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SOUTH FLORIDA RESEARCH CENTER

Report T-611

Annual Hydrology Review: Everglades National Park and Big Cypress National Preserve Water Year 1978

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ANNUAL HYDROLOGY REVIEW:

EVERGLADES NATIONAL PARK

and

BIG CYPRESS NATIONAL PRESERVE

WATER YEAR 1978

Report T-611

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

This is the third in a continuing series of annual hydrology reviews which are designed to provide insight into the hydrologic events monitored in South Florida National Park Service areas. Each year a great effort is made to obtain these hydrological data and this review is an attempt to put these data in perspective throughout a water year (October through September). Previous annual reviews were based on a calendar year, however, in order to be consistent with other water resource organizations the format has been changed to summarize hydrologic conditions throughout a water year. This review should serve as a ready reference describing the hydrologic conditions which prevailed in both Everglades National Park and the Big Cypress National Preserve during Water Year 78. It is the intent of this review to provide an easily retrievable source of Everglades National Park/Big Cypress National Preserve hydrology data, thus providing greater insight into the hydrologic conditions within the park and the preserve.

INTRODUCTION

The dynamic equilibrium of the hydrologic parameters and the response of the water budget directly affects all ecological aspects of Everglades National Park. An intensive water resources program for water management is mandatory if the quality of the Everglades is to be preserved. The initial thrust for such a program depends on a complete understanding of the hydrologic balance in the park.

Throughout the years both the National Park Service and the U.S. Geological Survey have documented hydrologic inputs for South Florida and the Everglades. Some monitoring stations have periods of record exceeding 30 years of tabulation. The program has developed to such an extent that presently there are over 150 hydrologic monitoring stations (continuous and discontinuous) throughout Everglades National Park and the Big Cypress National Preserve. These records, then, are the key to the past which enable researchers to assess present hydrologic conditions and formulate conclusions regarding the nature of the hydrologic balance for a given year.

The purpose of the Annual Hydrology Review is to summarize and explain hydrologic conditions experienced in Everglades National Park and the Big Cypress National Preserve during the water year. The hydrologic parameters examined for Water Year 78 include: precipitation, temperature, water level, water deliveries, and discharge. These data are summarized both graphically and in tabular formats to provide greater insight into hydrologic conditions during Water Year 78.

I. CLIMATE

Background

Everglades National Park is situated at the southern terminus for the State of Florida. The park is a subtropical wilderness located between the geographic coordinates N 24° 50' 05" and N 25° 50' 20" latitude and W 80° 20' 20" and W 81° 30' 10" longitude. The proximity of the park to the tropics, combined with a marine influence, has produced a climatic regime with mild, dry winters and warm, wet summers.

According to the Koppen climatic classification scheme, Everglades National Park is situated in the Tropical Rainy (Aw) group. This classification characterizes a tropical wet/dry climate marked by dry winters and wet summers.

The climate of the park is influenced by the Atlantic Ocean and the Gulf of Mexico. These oceanic waters have heat retentive capacities which liberate heat during winter months, thereby maintaining mild ambient temperatures. During the summer season the marine influence helps to maintain a uniform diurnal temperature.

Three separate weather systems throughout the year have been associated with precipitation patterns in south Florida (Thomas, 1970). The southeasterly trades influence the climate during the months of April, May, June, September, October and November. Coinciding with the southeasterly air flow, rainfall tends to be the greatest during some of these months. Conversely, rainfall greatly diminishes with the arrival of the northerlies in January and February. Finally, intense local thunderstorms are generated in July and August through convection processes.

The climatological monitoring program at Everglades National Park and the Big Cypress National Preserve is operated in conjunction with the weather programs of the National Climatic Center, National Oceanic and Atmospheric Administration and the Environmental Data Service. The National Park Service has been a cooperating agency for over 28 years at Everglades National Park reporting climatic data to the National Weather Service. There are four weather stations located in the park and one recently established station situated in the Big Cypress (Figure 1). The longest term station in the park is the Everglades City Ranger Station, reporting climatic data for 38 years, followed by the Tamiami Ranger Station (36 years), Royal Palm Ranger Station (29 years) and Flamingo Ranger Station (26 years) (Table 1). Another long term weather monitoring station to be considered for analysis of south Florida climatic conditions is located in Homestead, Florida. Finally, the Big Cypress initiated a weather monitoring program at the Oasis Ranger Station during 1978.

1978 Temperatures

Throughout Water Year 78, temperatures monitored at the weather stations were usually at or near historic means (Figure 2). The greatest departures from the norm occurred during January, February and March. Despite the cooler than normal winter months, no station reported a temperature lower than freezing. On January 30, Royal Palm experienced the coldest day during the water year in the

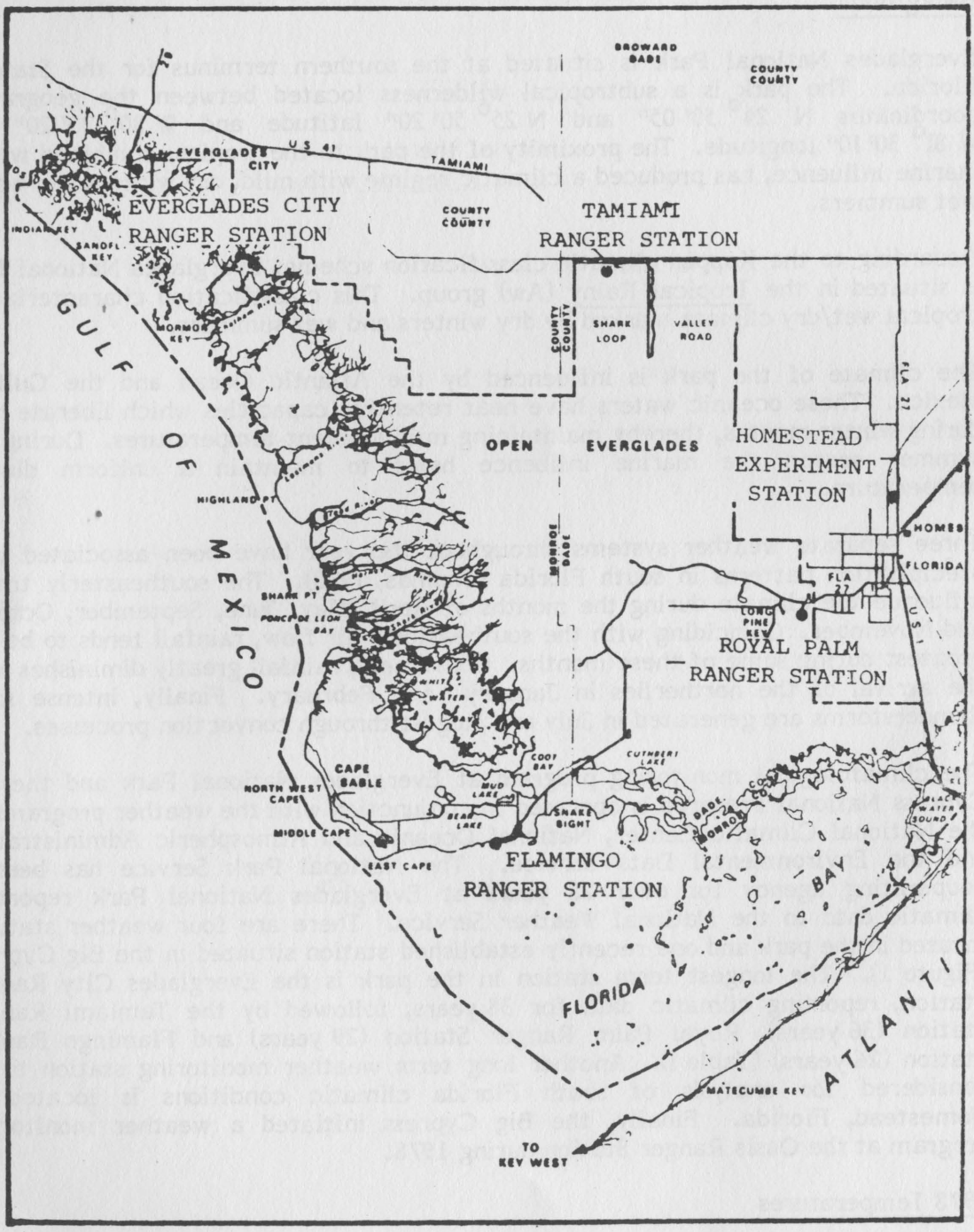

Figure 1. Map of Everglades National Park and South Florida weather stations.

Table 1: Weather Station Index for Everglades National Park and Big Cypress National Preserve.

CLIMATE

Station Index

Station	County	MSL Elevation	Latitude	Longitude	Period of Record Temp.	Precip.
Royal Palm	Dade	7	N25°23'	W80°36'	29	29
Flamingo	Monroe	3	N25°09'	W80°55'	26	26
Everglades	Collier	5	N25°51'	W81°23'	51	38
Tamiami	Dade	15	N25°45'	W80°50'	36	36
Homestead Exp. Station	Dade	11	N25°30'	W80°30'	67	67
Oasis	Collier	8	N25°51"	W81°30'	0.5	0.5

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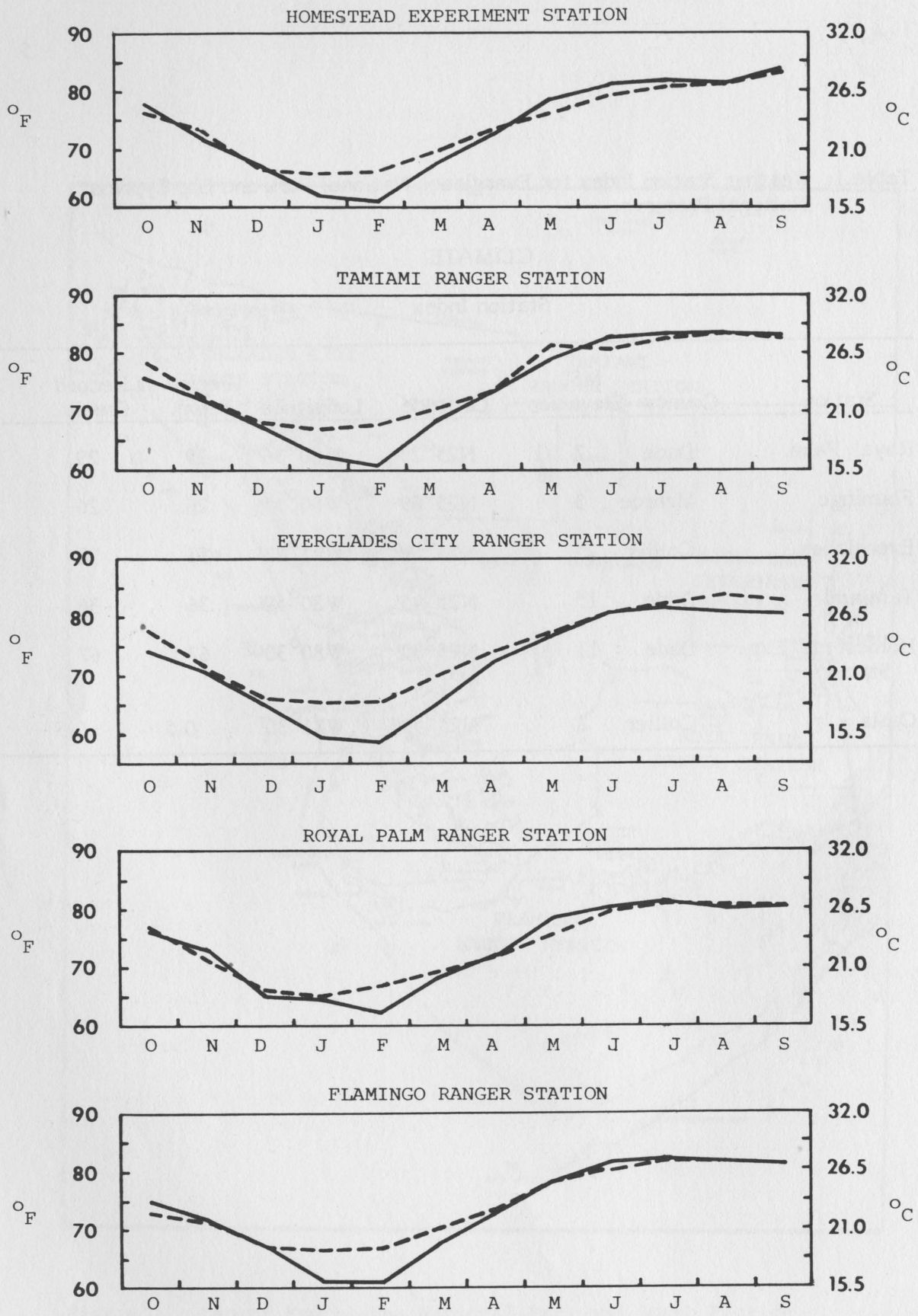

Figure 2. Mean monthly temperatures at five selected stations for Water Year 1978 and period of record.

park, reporting a low of 32°F. Conversely, the maximum temperature reported in south Florida by the NPS/NOAA weather stations was 100°F on June 6 at the Royal Palm Ranger Station.

The Homestead Experiment Station had temperatures ranging from a low of 34°F on February 23, to a maximum of 93°F which was experienced during three different months (June, August and September) (Table 2). The coldest average monthly temperature reported at the Homestead station was in February, and the month with the warmest average temperature was September. Throughout seven months of the water year, average monthly temperatures were greater than normal. The months which reported lower than normal temperatures were October, January, February, March, and April. The greatest departure from the mean occurred in February when temperatures averaged 5.4°F below normal conditions.

Royal Palm also reported lower than normal temperatures throughout the winter months (Table 3). At Royal Palm from October through March (excluding November) cooler than normal temperatures were experienced. The month of February deviated furthest from the mean. February's average daily temperatures departed from the norm by 4.5°F. The coldest temperatures reported at Royal Palm was 32° on January 30. Conversely, the warmest temperatures in Everglades National Park during Water Year 78 occurred at Royal Palm on June 6 when temperatures reached 100°F.

Like the other stations, both Flamingo and Tamiami Ranger Stations experienced cooler than normal winter temperatures and summer temperatures which were slightly higher than normal (Tables 4 and 5). The greatest deviations from the norm at both of these stations occurred during February. Average February temperatures departed from the norm by 7.2°F at Tamiami and 5.7°F at Flamingo. Conversely, the high daily maximum temperatures for both stations during the summer ranged in the mid-90's.

Everglades City Ranger Station reported lower than normal temperatures throughout all months during Water Year 78 (Table 6). The greatest departure from the norm occurred during the month of February when the average monthly temperature was 8.1°F cooler than normal. Like the other stations, the winter months at Everglades City deviated the farthest from normal temperature conditions.

1978 Rainfall

Precipitation serves as a significant source of fresh water supply to the Everglades ecosystem. Yearly variations in the amounts and distribution of rainfall supplied to this region has a direct impact upon the ecology of the park. Rainfall inputs into Everglades National Park are monitored daily by park personnel at four park weather stations, and one station in the Big Cypress National Preserve (Figure 1). In addition, over 100 rain gauges (tipping bucket and cones) measure precipitation in the interior of the park and the preserve.

A comparison of Water Year 78 monthly rainfall with mean monthly rainfall for the period of record was generated (Figure 3). The total Water Year 78 rainfall for these stations ranged from 71.11 inches at Royal Palm to 41.09 inches at Flamingo, with a middle range of 59.73, 55.65, and 52.75 inches falling at Everglades City,

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Table 2: Homestead Experiment Station, 1978 Monthly Temperatures (^{o}F)

Month	Avg. Max.	Avg. Min.	Avg.	Departure from Mean*	Highest Temp.	Date	Lowest Temp.	Date
Oct.	84.6	64.1	74.4	-1.9	91	3	53	17
Nov.	81.7	61.9	71.8	1.4	88	17	46	27
Dec.	77.2	56.1	66.7	0.3	87	15	37	23
Jan.	71.7	51.8	61.8	-3.5	84	1	37	30
Feb.	71.3	50.0	60.7	-5.4	82	18	34	23
Mar.	77.8	56.8	67.3	-2.1	85	15	44	18
Apr.	82.9	61.8	72.4	-0.7	90	14	53	27
May	87.0	69.7	78.4	2.5	91	2	57	15
Jun.	89.7	72.9	81.3	2.1	93	12	69	14
Jul.	90.2	72.8	81.5	1.0	92	29	70	20
Aug.	90.1	72.5	81.3	0.3	93	18	69	28
Sept.	91.1	75.1	83.1	0.7	93	24	72	5

* Mean monthly temperatures for Homestead obtained from Annual Hydrology Review: Everglades National Park 1977. These calculated departures may change with an updated mean (1911-1978).

Table 3: Royal Palm Ranger Station, 1978 Monthly Temperatures (^{o}F)

Month	Avg. Max.	Avg. Min.	Avg.	Departure from Mean*	Highest Temp.	Date	Lowest Temp.	Date
Oct.	86.4	66.0	76.2	-0.8	92	12	53	14
Nov.	84.4	62.3	73.3	2.3	89	8	44	14
Dec.	73.8	56.0	64.9	-1.2	86	1	38	23
Jan.	76.1	52.6	64.4	-0.7	85	2	32	30
Feb.	74.5	50.6	62.5	-4.5	85	15	33	23
Mar.	80.8	55.2	68.0	-1.3	86	15	41	18
Apr.	83.9	60.4	72.2	0.0	92	21	52	28
May	88.7	68.7	78.7	2.8	92	3	58	15
Jun.	89.8	70.6	80.2	0.7	100	6	55	19
Jul.	90.3	71.9	81.1	0.1	94	5	68	7
Aug.	89.1	71.7	80.4	-1.1	92	9	67	6
Sept.	90.0	71.1	80.6	-0.1	94	9	69	2

*Mean monthly temperatures for Royal Palm obtained from Thomas, Terence, Technical Report 70-2, Table 2 (1949-1968). These calculated departures may change with an updated mean (1949-1978).

Table 4: Flamingo Ranger Station, 1978 Monthly Temperatures (^{o}F)

Month	Avg. Max.	Avg. Min.	Avg.	Departure from Mean*	Highest Temp.	Date	Lowest Temp.	Date
Oct.	84.9	64.8	74.9	2.1	91	4	51	15
Nov.	81.8	62.5	72.2	0.9	86	1	46	27
Dec.	77.1	56.9	67.0	0.9	84	16	37	28
Jan.	72.2	50.4	61.3	-5.2	80	19	36	29
Feb.	71.2	51.0	61.1	-5.7	80	15	33	23
Mar.	77.1	57.8	67.5	-2.7	83	31	42	18
Apr.	81.9	63.6	72.8	-0.7	85	26	54	28
May	85.7	71.2	78.5	0.2	93	26	60	16
Jun.	88.5	74.4	81.5	1.6	93	14	69	14
Jul.	89.6	74.9	82.3	0.5	91	26	69	12
Aug.	89.5	73.7	81.6	-0.1	97	15	70	28
Sept.	89.3	72.7	81.0	0.3	93	7	69	27

*Mean monthly temperatures for Flamingo obtained from Thomas, Terence, Technical Report 70-2, Table 6 (1962-1968). These calculated departures may change with an updated mean (1952-1978).

Table 5: Tamiami Ranger Station, 1978 Monthly Temperatures (^{o}F)

Month	Avg. Max.	Avg. Min.	Avg.	Departure from Mean**	Highest Temp.	Date	Lowest Temp.	Date
Oct.	84.9	66.6	75.8	-2.6	90	12	55	14
Nov.	82.3	62.6	72.5	-0.3	88	4	48	27
Dec.	77.9	56.8	67.4	-1.0	87	2	-	-
Jan.	72.4	52.1	62.3	-4.9	84	1	38	30
Feb.	70.8	50.5	60.7	-7.2	82	17	34	7
Mar.	78.3	58.3	68.3	-2.3	87	16	45	5
Apr.	84.0	63.5	73.8	0.1	89	15	56	27
*May	89.0	69.2	79.1	-2.2	94	25	52	5
Jun.	91.1	74.4	82.8	2.2	94	30	71	23
Jul.	91.4	75.1	83.3	0.9	95	19	72	19
Aug.	91.4	75.3	83.4	0.2	95	19	64	22
Sept.	91.1	75.1	83.1	0.7	93	24	72	5

*Data not on record for May 1, 2, 15, 16 and 23

**Mean monthly temperatures for Tamiami for February, March and September obtained from Thomas (1970) Table 2 (1949-1968). Other means obtained from Annual Hydrology Review, Everglades National Park 1977. These calculated departures may change with an updated mean (1942-1978).

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Table 6: Everglades City Ranger Station, 1978 Monthly Temperatures (^{o}F)

Month	Avg. Max.	Avg. Min.	Avg.	Departure from Mean*	Highest Temp.	Date	Lowest Temp.	Date
Oct.	84.2	64.7	74.5	-3.4	92	1	52	19
Nov.	80.8	60.4	70.6	-1.1	86	10	44	27
Dec.	75.2	54.6	64.9	-1.9	83	5	37	28
Jan.	70.8	48.9	59.9	-5.7	82	19	35	30
Feb.	68.6	48.4	58.5	-8.1	78	4	34	7
Mar.	75.3	56.8	66.1	-3.8	83	14	42	5
Apr.	81.7	63.3	72.5	-1.6	88	23	53	28
May	85.0	69.0	77.0	-0.5	93	19	63	1
Jun.	88.1	72.5	80.3	-0.5	93	15	70	22
Jul.	89.5	73.1	81.3	-1.0	95	26	69	12
Aug.	89.2	72.8	81.0	-1.9	94	29	68	25
Sept.	89.2	71.8	80.5	-1.5	93	19	69	27

*Mean monthly temperature values obtained from Annual Hydrology Review: Everglades National Park 1977, except for February value which was obtained from Thomas (1970) Table 3. These calculated departures may change with an updated mean (1927-1978).

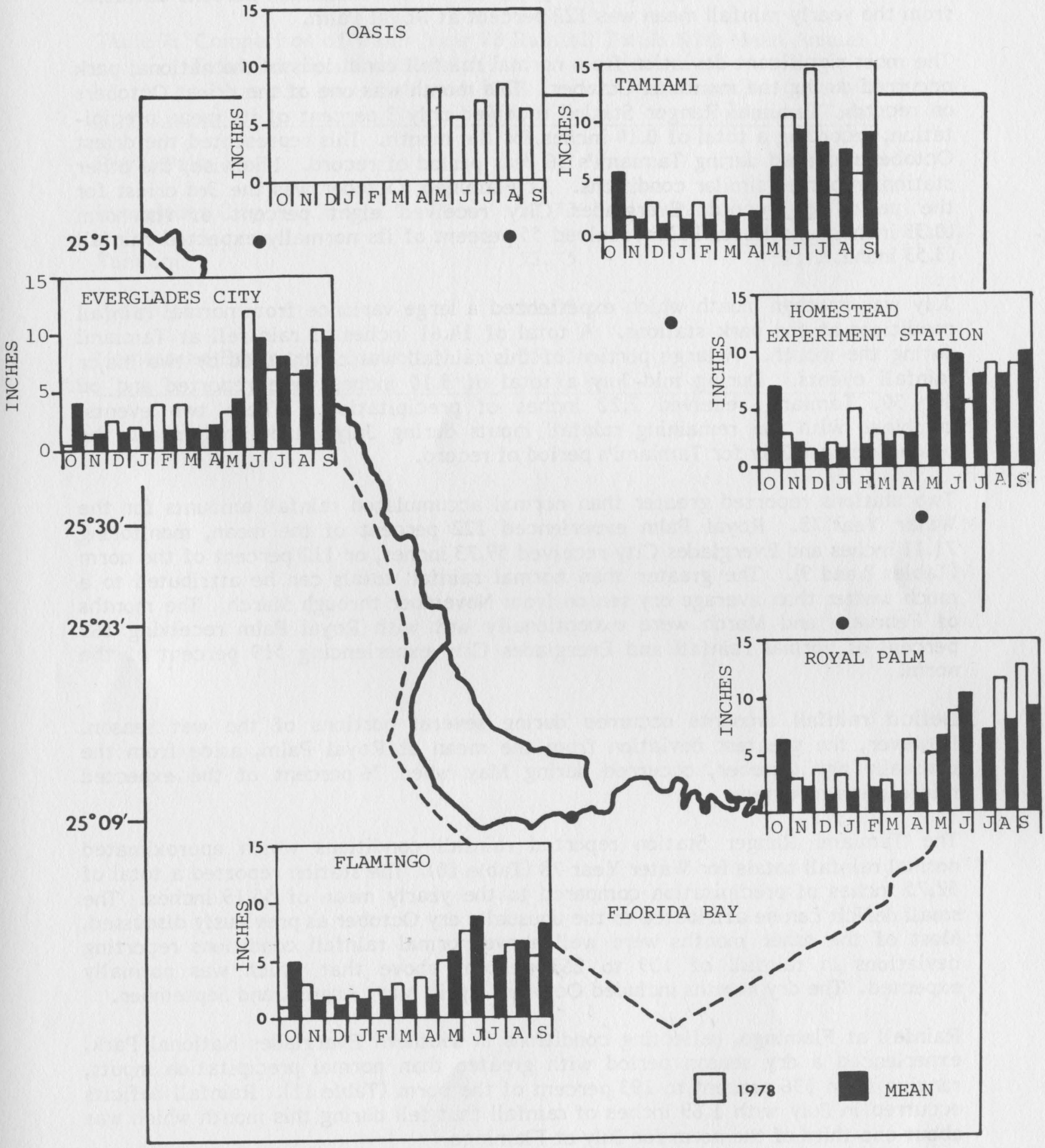

Figure 3. Rainfall at six stations providing climatological information for Everglades National Park and Big Cypress National Preserve.

Homestead, and Tamiami, respectively (Table 7). The maximum percent deviation from the yearly rainfall mean was 122 percent at Royal Palm.

The most significant deviation from normal rainfall conditions in the national park occurred during the month of October. This month was one of the driest Octobers on record. Tamiami Ranger Station received only 3 percent of its mean precipitation, recording a total of 0.14 inches for the month. This represented the driest October recorded during Tamiami's 36 year period of record. Likewise, the other stations reported similar conditions. At Flamingo, October was the 3rd driest for the period of record, Everglades City received eight percent of its norm (0.33 inches) and Royal Palm received 55 percent of its normally expected rainfall (3.53 inches).

July was another month which experienced a large variance from normal rainfall conditions at the park stations. A total of 14.61 inches of rain fell at Tamiami during the month. A large portion of this rainfall was contributed by two major rainfall events. During mid-July a total of 3.10 inches were reported and on July 30, Tamiami received 2.22 inches of precipitation. These two events, combined with the remaining rainfall inputs during July, made this month the second wettest July for Tamiami's period of record.

Two stations reported greater than normal accumulated rainfall amounts for the Water Year 78. Royal Palm experienced 122 percent of the mean, monitoring 71.11 inches and Everglades City received 59.73 inches, or 112 percent of the norm (Tables 8 and 9). The greater than normal rainfall totals can be attributed to a much wetter than average dry season from November through March. The months of February and March were exceptionally wet with Royal Palm receiving 169 percent of normal rainfall and Everglades City experiencing 519 percent of the norm.

Deficit rainfall amounts occurred during several portions of the wet season. However, the greatest deviation from the mean at Royal Palm, aside from the unusually dry October, occurred during May when 76 percent of the expected rainfall was reported.

The Tamiami Ranger Station reported rainfall conditions which approximated normal rainfall totals for Water Year 78 (Table 10). The station reported a total of 52.75 inches of precipitation compared to the yearly mean of 55.19 inches. The small deficit can be attributed to the unusually dry October as previously discussed. Most of the other months were well above normal rainfall conditions reporting deviations in rainfall of 109 to 263 percent above that which was normally expected. The dry months included October, April, May, August, and September.

Rainfall at Flamingo, reflecting conditions in southern Everglades National Park, experienced a dry season period with greater than normal precipitation inputs, ranging from 136 percent to 193 percent of the norm (Table 11). Rainfall deficits occurred in July with 1.69 inches of rainfall that fell during this month which was about one-third of the norm for July at Flamingo.

The Homestead Experiment Station, representing precipitation conditions in the east Everglades, experienced 90 percent of its normal precipitation for the water year (Table 12). Most of the dry season months experienced greater than normal

Table 7: Comparison of Water Year 78 Rainfall Totals With Mean Annual Totals for Period of Record.

	WY 78 Total	$\bar{x}$ Annual Total
Royal Palm	71.11	58.13
Everglades City	59.73	53.32
Tamiami	52.75	52.75
Flamingo	41.09	41.09
Homestead Experiment Station	55.65	55.65

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Table 8: Royal Palm, Water Year 78

RAINFALL

Month	Total	Mean	% of Mean	Greatest	Date
Oct.	3.53	6.38	55	2.01	13
Nov.	2.89	2.16	134	2.31	24
Dec.	3.58	1.39	258	2.87	17
Jan.	3.32	1.61	206	1.46	20
Feb.	4.60	1.91	441	1.72	18
Mar.	2.77	1.56	178	1.50	4
Apr.	6.31	2.54	248	5.38	24
May	5.07	6.63	76	1.12	19
Jun.	8.71	10.24	85	2.47	5
Jul.	6.25	7.02	89	1.90	30
Aug.	11.41	7.78	147	2.89	13
Sept.	13.67	8.91	153	2.66	14
TOTAL	71.11	58.13	122		

Table 9: Everglades City, Water Year 78

RAINFALL

Month	Total	Mean	% of Mean	Greatest	Date
Oct.	0.33	4.28	8	.13	23
Nov.	1.91	1.41	135	.50	3, 25
Dec.	4.28	1.49	287	1.90	26
Jan.	2.33	1.60	146	.64	9
Feb.	3.92	1.74	225	1.58	9
Mar.	5.44	1.85	294	1.95	20
Apr.	1.82	2.19	83	1.09	24
May	3.39	4.44	76	.67	13
Jun.	12.11	9.76	124	2.01	11
Jul.	7.18	7.99	90	1.11	12
Aug.	6.48	6.89	94	1.54	25
Sept.	10.54	9.68	109	1.62	17
TOTAL	59.73	53.32	112		

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Table 10: Tamiami, Water Year 78

RAINFALL

Month	Total	Mean	% of Mean	Greatest	Date
Oct.	0.14	5.54	3	.14	23
Nov.	1.65	1.50	110	.63	5, 24
Dec.	3.08	1.17	263	1.51	17
Jan.	2.19	1.47	149	.92	20
Feb.	3.16	1.51	209	1.54	19
Mar.	3.53	1.84	192	1.55	10
Apr.	1.93	2.33	83	.80	01
May	3.52	5.96	59	1.23	25
Jun.	10.10	9.26	109	2.35	19
Jul.	14.61	8.20	178	3.10	15
Aug.	3.46	7.50	46	3.10	15
Sept.	5.38	8.91	60	1.29	29
TOTAL	52.75	55.19	96		

Table 11: Flamingo, Water Year 78

RAINFALL

Month	Total	Mean	% of Mean	Greatest	Date
Oct.	1.05	4.93	21	.80	23
Nov.	2.96	1.51	185	1.48	25
Dec.	1.86	1.22	154	.65	17
Jan.	2.00	1.62	123	.77	20
Feb.	2.44	1.79	136	.91	19
Mar.	2.19	1.49	193	.77	10
Apr.	3.51	1.94	181	2.18	16
May	4.95	5.77	86	1.72	22
Jun.	7.21	8.76	85	2.78	19
Jul.	1.69	5.33	32	.85	14
Aug.	6.58	6.55	98	1.36	21
Sept.	4.65	8.17	65	.90	26
TOTAL	41.09	49.08	84		

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Table 12: Homestead Experiment Station, Water Year 78

RAINFALL

Month	Total	Mean	% of Mean	Greatest	Date
Oct.	1.58	6.96	23	1.29	22
Nov.	2.98	2.20	135	2.39	24
Dec.	1.66	1.34	124	.92	17
Jan.	2.19	1.63	134	.61	20
Feb.	5.12	1.91	268	2.67	18
Mar.	3.11	2.12	147	1.01	3
Apr.	2.96	2.86	103	1.30	24
May	7.06	6.49	32	No Report	
Jun.	10.24	9.86	104	2.32	12,18
Jul.	5.61	8.11	69	1.33	6
Aug.	9.18	8.17	120	2.50	5
Sept.	8.96	9.91	90	1.89	2
TOTAL	55.65	61.56	90		

rainfall totals. February deviated the greatest above normal conditions, receiving 268 percent (5.12 inches) of the monthly mean rainfall. By water years end the Homestead Experiment Station received 55.65 inches of rain compared to the norm of 61.56 inches.

The Big Cypress National Preserve initiated a new NPS/NOAA monitoring station at the Oasis Ranger Station in 1978 and the first weather readings commenced on May 14 (Table 13). Since the station has a very short period of record, analysis of rainfall events compared to normal conditions cannot be made. However, compared to the weather stations in close proximity to Oasis, it appears that trends which applied to them were also present at this station.

Table 13: Oasis Ranger Station, Water Year 78.

RAINFALL

Month	Total	Greatest	Date
May (beginning May 14)	8.31	3.39	19
June	5.83	1.65	28
July	7.08	1.82	12
August	8.60	1.76	24
September	6.36	3.47	6

II: WATER LEVELS

Everglades National Park

Surface water is one of the most prominent and characteristic natural features in south Florida. The mechanism for overland sheet flow is enacted following sufficient inputs of rainfall into the hydrologic regime. The surface water slowly inundates the flat, broad plain of the Everglades as a thin film. Even though the depth is not of great extent, the impact is widespread and life flourishes throughout the area. Eventually, the anemic flow reaches the ultimate base level, the ocean.

The National Park Service has established an extensive hydrologic monitoring network throughout all areas of Everglades National Park (Figure 4). Presently there are over 150 hydrologic monitoring stations in the park. In addition, six continuous recording stations were in operation during Water Year 78 in the Big Cypress National Preserve (Figure 5). These stations range from sophisticated satellite telemetry stations which continuously monitor stage levels to staff gauges which are read discontinuously. National Park Service hydrology personnel work in conjunction with the U.S. Geological Survey to obtain and document water level data at these monitoring stations.

Water levels throughout the park during Water Year 78 were analyzed by reviewing data from selected park stations, grouped on a regional basis. The analysis focused on both a comparison of 1978 water levels with the period of record, and on the relationship of water levels to the land surface. This latter method distinguished between the presence of ground water versus surface water, indicated the occurrence and duration of inundation, and delineated the depth of surface and ground water tables. The information gained from this approach is valuable from the hydrologic standpoint due to the differing characteristics and behavior of groundwater and surface water. The comparison with the period of record places these events or conditions in an historic perspective indicating the normalcy or deviation of Water Year 78 hydrologic conditions from the historic past.

Shark Slough

Shark River Slough is the largest natural drainage system in Everglades National Park, encompassing 240,000 acres of wetlands. Water supply to the slough is dependent upon both direct rainfall contributions and water allocations through control structures along the Tamiami Trail. The slough, serving as a major arterial for surface water movement, is the lifestream for much of Everglades National Park. Flowing in a southwesterly direction towards the ocean, a portion of the slough's fresh waters eventually reach the estuaries, influencing the salinities of these regions.

Within Shark River Slough there are six continuous monitoring stations with relatively long periods of record ranging from 12 to 28 years (Appendix 1). These stations are P-33, P-36, P-35, P-38, G-620 and NP-62. In addition, there are also six Landsat telemetry stations (NP 201-206) which provide a basis of "real time" data for the hydrology network. Two other long-term continuous monitoring stations, NP-34, 6 miles west of Shark Slough's boundaries, and NP-44, 4 miles east of the slough's boundaries, provide data on contrasting hydrologic conditions existing adjacent to the slough.

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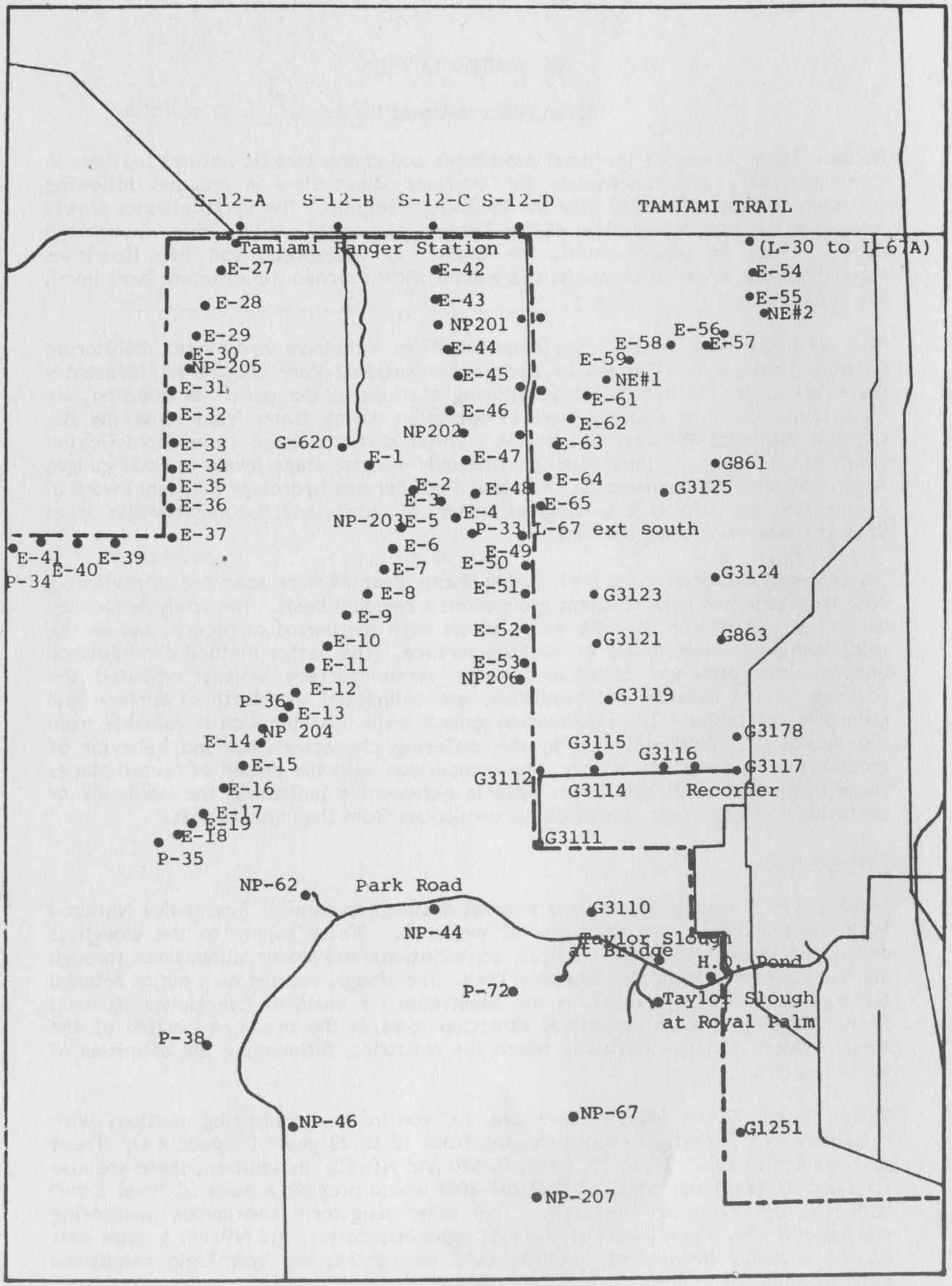


Figure 4. Everglades National Park Hydrologic Monitoring Network.

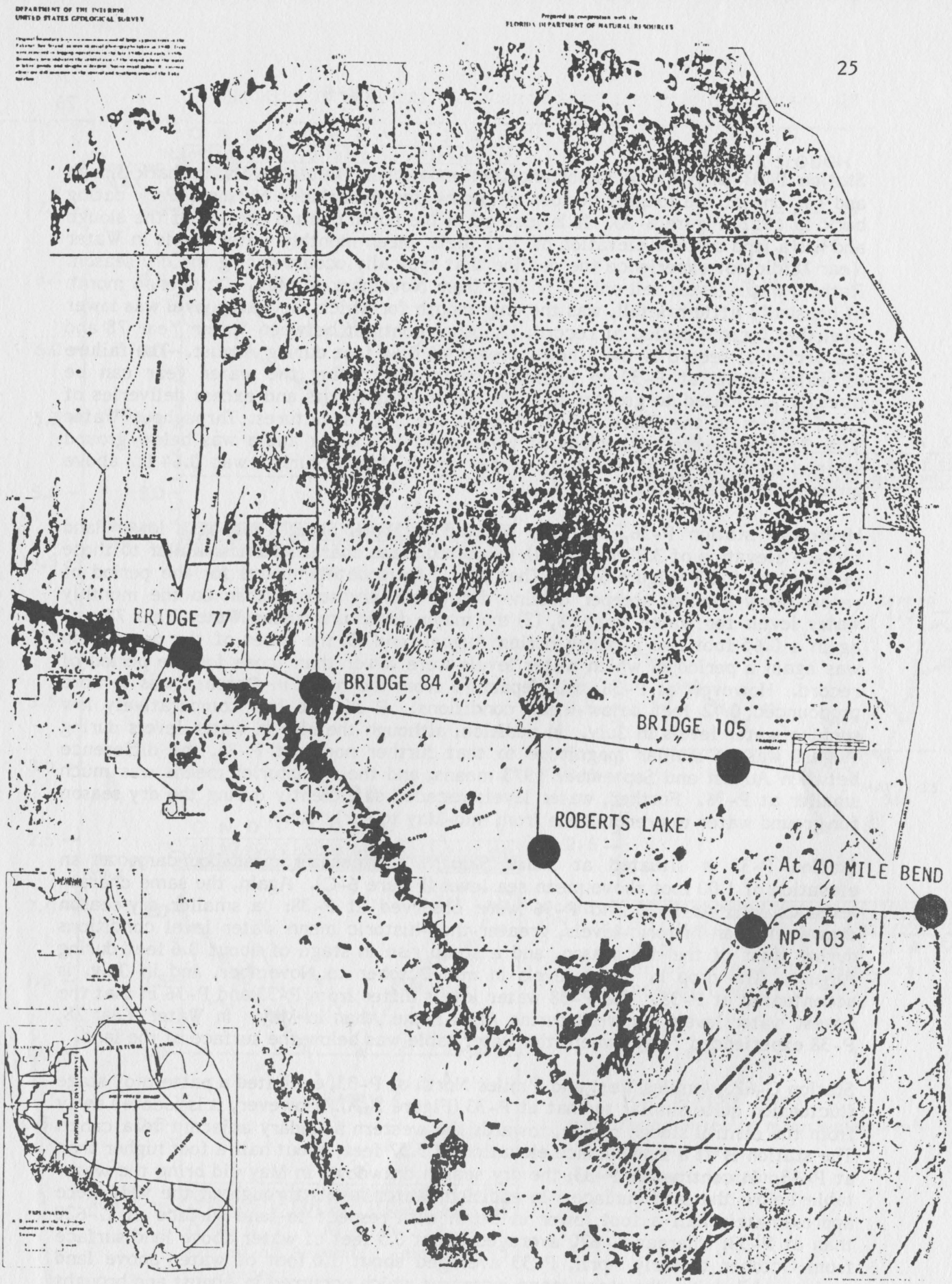


Figure 5. Location of gauging stations in the Big Cypress.

Station P-33 is of major importance for monitoring water levels in Shark Slough and has one of the longest periods of record for Everglades National Park dating back to 1952 (Figure 6-A). It is located in the north central portion of the slough and has a land surface elevation of 5.11 feet. Mean monthly water levels in Water Year 78 did not experience the decline that typically occurs during the dry season. Rather, water levels fell only 0.37 feet from November to May. October, a month of unusually little rainfall, was the only month for which the water level was lower than that for the period of record. Another contrast between Water Year 78 and the period of record is the stage increase of 0.64 feet during August. The failure of water levels at P-33 to recede substantially during the water year can be directly attributed to greater than normal rainfall inputs and excess deliveries of flood waters to the Shark Slough through the S-12 structures. Throughout Water Year 78 there were no periods of time when the water table was below ground surface at P-33. The minimum water depth that occurred was 0.64 ft. above ground surface elevation.

