

02278500 DIVERSIONS TO CONSERVATION AREA NO. 1 AT S-5A AND S-5A-S, NEAR LOXAHATCHEE, FL

LOCATION.--Lat 26°41'00", long 80°22'10", in SW ¼ sec.32, T.43 S., R.40 E., Palm Beach County, Hydrologic Unit 03090202, at pump station S-5A, 1.5 mi downstream from Cross Canal, and 6 mi west of Loxahatchee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1957 to current year. Records of gage heights prior to October 1961 are available in files of the U.S. Geological Survey.

GAGE.--Electronic data logger for the conservation area, satellite data collection platform with water-stage shaft encoder for West Palm Beach Canal. Moscad RF Data/Telemetry system operated by South Florida Water Management District for Levee 8 Canal. Satellite data collection platform for Levee 8 Canal discontinued on November 19, 2001. Datum of gage is National Geodetic Vertical Datum of 1929 (South Florida Water Management District benchmark). Prior to September 30, 1967, auxiliary deflection vane recorder 500 ft upstream and in Levee 8 Canal, and auxiliary water-stage recorder upstream from S-5A-W and downstream from S-5A-E. 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 0.11 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 is considered as that to the south into Conservation Area No. 1. Flow is controlled by S-5A pumpage, siphoning, gate operation of S-5A-S, and regulation of Cross Canal, 1.5 mi upstream, and gate structure S-352, 20 mi upstream. Negative figures indicate releases from gate S-5A-S when stage in the conservation area is higher than stage in Levee 8 Canal. The discharge is summation of S-5A pumpage, siphoning and S-5A-S gate flow. Stage determined from either of 2 sources, digital recorder at 02278500 or DCP stage from 02278520 station. Digital recorder discontinued on January 14, 1999. Starting October 1, 2001 the datum of all the gages is 0.11 ft higher. No corrections to previous years were deemed necessary. See GAGE.

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

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 47 complete water years of discharge (1958-2004).

EXTREME STAGES FOR PERIOD OF RECORD.--Maximum gage height, 14.18 ft present datum, Oct. 3, 1957; minimum, 6.78 ft present datum, Oct. 28, 1981. See GAGE.

EXTREME STAGES FOR CURRENT YEAR.--Maximum gage height, 12.04 ft Dec. 14; minimum, 8.61 ft Oct. 2. See GAGE.

