66	13.45
6	9.39	11.15	9.88	10.42	10.86	10.95	9.79	10.26	10.03	9.84	11.10	13.20
7	10.69	10.69	9.95	10.35	10.82	10.91	9.88	10.18	10.11	9.91	11.04	12.85
8	10.61	10.73	9.92	10.17	10.94	10.72	9.71	10.60	10.30	10.05	10.99	12.68
9	10.59	10.76	9.54	9.97	10.91	10.91	9.90	10.03	10.16	10.10	11.43	12.99
10	10.52	10.87	9.31	10.25	10.91	10.85	10.21	9.88	10.16	9.55	11.39	13.25
11	10.47	10.85	9.39	10.19	10.90	9.77	10.24	9.80	10.09	9.75	11.58	13.24
12	10.28	10.85	9.36	10.33	10.88	9.64	8.91	9.88	9.99	9.48	10.24	12.69
13	9.91	10.68	9.31	10.16	10.87	10.07	8.56	9.61	10.17	9.84	8.96	12.77
14	9.97	10.75	9.21	10.56	10.84	9.88	9.74	9.64	9.82	9.50	8.33	12.66
15	10.25	10.84	9.35	10.53	10.76	9.96	10.21	9.93	9.92	9.82	8.65	12.21
16	10.02	10.89	9.86	10.82	10.65	9.64	10.04	9.80	8.80	9.54	9.66	12.32
17	8.94	10.87	9.98	10.79	10.88	10.09	9.96	10.23	9.04	9.64	10.09	12.34
18	9.20	10.91	9.97	10.66	10.80	10.65	9.94	10.01	9.30	10.13	10.86	12.40
19	9.33	10.91	9.92	10.85	10.85	10.74	10.04	10.04	9.83	9.41	10.18	12.17
20	8.31	10.70	9.76	10.85	10.84	10.10	10.03	10.28	9.83	10.05	9.87	12.45
21	8.67	10.82	9.96	10.87	10.86	9.70	9.98	10.37	9.83	10.05	9.68	12.70
22	9.59	10.72	9.93	10.87	10.58	9.95	10.15	10.59	9.58	10.26	10.06	12.77
23	10.59	10.69	9.90	10.86	10.29	10.00	9.87	10.72	9.67	9.31	10.17	12.75
24	10.60	10.73	9.86	10.83	10.89	9.81	9.93	10.26	9.53	9.62	10.19	12.70
25	10.62	10.79	10.77	10.66	10.86	9.89	9.69	10.30	9.79	9.97	12.02	12.64
26	10.43	10.66	9.78	10.40	10.87	10.19	10.25	10.37	9.54	10.18	11.02	14.51
27	10.65	10.68	9.90	10.90	10.77	10.08	10.42	10.33	9.67	9.45	11.99	13.96
28	10.70	10.73	9.87	10.69	10.72	10.30	9.83	10.21	9.82	9.67	11.91	14.09
29	10.76	10.83	9.86	10.88	10.73	10.31	9.87	10.40	9.51	10.14	11.48	13.73
30	10.77	10.13	9.85	10.87	---	10.08	9.89	10.56	10.40	10.15	11.70	13.39
31	10.85	---	9.89	10.92	---	9.70	---	11.45	---	10.23	12.12	---
TOTAL	313.86	323.05	303.35	324.73	311.61	318.62	296.06	317.35	300.83	304.74	332.09	377.00
MEAN	10.12	10.77	9.79	10.48	10.75	10.28	9.87	10.24	10.03	9.83	10.71	12.57
MAX	10.85	11.15	10.77	10.92	10.94	10.95	10.42	11.45	11.83	10.87	12.12	14.51
MIN	8.31	10.13	9.21	9.79	9.80	9.64	8.56	9.61	8.80	9.22	8.33	9.18

02278600 WEST PALM BEACH CANAL BELOW S-5A-E, NEAR LOXAHATCHEE, 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	436	528	480	397	189	551	289	0.00	74	0.00	0.00	0.00
2	391	540	380	382	451	541	143	0.00	118	134	0.00	0.00
3	479	515	329	395	493	543	175	0.00	118	168	0.00	0.00
4	440	519	396	395	515	554	106	0.00	78	174	1.4	196
5	215	499	376	419	565	582	125	0.00	0.00	0.00	0.00	115
6	297	140	369	538	560	595	283	16	0.00	0.00	0.00	44