Hydrology station P-36, centrally located in Shark Slough and at a lower land surface elevation of 3.20 feet (msl), exhibited stage characteristics similar to those reported at P-33 (Figure 6-B). That is, (1) the monthly means for the period of record show a much steeper decline during the dry season than do the monthly water levels for Water Year 78, (2) the major departure during Water Year 78 was again a 0.65 foot rise in stage during August, and (3) the onset of the dry season was again a period in which water levels were lower than those for the period of record. However, at P-36, this departure from the norm in October was a more pronounced 0.42 feet below mean conditions. P-36 also had comparatively low surface water levels in July. In addition, although the rise in water levels during August was of similar magnitude to that further north at P-33, the difference between August and September 1978 means, and their "historic" means was much smaller at P-36. Further, water levels receded sufficiently during the dry season for ground water to predominate from mid-May to early June.

Station P-38 is situated at Shark Slough's southeasternmost boundary, at an elevation of 1.00 foot above mean sea level (Figure 6-C). Again, the same characteristics seen at P-33 and P-36 were observed at P-38: a smaller dry-season drawdown than historic levels, greater-than-historic mean water level conditions during most of the dry season, and a steep rise in stage of about 0.6 feet during August. The drop in water levels in mid-October to November, and in July, is accentuated at P-38. The P-38 water levels differ from P-33 and P-36 in that the lowest water levels occurred during April rather than in May. In Water Year 78, P-38 experienced 7 days where the water table was below the surface of the land.

Station G-620, 4 miles West and 3 miles North of P-33, exhibited a pattern of stage fluctuation quite similar to that at P-33 (Figure 7-A). However, it is located away from the central slough region, towards the western boundary adjacent to a canal. The station is at a land surface elevation of 5.57 feet, about half a foot higher than at P-33. In contrast to P-33, the dry season drawdown in May did bring the water table below the land surface. In addition, water levels throughout the year were approximately half a foot lower in depth with respect to land surface at G-620 than at P-33; whereas G-620 averaged about 0.5 feet of water above land surface from October to early April, P-33 averaged about 1.0 foot of water above land surface. Likewise, the steep stage increases which occurred in August and brought water water levels at P-33 to nearly 2 feet above land surface, resulted in 1.3 feet of water above land surface at G-620.

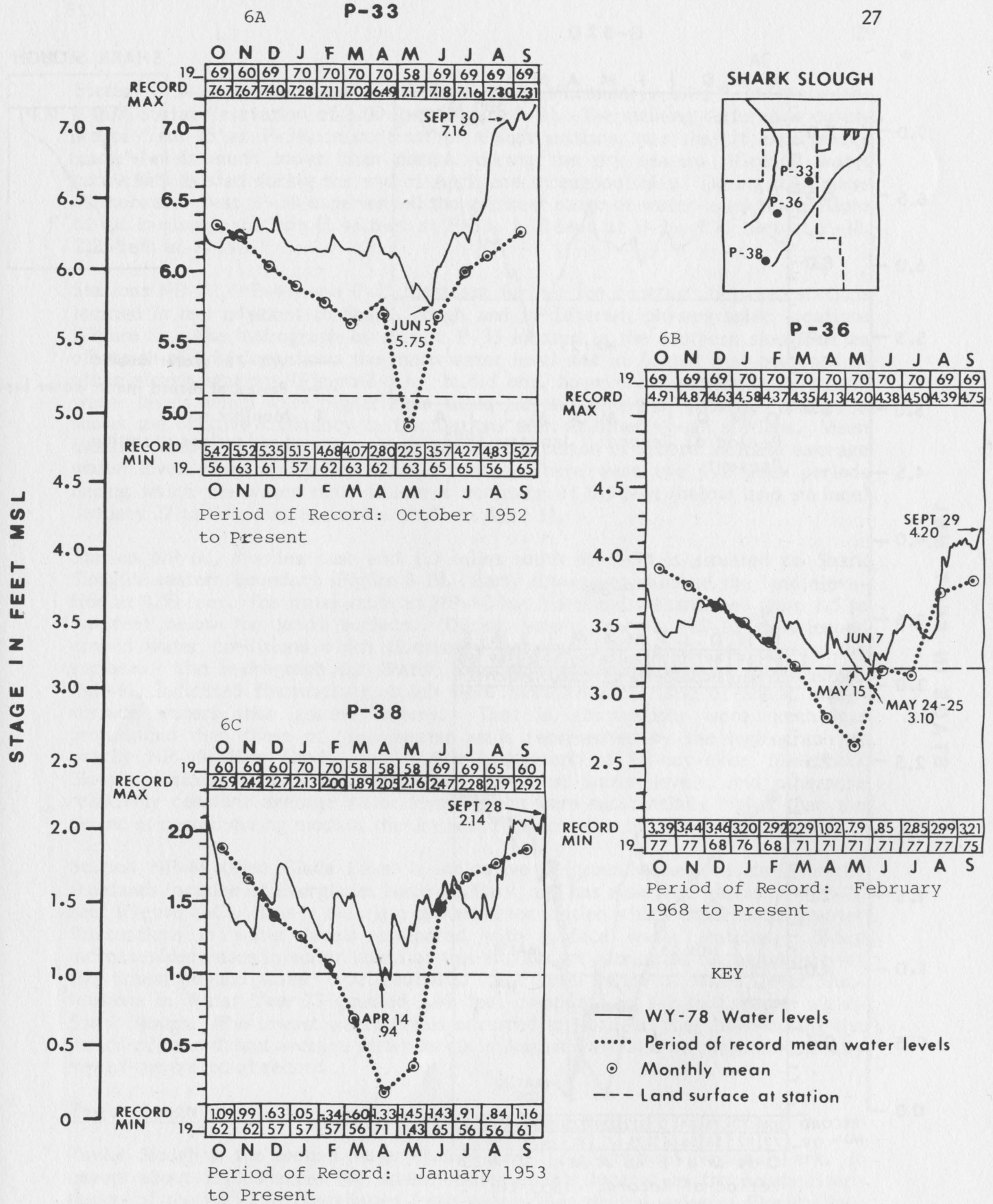
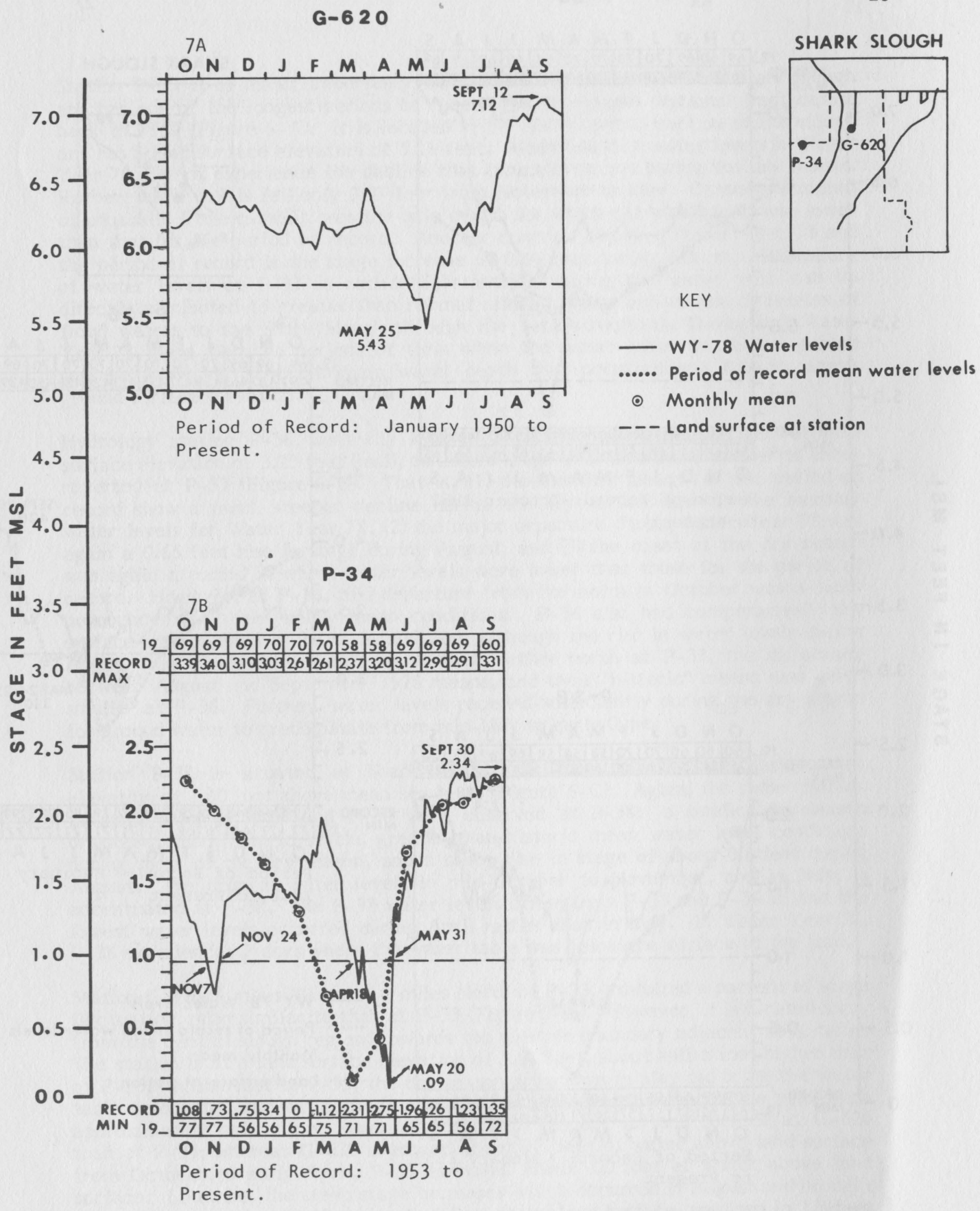


Figure 6. Water levels in Shark Slough at (6A) P-33, (6B) P-36, and (6C) P-38.



Period of Record: January 1950 to Present.

Period of Record: 1953 to Present.

Figure 7. Water levels at (7A) Shark Slough station G-620 and (7B) P-34, West of Shark Slough.

Station P-34, is located west of the Shark Slough's boundary. Like P-38, it also has a land surface elevation of 1.00 foot (Figure 7-B). The striking difference during Water Year 78 at P-34, in contrast to slough stations, was that it experienced water levels much lower than normal during the dry season. Ground water conditions existed during the end of April and throughout May. During the course of the water year, P-34 experienced the greatest range of water level fluctuations of all in-slough stations (1.41 feet at P-33, 1.10 feet at P-36, 1.20 feet at P-38, 2.25 feet at P-34).

Stations NP-62, NP-44, and P-35 illustrate further the contrasts between stations located in and adjacent to Shark Slough and in different physiographic locations (Figure 8). The hydrograph of station P-35 located in the southern slough at an elevation of 0.86 feet shows the sharp water level rise in August that occurred at other slough stations (Figure 8-A). It did not, however, experience dry season water levels which were higher than those for the period of record. Further, it shows the relative constancy in fluctuations seen at other slough stations. Mean monthly values for both Water Year 78 and the period of record indicate average water levels were above the lands surface. There were two 1-2 week periods during which the water table fell to a minimum of 0.5 feet (below land surface) January 27 to February 6, and March 31 to April 14.

Station NP-62, 5 miles east and 1.5 miles south of P-35 is situated on Shark Slough's eastern boundary (Figure 8-B). Early surveys established the land elevation at 4.50 feet. The water table at NP-62 has historically fluctuated from 1.5 to 3.5 feet below the land's surface. During Water Year 78, NP-62 experienced ground water conditions which fluctuated between 1.25 to 2.5 feet below the surface. The hydrograph for Water Year 78 stage recordings at Pa-hay-okee (NP-62) indicated fluctuations, which were more characteristic of Shark Slough surface waters than ground waters. That is, fluctuations were much less pronounced than those of groundwater wells represented by the hydrograph of nearby NP-44 (Pine Glade Lake). The hydrograph of Pa-hay-okee, like Shark Slough stations, exhibited a steep rise in August water levels, and otherwise relatively constant average water levels which were substantially higher than the period of record during most of the dry season (December through May).

Station NP-44 (Pine Glade Lake) is indicative of groundwater conditions in the Pinelands location of Everglades National Park, and has a surface elevation of 5.00 feet (Figure 8-C). This is clearly a groundwater station which experiences greater fluctuations in water levels compared with surface water stations. Sharp increases/decreases in water levels at this station are attributed to the porosity of the limestone and water inputs/outputs. The total range of water level fluctuations in Water Year 78 equaled 3.48 feet compared to 1-2 foot ranges within Shark Slough. The lowest water levels occurred in April, as they have during the period of record, and average water levels in August were also as characteristically low as the period of record.

Taylor Slough

Taylor Slough is the second major drainage area in Everglades National Park. It covers about 25,000 acres (40 square miles) and is located in the southeastern region of the park. It contributes fresh waters into the estuaries of Florida Bay. Park headquarters and the Royal Palm Visitors Center are located in this region,

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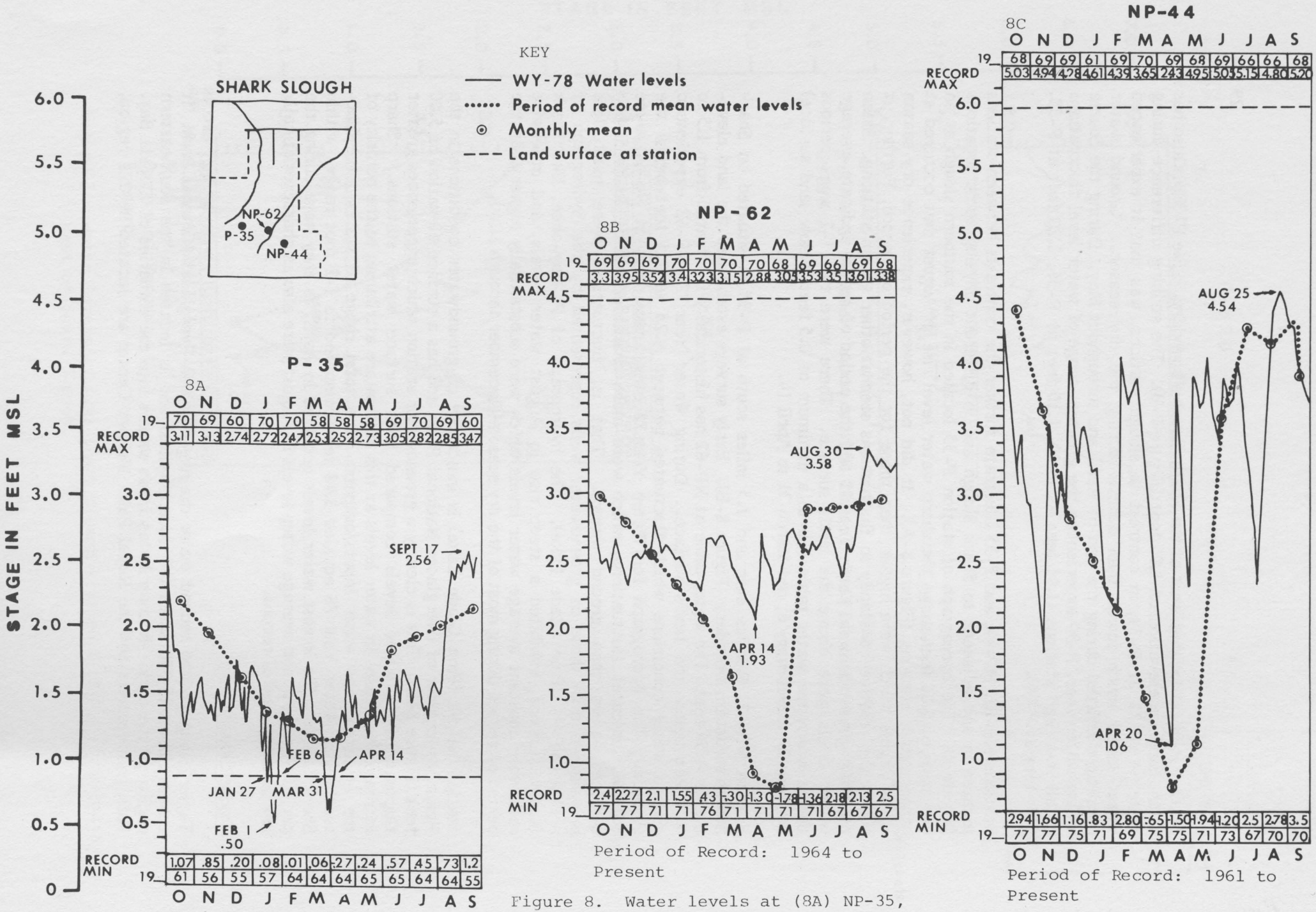


Figure 8. Water levels at (8A) NP-35, (8B) NP-62 and (8C) NP-44.

and the abundant wildlife which depend upon this important source of fresh water, draw many visitors to the area. Royal Palm provides climatological data, and five long-term continuous recording water level gauges provide an ongoing record of water levels in Taylor Slough. Man-made structures affecting slough conditions include canals, roads, and levees, constructed within, and adjacent to its headwaters, external to the park's boundaries

The stage at which overland sheet flow in Taylor Slough occurs ranges from 2.33 feet above msl at the Taylor Slough Bridge to 4.9 feet above msl at Culvert 7, about 6500 feet east of the bridge. These levels vary because of the differences between the trough basin of the slough, and the associated higher land surface elevations on the slough's margins.

Surface flow into Taylor Slough differs from that in the rest of the Everglades and Big Cypress watersheds, in that it is of shorter yearly duration because of the relatively small size of the system. The periods during which the stage at Taylor Slough Bridge fell below 2.33 feet and flow therefore ceased or was negligible, occurred in November, February, April, and May. The driest period in Taylor Slough occurred in April, when water levels at Taylor Slough Bridge dropped to their Water Year 78 minimum of 1.48 feet above msl (Figure 9-A).

In comparison with the period of record, the greatest deviations from monthly means at the Taylor Slough Bridge occurred from March to May. This portion of the dry season experienced monthly water levels 1.34 to 1.99 feet higher than the period of record means. Maximum stage levels in March and April 1978 were higher than any previously recorded stage for these months by 0.80 and 0.65 feet, respectively. These higher than normal conditions reflected the greater than normal rainfall inputs at this location during this period of time. However, October, November, and July means were more than half a foot below means of the period of record.

At station P-37 (NP-207), situated in the south central portion of Taylor Slough on its western border, the only months that were below the mean for the period of record were October and November, but the deviations were much smaller here than at the Taylor Slough Bridge (Figure 9-B). The maximum deviations from the monthly means for the period of record again occurred in March through May, ranging from 0.80 to 1.08 feet higher (vs. 1.34 to 1.99 feet higher at Taylor Slough Bridge). February and March maximums exceeded previous maximums for those months by .06 and .17 feet respectively.

Big Cypress Water Levels

The National Park Service, in cooperation with the USGS maintained a network of water level gauges within Big Cypress during FY 78 (Figure 5). There were six continuous-recording gauges in operation during this period, one of which (Bridge 84) consisted of a satellite data collection platform (DCP). These stations also included Bridge 105, 40-Mile Bend, Bridge 77, NP-103 and Roberts Lake, all of which are situated along Tamiami Trail or the Loop Road. The period of record for Bridge 105 and 40-Mile Bend commenced in 1939, for Bridges 77 and 84 in 1960, and for NP-103 and Roberts Lake in 1973. As for Shark Slough and Taylor Slough, the hydrographs presented show water levels during Water Year 78 compared with the historic mean (Figures 10 and 11). Actual daily stage data are presented in Appendix B for all six stations.

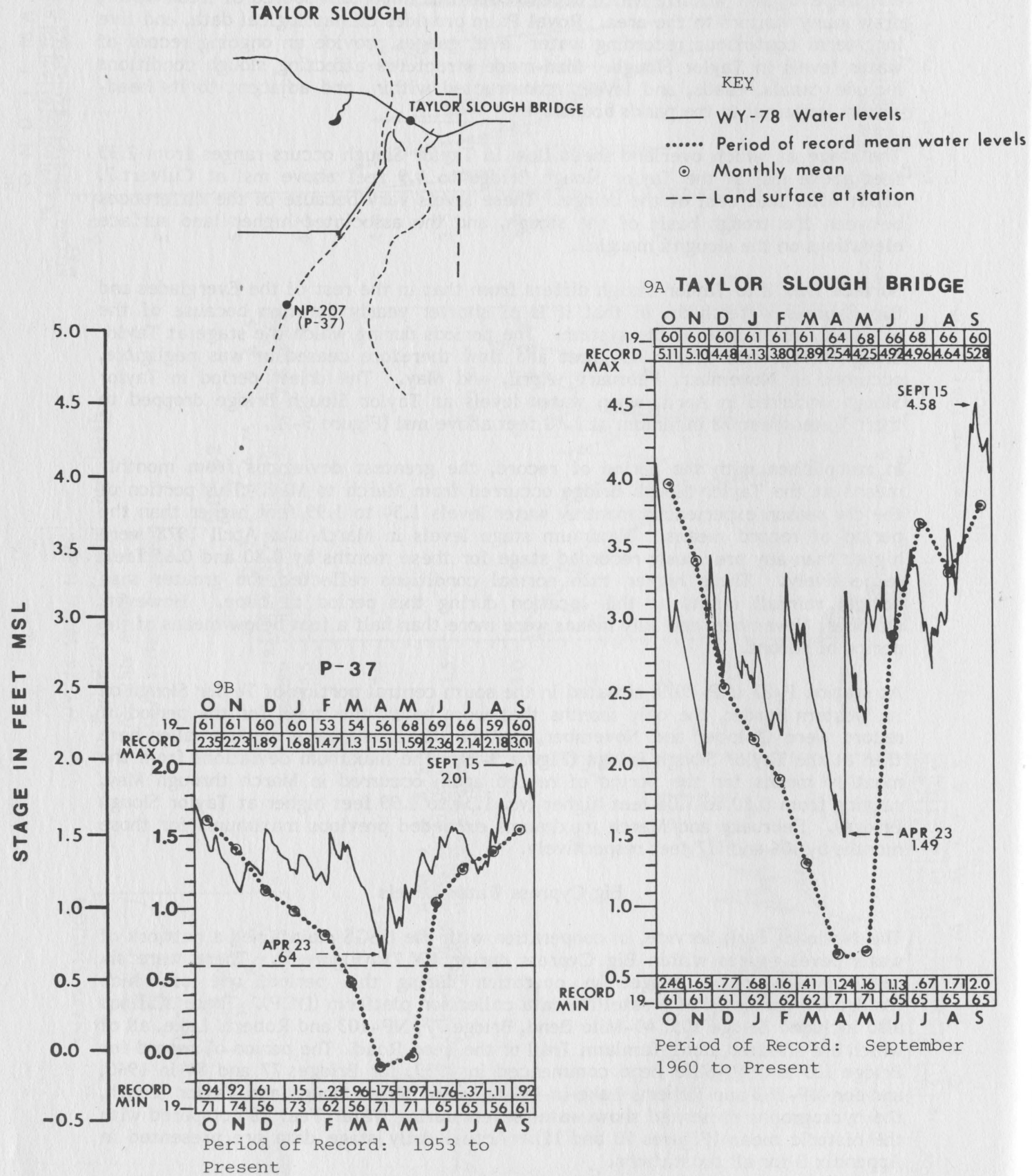


Figure 9. Water levels in Taylor Slough at (9A) Taylor Slough at the Bridge and (9B) NP-207.

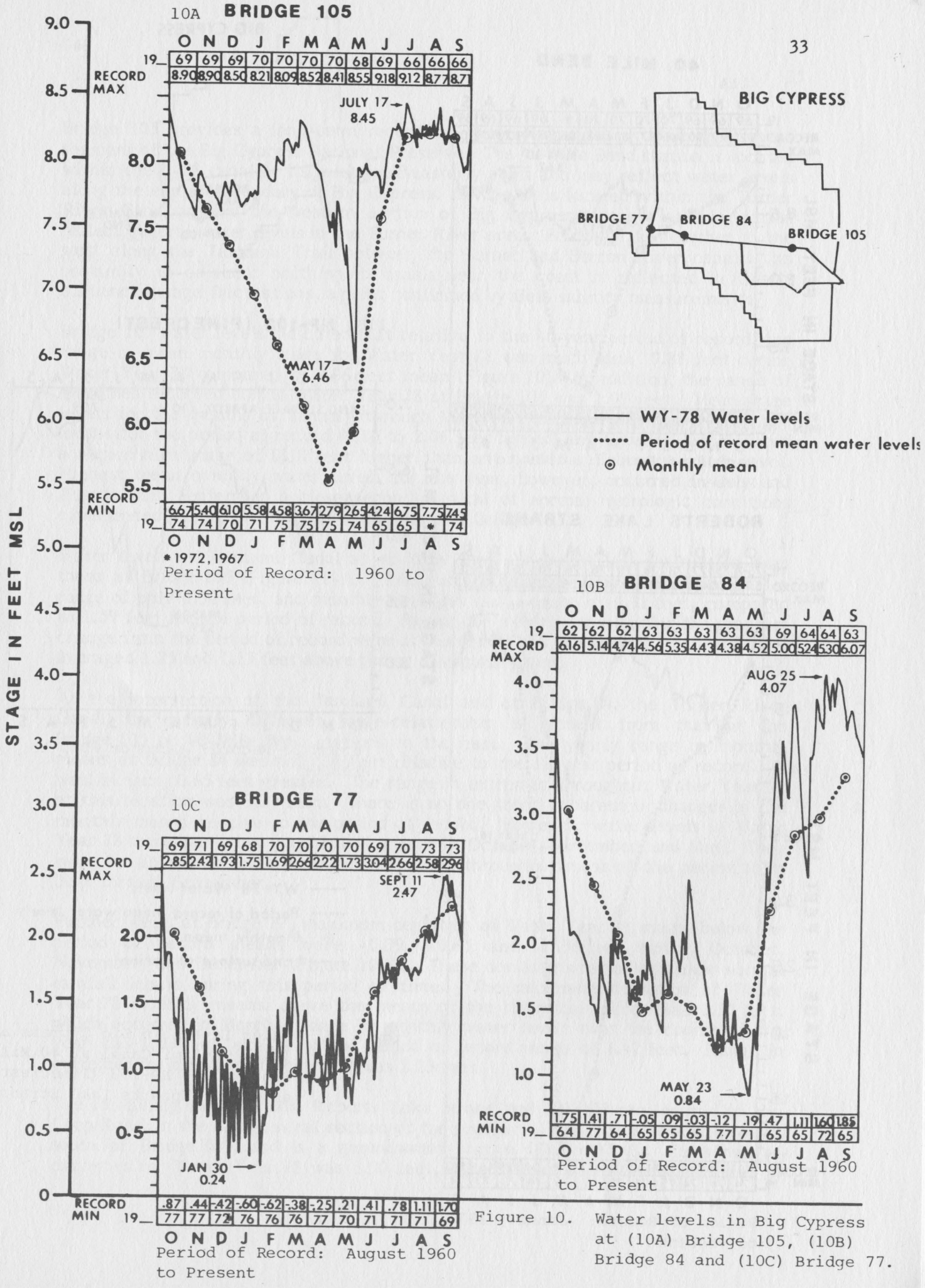
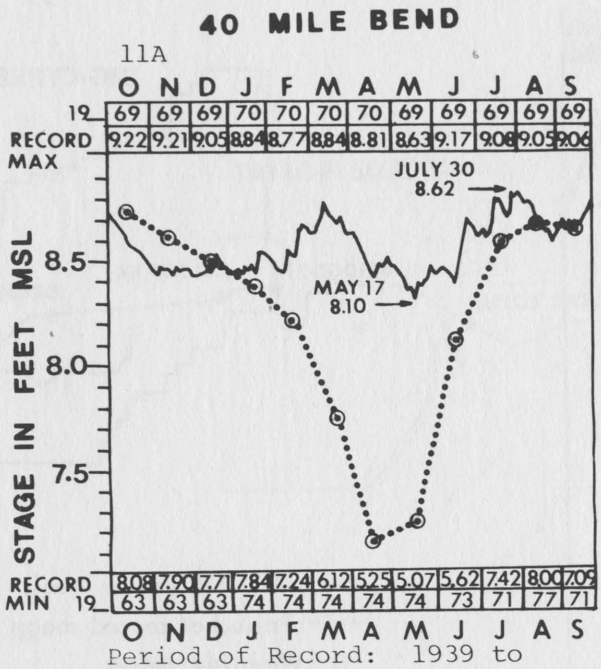
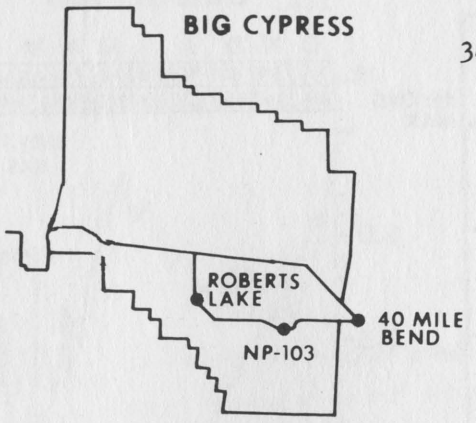
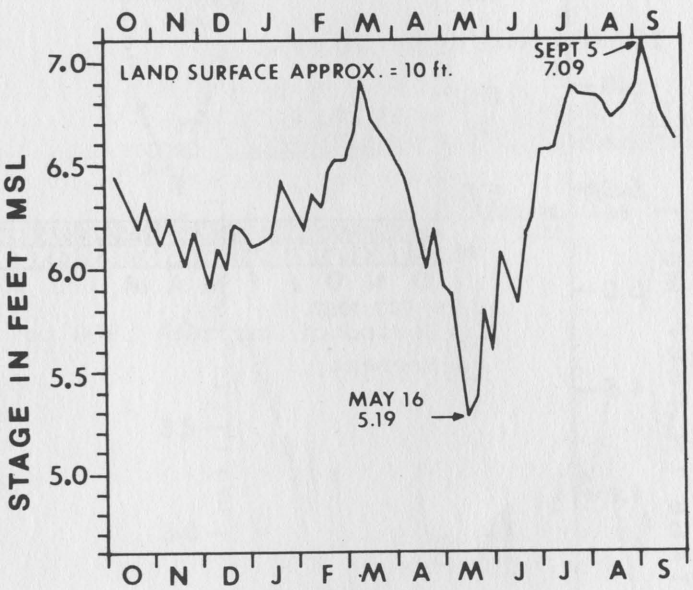


Figure 10. Water levels in Big Cypress at (10A) Bridge 105, (10B) Bridge 84 and (10C) Bridge 77.

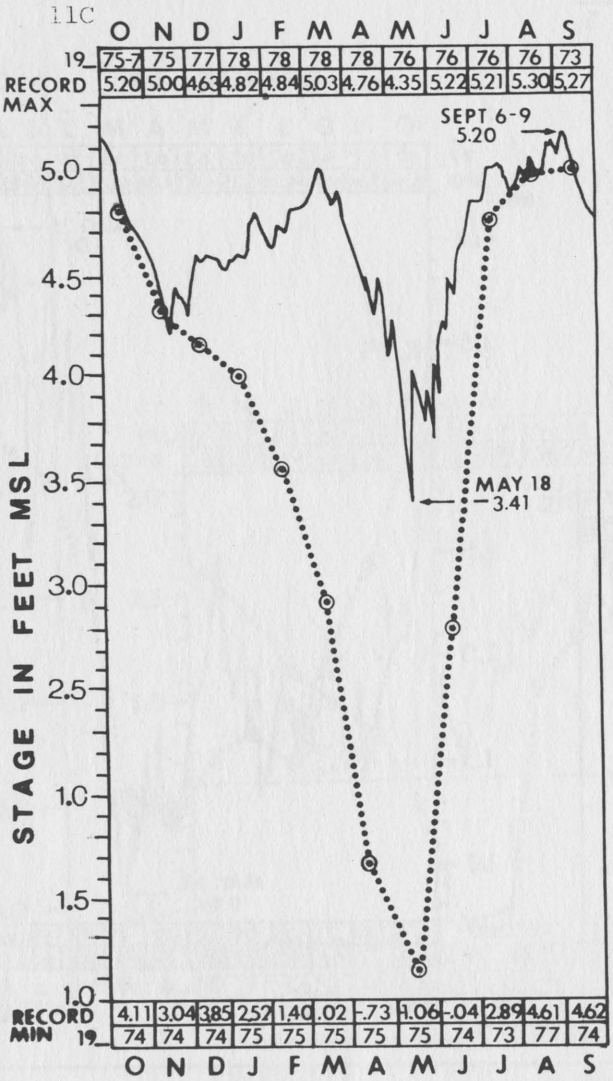


Period of Record: 1939 to Present





Period of Record: October 1970 to Present



Period of Record: January 1973 to Present

KEY

—— WY-78 Water levels

····· Period of record mean water levels

⊙ Monthly mean

– – – Land surface at station

Figure 11. Water Levels in Big Cypress at (11A) Tamiami Canal at 40 Mile Bend, (11B) NP-103 (Pinecrest) and (11C) Roberts Lake Strand.

Bridge 105 provides a long-term record of water stages for a centrally located segment of the Big Cypress National Preserve. The 40-Mile Bend station is located within the L-28 canal at its most southeasterly point and may reflect water levels along the eastern boundary of Big Cypress. Bridge 84 is located within the Turner River Canal toward the western portion of Big Cypress. Stages at this station reflect general water levels in the Turner River area. Bridge 77 lies further to the west along the Tamiami Trail between the Turner and Barron River canals. Its proximity to adjacent north/south canals near the coast is reflected in tidally influenced stage fluctuations, a point confirmed by field salinity measurements.

Bridge 105 water levels indicated that relative to the 40-year period of record, the range in mean monthly stage for Water Year 78 was much less: 0.88 feet during Water Year 78 compared to 2.66 feet mean (Figure 10). In addition, the range of extremes recorded during Water Year 78 at Bridge 105 was 1.99 feet. Mean stage levels for the months of January through May were considerably higher than the means for the period of record (0.83 to 2.06 feet higher) and February experienced a record high stage of 0.10 feet higher than any previous February water level. Highest mean monthly water levels for the year, however, occurred in July and August with September a close second, typical of normal hydrologic conditions experienced throughout the period of record at Bridge 105.

Water levels at Tamiami Canal at 40-Mile Bend underwent less fluctuation than those at Bridge 105 (Figure 11-A). The extreme stage levels for the year had a range of only 0.52 feet, and monthly averages had a range of 0.31 feet, compared to 1.59 feet for the period of record. Again, the months experiencing the greatest change from the period of record were at the end of the dry season; April and May, averaged 1.25 and 1.15 feet above period of record means.

At the intersection of the Tamiami Canal and at Bridge 84, the Turner River Canal, an entirely different stage-relationship is present from that at the Bridge 105 or 40-Mile Bend stations to the east. The yearly range in monthly means at Bridge 84 was not constant relative to the 18 year period of record. It was, in fact, 0.65 feet greater. The range in extremes throughout Water Year 78 at this location was 3.23 feet. There is no one trend apparent in changes in the monthly means relative to the period of record. However, water levels in Water Year 78 were far below the historic means in October, November, and May. They were far above historic means in March, and throughout most of the period from June through September.

Further west, at Bridge 77, maximum deviation of Water Year 78 means below the period of record means were -0.39, -0.65 and -0.36 feet during October, November, and December (Figure 10-C). These deviations reflected below normal rainfall inputs during this period of time. The maximum deviation of Water Year 78 monthly means, above the means of the historical record was 0.30 feet, which occurred in March. Range in monthly water levels over the course of the year was 1.53 feet, similar to the period of record range of 1.42 feet. Range in extremes for the year at Bridge 77 was 2.23 feet.

The remaining two stations, Roberts Lake Strand and NP-103 are located on the Loop Road, in the east-central section of the preserve. NP-103, is almost directly south of Bridge 105, and is a groundwater station (Figure 11-B). Its range of extremes for Water Year 78 was 1.90 feet. The lowest water levels occurred in

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May (5.19 feet), averaging 5.60 feet above msl or about 4.4 feet below land surface. Highest water levels occurred in August (7.09 feet), averaging 6.74 to 6.79 feet above msl from July through August, or about 3.2 feet below land surface. This range is surprisingly not as great as one might expect for a groundwater station.

Roberts Lake Strand, located in a cypress strand, is roughly midway between NP-103 and Bridge 84, experienced water levels which had a range of 1.79 feet during Water Year 78 (Figure 11-C). Maximum stages from June through October were close to 5.00 feet above msl while May averaged the lowest water levels of 3.91 feet above msl. The Water Year 78 pattern appears to be more constant than the preceeding 5 years with a 1.12 foot, the range of the average monthly water levels in 1978 compared with a range of 3.89 feet during the previous five years. A second major change from the period of record is observed during the dry season of March through June. Prior to 1978, average monthly water levels during these months were 1.55 to 2.48 feet lower than in Water Year 78.

III: WATER DELIVERIES AND DISCHARGE

Past development in South Florida has altered the natural overland sheet flow that once occurred from Lake Okeechobee to Florida Bay. With the completion of the Tamiami Trail (U.S. 41) combined with the development of flood control projects, natural overland sheet flow no longer exists continuously from the lake southward. In order to insure water inflows (comparable to the historic past) into Everglades National Park, the U.S. Congress mandated a minimum water delivery schedule for water to be discharged into the park (Public Law 91-282). In addition, the Big Cypress was designated as a National Preserve (Public Law 93-440) in order to "preserve and protect the hydrologic values of the Big Cypress watershed." Through these actions the hydrologic integrity of each area has been assured.

Intensive discharge measurements are made by the U.S. Geological Survey in cooperation with the National Park Service along a 60 mile segment of the Tamiami Trail. The measurements monitor discharge at the four S-12 control structures and some 57 culverts between L-30 and Carnestown, Florida. These measurements are made to determine surface inflows into the northern sections of Everglades National Park. These flows can be analyzed to determine the contributions of the Big Cypress, Northeast Shark Slough, and the S-12 discharges to the national park. In addition, discharge measurements are made for surface inflows in Taylor Slough and the Context Road areas to provide discharge data for their respective regions.

During Water Year 78 Everglades National Park received a combined total of 944,920 acre-feet of water from the Big Cypress, S-12 discharges, Taylor Slough, Northeast Shark Slough and the Context Road areas (Table 14). The largest and most significant segment for water contributions was the Tamiami Canal Outlets: L-67(A) to 40 Mile Bend section (S-12A, B, C and D). Nearly 55 percent of all surface inflows into Everglades National Park passed through these control structures. Much of these waters can be attributed to "excess deliveries" by the Corps of Engineers during March, July, August, and September. Other inflows include the Big Cypress watershed, which contributed 36 percent of all surface inflows, Northeast Shark Slough (6 percent), Taylor Slough (2 percent) and the Context Road and C-111 areas (less than 1 percent).

S-12 Water Deliveries

Water is delivered to the Shark Slough drainage basin of Everglades National Park via 4 control structures (S-12A, S-12B, S-12C, and S-12D). Each of these structures contain six gates which can be independently operated which allows surface waters to enter the slough through the process of gravity flow. The structures are situated at approximately 3 mile intervals along the Tamiami Trail. The discharge section for all four structures is referred to as the Tamiami Canal Outlets: L-67(A) to 40 Mile Bend.

The amount of water released to Everglades National Park is in accordance with Public Law 91-282 enacted by the U.S. Congress in 1970, authorizing the minimum amount of water to be delivered into the park. One of the provisions of the law provided for the minimum delivery of 260,000 acre-feet (320.58 hm^3) of water per annum to the park through the Tamiami structures (S-12's) on a monthly schedule (Table 15). There is no guarantee that this allotment of water will be available

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Table 14. Total Surface Water Inflows into Everglades National Park, Water Year 78

Location	Acre-feet	Percentile Contribution
S-12 Deliveries	517,000	55
L-30 to L-67 A	60,750	6
Big Cypress	340,700	36
Taylor Slough Bridge	20,900	2
Taylor Slough at Context	5,570	1
C-111		
TOTAL	944,920 acre-feet	

Table 15: S-12 Scheduled water deliveries to Everglades National Park

Month	Volume-Acre Feet
January	22,000
February	9,000
March	4,000
April	1,700
May	1,700
June	5,000
July	7,000
August	12,000
September	39,000
October	62,000
November	59,000
December	32,000
Total	260,000

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each year, however, hydrologic investigations have determined that sufficient water should be available to meet this schedule during most years.

The minimum water delivery schedule for Everglades National Park was determined through the utilization of historic hydrologic records. The resulting schedule was developed to approximate natural overland sheet flow in accordance with seasonal fluctuation into the Shark River Slough throughout recent historic times in accordance with seasonal variations.

In order to meet the requirements of the monthly water delivery schedule, a 10-day release schedule was developed. The delivery rates were determined by stage-discharge relationships between flows measured through the Tamiami Canal outlets between 40 Mile Bend and L-30 and P-33. Average water levels for the slough were determined by computing mean gauge height at P-33 and analyzing the monthly stage duration curves. Therefore, the 10-day schedule evolved from a hydrographic interpolation. The resulting calculations developed a schedule of flows ranging from 15 cfs (0.42 m^3/s) to a maximum 1040 cfs (29.45 m^3/s) per 10-day period.

During Water Year 78 the Corps of Engineers delivered to Everglades National Park a total of 517,999 acre-feet of water through the four S-12 control structures. This large discharge includes an excess delivery totaling 257,000 acre-feet to Everglades National Park which nearly exceeded the Congressionally mandated water delivery schedule (260,000 acre-feet) for an entire year (Table 16). Therefore, throughout the water year Everglades National Park received 199 percent of the schedule waters to be delivered to the park. The greatest excess deliveries occurred during the months of July, August and September, with a secondary excess delivery during the month of March.

The greatest excess delivery which disrupted and affected the national parks' ecosystem occurred during the months of July, August, and September (Figure 12). Water levels in all three conservation areas were above the regulated levels. These conditions were a result of unusually heavy rainfall events which occurred during July. The Tamiami Ranger Station, adjacent to Conservation Area 3, experienced its second wettest July during its period of record since 1943 (refer to rainfall section). During July, all four structures were opened fully to accommodate this excess delivery of surface waters. By the end of July, Shark Slough had received 521 percent of its monthly regulated schedule.

This excessive amount of water discharged through the S-12 control structures had an adverse impact on ecosystem stability. The rate and quantity of delivered waters poorly simulated the natural flow conditions that would be expected from a normal flow situation associated with the greater than normal rainfall totals. The most consequential damage which was documented during the flood release was an impact upon alligator nesting in the Shark Slough. According to Kushlan (1979) "26 percent of (the alligator) nests were completely flooded and 63 percent of the nests were affected by flooding."

The greatest single monthly discharge during Water Year 78 into Everglades National Park occurred during this excess delivery in August when 130,200 acre-feet were discharged through the S-12. The August delivery schedule was exceeded during the first week in the month when 28,007 acre-feet of water was

Table 16: Water Year 78 S-12 Deliveries to ENP (A through D).

