

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291524 SPRING CREEK HEADWATER NEAR BONITA SPRINGS, FL

LOCATION.--Lat 26°21'42", long 81°47'27", in SE ¼ sec.22, T.47 S., R.25 E., Lee County, Hydrologic Unit 03090204, at culvert on State Road 887 (old U.S. Highway 41), 1.8 mi north of Bonita Springs, 4.7 mi upstream from mouth and 5.6 mi south of Estero.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1987 to current year.

GAGE.--Satellite data collection platform with water-stage shaft encoder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida State Road Department Bench Mark).

REMARKS.--Records are fair, except for estimated daily values, which are poor. Days of no flow occurred during water years 1989, 1990, 1997.

ANNUAL MEAN and ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 16 complete water years of discharge (1989-2004).

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	8.60	6.81	6.70	6.70	7.24	7.92	7.34	7.65	6.99	7.16	8.19	7.64
2	8.21	6.81	---	6.69	7.24	7.88	7.30	7.65	6.97	7.15	---	7.76
3	8.00	6.83	---	6.69	7.34	7.86	7.27	7.66	6.99	7.14	8.29	7.45
4	7.85	6.83	6.69	6.69	7.51	7.84	7.26	7.66	7.01	---	8.32	7.42
5	7.74	6.84	---	6.68	7.50	7.82	7.24	7.61	7.01	7.15	8.24	7.56
6	7.64	6.91	6.68	6.69	7.48	7.80	7.22	7.57	6.98	7.23	8.28	7.55
7	7.53	6.93	6.69	6.69	7.48	7.78	7.19	7.53	7.01	7.24	8.20	7.49
8	7.45	6.91	---	6.69	7.44	7.77	7.18	7.50	7.08	7.23	---	7.42
9	7.37	6.95	6.69	6.68	7.42	7.75	7.19	7.47	7.09	7.20	8.02	7.37
10	7.30	6.93	6.70	6.68	7.40	7.73	7.20	7.44	7.08	7.17	---	7.25
11	7.25	6.90	6.70	6.68	7.38	7.71	7.21	7.42	7.08	7.20	---	7.21
12	7.21	6.87	6.70	6.68	7.40	7.70	7.29	7.38	7.09	---	7.40	7.13
13	7.17	6.84	6.69	6.68	7.40	7.68	7.40	7.35	7.08	---	7.85	7.08
14	7.14	6.83	6.70	6.68	7.39	7.67	7.44	7.31	7.24	7.34	9.77	7.05
15	7.11	6.81	6.70	6.66	7.56	7.66	7.41	7.28	7.31	7.32	8.86	7.02
16	7.07	6.80	6.72	6.67	7.63	7.67	7.36	7.30	7.36	7.29	8.22	7.00
17	7.04	6.79	6.87	6.66	7.62	7.66	7.33	7.26	7.35	7.32	9.10	6.98
18	---	6.78	6.90	6.74	7.59	7.64	7.31	7.24	7.33	7.36	8.91	6.95
19	---	6.79	6.86	6.83	7.59	7.61	7.28	7.20	7.30	7.48	8.18	6.93
20	6.98	6.79	6.84	6.83	7.57	7.59	7.24	7.17	7.26	7.91	7.79	6.92
21	6.97	6.78	6.81	6.81	---	7.59	7.22	---	7.23	8.03	7.72	6.90
22	6.95	6.76	6.80	6.79	7.54	7.59	---	7.14	7.20	7.93	8.40	6.90
23	6.94	6.75	6.78	6.78	7.52	7.55	---	---	7.17	7.87	7.91	6.88
24	6.92	6.74	6.77	6.76	7.50	7.53	7.18	---	7.16	7.82	7.59	6.87
25	6.91	6.74	6.76	6.75	7.83	7.49	7.20	7.10	7.15	7.93	7.44	6.86
26	6.88	6.74	6.75	6.75	8.39	7.48	7.18	7.08	7.14	8.05	7.33	6.88
27	6.87	---	6.74	6.75	8.13	7.47	7.17	7.06	7.14	7.96	7.24	6.95
28	6.86	6.73	6.73	6.75	8.03	7.46	7.15	7.04	7.20	8.07	7.19	6.91
29	6.85	---	6.72	6.83	7.98	7.44	7.13	7.03	7.20	8.37	7.13	6.88
30	6.84	6.70	6.71	7.04	---	7.42	7.28	7.01	7.19	8.19	7.12	6.86
31	6.82	---	6.70	7.21	---	7.38	---	7.01	---	8.11	7.24	---
TOTAL	---	---	---	209.21	---	237.14	---	---	214.39	---	---	214.07
MEAN	---	---	---	6.75	---	7.65	---	---	7.15	---	---	7.14
MAX	---	---	---	7.21	---	7.92	---	---	7.36	---	---	7.76
MIN	---	---	---	6.66	---	7.38	---	---	6.97	---	---	6.86

