

02278550 LEVEE 8 CANAL AT WEST PALM BEACH CANAL NEAR LOXAHATCHEE, FL

LOCATION.--Lat 26°41'05", long 80°21'35", in SE ¼ sec.32, T.43 S., R.40 E., Palm Beach County, Hydrologic Unit 03090202, 37 mi east of Belle Glade on U.S. Highway 441, 21 mi southeast of Canal Point on U.S. Highway 98 and 6 mi west of Loxahatchee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1957 to current year. Discontinued.

REVISED RECORDS.--WDR FL-84-2A, 1982, (revised maximum negative discharge).

GAGE.--Satellite data collection platform with water-stage shaft encoder for West Palm Beach Canal west of Levee 8 Canal, Moscad RF Data/Telemetry system operated by South Florida Water Management District for West Palm Beach Canal east of Levee 8 Canal, electronic data logger for Conservation area. Satellite data collection platform for Levee 8 discontinued on November 19, 2001. Datum of gage is National Geodetic Vertical Datum of 1929 (South Florida Water Management District benchmark). 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 -.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. Discontinued due to combination of flow not possible due to S-5A-E being discontinued. Flow regulated by operation of S-5A-E, S-5A-S, and S-5A-W, just downstream and pumpage at S-5A. Gate operation and pumpage occasionally reverses the flow (negative figures indicate flow reversed). Discharge is summation of flows at S-5A-E, S-5A-S, and S-5A-W. Discharge computed from relation between discharge, head, and gate openings. Records of gage heights prior to October 1961, are available in files of the U.S. Geological Survey, (USGS). Prior to September 30, 1967, deflection vane recorder at upstream side in center of span of bridge on U.S. Highway 441, 50 ft upstream from mouth and West Palm Beach Canal. Satellite data collection platform with acoustic velocity meter installed April 11, 1991, at same location of satellite data collection platform, removed October, 1993. Starting in the water year 2001, negative discharge from control structure S-5A-W and S-5A-E is considered estimated due to updated information, provided to USGS about the site. Prior negative discharges are not marked estimated in the files or data bases of USGS. Estimated discharge does not necessarily indicate negative discharges through these control structures.

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

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 44 complete water years of discharge (1958-89, 1991-92, 1994-98, 2000-04).

EXTREME STAGES FOR PERIOD OF RECORD.--Maximum gage height, 19.69 ft present datum, Oct. 18, 1995; minimum, 8.21 ft present datum, Mar. 17, 1969. See GAGE.

EXTREME STAGES FOR CURRENT YEAR.--Maximum gage height, 18.82 ft Sept. 27; minimum, 10.78 ft June 17.