Month	Scheduled Deliveries Acre-Feet	Actual Deliveries Acre-Feet	Monthly Deliveries cfs	Monthly Percent
Oct.	62,000	73,091	36,850	118
Nov.	59,000	57,290	28,881	97
Dec.	32,000	32,930	16,603	103
Jan.	22,000	22,210	11,196	101
Feb.	9,000	10,690	5,391	119
Mar.	4,000	38,230	19,274	956
Apr.	1,700	2,870	1,448	169
May	1,700	2,510	1,265	148
Jun.	5,000	5,390	2,718	108
Jul.	7,000	36,440	18,371	521
Aug.	12,000	130,200	65,620	1,085
Sept.	39,000	105,200	5,337	270
TOTAL	260,000	517,000	-	199

Scheduled Deliveries = 260,000

Excess Deliveries = 257,000 acre-feet

Mean Discharge = 714 cfs

Max. Discharge = 2,860 cfs

Min. Discharge = 38 cfs

Total Discharge = 260,654 cfs

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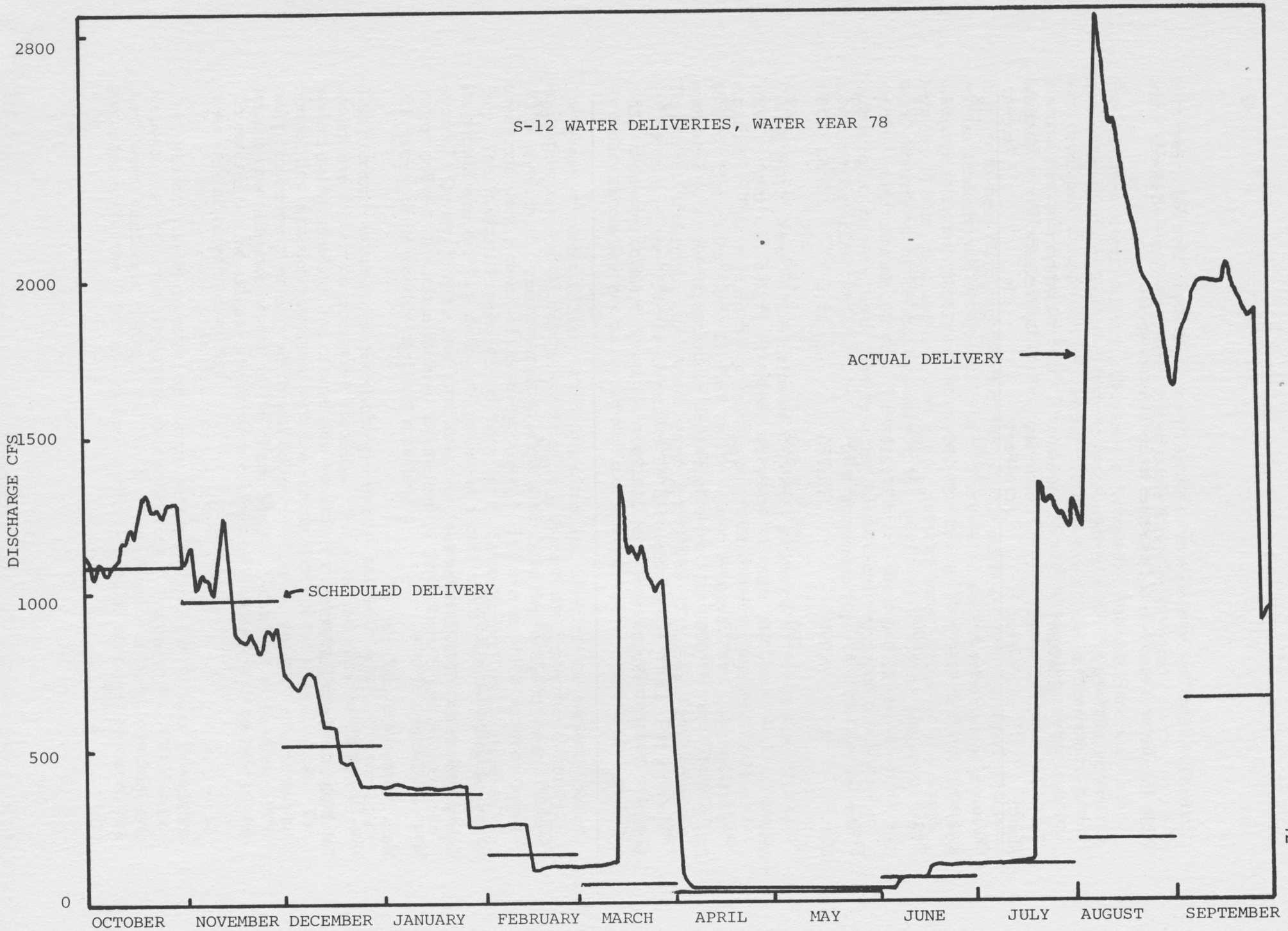

Figure 12. S-12 Deliveries, WY 78.

delivered to the Shark Slough. Throughout the month all 6 gates were opened at the four control structures. By month's end, the excess deliveries amounted to 1,085 percent of the scheduled monthly delivery mandated by Congress.

Decreasing rainfall amounts in September, combined with receding water levels in Lake Okeechobee, and the three conservation areas, resulted in a delivery schedule which more closely approximated the scheduled monthly discharge. Two structures, S-12A and S-12D, were closed by the end of the month; however, excess deliveries were continuous throughout the month. The scheduled September water delivery had been reached by mid-month and by month's end the park had received 270 percent of the scheduled monthly deliveries or a total of 105,000 acre-feet (schedule = 39,000 acre-feet).

The combined excess deliveries to the Shark Slough throughout these months totaled 213,840 acre-feet of surface waters. The magnitude of these deliveries and the abrupt change in surface water conditions impacted the ecological integrity of the slough's ecosystem. The excess delivery began on July 11 when the discharge through S-12B and S-12C totaled 964 cfs (prior to excess delivery on July 18 the rate was 139 cfs). The following day (July 20) the discharge rate increased to 1353 cfs (2679 acre-feet/day). This represented a change in delivery from 62,383 gallons per minute (July 18) to over 607,226 gallons per minute by July 20. The excess deliveries approximated this discharge rate throughout the remainder of July. In August, discharge rates were increased through the additional openings of structures S-12B and S-12D. The greatest single daily discharge into the slough during this excess delivery occurred on August 9 when all four structures delivered waters at a rate of 2858 cfs (5659 acre-feet). This discharge rate was equivalent to a delivery of 1,282,670 gallons per minute. Finally, on September 26 two of the structures were closed and deliveries were reduced.

This period of time during Water Year 78 was not the only time during which excessive amounts of water were discharged into the Shark Slough via the S-12's. Another major discharge occurred during the month of March. On March 13, the Corps of Engineers opened all gates to 3.0 feet (full open) at structure S-12C. The discharge rate increased from 91 cfs (180 acre-feet/day) on March 12 to a maximum of 1360 cfs (2692 acre-feet/day) on March 14. The excess delivery continued until March 27 when the Corps of Engineers began stepping down the discharges to the normally scheduled rate of 86 cfs on April 1. The results of this discharge had little impact on the slough as water levels were at a relatively high stage (compared to the norm) as a result of greater than normal rainfall amounts during January, February, and March. Hydrology station P-33 (10.4 miles south of S-12C) received the first perturbation from the excess delivery some 11 days (March 24) after the discharge began.

Throughout the remainder of the months during Water Year 78 discharges into the slough by the S-12 control structures approximated those mandated by Congress. Each month (except November) experienced a discharge rate slightly above the scheduled delivery rate. However, the rates and quantity of waters delivered to the park were not as dramatic as those experienced during March, July, August, and September.

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Flow Contributions To Everglades National Park

Surface waters, as mentioned previously, enter Everglades National Park through the S-12 control structures, Taylor Slough, C-111 and from the Big Cypress. In addition to the 260,000 acre-feet of water to be delivered to the national park through the S-12's, the Public Law (91-282) also specified that 37,000 acre-feet be delivered to Taylor Slough and an additional 18,000 acre-feet was to enter the park through the C-111 area.

The maximum daily discharge into Everglades National Park during Water Year 78 occurred at S-12D during an excess delivery on August 9 (Table 17). Likewise, the other control devices reported their greatest daily discharge rates during periods of flood releases into the park. S-12C approximated the maximum monitored at S-12D when the daily maximum reached 1360 cfs on March 12. The other two structures (S-12A and B) experienced lower discharge conditions (407 cfs and 796 cfs, respectively) associated with the August excess deliveries.

Three of the control structures reported "no flow" conditions for their minimum discharge rate (S-12A, B and D) sometime during the water year. The greatest number of "no flow" days (311 days) was recorded at S-12D which was only opened for a 2-month interval from August 2 until September 24 for the flood release. During the remaining months throughout Water Year 78, S-12D was not opened, in accordance with water resources management practices. Likewise, S-12A reported a similar condition with 296 "no flow" days as a result of these same management policies. The third station experiencing no-flow conditions was S-12B. It was the management's intent to utilize this structure in a secondary capacity to deliver surface waters to Everglades National Park. Therefore, only 163 days were reported throughout the water year when zero discharge was monitored.

The primary source for surface water distribution in Everglades National Park is S-12C which provided the optimum hydrologic source for Shark River Slough inputs because of its location to the central slough. Throughout Water Year 78 there were zero "no flow" days at S-12C and the minimum daily discharge monitored at the structure was 40 cfs.

Taylor Slough experienced 266 days of overland sheet flow during Water Year 78. The maximum daily discharge at the Taylor Slough Bridge was 298 cfs. There were 89 days of zero flow and the mean daily discharge was 28.9 cfs. This daily discharge value is less than the mean daily discharge rate for the period of record which is 38.0 cfs. However, it must be emphasized that a reduced flow rate when compared with the period of record includes data which reflect impacts on the hydrology of Taylor Slough by construction of the L-31(W) canal. Therefore, a departure from the mean would be expected. Rose, Rosendahl, and Flora (1980) reported the mean annual discharge following canal construction at 28.5 cfs for the Taylor Slough Bridge. Considering the canal's impact on the slough's hydroperiod, the discharge rates for Water Year 78 were normal compared with the mean flow conditions experienced since canal construction (1968) (Table 18).

Throughout Water Year 78, at the Taylor Slough Bridge flow equalled or exceeded 10 cfs fifty percent of the time during the water year (Figure 13). The flow duration curve reflects the numerous days throughout the water year for which discharge was very low or non-existent at the Taylor Slough Bridge. Flow exceeding 50 cfs occurred less than 10 percent of the time throughout the water year. The mean daily discharge was equalled or exceeded only 22 percent of the time.

Table 17. Summary of Discharge Data for Everglades National Park during Water Year 78

Station	Max. Daily cfs	Min. Daily cfs	Number of No Flow Days	Mean Daily cfs
S-12A	407	0	296	59
S-12B	796	0	163	102
S-12C	1360	40	0	427
S-12D	1470	0	311	127
L-30 to 67(A)	386	2.2	0	84
Taylor Slough Bridge	298	0	89	28.9
Context Road	139	0	222	7.7

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Table 18: Discharge, Taylor Slough at the Bridge, Water Year 78

Month	$\bar{x}$ Monthly Q (after Canal Construction) 1969-1977	Water Year 79 Monthly Discharge	Percentage of Norm
Oct.	3,529	2,780	79
Nov.	1,250	471	37
Dec.	101	679	672
Jan.	43	179	416
Feb.	39	342	877
Mar.	31	315	1,016
Apr.	12	103	858
May	240	321	134
Jun.	4,498	931	21
Jul.	2,890	1,740	60
Aug.	2,269	2,130	94
Sept.	5,706	10,910	191
TOTAL	20,608	20,901	101

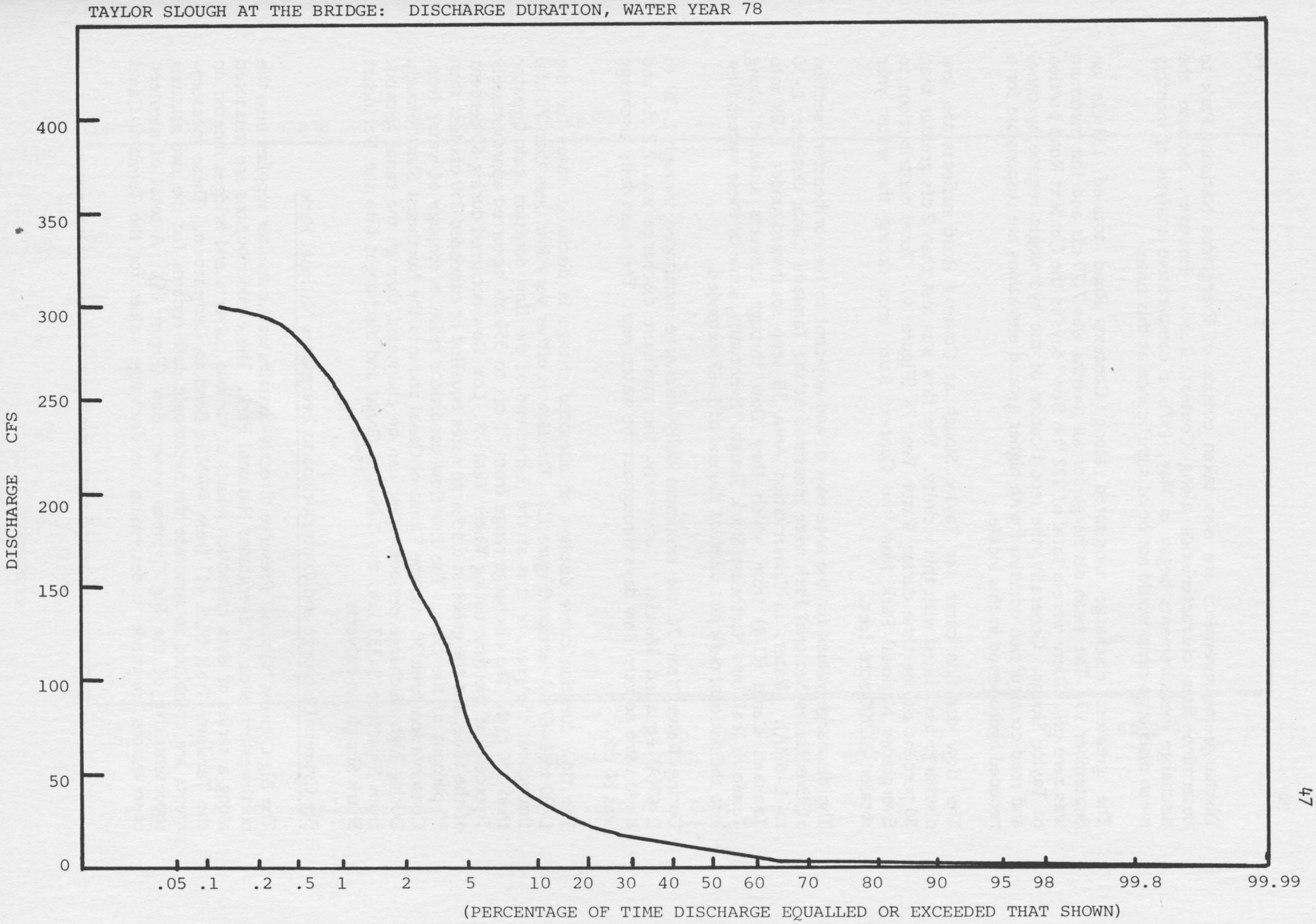

Figure 13. Discharge duration curve WY 78: Taylor Slough at the bridge.

Discharge measurements are also taken outside of Everglades National Park to determine flow characteristics along Context Road. However, because the discharge measurements began in May, 1976, a comparative analysis of monthly mean discharge rates would not be of significance at this time.

The greatest discharge monitored along Context Road totaled 139 cfs on September 13. The mean discharge for all months was 7.70 cfs and the minimum was zero cfs. There were a total of 222 "no flow" days in the Context Road portion of Taylor Slough. Generally, the modification of the hydrologic regime by canal and road construction combined with higher ground elevations are responsible for a reduced hydroperiod in this locale.

The flow duration curve for Taylor Slough at Context Road reflects the low discharge associated with this vicinity. The flow was less than 2 cfs greater than 80 percent of the time during Water Year 78 (Figure 14). Total contributions to Everglades National Park from the Context Road area during the water year totaled 20,900 acre-feet.

The discharge values for the area east of and adjacent to the northeastern section of Everglades National Park were measured at the Tamiami Canal Outlets: L-30 to L-67(A). Waters in Conservation Area 3B seep southward under L-29 into Tamiami Canal (C-4) from which they flow through culverts situated along Tamiami Trail into Northeast Shark Slough. Eventually, some of these waters flow into the national park just south of the end of L-67 extended.

During Water Year 78 the maximum daily discharge monitored through L-30 to L-67(A) equalled 386 cfs. Conversely, the minimum discharge was 2.2 cfs and there were no zero flow days throughout the water year. The mean daily discharge was 84 cfs.

The flow duration curve displays an abrupted change in discharge rates for the L-30 to L-67(A) section (Figure 15). The flow is either very low (less than 70 cfs) throughout the year, or it is at the higher end of the flow duration scale (greater than 350 cfs). The discharge range from 70 cfs to 350 cfs occurred approximately 5 percent of the time during Water Year 78. Low flow occurred during 80 percent of the time, and the greatest discharge rates equalled or exceeded 350 cfs less than 10 percent of the time. The low flow conditions reflects seepage of water from Conservation Area 3B into the Tamiami Canal and into the Northeast Shark Slough. During high discharge periods water can be channeled through the canal network from Structure S-333 into the Tamiami Canal and discharges into the Northeast Shark Slough via culverts.

Big Cypress Discharge and Contributions to Everglades National Park

The Big Cypress National Preserve directly contributes freshwater supplies into the northwestern area of Everglades National Park. These contributions are measured along a series of data collection points at various culverts and bridges located on the Tamiami Trail (U.S. 41) from 40-Mile Bend to Carnestown. These measurements are combined to generate the hydrologic data records for the two stations representative of the Big Cypress water flow (Figure 16). A total of nineteen observations are made to determine the discharge values for the Tamiami Canal

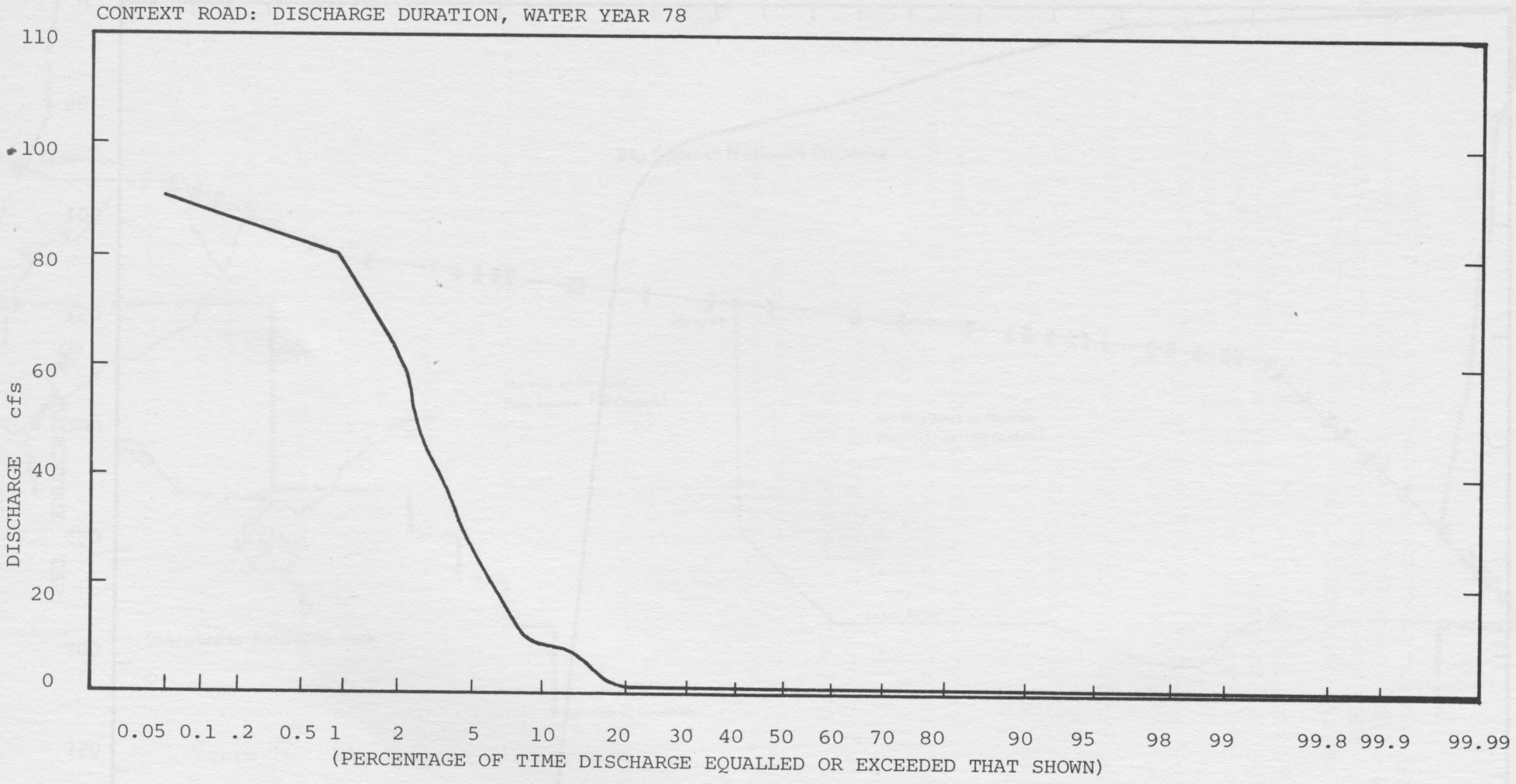

Figure 14. Discharge duration curve Water Year 78: Context Road.

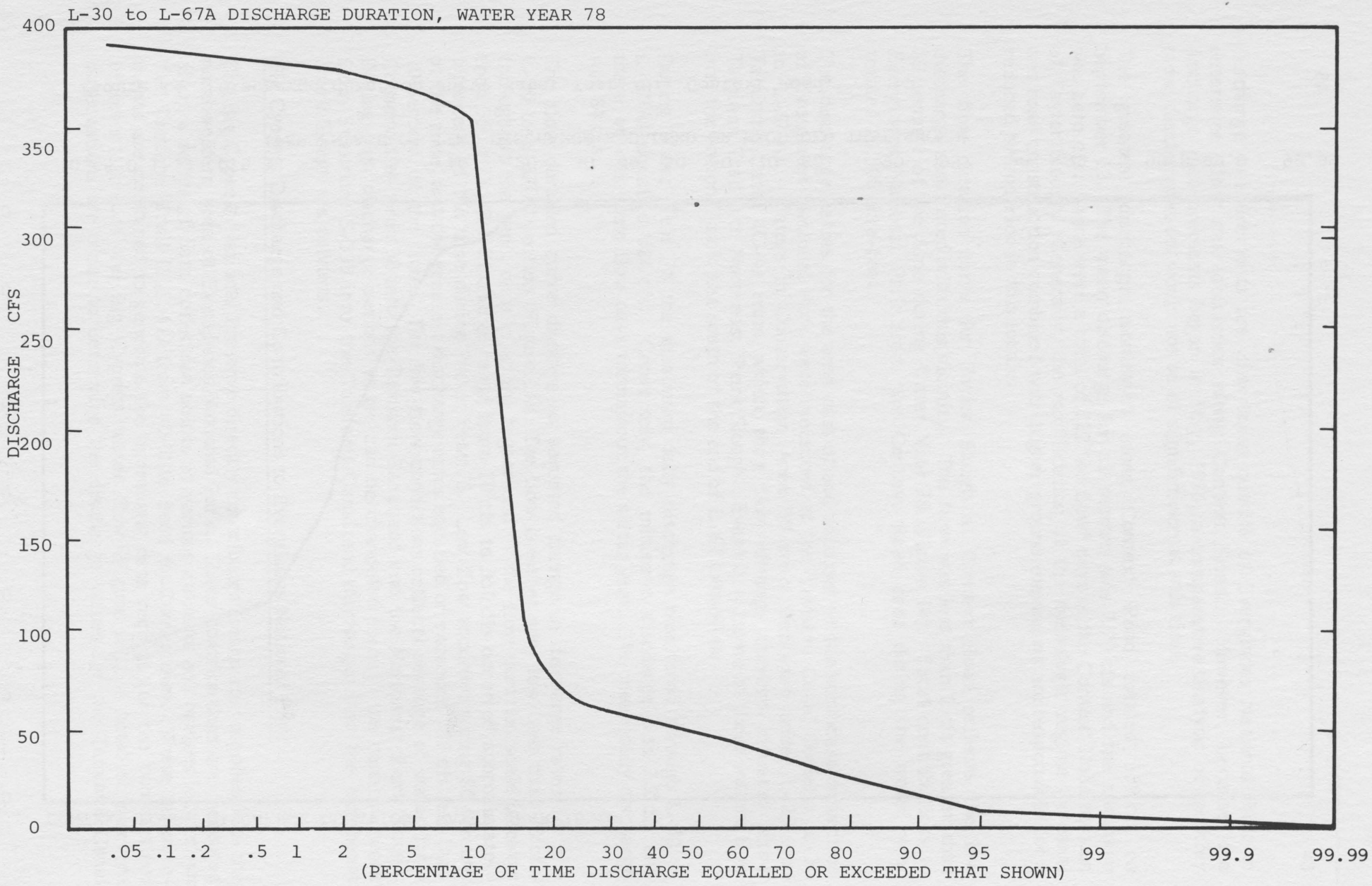

Figure 15. Discharge duration curve Water Year 78: L-30 to L-67A.

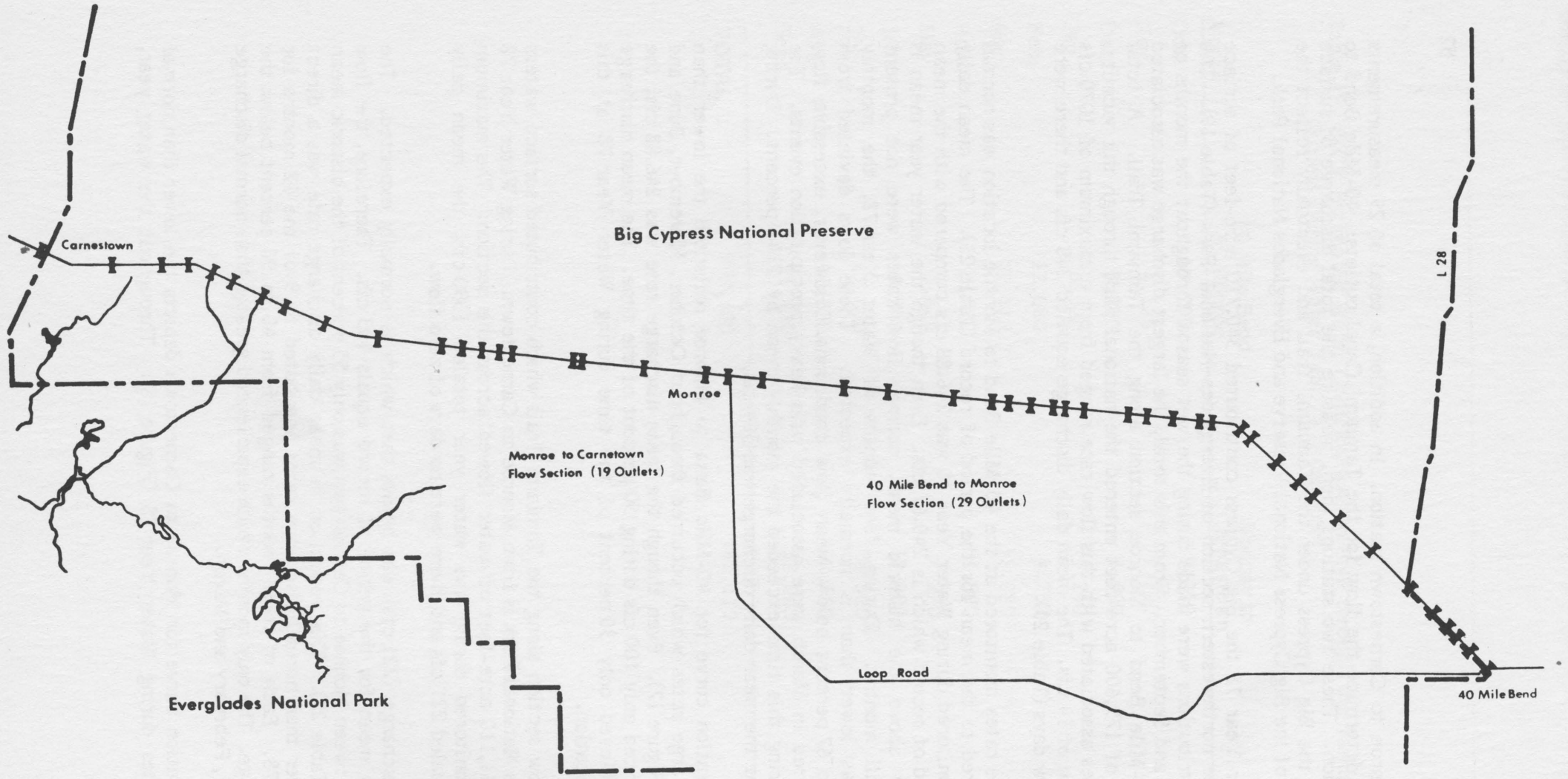

Figure 16. Big Cypress Culvert Map.

outlets: Monroe to Carnestown station. In addition, a total of 29 measurements are taken to determine the flow for the Tamiami Canal outlets: 40-Mile Bend to Monroe Station. These two stations then, measure the total discharge of surface waters from the Big Cypress under the Tamiami Trail and eventually reflect the contribution of the Big Cypress National Preserve and Everglades National Park.

During Water Year 78 the Big Cypress contributed 340,710 acre-feet of surface waters to the northwestern section of Everglades National Park (Table 19). The greatest contributions were made during the wet season throughout the months of July, August and September. From this total, the largest discharge was associated with the 40-Mile Bend to Monroe section along the Tamiami Trail. A total contribution of 179,600 acre-feet entered the national park through this vicinity. The discharges associated with this flow rate ranged from a maximum of 1070 cfs to a minimum of 14 cfs. The mean daily discharge equaled 248 cfs and there were no "zero" flow days (Table 20).

The discharge rates monitored at the 40-Mile Bend to Monroe location was normal when compared to the mean for the period of record (Table 21). The mean daily discharge monitored during Water Year 78 was 246.88 cfs compared with the mean for the period of record which is 240.67 cfs. Even though the water year mean is only slightly above the historic mean, normal flow rates were not present throughout all months. During five months of Water Year 78, the monthly discharge was lower than is normally expected. These lows deviated from 33 percent to 67 percent below mean flow conditions. However, excessive flow rates monitored in March were associated with heavy precipitation events. The discharge during this time exceeded the monthly mean by 2141 percent. During this brief time the mean daily discharge was 364 cfs.

The flow duration curve for 40-Mile Bend to Monroe reflected the lower than normal discharge rates which occurred throughout October, November, June and September (Figure 17). Even though the mean discharge rate was 246.88 cfs, the area experienced only 100 cfs during 50 percent of the time. The mean discharge rate was achieved only 30 percent of the time during Water Year 78 at this monitoring location.

The other flow section along the Tamiami Trail which contributed surface waters to Everglades National Park is from Monroe to Carnestown. During Water Year 78 a total of 161,110 acre-feet of water flowed across this section. The maximum discharge monitored during the water year totaled 1390 cfs, the mean daily discharge equaled 221 cfs and there were no days of zero flow.

The mean discharge (221 cfs) was below that which is normally expected. The historic daily mean for the period of record equals 403 cfs. Therefore, the flow monitored between Monroe to Carnestown was only 55 percent of the historic mean daily flow (Table 22). This reduction in mean daily discharge rate was a direct result of lower than normal discharge rates attributed to 9 of the 12 months for Water Year 78. Each of these months ranged from 40 to 90 percent below the mean discharge. The only months which experienced greater than normal discharge were January, February and March.

The flow duration curve for Monroe to Carnestown depicts the lower than normal discharge rates during Water Year 78 (Figure 18). Throughout the water year,

Table 19. BICY Estimated Water Contributions to ENP through the Tamiami Canal Outlets During Water Year 78 (Acre-Feet)

Month	40 Mile Bend to Monroe	Monroe to Carnestown	Total
Oct.	17,790	19,250	37,040
Nov.	4,240	1,700	5,940
Dec.	2,720	3,500	6,220
Jan.	4,520	5,250	9,770
Feb.	12,080	4,730	16,810
Mar.	22,410	18,080	40,490
Apr.	3,570	1,900	5,470
May	5,620	270	5,890
June	9,840	17,490	27,330
July	42,050	28,320	70,370
Aug.	33,330	28,560	61,890
Sept.	21,430	32,060	53,490
TOTAL	179,600	161,110	340,710

Table 20. Summary of Discharge Data for Big Cypress During Water Year 78

Station	Max. Daily cfs	Min. Daily cfs	Number of No Flow Days	Mean Daily cfs
40 Mile Bend to Monroe	1070	14	0	248
Monroe to Carnestown	1390	0.02	0	221
Roberts Lake Slough	429	0	61	104
Barron River	248	10	0	120

Table 21: Water Year 78 Discharge, Tamiami Canal Outlets: 40 Mile Bend to Monroe

Month	Mean Daily Discharge (cfs)	Water Year 78 Mean Daily Discharge (cfs)	Percent Discharge
Oct.	432	289	67
Nov.	213	71.3	33
Dec.	86	44.3	52
Jan.	52	73.5	141
Feb.	49	218	445
Mar.	17	364	2141
Apr.	36	60	167
May	79	91.5	116
June	258	165	64
July	555	684	123
Aug.	566	542	96
Sept.	545	360	66
Mean Daily Q For Year	240.67	246.88	103

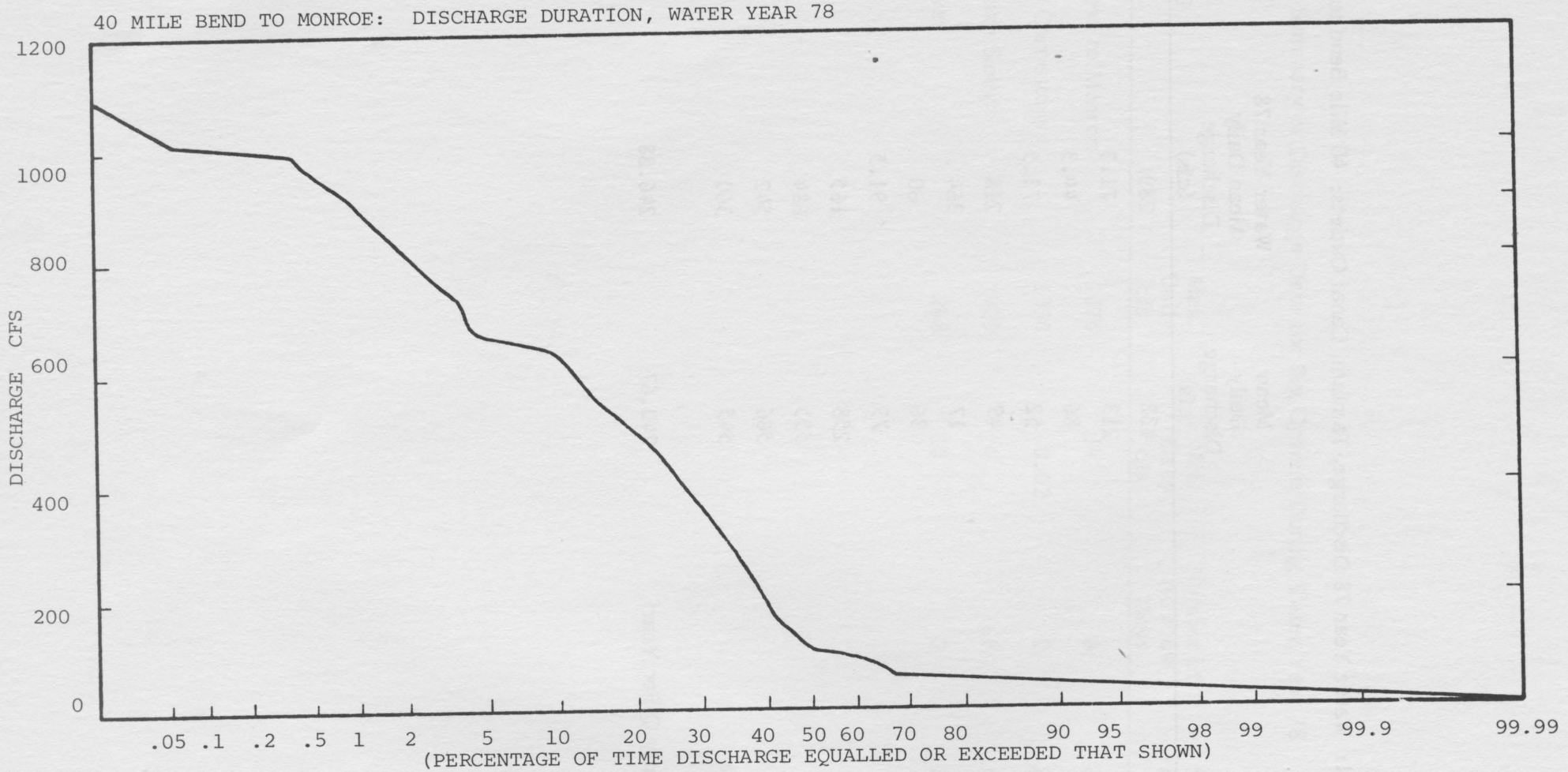

Figure 17. Discharge duration curve Water Year 78: 40 Mile Bend to Monroe.

Table 22: Water Year 78 Discharge, Tamiami Canal Outlets: Monroe to Carnestown

Month	Mean Daily Discharge (cfs)	Water Year 78 Mean Daily Discharge (cfs)	Percent Discharge
Oct.	646	313	48
Nov.	277	28.6	10
Dec.	106	56.9	54
Jan.	65	85.3	131
Feb.	58	85.1	147
Mar.	191	294	154
Apr.	52	31.9	61
May	43	4.39	10
June	668	294	44
July	799	461	58
Aug.	889	464	52
Sept.	1046	539	52
Mean Daily Q For Year	403	221	55

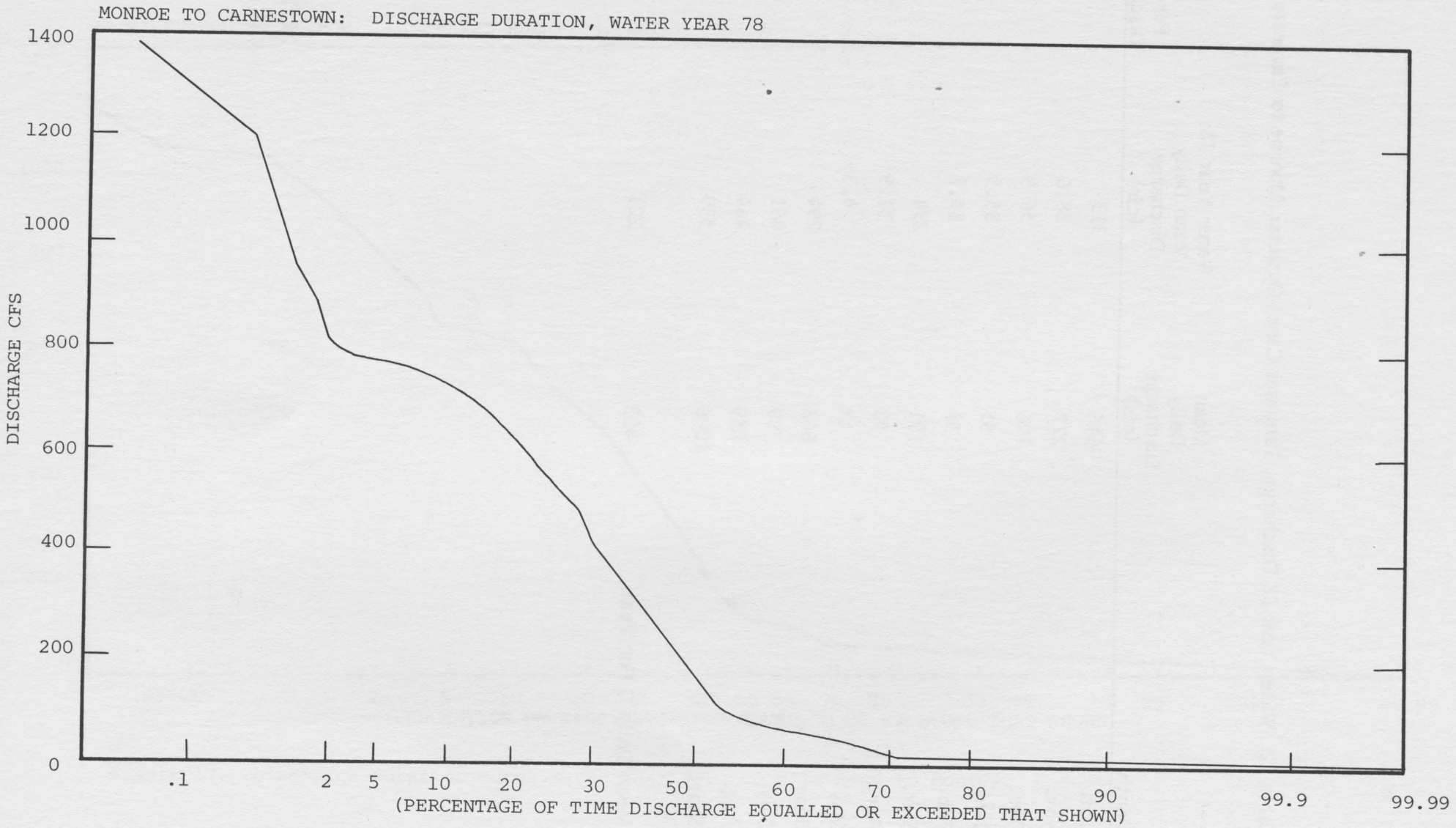

Figure 18. Discharge duration curve Water Year 78: Monroe to Carnestown.

discharge equaled or exceeded 95 cfs only 50 percent of the time. The mean discharge (403 cfs) was monitored only 22 percent (80 days) during the water year.

The other discharge locations for the Big Cypress include Roberts Lake Slough and the Barron River Canal. Roberts Lake, a cypress strand located between the Tamiami Trail and Everglades National Park, is indicative of overland sheet flow within the southern regions of Big Cypress. Conversely, the Barron River indicates hydrologic conditions along the western boundary of Big Cypress and gives an indication of flow distribution from Immokalee.

Roberts Lake Slough experienced the largest mean daily maximum discharge of the two stations reporting 429 cfs throughout the year. The minimum daily discharge at Roberts Lake equaled zero cfs and there were 61 of these no flow days (Table 20). The Barron River experienced 248 cfs for the mean daily max, 10 cfs for the mean daily minimum and there were no zero flow days.

The flow duration curves for these two stations depict low surface flow conditions throughout the year. During 50 percent of the water year discharge equaled or exceeded only 60 cfs at Roberts Lake and 132 cfs at the Barron River (Figures 19 and 20). The curves indicate two different flow regimes for which they represent. The Roberts Lake flow duration curve indicates a discharge which is very low and non-existent (20 cfs or less) throughout 40 percent of the water year. Conversely, the Barron River has a more sustained flow, exceeding 20 cfs at least 90 percent of the time.

CONCLUSION

The hydrological parameters monitored within Everglades National Park and the Big Cypress National Preserve provide an insight into hydrologic conditions for these wetland areas and help quantify the hydrologic budget for these protected lands. Through the continuous monitoring of surface water levels, precipitation inputs and discharge rates associated with controlled deliveries to Everglades National Park, a better understanding of the South Florida hydrosphere can be formulated resulting in better park and preserve resources management.

During Water Year 78 a total of 944,920 acre-feet of surface waters were discharged into Everglades National Park. Much of these surface waters were a direct result of flood releases through the S-12 control structures. The Big Cypress supplied 340,700 acre-feet of this total which represented a contribution of 36 percent of all inflows into Everglades National Park. Smaller inflows were associated with Taylor Slough and the L-30 to L-67(A) locations.

