Lee County Board Of County Commissioners
Agenda Item Summary **Blue Sheet No. 20030167**

1. REQUESTED MOTION:

ACTION REQUESTED: Request approval of the Six Mile Cypress Slough Preserve Land Stewardship Plan.

WHY ACTION IS NECESSARY: Action is part of the procedure for management of Preserves owned by Lee County and it is part of the joint management agreement with South Florida Water Management District.

WHAT ACTION ACCOMPLISHES: Allows county staff to implement the SMCSP management plan.

2. DEPARTMENTAL CATEGORY: C11A
COMMISSION DISTRICT # 5

3. MEETING DATE: 02-25-2003

4. AGENDA:
- X CONSENT
- ADMINISTRATIVE
- APPEALS
- PUBLIC
- WALK ON
- TIME REQUIRED:

5. REQUIREMENT/PURPOSE: *(Specify)*
- STATUTE
- ORDINANCE
- ADMIN. CODE
- X OTHER agreement

6. REQUESTOR OF INFORMATION:
A. COMMISSIONER
B. DEPARTMENT Parks and Recreation
C. DIVISION
BY: John Yarbrough, Director

7. BACKGROUND:

Six Mile Cypress Slough is jointly owned by Lee County and the South Florida water Management District. Lee County Parks and Recreation manages the Preserve. The management plan is updated every five years. The revised management plan includes an in-depth description of natural resources, management practices and implementation of future projects. The action plan time line (pg. 86) summarizes management actions to be pursued in the next 5 years. This plan was approved by the SFWMD Governing Board on December 12, 2002.

8. MANAGEMENT RECOMMENDATIONS:

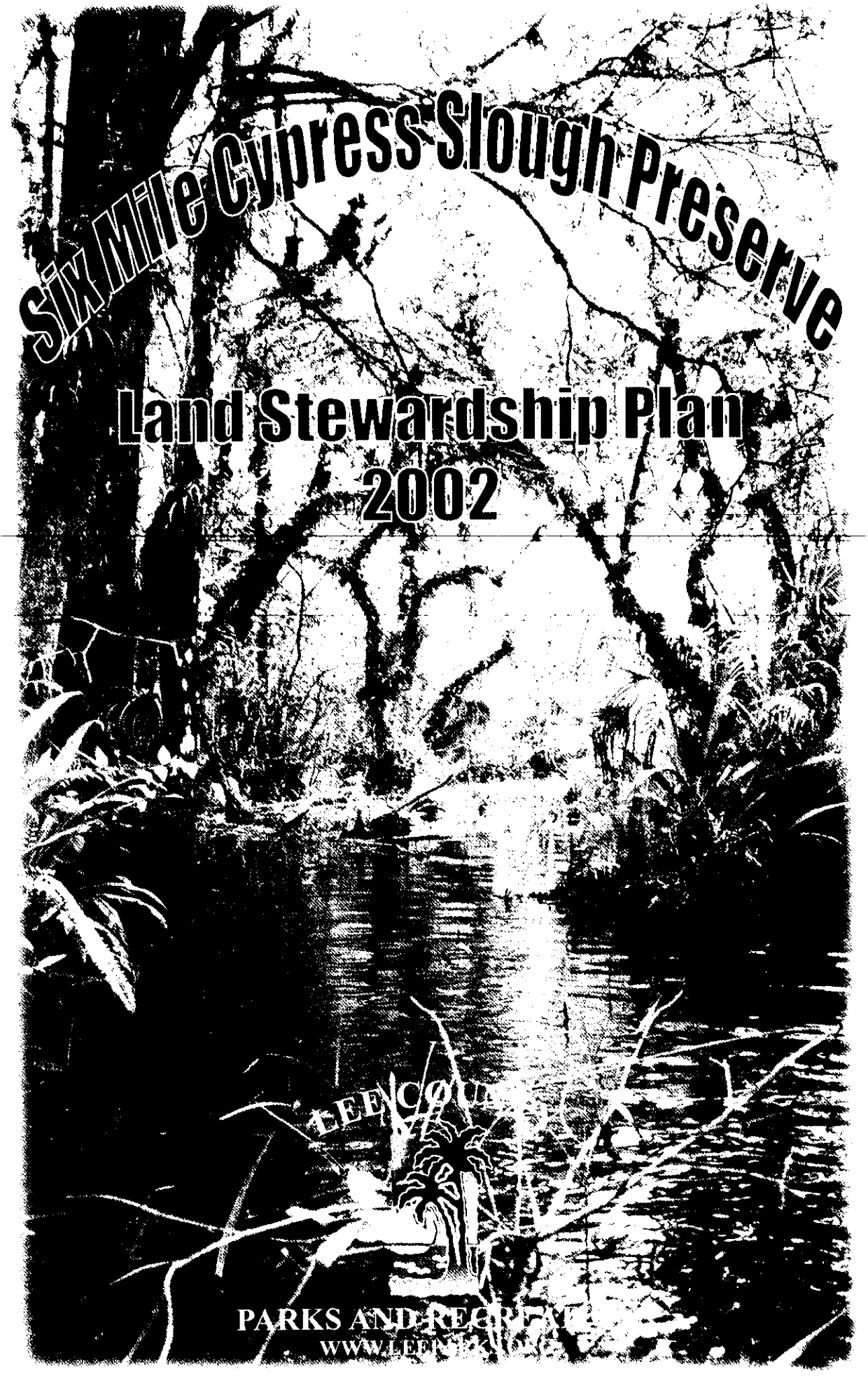
9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA	OM	Risk	GC	
2-6-03				2/7/03	2/11/03	2/11/03	2/11/03	2-11-03	2-11-03

