Water-Data Report 2013

02286400 MIAMI CANAL AT S-354, AND S-3, AT LAKE HARBOR, FL

Southern Florida Basin
Everglades Subbasin

LOCATION.--Lat 26°41′42″, long 80°48′25″ referenced to North American Datum of 1927, in SE ¼ sec.35, T.44 S., R.35 E., Palm Beach County, FL, Hydrologic Unit 03090202, 0.25 mi downstream of S-354 and pump station 3 at Lake Okeechobee, 0.05 mi south of U.S. Highway 27 on the Miami Canal in Lake Harbor.

DRAINAGE AREA.--Indeterminate.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Prior to October 1940, monthly discharge only, published in WSP 1304. October 1988 to current year. December 1939 to June 1943 (published as Miami Canal at Lake Harbor, October 1957 to September 1988, published as Miami Canal at HGS-3, and S-3, at Lake Harbor.

REVISED RECORDS.--WDR FL-93-2A, 1992, (revised annual and monthly statistic record).

GAGE.--Satellite data collection platform with water-stage shaft encoder and acoustic Doppler velocity meter. Datum of gage is National Geodetic Vertical Datum of 1929. December 1, 1939 to June 30, 1943, nonrecording gage at this site at same datum. October 1, 1957 to September 30, 1959, dual water-stage recorder at present site, at datum 0.05 ft lower and October 1, 1959 to February 7, 1962, at datum 0.22 ft lower. October 1, 1957 to September 30, 1968, two deflection vane recorders. From 1981water year to April 1, 1987, electromagnetic velocity meter and digital recorder. Electromagnetic velocity meter reinstalled May 11, 1988 and discontinued in the 1992 water year, September 11, 1991 to October 4, 2003, acoustic velocity meter. Satellite data collection platform installed September 11, 1991. Acoustic Doppler velocity meter installed May 23, 2002 and ran simultaneously with the acoustic velocity meter until October 4, 2003 when the acoustic velocity meter was removed. Prior to October 1, 1998, lake stage published under station number 02286399. Lake station discontinued September 30, 1998.

COOPERATION.--S-3 pump, syphon record and S-354 gate-operation record provided by South Florida Water Management District.

REMARKS.--Records quality is fair except for any days of estimated discharge which are considered poor. Flow is completely regulated by gates and the pump station at Lake Okeechobee. Discharge is the flow through acoustic velocity meter site located approximately 0.25 mi below the S-354 gate structure. Stage is also collected at the acoustic velocity meter site. Flow frequently reversed during and after periods of heavy rainfall by pumpage into the canal from agricultural lands in the Everglades, or by the operation of pump station 3 (negative figures indicate reverse flow). Discharge computed from relations between stage vs. area and index velocity vs. mean channel velocity.

EXTREMES FOR PERIOD OF RECORD.--
CANAL STAGES: Maximum gage height 14.92 ft, present datum, Mar. 21, 1960 and Oct. 2, 1965 ; minimum, 7.45 ft May 2, 2001.

EXTREMES FOR CURRENT YEAR.--
CANAL STAGES: Maximum gage height, 12.49 ft Feb. 14; minimum, 8.20 ft Apr. 15.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 02286400, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/02286400.2013.pdf