02291524 SPRING CREEK HEADWATER NEAR BONITA SPRINGS, 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	59	4.2	2.7	2.5	2.3	9.2	2.8	5.7	0.80	1.3	16	18
2	42	4.1	e2.7	2.4	2.0	8.7	2.4	5.2	0.72	1.2	e20	20
3	33	4.3	e2.7	2.4	2.6	8.5	2.2	5.0	0.83	1.1	18	15
4	27	4.4	2.7	2.4	4.1	8.3	2.1	5.0	1.0	e1.0	19	15
5	23	4.5	e2.7	2.3	3.9	8.0	1.9	4.6	0.98	1.2	17	17
6	20	5.5	2.6	2.4	3.7	7.8	1.7	4.2	0.80	1.8	18	16
7	17	5.8	2.6	2.4	3.7	7.6	1.5	3.9	0.95	1.8	17	16
8	15	5.5	e2.6	2.4	3.3	7.4	1.5	3.6	1.4	1.7	e15	15
9	14	6.1	2.6	2.4	3.1	7.1	1.5	3.4	1.5	1.5	14	14
10	12	5.8	2.7	2.3	2.9	6.9	1.6	3.2	1.3	1.3	e13	12
11	11	5.3	2.6	2.3	2.8	6.7	1.6	3.0	1.3	1.6	e13	12
12	10	4.9	2.7	2.2	3.0	6.6	2.4	2.7	1.3	e2.4	14	11
13	9.7	4.6	2.6	2.2	2.9	6.4	3.3	2.5	1.3	e2.7	35	10
14	9.1	4.3	2.7	2.2	2.9	6.2	3.7	2.2	2.4	2.7	92	9.6
15	8.7	4.1	2.7	2.1	4.5	6.1	3.4	2.1	3.0	2.5	51	9.2
16	8.0	4.0	2.9	2.1	5.3	6.2	3.0	2.3	3.4	2.2	32	9.0
17	7.5	3.8	4.6	2.0	5.1	6.0	2.7	2.0	3.3	2.5	56	8.7
18	e7.2	3.8	5.1	2.8	4.9	5.8	2.5	1.9	3.1	2.9	50	8.3
19	e6.7	3.8	4.5	3.7	4.8	5.6	2.2	1.6	2.8	4.1	28	8.1
20	6.6	3.9	4.2	3.6	4.6	5.3	1.9	1.5	2.4	9.2	20	7.9
21	6.3	3.8	3.8	3.4	e4.7	5.3	1.7	e1.4	2.1	11	19	7.7
22	6.1	3.5	3.7	3.2	4.3	5.3	e1.6	1.3	1.8	9.8	34	7.6
23	6.0	3.4	3.5	3.1	4.1	4.9	e1.5	e1.3	1.5	9.2	23	7.5
24	5.7	3.3	3.3	3.0	4.0	4.6	1.4	e1.3	1.4	8.7	17	7.3
25	5.5	3.2	3.2	2.8	8.1	4.3	1.6	1.2	1.3	10	15	7.1
26	5.1	3.2	3.1	2.7	17	4.1	1.5	1.1	1.2	12	13	7.4
27	4.9	e3.1	2.9	2.8	12	4.0	1.4	1.0	1.2	11	12	8.3
28	4.8	3.1	2.8	2.8	11	3.9	1.2	0.95	1.6	13	12	7.8
29	4.7	e2.9	2.8	3.3	9.9	3.7	1.1	0.89	1.5	19	11	7.4
30	4.5	2.8	2.7	3.1	---	3.5	2.3	0.82	1.4	15	11	7.1
31	4.3	---	2.6	2.5	---	3.1	---	0.82	---	14	12	---
TOTAL	404.4	125.0	95.6	81.8	147.5	187.1	61.2	77.68	49.58	179.4	737	327.0
MEAN	13.0	4.17	3.08	2.64	5.09	6.04	2.04	2.51	1.65	5.79	23.8	10.9
MAX	59	6.1	5.1	3.7	17	9.2	3.7	5.7	3.4	19	92	20
MIN	4.3	2.8	2.6	2.0	2.0	3.1	1.1	0.82	0.72	1.0	11	7.1
AC-FT	802	248	190	162	293	371	121	154	98	356	1,460	649

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	16.6	7.06	4.44	3.77	3.64	2.95	2.01	1.39	6.66	14.3	19.5	22.2						
MAX	95.9	26.5	14.1	9.45	15.3	11.8	5.56	6.41	28.9	42.0	46.1	52.6						
(WY)	(1996)	(1999)	(1998)	(1995)	(1998)	(1998)	(1993)	(1991)	(1992)	(1999)	(1995)	(1995)						
MIN	4.05	1.63	1.02	0.71	0.28	0.11	0.11	0.18	0.43	0.90	5.16	9.20						
(WY)	(1990)	(1990)	(1993)	(1997)	(1997)	(1997)	(1990)	(1989)	(1988)	(1988)	(1989)	(1996)						

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	3,069.0	2,473.26	
ANNUAL MEAN	8.41	6.76	8.88
HIGHEST ANNUAL MEAN			17.2
LOWEST ANNUAL MEAN			3.18
HIGHEST DAILY MEAN	105	Sep 30	92
LOWEST DAILY MEAN	1.7	Apr 24	0.72
ANNUAL SEVEN-DAY MINIMUM	1.9	Apr 19	0.83
MAXIMUM PEAK FLOW			102
MAXIMUM PEAK STAGE			9.92
INSTANTANEOUS LOW FLOW			0.66
ANNUAL RUNOFF (AC-FT)	6,090	4,910	6,430
10 PERCENT EXCEEDS	18	15	19
50 PERCENT EXCEEDS	4.9	3.8	3.8
90 PERCENT EXCEEDS	2.6	1.4	0.70

e Estimated

** Many days during water years 1989, 1990, 1997.

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.