10. COMMISSION ACTION:
- APPROVED
- DENIED
- DEFERRED
- OTHER

Rec. by CoAtty
Date: 2/7/03
Time: 11:19 am
Forwarded To: 2/11/03

RECEIVED BY COUNTY ADMIN.
2-7-03
12:00
COUNTY ADMIN. FORWARDED TO:
2-11-03
3pm


Six Mile Cypress Slough Preserve
Land Stewardship Plan
2002
PARKS AND REC

Six Mile Cypress Slough Preserve
Land Stewardship Plan
September 2002

Lee County
Board of Commissioners

Lee County Department of
Parks and Recreation

Approved by:

SFWMD Approved-SFWMD-12/12/02 _____

BOCC _____

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Vision Statement

It is our mission to conserve, protect and restore Six Mile Cypress Slough Preserve. It is essential to restore the hydrologic regime to as close to the natural state as possible. Through land stewardship activities, public education and citizen involvement, this county Preserve will serve as an ecological and educational benefit to our society. The wealth of natural resources within this preserve is critical to sustaining the ever diminishing ecosystems of southwest Florida.

"The question is not whether we must manage nature, but rather how shall we manage it – by accident, haphazardly, or with the calculated goal of its survival forever?" Daniels Janzen (from his acceptance speech in 1997 for the Kyoto Prize in Basic Science)

I. EXECUTIVE SUMMARY

The Six Mile Cypress Slough Preserve (SMCSP) is Lee County's oldest preserve. Its protection came about after a 1976 public referendum where the Lee County voters overwhelmingly agreed to tax themselves an additional amount to purchase and protect this diverse, yet sensitive natural area. The Preserve is approximately 2,200 acres located in central Lee County (see Figures 1 and 2).

The purposes for acquisition include allowing the important hydrological function to continue, protection of wildlife and their habitat, and providing appropriate, resource based public use. The South Florida Water Management District is an important partner in assisting with acquisition, which continues through their Save Our Rivers Program and Lee County's Conservation 2020 Program.