7	529	154	378	549	563	579	210	9.2	0.00	0.00	0.00	483
8	536	350	368	496	595	578	213	0.00	0.00	0.00	0.00	733
9	534	475	233	464	585	605	170	0.00	0.00	9.2	0.00	378
10	512	544	243	516	583	585	0.00	48	0.00	130	0.00	167
11	490	568	249	521	571	244	0.00	163	0.00	198	0.00	154
12	472	528	248	557	579	337	0.00	24	0.00	87	0.00	235
13	377	508	243	513	591	438	0.00	62	0.00	46	0.00	477
14	414	548	103	589	561	392	0.00	141	0.00	71	0.00	480
15	479	569	174	578	533	441	63	88	0.00	108	0.00	553
16	438	590	255	609	564	391	117	0.00	80	102	0.00	617
17	114	593	341	578	595	518	155	0.00	149	43	0.00	617
18	330	592	381	517	574	657	94	39	155	0.00	0.00	662
19	304	552	377	585	578	652	93	152	86	0.00	0.00	696
20	46	547	376	610	606	408	94	143	149	0.00	0.00	724
21	166	623	394	595	596	425	64	51	15	0.00	0.00	548
22	444	572	383	601	505	269	0.00	0.00	46	0.00	0.00	570
23	554	541	320	611	540	98	217	0.00	0.00	0.00	0.00	602
24	551	565	367	604	610	156	146	40	17	0.00	0.00	539
25	532	587	576	578	374	49	143	79	25	0.00	0.00	665
26	511	593	379	398	505	92	151	89	26	0.00	0.00	143
27	577	564	396	602	536	0.00	61	112	55	0.00	0.00	496
28	577	584	392	559	556	0.00	76	222	0.00	0.00	0.00	683
29	585	586	403	618	560	0.00	112	180	35	0.00	0.00	747
30	564	440	412	546	---	0.00	0.00	234	3.9	0.00	0.00	780
31	547	---	416	509	---	165	---	211	---	0.00	0.00	---
TOTAL	13,441	15,514	10,737	16,429	15,633	11,445.00	3,300.00	2,103.20	1,229.90	1,270.20	1.40	13,104.00
MEAN	434	517	346	530	539	369	110	67.8	41.0	41.0	0.05	437
MAX	585	623	576	618	610	657	289	234	155	198	1.4	780
MIN	46	140	103	382	189	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	26,660	30,770	21,300	32,590	31,010	22,700	6,550	4,170	2,440	2,520	2.8	25,990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2004, BY WATER YEAR (WY)

MEAN	153	157	151	195	168	188	193	137	111	185	181	183
MAX	623	650	697	679	700	795	661	626	662	1,106	790	653
(WY)	(1958)	(1961)	(1961)	(1960)	(1961)	(1983)	(1983)	(1960)	(1961)	(1992)	(1959)	(2002)
MIN	-21.3	-39.6	0.00	-26.6	0.00	-57.1	-113	-74.8	-254	-106	-1.77	-76.4
(WY)	(1984)	(1972)	(1972)	(1991)	(1957)	(1982)	(1999)	(1982)	(1982)	(1985)	(1956)	(1977)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1956 - 2004
ANNUAL TOTAL	137,351.00	104,207.70	
ANNUAL MEAN	376	285	171
HIGHEST ANNUAL MEAN			573
LOWEST ANNUAL MEAN			1.43
HIGHEST DAILY MEAN	623	Nov 21	780
LOWEST DAILY MEAN	0.00	Feb 24	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 23	0.00
ANNUAL RUNOFF (AC-FT)	272,400	206,700	123,900
10 PERCENT EXCEEDS	544	586	537
50 PERCENT EXCEEDS	400	246	51
90 PERCENT EXCEEDS	172	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.