

## 02283500 NORTH NEW RIVER CANAL BELOW S-351, NEAR SOUTH BAY, FL

LOCATION.--Lat 26°41'50", long 80°42'50", in SW ¼ sec.35, T.43 S., R.36 E., Palm Beach County, Hydrologic Unit 03090202, 30 ft from west bank, 800 ft downstream from Hillsboro Canal, 1,600 ft downstream from gate structure S-351 and pump station 2 at Lake Okeechobee, and 2.5 mi north of South Bay.

DRAINAGE AREA.--Indeterminate.

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

REVISED RECORDS.--WDR FL-77-2A, 1974, 1975; WDR FL-92-2A, 1991; WDR FL-93-2A, 1977, 1985.

GAGE.--Satellite data collection platform with water-stage shaft encoder and acoustic doppler velocity meter. Prior to January 1, 2002, acoustic velocity meter at same site and datum. Prior to October 1, 1986, water-stage recorder at pump station 2 used for gage heights at this station. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to January 18, 1954, water-stage and deflection-meter recorder at site 1,600 ft downstream at same datum. January 19, 1965 to September 30, 1967, deflection-meter recorder at site 1,600 ft downstream. Satellite data collection platform collecting stage and velocity data was installed November 29, 1990.

REMARKS.--Records poor. Flow regulated by S-351 gate and pump station at Lake Okeechobee. Flow occasionally reversed during and after periods of heavy rainfall by pumpage into the canal from agricultural lands in the Everglades by pumping at structure 2 or by gravity flow through gates during periods of negative heads (negative figures indicate flow reversed). Discharge was the difference in flow between North New River Canal at S-2 and S-351 and Hillsboro Canal below S-351 October 1967 to June 9, 1987. Records of stage and discharge for water year 2002 are published in the data book for water year 2003.

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 42 complete water years of discharge (1958-95,1997-98, 2000, 2004).

EXTREME STAGES FOR PERIOD OF RECORD.--Maximum gage height, 14.09 ft Sept. 28, 1962; minimum, 6.98 ft observed Oct. 28, 1981.

EXTREME STAGES FOR CURRENT YEAR.--Maximum gage height, 13.12 ft Sept. 6; minimum, 8.75 ft Sept. 4.

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	11.16	11.09	11.38	10.79	11.28	10.42	11.45	---	11.95	10.74	11.24	10.12
2	10.03	10.88	11.28	10.72	10.92	10.76	11.42	11.15	11.78	10.82	11.50	9.36
3	10.03	11.13	---	10.67	10.40	10.89	11.39	10.66	11.44	11.02	12.22	9.20
4	11.16	10.72	11.24	10.67	10.63	10.79	11.40	10.63	10.87	10.94	12.01	9.22
5	10.84	10.32	11.26	10.66	10.79	10.60	11.38	10.68	10.18	10.96	11.00	10.73
6	10.57	---	11.08	10.75	10.80	10.68	11.44	10.85	10.44	10.97	10.82	12.46
7	10.93	10.35	---	10.91	10.67	10.98	11.34	10.98	11.09	10.96	10.71	10.81
8	11.02	10.88	---	10.77	10.43	10.55	11.43	11.34	10.61	10.95	10.55	10.37
9	10.96	11.10	11.20	10.70	10.33	10.25	11.51	11.38	10.70	11.04	10.70	10.38
10	10.83	10.79	11.22	10.72	10.48	10.31	11.48	---	10.21	11.17	10.43	10.22
11	10.79	10.58	---	10.87	11.22	10.25	11.25	11.30	10.35	11.22	9.81	10.03
12	10.81	10.35	---	10.73	11.10	10.49	10.90	11.20	10.74	11.38	10.67	9.81
13	10.79	10.33	---	10.63	11.08	11.08	10.77	11.20	10.64	11.47	10.53	9.95
14	10.65	10.97	---	11.14	10.92	10.99	11.07	11.43	10.46	11.44	9.90	10.12
15	10.95	10.99	---	11.17	11.06	10.97	11.06	11.84	10.30	---	10.62	9.68
16	10.71	10.97	10.57	11.17	10.95	10.75	10.69	11.70	---	11.65	10.80	9.69
17	10.95	11.11	---	11.31	10.85	10.65	10.57	11.69	10.61	11.53	10.67	9.97
18	10.98	11.60	---	11.27	10.72	10.72	10.52	11.75	10.17	---	10.52	10.37
19	10.76	11.28	10.25	11.32	10.92	10.74	10.62	11.70	11.05	11.73	10.64	10.44
20	10.74	10.98	---	11.09	11.12	10.94	10.70	11.69	11.22	10.62	10.08	10.17
21	10.66	10.77	---	10.64	11.05	10.92	10.72	11.71	11.15	10.60	10.0	10.85
22	11.00	10.60	10.21	10.61	11.02	10.93	10.74	11.73	11.03	10.50	10.73	12.43
23	10.89	---	---	10.81	10.94	11.51	11.16	11.75	10.77	10.50	10.32	10.86
24	10.99	10.75	10.38	11.38	10.63	11.46	11.49	11.69	10.53	10.84	10.12	9.89
25	---	10.69	10.41	11.42	10.40	11.26	11.39	11.68	---	10.83	11.09	9.87
26	---	11.35	10.52	11.37	11.43	11.30	11.32	11.61	10.54	---	12.08	11.26
27	11.02	11.50	10.59	11.15	10.86	11.18	11.23	11.62	10.72	10.88	11.46	12.03
28	11.10	11.47	10.53	10.66	9.83	11.18	---	11.83	10.72	11.46	10.46	11.50
29	10.99	11.29	10.40	10.50	10.30	11.18	---	11.89	10.72	11.14	9.94	---
30	11.02	11.49	10.44	10.94	---	11.23	10.87	11.90	10.73	11.30	10.89	---
31	11.08	---	10.77	11.33	---	11.38	---	11.93	---	10.65	10.58	---
TOTAL	---	---	---	338.87	313.13	337.34	---	---	---	---	333.09	---
MEAN	---	---	---	10.93	10.80	10.88	---	---	---	---	10.74	---
MAX	---	---	---	11.42	11.43	11.51	---	---	---	---	12.22	---
MIN	---	---	---	10.50	9.83	10.25	---	---	---	---	9.81	---