Long term impacts on the hydrology of the slough have altered water quantity, timing of flow, quality and hydroperiod. Alterations of the drainage patterns, invasion of exotic pest plants and animals, suppression of wildfires in habitats with natural fire regimes and the ongoing pressure of development within the watershed present major challenges to restoring the SMCSP.

The Interpretive Facility, including a 1.2 mile boardwalk, allows residents of Lee County and visitors to experience a portion of the preserve through regularly scheduled programs, or on their own.

The goal of this land stewardship plan is to identify Preserve resources, develop ways to protect those resources and implement restoration activities to restore SMCSP to a viable, functioning, natural system. This goal will be met through increased resource management activities, restoration projects, ongoing hydrology and water quality data collection, educational outreach and volunteer support.

II. INTRODUCTION

This land stewardship plan was prepared to implement the Six Mile Cypress Slough Preserve Management Plan (Lee County, 1986) and to satisfy the management agreement (Appendix 1) between Lee County and South Florida Water Management District (SFWMD)

dated January 5, 1988. Lee County manages the portion of the Preserve acquired through the Save Our Rivers Program, within the Six Mile Cypress Slough Preserve (SMCSP). The Save our Rivers Program requires that the Preserve be managed as a unit. This plan does not apply to areas outside SMCSP boundaries. However, recommendations are presented for purchase of additional land contiguous to the present acquisition area. For a detailed description of the SMCSP and its watershed, see the Six Mile Cypress Slough Preserve Management Plan (Lee County, 1986).

III. SITE DESCRIPTION AND LOCATION

The slough is approximately 9.2 miles long, averages 1,500 feet in width and occupies approximately 2,200 acres in central Lee County (see Figure 3). It extends in a northeast to southwest direction with a land slope of less than one foot per mile. Elevation at its north end at SR 82 is approximately 18 feet National Geodetic Vertical Datum (NGVD) and at its south end about 12 feet NGVD. Interestingly, its orientation parallels that of the Caloosahatchee River. The depth of the slough between the edge of the wetlands fringe and the slough bottom averages 2-3 feet. A number of depressional ponds occur throughout the strand with the deeper depressions having the greatest hydroperiod, at times holding water throughout the year. There are also narrow, shallow channels that cut into the broader slough bottom creating flow ways and wildlife passages.