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	8.92	11.01	10.93	10.66	9.82	10.48	11.00	10.99	10.27	10.69	10.24	9.57
2	9.01	10.97	11.15	10.57	10.19	10.77	11.14	10.95	10.39	10.53	10.34	9.20
3	9.32	10.79	11.19	10.63	9.18	10.87	11.28	10.67	10.18	10.88	9.40	9.27
4	11.07	9.95	11.04	10.65	10.40	10.75	11.35	10.75	9.87	10.33	9.43	9.24
5	10.20	9.63	11.08	10.43	10.61	10.47	11.26	10.59	9.85	10.71	9.35	9.21
6	10.59	9.57	11.36	10.57	10.54	10.51	11.02	10.71	9.94	10.84	9.64	9.80
7	11.02	9.51	11.50	10.79	10.91	10.77	10.92	10.49	9.90	10.88	9.38	10.20
8	11.20	11.32	11.16	10.75	10.65	10.82	10.93	10.80	9.84	10.65	9.31	9.59
9	11.09	10.34	10.85	10.58	10.30	10.50	10.97	10.94	10.25	10.26	9.99	9.38
10	10.98	10.30	10.97	10.63	10.14	10.68	11.24	10.92	9.86	10.36	9.95	9.20
11	10.93	9.95	11.00	10.77	10.95	10.52	11.16	10.80	10.13	10.53	9.82	9.27
12	10.98	10.28	11.02	10.70	11.01	10.51	10.36	10.59	10.06	10.82	10.06	9.28
13	10.93	10.34	11.04	10.62	10.98	10.78	9.85	10.59	10.04	11.14	9.30	9.37
14	10.67	10.82	11.34	10.78	10.99	10.77	11.26	10.21	9.86	11.09	9.29	9.74
15	10.60	10.98	9.20	10.35	11.23	10.71	11.36	10.06	10.34	11.11	9.63	9.59
16	10.61	10.91	9.56	10.06	11.18	10.82	10.76	10.32	10.18	10.38	10.04	9.67
17	10.63	10.92	10.87	10.00	10.62	10.83	10.62	10.44	10.07	9.65	9.92	10.19
18	10.81	11.23	10.60	10.45	10.81	10.13	10.46	10.69	9.69	10.48	9.71	10.31
19	10.82	11.51	9.56	11.02	11.06	10.17	10.60	10.63	10.94	10.29	9.78	10.08
20	10.78	11.27	9.58	10.86	10.89	10.53	10.28	10.42	10.78	9.92	9.34	10.06
21	10.61	10.92	9.88	10.50	11.01	10.80	10.47	10.73	11.02	10.63	9.79	9.85
22	10.66	10.60	10.21	10.41	11.09	10.54	10.51	10.88	10.52	10.06	9.79	9.24
23	10.65	10.68	10.30	10.47	10.94	10.73	10.69	10.99	9.90	10.04	9.32	9.19
24	10.56	10.74	10.44	10.66	10.19	11.01	11.04	10.58	9.73	10.60	9.58	9.21
25	10.85	10.89	10.51	10.92	9.67	10.94	11.15	9.62	10.16	10.02	9.94	9.18
26	10.93	10.93	10.57	10.99	9.64	11.02	11.04	9.73	10.29	10.22	9.31	9.30
27	10.92	11.31	10.61	10.80	9.12	11.10	10.92	10.47	10.58	10.05	9.30	9.68
28	10.86	11.40	10.55	10.55	9.62	11.16	10.67	10.44	10.51	10.06	9.37	9.64
29	10.89	11.25	10.43	9.92	10.43	11.11	10.48	10.19	10.52	9.93	9.70	9.34
30	10.87	11.21	10.28	10.60	---	10.91	10.66	10.37	10.51	10.19	9.74	9.29
31	10.92	---	10.42	10.37	---	10.92	---	10.35	---	10.70	9.83	---
TOTAL	329.88	321.53	329.20	328.06	304.17	332.63	325.45	326.91	306.18	324.04	299.59	286.14
MEAN	10.64	10.72	10.62	10.58	10.49	10.73	10.85	10.55	10.21	10.45	9.66	9.54
MAX	11.20	11.51	11.50	11.02	11.23	11.16	11.36	10.99	11.02	11.14	10.34	10.31
MIN	8.92	9.51	9.20	9.92	9.12	10.13	9.85	9.62	9.69	9.65	9.29	9.18