Precipitation inputs into Everglades National Park and Big Cypress National Preserve ecosystems fluctuated in accordance with respect to localized thunderstorm patterns. The major universal trend at all monitoring stations was an unusually dry October. The rainfall pattern throughout the water year indicated a slightly wetter than usual dry season followed by a drier than normal September and October. Unusually heavy rains in July in the central Everglades were recorded at the Tamiami Ranger Station for that month. By water year's end Royal Palm reported the greatest rainfall amounts above normal (122 percent), while Flamingo received the lowest amount of precipitation experiencing only 84 percent of the norm.

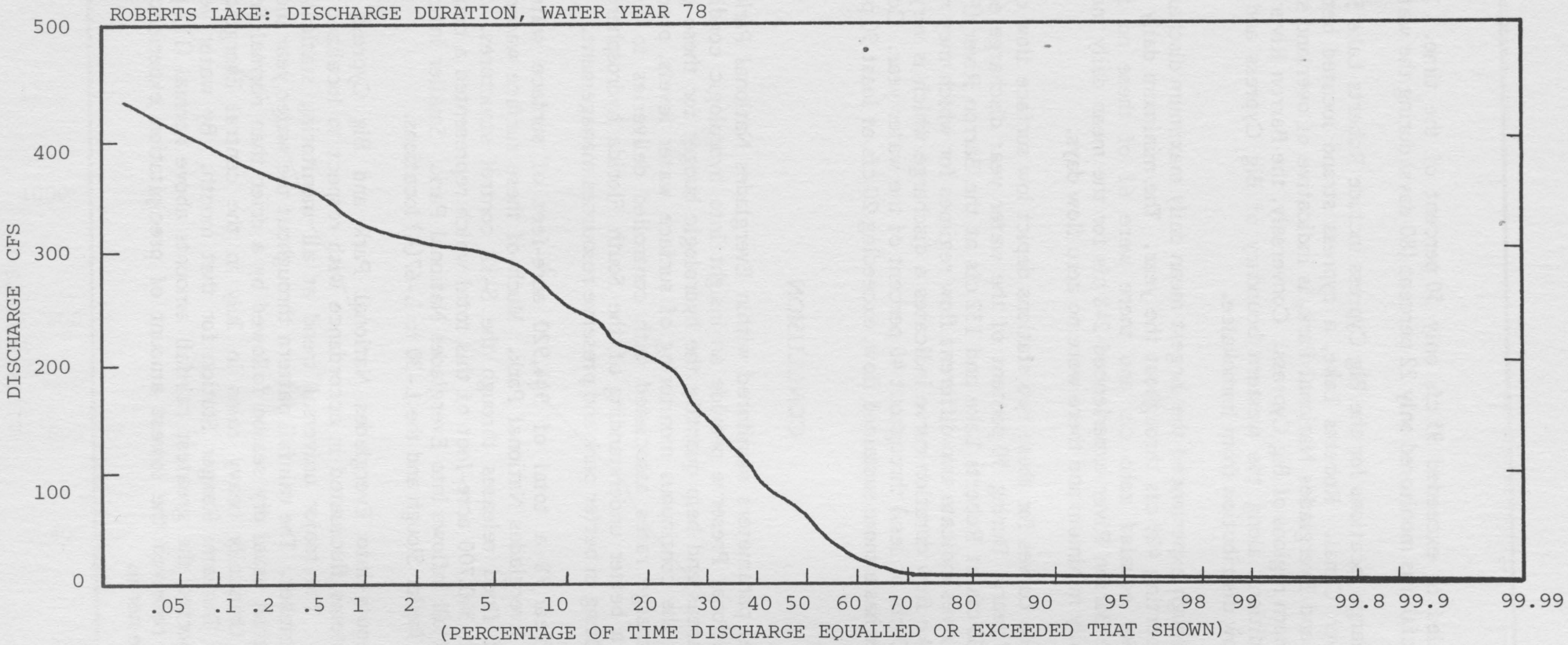

Figure 19. Discharge duration curve Water Year 78: Roberts Lake.

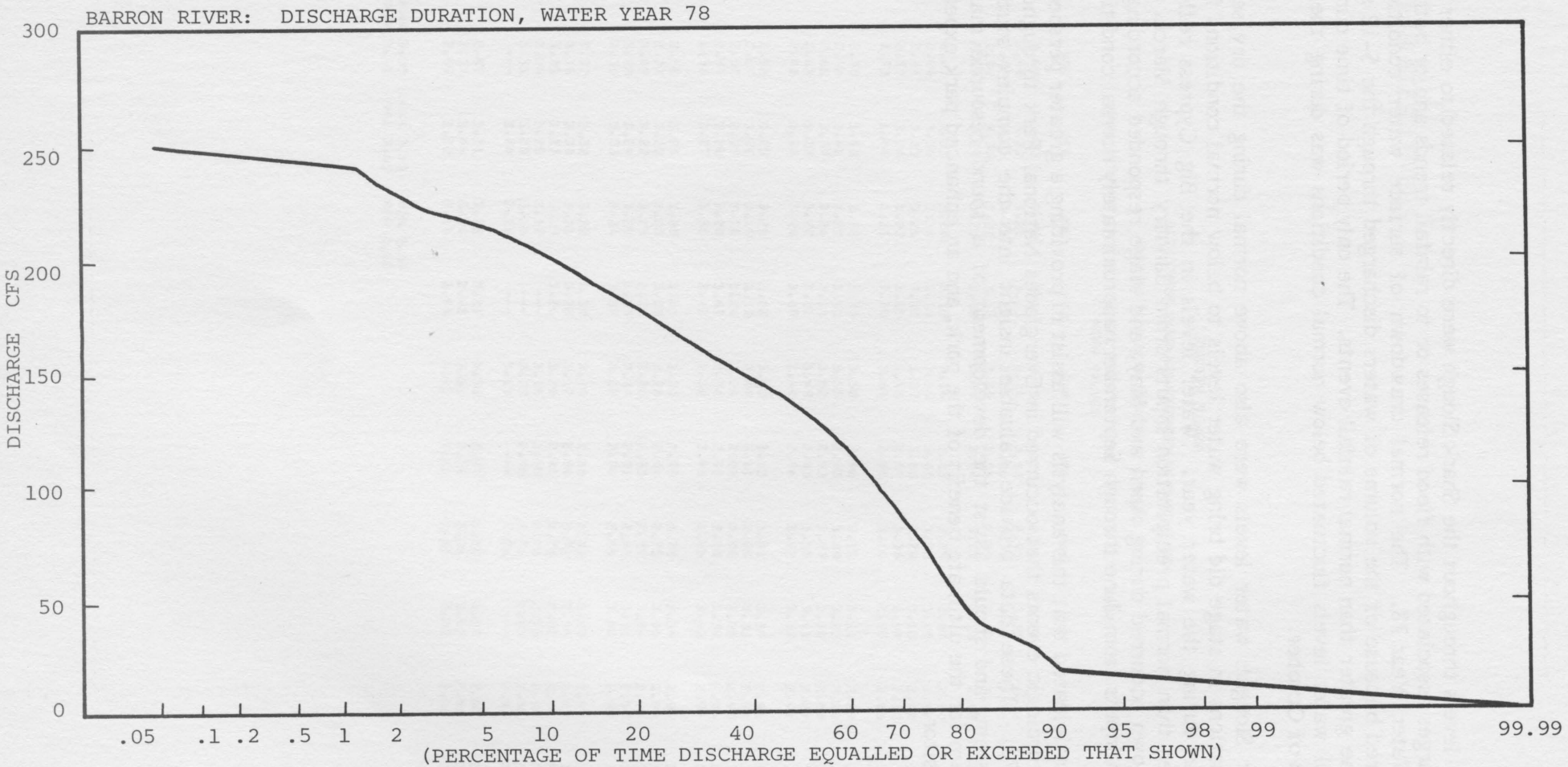

Figure 20. Discharge duration curve Water Year 78: Barron River.

Water levels throughout the Shark Slough were directly related to either excessive discharges associated with flood releases or to rainfall trends and/or both throughout Water Year 78. The normal drawdown of surface water conditions never occurred because of the volume of waters discharged through the S-12 structures and the greater than normal rainfall events. The only period of time during which overall water levels fluctuated below normal conditions was during the very dry month of October.

Taylor Slough's water levels were also above normal during the dry season, but fluctuations in stage did bring water levels to below normal conditions for 3 to 4 months during the water year. Water levels in the Big Cypress reflected the greater than normal precipitation inputs from January through March. A slight drawdown occurred during April and May, and stage responded accordingly to wet season inputs from June through September, approximately normal conditions.

It is anticipated that this analysis will assist in providing a greater perspective into the hydrologic events that occurred in Everglades National Park throughout Water Year 78. These data provide valuable insight into the complex south Florida ecosystem, and should assist the development of a sound resource management program for the ultimate benefit of the park, and an enhanced park experience for the visitor.

APPENDIX I: WATER LEVELS

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291143 FAKA UNION CANAL NEAR COPELAND, FL

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.52	2.88	3.33	3.25	3.14	3.25	3.10	2.94	3.40	2.91	2.90	3.05
2	3.49	2.86	3.32	3.25	3.13	3.24	3.08	2.95	3.35	2.94	2.92	3.05
3	3.49	2.89	3.31	3.24	3.13	3.25	3.06	2.99	3.27	2.96	2.96	3.05
4	3.48	2.91	3.30	3.22	3.12	3.39	3.05	2.99	3.17	2.94	2.98	3.03
5	3.45	2.90	3.29	3.21	3.12	3.38	3.04	3.19	3.13	2.92	2.98	3.04
6	3.42	2.87	3.33	3.20	3.12	3.34	3.03	3.25	3.09	2.90	2.99	3.03
7	3.42	2.84	3.36	3.20	3.10	3.31	3.01	3.23	3.09	2.91	3.01	3.03
8	3.41	2.80	3.33	3.25	3.10	3.27	3.00	3.20	3.13	2.89	3.02	2.98
9	3.39	2.77	3.34	3.23	3.19	3.45	2.99	3.16	3.08	2.88	3.04	2.93
10	3.37	2.73	3.44	3.21	3.18	3.61	2.98	3.14	2.95	2.86	3.05	2.95
11	3.36	2.70	3.43	3.20	3.15	3.58	2.96	3.12	3.11	2.89	3.05	2.95
12	3.36	2.68	3.42	3.23	3.13	3.55	2.95	3.09	3.23	2.89	3.06	2.94
13	3.32	2.65	3.37	3.24	3.11	3.52	2.93	3.07	3.38	2.89	3.07	2.95
14	3.29	2.62	3.32	3.22	3.11	3.49	2.93	3.05	3.41	2.89	3.08	2.87
15	3.27	2.60	3.28	3.20	3.09	3.46	2.94	3.02	3.37	2.90	3.12	2.89
16	3.25	2.58	3.25	3.20	3.08	3.43	3.03	3.01	3.39	2.91	3.13	2.91
17	3.23	2.57	3.30	3.19	3.13	3.40	3.01	2.99	3.33	2.92	3.13	2.94
18	3.19	2.58	3.29	3.18	3.20	3.36	2.99	2.98	3.28	2.93	3.14	2.98
19	3.17	2.59	3.28	3.28	3.41	3.34	2.98	2.98	3.39	2.94	3.14	3.00
20	3.14	2.56	3.27	3.30	3.42	3.32	2.96	2.96	3.42	2.94	3.15	3.01
21	3.12	2.55	3.25	3.29	3.41	3.30	2.95	2.78	3.34	2.94	3.15	3.02
22	3.09	2.72	3.23	3.28	3.39	3.28	2.94	2.75	3.05	2.94	3.14	3.09
23	3.08	3.02	3.22	3.26	3.36	3.26	2.93	2.70	3.04	2.94	3.20	3.13
24	3.06	3.23	3.24	3.25	3.35	3.24	2.91	2.66	3.01	2.93	3.31	3.13
25	3.04	3.35	3.33	3.24	3.32	3.22	2.90	2.65	3.00	2.93	3.28	3.07
26	3.01	3.37	3.32	3.23	3.30	3.19	2.88	2.68	2.97	2.93	3.27	3.01
27	2.98	3.36	3.30	3.21	3.28	3.17	2.89	2.71	2.96	2.92	3.25	3.04
28	2.96	3.35	3.27	3.19	3.26	3.16	2.91	2.72	2.82	2.91	3.23	3.13
29	2.94	3.34	3.25	3.17	---	3.15	2.95	2.70	2.93	2.90	3.19	3.16
30	2.92	3.34	3.25	3.15	---	3.13	2.96	2.71	2.93	2.91	3.12	3.21
31	2.90	---	3.24	3.15	---	3.11	---	3.26	---	2.91	3.10	---
MEAN	3.23	2.87	3.31	3.22	3.21	3.33	2.97	2.96	3.17	2.92	3.10	3.02
MAX	3.52	3.37	3.44	3.30	3.42	3.61	3.10	3.26	3.42	2.96	3.31	3.21
MIN	2.90	2.55	3.22	3.15	3.08	3.11	2.88	2.65	2.82	2.86	2.90	2.87

CAL YR 1977 MEAN 3.05 MAX 3.63 MIN 2.00
WTR YR 1978 MEAN 3.11 MAX 3.61 MIN 2.55

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291143 FAKA UNION CANAL NEAR COPELAND, FL

LOCATION.--Lat 25°57'59", long 81°30'23", in SW¼ sec.3, T.52 S., R.28 E., Collier County, Hydrologic Unit 03090204, on left bank, 0.5 mi (0.8 km) from U.S. Highway 41, and 9.3 mi (15.0 km) west of Copeland.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--December 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Collier County bench mark).

AVERAGE DISCHARGE.--8 years (1971-78), 248 ft^3/s (7.02 m^3/s), 179,500 acre-ft/yr (221 hm^3/yr).

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,200 ft^3/s (90.6 m^3/s) Sept. 15, 1971, gage height, 4.77 ft (1.454 m); no flow for many days in 1971-1976; minimum gage height, 0.37 ft (0.113 m) May 7, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 831 ft^3/s (23.5 m^3/s) June 20; maximum gage height, 3.62 ft (1.103 m) Mar.10; minimum discharge, 1.0 ft^3/s (0.03 m^3/s) estimated leakage, May 24-26; minimum gage height, 2.55 ft (0.777 m) Nov. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	483	128	73	107	137	166	137	140	275	336	364	543
2	455	118	69	111	132	158	128	155	238	358	377	543
3	461	133	69	106	137	164	123	162	181	383	413	543
4	460	143	64	102	133	254	115	156	129	366	425	523
5	442	138	64	102	126	245	115	288	106	349	428	533
6	421	123	79	97	125	218	115	329	89	335	436	523
7	425	108	95	101	118	200	108	307	88	343	461	523
8	426	89	90	125	118	169	108	271	107	331	467	483
9	415	77	93	119	159	295	103	238	84	316	489	434
10	411	61	147	111	154	436	101	215	39	306	497	453
11	411	50	145	110	139	404	93	201	99	327	500	453
12	415	44	146	125	127	384	91	175	162	332	506	443
13	392	35	119	140	114	364	84	162	262	337	515	453
14	374	26	101	128	112	342	86	145	280	334	533	380
15	366	21	80	122	104	318	92	122	254	342	583	390
16	350	18	72	120	98	303	143	110	265	352	591	410
17	341	16	92	124	118	278	134	102	223	361	591	436
18	322	17	95	115	158	257	126	93	188	371	606	472
19	311	15	87	180	300	241	120	89	268	372	605	490
20	298	13	86	197	303	237	119	77	831	375	619	506
21	278	11	78	189	287	225	113	17	758	384	617	520
22	258	7.0	75	187	275	219	113	9.9	443	384	613	601
23	249	4.1	75	179	250	201	108	3.8	437	380	675	644
24	236	32	82	177	234	195	103	1.0	412	380	812	646
25	221	69	130	170	216	182	99	1.0	425	377	776	578
26	200	75	125	174	201	172	95	1.0	382	377	762	513
27	183	75	120	158	189	162	99	1.5	379	372	743	539
28	173	71	109	153	169	161	113	1.6	344	361	722	641
29	161	72	105	143	---	153	134	1.0	354	361	669	670
30	159	71	102	142	---	148	145	3.4	349	365	594	728
31	197	---	102	137	---	137	---	191	---	366	573	---
TOTAL	10294	1860.1	2969	4251	4733	7388	3363	3769.2	8451	11033	17562	15614
MEAN	332	62.0	95.8	137	169	238	112	122	282	356	567	520
MAX	483	143	147	197	303	436	145	329	831	384	812	728
MIN	159	4.1	64	97	98	137	84	1.0	39	306	364	380
AC-FT	20420	3690	5890	8430	9390	14650	6670	7480	16760	21880	34830	30970

CAL YR 1977 TOTAL 56763.3 MEAN 156 MAX 545 MIN 1.0 AC-FT 112600
WTR YR 1978 TOTAL 91287.3 MEAN 250 MAX 831 MIN 1.0 AC-FT 181100

DO NOT CIRCULATE

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

260342081312500 FAKA UNION CANAL NEAR DEEP LAKE, FL

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.03	9.79	9.75	9.76	9.67	9.75	9.70	9.60	9.63	10.48	10.68	11.89
2	10.01	9.78	9.75	9.76	9.66	9.77	9.69	9.58	9.63	10.79	10.84	11.87
3	10.00	9.76	9.76	9.75	9.67	9.70	9.68	9.55	9.63	10.67	11.26	11.82
4	9.99	9.75	9.76	9.75	9.66	9.81	9.67	9.54	9.63	10.55	11.26	11.81
5	9.96	9.75	9.74	9.73	9.66	9.79	9.65	9.69	9.63	10.46	11.19	11.88
6	9.96	9.74	9.71	9.70	9.65	9.78	9.64	9.75	9.62	10.43	11.26	11.82
7	9.95	9.73	9.71	9.70	9.65	9.77	9.63	9.74	9.62	10.58	11.24	11.77
8	9.94	9.73	9.73	9.69	9.65	9.82	9.59	9.73	9.64	10.56	11.18	11.70
9	9.91	9.72	9.75	9.70	9.66	9.97	9.50	9.71	9.64	10.51	11.23	11.65
10	9.91	9.71	9.77	9.70	9.65	9.98	9.46	9.71	9.65	10.58	11.20	11.59
11	9.91	9.70	9.80	9.69	9.65	9.96	9.43	9.70	9.73	10.79	11.19	11.56
12	9.90	9.69	9.82	9.69	9.64	9.94	9.40	9.69	9.82	10.80	11.17	11.50
13	9.90	9.69	9.84	9.70	9.62	9.92	9.37	9.68	9.87	10.79	11.23	11.41
14	9.90	9.68	9.84	9.70	9.63	9.90	9.35	9.66	9.85	10.77	11.42	11.34
15	9.89	9.68	9.85	9.70	9.62	9.88	9.36	9.65	9.84	11.38	11.48	11.31
16	9.88	9.67	9.87	9.69	9.61	9.87	9.48	9.63	9.84	11.37	11.46	11.41
17	9.87	9.67	9.92	9.69	9.63	9.86	9.47	9.60	9.82	11.31	11.48	11.45
18	9.87	9.66	9.93	9.69	9.68	9.85	9.43	9.59	9.85	11.36	11.54	11.45
19	9.86	9.65	9.93	9.69	9.80	9.83	9.41	9.58	9.93	11.30	11.50	11.37
20	9.85	9.65	9.91	9.74	9.80	9.82	9.38	9.56	9.95	11.42	11.50	11.32
21	9.85	9.64	9.91	9.74	9.80	9.81	9.35	9.53	10.02	11.39	11.45	11.25
22	9.84	9.63	9.89	9.74	9.80	9.80	9.32	9.48	10.39	11.29	11.42	11.34
23	9.84	9.63	9.89	9.74	9.79	9.79	9.29	9.45	10.42	11.21	11.62	11.26
24	9.84	9.74	9.86	9.73	9.79	9.78	9.53	9.41	10.31	11.11	12.13	11.28
25	9.83	9.81	9.85	9.72	9.78	9.77	9.75	9.39	10.30	11.02	12.07	11.38
26	9.82	9.80	9.84	9.72	9.77	9.76	9.73	9.37	10.45	10.97	12.00	11.27
27	9.82	9.78	9.81	9.70	9.77	9.75	9.70	9.36	10.36	10.89	11.94	11.11
28	9.81	9.78	9.80	9.70	9.75	9.75	9.67	9.34	10.30	10.80	11.87	10.96
29	9.81	9.77	9.79	9.69	---	9.74	9.65	9.33	10.31	10.72	11.82	10.83
30	9.80	9.76	9.78	9.68	---	9.73	9.62	9.32	10.33	10.77	11.84	10.71
31	9.80	---	9.77	9.68	---	9.71	---	9.63	---	10.73	11.91	---
MEAN	9.89	9.72	9.82	9.71	9.70	9.82	9.53	9.57	9.93	10.90	11.46	11.44
MAX	10.03	9.81	9.93	9.76	9.80	9.98	9.75	9.75	10.45	11.42	12.13	11.89
MIN	9.80	9.63	9.71	9.68	9.61	9.70	9.29	9.32	9.62	10.43	10.68	10.71

WTR YR 1978 MEAN 10.13 MAX 12.13 MIN 9.29

DO NOT CIRCULATE

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

260342081312500 FAKA UNION CANAL NEAR DEEP LAKE, FL

LOCATION.--Lat 26°03'42", long 81°31'25", in NE¼NE¼ sec.5, T.51 S., R.28 E., Collier County, Hydrologic Unit 03090204, on right bank, 50 ft (15 m) above weir number 19, 0.5 mi (0.8 km) upstream from bridge on 100th Avenue S.E., and 11 mi (18 km) northwest of Deep Lake.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is about National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 285 ft^3/s (8.07 m^3/s) Aug. 24; maximum gage height, 12.18 ft (3.712 m) Aug. 23; minimum daily discharge, 6.9 ft^3/s (0.195 m^3/s); minimum gage height, 9.28 ft (2.829 m) Apr. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	27	16	17	12	16	13	11	12	92	115	248
2	51	24	23	16	12	17	13	11	12	126	133	246
3	50	20	24	15	12	13	13	10	12	113	178	240
4	50	16	24	15	12	19	12	9.8	12	100	178	239
5	47	15	22	14	12	18	12	13	12	91	171	246
6	47	15	19	14	12	17	12	15	11	88	179	240
7	46	14	19	13	12	16	12	15	11	104	176	235
8	46	15	21	13	12	19	11	14	12	102	170	227
9	41	14	23	13	12	36	9.0	14	12	96	175	221
10	41	14	25	13	12	38	8.6	13	12	104	172	215
11	41	13	29	13	12	36	8.3	13	14	127	171	212
12	40	13	31	13	12	34	8.0	13	20	128	168	204
13	40	13	32	13	11	31	7.7	13	26	127	176	195
14	41	13	32	13	12	29	7.5	12	24	125	196	188
15	40	13	33	13	11	27	7.6	12	22	192	203	184
16	38	12	35	13	11	26	8.8	12	22	190	201	195
17	37	12	36	13	12	24	8.7	11	20	184	202	199
18	37	12	42	13	13	23	8.3	11	23	190	209	199
19	34	12	42	13	18	21	8.1	11	32	182	205	191
20	35	12	40	15	18	21	7.8	10	35	196	205	185
21	35	12	40	15	18	19	7.5	9.6	42	193	200	178
22	34	12	37	15	18	19	7.2	8.8	83	182	196	188
23	34	12	33	15	18	17	6.9	8.5	86	173	218	178
24	34	15	30	14	17	17	11	8.1	74	162	285	181
25	33	19	27	14	17	16	16	7.9	73	152	268	192
26	32	18	26	14	16	16	14	7.7	89	147	260	180
27	32	17	24	13	16	16	13	7.6	79	138	254	162
28	31	17	23	13	16	15	12	7.4	73	128	246	146
29	31	16	21	13	---	15	12	7.3	74	120	240	132
30	30	16	19	13	---	14	11	7.2	76	125	243	118
31	30	---	18	13	---	14	---	12	---	120	250	---
TOTAL	1211	453	866	427	386	659	307.0	335.9	1105	4297	6243	5964
MEAN	39.1	15.1	27.9	13.8	13.8	21.3	10.2	10.8	36.8	139	201	199
MAX	53	27	42	17	18	38	16	15	89	196	285	248
MIN	30	12	16	13	11	13	6.9	7.2	11	88	115	118
AC-FT	2400	899	1720	847	766	1310	609	666	2190	8520	12380	11830

WTR YR 1978 TOTAL 22253.9 MEAN 61.0 MAX 285 MIN 6.9 AC-FT 44140

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

261616081314400 FAKA UNION CANAL NEAR SUNNILAND, FL.

LOCATION.--Lat 26°16'16", long 81°31'40", in NW¼SW¼ sec.28, T.48 S., R.28 E., Hydrologic Unit 03090204, on left bank, 50 ft (15 m) upstream from weir number 15 and 22nd Avenue N.E., 1.5 mi (2.4 km) south of State Highway 858, and 12 mi (19 km) northeast of Sunniland.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is about National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.61 ft (3.234 m) May 9; minimum, 9.43 ft (2.874 m) estimated Nov. 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.08	9.77	9.64	9.63	9.67	9.82	9.83	9.80	9.87	9.91	10.37	10.05
2	10.05	9.76	9.63	9.65	9.66	9.81	9.81	9.77	9.91	9.92	10.32	10.06
3	10.04	9.75	9.62	9.66	9.65	9.80	9.80	9.77	9.93	9.96	10.33	10.06
4	10.06	9.75	9.59	9.66	9.64	9.86	9.80	9.77	9.96	9.99	10.37	10.14
5	10.05	9.76	9.56	9.66	9.63	9.82	9.79	9.84	9.98	10.01	10.36	10.16
6	10.02	9.74	9.58	9.65	9.61	9.80	9.85	9.87	9.98	10.00	10.52	10.17
7	10.00	9.73	9.66	9.65	9.59	9.79	9.83	9.85	9.99	10.04	10.50	10.18
8	9.98	9.73	9.70	9.65	9.57	10.00	9.80	9.83	10.00	10.12	10.40	10.18
9	9.95	9.72	9.73	9.69	9.59	10.17	9.71	10.05	10.02	10.08	10.34	10.17
10	9.93	9.71	9.79	9.70	9.60	10.14	9.66	10.07	10.05	10.05	10.28	10.16
11	9.92	9.68	9.79	9.70	9.59	10.11	9.64	10.00	10.09	10.03	10.27	10.20
12	9.91	9.66	9.78	9.70	9.59	10.07	9.64	9.96	10.07	10.01	10.27	10.16
13	9.89	9.64	9.78	9.73	9.58	10.03	9.63	9.94	10.05	10.01	10.24	10.13
14	9.87	9.62	9.77	9.74	9.57	10.00	9.65	9.92	10.02	10.05	10.20	10.11
15	9.86	9.60	9.77	9.74	9.55	9.97	9.66	9.91	10.01	10.17	10.17	10.10
16	9.85	9.57	9.76	9.74	9.55	9.94	9.66	9.91	10.01	10.16	10.15	10.15
17	9.83	9.47	9.79	9.74	9.63	9.91	9.67	9.87	9.96	10.12	10.15	10.12
18	9.82	9.46	9.80	9.74	9.77	9.89	9.65	9.85	9.93	10.13	10.15	10.10
19	9.81	9.44	9.78	9.76	9.90	9.87	9.60	9.82	9.91	10.28	10.13	10.08
20	9.81	9.43	9.77	9.79	9.89	9.85	9.60	9.80	9.88	10.38	10.12	10.07
21	9.81	9.47	9.77	9.79	9.89	9.85	9.59	9.79	9.85	10.25	10.07	10.06
22	9.80	9.45	9.76	9.78	9.88	9.84	9.58	9.78	9.84	10.19	10.13	10.05
23	9.80	9.43	9.75	9.77	9.87	9.83	9.65	9.77	9.88	10.18	10.10	10.04
24	9.80	9.47	9.74	9.77	9.86	9.91	9.73	9.75	9.94	10.17	10.07	10.04
25	9.79	9.54	9.73	9.76	9.85	9.96	9.77	9.75	9.99	10.16	10.05	10.07
26	9.79	9.55	9.73	9.76	9.84	9.94	9.85	9.74	9.99	10.26	10.05	10.07
27	9.79	9.55	9.71	9.74	9.83	9.92	9.90	9.74	9.98	10.20	10.09	10.05
28	9.78	9.53	9.69	9.73	9.82	9.91	9.90	9.77	9.95	10.15	10.08	10.04
29	9.77	9.53	9.67	9.71	---	9.89	9.83	9.80	9.94	10.19	10.05	10.05
30	9.77	9.55	9.65	9.70	---	9.87	9.80	9.86	9.93	10.38	10.05	10.13
31	9.79	---	9.64	9.69	---	9.85	---	9.87	---	10.50	10.05	---
MEAN	9.88	9.60	9.71	9.72	9.70	9.92	9.73	9.85	9.96	10.13	10.21	10.11
MAX	10.08	9.77	9.80	9.79	9.90	10.17	9.90	10.07	10.09	10.50	10.52	10.20
MIN	9.77	9.43	9.56	9.63	9.55	9.79	9.58	9.74	9.84	9.91	10.05	10.04

WTR YR 1978 MEAN 9.88 MAX 10.52 MIN 9.43

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291000 BARRON RIVER CANAL NEAR EVERGLADES, FL

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.09	2.76	2.88	3.90	3.39	3.65	3.32	2.33	2.20	4.26	4.45	4.53
2	5.08	2.62	2.86	3.97	3.37	3.60	3.26	2.25	2.22	4.36	4.47	4.50
3	5.05	2.55	2.83	4.05	3.34	3.76	3.20	2.16	2.35	4.24	4.50	4.47
4	5.00	2.75	2.79	4.03	3.33	4.00	3.13	2.13	2.63	4.11	4.49	4.53
5	4.98	2.71	2.76	4.01	3.31	3.86	3.08	2.44	2.68	4.00	4.41	4.64
6	4.93	2.65	2.96	4.01	3.27	3.77	3.03	2.58	2.69	4.02	4.44	4.80
7	4.85	2.58	3.20	3.99	3.23	3.72	2.98	2.56	2.97	4.23	4.42	5.11
8	4.75	2.52	3.17	4.02	3.26	3.68	2.93	2.49	3.05	4.28	4.35	5.19
9	4.58	2.48	3.19	4.13	3.55	4.25	2.88	2.40	3.06	4.12	4.29	5.15
10	4.49	2.39	3.49	3.99	3.46	4.27	2.81	2.30	3.03	4.05	4.36	5.05
11	4.39	2.32	3.49	4.14	3.40	4.20	2.68	2.20	3.25	4.16	4.58	5.01
12	4.25	2.20	3.48	4.31	3.34	4.16	2.40	2.13	3.48	4.34	4.77	4.90
13	4.16	2.00	3.48	4.34	3.29	4.13	2.27	2.09	3.53	4.24	4.90	4.66
14	4.08	1.85	3.51	4.31	3.24	4.10	2.18	2.04	3.37	4.12	4.87	4.42
15	4.02	1.65	3.51	4.24	3.18	4.06	2.17	1.95	3.26	4.14	4.77	4.47
16	3.95	1.78	3.50	4.19	3.15	4.02	2.52	1.89	3.36	4.24	4.64	5.17
17	3.89	1.92	3.63	4.16	3.32	4.02	2.41	1.84	3.32	4.21	4.57	5.02
18	3.80	2.08	3.82	4.13	3.63	4.01	2.29	1.82	3.28	4.12	4.50	4.82
19	3.77	2.07	3.85	4.20	3.90	3.93	2.21	1.77	3.83	4.37	4.40	4.63
20	3.66	2.05	3.88	4.40	3.84	3.91	2.14	1.75	4.16	4.78	4.29	4.51
21	3.51	2.02	3.90	4.34	3.89	3.93	2.07	1.71	4.08	4.77	4.14	4.35
22	3.42	2.02	3.90	4.32	4.01	3.87	1.99	1.68	4.08	4.77	4.05	4.30
23	3.32	2.01	3.89	4.31	4.13	3.81	1.94	1.64	3.93	4.73	4.13	4.22
24	3.23	2.33	3.88	4.24	4.02	3.78	2.34	1.61	3.78	4.66	4.10	4.22
25	3.19	2.73	3.93	4.08	3.88	3.78	2.75	1.62	3.72	4.56	3.87	4.20
26	3.15	2.81	4.10	3.99	3.81	3.70	2.66	1.76	3.73	4.43	3.79	4.02
27	3.08	2.82	4.06	3.90	3.76	3.62	2.57	2.07	3.77	4.32	3.70	3.88
28	3.04	2.82	3.98	3.84	3.70	3.57	2.55	2.03	3.80	4.19	3.57	3.76
29	2.99	2.85	3.89	3.77	---	3.55	2.47	1.98	3.87	4.15	3.83	3.68
30	2.92	2.88	3.89	3.62	---	3.45	2.40	1.93	3.85	4.30	4.30	3.63
31	2.81	---	3.89	3.42	---	3.38	---	1.97	---	4.30	4.40	---
MEAN	3.98	2.37	3.54	4.08	3.54	3.86	2.59	2.04	3.34	4.31	4.33	4.53
MAX	5.09	2.88	4.10	4.40	4.13	4.27	3.32	2.58	4.16	4.78	4.90	5.19
MIN	2.81	1.65	2.76	3.42	3.15	3.38	1.94	1.61	2.20	4.00	3.57	3.63

CAL YR 1977 MEAN 3.22 MAX 5.65 MIN .83
WTR YR 1978 MEAN 3.55 MAX 5.19 MIN 1.61

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291000 BARRON RIVER CANAL NEAR EVERGLADES, FL

LOCATION.--Lat 25°57'28", long 81°21'19", in NW¼ sec.7, T.52 S., R.30 E., Collier County, Hydrologic Unit 03090204, on right bank 40 ft (12 m) upstream from control structure, 0.7 mi (1.1 km) north of Copeland, 7 mi (11 km) north of town of Everglades, and 7.5 mi (12.1 km) upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July to December 1951 (discharge measurements only), January 1952 to current year. Records prior to January 1952 are available in files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (State Department of Transportation bench mark). Prior to Jan. 24, 1952, nonrecording gage.

REMARKS.--Records fair except those below 20 ft^3/s (0.57 m^3/s), which are poor. Flow regulated by operation of control structure at, above, and below station, and is occasionally affected by tide. Overbank flow not included in discharge figures.

AVERAGE DISCHARGE.--26 years (1952-78); 101 ft^3/s (2.86 m^3/s), 73,120 acre-ft/yr (90.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 292 ft^3/s (8.27 m^3/s) Sept. 25, 1962; maximum gage height, 6.43 ft (1.960 m) Sept. 10 or 11, 1960; no flow many days; minimum gage height, 0.21 ft (0.064 m) May 18, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 1947 reached a stage of about 7 ft (2.13 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 248 ft^3/s (7.02 m^3/s) Sept. 8; maximum gage height, 5.20 ft (1.585 m) Sept 8, 16; minimum daily discharge, 10 ft^3/s (0.283 m^3/s) Nov. 15, 16; minimum gage height, 1.55 ft (0.472 m) May 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	42	41	133	98	116	111	40	25	180	194	200
2	218	32	39	138	95	112	107	35	27	187	196	198
3	217	28	36	145	93	124	103	30	37	178	198	196
4	215	41	32	143	90	140	99	28	61	169	197	200
5	215	38	30	142	88	130	95	48	65	161	191	209
6	213	33	49	141	84	124	91	59	66	163	193	221
7	208	29	75	140	78	121	87	56	86	178	192	242
8	201	26	72	142	81	117	83	50	92	181	186	248
9	190	24	74	150	109	158	79	41	93	170	182	245
10	185	20	105	140	103	161	74	33	91	165	188	238
11	178	18	105	150	98	158	65	25	107	174	204	235
12	170	16	105	162	92	157	46	21	123	186	218	227
13	165	13	105	164	86	157	36	20	127	179	227	210
14	161	11	106	163	80	156	31	19	115	170	225	192
15	158	10	106	158	73	155	31	18	108	172	219	195
16	155	10	106	154	69	154	55	16	114	179	208	246
17	152	13	114	152	90	155	47	15	112	177	204	236
18	147	14	127	151	113	156	38	15	109	170	198	222
19	147	14	130	155	133	152	33	14	150	188	190	209
20	141	13	132	169	129	153	29	14	173	219	182	199
21	127	13	133	164	133	155	25	13	167	219	171	187
22	117	13	133	163	141	153	22	13	169	218	165	183
23	106	13	132	163	150	149	20	13	159	216	171	177
24	96	19	132	158	143	146	42	12	148	210	169	177
25	90	33	135	147	132	146	70	12	144	203	153	176
26	83	38	148	140	127	139	64	14	145	193	146	163
27	74	38	145	134	123	134	58	20	147	184	140	153
28	68	38	139	129	119	129	57	19	149	175	130	145
29	62	39	133	124	---	128	51	18	154	172	149	138
30	54	41	132	114	---	121	45	17	160	183	186	134
31	44	---	133	100	---	115	---	18	---	183	197	---
TOTAL	4575	730	3184	4528	2950	4371	1794	766	3423	5702	5769	6001
MEAN	148	24.3	103	146	105	141	59.8	24.7	114	184	186	200
MAX	218	42	148	169	150	161	111	59	173	219	227	248
MIN	44	10	30	100	69	112	20	12	25	161	130	134
AC-FT	9070	1450	6320	8980	5850	8670	3560	1520	6790	11310	11440	11900

CAL YR 1977	TOTAL	32660.8	MEAN	89.5	MAX 231	MIN 7.7	AC-FT	64780
WTR YR 1978	TOTAL	43793.0	MEAN	120	MAX 248	MIN 10	AC-FT	86860

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02290950 ROBERTS LAKE SLOUGH NEAR MONROE, FL

LOCATION.--Lat 25°47'14", long 81°05'59", in NW¼ sec.11, T.53 S., R.32 E., Monroe County, Hydrologic Unit 03090204, on downstream side of State Highway 94, 60 ft (18 m) west of culverts, and 5.2 mi (8.4 km) south of Monroe.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Figures of daily discharge consist of runoff form Roberts Lake Slough as represented by flow through all 10 bridges 1 to 10.

AVERAGE DISCHARGE.--5 years, 76.2 ft^3/s (2.158 m^3/s), 55,170 acre-ft/yr (68.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 496 ft^3/s (14.0 m^3/s) Aug. 24, 1976; maximum gage height, 5.36 ft (1.634 m) Aug. 23, 1976; no flow for many days each year; minimum gage height, -1.06 ft (-0.323 m) May 13, 14, 15, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 429 ft^3/s (12.1 m^3/s) Oct. 1; maximum gage height, 5.20 ft (1.585 m) Oct. 1, Sept 6-9; no flow for many days; minimum gage height, 3.38 ft (1.030 m) May 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	40	.00	5.6	43	121	83	.00	.00	198	163	284
2	422	38	.00	5.6	40	119	73	.00	.00	202	177	267
3	414	33	.00	5.6	37	124	57	.00	.00	203	192	260
4	384	25	.00	6.9	37	145	52	.00	.00	197	219	249
5	360	22	.00	12	37	148	47	.00	.00	197	236	283
6	341	20	.40	13	38	149	41	.00	.00	195	242	322
7	328	19	1.9	13	39	149	31	.00	.00	196	236	345
8	304	12	4.1	14	41	149	31	.00	.00	197	234	345
9	281	11	4.6	19	71	188	23	.00	.00	197	228	344
10	262	9.5	16	19	75	216	18	.00	.00	205	199	331
11	236	3.6	21	19	74	234	14	.00	.00	220	193	299
12	215	1.6	19	19	79	237	9.2	.00	5.5	290	201	280
13	196	1.0	19	19	80	238	3.3	.00	27	301	235	256
14	175	.50	19	19	81	235	2.0	.00	19	315	263	258
15	151	.00	13	19	74	232	.90	.00	21	294	243	255
16	135	.00	9.9	16	66	217	5.1	.00	18	311	228	240
17	123	.00	13	16	63	206	3.6	.00	11	306	205	212
18	114	.00	15	17	77	174	2.5	.00	9.6	302	199	204
19	105	.00	18	24	104	157	2.6	.00	30	299	197	185
20	99	.00	17	64	102	150	1.4	.00	34	297	198	182
21	89	.00	16	62	112	146	.40	.00	57	305	202	154
22	82	.00	17	66	114	137	.00	.00	79	296	207	144
23	81	.00	17	75	115	123	.00	.00	80	278	210	139
24	81	.30	16	85	113	134	1.8	.00	78	270	220	130
25	76	.70	14	79	111	156	3.0	.00	85	261	246	129
26	69	.70	14	72	110	162	3.9	.00	85	237	304	122
27	60	.60	12	67	114	161	2.3	.00	110	215	305	110
28	53	.20	8.4	62	117	142	1.1	.00	160	206	291	88
29	50	.02	6.9	47	---	127	.50	.00	194	204	281	97
30	48	.00	5.7	35	---	106	.00	.00	191	197	313	89
31	46	---	5.6	33	---	88	---	.00	---	173	304	---
TOTAL	5809	238.72	323.50	1028.7	2164	5070	513.60	.00	1294.10	7564	7171	6603
MEAN	187	7.96	10.4	33.2	77.3	164	17.1	.000	43.1	244	231	220
MAX	429	40	21	85	117	238	83	.00	194	315	313	345
MIN	46	.00	.00	5.6	37	88	.00	.00	.00	173	163	88
AC-FT	11520	474	642	2040	4290	10060	1020	.00	2570	15000	14220	13100

CAL YR 1977 TOTAL 21570.28 MEAN 59.1 MAX 439 MIN .00 AC-FT 42780
WTR YR 1978 TOTAL 37779.62 MEAN 104 MAX 429 MIN .00 AC-FT 74940

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290870 EVERGLADES P-34 NEAR HOMESTEAD, FL

LOCATION.--Lat 25°36'30", long 80°55'30", in sec.9, T.56 S., R.34 E., Monroe County, Hydrologic Unit 03090202, in the Everglades at the headwaters of Rogers River, 3.5 mi (5.6 km) west of Dade-Monroe County line, 12 mi (19 km) southwest of 40-mile bend on U.S. Highway 41, and 29 mi (47 km) northwest of Homestead.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1953 to current year (gage heights). Records of gage heights prior to October 1962 are available in files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Elevation of the land surface is about 1.3 ft (0.39 m).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 3.42 ft (1.042 m) Sept. 12, 1960; minimum, -2.75 ft (-0.838 m) May 14, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 2.34 ft (0.713 m) Sept. 30; minimum, 0.03 ft (0.009 m) May 25.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.86	1.05	1.42	1.43	1.44	1.66	1.60	.75	1.34	1.73	2.12	2.13
2	1.85	1.02	1.42	1.44	1.44	1.64	1.58	.72	1.38	1.81	2.21	2.17
3	1.80	1.01	1.42	1.45	1.43	1.65	1.55	.67	1.35	1.95	2.24	2.20
4	1.78	1.01	1.42	1.45	1.42	1.77	1.50	.68	1.30	1.98	2.24	2.18
5	1.75	1.05	1.43	1.44	1.43	1.76	1.45	.88	1.27	2.00	2.26	2.20
6	1.72	1.02	1.45	1.44	1.42	1.74	1.40	.84	1.32	2.12	2.30	2.25
7	1.68	.99	1.47	1.44	1.41	1.72	1.30	.76	1.37	2.14	2.32	2.28
8	1.64	.96	1.46	1.44	1.41	1.71	1.25	.69	1.37	2.09	2.30	2.28
9	1.60	.94	1.46	1.43	1.46	1.84	1.20	.62	1.37	2.04	2.24	2.26
10	1.57	.93	1.48	1.42	1.44	1.97	1.18	.57	1.41	2.00	2.24	2.24
11	1.53	.88	1.47	1.42	1.44	1.98	1.15	.54	1.47	1.96	2.26	2.23
12	1.49	.84	1.47	1.41	1.43	1.98	1.10	.52	1.54	1.98	2.27	2.24
13	1.46	.81	1.46	1.43	1.42	1.97	1.07	.48	1.66	2.02	2.28	2.25
14	1.43	.79	1.49	1.45	1.41	1.95	1.05	.42	1.64	2.03	2.32	2.25
15	1.40	.77	1.48	1.44	1.40	1.93	1.05	.35	1.60	2.06	2.25	2.23
16	1.37	.76	1.47	1.43	1.39	1.90	1.07	.29	1.56	2.06	2.24	2.24
17	1.35	.75	1.52	1.43	1.39	1.88	1.02	.23	1.51	2.06	2.24	2.23
18	1.32	.73	1.56	1.42	1.47	1.86	.99	.32	1.47	2.06	2.22	2.21
19	1.30	.88	1.54	1.43	1.60	1.85	.96	.39	1.48	2.06	2.24	2.21
20	1.28	.89	1.53	1.53	1.65	1.82	.91	.35	1.49	2.04	2.26	2.21
21	1.25	.87	1.52	1.52	1.69	1.80	.87	.25	1.56	2.01	2.25	2.22
22	1.26	.98	1.51	1.52	1.72	1.76	.82	.18	1.68	1.98	2.25	2.24
23	1.27	.94	1.50	1.52	1.72	1.72	.82	.13	1.71	1.95	2.25	2.26
24	1.25	1.12	1.49	1.52	1.72	1.70	1.07	.09	1.69	1.93	2.30	2.25
25	1.23	1.25	1.49	1.51	1.72	1.66	1.08	.38	1.67	1.91	2.33	2.25
26	1.21	1.26	1.48	1.51	1.71	1.65	1.01	.77	1.66	1.88	2.31	2.25
27	1.18	1.34	1.47	1.50	1.70	1.65	.93	.69	1.63	1.86	2.28	2.23
28	1.15	1.38	1.46	1.49	1.68	1.64	.87	.68	1.64	1.92	2.24	2.23
29	1.12	1.40	1.45	1.48	---	1.64	.81	.66	1.68	2.01	2.20	2.32
30	1.10	1.41	1.45	1.46	---	1.63	.77	.85	1.69	2.06	2.18	2.34
31	1.08	---	1.44	1.45	---	1.62	---	1.33	---	2.06	2.15	---
MEAN	1.43	1.00	1.47	1.46	1.52	1.78	1.11	.55	1.52	1.99	2.25	2.24
MAX	1.86	1.41	1.56	1.53	1.72	1.98	1.60	1.33	1.71	2.14	2.33	2.34
MIN	1.08	.73	1.42	1.41	1.39	1.62	.77	.09	1.27	1.73	2.12	2.13

CAL YR 1977 MEAN 1.16 MAX 2.40 MIN -.66
WTR YR 1978 MEAN 1.53 MAX 2.34 MIN .09

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290868 EVERGLADES 205-NP NEAR MIAMI, FL

LOCATION.--Lat 25°42'36", long 80°50'23", in NE¼ sec.5, T.55 S., R.35 E., Dade County, Hydrologic Unit 03090202, 3.5 mi (5.6 km) south of 40 Mile Bend on U.S. Highway 41, and 41 mi (66 km) west of Dade County courthouse in Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1974 to current year (gage heights).