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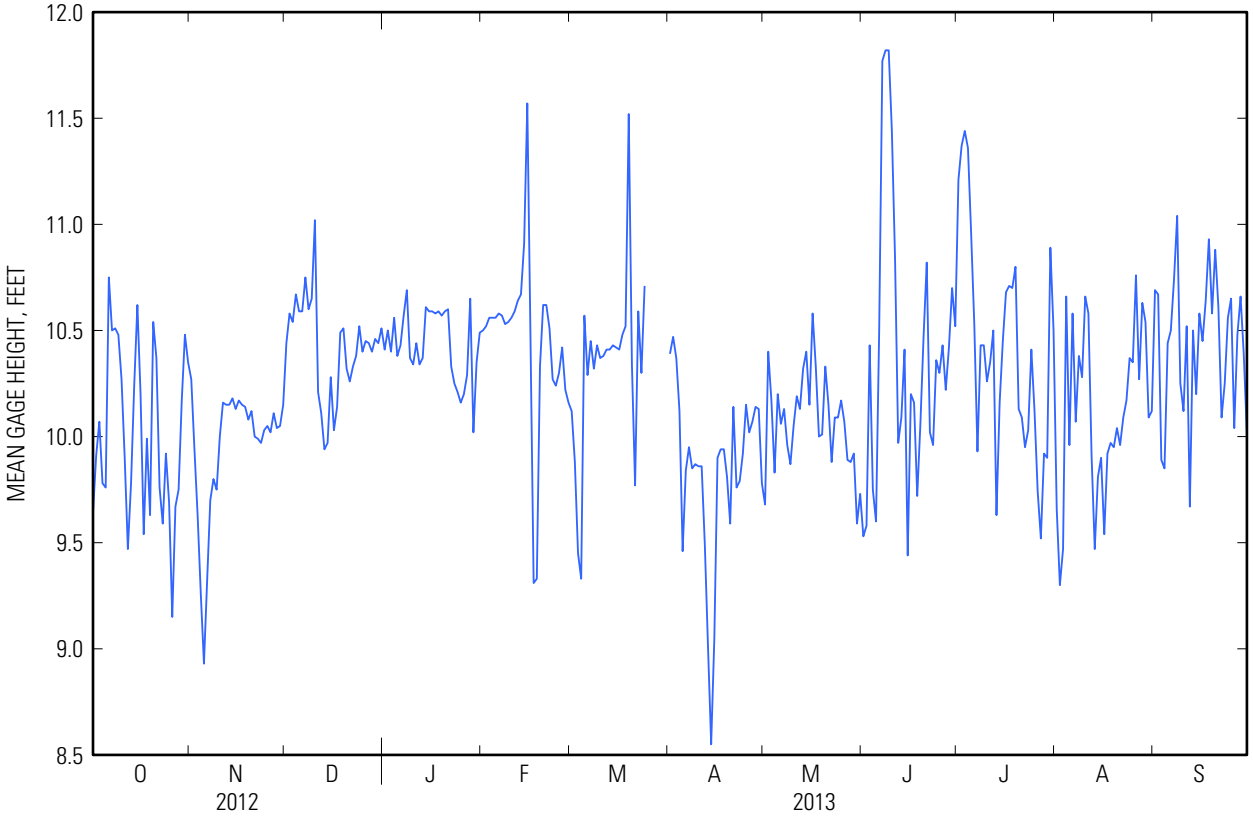
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9.64	10.27	10.44	10.41	10.50	10.12	10.39	9.68	9.53	11.21	9.66	10.69
2	9.91	9.94	10.58	10.50	10.52	9.88	10.47	10.40	9.58	11.37	9.30	10.67
3	10.07	9.63	10.54	10.40	10.56	9.45	10.37	10.17	10.43	11.44	9.47	9.89
4	9.78	9.26	10.67	10.56	10.56	9.33	10.12	9.83	9.75	11.36	10.66	9.85
5	9.76	8.93	10.59	10.38	10.56	10.57	9.46	10.20	9.60	10.96	9.96	10.44
6	10.75	9.32	10.59	10.43	10.58	10.29	9.84	10.06	10.50	10.53	10.58	10.50
7	10.50	9.70	10.75	10.57	10.57	10.45	9.95	10.13	11.77	9.93	10.07	10.74
8	10.51	9.80	10.60	10.69	10.53	10.32	9.85	9.96	11.82	10.43	10.38	11.04
9	10.48	9.75	10.65	10.37	10.54	10.43	9.87	9.87	11.82	10.43	10.28	10.25
10	10.27	10.00	11.02	10.34	10.56	10.37	9.86	10.05	11.44	10.26	10.66	10.12
11	9.90	10.16	10.21	10.44	10.59	10.38	9.86	10.19	10.84	10.35	10.58	10.52
12	9.47	10.15	10.11	10.34	10.64	10.41	9.49	10.13	9.97	10.50	9.91	9.67
13	9.78	10.15	9.94	10.37	10.67	10.41	9.01	10.32	10.09	9.63	9.47	10.50
14	10.24	10.18	9.97	10.61	10.91	10.43	8.55	10.40	10.41	10.16	9.81	10.20
15	10.62	10.13	10.28	10.59	11.57	10.42	9.05	10.15	9.44	10.45	9.90	10.58
16	10.20	10.17	10.03	10.59	10.47	10.41	9.90	10.58	10.20	10.68	9.54	10.45
17	9.54	10.15	10.14	10.58	9.31	10.48	9.94	10.33	10.16	10.71	9.92	10.64