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	15.48	14.91	14.03	14.59	15.05	13.31	13.73	13.46	12.10	12.04	12.47	14.04
2	14.77	15.09	14.53	14.68	14.94	13.22	14.21	13.44	12.15	11.76	12.62	14.14
3	15.17	14.76	14.53	14.55	14.22	13.27	14.02	13.72	12.14	11.98	12.99	14.34
4	13.77	13.69	14.43	14.20	13.71	13.33	13.98	13.94	11.99	11.86	12.96	15.18
5	13.56	14.82	14.48	14.19	13.85	13.19	14.37	13.92	11.71	12.02	13.25	15.10
6	13.72	16.16	14.95	13.84	13.91	13.33	13.78	13.76	11.70	12.04	13.61	17.03
7	13.85	16.47	14.58	14.32	13.27	13.37	13.85	13.55	11.82	12.01	13.60	17.34
8	13.84	16.26	14.59	14.10	13.15	13.40	13.81	13.58	12.05	12.00	13.34	17.28
9	13.80	16.01	14.92	13.89	13.23	13.31	13.93	13.45	12.14	11.80	12.99	15.72
10	13.48	15.67	15.35	14.28	13.36	13.27	14.28	13.24	12.24	11.73	12.99	16.07
11	13.18	15.32	15.62	14.36	13.20	13.72	14.09	12.96	12.33	12.04	13.31	15.64
12	12.80	15.36	15.52	14.30	13.25	14.29	14.26	13.15	12.40	11.69	13.74	15.09
13	13.03	15.85	15.24	14.30	13.69	13.57	14.13	12.93	12.40	12.00	13.72	15.23
14	13.35	15.75	15.43	14.28	13.31	13.88	14.87	12.74	12.35	11.91	13.73	15.15
15	13.39	15.38	16.00	14.43	13.07	13.72	14.53	12.89	12.53	11.88	13.78	14.69
16	13.07	15.16	15.58	14.19	13.23	13.66	14.09	12.91	12.61	11.85	13.76	14.15
17	13.92	15.25	15.75	14.27	13.30	13.83	13.58	12.89	11.84	11.87	13.27	13.72
18	14.89	15.07	15.69	14.22	13.19	13.57	13.72	13.02	12.28	11.88	12.94	13.64
19	14.61	14.75	15.49	14.59	13.22	13.91	13.75	12.72	12.07	12.07	12.98	13.54
20	15.19	15.46	15.47	14.41	13.29	13.76	13.80	12.77	11.80	12.06	13.56	13.93
21	15.69	15.17	15.17	13.97	13.27	13.53	13.64	12.80	12.23	12.17	13.61	15.02
22	15.00	14.38	15.00	13.95	13.08	13.95	13.69	12.82	12.81	12.64	13.65	16.10
23	14.01	13.96	15.37	13.90	13.21	14.60	13.42	12.83	12.59	12.42	13.68	15.94
24	13.96	14.31	15.37	14.23	13.23	14.00	13.47	12.77	12.41	12.00	13.74	15.26
25	13.76	15.21	14.39	13.92	13.77	14.13	13.27	12.62	12.46	11.87	13.61	14.91
26	13.32	15.44	14.92	13.89	14.35	14.41	13.38	12.51	12.25	11.84	13.77	16.81
27	13.94	14.15	15.03	13.92	13.88	14.45	13.64	11.87	11.83	11.77	13.83	18.43
28	14.46	13.77	15.06	14.06	13.31	14.57	13.62	11.68	11.82	11.88	13.88	18.20
29	14.60	13.73	14.84	13.97	13.35	14.75	12.82	11.68	11.91	12.43	13.77	18.22
30	14.46	13.68	14.64	13.72	---	14.73	13.34	12.16	11.99	12.48	13.75	18.27
31	14.50	---	14.65	13.80	---	14.33	---	11.94	---	12.54	13.80	---
TOTAL	436.57	450.99	466.62	439.32	392.89	428.36	415.07	400.72	364.95	372.53	416.70	468.18
MEAN	14.08	15.03	15.05	14.17	13.55	13.82	13.84	12.93	12.16	12.02	13.44	15.61
MAX	15.69	16.47	16.00	14.68	15.05	14.75	14.87	13.94	12.81	12.64	13.88	18.43
MIN	12.80	13.68	14.03	13.72	13.07	13.19	12.82	11.68	11.70	11.69	12.47	13.54