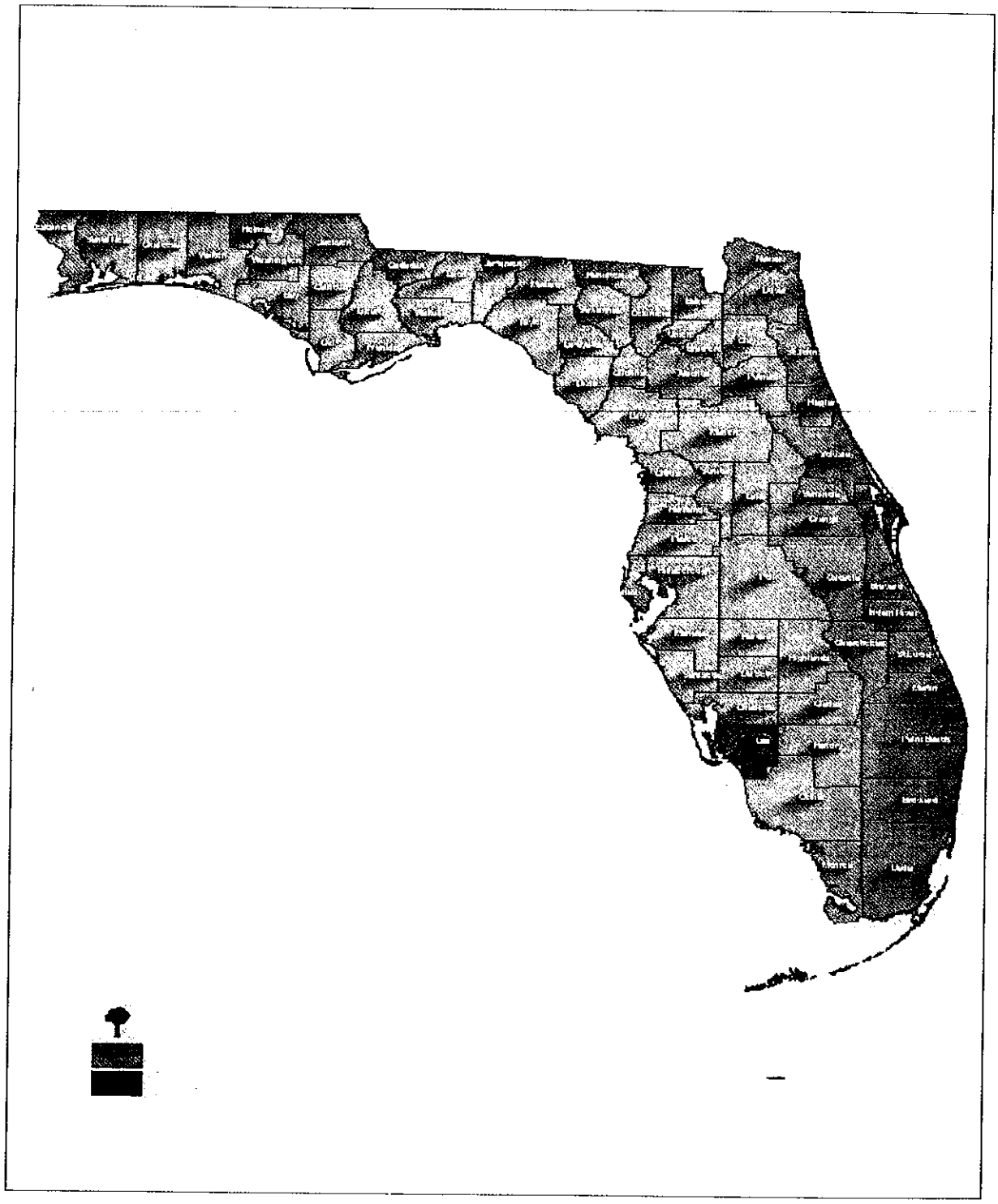
Slough headwaters originate in a series of wetlands throughout the flat agricultural lands north of State Road 82 and Buckingham Road. (U.S. Army Corps of Engineers, 1986).
The main area of the slough occurs immediately south of Immokalee Road (SR 82) at its intersection with Buckingham Road. Culverts beneath these roads permit storm water flow from the approximately 2.6 square mile drainage area to the north, although these culverts are partially blocked by sediment and vegetation. This blockage is likely the result of insufficient storm water flow in recent years (U.S. Army Corps of Engineers, 1986).

IV. PHYSICAL RESOURCES

A. Climate

Southwest Florida has a humid, sub-tropical climate due to its maritime location. The southern Florida peninsula projects into the Caribbean Ocean and the Gulf of Mexico, which have climatic and biological influences. Temperate climate influences are exerted as well, with infrequent but significant freezes occurring. Cold fronts regularly push cool sometimes moist weather from the southeast U.S. to southwest Florida. Annual rainfall averages 53.4 inches at Page Field – an airport located approximately 2 miles from the preserve (Table 1)
The high maximum temperature for Ft. Myers was 103°F in June 1981. The low minimum temperature was 28°F in January 1966 and 1981.