18	9.99	10.14	10.49	10.59	9.33	10.52	9.94	10.0	9.72	10.70	9.97	10.93
19	9.63	10.08	10.51	10.57	10.33	11.52	9.81	10.01	10.06	10.80	9.95	10.58
20	10.54	10.12	10.32	10.59	10.62	10.34	9.59	10.33	10.47	10.13	10.04	10.88
21	10.37	10.0	10.26	10.60	10.62	9.77	10.14	10.15	10.82	10.09	9.96	10.61
22	9.76	9.99	10.33	10.33	10.51	10.59	9.76	9.88	10.02	9.95	10.09	10.09
23	9.59	9.97	10.38	10.25	10.27	10.30	9.79	10.09	9.96	10.03	10.17	10.25
24	9.92	10.03	10.52	10.21	10.24	10.71	9.92	10.09	10.36	10.41	10.37	10.56
25	9.69	10.05	10.40	10.16	10.30	---	10.15	10.17	10.30	10.12	10.35	10.65
26	9.15	10.02	10.45	10.20	10.42	---	10.02	10.07	10.43	9.74	10.76	10.04
27	9.67	10.11	10.44	10.29	10.22	---	10.07	9.89	10.22	9.52	10.27	10.48
28	9.75	10.04	10.40	10.65	10.16	---	10.14	9.88	10.42	9.92	10.63	10.66
29	10.17	10.05	10.46	10.02	---	---	10.13	9.92	10.70	9.90	10.54	10.39
30	10.48	10.15	10.44	10.35	---	---	9.78	9.59	10.52	10.89	10.09	10.01
31	10.35	---	10.51	10.49	---	---	---	9.73	---	10.50	10.12	---
Total	310.48	298.44	323.02	323.47	292.66	---	295.22	312.25	311.35	323.10	313.46	312.88
Mean	10.02	9.95	10.42	10.43	10.45	---	9.84	10.07	10.38	10.42	10.11	10.43
Max	10.75	10.27	11.02	10.69	11.57	---	10.47	10.58	11.82	11.44	10.76	11.04
Min	9.15	8.93	9.94	10.02	9.31	---	8.55	9.59	9.44	9.52	9.30	9.67