## 02278500 DIVERSIONS TO CONSERVATION AREA NO. 1 AT S-5A AND S-5A-S, 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	2,110	163	240	0.00	1,050	-29	234	0.00	150	0.00	586	1,060
2	1,040	146	-13	130	1,390	-46	-0.70	0.00	128	249	1,350	797
3	421	471	0.00	-34	500	-66	0.00	0.00	121	-155	2,980	320
4	0.00	635	-8.9	2.8	-28	-86	0.00	0.00	428	375	2,790	884
5	861	508	199	136	145	-144	-11	0.00	288	243	2,150	2,080
6	0.00	2,020	0.00	42	96	-163	32	0.00	794	234	1,480	4,460
7	0.00	1,180	0.00	-48	0.00	-140	152	273	1,520	46	1,130	5,310
8	0.00	0.00	5.2	-18	-83	-92	68	0.00	643	348	694	5,160
9	0.00	918	0.00	14	124	-189	99	0.00	598	561	643	4,930
10	0.00	651	0.00	72	96	-102	0.00	0.00	882	402	1,140	4,460
11	0.00	642	0.00	58	16	-67	0.00	-118	585	268	291	3,700
12	0.00	166	0.00	-50	82	0.00	672	208	774	419	2,380	2,540
13	0.00	0.00	0.00	0.40	93	0.00	614	68	547	208	1,770	1,460
14	0.00	57	218	-1.9	-78	0.00	0.00	509	464	247	507	982
15	0.00	0.00	2,010	53	-7.0	0.00	160	764	0.00	141	848	516
16	0.00	0.00	136	51	-80	0.00	65	858	670	1,100	1,320	277
17	0.00	0.00	658	-18	369	-52	-22	500	571	399	1,900	0.00
18	0.00	0.00	755	97	-92	209	0.00	274	224	514	1,670	667
19	0.00	0.00	462	83	38	192	11	193	-90	1,260	1,720	689
20	0.00	0.00	0.00	63	15	-197	274	201	646	506	1,550	984
21	0.00	0.00	0.00	-70	-144	-100	33	-16	508	471	649	2,930
22	0.00	0.00	0.00	48	-54	142	0.00	0.00	721	450	1,640	4,240
23	0.00	0.00	0.00	-29	-132	213	100	0.00	728	400	1,190	3,600
24	62	169	0.00	93	301	0.00	-52	383	367	0.00	519	2,770
25	79	85	0.00	86	996	0.00	-35	830	-34	559	1,650	2,110
26	53	144	0.00	47	2,040	-31	38	472	-31	432	2,490	3,440
27	218	0.00	0.00	4.1	1,930	0.00	153	0.10	0.00	521	1,880	5,480
28	177	-60	0.00	-129	29	0.00	103	-176	0.00	1,200	1,080	5,410
29	266	-77	0.00	72	-89	0.00	-20	75	55	548	471	5,120
30	141	-3.6	0.00	161	---	0.00	0.00	45	158	971	652	4,940
31	130	---	0.00	1,650	---	0.00	---	26	---	0.00	540	---
TOTAL	5,558.00	7,814.40	4,661.30	2,565.40	8,523.00	-748.00	2,667.30	5,369.10	12,415.00	12,917.00	41,660	81,316.00
MEAN	179	260	150	82.8	294	-24.1	88.9	173	414	417	1,344	2,711
MAX	2,110	2,020	2,010	1,650	2,040	213	672	858	1,520	1,260	2,980	5,480
MIN	0.00	-77	-13	-129	-144	-197	-52	-176	-90	-155	291	0.00
AC-FT	11,020	15,500	9,250	5,090	16,910	-1,480	5,290	10,650	24,630	25,620	82,630	161,300

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

MEAN	600	249	155	258	181	209	135	240	525	515	679	878
MAX	2,528	1,719	1,229	2,605	1,478	1,992	820	1,440	2,750	1,592	1,816	2,711
(WY)	(1996)	(1988)	(2003)	(1958)	(1983)	(1970)	(1991)	(1984)	(1968)	(1968)	(2003)	(2004)
MIN	-204	-870	-537	-460	-456	-144	-326	-184	-300	-136	-141	18.2
(WY)	(1981)	(1992)	(1992)	(1984)	(1987)	(1999)	(1995)	(1994)	(1989)	(1989)	(1984)	(1961)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1958 - 2004

ANNUAL TOTAL	187,878.90	184,718.50	
ANNUAL MEAN	515	505	386
HIGHEST ANNUAL MEAN			720
LOWEST ANNUAL MEAN			111
HIGHEST DAILY MEAN	3,260	Aug 12	5,480
LOWEST DAILY MEAN	-478	Mar 25	-197
ANNUAL SEVEN-DAY MINIMUM	-7.4	Apr 8	-131
ANNUAL RUNOFF (AC-FT)	372,700		366,400
10 PERCENT EXCEEDS	1,610		1,580
50 PERCENT EXCEEDS	192		93
90 PERCENT EXCEEDS	0.00		-31

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.