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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	-300	203	226	162	-409	11	700	e581	1,170	253	-93	57
2	-293	58	345	155	-463	-111	584	136	89	325	-75	214
3	-394	-27	e320	201	-473	-146	628	-21	-654	443	304	189
4	-202	-115	109	169	-190	-157	556	10	-276	433	225	-87
5	-213	-66	403	180	-55	-190	567	333	-28	429	176	82
6	-121	e117	132	381	-123	315	582	500	99	465	75	85
7	-7.5	-126	e179	253	89	202	590	520	59	577	59	-965
8	-53	294	e138	145	69	49	716	716	-130	614	12	-783
9	-65	20	634	203	-101	394	701	601	-34	731	210	-437
10	-70	-153	311	291	90	499	581	e623	-21	677	119	107
11	-42	18	e466	266	422	464	178	686	-188	688	-16	304
12	-133	-82	e344	214	230	615	-93	830	-183	615	331	276
13	-10	136	e171	204	92	490	-74	859	-208	628	2.6	156
14	-30	297	e69	620	-157	150	23	946	-99	676	-319	64
15	-82	215	e95	561	-5.0	159	197	964	-68	e572	19	-55
16	58	141	-270	608	141	-107	18	742	e-35	208	-53	-107
17	196	664	e140	657	-9.7	91	-41	865	-324	-163	325	93
18	121	608	e-40	283	71	197	53	980	-227	e-159	166	44
19	-55	300	-264	148	237	432	252	951	39	123	75	-26
20	-20	139	e-180	-77	525	273	278	1,020	225	49	-72	240
21	257	44	e-109	-97	366	290	299	1,090	180	80	0.72	659
22	283	9.1	-134	59	253	499	583	1,000	123	-124	273	656
23	148	e131	e-144	272	78	635	848	962	-178	-453	-107	147
24	378	82	-86	703	-119	394	714	1,100	-296	-433	-212	309
25	e230	201	-95	587	-2.5	416	600	1,210	e-196	-109	401	331
26	e196	599	-155	457	183	362	639	1,100	420	e-247	468	373
27	318	393	-156	15	11	394	359	1,350	336	-375	239	75
28	102	353	-61	-77	-101	577	e125	1,460	253	87	-84	226
29	84	382	-129	79	48	588	e217	1,530	-53	273	-170	e443
30	111	364	217	82	---	707	413	1,510	83	355	-35	e678
31	212	---	258	113	---	813	---	1,420	---	282	-327	---
TOTAL	603.5	5,199.1	2,734	7,817	696.8	9,305	11,793	26,574	-122	7,520	1,917.32	3,348
MEAN	19.5	173	88.2	252	24.0	300	393	857	-4.07	243	61.8	112
MAX	378	664	634	703	525	813	848	1,530	1,170	731	468	678
MIN	-394	-153	-270	-97	-473	-190	-93	-21	-654	-453	-327	-965
AC-FT	1,200	10,310	5,420	15,510	1,380	18,460	23,390	52,710	-242	14,920	3,800	6,640

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

MEAN	-36.1	110	165	149	212	284	487	357	-25.1	-107	-96.7	-239
MAX	609	776	685	751	1,141	1,525	1,405	1,393	1,073	819	401	900
(WY)	(1995)	(1974)	(1996)	(1996)	(1993)	(1985)	(1993)	(1992)	(1979)	(1992)	(1974)	(1992)
MIN	-779	-431	-309	-1,487	-283	-782	-265	-668	-987	-939	-1,086	-1,902
(WY)	(1961)	(1999)	(1995)	(1958)	(1958)	(1970)	(1958)	(1972)	(1982)	(1959)	(1981)	(1960)

## SUMMARY STATISTICS

ANNUAL TOTAL  
ANNUAL MEAN  
HIGHEST ANNUAL MEAN  
LOWEST ANNUAL MEAN  
HIGHEST DAILY MEAN  
LOWEST DAILY MEAN  
ANNUAL SEVEN-DAY MINIMUM  
ANNUAL RUNOFF (AC-FT)  
10 PERCENT EXCEEDS  
50 PERCENT EXCEEDS  
90 PERCENT EXCEEDS

## FOR 2004 WATER YEAR

77,385.72

211

1,530 May 29

-965 Sep 7

-285 Sep 4

153,500

668

156

-158

## WATER YEARS 1957 - 2004

113

501

-232

2,920

-3,460

-2,720

81,600

704

117

-421

1992

1982

Mar 13, 1985

Jun 25, 1982

Jun 18, 1959

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.