## 02278550 LEVEE 8 CANAL AT WEST PALM BEACH CANAL 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	413	457	397	177	522	244	0.00	-46	5.6	0.00	0.00
2	391	408	367	381	451	495	142	0.00	-28	49	0.00	0.00
3	479	552	329	361	493	477	175	0.00	-27	13	0.00	0.00
4	440	519	387	398	487	468	106	0.00	-6.0	-4.0	1.4	196
5	215	499	361	387	434	438	114	0.00	0.00	0.00	0.00	295
6	297	140	369	406	454	432	65	16	0.00	0.00	0.00	563
7	529	200	378	373	563	439	91	9.2	0.00	-1.6	0.00	1,020
8	536	350	368	420	512	486	72	0.00	0.00	0.00	0.00	1,060
9	534	475	233	340	447	416	80	0.00	0.00	9.2	0.00	840
10	512	544	243	310	452	483	0.00	48	0.00	6.0	0.00	672
11	490	568	249	301	443	177	0.00	45	0.00	-38	0.00	733
12	472	528	248	248	412	337	0.00	24	0.00	29	0.00	664
13	377	508	243	252	408	438	0.00	62	0.00	-51	0.00	477
14	414	548	103	162	484	392	0.00	31	0.00	15	0.00	480
15	479	569	174	-143	526	441	20	-4.0	0.00	-3.0	0.00	553
16	438	590	255	-108	484	391	107	0.00	80	-16	0.00	617
17	114	593	341	-176	527	466	133	0.00	-9.0	-9.0	0.00	617
18	330	592	381	-151	482	410	94	39	-8.0	0.00	0.00	623
19	304	552	377	-85	411	301	93	66	-4.0	0.00	0.00	584
20	46	547	376	160	395	211	94	75	49	0.00	0.00	578
21	166	623	394	112	452	325	64	35	-31	0.00	0.00	548
22	444	572	383	114	452	135	0.00	0.00	-46	0.00	0.00	570
23	554	541	320	113	408	98	101	0.00	0.00	0.00	0.00	736
24	459	466	367	164	428	156	94	39	-2.0	0.00	0.00	878
25	611	406	576	299	312	49	108	47	-9.0	0.00	0.00	994
26	564	472	379	261	505	-22	19	28	-5.0	0.00	0.00	662
27	542	564	396	271	536	0.00	-22	102	55	0.00	0.00	1,120
28	476	524	392	148	544	0.00	76	46	0.00	0.00	0.00	1,090
29	587	509	403	211	471	0.00	92	-33	8.0	0.00	0.00	1,170
30	423	436	412	288	---	0.00	0.00	-1.0	-5.5	0.00	0.00	1,200
31	398	---	416	330	---	165	---	-49	---	0.00	0.00	---
TOTAL	13,057	14,808	10,677	6,544	13,150	9,126.00	2,162.00	625.20	-34.50	4.20	1.40	19,540.00
MEAN	421	494	344	211	453	294	72.1	20.2	-1.15	9.14	0.05	651
MAX	611	623	576	420	563	522	244	102	80	49	1.4	1,200
MIN	46	140	103	-176	177	-22	-22	-49	-46	-51	0.00	0.00
AC-FT	25,900	29,370	21,180	12,980	26,080	18,100	4,290	1,240	-68	8.3	2.8	38,760

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	251	139	79.4	130	79.4	113	94.4	86.1	116	163	174	257
MAX	1,169	691	616	820	503	714	648	728	896	1,048	856	937
(WY)	(1996)	(1960)	(1995)	(1958)	(1983)	(1970)	(1970)	(1984)	(1968)	(1992)	(1986)	(1960)
MIN	-218	-838	-565	-139	-486	-193	-175	-208	-330	-286	-151	-509
(WY)	(1977)	(1992)	(1992)	(1976)	(1999)	(1977)	(1974)	(1992)	(1989)	(1982)	(1977)	(1981)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1958 - 2004

ANNUAL TOTAL	130,570.50	89,660.30	
ANNUAL MEAN	358	245	145
HIGHEST ANNUAL MEAN			453
LOWEST ANNUAL MEAN			-76.7
HIGHEST DAILY MEAN	623	Nov 21	1,200
LOWEST DAILY MEAN	-28	Feb 22	-176
ANNUAL SEVEN-DAY MINIMUM	0.00	May 23	-56
ANNUAL RUNOFF (AC-FT)	259,000		177,800
10 PERCENT EXCEEDS	526		552
50 PERCENT EXCEEDS	381		176
90 PERCENT EXCEEDS	165		0.00
			105,200
			448
			85
			-103
			3,130
			Oct 23, 1995
			Jan 17
			Apr 27, 1982
			Jan 15
			Nov 27, 1991

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.