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is National Geodetic Vertical Datum of 1929. Prior to October 1976 at datum 1.154 ft (0.352 m) higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 7.00 ft (2.134 m) July 30, 1978; minimum, 2.35 ft (0.716 m) May 3, 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.00 ft (2.134 m) July 30; minimum, 3.54 ft (1.079 m) May 18.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.25	4.93	6.06	6.04	5.48	6.16	5.93	4.59	4.06	6.43	6.82	6.67
2	6.22	4.87	6.06	6.03	5.47	6.14	5.89	4.51	5.36	6.40	6.76	6.66
3	6.19	4.82	6.05	6.03	5.46	6.29	5.85	4.43	5.35	6.43	6.71	6.66
4	6.16	4.79	6.04	6.04	5.45	6.32	5.79	4.36	5.25	6.48	6.67	6.67
5	6.14	4.99	6.03	6.03	5.44	6.28	5.73	4.46	5.22	6.49	6.64	6.67
6	6.11	5.04	6.06	6.01	5.40	6.25	5.64	4.44	5.50	6.56	6.65	6.68
7	6.08	4.99	6.09	6.01	5.36	6.23	5.56	4.35	5.90	6.51	6.67	6.68
8	6.06	4.95	6.08	6.00	5.35	6.31	5.48	4.26	5.88	6.53	6.67	6.68
9	6.04	4.90	6.07	6.01	5.89	6.40	5.40	4.18	5.83	6.51	6.66	6.72
10	6.01	4.85	6.09	6.00	5.87	6.47	5.32	4.09	5.81	6.46	6.65	6.70
11	5.98	4.80	6.09	6.00	5.85	6.44	5.25	4.01	5.88	6.42	6.65	6.70
12	5.95	4.73	6.08	5.96	5.83	6.41	5.24	3.95	5.83	6.38	6.68	6.72
13	5.92	4.70	6.07	5.95	5.81	6.38	5.20	3.92	5.79	6.38	6.67	6.74
14	5.87	4.69	6.07	5.92	5.79	6.36	5.14	3.85	5.71	6.37	6.65	6.73
15	5.81	4.69	6.07	5.88	5.77	6.34	5.09	3.77	5.60	6.42	6.64	6.75
16	5.76	4.71	6.06	5.85	5.85	6.32	5.04	3.69	5.50	6.42	6.63	6.77
17	5.67	4.73	6.10	5.82	5.91	6.24	4.96	3.61	5.40	6.46	6.70	6.74
18	5.58	4.74	6.14	5.80	5.90	6.20	4.89	3.77	5.40	6.49	6.69	6.71
19	5.50	4.76	6.13	5.76	5.88	6.18	4.82	4.31	6.03	6.62	6.67	6.69
20	5.44	4.75	6.13	5.75	5.86	6.15	4.75	4.30	6.06	6.61	6.75	6.69
21	5.38	4.74	6.13	5.72	5.85	6.13	4.66	4.22	6.15	6.56	6.72	6.72
22	5.37	5.17	6.13	5.70	5.84	6.11	4.57	4.14	6.31	6.53	6.69	6.69
23	5.41	5.21	6.13	5.66	5.82	6.09	4.49	4.05	6.39	6.51	6.67	6.70
24	5.34	5.49	6.13	5.62	5.86	6.07	4.85	3.97	6.43	6.49	6.65	6.68
25	5.29	5.97	6.12	5.58	5.90	6.04	5.10	3.91	6.44	6.48	6.65	6.68
26	5.25	6.01	6.12	5.55	5.91	6.02	5.04	3.88	6.54	6.48	6.63	6.68
27	5.19	6.02	6.10	5.54	5.91	5.99	4.94	3.83	6.57	6.47	6.62	6.67
28	5.13	6.03	6.08	5.53	5.92	6.00	4.84	3.85	6.53	6.50	6.60	6.68
29	5.07	6.05	6.07	5.52	---	5.99	4.75	4.09	6.50	6.75	6.59	6.83
30	5.03	6.06	6.06	5.50	---	5.96	4.66	4.03	6.46	7.00	6.64	6.82
31	4.98	---	6.04	5.48	---	5.96	---	3.95	---	6.90	6.66	---
MEAN	5.68	5.11	6.09	5.82	5.74	6.20	5.16	4.09	5.86	6.52	6.67	6.71
MAX	6.25	6.06	6.14	6.04	5.92	6.47	5.93	4.59	6.57	7.00	6.82	6.83
MIN	4.98	4.69	6.03	5.48	5.35	5.96	4.49	3.61	4.06	6.37	6.59	6.66

CAL YR 1977 MEAN 4.93 MAX 6.69 MIN 2.35
WTR YR 1978 MEAN 5.80 MAX 7.00 MIN 3.61

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290862 EVERGLADES 202 NP NEAR MIAMI, FL

LOCATION.--Lat 25°39'40", long 80°42'45", in NW¼ sec.4, T.56 S., R.36 E., Dade County, Hydrologic Unit 03090202, 9 mi (14 km) south of S-12-C on U.S. Highway 41, and 36 mi (58 km) west of Dade County Courthouse in Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1975 to current year (gage heights).

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is National Geodetic Vertical Datum of 1929. Prior to October 1976, at datum 2.85 ft (0.869 m) higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum 7.37 ft (2.246 m) Sept. 28, 29, 1978; minimum, 5.01 ft (1.527 m) present datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.37 ft (2.246 m) Sept. 28, 29; minimum, 5.81 (1.771 m) May 18.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.44	6.64	6.67	6.40	6.33	6.26	6.59	5.96	5.96	6.21	6.69	7.14
2	6.44	6.63	6.66	6.39	6.32	6.24	6.57	5.94	5.96	6.19	6.75	7.17
3	6.46	6.63	6.65	6.39	6.31	6.24	6.54	5.92	5.95	6.17	6.78	7.20
4	6.47	6.64	6.63	6.38	6.30	6.30	6.51	5.91	5.93	6.15	6.76	7.20
5	6.47	6.70	6.62	6.37	6.29	6.27	6.48	5.92	6.01	6.14	6.78	7.23
6	6.48	6.71	6.64	6.37	6.28	6.25	6.44	5.91	6.13	6.13	6.84	7.28
7	6.50	6.70	6.66	6.36	6.27	6.24	6.41	5.89	6.17	6.13	6.91	7.26
8	6.50	6.70	6.65	6.36	6.26	6.22	6.38	5.88	6.15	6.12	6.93	7.24
9	6.51	6.70	6.64	6.36	6.28	6.26	6.35	5.86	6.11	6.13	6.97	7.25
10	6.52	6.69	6.64	6.35	6.27	6.31	6.31	5.89	6.09	6.12	6.99	7.25
11	6.52	6.68	6.64	6.34	6.25	6.30	6.28	5.95	6.08	6.11	7.06	7.23
12	6.53	6.66	6.63	6.33	6.24	6.30	6.25	5.92	6.07	6.10	7.14	7.26
13	6.54	6.65	6.61	6.34	6.23	6.29	6.22	5.90	6.05	6.10	7.15	7.28
14	6.54	6.65	6.60	6.36	6.22	6.28	6.20	5.89	6.02	6.12	7.15	7.28
15	6.54	6.64	6.58	6.36	6.21	6.27	6.20	5.87	6.01	6.20	7.15	7.27
16	6.54	6.64	6.57	6.35	6.20	6.25	6.20	5.85	6.00	6.23	7.14	7.27
17	6.55	6.64	6.60	6.35	6.20	6.24	6.16	5.83	5.99	6.28	7.15	7.26
18	6.55	6.64	6.63	6.35	6.26	6.23	6.13	5.83	6.03	6.27	7.15	7.24
19	6.55	6.64	6.60	6.35	6.35	6.26	6.10	5.86	6.12	6.27	7.15	7.22
20	6.56	6.63	6.58	6.41	6.34	6.31	6.08	5.88	6.14	6.28	7.14	7.21
21	6.56	6.62	6.56	6.41	6.37	6.36	6.05	5.87	6.16	6.29	7.15	7.21
22	6.58	6.65	6.54	6.41	6.37	6.43	6.03	5.86	6.20	6.30	7.16	7.20
23	6.62	6.64	6.52	6.42	6.36	6.47	6.02	5.85	6.19	6.33	7.17	7.20
24	6.63	6.70	6.51	6.42	6.34	6.50	6.08	5.83	6.19	6.34	7.18	7.20
25	6.63	6.74	6.50	6.42	6.33	6.52	6.08	5.83	6.20	6.34	7.16	7.21
26	6.64	6.73	6.48	6.41	6.31	6.54	6.06	5.87	6.23	6.36	7.15	7.23
27	6.64	6.71	6.46	6.40	6.30	6.56	6.03	5.93	6.21	6.38	7.14	7.21
28	6.64	6.70	6.44	6.39	6.28	6.58	6.01	5.95	6.22	6.39	7.15	7.20
29	6.64	6.69	6.43	6.38	---	6.60	5.99	5.96	6.21	6.44	7.14	7.32
30	6.64	6.68	6.42	6.36	---	6.60	5.97	5.96	6.22	6.57	7.15	7.27
31	6.64	---	6.41	6.34	---	6.60	---	5.96	---	6.64	7.16	---
MEAN	6.55	6.67	6.57	6.38	6.29	6.36	6.22	5.89	6.10	6.25	7.05	7.23
MAX	6.64	6.74	6.67	6.42	6.37	6.60	6.59	5.96	6.23	6.64	7.18	7.32
MIN	6.44	6.62	6.41	6.33	6.20	6.22	5.97	5.83	5.93	6.10	6.69	7.14

CAL YR 1977 MEAN 6.17 MAX 6.74 MIN 5.24
WTR YR 1978 MEAN 6.46 MAX 7.32 MIN 5.83

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290861 EVERGLADES 201 NP NEAR MIAMI, FL

LOCATION.--Lat 25°43'05", long 80°43'33", in SW¼ sec.34, T.54 S., R.36 E., Dade County, Hydrologic Unit 03090202, 3 mi (5 km) south of S-12-C on U.S. Highway 41, and 34 mi (55 km) west of Dade County courthouse in Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1974 to current year (gage heights).

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1976 at datum 3.52 ft (1.073 m) higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.24 ft (2.512 m) Sept. 15, 23, 1978; minimum, 4.60 ft (1.402 m), present datum, May 6, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.24 ft (2.512 m) Sept. 15, 23; minimum, 6.53 ft (1.990 m) May 26.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.45	7.57	7.56	7.26	7.19	7.11	7.44	6.93	6.76	6.97	7.59	8.11
2	7.46	7.57	7.55	7.25	7.18	7.10	7.39	6.91	6.74	7.00	7.63	8.12
3	7.48	7.57	7.54	7.26	7.17	7.12	7.33	6.89	6.70	7.00	7.62	8.15
4	7.48	7.58	7.53	7.26	7.17	7.19	7.28	6.88	6.66	7.05	7.66	8.15
5	7.48	7.64	7.52	7.26	7.18	7.18	7.23	6.89	6.78	7.06	7.74	8.17
6	7.49	7.64	7.55	7.25	7.18	7.16	7.20	6.88	6.86	7.03	7.83	8.20
7	7.50	7.62	7.56	7.25	7.17	7.15	7.17	6.85	6.87	7.06	7.85	8.20
8	7.50	7.62	7.54	7.25	7.18	7.13	7.12	6.83	6.88	7.06	7.91	8.19
9	7.51	7.61	7.53	7.27	7.21	7.21	7.10	6.80	6.90	7.03	7.95	8.21
10	7.52	7.60	7.55	7.25	7.21	7.29	7.07	6.84	6.96	7.00	7.99	8.20
11	7.52	7.59	7.52	7.24	7.20	7.26	7.05	6.87	6.95	6.98	8.04	8.20
12	7.52	7.58	7.49	7.24	7.19	7.23	7.04	6.86	6.92	6.97	8.05	8.21
13	7.53	7.57	7.46	7.27	7.18	7.20	7.00	6.85	6.88	6.95	8.06	8.21
14	7.52	7.57	7.45	7.32	7.18	7.17	6.99	6.83	6.86	7.17	8.05	8.22
15	7.52	7.57	7.43	7.31	7.17	7.26	6.98	6.80	6.84	7.18	8.04	8.23
16	7.53	7.57	7.42	7.29	7.17	7.44	6.97	6.77	6.82	7.21	8.05	8.22
17	7.53	7.56	7.45	7.28	7.17	7.50	6.96	6.74	6.80	7.16	8.04	8.21
18	7.53	7.55	7.47	7.27	7.22	7.52	6.95	6.76	6.99	7.17	8.04	8.20
19	7.53	7.55	7.44	7.27	7.32	7.53	6.95	6.79	7.07	7.16	8.03	8.19
20	7.54	7.54	7.41	7.39	7.29	7.55	6.93	6.78	7.05	7.18	8.03	8.17
21	7.54	7.53	7.40	7.37	7.28	7.56	6.91	6.75	7.06	7.26	8.04	8.17
22	7.56	7.54	7.37	7.34	7.26	7.57	6.89	6.72	7.04	7.32	8.05	8.18
23	7.58	7.54	7.35	7.32	7.23	7.57	6.88	6.68	7.04	7.36	8.06	8.21
24	7.58	7.61	7.33	7.30	7.20	7.57	6.96	6.63	7.01	7.36	8.07	8.18
25	7.58	7.64	7.32	7.29	7.18	7.58	7.00	6.58	7.00	7.36	8.08	8.19
26	7.59	7.62	7.31	7.28	7.16	7.58	7.00	6.66	6.99	7.36	8.09	8.18
27	7.58	7.59	7.29	7.26	7.14	7.58	6.98	6.73	6.97	7.38	8.11	8.12
28	7.58	7.58	7.27	7.25	7.13	7.58	6.97	6.80	6.96	7.51	8.11	8.08
29	7.58	7.57	7.26	7.23	---	7.57	6.96	6.81	6.96	7.70	8.10	8.14
30	7.58	7.57	7.26	7.22	---	7.53	6.94	6.80	6.96	7.62	8.10	8.13
31	7.58	---	7.26	7.20	---	7.48	---	6.79	---	7.60	8.10	---
MEAN	7.53	7.58	7.43	7.27	7.20	7.37	7.05	6.80	6.91	7.20	7.97	8.18
MAX	7.59	7.64	7.56	7.39	7.32	7.58	7.44	6.93	7.07	7.70	8.11	8.23
MIN	7.45	7.53	7.26	7.20	7.13	7.10	6.88	6.58	6.66	6.95	7.59	8.08

CAL YR 1977 MEAN 7.02 MAX 7.64 MIN 4.66
WTR YR 1978 MEAN 7.38 MAX 8.23 MIN 6.58

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290832 EVERGLADES 203-NP, NEAR HOMESTEAD, FL

LOCATION.--Lat 25°37'25", long 80°44'22", in SW¼ sec.25, T.55 S., R.36 E., Dade County, Hydrologic Unit 03090202, in alligator hole in Everglades National Park at Park marker 5, 8 mi (12.9 km) south of U.S. Highway 41, 20 mi (32.2 km) northwest of Homestead, and 33 mi (53.1 km) west of Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1973 to current year (gage heights).

GAGE.--Water stage-recorder and Data Collection Platform (DCP). Formerly published as Everglades P-5S near Homestead. Datum of gage is National Geodetic Vertical Datum of 1929 (datum furnished by the Corps of Engineers).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.82 ft (2.079 m) Sept. 30, 1978; minimum, 3.25 ft (0.991 m) May 19, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.82 ft (2.079 m) Sept. 30; minimum, 5.36 ft (1.634 m) June 1, 2, 4.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.03	6.11	6.19	5.98	5.90	5.90	6.07	5.69	5.37	5.87	6.07	6.57
2	6.01	6.11	6.17	5.97	5.89	5.89	6.07	5.67	5.37	5.86	6.15	6.64
3	6.00	6.11	6.16	5.97	5.89	5.87	6.06	5.65	5.38	5.84	6.23	6.66
4	5.99	6.11	6.15	5.96	5.88	5.95	6.05	5.63	5.38	5.83	6.26	6.65
5	5.98	6.18	6.14	5.96	5.88	5.93	6.03	5.64	5.42	5.84	6.28	6.65
6	5.98	6.19	6.16	5.95	5.88	5.91	6.01	5.65	5.54	5.89	6.34	6.68
7	5.99	6.18	6.18	5.94	5.87	5.89	6.00	5.64	5.65	5.89	6.39	6.67
8	5.99	6.17	6.16	5.93	5.86	5.88	5.98	5.61	5.69	5.87	6.39	6.66
9	5.99	6.17	6.16	5.93	5.89	5.90	5.96	5.59	5.70	5.86	6.40	6.68
10	6.00	6.17	6.16	5.92	5.88	5.96	5.93	5.58	5.73	5.84	6.41	6.67
11	6.00	6.16	6.15	5.91	5.87	5.94	5.91	5.59	5.75	5.81	6.54	6.65
12	6.00	6.15	6.14	5.90	5.86	5.93	5.89	5.57	5.73	5.79	6.64	6.64
13	6.02	6.14	6.13	5.91	5.85	5.92	5.89	5.56	5.72	5.77	6.60	6.68
14	6.01	6.14	6.12	5.93	5.84	5.90	5.88	5.55	5.70	5.78	6.59	6.69
15	6.01	6.13	6.12	5.92	5.82	5.89	5.86	5.53	5.69	5.82	6.57	6.69
16	6.01	6.13	6.11	5.91	5.81	5.88	5.85	5.51	5.67	5.84	6.56	6.68
17	6.02	6.13	6.18	5.90	5.81	5.86	5.83	5.49	5.65	5.88	6.60	6.67
18	6.01	6.13	6.21	5.90	5.87	5.84	5.82	5.50	5.67	5.91	6.63	6.65
19	6.02	6.13	6.18	5.90	6.02	5.82	5.80	5.52	5.69	5.92	6.60	6.64
20	6.02	6.13	6.16	5.94	6.00	5.81	5.78	5.52	5.79	5.92	6.58	6.63
21	6.03	6.12	6.14	5.94	6.00	5.81	5.76	5.50	5.85	5.92	6.56	6.63
22	6.05	6.15	6.11	5.94	5.99	5.81	5.74	5.49	5.86	5.92	6.58	6.62
23	6.08	6.15	6.09	5.94	5.97	5.83	5.73	5.47	5.85	5.93	6.59	6.61
24	6.08	6.22	6.08	5.94	5.96	5.84	5.81	5.45	5.84	5.94	6.66	6.60
25	6.09	6.26	6.07	5.94	5.95	5.88	5.82	5.44	5.82	5.93	6.69	6.59
26	6.10	6.24	6.06	5.95	5.94	5.91	5.80	5.43	5.83	5.92	6.66	6.59
27	6.11	6.22	6.04	5.94	5.93	5.94	5.77	5.43	5.85	5.91	6.64	6.59
28	6.11	6.21	6.02	5.93	5.91	5.98	5.75	5.42	5.89	5.91	6.62	6.61
29	6.11	6.20	6.01	5.92	---	6.01	5.72	5.41	5.91	5.92	6.60	6.80
30	6.11	6.20	6.00	5.91	---	6.03	5.70	5.40	5.89	5.95	6.59	6.77
31	6.11	---	5.99	5.91	---	6.05	---	5.38	---	5.99	6.57	---
MEAN	6.03	6.16	6.12	5.93	5.90	5.90	5.88	5.53	5.70	5.88	6.50	6.65
MAX	6.11	6.26	6.21	5.98	6.02	6.05	6.07	5.69	5.91	5.99	6.69	6.80
MIN	5.98	6.11	5.99	5.90	5.81	5.81	5.70	5.38	5.37	5.77	6.07	6.57

CAL YR 1977 MEAN 5.70 MAX 6.26 MIN 4.83
WTR YR 1978 MEAN 6.02 MAX 6.80 MIN 5.37

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290829 EVERGLADES 204-NP NEAR HOMESTEAD, FL

LOCATION.--Lat 25°30'12", long 80°49'13", in NE¼ sec.1, T.57 S., R.35 E., Dade County, Hydrologic Unit 03090202, in Everglades National Park between Park markers 14 and 15, 16 mi (25.7 km) south of U.S. Highway 41, 21 mi (33.8 km) west of Homestead, and 38 mi (61.1 km) west of Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1973 to current year (gage heights). Prior to October 1, 1975 published as Everglades P-145.

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is National Geodetic Vertical Datum of 1929 (datum furnished by the Corps of Engineers).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 3.76 ft (1.146 m) Sept. 28, 1978; minimum, 0.59 ft (0.180 m) May 16, 1974 and May 6, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.76 ft (1.146 m) Sept. 28; minimum, 2.54 ft (0.774 m) June 6, 7.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.25	2.80	3.02	2.93	2.78	2.88	2.74	2.72	2.57	2.89	2.82	3.54
2	3.21	2.79	3.02	2.94	2.78	2.87	2.72	2.71	2.58	2.92	2.84	3.55
3	3.16	2.80	3.01	2.95	2.77	2.88	2.71	2.70	2.57	2.91	2.86	3.57
4	3.12	2.81	3.00	2.95	2.77	2.96	2.69	2.69	2.56	2.89	2.88	3.58
5	3.08	2.88	2.99	2.94	2.78	2.93	2.68	2.72	2.56	2.88	2.90	3.58
6	3.05	2.88	3.02	2.93	2.78	2.92	2.67	2.72	2.54	2.89	2.89	3.57
7	3.04	2.87	3.04	2.94	2.77	2.91	2.66	2.70	2.65	2.92	2.89	3.57
8	3.01	2.87	3.02	2.93	2.77	2.90	2.65	2.69	2.82	2.97	2.89	3.57
9	2.99	2.87	3.02	2.92	2.79	2.93	2.64	2.67	2.78	3.00	2.89	3.57
10	2.96	2.87	3.06	2.91	2.79	2.95	2.63	2.66	2.77	2.97	2.90	3.58
11	2.94	2.86	3.04	2.90	2.78	2.94	2.63	2.66	2.80	2.96	2.96	3.57
12	2.92	2.85	3.02	2.89	2.77	2.93	2.62	2.67	2.77	2.97	3.13	3.60
13	2.89	2.85	3.01	2.90	2.77	2.92	2.62	2.66	2.77	3.01	3.24	3.64
14	2.87	2.86	3.01	2.92	2.76	2.91	2.62	2.65	2.73	2.99	3.29	3.61
15	2.85	2.86	3.00	2.90	2.76	2.89	2.72	2.64	2.71	2.97	3.29	3.60
16	2.84	2.86	2.99	2.89	2.75	2.87	2.92	2.62	2.69	2.95	3.31	3.60
17	2.82	2.86	3.05	2.88	2.79	2.82	2.89	2.60	2.67	2.93	3.40	3.60
18	2.81	2.86	3.09	2.87	2.88	2.78	2.84	2.60	2.69	2.97	3.51	3.58
19	2.80	2.87	3.07	2.86	3.00	2.75	2.80	2.64	2.77	2.96	3.45	3.56
20	2.79	2.86	3.06	2.88	2.98	2.74	2.77	2.65	2.80	2.94	3.43	3.57
21	2.78	2.86	3.05	2.87	3.00	2.73	2.75	2.63	2.84	2.93	3.40	3.58
22	2.80	2.86	3.03	2.86	2.99	2.74	2.73	2.62	2.84	2.91	3.39	3.57
23	2.81	2.86	3.02	2.85	2.97	2.75	2.72	2.60	2.84	2.90	3.37	3.55
24	2.81	2.95	3.01	2.85	2.95	2.75	2.81	2.60	2.83	2.88	3.47	3.55
25	2.80	3.00	3.00	2.84	2.94	2.76	2.82	2.61	2.82	2.86	3.56	3.58
26	2.80	3.01	3.00	2.84	2.92	2.77	2.80	2.60	2.89	2.85	3.54	3.60
27	2.80	3.01	2.98	2.83	2.91	2.78	2.78	2.59	2.89	2.83	3.52	3.58
28	2.80	3.02	2.97	2.82	2.89	2.78	2.76	2.59	2.88	2.82	3.51	3.58
29	2.80	3.02	2.95	2.81	---	2.76	2.75	2.60	2.89	2.82	3.54	3.70
30	2.80	3.02	2.95	2.80	---	2.76	2.73	2.60	2.89	2.82	3.59	3.63
31	2.80	---	2.94	2.79	---	2.75	---	2.58	---	2.82	3.57	---
MEAN	2.91	2.89	3.01	2.88	2.84	2.84	2.73	2.64	2.75	2.91	3.23	3.58
MAX	3.25	3.02	3.09	2.95	3.00	2.96	2.92	2.72	2.89	3.01	3.59	3.70
MIN	2.78	2.79	2.94	2.79	2.75	2.73	2.62	2.58	2.54	2.82	2.82	3.54

CAL YR 1977 MEAN 2.71 MAX 3.46 MIN 1.38
WTR YR 1978 MEAN 2.94 MAX 3.70 MIN 2.54

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290827 LEVEE 67 EXTENDED CANAL NEAR RICHMOND HEIGHTS, FL

LOCATION .--Lat 25°39'54", long 80°40'24", NW¼ sec.19, T.55 S., R.37 E., Dade County, Hydrologic Unit 03090202, near left bank 100 ft (30 m) upstream from control structure, 6 mi (10 km) south of Tamiami Canal, and 19 mi (31 km) west of Richmond Heights.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--June 1971 to current year (gage heights).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Dade County bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.90 ft (2.713 m) Aug. 29, 1974; minimum, 5.81 ft (1.771 m) May 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.85 ft (2.393 m) estimated, Sept. 30; minimum, 6.37 ft (1.942 m) May 17, 26.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.97	7.10	7.13	6.90	6.83	6.76	7.14	6.49	6.50	6.74	7.12	7.68
2	6.97	7.09	7.12	6.90	6.82	6.74	7.11	6.49	6.48	6.72	7.20	7.70
3	6.97	7.09	7.11	6.91	6.81	6.72	7.08	6.47	6.46	6.72	7.25	7.72
4	6.95	7.10	7.10	6.90	6.80	6.80	7.04	6.46	6.46	6.75	7.30	7.75
5	6.95	7.14	7.09	6.89	6.80	6.78	7.00	6.48	6.50	6.75	7.34	7.76
6	6.96	7.16	7.11	6.88	6.78	6.76	6.96	6.47	6.54	6.76	7.38	7.78
7	6.97	7.16	7.13	6.88	6.77	6.74	6.92	6.46	6.57	6.76	7.42	7.80
8	6.98	7.16	7.11	6.86	6.76	6.72	6.88	6.46	6.59	6.78	7.44	7.78
9	6.99	7.15	7.10	6.87	6.78	6.78	6.85	6.46	6.56	6.78	7.45	7.76
10	7.00	7.15	7.11	6.87	6.78	6.83	6.81	6.45	6.55	6.76	7.46	7.76
11	7.01	7.14	7.11	6.86	6.76	6.83	6.77	6.44	6.60	6.76	7.48	7.77
12	7.02	7.12	7.09	6.86	6.75	6.83	6.74	6.44	6.59	6.77	7.55	7.78
13	7.02	7.11	7.08	6.87	6.74	6.82	6.70	6.43	6.57	6.77	7.60	7.78
14	7.02	7.11	7.07	6.90	6.73	6.80	6.69	6.43	6.56	6.76	7.62	7.76
15	7.02	7.10	7.05	6.90	6.72	6.81	6.67	6.42	6.56	6.76	7.64	7.76
16	7.02	7.10	7.03	6.90	6.71	6.82	6.66	6.40	6.57	6.76	7.64	7.75
17	7.02	7.10	7.07	6.90	6.72	6.87	6.63	6.38	6.58	6.75	7.65	7.75
18	7.03	7.10	7.09	6.90	6.76	6.90	6.61	6.42	6.60	6.75	7.66	7.75
19	7.03	7.10	7.07	6.89	6.86	6.94	6.59	6.47	6.61	6.75	7.66	7.75
20	7.04	7.09	7.04	6.95	6.86	6.99	6.57	6.48	6.60	6.76	7.65	7.75
21	7.04	7.09	7.02	6.96	6.87	7.03	6.55	6.46	6.60	6.76	7.65	7.74
22	7.06	7.11	7.01	6.97	6.87	7.07	6.53	6.44	6.60	6.77	7.66	7.74
23	7.09	7.10	6.98	6.97	6.85	7.10	6.51	6.43	6.61	6.76	7.65	7.73
24	7.09	7.16	6.97	6.97	6.84	7.11	6.60	6.41	6.62	6.76	7.65	7.75
25	7.10	7.20	6.96	6.95	6.82	7.12	6.62	6.40	6.63	6.76	7.64	7.75
26	7.10	7.19	6.95	6.96	6.81	7.14	6.60	6.42	6.65	6.77	7.64	7.76
27	7.11	7.17	6.94	6.95	6.79	7.16	6.57	6.50	6.68	6.78	7.64	7.82
28	7.10	7.16	6.92	6.94	6.77	7.17	6.55	6.53	6.70	6.80	7.65	7.85
29	7.10	7.15	6.91	6.91	---	7.18	6.53	6.55	6.72	6.85	7.65	7.82
30	7.10	7.14	6.90	6.86	---	7.18	6.51	6.53	6.74	6.95	7.65	7.85
31	7.10	---	6.90	6.85	---	7.16	---	6.51	---	7.05	7.66	---
MEAN	7.03	7.13	7.04	6.91	6.79	6.92	6.73	6.46	6.59	6.78	7.54	7.76
MAX	7.11	7.20	7.13	6.97	6.87	7.18	7.14	6.55	6.74	7.05	7.66	7.85
MIN	6.95	7.09	6.90	6.85	6.71	6.72	6.51	6.38	6.46	6.72	7.12	7.68

CAL YR 1977 MEAN 6.69 MAX 7.20 MIN 5.81
WTR YR 1978 MEAN 6.97 MAX 7.85 MIN 6.38

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

253735080402100 LEVEE 67 EXTENDED CANAL AT SOUTH END NEAR COOPERTOWN, FL

LOCATION.--Lat 25°37'35", long 80°40'21", in SE¼ sec.22, T.55 S., R.36 E., Dade County, Hydrologic Unit 03090202, 2.7 mi (4.3 km) south of L-67 extention station, and 9.7 mi (15.6 km) southwest of Coopertown.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1976 to current year (gage heights).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 7.58 ft (2.310 m) Sept. 29, 1978; minimum, 6.10 ft (1.859 m) May 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.58 ft (2.310 m) Sept. 29; minimum, 6.55 ft (1.996 m) May 5.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.92	6.94	7.00	6.85	7.12	7.05	7.36	6.61	6.59	6.76	6.92	7.36
2	6.91	6.94	6.99	6.84	7.12	6.99	7.36	6.61	6.59	6.76	6.99	7.42
3	6.90	6.94	6.99	6.83	7.11	6.81	7.36	6.59	6.58	6.75	7.05	7.43
4	6.90	6.94	6.97	6.82	7.11	6.76	7.32	6.59	6.58	6.74	7.04	7.42
5	6.89	6.96	6.96	6.82	7.12	6.77	7.28	6.60	6.61	6.74	7.05	7.44
6	6.89	6.98	6.98	6.80	7.12	6.78	7.23	6.60	6.63	6.74	7.13	7.47
7	6.89	6.98	7.00	6.78	7.11	6.75	7.19	6.59	6.67	6.76	7.14	7.45
8	6.89	6.98	6.99	6.78	7.08	6.71	7.14	6.58	6.69	6.75	7.15	7.44
9	6.89	6.98	6.97	6.80	7.12	6.73	7.04	6.57	6.66	6.74	7.17	7.43
10	6.89	6.98	6.98	6.79	7.12	6.76	6.95	6.58	6.68	6.73	7.17	7.42
11	6.89	6.98	6.98	6.78	7.09	6.77	6.84	6.61	6.70	6.72	7.19	7.42
12	6.89	6.97	6.97	6.77	7.06	6.78	6.76	6.59	6.68	6.71	7.24	7.43
13	6.89	6.96	6.96	6.78	7.02	6.78	6.75	6.59	6.67	6.70	7.29	7.46
14	6.89	6.95	6.95	6.80	7.01	6.78	6.74	6.59	6.65	6.70	7.31	7.47
15	6.89	6.95	6.95	6.80	7.00	6.77	6.75	6.58	6.65	6.70	7.31	7.49
16	6.89	6.95	6.94	6.79	6.97	6.76	6.75	6.57	6.64	6.70	7.30	7.48
17	6.89	6.95	6.99	6.78	6.94	6.88	6.72	6.56	6.62	6.69	7.31	7.46
18	6.88	6.95	7.01	6.79	7.07	6.93	6.70	6.59	6.64	6.70	7.31	7.45
19	6.89	6.95	6.99	6.78	7.38	6.92	6.69	6.60	6.67	6.70	7.31	7.43
20	6.89	6.95	6.97	6.82	7.35	6.95	6.68	6.60	6.70	6.71	7.30	7.43
21	6.89	6.94	6.95	6.82	7.36	6.94	6.66	6.60	6.72	6.71	7.30	7.43
22	6.91	6.97	6.90	6.83	7.33	6.83	6.65	6.59	6.77	6.72	7.34	7.42
23	6.93	6.96	6.90	6.83	7.29	6.85	6.63	6.58	6.74	6.76	7.34	7.41
24	6.94	7.01	6.94	6.83	7.25	7.06	6.73	6.57	6.72	6.78	7.43	7.41
25	6.94	7.05	6.95	6.83	7.22	7.25	6.72	6.57	6.70	6.77	7.43	7.40
26	6.94	7.04	6.95	6.84	7.19	7.29	6.70	6.57	6.72	6.77	7.39	7.41
27	6.94	7.02	6.92	6.84	7.16	7.31	6.68	6.59	6.73	6.77	7.37	7.41
28	6.94	7.02	6.90	6.95	7.10	7.32	6.66	6.59	6.75	6.78	7.35	7.42
29	6.94	7.01	6.88	7.09	---	7.33	6.64	6.60	6.77	6.80	7.34	7.56
30	6.94	7.00	6.87	7.10	---	7.33	6.63	6.60	6.75	6.86	7.34	7.53
31	6.94	---	6.86	7.12	---	7.34	---	6.59	---	6.88	7.34	---
MEAN	6.91	6.97	6.95	6.84	7.14	6.94	6.88	6.59	6.68	6.75	7.25	7.44
MAX	6.94	7.05	7.01	7.12	7.38	7.34	7.36	6.61	6.77	6.88	7.43	7.56
MIN	6.88	6.94	6.86	6.77	6.94	6.71	6.63	6.56	6.58	6.69	6.92	7.36

CAL YR 1977 MEAN 6.68 MAX 7.07 MIN 6.10
WTR YR 1978 MEAN 6.94 MAX 7.56 MIN 6.56

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

254130080380500 NORTHEAST SHARK RIVER SLOUGH NO. 1 NEAR COOPERTOWN, FL. (revised).

LOCATION.--Lat 25°41'30", long 80°17'06", in NW¼ sec.4, T.54 S., R.31 E., Dade County, Hydrologic Unit 03090202, 0.7 mi (1.1 km) west of southeast corner of Blue Shanty Canal, 0.8 mi (1.2 km) south of east-west section of Shanty Canal, and 4.7 mi (7.6 km) south-west of Coopertown.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1976 to current year (gage heights). Prior to October 1977, published as "Northeast Shark Valley Slough No. 1 near Coopertown".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.91 ft (2.106 m) Oct. 1, 2, 1976; minimum 5.01 ft (1.527 m) May 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.78 ft (2.067 m) Sept. 29, 30; minimum, 5.41 ft (1.649 m) May 18.