Figure 1 : SMSCP location within Florida



80 0 80 160 Miles

Figure 2 : SMSCP location within Lee County

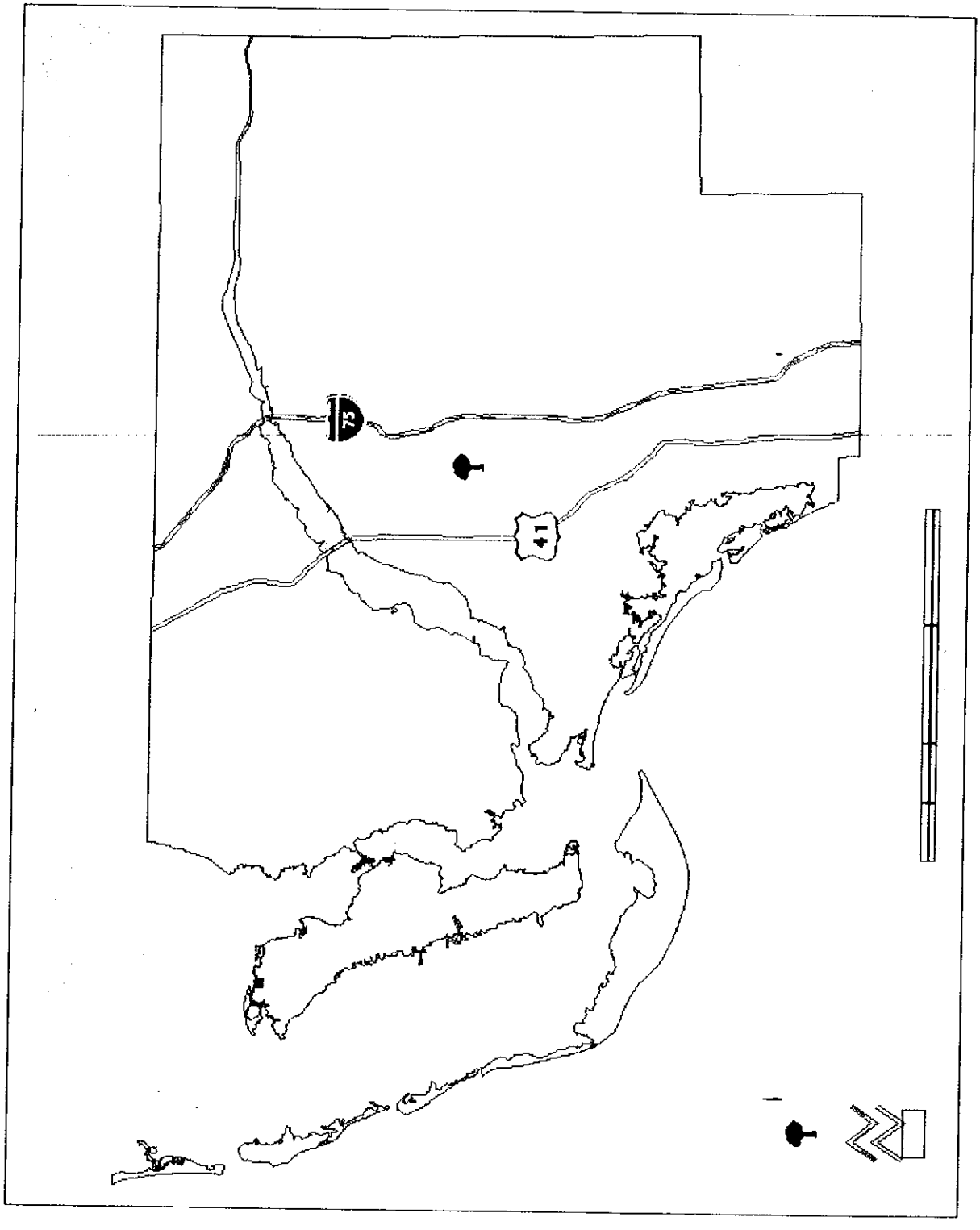
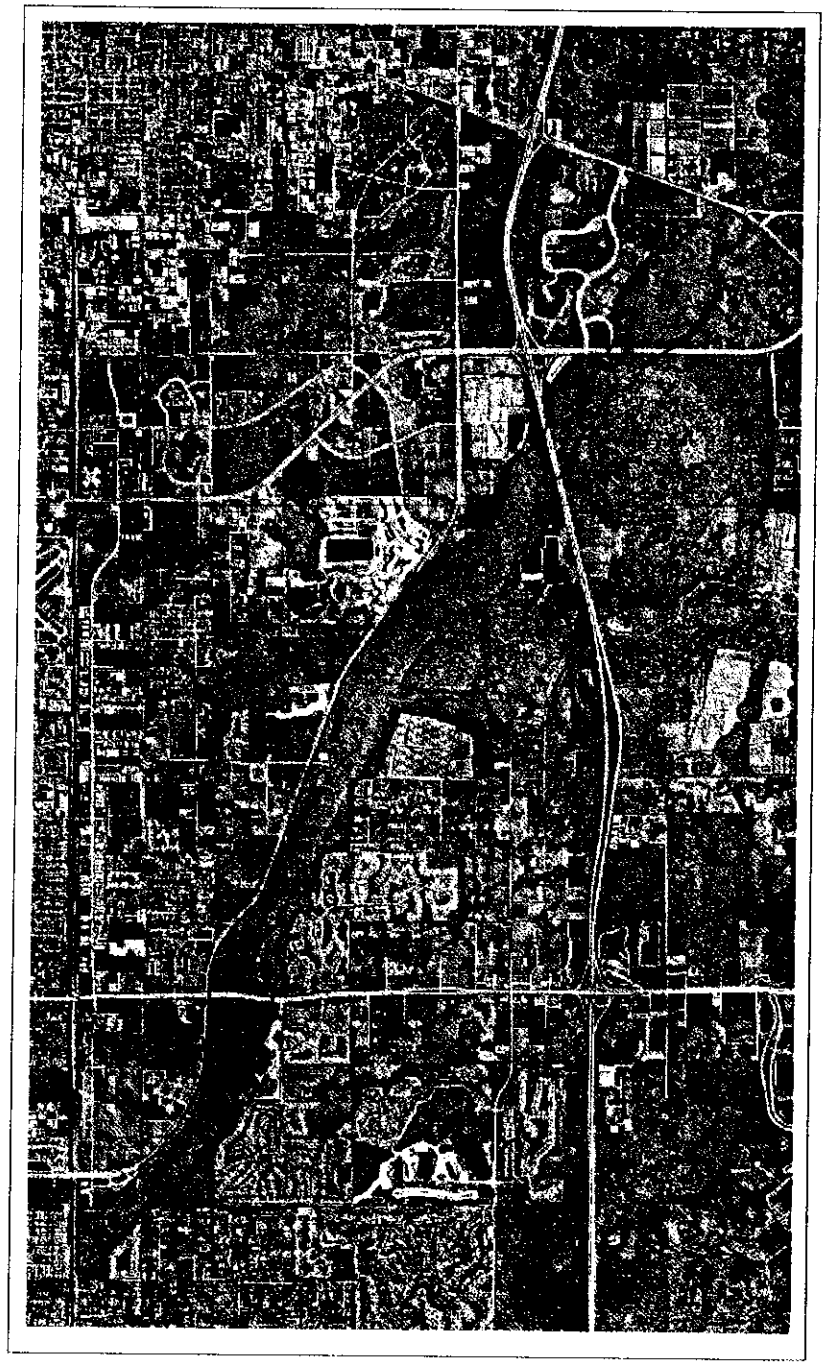