02286400 MIAMI CANAL AT S-354, AND S-3, AT LAKE HARBOR, FL—Continued



02286400 MIAMI CANAL AT S-354, AND S-3, AT LAKE HARBOR, FL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	17	-6.1	881	163	492	-15	213	-0.06	-3.8	14	6.9	6.2
2	6.8	-4.5	707	116	246	-27	249	12	4.7	19	-6.5	3.0
3	19	33	677	185	183	-19	65	-12	12	24	-2.5	4.8
4	-32	-1.9	505	139	534	230	-7.2	-0.74	4.6	11	4.6	5.3
5	-11	-3.4	253	33	601	305	-4.5	-5.2	13	3.3	16	-25
6	-17	324	249	134	606	258	35	-11	-22	12	-8.0	-9.4
7	-17	-7.4	211	49	537	92	-8.3	0.18	14	-8.4	12	-2.7
8	-12	194	-10	5.9	525	249	75	143	-13	-7.1	1.5	1.8
9	-24	62	-4.9	8.1	315	270	203	214	-22	-11	-0.12	-3.4
10	9.4	252	-1.3	59	189	146	206	452	-55	-3.4	7.5	8.3
11	8.7	647	-107	320	568	276	117	266	-31	13	-17	2.6
12	4.4	1,060	-25	48	698	143	59	258	-5.1	18	-12	15
13	32	1,020	-5.8	110	496	315	1.2	57	7.4	4.9	9.4	-14
14	28	1,000	4.5	450	98	387	-30	0.82	-1.1	27	153	-4.9
15	-12	960	0.38	480	9.3	373	160	149	1.3	0.12	156	3.6
16	-5.1	1,010	-0.15	377	14	429	-2.4	559	-15	-1.0	107	19
17	-5.7	877	4.2	458	-13	409	8.1	338	0.37	5.2	82	23
18	10	965	-8.8	454	8.9	400	4.8	120	34	7.7	52	4.3
19	2.8	528	-9.4	546	0.41	-45	-15	171	-2.1	5.5	59	-22
20	1.8	219	-9.9	668	-12	3.9	5.0	552	-6.1	-12	301	2.7
21	-4.2	232	-12	1,060	-45	-16	-1.6	553	7.6	16	197	-16
22	24	110	156	795	4.5	-9.6	-5.0	277	-0.70	-1.5	566	13
23	13	245	105	526	-13	14	-0.89	-16	1.7	-1.9	331	19
24	8.3	248	46	449	-6.3	13	180	-21	15	16	106	21
25	67	244	52	538	-1.7	e0.00	434	5.3	-4.1	2.3	-0.78	31
26	-1.3	307	173	514	-16	e-25	252	1.4	6.5	13	-9.4	1.3
27	3.3	444	0.65	517	-1.6	e85	455	110	-43	-5.6	-1.4	21
28	6.5	807	93	681	-16	e138	420	138	9.4	-2.3	-9.7	23
29	-2.0	718	55	382	---	e85	173	42	15	-146	-44	17
30	-7.5	807	180	493	---	e138	-6.7	9.3	1.4	-169	17	8.3
31	-20	---	109	432	---	e191	---	4.0	---	-3.0	20	---
Total	91.2	13,289.7	4,267.48	11,190.0	6,000.51	4,793.30	3,233.51	4,366.00	-76.03	-160.18	2,093.50	156.8
Mean	2.94	443	138	361	214	155	108	141	-2.53	-5.17	67.5	5.23
Max	67	1,060	881	1,060	698	429	455	559	34	27	566	31
Min	-32	-7.4	-107	5.9	-45	-45	-30	-21	-55	-169	-44	-25
Ac-ft	181	26,360	8,460	22,200	11,900	9,510	6,410	8,660	-151	-318	4,150	311

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	-45.5	53.7	94.3	121	184	238	433	349	25.0	-48.0	-76.7	-134
Max	609	443	411	634	1,439	1,415	1,480	1,065	1,157	936	302	1,191
(WY)	(1989)	(2013)	(2005)	(1993)	(1993)	(1966)	(1993)	(2000)	(1998)	(1992)	(1993)	(1992)
Min	-1,167	-429	-330	-849	-373	-1,185	-316	-296	-897	-769	-899	-1,614
(WY)	(1961)	(1961)	(1958)	(1958)	(1983)	(1970)	(1958)	(1972)	(1968)	(1985)	(1981)	(1960)