REVISIONS.--Revised figures of gage heights for water year 1977, superseding those published in the report for 1977 are given herein.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.58	6.17	6.17	6.15	6.04	6.12	6.01	5.73	5.79	6.35	6.14	6.55
2	6.56	6.16	6.16	6.14	6.04	6.11	6.00	5.71	5.74	6.35	6.14	6.59
3	6.53	6.15	6.16	6.15	6.03	6.11	5.98	5.69	5.71	6.34	6.14	6.65
4	6.51	6.14	6.15	6.15	6.03	6.17	5.97	5.69	5.71	6.34	6.14	6.66
5	6.50	6.15	6.14	6.14	6.04	6.16	5.95	5.73	5.77	6.33	6.15	6.66
6	6.48	6.15	6.17	6.13	6.05	6.15	5.94	5.71	5.77	6.32	6.23	6.68
7	6.47	6.15	6.20	6.13	6.04	6.14	5.92	5.66	5.75	6.31	6.36	6.69
8	6.45	6.15	6.19	6.12	6.04	6.14	5.90	5.62	5.73	6.31	6.37	6.69
9	6.43	6.15	6.19	6.11	6.07	6.18	5.88	5.59	5.69	6.31	6.37	6.71
10	6.41	6.14	6.19	6.10	6.07	6.23	5.86	5.58	5.66	6.31	6.37	6.69
11	6.39	6.13	6.19	6.09	6.05	6.22	5.83	5.65	5.66	6.29	6.35	6.69
12	6.38	6.11	6.18	6.09	6.04	6.22	5.81	5.61	5.69	6.27	6.36	6.69
13	6.36	6.10	6.18	6.09	6.03	6.21	5.77	5.59	5.66	6.25	6.40	6.69
14	6.33	6.09	6.18	6.11	6.02	6.20	5.80	5.65	5.62	6.25	6.48	6.69
15	6.31	6.08	6.17	6.11	6.01	6.18	5.89	5.57	5.60	6.24	6.48	6.70
16	6.30	6.07	6.17	6.10	6.00	6.17	5.88	5.50	5.58	6.25	6.46	6.72
17	6.28	6.07	6.21	6.09	6.00	6.15	5.84	5.45	5.56	6.30	6.46	6.72
18	6.26	6.06	6.26	6.09	6.08	6.13	5.80	5.55	5.67	6.27	6.45	6.72
19	6.24	6.06	6.26	6.09	6.19	6.11	5.77	5.88	6.00	6.25	6.45	6.72
20	6.23	6.05	6.25	6.14	6.18	6.11	5.73	5.90	6.01	6.24	6.45	6.72
21	6.21	6.05	6.25	6.12	6.19	6.10	5.70	5.86	6.00	6.22	6.47	6.71
22	6.23	6.06	6.23	6.12	6.19	6.09	5.69	5.79	6.05	6.21	6.47	6.71
23	6.25	6.06	6.22	6.11	6.18	6.08	5.71	5.73	6.09	6.22	6.48	6.71
24	6.25	6.12	6.21	6.11	6.17	6.06	5.87	5.69	6.12	6.23	6.51	6.71
25	6.25	6.17	6.20	6.11	6.16	6.05	5.97	5.69	6.15	6.21	6.54	6.69
26	6.24	6.18	6.20	6.11	6.15	6.04	5.93	5.70	6.28	6.19	6.54	6.69
27	6.23	6.18	6.19	6.09	6.14	6.02	5.89	5.69	6.33	6.17	6.54	6.69
28	6.21	6.17	6.17	6.08	6.14	6.01	5.84	5.78	6.40	6.15	6.54	6.69
29	6.20	6.17	6.16	6.07	---	6.02	5.80	5.91	6.39	6.15	6.53	6.74
30	6.19	6.17	6.15	6.06	---	6.02	5.76	5.89	6.37	6.15	6.53	6.78
31	6.18	---	6.15	6.05	---	6.01	---	5.85	---	6.14	6.53	---
MEAN	6.34	6.12	6.19	6.11	6.08	6.12	5.86	5.70	5.89	6.26	6.40	6.69
MAX	6.58	6.18	6.26	6.15	6.19	6.23	6.01	5.91	6.40	6.35	6.54	6.78
MIN	6.18	6.05	6.14	6.05	6.00	6.01	5.69	5.45	5.56	6.14	6.14	6.55

CAL YR 1977 MEAN 6.04 MAX 6.69 MIN 5.01
WTR YR 1978 MEAN 6.15 MAX 6.78 MIN 5.45

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

254315080331500 NORTHEAST SHARK RIVER SLOUGH NO. 2 NEAR COOPERTOWN, FL (revised)

LOCATION.--Lat 25°43'15", long 80°33'15", in SW¼ sec.20, T.54 S., R.38 E., Dade County, Hydrologic Unit 03090202, 2.7 mi (4.3 km) south of Coopertown in Northeast Shark River Slough.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1976 to current year (gage heights). Published as "Northeast Shark Valley Slough No. 2 near Coopertown" October 1976 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.87 ft (2.094 m) Oct. 1, 2, 1976; minimum, 5.11 ft (1.558 m) May 3, 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.80 ft (2.073 m) Sept. 14; minimum, 5.13 ft (1.564 m) May 17, 18.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.64	6.22	6.16	6.14	6.00	6.09	5.98	5.75	5.72	6.35	6.17	6.60
2	6.62	6.20	6.15	6.13	5.99	6.08	5.96	5.70	5.70	6.37	6.22	6.63
3	6.60	6.20	6.15	6.14	5.98	6.09	5.93	5.63	5.65	6.38	6.25	6.67
4	6.58	6.23	6.13	6.14	5.96	6.16	5.86	5.57	5.70	6.36	6.23	6.67
5	6.57	6.26	6.12	6.13	5.98	6.15	5.82	5.60	5.90	6.35	6.25	6.69
6	6.55	6.26	6.16	6.12	5.98	6.14	5.79	5.56	5.88	6.35	6.32	6.73
7	6.54	6.24	6.18	6.10	5.96	6.13	5.75	5.47	5.87	6.35	6.32	6.73
8	6.53	6.24	6.17	6.09	5.95	6.12	5.71	5.40	5.86	6.35	6.32	6.73
9	6.51	6.21	6.17	6.13	5.99	6.18	5.65	5.34	5.83	6.35	6.32	6.72
10	6.48	6.20	6.19	6.10	5.98	6.24	5.59	5.22	5.81	6.33	6.31	6.72
11	6.45	6.18	6.18	6.08	5.97	6.23	5.54	5.16	5.79	6.32	6.31	6.71
12	6.44	6.16	6.16	6.07	5.95	6.22	5.45	5.26	5.79	6.30	6.34	6.72
13	6.42	6.15	6.16	6.08	5.92	6.21	5.39	5.43	5.80	6.29	6.37	6.72
14	6.39	6.13	6.16	6.10	5.89	6.20	5.40	5.36	5.77	6.29	6.42	6.75
15	6.38	6.11	6.16	6.09	5.84	6.19	5.51	5.23	5.75	6.28	6.46	6.79
16	6.37	6.09	6.15	6.08	5.81	6.18	5.49	5.15	5.72	6.28	6.46	6.79
17	6.35	6.08	6.21	6.08	5.82	6.16	5.42	5.14	5.66	6.29	6.48	6.79
18	6.32	6.07	6.27	6.07	5.94	6.15	5.39	5.33	5.74	6.28	6.48	6.79
19	6.30	6.06	6.26	6.06	6.10	6.12	5.37	5.62	5.97	6.28	6.49	6.78
20	6.29	6.05	6.25	6.15	6.11	6.10	5.27	5.69	5.98	6.27	6.50	6.77
21	6.28	6.04	6.25	6.13	6.16	6.09	5.18	5.66	6.01	6.25	6.54	6.76
22	6.30	6.06	6.23	6.12	6.17	6.08	5.15	5.60	6.12	6.26	6.53	6.76
23	6.33	6.05	6.21	6.11	6.16	6.07	5.18	5.55	6.18	6.26	6.55	6.76
24	6.32	6.14	6.20	6.10	6.15	6.06	5.81	5.49	6.20	6.27	6.58	6.75
25	6.31	6.19	6.19	6.09	6.13	6.05	5.90	5.50	6.23	6.25	6.58	6.74
26	6.30	6.18	6.19	6.09	6.12	6.03	5.89	5.72	6.35	6.23	6.57	6.74
27	6.29	6.17	6.17	6.08	6.10	6.02	5.86	5.74	6.36	6.20	6.57	6.74
28	6.28	6.17	6.16	6.06	6.10	6.01	5.84	5.79	6.39	6.18	6.56	6.73
29	6.27	6.16	6.14	6.04	---	6.02	5.80	5.79	6.38	6.17	6.56	6.74
30	6.26	6.16	6.14	6.03	---	6.00	5.77	5.77	6.36	6.17	6.59	6.77
31	6.25	---	6.14	6.01	---	5.99	---	5.75	---	6.16	6.58	---
MEAN	6.40	6.16	6.18	6.09	6.01	6.11	5.62	5.52	5.95	6.28	6.43	6.73
MAX	6.64	6.26	6.27	6.15	6.17	6.24	5.98	5.79	6.39	6.38	6.59	6.79
MIN	6.25	6.04	6.12	6.01	5.81	5.99	5.15	5.14	5.65	6.16	6.17	6.60

CAL YR 1977 MEAN 6.00 MAX 6.79 MIN 5.12
WTR YR 1978 MEAN 6.12 MAX 6.79 MIN 5.14

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290825 FLORIDA BAY AT FLAMINGO, FL

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.11	.31	.06	-.68	.06	-.72	.08	-.06	.17	.07	.26
2	.56	.40	.27	.29	-.61	-.14	-.56	.23	-.07	.19	-.07	.28
3	.65	.72	.10	.04	-.59	.18	-.47	.26	-.07	.12	.07	.54
4	.23	.89	.23	-.14	-.66	.31	-.59	.29	-.09	.03	.45	.37
5	-.13	.78	.41	-.40	-.74	-.26	-.47	-.08	.43	.47	.10	.52
6	.28	.73	.53	-.32	-.43	-.52	-.38	.21	-.05	-.15	.16	.65
7	.10	.72	-.29	-.10	-.40	-.16	-.42	-.23	-.06	-.14	.07	.58
8	.40	.61	-.61	-.03	-.38	-.04	-.10	-.28	-.07	-.16	.00	.49
9	.56	.37	-.22	.12	.12	-.19	-.26	-.13	.00	-.10	.12	.44
10	.69	.36	-.42	-.35	.00	.18	-.29	-.08	.05	-.15	.13	.41
11	.54	-.09	-.52	-.61	-.10	.01	-.30	-.09	.01	-.12	.29	.36
12	.47	-.32	-.41	-.09	-.05	-.18	-.19	-.38	.14	-.10	-.01	.51
13	.32	-.19	-.18	.16	.00	-.16	-.07	-.13	.06	.13	-.14	.28
14	.07	-.29	.24	.12	.16	-.28	-.01	.16	.11	.07	-.35	.17
15	-.02	.13	.20	-.20	-.19	.02	-.08	.42	.02	.06	-.42	.30
16	.08	.26	.23	-.44	.12	-.24	-.24	.31	-.21	.15	-.20	.32
17	-.10	.44	.38	-.29	-.16	-.13	-.11	.14	-.51	.17	-.02	.28
18	-.13	.23	.51	-.18	.09	-.73	-.16	-.24	-.23	-.01	.35	.30
19	.10	.27	.13	-.27	-.01	-1.11	.37	-.16	-.03	-.05	.12	.40
20	.05	.26	.03	.05	-.28	-.69	.26	-.19	.72	.30	.16	.46
21	-.07	.16	.18	-.60	-.50	-.21	.07	-.11	.05	-.07	.12	.45
22	-.29	.03	.08	-.70	-.11	-.16	-.25	.29	.09	-.10	.18	.50
23	.13	.21	-.46	-.69	-.50	-.15	-.16	-.21	.14	-.15	.26	.60
24	.24	.56	-.44	-.63	-.32	.05	-.06	-.07	.15	.03	.17	.75
25	.31	.29	.02	-.10	-.12	-.11	-.18	-.03	.26	-.01	.20	.90
26	.20	.15	-.09	-.13	-.03	.13	.07	-.10	.34	.18	.15	.85
27	.21	-.24	-.38	-.67	-.01	-.11	.31	-.18	.25	.50	.19	.90
28	.36	-.29	-.46	-.76	-.11	-.22	-.09	-.22	.26	.21	.06	.95
29	.14	-.21	-.51	-.71	---	-.42	-.15	-.02	.16	.14	.28	1.05
30	.04	.05	-.04	-.67	---	-.31	-.12	.08	.21	-.08	.19	.90
31	.00	---	.05	-.74	---	-.49	---	.00	---	.09	.11	---
MEAN	.22	.24	-.04	-.29	-.23	-.20	-.18	-.01	.07	.05	.09	.53
MAX	.69	.89	.53	.29	.16	.31	.37	.42	.72	.50	.45	1.05
MIN	-.29	-.32	-.61	-.76	-.74	-1.11	-.72	-.38	-.51	-.16	-.42	.17

CAL YR 1977 MEAN .06 MAX .97 MIN -1.00
WTR YR 1978 MEAN .02 MAX 1.05 MIN -1.11

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290825 FLORIDA BAY AT FLAMINGO, FL,

LOCATION.--Lat 25°08'37", long 80°55'15", in SW¼ sec.4, T.61 S., R.34 E., Monroe County, Hydrologic Unit 03090202, in Everglades National Park on bulkhead of Everglades National Park Rangers' boatdock at Flamingo, on Flamingo-Coot Bay Canal, and 500 ft (152 m) upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1960 to current year (gage heights). Published since October 1962. Records of gage heights prior to October 1962 are available in files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 13, 1972, at site 300 ft (91 m) west, and at datum 0.48 ft (0.146 m) lower.

REMARKS.--Gage records water levels and tidal fluctuations in upper Florida Bay. The stage record published is the maximum and minimum tide event for each calendar day.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 11.36 ft (3.463 m) present datum Sept. 10, 1960 (from hurricane floodmark); minimum, -2.47 ft (-0.753 m) present datum Jan. 16, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.24 ft (0.988 m) June 20; minimum, -1.11 ft (0.338 m) Mar. 19.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.98	2.30	2.59	2.26	1.75	2.43	1.75	2.57	2.40	2.77	2.76	2.80
2	2.81	2.38	2.33	2.35	1.97	2.31	1.85	2.47	2.47	2.92	2.64	2.79
3	2.78	2.57	2.16	1.97	1.64	2.59	1.74	2.78	2.50	2.85	2.65	2.92
4	2.55	2.59	2.30	2.07	2.18	2.12	1.82	3.01	2.61	2.81	2.68	2.98
5	1.65	2.59	2.67	2.32	2.10	2.38	2.03	2.85	2.65	2.69	2.82	2.95
6	2.11	2.73	2.49	2.08	2.43	2.24	2.22	2.56	2.58	2.67	2.56	2.96
7	1.94	2.64	1.85	2.70	2.45	2.46	2.24	2.49	2.53	2.51	2.33	2.98
8	2.62	2.86	1.38	2.81	2.33	2.66	2.53	2.68	2.71	2.39	2.29	2.85
9	2.85	2.95	2.40	3.12	3.18	2.92	2.44	2.73	2.64	2.22	2.35	2.75
10	3.02	3.04	2.65	2.45	2.58	2.92	2.33	2.64	2.39	2.09	2.29	2.72
11	2.87	2.89	2.26	2.05	2.39	2.48	2.43	2.37	2.27	2.06	2.53	2.83
12	3.05	2.34	2.42	2.25	2.42	2.43	2.24	2.06	2.22	2.20	2.41	2.98
13	3.07	2.60	2.66	2.83	2.46	2.14	2.29	2.27	2.28	2.19	2.36	2.95
14	2.69	2.48	3.01	2.66	2.07	2.36	2.06	2.24	2.32	2.26	2.19	2.98
15	2.55	2.81	2.73	1.68	2.12	2.04	1.66	2.21	2.22	2.64	2.41	3.05
16	2.78	2.63	2.42	1.41	2.07	1.75	1.67	2.20	2.24	2.80	2.63	3.15
17	2.42	2.71	2.39	2.01	1.87	1.34	1.96	2.30	1.95	3.00	2.97	3.20
18	2.21	2.33	2.40	1.44	2.41	1.01	2.22	2.29	2.50	3.04	3.10	3.05
19	2.30	2.32	2.14	1.98	2.46	1.45	2.72	2.41	2.96	2.94	3.02	2.85
20	2.11	2.42	2.49	2.96	2.32	1.56	2.72	2.53	3.24	2.94	2.77	2.70
21	2.06	2.01	2.41	2.01	1.99	2.14	2.60	2.79	3.11	2.75	2.59	2.82
22	1.96	2.27	2.45	1.65	2.71	2.46	2.53	2.76	3.07	2.69	2.43	2.70
23	2.39	2.67	1.85	1.87	2.15	2.36	2.15	2.95	3.09	2.52	2.50	2.60
24	2.72	2.99	2.13	1.98	2.38	2.61	2.72	3.07	2.96	2.38	2.57	2.32
25	2.82	3.00	2.61	2.42	2.40	2.53	2.98	2.83	2.82	2.34	2.40	2.40
26	2.76	2.86	2.97	2.77	2.54	2.65	3.07	2.61	2.57	2.50	2.20	2.50
27	2.91	2.16	2.15	1.81	2.44	2.50	2.69	2.11	2.42	2.62	2.25	2.60
28	2.81	2.28	1.91	1.79	2.62	2.15	2.39	2.15	2.44	2.43	2.27	2.70
29	2.62	2.20	1.83	1.63	---	2.39	1.94	2.24	2.50	2.32	2.71	2.85
30	2.62	2.42	2.27	1.55	---	2.18	2.19	2.31	2.81	2.32	2.70	2.90
31	2.33	---	2.22	1.71	---	1.57	---	2.36	---	2.56	2.48	---
MEAN	2.56	2.57	2.34	2.15	2.30	2.23	2.27	2.51	2.58	2.56	2.54	2.83
MAX	3.07	3.04	3.01	3.12	3.18	2.92	3.07	3.07	3.24	3.04	3.10	3.20
MIN	1.65	2.01	1.38	1.41	1.64	1.01	1.66	2.06	1.95	2.06	2.19	2.32

CAL YR 1977 MEAN .66 MAX 3.07 MIN -1.00
WTR YR 1978 MEAN 2.45 MAX 3.24 MIN 1.01

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290811 EVERGLADES 206 NP NEAR MIAMI, FL

LOCATION.--Lat 25°32'42", long 80°40'29", in sec*, T.57 S., R.37 E., Dade County, Hydrologic Unit 03090202, 16 mi (26 km) south of the southern end of levee 67, and 35 mi (56 km) west of Dade County Courthouse in Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is National Geodetic Vertical Datum 1929. Prior to October 1976, at datum 6.24 ft (1.902 m) lower.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.36 ft (1.939 m) Sept. 14, 1978; minimum, 0.81 ft (0.247 m), May 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.36 ft (1.939 m) Sept 14; minimum, 2.60 ft (0.792 m) Apr. 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.03	4.80	5.29	4.79	3.85	5.29	4.20	4.11	4.20	5.85	5.39	6.00
2	6.01	4.74	5.26	4.83	3.80	5.24	4.10	3.99	4.24	5.90	5.40	6.10
3	5.97	4.68	5.22	4.97	3.76	5.33	3.98	3.88	4.34	5.88	5.46	6.21
4	5.91	4.60	5.18	4.99	3.72	5.69	3.87	3.76	4.25	5.87	5.42	6.18
5	5.85	4.50	5.14	4.95	3.76	5.65	3.77	3.82	4.17	5.88	5.49	6.16
6	5.71	4.75	5.21	4.91	3.84	5.61	3.67	3.84	4.15	5.92	5.76	6.15
7	5.59	4.95	5.31	4.88	3.78	5.57	3.58	3.81	4.45	5.95	5.78	6.13
8	5.49	4.87	5.26	4.85	3.76	5.53	3.50	3.73	4.90	5.96	5.75	6.11
9	5.40	4.78	5.24	4.89	4.00	5.62	3.41	3.63	5.10	5.93	5.76	6.09
10	5.34	4.70	5.34	4.82	4.02	5.69	3.33	3.55	5.12	5.91	5.74	6.07
11	5.28	4.62	5.29	4.74	3.94	5.65	3.25	3.69	5.12	5.88	5.73	6.06
12	5.22	4.55	5.23	4.68	3.85	5.61	3.17	3.72	5.10	5.85	5.74	6.12
13	5.16	4.50	5.18	4.73	3.79	5.57	3.10	3.68	5.05	5.83	5.77	6.20
14	5.10	4.44	5.16	4.81	3.71	5.52	3.02	3.61	4.98	5.82	5.82	6.26
15	5.04	4.39	5.11	4.71	3.63	5.47	2.98	3.49	4.90	5.80	5.82	6.29
16	4.98	4.33	5.06	4.62	3.57	5.42	3.06	3.37	4.80	5.78	5.81	6.24
17	4.92	4.30	5.32	4.59	3.88	5.34	3.03	3.25	4.75	5.75	5.80	6.20
18	4.86	4.25	5.46	4.55	4.86	5.24	2.97	3.38	4.72	5.72	5.79	6.16
19	4.80	4.20	5.43	4.52	5.55	5.15	2.91	3.83	5.00	5.70	5.79	6.13
20	4.73	4.14	5.39	4.71	5.53	5.07	2.85	4.11	5.45	5.67	5.83	6.10
21	4.67	4.09	5.35	4.63	5.58	5.00	2.78	4.14	5.65	5.64	5.91	6.09
22	4.62	4.35	5.30	4.54	5.56	4.92	2.70	4.19	5.70	5.64	5.89	6.08
23	4.56	4.35	5.24	4.48	5.52	4.82	2.75	4.34	5.72	5.70	5.89	6.07
24	4.75	5.08	5.20	4.44	5.49	4.72	4.81	4.21	5.72	5.69	6.07	6.05
25	4.95	5.47	5.17	4.40	5.46	4.65	4.88	4.17	5.70	5.65	6.12	6.03
26	5.15	5.44	5.15	4.34	5.42	4.59	4.78	4.26	5.71	5.60	6.08	6.02
27	5.09	5.39	5.07	4.24	5.38	4.48	4.63	4.21	5.73	5.56	6.04	6.00
28	5.03	5.36	4.99	4.14	5.34	4.45	4.48	4.18	5.79	5.52	6.01	5.99
29	4.97	5.34	4.93	4.05	---	4.45	4.34	4.15	5.79	5.48	6.00	6.05
30	4.92	5.32	4.88	3.97	---	4.37	4.22	4.11	5.79	5.47	6.02	6.04
31	4.86	---	4.83	3.90	---	4.26	---	4.13	---	5.43	6.02	---
MEAN	5.19	4.71	5.20	4.60	4.44	5.16	3.60	3.88	5.07	5.75	5.80	6.11
MAX	6.03	5.47	5.46	4.99	5.58	5.69	4.88	4.34	5.79	5.96	6.12	6.29
MIN	4.56	4.09	4.83	3.90	3.57	4.26	2.70	3.25	4.15	5.43	5.39	5.99

CAL YR 1977 MEAN 4.41 MAX 6.23 MIN .81
WTR YR 1978 MEAN 4.97 MAX 6.29 MIN 2.70

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290810 EVERGLADES 207 NEAR HOMESTEAD, FL

LOCATION.--Lat 25°17'30", long 80°40'30", in sec.36, T.50 S., R.36 E., Dade County, Hydrologic Unit 03090202, in the Everglades, 7.5 mi (12.1 km) southwest of Royal Palm Ranger Station, and 18 mi (29 km) southwest of Homestead.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1953 to current year (gage heights). Records of gage heights prior to October 1962 are available in files of the Geological Survey. Prior to October 1977, published as "Everglades P-37 near Homestead".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Dade County bench mark). Prior to Oct. 1, 1963, at datum 0.32 ft (0.098 m) lower.

REMARKS.--Elevation of the land surface is about 0.6 ft (0.183 m).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 3.05 ft (0.930 m) present datum Sept. 11, 1960; minimum, -1.97 ft (-0.600 m) May 14, 1971 (estimated).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 2.00 ft (0.610 m) Sept. 15; minimum, 0.61 ft (0.186 m) Apr. 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.75	1.36	1.30	1.37	1.21	1.35	1.09	.89	1.37	1.59	1.25	1.57
2	1.75	1.35	1.30	1.36	1.21	1.34	1.06	.87	1.39	1.57	1.29	1.59
3	1.74	1.33	1.30	1.35	1.19	1.35	1.04	.85	1.39	1.56	1.29	1.61
4	1.71	1.32	1.29	1.35	1.19	1.47	1.01	.83	1.37	1.55	1.27	1.61
5	1.66	1.31	1.28	1.35	1.23	1.46	.99	.92	1.34	1.53	1.27	1.68
6	1.64	1.31	1.28	1.35	1.23	1.44	.97	.93	1.31	1.57	1.31	1.72
7	1.64	1.31	1.28	1.35	1.22	1.41	.95	.91	1.29	1.56	1.32	1.74
8	1.61	1.29	1.28	1.34	1.22	1.39	.93	.88	1.28	1.54	1.33	1.74
9	1.58	1.28	1.27	1.31	1.26	1.44	.90	.86	1.29	1.52	1.31	1.73
10	1.57	1.26	1.26	1.29	1.25	1.46	.88	.84	1.27	1.53	1.29	1.95
11	1.56	1.24	1.25	1.27	1.23	1.44	.85	.89	1.24	1.52	1.28	1.97
12	1.54	1.22	1.24	1.26	1.21	1.42	.83	1.16	1.24	1.50	1.32	1.98
13	1.52	1.19	1.23	1.26	1.20	1.39	.81	1.16	1.32	1.51	1.50	1.98
14	1.49	1.18	1.23	1.27	1.19	1.37	.79	1.14	1.31	1.52	1.55	1.97
15	1.47	1.17	1.23	1.26	1.17	1.35	.78	1.10	1.34	1.51	1.53	2.01
16	1.45	1.16	1.22	1.25	1.16	1.33	.82	1.06	1.37	1.49	1.50	1.99
17	1.42	1.15	1.39	1.24	1.19	1.31	.79	1.03	1.34	1.47	1.48	1.94
18	1.40	1.13	1.55	1.25	1.35	1.27	.76	1.05	1.35	1.44	1.45	1.90
19	1.38	1.12	1.56	1.25	1.53	1.25	.73	1.11	1.49	1.42	1.43	1.86
20	1.37	1.11	1.54	1.37	1.53	1.23	.71	1.15	1.49	1.39	1.48	1.83
21	1.35	1.10	1.51	1.38	1.51	1.22	.68	1.12	1.47	1.39	1.54	1.81
22	1.40	1.11	1.49	1.37	1.47	1.21	.66	1.11	1.45	1.37	1.54	1.80
23	1.49	1.10	1.47	1.35	1.44	1.19	.64	1.10	1.46	1.36	1.52	1.82
24	1.51	1.21	1.46	1.34	1.42	1.18	.96	1.10	1.46	1.36	1.66	1.80
25	1.51	1.29	1.45	1.34	1.40	1.16	1.10	1.13	1.43	1.36	1.77	1.91
26	1.48	1.31	1.45	1.32	1.39	1.14	1.07	1.22	1.42	1.33	1.72	1.86
27	1.46	1.31	1.43	1.30	1.37	1.12	1.03	1.29	1.49	1.32	1.67	1.81
28	1.44	1.31	1.41	1.28	1.36	1.13	.99	1.34	1.48	1.30	1.63	1.79
29	1.42	1.32	1.39	1.26	---	1.14	.95	1.36	1.49	1.29	1.59	1.77
30	1.40	1.33	1.39	1.24	---	1.12	.91	1.37	1.51	1.27	1.56	1.75
31	1.38	---	1.37	1.23	---	1.10	---	1.36	---	1.26	1.55	---
MEAN	1.52	1.24	1.36	1.31	1.30	1.30	.89	1.07	1.38	1.45	1.46	1.82
MAX	1.75	1.36	1.56	1.38	1.53	1.47	1.10	1.37	1.51	1.59	1.77	2.01
MIN	1.35	1.10	1.22	1.23	1.16	1.10	.64	.83	1.24	1.26	1.25	1.57

CAL YR 1977 MEAN 1.10 MAX 1.89 MIN -.56
WTR YR 1978 MEAN 1.34 MAX 2.01 MIN .64

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEREASTERN COASTAL AREA

02290803 TAYLOR SLOUGH AT ROYAL PALM NEAR HOMESTEAD, FL

LOCATION.--Lat 25°24'07", long 80°40'15", in NW¼ sec.7, T.58 S., R.37 E., Dade County, Hydrologic Unit 03090202, at end of north walkway of Anhinga Trail in Everglades National Park, 1.5 mi (2.4 km) south of State Highway 27, and 9.5 mi (15.3 km) southwest of Homestead.

PERIOD OF RECORD.--February 1968 to current year (gage heights).

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Gage records water levels in the southeastern portion of the Everglades National Park.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 4.35 ft (1.326 m) July 7, 1968; minimum,-1.50 ft (-0.457 m) May 14, 15, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.90 ft (1.189 m) Sept. 27; minimum gage height, 1.33 ft (0.405 m) Apr. 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.82	2.48	2.86	2.39	2.15	2.58	1.96	2.48	2.83	2.82	2.42	3.41
2	3.78	2.47	2.79	2.37	2.12	2.53	1.98	2.39	2.83	2.82	2.41	3.42
3	3.76	2.44	2.69	2.41	2.09	2.50	1.98	2.28	2.87	2.83	2.48	3.43
4	3.73	2.40	2.64	2.45	2.05	2.65	1.95	2.21	2.86	2.86	2.44	3.44
5	3.66	2.36	2.58	2.45	2.06	2.67	1.91	2.20	2.84	2.88	2.42	3.45
6	3.60	2.34	2.53	2.45	2.10	2.64	1.87	2.25	3.08	2.91	2.43	3.49
7	3.50	2.32	2.52	2.43	2.09	2.59	1.79	2.26	3.07	2.98	2.45	3.54
8	3.43	2.30	2.52	2.41	2.06	2.55	1.78	2.20	2.98	2.98	2.47	3.54
9	3.37	2.26	2.48	2.40	2.06	2.58	1.71	2.14	2.86	2.99	2.47	3.54
10	3.30	2.20	2.44	2.41	2.10	2.65	1.68	2.10	2.73	2.93	2.43	3.53
11	3.23	2.17	2.48	2.37	2.10	2.67	1.60	2.14	2.65	2.92	2.41	3.54
12	3.16	2.13	2.47	2.33	2.08	2.66	1.54	2.14	2.57	2.88	2.55	3.58
13	3.14	2.08	2.45	2.30	2.05	2.63	1.50	2.13	2.60	2.85	2.87	3.60
14	3.13	2.05	2.40	2.32	2.01	2.59	1.47	2.13	2.59	2.85	3.03	3.60
15	3.04	2.03	2.38	2.33	2.00	2.54	1.62	2.09	2.55	2.91	3.04	3.63
16	2.95	2.00	2.33	2.28	1.95	2.52	1.64	2.06	2.49	2.91	3.03	3.65
17	2.87	1.97	2.42	2.28	1.96	2.45	1.63	2.01	2.47	2.83	3.00	3.66
18	2.80	1.96	2.96	2.30	2.33	2.40	1.61	2.08	2.43	2.73	2.93	3.67
19	2.70	1.93	3.04	2.30	2.73	2.36	1.57	2.35	2.56	2.68	2.84	3.68
20	2.63	1.91	2.97	2.49	2.82	2.33	1.54	2.68	2.60	2.64	2.77	3.71
21	2.56	1.88	2.91	2.58	2.89	2.28	1.47	2.74	2.72	2.59	2.74	3.74
22	2.50	1.85	2.85	2.56	2.86	2.25	1.44	2.76	2.81	2.52	2.71	3.77
23	2.61	1.84	2.78	2.53	2.86	2.24	1.37	2.73	2.91	2.53	2.69	3.84
24	2.70	2.15	2.72	2.49	2.85	2.19	2.39	2.67	2.99	2.55	2.72	3.85
25	2.71	2.79	2.72	2.45	2.81	2.17	2.92	2.61	2.98	2.52	2.86	3.86
26	2.69	2.99	2.67	2.42	2.76	2.14	2.95	2.55	2.90	2.48	2.94	3.88
27	2.68	3.05	2.62	2.37	2.67	2.10	2.89	2.62	2.87	2.42	3.04	3.87
28	2.62	3.00	2.56	2.31	2.58	2.05	2.78	2.68	2.89	2.38	3.05	3.74
29	2.57	2.94	2.50	2.26	---	2.08	2.67	2.74	2.85	2.32	3.01	3.72
30	2.53	2.91	2.46	2.22	---	2.07	2.56	2.85	2.83	2.34	3.14	3.69
31	2.48	---	2.43	2.18	---	2.01	---	2.86	---	2.47	3.38	---
MEAN	3.04	2.31	2.62	2.38	2.33	2.41	1.93	2.39	2.77	2.72	2.75	3.64
MAX	3.82	3.05	3.04	2.58	2.89	2.67	2.95	2.86	3.08	2.99	3.38	3.88
MIN	2.48	1.84	2.33	2.18	1.95	2.01	1.37	2.01	2.43	2.32	2.41	3.41

CAL YR 1977 MEAN 2.36 MAX 4.29 MIN -.03
WTR YR 1978 MEAN 2.61 MAX 3.88 MIN 1.37

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FL

LOCATION.--Lat 25°24'05", long 80°36'25", in NE¼ sec.10, T.58 S., R.37 E., Dade County, Hydrologic Unit 03090202, at upstream (north) side of bridge on State Highway 27, in Everglades National Park, 1.5 mi (2.4 km) north of Royal Palm Ranger Station, and 9 mi (14 km) southwest of Homestead.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Dade County bench mark). Prior to Oct. 1, 1965, at datum 1.19 ft (0.363 m) lower.

REMARKS.--Records fair. Figures of daily discharge consist of runoff from Taylor Slough, as represented by the flow through all the outlets for a distance of some 3 mi (5 km) along State Highway 27 in the Everglades National Park. During periods of extremes high water possibly some flow is diverted from Shark River Slough.

AVERAGE DISCHARGE.--18 years, 37.1 ft^3/s (1.05 m^3/s), 26,860 acre-ft/yr (33.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 808 ft^3/s (22.9 m^3/s) Sept. 23-25, 1960, gage height, 5.28 ft (1.609 m) present datum; no flow for many days in most years; minimum gage height, -1.67 ft (-0.509 m) estimated, present datum May 14, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft^3/s (9.09 m^3/s) Sept. 14; gage height, 4.64 ft (1.414 m); no flow for many days; minimum gage height, 1.43 ft (0.436 m) Apr. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	6.6	18	2.9	.00	7.6	.00	.00	15	24	12	123
2	143	5.2	15	2.1	.00	6.4	.00	.00	15	25	13	153
3	122	3.8	13	4.8	.00	7.1	.00	.00	15	31	14	186
4	117	2.7	11	6.4	.00	13	.00	.00	13	36	12	196
5	106	2.6	9.0	6.0	.00	12	.00	.00	15	35	12	205
6	93	1.8	8.3	5.4	.00	10	.00	.00	21	42	14	225
7	81	.65	8.4	4.8	.00	9.2	.00	.00	18	53	15	224
8	71	.00	6.9	4.2	.00	8.2	.00	.00	16	53	17	210
9	62	.00	5.8	4.9	.00	11	.00	.00	13	52	17	206
10	53	.00	7.7	3.6	.00	13	.00	.00	10	49	15	236
11	45	.00	6.7	2.4	.00	12	.00	.00	7.9	44	14	251
12	38	.00	5.4	1.5	.00	10	.00	.00	6.7	38	26	264
13	37	.00	4.2	1.6	.00	9.2	.00	.00	8.7	36	57	259
14	32	.00	3.3	2.5	.00	8.1	.00	.00	7.8	44	67	285
15	26	.00	2.4	1.5	.00	7.0	.00	.00	6.9	46	61	298
16	22	.00	1.4	.40	.00	5.8	.00	.00	6.7	39	53	268
17	19	.00	15	.00	.90	4.3	.00	.00	5.5	32	44	241
18	16	.00	29	.00	7.2	2.7	.00	.11	6.2	25	35	212
19	14	.00	28	.53	20	1.6	.00	4.8	11	21	29	181
20	12	.00	24	8.5	26	.58	.00	16	13	17	27	160
21	9.7	.00	21	7.9	25	.00	.00	17	15	15	24	140
22	12	.00	17	6.3	21	.00	.00	15	22	15	22	131
23	17	.00	15	4.9	17	.00	.00	13	29	16	21	124
24	17	13	13	3.6	14	.00	6.0	11	28	16	29	113
25	16	40	12	2.5	12	.00	14	9.7	26	14	47	125
26	14	43	11	1.2	11	.00	12	9.1	23	12	54	138
27	13	38	8.9	.04	9.8	.00	9.3	11	23	10	53	106
28	11	32	7.3	.00	8.7	.00	6.2	12	24	8.0	48	89
29	9.7	26	5.9	.00	---	.00	3.5	13	25	6.3	46	79
30	8.2	22	4.7	.00	---	.00	.74	15	23	8.6	68	74
31	7.3	---	3.8	.00	---	.00	---	15	---	15	106	---
TOTAL	1401.9	237.35	342.1	90.47	172.60	158.78	51.74	161.71	469.4	877.9	1072	5502
MEAN	45.2	7.91	11.0	2.92	6.16	5.12	1.72	5.22	15.6	28.3	34.6	183
MAX	158	43	29	8.5	26	13	14	17	29	53	106	298
MIN	7.3	.00	1.4	.00	.00	.00	.00	.00	5.5	6.3	12	74
AC-FT	2780	471	679	179	342	315	103	321	931	1740	2130	10910

CAL YR 1977 TOTAL 14289.37 MEAN 39.1 MAX 432 MIN .00 AC-FT 28340
WTR YR 1978 TOTAL 10537.95 MEAN 28.9 MAX 298 MIN .00 AC-FT 20900

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

252948080352700 TAYLOR SLOUGH AT CONTEXT ROAD NEAR HOMESTEAD, FL

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.35	3.71	4.47	4.08	3.40	4.21	3.29	3.92	3.73	4.96	4.35	5.24
2	5.26	3.65	4.39	4.35	3.37	4.35	3.21	3.80	3.78	5.27	4.32	5.23
3	5.18	3.62	4.32	4.37	3.34	4.77	3.14	3.92	3.74	5.20	4.22	5.40
4	5.06	3.61	4.25	4.27	3.40	4.52	3.08	4.03	3.62	5.12	4.13	5.56
5	5.00	3.60	4.32	4.22	3.44	4.46	3.02	3.90	3.62	5.15	4.03	5.62
6	4.95	3.60	4.40	4.19	3.39	4.42	2.96	3.80	3.67	5.26	3.95	5.68
7	4.87	3.60	4.30	4.15	3.37	4.38	2.87	3.75	4.07	5.23	3.90	5.70
8	4.83	3.58	4.23	4.18	3.58	4.71	2.82	3.72	4.34	5.19	3.95	5.69
9	4.75	3.53	4.24	4.08	3.53	4.69	2.80	3.68	4.02	5.13	4.12	5.68
10	4.70	3.47	4.19	4.01	3.46	4.46	2.78	3.65	3.79	5.06	4.50	5.74
11	4.63	3.41	4.15	3.96	3.42	4.40	2.75	3.65	3.63	4.98	4.73	5.74
12	4.55	3.30	4.13	3.96	3.37	4.37	2.73	3.65	3.77	4.93	4.82	5.79
13	4.50	3.13	4.12	3.99	3.32	4.33	2.70	3.63	4.18	4.88	4.75	5.87
14	4.42	2.97	4.09	3.91	3.26	4.26	2.82	3.58	4.03	4.92	4.65	5.84
15	4.35	2.88	4.08	3.86	3.22	4.20	3.00	3.55	4.01	4.86	4.53	5.79
16	4.31	2.88	4.65	3.84	3.50	4.10	2.98	4.00	3.93	4.78	4.48	5.74
17	4.27	2.87	4.93	3.81	4.47	4.01	2.95	4.25	3.80	4.68	4.45	5.69
18	4.22	3.20	4.77	3.79	5.58	3.95	2.90	4.50	4.28	4.57	4.40	5.63
19	4.22	3.32	4.70	4.03	5.32	3.90	2.85	4.60	4.68	4.48	4.35	5.55
20	4.13	3.28	4.66	4.00	5.08	3.86	2.80	4.50	4.49	4.41	4.32	5.52
21	4.05	3.30	4.58	3.95	4.85	3.81	2.75	4.30	4.56	4.36	4.30	5.42
22	4.17	3.32	4.53	3.90	4.60	3.73	3.15	4.15	4.95	4.30	4.28	5.38
23	4.34	4.67	4.51	3.87	4.48	3.66	3.80	4.00	5.04	4.45	4.50	5.36
24	4.23	5.25	4.50	3.84	4.44	3.59	4.42	3.90	4.93	4.49	4.78	5.27
25	4.19	5.08	4.45	3.77	4.42	3.53	4.52	3.78	4.89	4.37	5.02	5.20
26	4.13	4.92	4.37	3.70	4.37	3.47	4.40	3.77	5.08	4.25	4.97	5.22
27	3.95	4.80	4.09	3.64	4.33	3.41	4.25	3.69	4.92	4.14	4.92	5.19
28	3.87	4.71	4.16	3.58	4.26	3.47	4.10	3.66	4.87	4.04	4.86	5.18
29	3.85	4.64	4.11	3.52	---	3.34	4.07	3.63	4.87	3.96	4.81	5.13
30	3.80	4.55	4.08	3.46	---	3.38	4.00	3.63	4.84	3.89	5.02	5.04
31	3.75	---	4.05	3.43	---	3.39	---	3.66	---	3.85	5.34	---
MEAN	4.45	3.75	4.35	3.93	3.95	4.04	3.26	3.88	4.27	4.68	4.51	5.50
MAX	5.35	5.25	4.93	4.37	5.58	4.77	4.52	4.60	5.08	5.27	5.34	5.87
MIN	3.75	2.87	4.05	3.43	3.22	3.34	2.70	3.55	3.62	3.85	3.90	5.04

CAL YR 1977 MEAN 3.73 MAX 6.09 MIN .75
WTR YR 1978 MEAN 4.22 MAX 5.87 MIN 2.70

APPENDIX II: S-12 DISCHARGE BY GATE

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

S-12A Discharge (cfs) WY 78

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	0	0	0	0	0	0	0	0	0	0	348	271
2	0	0	0	0	0	0	0	0	0	0	345	280
3	0	0	0	0	0	0	0	0	0	0	361	284
4	0	0	0	0	0	0	0	0	0	0	349	299
5	0	0	0	0	0	0	0	0	0	0	354	324
6	0	0	0	0	0	0	0	0	0	0	347	321
7	0	0	0	0	0	0	0	0	0	0	378	318
8	0	0	0	0	0	0	0	0	0	0	377	324
9	0	0	0	0	0	0	0	0	0	0	351	346
10	0	0	0	0	0	0	0	0	0	0	337	343
11	0	0	0	0	0	0	0	0	0	0	319	352
12	0	0	0	0	0	0	0	0	0	0	318	354
13	0	0	0	0	0	0	0	0	0	0	296	355
14	0	0	0	0	0	0	0	0	0	0	294	343
15	0	0	0	0	0	0	0	0	0	0	292	360
16	0	0	0	0	0	0	0	0	0	0	288	364
17	0	0	0	0	0	0	0	0	0	0	287	353
18	0	0	0	0	0	0	0	0	0	0	286	334
19	0	0	0	0	0	0	0	0	0	266	280	326
20	0	0	0	0	0	0	0	0	0	407	279	317
21	0	0	0	0	0	0	0	0	0	399	273	306
22	0	0	0	0	0	0	0	0	0	360	274	290
23	0	0	0	0	0	0	0	0	0	349	270	283
24	0	0	0	0	0	0	0	0	0	362	265	282
25	0	0	0	0	0	0	0	0	0	348	263	160
26	0	0	0	0	0	0	0	0	0	322	260	0
27	0	0	0	0	0	0	0	0	0	339	258	0
28	0	0	0	0	0	0	0	0	0	327	254	0
29	0	0	0	0	-	0	0	0	0	323	249	0
30	0	0	0	0	-	0	0	0	0	358	242	0
31	0	-	0	0	-	0	-	0	-	340	246	-
Total	0	0	0	0	0	0	0	0	0	4,500	9,340	7,889

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

S-12B Discharge (cfs) WY 78

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	97	269	0	102	78	39	0	0	0	0	0	247
2	97	267	0	103	79	39	0	0	0	0	0	255
3	96	260	0	105	79	38	0	0	0	0	279	259
4	96	252	0	106	79	40	0	0	0	0	735	262
5	96	256	0	104	78	40	0	0	0	0	796	266
6	96	265	0	104	78	40	0	0	0	0	728	271
7	95	267	0	103	80	40	0	0	0	0	679	276
8	95	268	0	102	80	40	0	0	0	0	354	280
9	95	267	90	103	80	40	0	0	0	0	344	284
10	95	265	173	103	80	42	0	0	0	0	329	282
11	96	264	175	103	81	42	0	0	0	0	321	282
12	97	262	175	102	81	42	0	0	0	0	313	287
13	97	247	174	101	82	16	0	0	0	0	307	282
14	97	192	171	103	82	0	0	0	0	0	312	282
15	96	124	170	103	51	0	0	0	0	0	309	289
16	95	123	136	102	36	0	0	0	0	0	301	291
17	96	124	103	102	36	0	0	0	0	0	296	293
18	191	125	103	102	36	0	0	0	0	0	292	285
19	293	124	104	100	38	0	0	0	0	0	284	286
20	285	125	105	103	38	0	0	0	0	0	277	281
21	285	125	104	104	39	0	0	0	0	0	272	277
22	284	124	104	104	39	0	0	0	0	0	267	267
23	278	122	105	104	39	0	0	0	0	0	259	293
24	280	124	105	104	39	0	0	0	0	0	255	235
25	281	125	105	102	39	0	0	0	0	0	253	286
26	285	124	104	101	39	0	0	0	0	0	240	234
27	285	123	104	70	39	0	0	0	0	0	230	243
28	278	121	104	77	39	0	0	0	0	0	231	257
29	271	120	104	77	-	0	0	0	0	0	228	256
30	255	64	105	78	-	0	0	0	0	0	224	258
31	251	-	105	78	-	0	-	0	-	0	221	-
Total	5,434	5,518	2,828	3,055	1,664	498	0	0	0	0	9,936	8,246

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

S-12C Discharge (cfs) WY 78

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	1040	838	761	283	178	83	86	42	41	124	769	536
2	1040	904	751	284	177	84	88	42	40	126	776	541
3	954	908	723	288	177	82	68	42	40	126	789	551
4	1010	765	709	292	178	86	45	41	40	126	664	544
5	1010	763	693	288	180	87	46	41	38	127	694	563
6	1010	814	718	286	180	87	46	41	49	126	636	570
7	972	783	735	283	181	86	46	42	72	127	729	586
8	972	795	760	278	180	86	46	41	73	128	714	577
9	972	792	554	274	183	87	46	41	73	128	693	579
10	1010	749	399	278	186	90	46	41	73	128	660	575
11	1010	785	406	276	184	91	45	41	73	127	636	570
12	1040	844	407	271	184	91	44	41	73	127	610	572
13	1080	999	405	266	183	845	44	41	73	128	622	572
14	1070	888	402	279	184	1360	44	40	72	129	623	572
15	1130	760	402	275	113	1200	45	40	72	132	611	582
16	1130	771	371	276	78	1110	45	40	105	134	595	590
17	1080	738	349	270	80	1160	45	40	121	135	581	587
18	1080	734	357	269	79	1130	44	40	119	139	575	578
19	1040	721	359	266	81	1100	44	40	121	698	564	559
20	1040	711	358	276	83	1150	45	41	121	946	536	555
21	1040	762	314	279	84	1060	45	41	119	863	544	555
22	972	730	285	282	86	1060	44	41	120	919	548	549
23	1010	693	287	284	86	1040	44	40	122	932	557	548
24	1010	699	284	283	85	997	44	40	123	950	545	554
25	972	768	284	280	85	1030	44	40	123	924	533	596
26	1010	772	284	281	85	1040	45	40	123	903	533	650
27	1010	761	284	174	84	885	45	41	124	923	522	667
28	1010	721	284	179	83	717	45	41	126	906	508	682
29	1040	786	282	180	---	433	45	41	127	878	497	683
30	1040	786	285	181	---	291	45	41	127	943	490	690
31	1040	---	286	180	---	177	---	41	---	943	483	---
Total	31,844	23,540	13,778	8,141	3,727	18,825	1,454	1,265	2,723	14,045	18,837	17,533

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

S-12D Discharge (cfs) WY 78

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	0	0	0	0	0	0	0	0	0	0	0	740
2	0	0	0	0	0	0	0	0	0	0	0	750
3	0	0	0	0	0	0	0	0	0	0	200	756
4	0	0	0	0	0	0	0	0	0	0	520	762
5	0	0	0	0	0	0	0	0	0	0	520	768
6	0	0	0	0	0	0	0	0	0	0	520	806
7	0	0	0	0	0	0	0	0	0	0	780	815
8	0	0	0	0	0	0	0	0	0	0	1250	820
9	0	0	0	0	0	0	0	0	0	0	1470	802
10	0	0	0	0	0	0	0	0	0	0	1400	796
11	0	0	0	0	0	0	0	0	0	0	1340	798
12	0	0	0	0	0	0	0	0	0	0	1250	794
13	0	0	0	0	0	0	0	0	0	0	1290	784
14	0	0	0	0	0	0	0	0	0	0	1260	788
15	0	0	0	0	0	0	0	0	0	0	1210	793
16	0	0	0	0	0	0	0	0	0	0	1140	807
17	0	0	0	0	0	0	0	0	0	0	1090	808
18	0	0	0	0	0	0	0	0	0	0	1070	787
19	0	0	0	0	0	0	0	0	0	0	1030	786
20	0	0	0	0	0	0	0	0	0	0	930	781
21	0	0	0	0	0	0	0	0	0	0	920	764
22	0	0	0	0	0	0	0	0	0	0	900	769
23	0	0	0	0	0	0	0	0	0	0	890	760
24	0	0	0	0	0	0	0	0	0	0	890	744
25	0	0	0	0	0	0	0	0	0	0	870	304
26	0	0	0	0	0	0	0	0	0	0	870	0
27	0	0	0	0	0	0	0	0	0	0	830	0
28	0	0	0	0	0	0	0	0	0	0	787	0
29	0	0	0	0	-	0	0	0	0	0	736	0
30	0	0	0	0	-	0	0	0	0	0	694	-
31	0	-	0	0	-	0	-	0	-	0	700	-
Total	0	0	0	0	0	0	0	0	0	0	27,357	19,082

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02289060 TAMIAMI CANAL OUTLETS, LEVEE 30 TO LEVEE 67A, NEAR MIAMI, FL

LOCATION.--Lat 25°45'40", long 80°33'40", in SE¼ sec.6, T.54 S., R.38 E., Dade County, Hydrologic Unit 03090202, on south bank, 50 ft (15 m) west of bridge 53 on U.S. Highway 41, and 22.8 mi (36.7 km) west of Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1939 to September 1963 (monthly discharge). October 1963 to current year. Prior to October 1963, published as Tamiami Canal at bridge 45, near Miami (auxiliary). Records prior to October 1962 are available in files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 27, 1942, nonrecording gage at datum 0.80 ft (0.244 m) lower; Aug. 27, 1942, to Feb. 21, 1952, nonrecording gage at present datum; and Feb. 21, 1952 to Aug. 7, 1969 water-stage recorder at same datum all at site 4 mi (6.4 km) to the west.