Figure 3 : SMSCP 1998 Aerial Photograph



Six Mile
Cypress Slough
Preserve boundary

1 0 1 2 Miles

N
W E
S

Table 1. Climate Information for the Ft. Myers area (from Page Field Data) Including the Six Mile Cypress Slough Preserve.

Climatologically Normals (1961-90)
FORT_MYERS_FAA/AP, FL (083186) Percent Missing: 0.30

Dates	MinTemp (F)	MaxTemp (F)	AvgTemp (F)	AvgPrcp (in.)
January	53.2	74.4	63.8	1.84
February	54.1	75.5	64.8	2.23
March	58.7	80.0	69.3	3.07
April	62.0	84.6	73.3	1.06
May	67.6	88.8	78.2	3.87
June	72.9	90.6	81.8	9.52
July	74.6	91.4	83.0	8.26
August	74.8	91.4	83.1	9.66
September	74.2	90.0	82.1	7.82
October	68.5	86.0	77.2	2.94
November	60.9	80.7	70.8	1.57
December	55.0	76.0	65.5	1.58

B. Topography

Elevation at the north end of the Slough is approximately 20 feet NGVD and at the south end approximately 12 feet NGVD). (see Figure 4). The dip in elevation is less than one foot per mile. The depth of the slough between the elevation of the wetlands fringe and the slough bottom averages 2-3 feet.

C. Hydrogeology

1. Soils and Hydrogeology

The soil mantle in the Six Mile Cypress consists predominantly of the Pompano fine sand-depressional, Isles fine sand-depressional, and Copeland sandy loam-depressional map units according to the Soil Survey of Lee County (USDA, 1984). (see Figure 5). These soils occur in nearly level layers varying in thickness from 6 to 40 inches or more (Howard et. al., 1977) and are highly permeable. Less permeable layers containing silt and clay occur typically in surface depressions at varying depths below the soils. These layers reflect percolation of materials to predominant water table elevations.

Surface Holocene Age and underlying Pleistocene Age sediments are underlain by marine sediments deposited within shallow seas or along shorelines when the Pamlico Sea level was 20 to 30 feet above the present sea level. The surface materials have been reworked by weathering and erosion under current sea level and climate conditions (U.S. Army Corps of Engineers, 1986).

Limestone upon which the soil mantle rests is sandy, fossiliferous and locally porous. This type of the Pliocene Age Tamiami Formation is found at an approximate elevation of 20 feet above sea level in the vicinity of Lehigh Acres. Lime rock apparently of the same formation occurs near the south end of the slough at an elevation of about 2 feet above sea level. This formation slopes southwesterly about 1.5 feet per mile within the watershed of the slough with the Tamiami Formation thickening in its southern part. (U.S. Army Corps of Engineers, 1986).

2. Surficial Aquifer

The Slough receives ground water through discharge from the surficial (or water table) aquifer. The water table aquifer, consisting of sand, sandstone, and limestone, ranges in thickness from 40-45, feet and is underlain by confining beds of clay. The surficial aquifer is primarily recharged by rainfall, although uncapped or corroded metal cased artesian wells contribute relatively small volumes of water. Seepage received at the north end of the slough flows downstream as surface water only when the water table of adjacent lands remains above the bottom elevation of the slough (Ibid). Development related land drainage, even when resulting in lowered water table of as little as 2 feet, has been sufficient to significantly reduce the periods when the slough has surface water (Ibid).

The South Florida Water Management District (1982) indicated in their evaluation of surficial aquifers for water supply that the surficial aquifer in the slough watershed has a moderate potential for water supply. This aquifer would have limited use for large municipal needs, but is being utilized mainly for domestic and irrigation wells (COE, 1986).

3. Surface Water Quality

It is important that the quality of surface water in SMCSP be high for maintenance of optimum biological productivity. The original study of water quality in SMCSP was performed by Erwin, (1982). This study analyzed data collected from stations located from Daniels Parkway south to Ten Mile Canal. Parameters of the study included physical-chemical, nutrients, metals and pesticides for the surface waters of SMCSP, the shallow ground water, and for Ten Mile Canal. Since this study reports on data from one year it is difficult to draw any conclusions. This study will be useful as future data is collected and comparisons can be made. Generally, the report indicates that parameters were within acceptable levels.