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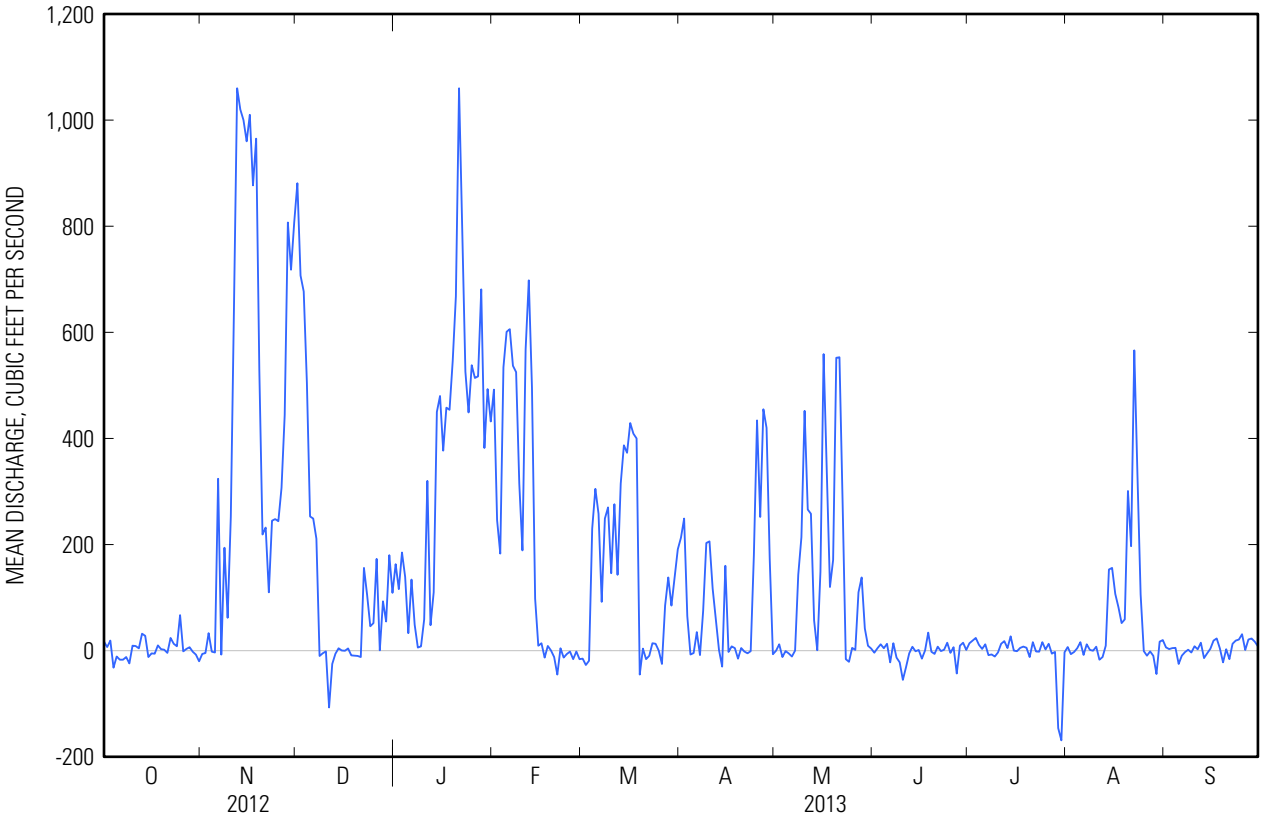
SUMMARY STATISTICS

	Water Year 2013		Water Years 1958 - 2013	
Annual total	49,245.79			
Annual mean	135		86.1	
Highest annual mean			487	1993
Lowest annual mean			-290	1960
Highest daily mean	1,060	Nov 12	2,280	Mar 24, 1966
Lowest daily mean	-169	Jul 30	-2,790	Mar 26, 1970
Annual seven-day minimum	-46	Jul 27	-2,170	Jun 18, 1959
Annual runoff (ac-ft)	97,680		62,370	
10 percent exceeds	500		547	
50 percent exceeds	13		14	
90 percent exceeds	-13		-292