REMARKS.--Records fair. Figures of daily discharge consist entirely of seepage through levee 29 from Conservation Area 3B as represented by flow through all the outlets of Tamiami Canal from levee 30 to levee 67A. Prior to October 1963, daily discharge for this portion of the Canal was published as part of the total daily discharge of station, Tamiami Canal outlets, Miami to Monroe (station 02289000).

AVERAGE DISCHARGE.--38 years, 232 ft^3/s (6.57 m^3/s), 168,000 acre-ft/yr (207 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 450 ft^3/s (12.7 m^3/s) Oct. 18, 1968; maximum gage height, 9.76 ft (2.975 m) Nov. 1, 1960; maximum daily reverse flow, 7.0 ft^3/s (0.20 m^3/s) estimated, May 11, 12, 1964; minimum gage height, 1.66 ft (0.506 m) May 13, 14, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 386 ft^3/s (10.9 m^3/s) Aug. 13; maximum gage height, 7.33 ft (2.234 m) Aug. 3; minimum daily discharge 2.2 ft^3/s (0.062 m^3/s) Apr. 13; minimum gage height, 6.01 ft (1.832 m) May 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	65	57	47	37	53	17	26	19	40	60	349
2	106	70	57	46	37	49	16	25	17	41	71	350
3	102	68	56	47	36	55	15	24	17	40	73	357
4	93	65	54	46	35	64	13	23	20	38	77	358
5	88	60	53	46	37	59	12	24	27	37	83	360
6	84	58	61	47	37	53	11	23	26	35	93	369
7	88	58	60	47	35	52	8.8	22	27	34	94	373
8	88	53	59	49	35	51	7.8	19	27	33	99	365
9	88	50	59	52	41	68	6.8	18	26	32	111	365
10	88	44	65	48	38	78	5.2	15	25	31	123	365
11	88	45	62	48	36	67	3.9	13	24	30	291	360
12	88	48	61	46	35	65	3.1	12	25	30	371	365
13	79	45	60	45	34	64	2.2	12	26	29	386	357
14	79	44	60	57	34	61	3.1	11	24	31	381	367
15	68	48	60	51	33	59	6.8	7.9	23	31	374	374
16	65	50	59	49	32	56	7.2	5.6	23	33	381	380
17	60	53	63	50	32	53	9.4	3.4	21	34	381	372
18	60	50	68	49	42	47	14	6.4	26	35	373	371
19	60	50	64	47	59	47	15	14	39	34	373	359
20	65	50	62	64	54	43	16	14	37	34	370	357
21	75	50	62	57	58	43	14	12	37	35	366	346
22	70	48	59	53	60	39	13	9.6	40	41	365	282
23	68	48	57	51	56	35	13	8.2	40	45	363	195
24	70	50	57	51	55	32	29	6.9	38	45	374	168
25	68	50	54	51	55	31	34	6.4	42	43	365	155
26	65	48	52	48	56	29	33	11	52	41	357	158
27	60	50	49	45	54	29	31	12	52	41	356	140
28	65	50	47	43	54	24	28	17	50	41	348	147
29	60	55	45	42	---	21	28	17	46	45	342	193
30	60	58	45	40	---	19	27	17	43	49	351	193
31	58	---	45	38	---	19	---	18	---	51	348	---
TOTAL	2358	1581	1772	1500	1207	1465	443.3	453.4	939	1159	8500	9250
MEAN	76.1	52.7	57.2	48.4	43.1	47.3	14.8	14.6	31.3	37.4	274	308
MAX	106	70	68	64	60	78	34	26	52	51	386	380
MIN	58	44	45	38	32	19	2.2	3.4	17	29	60	140
AC-FT	4680	3140	3510	2980	2390	2910	879	899	1860	2300	16860	18350

CAL YR 1977 TOTAL 13104.73 MEAN 35.9 MAX 135 MIN .00 AC-FT 25990
WTR YR 1978 TOTAL 30627.70 MEAN 83.9 MAX 386 MIN 2.2 AC-FT 60750

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02290950 ROBERTS LAKE SLOUGH NEAR MONROE, FL

LOCATION.--Lat 25°47'14", long 81°05'59", in NW¼ sec.11, T.53 S., R.32 E., Monroe County, Hydrologic Unit 03090204, on downstream side of State Highway 94, 60 ft (18 m) west of culverts, and 5.2 mi (8.4 km) south of Monroe.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Figures of daily discharge consist of runoff form Roberts Lake Slough as represented by flow through all 10 bridges 1 to 10.

AVERAGE DISCHARGE.--5 years, 76.2 ft^3/s (2.158 m^3/s), 55,170 acre-ft/yr (68.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 496 ft^3/s (14.0 m^3/s) Aug. 24, 1976; maximum gage height, 5.36 ft (1.634 m) Aug. 23, 1976; no flow for many days each year; minimum gage height, -1.06 ft (-0.323 m) May 13, 14, 15, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 429 ft^3/s (12.1 m^3/s) Oct. 1; maximum gage height, 5.20 ft (1.585 m) Oct. 1, Sept 6-9; no flow for many days; minimum gage height, 3.38 ft (1.030 m) May 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	40	.00	5.6	43	121	83	.00	.00	198	163	284
2	422	38	.00	5.6	40	119	73	.00	.00	202	177	267
3	414	33	.00	5.6	37	124	57	.00	.00	203	192	260
4	384	25	.00	6.9	37	145	52	.00	.00	197	219	249
5	360	22	.00	12	37	148	47	.00	.00	197	236	283
6	341	20	.40	13	38	149	41	.00	.00	195	242	322
7	328	19	1.9	13	39	149	31	.00	.00	196	236	345
8	304	12	4.1	14	41	149	31	.00	.00	197	234	345
9	281	11	4.6	19	71	188	23	.00	.00	197	228	344
10	262	9.5	16	19	75	216	18	.00	.00	205	199	331
11	236	3.6	21	19	74	234	14	.00	.00	220	193	299
12	215	1.6	19	19	79	237	9.2	.00	5.5	290	201	280
13	196	1.0	19	19	80	238	3.3	.00	27	301	235	256
14	175	.50	19	19	81	235	2.0	.00	19	315	263	258
15	151	.00	13	19	74	232	.90	.00	21	294	243	255
16	135	.00	9.9	16	66	217	5.1	.00	18	311	228	240
17	123	.00	13	16	63	206	3.6	.00	11	306	205	212
18	114	.00	15	17	77	174	2.5	.00	9.6	302	199	204
19	105	.00	18	24	104	157	2.6	.00	30	299	197	185
20	99	.00	17	64	102	150	1.4	.00	34	297	198	182
21	89	.00	16	62	112	146	.40	.00	57	305	202	154
22	82	.00	17	66	114	137	.00	.00	79	296	207	144
23	81	.00	17	75	115	123	.00	.00	80	278	210	139
24	81	.30	16	85	113	134	1.8	.00	78	270	220	130
25	76	.70	14	79	111	156	3.0	.00	85	261	246	129
26	69	.70	14	72	110	162	3.9	.00	85	237	304	122
27	60	.60	12	67	114	161	2.3	.00	110	215	305	110
28	53	.20	8.4	62	117	142	1.1	.00	160	206	291	88
29	50	.02	6.9	47	---	127	.50	.00	194	204	281	97
30	48	.00	5.7	35	---	106	.00	.00	191	197	313	89
31	46	---	5.6	33	---	88	---	.00	---	173	304	---
TOTAL	5809	238.72	323.50	1028.7	2164	5070	513.60	.00	1294.10	7564	7171	6603
MEAN	187	7.96	10.4	33.2	77.3	164	17.1	.000	43.1	244	231	220
MAX	429	40	21	85	117	238	83	.00	194	315	313	345
MIN	46	.00	.00	5.6	37	88	.00	.00	.00	173	163	88
AC-FT	11520	474	642	2040	4290	10060	1020	.00	2570	15000	14220	13100

CAL YR 1977 TOTAL 21570.28 MEAN 59.1 MAX 439 MIN .00 AC-FT 42780
WTR YR 1978 TOTAL 37779.62 MEAN 104 MAX 429 MIN .00 AC-FT 74940

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291000 BARRON RIVER CANAL NEAR EVERGLADES, FL

LOCATION.--Lat 25°57'28", long 81°21'19", in NW¼ sec.7, T.52 S., R.30 E., Collier County, Hydrologic Unit 03090204, on right bank 40 ft (12 m) upstream from control structure, 0.7 mi (1.1 km) north of Copeland, 7 mi (11 km) north of town of Everglades, and 7.5 mi (12.1 km) upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July to December 1951 (discharge measurements only), January 1952 to current year. Records prior to January 1952 are available in files of the Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (State Department of Transportation bench mark). Prior to Jan. 24, 1952, nonrecording gage.

REMARKS.--Records fair except those below 20 ft^3/s (0.57 m^3/s), which are poor. Flow regulated by operation of control structure at, above, and below station, and is occasionally affected by tide. Overbank flow not included in discharge figures.

AVERAGE DISCHARGE.--26 years (1952-78); 101 ft^3/s (2.86 m^3/s), 73,120 acre-ft/yr (90.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 292 ft^3/s (8.27 m^3/s) Sept. 25, 1962; maximum gage height, 6.43 ft (1.960 m) Sept. 10 or 11, 1960; no flow many days; minimum gage height, 0.21 ft (0.064 m) May 18, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 1947 reached a stage of about 7 ft (2.13 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 248 ft^3/s (7.02 m^3/s) Sept. 8; maximum gage height, 5.20 ft (1.585 m) Sept 8, 16; minimum daily discharge, 10 ft^3/s (0.283 m^3/s) Nov. 15, 16; minimum gage height, 1.55 ft (0.472 m) May 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	42	41	133	98	116	111	40	25	180	194	200
2	218	32	39	138	95	112	107	35	27	187	196	198
3	217	28	36	145	93	124	103	30	37	178	198	196
4	215	41	32	143	90	140	99	28	61	169	197	200
5	215	38	30	142	88	130	95	48	65	161	191	209
6	213	33	49	141	84	124	91	59	66	163	193	221
7	208	29	75	140	78	121	87	56	86	178	192	242
8	201	26	72	142	81	117	83	50	92	181	186	248
9	190	24	74	150	109	158	79	41	93	170	182	245
10	185	20	105	140	103	161	74	33	91	165	188	238
11	178	18	105	150	98	158	65	25	107	174	204	235
12	170	16	105	162	92	157	46	21	123	186	218	227
13	165	13	105	164	86	157	36	20	127	179	227	210
14	161	11	106	163	80	156	31	19	115	170	225	192
15	158	10	106	158	73	155	31	18	108	172	219	195
16	155	10	106	154	69	154	55	16	114	179	208	246
17	152	13	114	152	90	155	47	15	112	177	204	236
18	147	14	127	151	113	156	38	15	109	170	198	222
19	147	14	130	155	133	152	33	14	150	188	190	209
20	141	13	132	169	129	153	29	14	173	219	182	199
21	127	13	133	164	133	155	25	13	167	219	171	187
22	117	13	133	163	141	153	22	13	169	218	165	183
23	106	13	132	163	150	149	20	13	159	216	171	177
24	96	19	132	158	143	146	42	12	148	210	169	177
25	90	33	135	147	132	146	70	12	144	203	153	176
26	83	38	148	140	127	139	64	14	145	193	146	163
27	74	38	145	134	123	134	58	20	147	184	140	153
28	68	38	139	129	119	129	57	19	149	175	130	145
29	62	39	133	124	---	128	51	18	154	172	149	138
30	54	41	132	114	---	121	45	17	160	183	186	134
31	44	---	133	100	---	115	---	18	---	183	197	---
TOTAL	4575	730	3184	4528	2950	4371	1794	766	3423	5702	5769	6001
MEAN	148	24.3	103	146	105	141	59.8	24.7	114	184	186	200
MAX	218	42	148	169	150	161	111	59	173	219	227	248
MIN	44	10	30	100	69	112	20	12	25	161	130	134
AC-FT	9070	1450	6320	8980	5850	8670	3560	1520	6790	11310	11440	11900

CAL YR 1977	TOTAL	32660.8	MEAN	89.5	MAX 231	MIN 7.7	AC-FT	64780
WTR YR 1978	TOTAL	43793.8	MEAN	120	MAX 248	MIN 10	AC-FT	86860

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02288800 TAMIAMI CANAL OUTLETS, MONROE TO CARNESTOWN, FL

LOCATION.--Lat 25°53'10", long 81°15'30", in NW¼ sec.6, T.53 S., R.31 E., Collier County, Hydrologic Unit 03090204, on downstream side of bridge 84 on U.S. Highway 41, 7 mi (11 km) east of Carnestown, and 10 mi (16 km) west of Monroe.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 2, 1963, at site 2 mi (3 km) east at datum 0.93 ft (0.283 m) lower. May 2, 1963, to Feb. 10, 1965, at site on west bank of unnamed lateral 30 ft (9 m) downstream.

REMARKS.--Records fair. Figures of discharge consist of runoff from Big Cypress Watershed as represented by flow through all the outlets of the Tamiami Canal from Monroe, 55 mi (88 km) west of Miami, to a point 1 mi (1.6 km) east of the intersection with State Highway 29 at Carnestown. Flow at westernmost outlets slightly affected by tide.

AVERAGE DISCHARGE.--18 years, 365 ft^3/s (10.3 m^3/s), 264,200 acre-ft/yr (326 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,010 ft^3/s (170 m^3/s) Sept. 13, 1960; maximum gage height, 5.90 ft (1.798 m) present datum Sept. 14, 1960; no flow for many days in some years; minimum gage height observed, -0.43 ft (-0.131 m) present datum May 30, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,390 ft^3/s (39.4 m^3/s) Oct. 1; maximum gage height, 4.07 ft (1.241 m) Aug. 25, 26; minimum daily discharge, 0.02 ft^3/s (0.001 m^3/s) May 23; 0.79 ft (0.241 m) May 23 (tide affected).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	51	35	45	50	108	175	5.6	4.1	745	51	724
2	1210	45	32	48	45	109	138	5.8	5.2	707	58	725
3	1050	42	27	65	42	156	109	5.1	20	597	111	664
4	906	39	20	67	40	231	82	7.3	21	490	222	580
5	739	38	17	59	34	210	61	16	19	397	334	575
6	606	34	46	56	33	203	49	15	42	349	336	668
7	511	31	77	56	29	199	38	9.4	84	481	320	781
8	427	26	60	62	34	196	29	6.4	85	630	333	784
9	354	23	52	98	117	378	22	5.3	85	639	344	773
10	294	20	94	85	100	528	16	4.5	95	627	366	758
11	244	19	79	75	84	531	12	2.7	229	648	398	758
12	204	16	64	68	72	493	11	2.3	280	759	422	757
13	182	13	60	89	64	467	9.8	6.1	320	793	511	708
14	158	13	60	111	61	442	8.4	5.0	276	770	639	653
15	138	13	62	99	56	417	7.2	2.8	258	783	630	604
16	121	14	60	87	53	388	14	1.5	233	751	567	547
17	108	15	70	81	61	358	11	.84	195	681	530	495
18	96	15	92	76	97	326	9.4	.89	217	579	498	445
19	89	13	82	86	158	304	11	.18	356	512	487	398
20	80	12	72	174	139	290	11	.29	427	490	485	353
21	74	11	67	147	147	279	7.8	.20	465	389	472	362
22	73	14	61	129	144	267	5.4	.03	581	304	444	364
23	79	16	53	117	137	255	3.8	.02	725	249	485	372
24	76	37	50	108	129	252	18	.08	672	206	726	386
25	76	66	54	103	122	268	30	.48	581	166	792	385
26	78	58	68	98	116	264	24	1.6	486	135	763	369
27	78	47	63	87	111	247	18	4.1	421	113	690	330
28	75	41	52	78	108	242	12	7.7	402	88	610	293
29	69	39	46	71	---	264	8.2	8.2	552	74	541	282
30	64	38	44	63	---	240	6.0	6.2	681	68	550	272
31	57	---	46	57	---	202	---	4.5	---	58	683	---
TOTAL	9706	859	1765	2645	2383	9114	957.0	136.11	8817.3	14278	14398	16165
MEAN	313	28.6	56.9	85.3	85.1	294	31.9	4.39	294	461	464	539
MAX	1390	66	94	174	158	531	175	16	725	793	792	784
MIN	57	11	17	45	29	108	3.8	.02	4.1	58	51	272
AC-FT	19250	1700	3500	5250	4730	18080	1900	270	17490	28320	28560	32060

CAL YR 1977 TOTAL 122239.72 MEAN 335 MAX 1950 MIN .00 AC-FT 242500
WTR YR 1978 TOTAL 81223.41 MEAN 223 MAX 1390 MIN .02 AC-FT 161100

SOUTHERN FLORIDA

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02288900 TAMIAMI CANAL OUTLETS, 40-MILE BEND TO MONROE, FL

LOCATION.--Lat 25°51'05", long 80°58'50", in SW¼ sec.13, T.53 S., R.33 E., Collier County, Hydrologic Unit 03090202, on south bank, 25 ft (8 m) east of bridge 105 on U.S. Highway 41, and 54 mi (87 km) west of Miami, Dade County.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1939 to September 1963 (monthly discharge only). October 1963 to current year. Prior to October 1963, published as Tamiami Canal at bridge 105, near Miami (auxiliary). Records of gage height prior to October 1963 are available in files of Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 20, 1952, nonrecording gage and Feb. 20, 1952, to May 28, 1952, water-stage recorder, at same site at datum 0.37 ft (0.113 m) higher.

AVERAGE DISCHARGE.--38 years, 263 ft^3/s (7.45 m^3/s) 190,400 acre-ft/yr (235 hm^3/yr).

REMARKS.--Records good except those below 20 ft^3/s (0.57 m^3/s) and above 1,700 ft^3/s (48.1 m^3/s), which are poor. Figures of daily discharge consist of runoff from Big Cypress Watershed and the Everglades as represented by flow through all 29 bridges from bridge 28 to 22 and bridge 117 to 96. Prior to October 1963, daily discharge for this portion of canal was published as part of the total daily discharge of station, Tamiami Canal outlets, Miami to Monroe (station 02289000).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,800 ft^3/s (108 m^3/s) July 2, 1966, from rating curve extended above 1,700 ft^3/s (48.1 m^3/s); maximum gage height, 10.01 ft (3.051 m) Oct. 20, 1947 (present datum); no flow for many days in some years; minimum gage height, 2.65 ft (0.808 m) May 26, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,070 ft^3/s (30.3 m^3/s) July 17; maximum gage height, 8.51 ft (2.594 m) July 16; minimum daily discharge, 14 ft^3/s (0.40 m^3/s) May 17; minimum gage height, 6.41 ft (1.954 m) May 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	50	37	44	101	335	118	51	106	656	504	370
2	882	49	36	45	99	317	107	48	100	631	548	337
3	799	54	35	48	97	342	95	44	91	632	629	295
4	723	81	34	49	96	430	86	42	86	636	583	312
5	650	98	33	49	97	422	76	58	76	622	558	404
6	572	103	36	49	96	388	68	54	71	667	536	446
7	516	110	41	49	95	373	63	48	68	643	564	573
8	467	114	40	48	97	352	57	42	66	628	529	576
9	424	120	40	56	153	516	51	38	63	582	490	522
10	373	120	48	57	156	651	47	35	59	534	441	471
11	336	113	46	55	154	640	42	32	55	524	419	421
12	306	101	45	55	148	609	41	29	54	604	473	390
13	256	93	44	56	142	591	40	26	56	594	514	376
14	208	85	44	61	143	560	39	23	55	727	485	380
15	177	76	43	61	146	522	39	20	54	956	443	365
16	146	71	43	60	144	489	43	17	53	1030	451	355
17	122	68	47	60	152	443	40	14	53	1070	600	346
18	109	64	53	60	210	404	44	56	55	984	570	320
19	101	61	53	64	314	360	53	170	68	911	526	307
20	91	57	52	96	331	333	51	230	72	851	512	285
21	82	53	52	101	382	303	47	204	81	763	475	264
22	78	51	51	103	400	286	43	200	101	713	433	257
23	78	48	49	104	407	254	42	179	183	713	536	244
24	71	48	49	106	401	235	65	157	223	651	775	237
25	67	48	48	106	394	210	76	139	273	587	831	244
26	63	46	49	108	398	193	76	140	363	525	743	296
27	60	43	47	108	370	169	71	153	478	483	660	300
28	56	40	46	107	368	159	64	162	575	449	580	283
29	52	38	44	106	---	148	60	162	652	665	513	328
30	51	37	44	106	---	140	55	141	670	611	461	502
31	51	---	44	103	---	122	---	121	---	556	423	---
TOTAL	8967	2140	1373	2280	6091	11296	1799	2835	4960	21198	16805	10806
MEAN	289	71.3	44.3	73.5	218	364	60.0	91.5	165	684	542	360
MAX	1000	120	53	108	407	651	118	230	670	1070	831	576
MIN	51	37	33	44	95	122	39	14	53	449	419	237
AC-FT	17790	4240	2720	4520	12080	22410	3570	5620	9840	42050	33330	21430

CAL YR 1977 TOTAL 54237.74 MEAN 149 MAX 1350 MIN .00 AC-FT 107600
WTR YR 1978 TOTAL 90550.00 MEAN 248 MAX 1070 MIN 14 AC-FT 179600

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02289040 TAMIAMI CANAL OUTLETS, LEVEE 67A TO 40-MILE BEND, NEAR MIAMI, FL

LOCATION.--Lat 25°45'22", long 80°43'34", in N1/2 sec.22, T.54 S., R.36 E., Dade County, Hydrologic Unit 03090202, on south bank of levee 29 borrow canal, 100 ft (30 m) northwest of control structure 12-C, and 33 mi (53 km) west of Miami.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1939 to September 1963 (monthly discharge). October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Discharge is the total discharge through the S-12 structure A, B, C, and D from Conservation Area 3-A. Prior to October 1963 discharge was the total discharge southward through 12 bridges from bridge 40 to 29 and was published as part of the total daily discharge of station, Tamiami Canal outlets, Miami to Monroe (station 02289000).

COOPERATION.--Gate-opening records for S-12 complex furnished by Corps of Engineers.

AVERAGE DISCHARGE.--38 years, 383 ft^3/s (10.8 m^3/s), 277,300 acre-ft/yr (342 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,810 ft^3/s (136 m^3/s) Aug. 10, 11, 1968; maximum gage height, 10.52 ft (3.206 m) Oct. 26, 1968; no flow for some days most years; minimum gage height, 5.34 ft (1.628 m) May 21, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,860 ft^3/s (81.0 m^3/s) Aug. 9; maximum gage height, 10.04 ft (3.060 m) Mar. 11; minimum daily discharge, 38 ft^3/s (1.08 m^3/s) June 5; minimum gage height, 9.19 ft (2.801 m) June 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1110	761	385	256	122	86	42	41	124	1120	1790
2	1140	1170	751	387	256	123	88	42	40	126	1120	1830
3	1050	1170	723	393	256	120	68	42	40	126	1630	1850
4	1110	1020	709	398	257	126	45	41	40	126	2270	1870
5	1110	1020	693	392	258	127	46	41	38	127	2360	1920
6	1110	1080	718	390	258	127	46	41	49	126	2230	1970
7	1070	1050	735	386	261	126	46	42	72	127	2570	2000
8	1070	1060	760	380	260	126	46	41	73	128	2700	2000
9	1070	1060	644	377	263	127	46	41	73	128	2860	2010
10	1110	1010	572	381	266	132	46	41	73	128	2730	2000
11	1110	1050	581	379	265	133	45	41	73	127	2620	2000
12	1140	1110	582	373	265	133	44	41	73	127	2490	2000
13	1180	1250	579	367	265	861	44	41	73	128	2520	1990
14	1170	1080	573	382	266	1360	44	40	72	129	2490	1990
15	1230	884	572	378	164	1200	45	40	72	132	2420	2020
16	1230	894	507	378	114	1110	45	40	105	134	2320	2060
17	1180	862	452	372	116	1160	45	40	121	135	2250	2040
18	1270	859	460	371	115	1130	44	40	119	139	2220	1990
19	1330	845	463	366	119	1100	44	40	121	964	2160	1960
20	1330	836	463	379	121	1150	45	41	121	1350	2020	1930
21	1330	887	418	383	123	1060	45	41	119	1260	2010	1900
22	1260	854	389	386	125	1060	44	41	120	1280	1990	1880
23	1290	815	392	388	125	1040	44	40	122	1280	1980	1880
24	1290	823	389	387	124	997	44	40	123	1310	1960	1910
25	1250	893	389	382	124	1030	44	40	123	1270	1920	1340
26	1300	896	388	382	124	1040	45	40	123	1230	1900	884
27	1300	884	388	244	123	885	44	41	124	1260	1840	910
28	1190	842	388	256	122	717	44	41	126	1230	1780	993
29	1150	817	390	257	---	433	43	41	125	1200	1710	1060
30	1140	750	388	259	---	291	43	41	124	1300	1670	1060
31	1200	---	386	258	---	128	---	41	---	1120	1760	---
TOTAL	36850	28881	16603	11196	5391	19274	1448	1265	2718	18371	65620	53037
MEAN	1189	963	536	361	193	622	48.3	40.8	90.6	593	2117	1768
MAX	1330	1250	761	398	266	1360	88	42	126	1350	2860	2060
MIN	1050	750	386	244	114	120	43	40	38	124	1120	884
AC-FT	73090	57290	32930	22210	10690	38230	2870	2510	5390	36440	130200	105200

CAL YR 1977 TOTAL 136853 MEAN 375 MAX 1330 MIN 27 AC-FT 271400
WTR YR 1978 TOTAL 260654 MEAN 714 MAX 2860 MIN 38 AC-FT 517000

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

252948080352700 TAYLOR SLOUGH AT CONTEXT ROAD NEAR HOMESTEAD, FL

LOCATION.--Lat 25°29'48", long 80°35'27", in SE¼ sec.2, T.57 S., R.37 E., Dade County, Hydrologic Unit 03090202, 1.9 mi (3.1 km) west of L-31 Canal, on the north side of Context Road at Bridge 7, and 9.2 mi (14.8 km) northwest of Homestead.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Dade County bench mark).

REMARKS.--Records fair. Figures of daily discharge consist of the flow through all the outlets for a distance of some 7.5 mi (12.1 km) along Context Road.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 210 ft^3/s (5.95 m^3/s) Sept. 7, 1977; maximum gage height, 6.13 ft (1.868 m) Sept. 7, 1977; no flow for many days each year; minimum gage height, 0.72 ft (0.219 m) May 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 139 ft^3/s (3.94 m^3/s) Sept. 13; maximum gage height, 5.87 ft (1.789 m) Sept. 13; no flow for many days; minimum gage height, 2.70 ft (0.823 m) estimated, Apr. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	.00	.00	.00	.00	.00	.00	.00	.00	4.6	.94	29
2	14	.00	.00	.08	.00	.27	.00	.00	.00	14	.74	30
3	10	.00	.00	.03	.00	.83	.00	.00	.00	13	.43	46
4	4.5	.00	.00	.00	.00	.15	.00	.00	.00	11	.18	67
5	4.3	.00	.00	.00	.00	.09	.00	.00	.00	15	.12	78
6	3.1	.00	.00	.00	.00	.05	.00	.00	.00	26	.00	89
7	2.2	.00	.00	.00	.00	.00	.00	.00	.07	28	.00	93
8	1.7	.00	.00	.00	.00	.67	.00	.00	.01	27	.02	93
9	1.2	.00	.00	.00	.00	.47	.00	.00	.00	24	.19	92
10	.85	.00	.00	.00	.00	.08	.00	.00	.00	21	2.0	107
11	.58	.00	.00	.00	.00	.02	.00	.00	.00	18	5.8	107
12	.22	.00	.00	.00	.00	.00	.00	.00	.00	18	7.4	120
13	.26	.00	.00	.00	.00	.00	.00	.00	.00	16	6.1	139
14	.14	.00	.00	.00	.00	.00	.00	.00	.00	18	3.5	132
15	.07	.00	.00	.00	.00	.00	.00	.00	.00	15	1.4	123
16	.03	.00	.00	.00	.00	.00	.00	.00	.00	11	1.3	111
17	.00	.00	.00	.00	6.9	.00	.00	.00	.00	6.6	1.2	100
18	.00	.00	.00	.00	36	.00	.00	.08	.18	3.9	1.0	88
19	.00	.00	.00	.00	13	.00	.00	.35	.33	2.3	.71	77
20	.00	.00	.00	.00	3.9	.00	.00	.08	.05	1.5	.42	71
21	.00	.00	.00	.00	1.2	.00	.00	.00	.12	1.2	.41	59
22	.00	.00	.00	.00	.27	.00	.00	.00	2.1	.82	.40	54
23	.00	.00	.00	.00	.11	.00	.00	.00	2.2	2.1	1.5	52
24	.00	.00	.00	.00	.07	.00	.00	.00	1.2	2.3	8.0	44
25	.00	.00	.00	.00	.05	.00	.00	.00	1.2	1.2	15	38
26	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.58	13	40
27	.00	.00	.01	.00	.00	.00	.00	.00	1.1	.30	11	37
28	.00	.00	.00	.00	.00	.00	.00	.00	.88	.15	8.6	36
29	.00	.00	.00	.00	---	.00	.00	.00	1.1	.06	6.9	32
30	.00	.00	.00	.00	---	.00	.00	.00	1.1	.00	18	25
31	.00	---	.00	.00	---	.00	---	.00	---	.00	38	---
TOTAL	64.15	.00	.01	.11	61.50	2.63	.00	.51	14.34	302.61	154.26	2209
MEAN	2.07	.000	.000	.004	2.20	.085	.000	.016	.48	9.76	4.98	73.6
MAX	21	.00	.01	.08	36	.83	.00	.35	2.7	28	38	139
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25
AC-FT	127	.00	.02	.2	122	5.2	.00	1.0	28	600	306	4380

CAL YR 1977 TOTAL 4179.36 MEAN 11.5 MAX 210 MIN .00 AC-FT 8290
WTR YR 1978 TOTAL 2809.12 MEAN 7.70 MAX 139 MIN .00 AC-FT 5570

SOUTHERN FLORIDA

EVERGLADES AND SOUTHEASTERN COASTAL AREA

02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FL

LOCATION.--Lat 25°24'05", long 80°36'25", in NE¼ sec.10, T.58 S., R.37 E., Dade County, Hydrologic Unit 03090202, at upstream (north) side of bridge on State Highway 27, in Everglades National Park, 1.5 mi (2.4 km) north of Royal Palm Ranger Station, and 9 mi (14 km) southwest of Homestead.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Dade County bench mark). Prior to Oct. 1, 1965, at datum 1.19 ft (0.363 m) lower.

REMARKS.--Records fair. Figures of daily discharge consist of runoff from Taylor Slough, as represented by the flow through all the outlets for a distance of some 3 mi (5 km) along State Highway 27 in the Everglades National Park. During periods of extremes high water possibly some flow is diverted from Shark River Slough.

AVERAGE DISCHARGE.--18 years, 37.1 ft^3/s (1.05 m^3/s), 26,860 acre-ft/yr (33.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 808 ft^3/s (22.9 m^3/s) Sept. 23-25, 1960, gage height, 5.28 ft (1.609 m) present datum; no flow for many days in most years; minimum gage height, -1.67 ft (-0.509 m) estimated, present datum May 14, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft^3/s (9.09 m^3/s) Sept. 14; gage height, 4.64 ft (1.414 m); no flow for many days; minimum gage height, 1.43 ft (0.436 m) Apr. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	6.6	18	2.9	.00	7.6	.00	.00	15	24	12	123
2	143	5.2	15	2.1	.00	6.4	.00	.00	15	25	13	153
3	122	3.8	13	4.8	.00	7.1	.00	.00	15	31	14	186
4	117	2.7	11	6.4	.00	13	.00	.00	13	36	12	196
5	106	2.6	9.0	6.0	.00	12	.00	.00	15	35	12	205
6	93	1.8	8.3	5.4	.00	10	.00	.00	21	42	14	225
7	81	.65	8.4	4.8	.00	9.2	.00	.00	18	53	15	224
8	71	.00	6.9	4.2	.00	8.2	.00	.00	16	53	17	210
9	62	.00	5.8	4.9	.00	11	.00	.00	13	52	17	206
10	53	.00	7.7	3.6	.00	13	.00	.00	10	49	15	236
11	45	.00	6.7	2.4	.00	12	.00	.00	7.9	44	14	251
12	38	.00	5.4	1.5	.00	10	.00	.00	6.7	38	26	264
13	37	.00	4.2	1.6	.00	9.2	.00	.00	8.7	36	57	259
14	32	.00	3.3	2.5	.00	8.1	.00	.00	7.8	44	67	285
15	26	.00	2.4	1.5	.00	7.0	.00	.00	6.9	46	61	298
16	22	.00	1.4	.40	.00	5.8	.00	.00	6.7	39	53	268
17	19	.00	15	.00	.90	4.3	.00	.00	5.5	32	44	241
18	16	.00	29	.00	7.2	2.7	.00	.11	6.2	25	35	212
19	14	.00	28	.53	20	1.6	.00	4.8	11	21	29	181
20	12	.00	24	8.5	26	.58	.00	16	13	17	27	160
21	9.7	.00	21	7.9	25	.00	.00	17	15	15	24	140
22	12	.00	17	6.3	21	.00	.00	15	22	15	22	131
23	17	.00	15	4.9	17	.00	.00	13	29	16	21	124
24	17	13	13	3.6	14	.00	6.0	11	28	16	29	113
25	16	40	12	2.5	12	.00	14	9.7	26	14	47	125
26	14	43	11	1.2	11	.00	12	9.1	23	12	54	138
27	13	38	8.9	.04	9.8	.00	9.3	11	23	10	53	106
28	11	32	7.3	.00	8.7	.00	6.2	12	24	8.0	48	89
29	9.7	26	5.9	.00	---	.00	3.5	13	25	6.3	46	79
30	8.2	22	4.7	.00	---	.00	.74	15	23	8.6	68	74
31	7.3	---	3.8	.00	---	.00	---	15	---	15	106	---
TOTAL	1401.9	237.35	342.1	90.47	172.60	158.78	51.74	161.71	469.4	877.9	1072	5502
MEAN	45.2	7.91	11.0	2.92	6.16	5.12	1.72	5.22	15.6	28.3	34.6	183
MAX	158	43	29	8.5	26	13	14	17	29	53	106	298
MIN	7.3	.00	1.4	.00	.00	.00	.00	.00	5.5	6.3	12	74
AC-FT	2780	471	679	179	342	315	103	321	931	1740	2130	10910

CAL YR 1977 TOTAL 14289.37 MEAN 39.1 MAX 432 MIN .00 AC-FT 28340
WTR YR 1978 TOTAL 10537.95 MEAN 28.9 MAX 298 MIN .00 AC-FT 20900

APPENDIX IV: STATION INDEX

P. STATIONS

Data Collected Continuously

Station	USGS Designation	Location Lat.	Location Long.	Period of Record From	Period of Record To	Parameters*
P-33	02290815	N25°36'30"	W80°41'30"	10/52	Present	W.L.
P-34	02290870	N25°36'30"	W80°55'30"	1/53	Present	W.L.
P-35	02290830	N25°27'20"	W80°52'30"	2/53	Present	W.L.
P-36	02290828	N25°32'30"	W80°47'00"	2/68	Present	W.L.
P-37	02290810	N25°17'30"	W80°40'30"	1/53	Present	W.L.
P-38	02290820	N25°22'22"	W80°50'01"	1/53	Present	W.L.

ERTS STATIONS

NP 201	02290861	N25°43'05"	W80°43'33"	10/74	Present	W.L., RF
NP 202	02290862	N25°37'25"	W80°44'22"	1/75	Present	W.L., RF
NP 203	02290832	N25°38'54"	W80°41'18"	10/73	Present	W.L., RF
NP 204	02290829	N25°32'12"	W80°47'06"	10/73	Present	W.L., RF
NP 205	02290868	N25°42'36"	W80°50'23"	10/74	Present	W.L., RF
NP 206	02290811	N25°31'42"	W80°40'29"	10/74	Present	W.L., RF
NP 207	02290810	N25°17'30"	W80°40'30"	1/76	Present	W.L., RF

ADDITIONAL PARK STATIONS

NP-44	none	N25°25'45"	W80°43'10"	1961	Present	W.L.
NP-62	none	N25°26'10"	W80°47'00"	1964	Present	W.L.
Taylor Slough at Bridge	02290800	N25°24'05"	W80°36'25"	9/60	Present	W.L.

Station	USGS Designation	Location Lat.	Long.	Period of Record From	To	Parameters*
Headquarters Pond	none	N25°23'30"	W80°34'45"	9/65	Present	W.L.
Florida Bay at Flamingo	02290825	N25°08'37"	W80°55'15"	8/60	Present	Gage Height (Tide)
Tamiami Canal Outlets: L-67-A to 40 Mile Bend	02289040	N25°45'42"	W80°43'34"	11/39	Present	W.L., Q
Tamiami Canal Outlets: L-30 to L-67-A	02289060	N25°45'40"	W80°33'40"	11/39	Present	W.L., Q
N.E. Shark Slough #1	254130	N25°41'30"	W80°38'05"	7/76	Present	W.L.
N.E. Shark Slough #2	254315080331500	N25°43'15"	W80°33'15"	7/76	Present	W.L.
L-67 ext: South End	253735080402100	N25°37'35"	W80°40'21"	6/76	Present	W.L.
L-67-ext: Near Richmond	02290827	N25°39'54"	W80°40'24"	6/71	Present	W.L.
Shark Slough in Conserv. 3B NR Coopertown	254754080344300	N25°47'54"	W80°34'43"	8/76	Present	W.L.
NP-46	251910080474601	N25°19'10"	W80°47'46"	1964	Present	W.L.
NP-72	252345080421201	N25°23'45"	W80°42'12"	1964	Present	W.L.
NP-67	251950080390201	N25°19'50"	W80°39'02"	12/62	Present	W.L.

*WL -Water level; RF - Rainfall; T - Temperature

Big Cypress National Preserve
Hydrologic Data Collected Continuously

Station #	USGS Designation	Location Lat.	Long.	Period of Record From	To	Parameters*
TCO: 40 Mile Bend to Monroe (Bridge 105)	02288900	N25°51'05"	W80°58'50"	11/39	Present	Q, W.L.
TCO: Monroe to Carnestown (Bridge 84)	02288800	N25°53'10"	W81°15'30"	8/60	Present	Q, W.L., RF
Tamiami Canal at Bridge 77	02288780	N25°53'55"	W81°21'25"	8/60	Present	W.L.
Tamiami Canal at 40 Mile Bend	02288990	N25°45'50"	W80°49'50"	12/39	Present	W.L.
Roberts Lake Slough near Monroe	02290950	N25°47'14"	W81°05'59"	1/73	Present	Q, W. L.
Barron River near Everglades	02291000	N25°57'28"	W81°21'19"	1/52	Present	Q, W.L.
NP-103 (Pinecrest)	03090202	N25°44'00"	W80°57'00"	10/70	Present	W.L.
C-495	255748081181801	N25°57'48"	W81°18'18"	1/71	Present	W.L.

*W.L. - Water Level

RF - Rainfall

Q - Discharge

TCO - Tamiami Canal Outlets

Data Collected by Everglades National Park
Record Collected Infrequently (Discontinuous)

Station	USGS Designation	Location Latitude	Location Longitude	Water Level Period of Record From	Water Level Period of Record To	Rainfall Period of Record From	Rainfall Period of Record To
E-1	none	N25°38'45"	W80°45'20"	12/15/71	Present	11/15/73	Present
E-2	none	N25°38'10"	W80°43'58"	"	"	"	"
E-3	none	N25°37'45"	W80°43'00"	"	"	"	"
E-4	none	N25°37'15"	W80°42'30"	"	"	"	"
E-5	none	N25°37'00"	W80°44'30"	"	"	"	"
E-6	none	N25°36'15"	W80°44'32"	"	"	"	"
E-7	none	N25°35'40"	W80°45'00"	"	"	"	"
E-8	none	N25°35'07"	W80°45'58"	"	"	"	"
E-9	none	N25°34'34"	W80°46'02"	"	"	"	"
E-10	none	N25°33'39"	W80°46'32"	"	"	"	"
E-11	none	N25°33'00"	W80°47'02"	"	"	"	"
E-12	none	N25°32'08"	W80°47'32"	"	"	"	"
E-13	none	N25°31'30"	W80°47'43"	"	"	"	"
E-14	None	N25°31'04"	W80°48'20"	"	"	"	"
E-15	none	N25°30'25"	W80°48'57"	"	"	"	"
E-16	none	N25°30'42"	W80°49'12"	"	"	"	"
E-17	none	N25°29'47"	W80°49'40"	"	"	"	"
E-18	none	N25°27'38"	W80°51'53"	"	"	"	"
E-19	none	N25°29'00"	W80°50'00"	12/15/71	Present	none	none
E-20	none	N25°43'00"	W80°40'23"	12/20/67	Present	none	none

Station	USGS Designation	Location Latitude	Longitude	Water Level Period of Record From	To	Rainfall Period of Record From	To
E-21	none	N25°43'00"	W80°40'19"	"	"	"	"
E-22	none	N25°42'04"	W80°40'25"	"	"	"	"
E-23	none	N25°42'04"	W80°40'21"	"	"	"	"
E-24	none	N25°39'56"	W80°40'27"	"	"	"	"
E-25	none	N25°39'54"	W80°40'27"	"	"	"	"
E-26	none	N25°36'27"	W80°40'20"	12/20/67	Present	none	none
E-27	none	N25°44'40"	W80°50'07"	3/9/77	Present	none	none
E-28	none	N25°43'43"	W80°50'18"	3/8/77	"	"	"
E-29	none	N25°32'45"	W80°50'40"	3/9/77	"	"	"
E-30	none	N25°41'48"	W80°51'00"	3/8/77	"	"	"
E-31	none	N25°41'17"	W80°51'29"	3/8/77	"	"	"
E-32	none	N25°41'08"	W80°51'29"	3/8/77	"	"	"
E-33	none	N25°40'23"	W80°51'29"	3/9/77	"	"	"
E-34	none	N25°39'36"	W80°51'29"	3/9/77	"	"	"
E-35	none	N25°38'45"	W80°51'29"	3/8/77	"	"	"
E-36	none	N25°37'56"	W80°51'29"	3/9/77	"	"	"
E-37	none	N25°36'54"	W80°51'29"	3/10/77	"	"	"
E-39	none	N25°36'54"	W80°53'27"	3/10/77	"	"	"
E-40	none	N25°36'54"	W80°54'27"	3/10/77	"	"	"
E-41	none	N25°36'54"	W80°55'27"	3/10/77	"	"	"
E-42	none	N25°43'23"	W80°44'35"	3/15/77	"	"	"
E-43	none	N25°43'22"	W80°43'23"	"	"	"	"
E-44	none	N25°42'11"	W80°42'58"	"	"	"	"
E-45	none	N25°41'23"	W80°42'35"	"	"	"	"

Station	USGS Designation	Location Latitude	Longitude	Water Level Period of Record From	To	Rainfall Period of Record From	To
E-46	none	N25°40'27"	W80°42'52"	"	"	"	"
E-47	none	N25°38'52"	W80°42'28"	"	"	"	"
E-48	none	N25°37'58"	W80°42'09"	"	"	"	"
E-49	none	N25°36'40"	W80°40'20"	"	"	"	"
E-50	none	N25°35'47"	W80°40'20"	"	"	"	"
E-51	none	N25°34'52"	W80°40'20"	"	"	"	"
E-52	none	N25°34'00"	W80°40'20"	3/15/77	"	"	"
E-53	none	N25°32'53"	W80°40'20"	3/15/77	Present	none	none
E-54	none	N25°44'48"	W80°33'36"	3/14/77	"	"	"
E-55	none	N25°43'58"	W80°33'36"	3/14/77	"	"	"
E-56	none	N25°42'50"	W80°34'30"	3/15/77	"	"	"
E-57	none	N25°42'35"	W80°35'23"	"	"	"	"
E-58	none	N25°42'25"	W80°36'05"	"	"	"	"
E-59	none	N25°41'57"	W80°37'04"	"	"	"	"
E-61	none	N25°40'10"	W80°39'05"	"	"	"	"
E-62	none	N25°39'35"	W80°39'30"	"	"	"	"
E-63	none	N25°38'25"	W80°40'00"	"	"	"	"
E-64	none	N25°37'40"	W80°40'10"	"	"	"	"
E-65	none	n.a.	n.a.	"	"	"	"

APPENDIX V: RAINFALL DATA

1978 RAINFALL, TAMIAMI RANGER STATION

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.18	0.00
2	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.37	1.23	1.23	0.01
3	0.00	0.00	0.00	0.32	0.00	0.01	0.00	0.00	0.00	0.91	0.91	0.31
4	0.00	0.09	0.00	0.07	0.00	1.18	0.00	0.00	0.00	0.01	0.01	0.07
5	0.00	0.63	0.00	0.00	0.21	0.00	0.00	0.32	0.00	0.01	0.01	1.00
6	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.00	0.35	0.35	0.00
7	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.42	0.16	0.16	0.27
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00
9	0.00	0.00	0.00	0.28	0.88	0.56	0.00	0.00	0.00	0.45	0.45	0.18
10	0.00	0.00	0.71	0.00	0.01	1.55	0.00	0.00	0.00	0.10	0.10	0.00
11	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.10	0.47
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.32
14	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.10	3.10	0.31
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.00
17	0.00	0.00	1.51	0.00	0.01	0.00	0.00	0.00	0.00	1.20	1.20	0.00
18	0.00	0.00	0.15	0.00	0.09	0.00	0.00	0.00	0.01	0.22	0.22	0.00
19	0.00	0.00	0.00	0.00	1.54	0.00	0.07	0.64	2.35	0.38	0.38	0.00
20	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.29	0.05	0.22	0.22	0.00
21	0.00	0.26	0.00	0.00	0.37	0.00	0.00	0.00	0.12	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.12	0.29	0.29	0.19
23	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.35	0.35	0.00
24	0.00	0.63	0.00	0.00	0.00	0.00	0.58	0.00	0.11	0.12	0.12	0.00
25	0.00	0.04	0.00	0.00	0.00	0.00	0.00	1.23	0.00	0.00	0.00	0.27
26	0.00	0.00	0.07	0.02	0.00	0.00	0.48	0.02	1.92	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.71	0.00	0.00	0.36
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.69	0.00	0.00	0.11
29	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.81	0.02	1.04	1.04	1.29
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	2.22	2.22	0.22
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.14	1.65	3.08	2.23	3.16	3.53	1.93	3.52	10.10	13.61	14.79	5.38

1978 RAINFALL, ROYAL PALM RANGER STATION

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.10	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.26	0.02	0.01
2	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.76	0.08	0.33	1.13
3	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.02	0.09	0.12	0.13
4	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.03	0.43	0.08
5	0.00	0.34	0.00	0.00	0.49	0.00	0.00	0.43	2.47	0.00	0.00	1.09
6	0.00	0.00	0.12	0.01	0.01	0.00	0.00	0.06	0.00	0.41	0.40	0.69
7	0.32	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.63	0.72	0.26	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
9	0.00	0.00	0.00	0.31	0.41	0.83	0.00	0.00	0.00	0.36	0.16	0.00
10	0.00	0.00	0.34	0.00	0.00	0.13	0.00	0.09	0.00	0.00	0.01	2.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.69
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	1.18	0.03
13	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.06	0.49	2.89	0.00
14	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.22	0.73	0.06	2.66
15	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.04	0.20	0.00	0.03
16	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.17	0.00	0.29	0.05
17	0.00	0.00	2.87	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.00
18	0.00	0.00	0.25	0.52	1.72	0.00	0.00	1.05	0.56	0.00	0.00	0.00
19	0.00	0.04	0.00	0.00	1.66	0.00	0.00	1.12	0.56	0.00	0.00	0.00
20	0.00	0.00	0.00	1.46	0.02	0.00	0.01	0.09	0.15	0.00	0.25	0.99
21	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.26	0.06	0.66	0.00
22	1.20	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.15	0.15	0.16
23	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.68	0.21	0.60
24	0.00	2.31	0.00	0.02	0.00	0.00	5.38	0.00	0.00	0.00	0.93	0.00
25	0.00	0.01	0.00	0.00	0.00	0.00	0.30	0.07	0.02	0.01	0.00	2.25
26	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.61	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.03	0.00	0.00	0.00	0.00
29	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.04
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.24	1.90	0.71	0.04
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.02	2.27	0.00
TOTAL	3.53	2.89	3.58	3.32	4.60	2.77	6.31	5.07	8.71	6.25	11.41	12.67

1978 RAINFALL, OASIS RANGER STATION

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.09	0.00	0.04	0.00
2	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.01	0.04	0.97	0.00
3	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.13	0.00	1.20	0.00
4	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.30	0.00	0.00
5	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.01	3.47
6	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.63	0.00	0.37
7	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.26	0.00	0.20	0.93
8	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.65	0.51	0.00
9	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.02	0.00	0.00	0.00
10	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.00	0.00
11	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.02	0.00	0.07	0.00
12	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	1.82	0.35	0.08
13	##.##	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.03	0.19	0.09	0.00
14	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.04	0.00	0.25	0.00	0.00
15	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.02	0.90	0.00	0.23
16	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.08	0.00	0.00
17	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.00	1.07	0.00
18	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.18	0.00	0.42	0.00	0.00
19	##.##	##.##	##.##	##.##	##.##	##.##	##.##	3.39	1.40	0.00	0.04	0.00
20	##.##	##.##	##.##	##.##	##.##	##.##	##.##	1.49	0.07	0.15	1.54	0.00
21	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.18	0.45	0.00	0.00	0.00
22	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.70	0.03	0.00	0.00
23	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.54	0.26	0.00	0.03
24	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.07	1.76	0.09
25	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.02	0.00	0.00	0.56	0.00
26	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.23	0.00	0.00	0.69
27	##.##	##.##	##.##	##.##	##.##	##.##	##.##	1.61	0.16	0.00	0.00	0.00
28	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.15	1.65	0.00	0.00	0.00
29	##.##	##.##	##.##	##.##	##.##	##.##	##.##	1.25	0.05	0.81	0.00	0.00
30	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.48	0.00	0.47
31	##.##	##.##	##.##	##.##	##.##	##.##	##.##	0.00	0.00	0.00	0.19	0.00
TOTAL	##.##	##.##	##.##	##.##	##.##	##.##	##.##	8.31	5.83	7.08	8.60	6.36

= No data available

1978 RAINFALL, EVERGLADES CITY RANGER STATION

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.05	0.65	0.00	0.88
2	0.00	0.10	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.00	1.58
3	0.00	0.50	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
4	0.10	0.01	0.00	0.16	0.01	1.39	0.00	0.00	0.00	0.00	0.40	0.05
5	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.54	0.00	0.00	0.00	0.17
6	0.00	0.00	0.11	0.00	0.01	0.00	0.00	0.50	0.05	0.00	0.02	0.00
7	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.47	0.04
8	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.27	0.02	0.23
9	0.00	0.00	0.00	0.64	1.58	1.10	0.00	0.00	0.35	0.01	0.07	0.00
10	0.00	0.00	0.99	0.00	0.04	0.90	0.00	0.00	0.00	0.00	0.05	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01	0.01	0.00	0.00
12	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.39	0.58	1.11	0.00	0.81
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.89	0.97	0.00	0.00
14	0.00	0.00	0.01	0.37	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.60
15	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.95	0.46	0.00	0.07
16	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.10	0.55
17	0.00	0.00	0.21	0.00	0.28	0.02	0.00	0.00	0.00	0.43	0.28	1.62
18	0.00	0.00	0.27	0.00	0.08	0.00	0.00	0.00	0.00	0.00	1.05	0.00
19	0.00	0.00	0.00	0.00	1.54	0.00	0.00	0.04	0.96	0.00	0.00	0.00
20	0.00	0.00	0.00	0.56	0.03	1.95	0.00	0.00	1.71	0.12	0.49	0.00
21	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.19	0.18	0.00	1.48
22	0.00	0.38	0.00	0.00	0.05	0.00	0.00	0.00	1.55	0.52	0.00	0.04
23	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.78	0.05	0.03	0.04
24	0.01	0.27	0.00	0.00	0.00	0.00	1.09	0.00	0.03	0.03	0.78	0.05
25	0.00	0.50	0.04	0.00	0.00	0.00	0.32	0.00	0.02	0.30	1.54	0.75
26	0.00	0.01	1.90	0.00	0.00	0.00	0.00	0.00	0.05	0.30	0.00	0.25
27	0.03	0.00	0.00	0.00	0.00	0.10	0.00	0.09	0.00	0.00	0.00	0.18
28	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.36	0.02	0.00	0.00	0.00
29	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.26	0.00	0.09	0.00
30	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.51	0.25	0.11	0.07	1.15
31	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.55	0.00
TOTAL	0.33	1.91	4.28	2.33	3.92	5.56	1.82	3.39	12.11	7.18	6.48	10.54

1978 RAINFALL, FLAMINGO RANGER STATION

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00
2	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.01	0.00
3	0.14	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00
4	0.04	0.00	0.00	0.16	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.35	0.00	0.00	0.20	0.00	0.00	0.46	0.18	0.00	0.00	0.46
6	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	1.05	0.00
7	0.07	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.30	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
9	0.00	0.00	0.00	0.21	0.62	0.36	0.00	0.00	0.00	0.00	0.15	0.00
10	0.00	0.27	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.10	0.09	0.12
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.19	0.00	0.50	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.99	0.00	0.40	0.12
14	0.00	0.00	0.06	0.27	0.00	0.00	0.00	0.00	0.10	0.85	0.10	0.10
15	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.06
16	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.15	0.00	0.56
17	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.56
18	0.00	0.00	0.54	0.04	0.16	0.00	0.00	0.00	0.65	0.00	0.00	0.16
19	0.00	0.00	0.01	0.00	0.91	0.00	0.00	0.58	2.78	0.00	0.08	0.14
20	0.00	0.00	0.00	0.77	0.02	0.00	0.00	0.00	0.06	0.00	0.80	0.02
21	0.00	0.00	0.00	0.01	0.37	0.00	0.00	0.05	0.00	0.21	1.36	0.34
22	0.00	0.21	0.00	0.00	0.08	0.00	0.01	1.72	0.00	0.07	0.08	0.23
23	0.80	0.40	0.00	0.00	0.00	0.00	0.00	0.01	0.22	0.20	0.93	0.24
24	0.00	0.08	0.00	0.00	0.00	0.00	1.13	0.00	1.10	0.00	0.03	0.00
25	0.00	1.48	0.00	0.00	0.00	0.00	0.19	0.07	0.00	0.00	0.00	0.00
26	0.00	0.02	0.25	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.26	0.90
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.06
28	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.42	0.25	0.00	0.00	0.10
29	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.24	0.00	0.00	0.00	0.35
30	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.05
31	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.08	0.00
TOTAL	1.05	2.96	1.86	2.00	2.44	2.19	3.51	4.95	7.41	1.69	6.58	4.65

NP-44 PINE GLADE LAKE WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl) Max	Year	Min	Year
Oct	4.43	3.64	-1.43	-2.22	5.03	1968	2.94	1977
Nov	3.67	2.58	-2.19	-3.28	4.94	1969	1.66	1977
Dec	2.84	3.36	-3.02	-2.50	4.28	1969	1.16	1975
Jan	2.49	3.08	-3.37	-2.78	4.61	1961	0.83	1971
Feb	2.11	2.95	-3.75	-2.91	4.39	1969	2.01	1977
Mar	1.45	3.22	-4.41	-2.64	3.87	1978	-0.65	1975
Apr	0.75	2.04	-5.11	-3.82	3.79	1978	-1.50	1975
May	1.10	3.33	-4.76	-2.53	4.95	1968	-1.94	1971
June	3.57	3.67	-2.29	-2.19	5.05	1969	-1.20	1973
July	4.27	3.38	-1.59	-2.48	5.15	1966	2.30	1978
Aug	4.13	3.81	-1.73	-2.05	4.80	1966	2.34	1978
Sept	4.43	4.04	-1.43	-1.82	5.20	1968	3.50	1970

Extremes for WY 78: Max: 4.54, Aug. 25; Min: 1.06, April 20. Note: March max. of 3.87' replaces the former March max. of 3.65' (1970); April max. of 3.79 replaces the former April max. of 2.93' (1969). Feb. min. of 2.01 replaces former Feb. min. of 2.80 (1969); July min. of 2.30 replaces former July min. of 2.50 (1967); Aug. min of 2.34 replaces former Aug. min. of 2.78 (1970).

Land Surface Elevation: 5.86' (USGS data, 1978 report, National Geodetic Vertical Datum of 1929).

Periods of Inundation or Drydown for WY 78: Groundwater station, no periods of inundation; water table ranged from 1.82' to -3.82 below land surface.

Comments: Water levels estimated April 11-22. Ground water station east of Shark Slough.

*Historic means and extremes were obtained from 1977 Annual Hydrology Review, Everglades National Park; means represent a period of record from 1961-1977; extremes updated to include WY 78.

**Assuming land elevation essentially constant for period of record.

P-33 WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl)			
					Max	Year	Min	Year
Oct	6.33	6.19	1.22	1.08	7.67	1969	5.42	1956
Nov	6.24	6.27	1.13	1.16	7.67	1960	5.52	1963
Dec	6.04	6.27	.93	1.16	7.40	1969	5.35	1961
Jan	5.90	6.14	.79	1.03	7.28	1970	5.15	1957
Feb	5.78	6.14	.67	1.03	7.11	1970	4.68	1962
Mar	5.63	6.13	.52	1.02	7.02	1970	4.07	1963
Apr	5.29	6.14	.18	1.03	6.99	1970	2.80	1962
May	4.90	5.90	-.21	.79	7.17	1958	2.25	1963
June	5.68	6.00	.57	.89	7.18	1969	3.57	1965
July	6.05	6.27	.96	1.16	7.16	1969	4.27	1965
Aug	6.15	6.82	1.04	1.71	7.30	1969	4.83	1956
Sept	6.29	7.06	1.18	1.95	7.31	1969	5.27	1965

Extremes for WY 78: Max: 7.16', Sept. 30; Min: 5.75', June 5.

Land Surface Elevation: 5.11' above msl.

Periods of Inundation or Drydown for WY 78: Inundated entire year.

Comments: Stage at P-33, in north central Shark Slough is affected by water releases through S-12 structures on Tamiami Canal.

*Historic means and extremes obtained from 1977 Annual Hydrology Review, Everglades National Park; means represent period of record from 10/52-1977, extremes are updated to include 1978.

P-36 WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl) Max	Year	Min	Year
Oct	3.91	3.49	0.71	0.29	4.91	1969	3.39	1977
Nov	3.79	3.53	0.59	0.33	4.87	1969	3.44	1977
Dec	3.66	3.63	0.46	0.43	4.63	1969	3.46	1968
Jan	3.53	3.49	0.33	0.29	4.58	1970	3.20	1976
Feb	3.38	3.45	0.18	0.25	4.37	1970	2.92	1968
Mar	3.21	3.45	0.01	0.25	4.35	1970	2.29	1971
Apr	2.83	3.33	-0.37	0.13	4.13	1970	1.02	1971
May	2.62	3.20	-0.58	0.00	4.20	1970	0.79	1971
June	3.19	3.30	-0.01	0.10	4.38	1970	0.85	1971
July	3.65	3.50	0.45	0.30	4.50	1970	2.85	1977
Aug	3.73	3.81	0.53	0.61	4.39	1969	2.99	1977
Sept	3.83	4.10	0.63	0.90	4.75	1969	3.21	1975

Extremes for WY 78: Max: 4.20', Sept. 29; Min: 3.10, May 25-25.

Land Surface Elevation: 3.20 feet.

Periods of Inundation or Drydown for WY 78: No surface water May 15-June 6; maximum depth of water table below surface: .10 feet.

Comments: Stage at P-36 in central Shark Slough is probably affected by releases through S-12 structures on Tamiami Canal.

*Historic means and extremes obtained from 1977 Annual Hydrology Review, Everglades National Park and represent period of record from 2/68 to 1977.

**Assuming land surface elevation essentially constant.

P-38 WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl) Max	Year	Min	Year
Oct	1.89	1.64	.99	.74	2.59	1960	1.09	1962
Nov	1.67	1.35	.77	.45	2.42	1960-61	0.99	1962
Dec	1.41	1.61	.51	.71	2.27	1960	0.63	1957
Jan	1.26	1.45	.36	.55	2.13	1970	0.05	1957
Feb	1.07	1.36	.17	.46	2.00	1970	-0.34	1957
Mar	0.66	1.41	-0.24	.51	1.89	1958	-0.60	1956
Apr	0.19	1.13	-0.71	.23	2.05	1958	-1.33	1971
May	0.36	1.34	-0.54	.44	2.16	1958	-1.45	1971
June	1.47	1.51	0.57	.61	2.47	1969	-1.43	1965
July	1.69	1.49	0.79	.59	2.28	1969	0.91	1956
Aug	1.75	1.64	0.85	.74	2.19	1965	0.84	1956
Sept	1.89	2.07	0.99	1.17	2.92	1960	1.16	1961

Extremes for WY 78: Max: 2.14', Sept. 28; Min: 0.94', April 14.

Land Surface Elevation: About 0.9' (USGS data, 1978 USGS report)

Periods of Inundation or Drydown for WY 78: Although water levels below .9' above msl (approximate land surface) did not occur, driest conditions occurred from April 12-15 and May 20-23, when water levels ranged from .99-.94, and 1.00-.95 respectively, i.e., .04' (.48 inches) surface water .1' (1.2 inches).

Comments: Located in southern region of Shark Slough near eastern boundary.

*Historic means and extremes obtained from 1977 Annual Hydrology Review, Everglades National Park and represent period of record from 1953-1977.

**Assuming land elevation at P-38 essentially constant from 1953-77.

P-34 WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl)			
					Max	Year	Min	Year
Oct	2.26	1.43	1.26	0.43	3.39	1969	1.08	1977
Nov	2.06	1.00	1.06	0.00	3.40	1969	0.73	1977
Dec	1.85	1.47	0.85	0.47	3.10	1969	0.75	1956
Jan	1.65	1.46	0.65	0.46	3.03	1970	0.34	1956
Feb	1.33	1.52	0.33	0.52	2.69	1970	0.00	1965
Mar	0.76	1.78	-0.24	0.78	2.61	1970	-1.12	1975
Apr	0.14	1.11	-0.86	0.11	2.37	1958	-2.31	1971
May	0.44	0.55	-0.56	-0.45	3.20	1958	-2.75	1971
June	1.75	1.52	.75	0.52	3.12	1969	-1.96	1965
July	2.08	1.99	1.08	0.99	2.90	1969	0.26	1965
Aug	2.10	2.25	1.10	1.25	2.91	1969	1.23	1956
Sept	2.24	2.24	1.24	1.24	3.31	1960	1.35	1975

Extremes for WY 78: Max: 2.34, Sept. 30, Min: .09, May 24. Monthly maximums and minimums are within ranges of monthly extremes for period of record.

Land Surface Elevation: 1.00.

Periods of Inundation or Drydown for WY 78: No surface water present during periods in November, April, and May. Maximum depth of water table below land surface was .92 feet May 24.

Comments: Station located at headwaters of Rogers River, 12 miles southwest of 40 Mile Bend on U.S. Highway 41, and west of Shark Slough boundaries.

*Historic means and extremes obtained from 1977 Annual Hydrology Review, Everglades National Park and represent period of record from 1953-1977.

**Assuming land surface essentially constant over period of record.

P-35 WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl) Max	Year	Min	Year
Oct	2.19	1.66	1.33	0.80	3.11	1970	1.07	1961
Nov	1.96	1.42	1.10	0.56	3.13	1969	0.85	1956
Dec	1.63	1.47	0.77	0.61	2.74	1960	0.20	1955
Jan	1.40	1.27	0.54	0.41	2.72	1970	0.08	1957
Feb	1.28	1.21	0.42	0.35	2.47	1970	0.01	1964
Mar	1.16	1.34	0.30	0.48	2.53	1958	0.06	1964
Apr	1.13	1.06	0.27	0.20	2.52	1958	-0.27	1964
May	1.33	1.31	0.47	0.45	2.73	1958	0.24	1965
June	1.84	1.41	0.98	0.55	3.05	1969	0.57	1965
July	1.92	1.48	1.06	0.62	2.82	1970	0.45	1964
Aug	1.97	1.89	1.11	0.79	2.85	1969	0.73	1964
Sept	2.13	2.44	1.27	0.44	3.47	1960	1.20	1955

Extremes for WY 78: Max: 2.56, Sept. 17; Min: 0.50, Feb. 1. Monthly maximums and minimums were within ranges of monthly extremes for period of record.

Land Surface Elevation: .86' above msl.

Periods of Inundation or Drydown for WY 78: No surface water present Jan. 27 - Feb. 5 (10 days) and March 31 - April 13 (14 days). Maximum depth of water below land surface: .36 feet on Feb. 1.

Comments: Located in southwestern Shark Slough, this station is 100 feet north of Rookery Branch and 8 miles upstream from Shark River; its medium and low stages are affected by tides.

*Historic means and extremes were obtained from 1977 Annual Hydrology Review, Everglades National Park and represent period of record from September 1953 to 1977.

**Assuming land elevation essentially constant during period of record.

NP-62 (Pa-hay-okee) WATER LEVELS

Month	*Historic Means (ft to msl)	1978 Means (ft to msl)	Historic $\bar{x}$ distance to Land Surface*	1978 $\bar{x}$ to Land Surface	*Extremes for Period of Record (feet to msl) Max	Year	Min	Year
Oct	3.00	2.68	-1.48	-1.80	3.90	1969	2.40	1977
Nov	2.81	2.47	-1.67	-2.01	3.95	1969	2.27	1977
Dec	2.54	2.62	-1.94	-1.86	3.52	1969	2.10	1971
Jan	2.32	2.50	-2.16	-1.98	3.40	1970	1.55	1971
Feb	2.05	2.45	-2.43	-2.03	3.23	1970	0.43	1976
Mar	1.65	2.53	-2.83	-1.95	3.15	1970	-0.30	1971
Apr	0.88	2.26	-3.60	-2.22	2.88	1970	-1.30	1971
May	0.82	2.49	-3.66	-1.99	3.05	1968	-1.78	1971
June	2.88	2.62	-1.60	-1.86	3.53	1969	-1.36	1971
July	2.88	2.59	-1.60	-1.89	3.50	1966	2.18	1967
Aug	2.90	2.85	-1.58	-1.63	3.61	1969	2.13	1967
Sept	3.05	3.23	-1.43	-1.25	3.88	1968	2.50	1977

Extremes for WY 78: Max: 3.58', Aug. 30; Min: 1.93', April 14. Note: Oct. - Nov. minimums are record monthly minimums for the 14-year period of record; other monthly maximums and minimums are within range of extremes for period of record.

Land Surface Elevation: 4.48' (USGS data, National Geodetic Vertical dictim of 1929).

Periods of Inundation or Drydown for WY 78: Groundwater station; water table ranged from 0.9 feet to 2.55 feet below surface of land during year.

Comments: Station located in southern region of Shark Slough on eastern edge of slough.

*Historic means and extremes obtained from 1977 Annual Hydrology Review, Everglades National Park; means represent a period of record from 1964-1977, extremes are updated to include WY 78.

**Assuming land elevation essentially constant for period of record.

P-37

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	1.63	1.52	-0.11	2.35	1961	1.75	0.94	1971	1.35
Nov	1.40	1.24	-0.16	2.23	1961	1.36	0.92	1974	1.10
Dec	1.14	1.36	0.22	1.89	1960	1.56	0.61	1956	1.22
Jan	0.98	1.31	0.33	1.68	1960	1.38	0.15	1973	1.23
Feb	0.83	1.30	0.47	1.47	1953	1.53	-0.23	1962	1.16
Mar	0.50	1.30	0.80	1.30	1954	1.47	-0.96	1956	1.10
Apr	-0.10	0.89	0.99	1.51	1956	1.10	-1.75	1971	0.64
May	-0.01	1.07	1.08	1.59	1968	1.37	-1.97	1971	0.83
June	1.04	1.38	0.34	2.36	1969	1.51	-1.76	1965	1.24
July	1.29	1.45	0.16	2.14	1966	1.59	-0.37	1965	1.26
Aug	1.31	1.46	0.15	2.18	1959	1.77	-0.11	1956	1.25
Sept	1.56	1.82	0.26	3.01	1960	2.01	0.92	1961	1.57

WY 1978 Extremes: Max: 2.01; Min: .64

Mean: 1.34

Range: 1.37

Period of Record: 1953 to present

Land Surface Elevation: About 0.6 feet (USGS)

*Up to 1977

Taylor Slough Bridge

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	3.95	3.39	-0.56	5.11	1960	4.19	2.46	1961	2.81
Nov	3.38	2.58	-0.80	5.10	1960	3.47	1.65	1961	2.03
Dec	2.54	2.87	0.33	4.48	1960	3.31	0.77	1961	2.57
Jan	2.18	2.60	0.42	4.13	1961	2.81	0.68	1962	2.34
Feb	1.90	2.57	0.67	3.80	1961	3.26	0.16	1962	2.17
Mar	1.30	2.64	1.34	2.89	1961	2.97	-0.41	1962	2.23
Apr	0.65	2.08	1.43	2.54	1964	3.19	-1.24	1971	1.49
May	0.68	2.67	1.99	4.25	1968	3.15	-1.67	1971	2.25
June	2.88	3.07	0.19	4.92	1966	3.32	-1.13	1965	2.77
July	3.65	3.14	-0.51	4.96	1968	3.48	0.67	1965	2.66
Aug	3.32	3.25	-0.07	4.64	1966	3.85	1.71	1965	2.87
Sept	3.78	4.27	0.49	5.28	1960	4.58	2.00	1965	3.94

WY 1978 Extremes: Max: 4.58; Min: 1.49

Mean: 2.93

Range: 3.09

*Sept. 1960 to 1977 data used for calculations.

Headquarters Pond

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	2.92			4.66	1968		2.18	1974	
Nov	2.50			4.12	1969		1.56	1974	
Dec	1.98			2.80	1969		1.22	1970	
Jan	1.76			3.00	1970		0.82	1971	
Feb	1.53			2.76	1970		0.56	1975	
Mar	1.02			2.56	1969		-0.32	1975	
Apr	0.58			2.53	1972		-1.16	1971	
May	0.68			4.06	1968		-1.54	1971	
June	2.47			4.83	1966		-1.02	1971	
July	2.92			4.84	1968		1.75	1971	
Aug	2.52			3.99	1966		1.25	1965	
Sept	2.80			4.74	1968		1.60	1965	

Tamiami Canal - 40-Mile Bend
(02288990)

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	8.53	8.39	-0.14	9.22	1969	8.54	8.08	1963	8.26
Nov	8.42	8.26	-0.16	9.21	1969	8.27	7.90	1963	8.23
Dec	8.30	8.26	-0.04	9.05	1969	8.33	7.71	1963	8.21
Jan	8.18	8.27	0.09	8.84	1970	8.33	7.84	1974	8.23
Feb	8.00	8.35	0.35	8.77	1970	8.46	7.24	1974	8.24
Mar	7.56	8.48	0.92	8.84	1970	8.57	6.12	1974	8.41
Apr	6.94	8.29	1.35	8.81	1970	8.43	5.25	1974	8.21
May	7.04	8.19	1.15	8.63	1969	8.25	5.07	1974	8.10
June	7.91	8.29	0.38	9.17	1969	8.51	5.62	1973	8.17
July	8.38	8.49	0.11	9.08	1969	8.62	7.42	1971	8.38
Aug	8.47	8.50	0.03	9.05	1969	8.62	8.00	1977	8.36
Sept	8.44	8.47	0.03	9.06	1969	8.56	7.09	1971	8.42

Extremes for WY 78: Max 8.62; Min: 8.10.

Extremes for Period of Record Max: 10.3; Min: 1.46

Period of Record: 1939 to Present

Comments: Within L-28 canal at most southeasterly point.

Bridge 105 (Tamiami Outlets, 40-Mile Bend to Monroe)
(02288900)

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	8.08	7.95	-0.13	8.90	1969	8.41	6.67	1974	7.60
Nov	7.64	7.79	0.15	8.90	1969	7.92	5.40	1974	7.55
Dec	7.36	7.75	0.39	8.50	1969	7.86	6.10	1970	7.62
Jan	6.99	7.82	0.83	8.21	1970	7.98	5.58	1971	7.65
Feb	6.60	8.02	1.42	8.09	1970	8.19	4.58	1975	7.85
Mar	6.14	8.13	1.99	8.52	1970	8.32	3.67	1975	7.94
Apr	5.58	7.64	2.06	8.41	1970	7.94	2.79	1975	7.37
May	5.95	7.40	1.45	8.55	1968	7.99	2.65	1974	6.46
June	7.57	7.97	0.40	9.18	1969	8.29	4.24	1965	7.75
July	8.20	8.28	0.08	9.12	1966	8.45	6.75	1965	8.12
Aug	8.24	8.28	0.04	8.77	1966	8.44	7.75	1972,67	8.19
Sept	8.20	8.12	-0.08	8.71	1966	8.35	7.45	1974	7.92
Range	2.66	.88							

WY 78 Extremes: Max: 8.45, Min: 6.46

Bridge 84, Tamiami Canal Outlets, Monroe to Carnestown
(02288800)

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	3.01	2.50	-0.51	6.16	1962	3.55	1.75	1964	2.00
Nov	2.46	1.70	-0.76	5.14	1962	1.97	1.41	1977	1.41
Dec	2.08	1.78	-0.30	4.74	1962	2.11	0.71	1964	1.44
Jan	1.48	1.68	0.20	4.56	1963	2.02	-0.05	1965	1.49
Feb	1.63	1.71	0.08	5.35	1963	2.07	0.09	1965	1.33
Mar	1.54	2.02	0.48	4.43	1963	2.50	-0.03	1965	1.74
Apr	1.22	1.37	0.15	4.38	1963	1.71	-0.12	1977	1.08
May	1.34	1.13	-0.21	4.52	1963	1.50	0.19	1971	0.84
June	2.27	2.48	0.21	5.00	1969	3.48	0.47	1965	1.20
July	2.81	3.35	-0.46	5.24	1964	3.84	1.11	1965	2.57
Aug	2.98	3.60	0.62	5.30	1964	4.07	1.60	1972	2.52
Sept	3.28	3.84	0.56	6.07	1963	4.05	1.85	1965	3.60
Range	2.06	2.71							

WY 78 Extremes: Max: 4.07; Min: 0.84

Period of Record: Aug. 1960 to Present.

Roberts Lake Slough

(02290950)

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	4.87	4.94	0.07	5.20	1975,76,77	5.20	4.11	1974	4.70
Nov	4.37	4.47	0.10	5.00	1975	4.68	3.04	1974	4.23
Dec	4.18	4.55	0.37	4.63	1977	4.63	3.85	1974	4.33
Jan	4.02	4.66	0.64	4.82	1978	4.82	2.52	1975	4.55
Feb	3.57	4.75	0.18	4.84	1978	4.84	1.40	1975	4.65
Mar	2.95	4.92	1.97	5.03	1978	5.03	0.02	1975	4.77
Apr	1.68	4.52	2.48	4.76	1978	4.76	-0.73	1975	4.32
May	1.14	3.91	2.77	4.35	1976	4.31	-1.06	1975	3.41
June	2.84	4.39	1.55	5.22	1976	4.86	-0.04	1974	3.73
July	4.79	4.96	0.17	5.21	1976	5.06	2.89	1973	4.86
Aug	5.01	5.03	0.02	5.30	1976	5.16	4.61	1977	4.90
Sept	5.03	5.02	-0.01	5.27	1973	5.20	4.62	1974	4.78
Range	-3.89	-1.12							

Period of Record: 1973 to Present

Extremes for WY 78" Max: 5.20, Min: 3.41

Bridge 77
(02288780)

Month	Mean for Period of Record*	Mean for WY 78	Deviation of 78 from mean	Max for Period of record		1978 Max	Min for Period of Record		1978 Min
				Max	Year		Min	Year	
Oct	2.04	1.65	-0.39	2.85	1969	2.44	0.87	1977	0.87
Nov	1.63	0.98	-0.65	2.42	1971	1.38	0.44	1977	0.44
Dec	1.11	0.75	-0.36	1.93	1969	1.17	-0.42	1972	0.29
Jan	0.88	0.74	-0.14	1.75	1968	1.24	-0.60	1976	0.24
Feb	0.81	0.97	0.16	1.69	1970	1.45	-0.62	1976	0.31
Mar	0.98	1.28	0.30	2.66	1970	1.72	-0.38	1976	0.64
Apr	0.90	1.03	0.13	2.22	1970	1.38	-0.25	1977	0.72
May	1.01	1.02	0.01	1.73	1970	1.55	0.21	1970	0.69
June	1.58	1.37	-0.21	3.04	1969	1.90	0.41	1971	0.90
July	1.80	1.74	-0.06	2.66	1970	1.82	0.78	1971	1.60
Aug	2.05	1.86	-0.19	2.58	1973	2.08	1.11	1971	1.67
Sept	2.23	2.27	0.04	2.96	1973	2.47	1.70	1969	1.93

Period of Record: Aug. 1960 to Present

Extremes for WY 78: Max: 2.47; Min: .24

Extremes for Record: Max: 4.42 (Sept 1960); Min: -1.15 (Feb 1976)

HYDROLOGIC STATION PERIOD OF RECORD MAXIMUMS, MEANS, AND YEAR

P-33 WATER LEVEL

Month	Mean	Max.	Year	Min.	Year
Jan.	5.90	7.28	1970	5.15	1957
Feb.	5.78	7.11	1970	4.68	1962
Mar.	5.63	7.02	1970	4.07	1963
Apr.	5.29	6.99	1970	2.80	1962
May	4.90	7.17	1958	2.25	1963
Jun.	5.68	7.18	1969	3.57	1965
Jul.	6.05	7.16	1969	4.27	1965
Aug.	6.15	7.30	1969	4.83	1956
Sept.	6.29	7.31	1969	5.27	1965
Oct.	6.33	7.67	1969	5.42	1956
Nov.	6.24	7.67	1960	5.52	1963
Dec.	6.04	7.40	1969	5.35	1961

Period of Record: 1953 to Present

P-34 WATER LEVEL

Jan.	1.65	3.03	1970	0.34	1956
Feb.	1.33	2.69	1970	0.00	1965
Mar.	0.76	2.61	1970	-1.12	1975
Apr.	0.14	2.37	1958	-2.31	1971
May	0.44	3.20	1958	-2.75	1971
Jun.	1.75	3.12	1969	-1.96	1965
Jul.	2.08	2.90	1969	0.26	1965
Aug.	2.10	2.91	1969	1.23	1956
Sept.	2.24	3.31	1960	1.35	1975
Oct.	2.26	3.39	1969	1.08	1977
Nov.	2.06	3.40	1969	0.73	1977
Dec.	1.85	3.10	1969	0.75	1956

Period of Record: 1953 to Present

P-35 WATER LEVEL

Month	Mean	Max.	Year	Min.	Year
Jan.	1.40	2.72	1970	0.08	1957
Feb.	1.28	2.47	1970	0.01	1964
Mar.	1.16	2.53	1958	0.06	1964
Apr.	1.13	2.52	1958	-0.27	1964
May	1.33	2.73	1958	0.24	1965
Jun.	1.84	3.05	1969	0.57	1965
Jul.	1.92	2.82	1970	0.45	1964
Aug.	1.97	2.85	1969	0.73	1964
Sept.	2.13	3.47	1960	1.20	1955
Oct.	2.19	3.11	1970	1.07	1961
Nov.	1.96	3.13	1969	0.85	1956
Dec.	1.63	2.74	1960	0.20	1955

Period of Record: September 1953 to Present

P-36 WATER LEVEL

Jan.	3.53	4.58	1970	3.20	1976
Feb.	3.38	4.37	1970	2.92	1968
Mar.	3.21	4.35	1970	2.29	1971
Apr.	2.83	4.13	1970	1.02	1971
May	2.62	4.20	1970	0.79	1971
Jun.	3.19	4.38	1970	0.85	1971
Jul.	3.65	4.50	1970	2.85	1977
Aug.	3.73	4.39	1969	2.99	1977
Sept.	3.83	4.75	1969	3.21	1975
Oct.	3.91	4.91	1969	3.39	1977
Nov.	3.79	4.87	1969	3.44	1977
Dec.	3.66	4.63	1969	3.46	1968

Period of Record: February 1968 to Present

P-37 WATER LEVEL

Month	Mean	Max.	Year	Min.	Year
Jan.	0.98	1.68	1960	0.15	1973
Feb.	0.83	1.47	1953	-0.23	1962
Mar.	0.50	1.30	1954	-0.96	1956
Apr.	-0.10	1.51	1956	-1.75	1971
May	-0.01	1.59	1968	-1.97	1971
Jun	1.04	2.36	1969	-1.76	1965
Jul.	1.29	2.14	1966	-0.37	1965
Aug.	1.31	2.18	1959	-0.11	1956
Sept.	1.56	3.01	1960	0.92	1961
Oct.	1.63	2.35	1961	0.94	1971
Nov.	1.40	2.23	1961	0.92	1974
Dec.	1.14	1.89	1960	0.61	1956

Period of Record: 1953 to Present

P-38 WATER LEVEL

Jan.	1.26	2.13	1970	0.05	1957
Feb.	1.07	2.00	1970	-0.34	1957
Mar.	0.66	1.89	1958	-0.60	1956
Apr.	0.19	2.05	1958	-1.33	1971
May	0.36	2.16	1958	-1.45	1971
Jun.	1.47	2.47	1969	-1.43	1965
Jul.	1.69	2.28	1969	0.91	1956
Aug.	1.75	2.19	1965	0.84	1956
Sept.	1.89	2.92	1960	1.16	1961
Oct.	1.89	2.59	1960	1.09	1962
Nov.	1.67	2.42	1960, 1961	0.99	1962
Dec.	1.41	2.27	1960	0.63	1957

Period of Record: 1953 to Present

HEADQUARTERS POND WATER LEVEL

Month	Mean	Max.	Year	Min.	Year
Jan.	1.76	3.00	1970	0.82	1971
Feb.	1.53	2.76	1970	0.56	1975
Mar.	1.02	2.56	1969	-0.32	1975
Apr.	0.58	2.53	1972	-1.16	1971
May	0.68	4.00	1968	-1.54	1971
Jun.	2.47	4.83	1966	-1.02	1971
Jul.	2.92	4.84	1968	1.75	1971
Aug.	2.52	3.99	1966	1.25	1965
Sept.	2.80	4.74	1968	1.60	1965
Oct.	2.92	4.66	1968	2.18	1974
Nov.	2.50	4.12	1969	1.56	1974
Dec.	1.98	2.80	1969	1.22	1970

Period of Record: Sept. 1965 to Present

TAYLOR SLOUGH AT BRIDGE WATER LEVEL

Jan.	2.18	4.13	1961	0.68	1962
Feb.	1.90	3.80	1961	0.16	1962
Mar.	1.30	2.89	1961	-0.41	1962
Apr.	0.65	2.54	1964	-1.24	1971
May	0.68	4.25	1968	-1.67	1971
Jun.	2.88	4.92	1966	-1.13	1965
Jul.	3.65	4.96	1968	0.67	1965
Aug.	3.32	4.64	1966	1.71	1965
Sept.	3.78	5.28	1960	2.00	1965
Oct.	3.95	5.11	1960	2.46	1961
Nov.	3.38	5.10	1960	1.65	1961
Dec.	2.54	4.48	1960	0.77	1961

Period of Record: September 1960 to Present

NP-44 (PINE GLADE LAKE) WATER LEVEL

Month	Mean	Max.	Year	Min.	Year
Jan.	2.49	4.61	1961	0.83	1971
Feb.	2.11	4.39	1969	2.80	1969
Mar.	1.45	3.65	1970	-0.65	1975
Apr.	0.75	2.93	1969	-1.50	1975
May	1.10	4.95	1968	-1.94	1971
Jun.	3.57	5.05	1969	-1.20	1973
Jul.	4.27	5.15	1966	2.50	1967
Aug.	4.13	4.80	1966	2.78	1970
Sept.	4.43	5.20	1968	3.50	1970
Oct.	4.43	5.03	1968	2.94	1977
Nov.	3.67	4.94	1969	1.66	1977
Dec.	2.84	4.28	1969	1.16	1975

Period of Record: 1961 to Present

NP 62 (PA-HAY-OKEE) WATER LEVEL

Jan.	2.32	3.40	1970	1.55	1971
Feb.	2.05	3.23	1970	0.43	1976
Mar.	1.65	3.15	1970	-0.30	1971
Apr.	0.88	2.88	1970	-1.30	1971
May	0.82	3.05	1968	-1.78	1971
Jun.	2.88	3.53	1969	-1.36	1971
Jul.	2.88	3.50	1966	2.18	1967
Aug.	2.90	3.61	1969	2.13	1967
Sept.	3.05	3.88	1968	2.50	1967
Oct.	3.00	3.90	1969	2.40	1977
Nov.	2.81	3.95	1969	2.27	1977
Dec.	2.54	3.52	1969	2.10	1971

Period of Record: 1964 to Present

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