Water quality has been monitored continuously by the Lee County Environmental Laboratory since 1988 for the following parameters:

pH	Total Kjeldahl nitrogen
Temperature	Ammonia
Turbidity	Nitrate
Conductivity	Nitrite
Chloride	Total nitrogen
Dissolved oxygen	Total Phosphate
Biochemical oxygen demand	Ortho phosphate

Figure 4 : SMSCP Topography

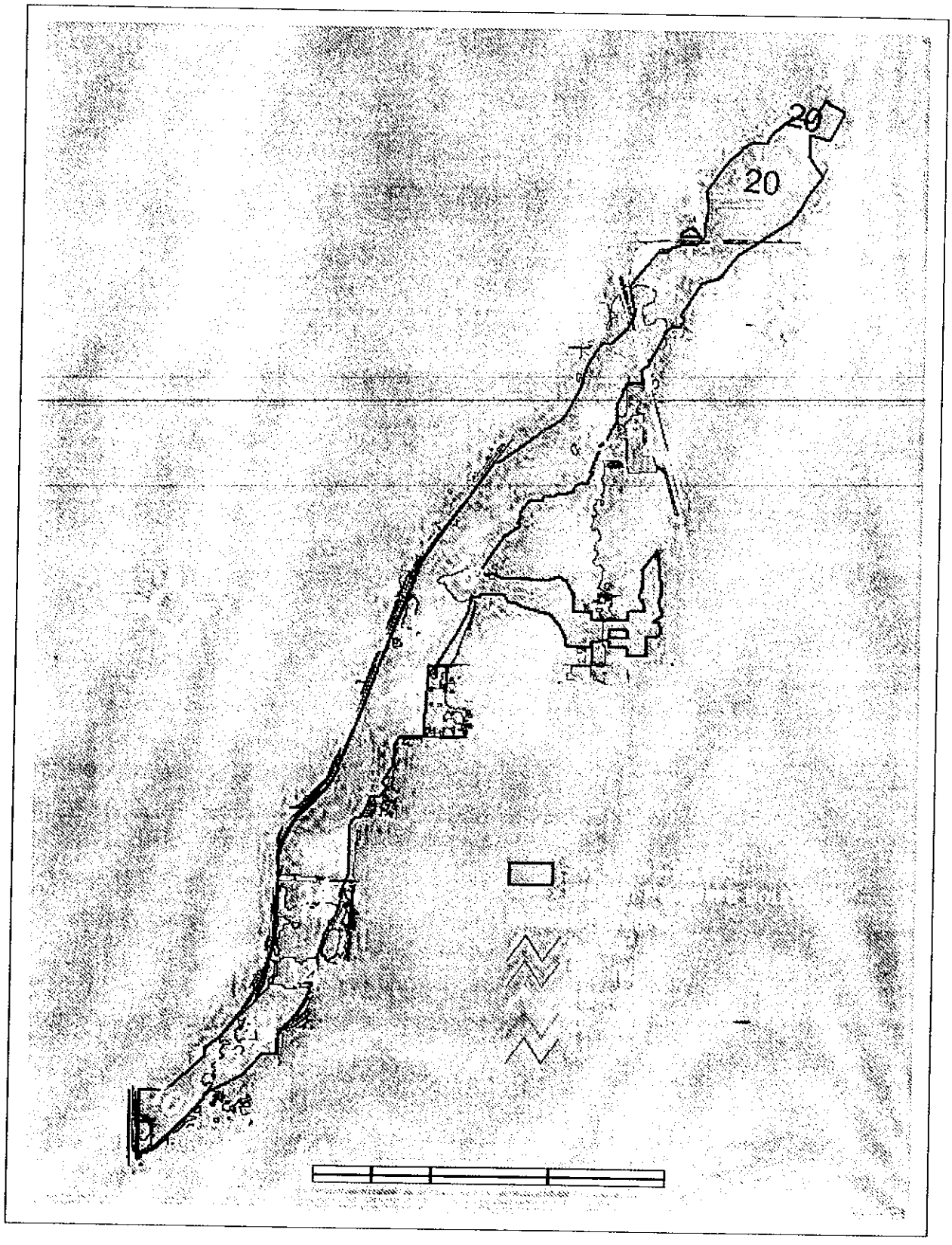
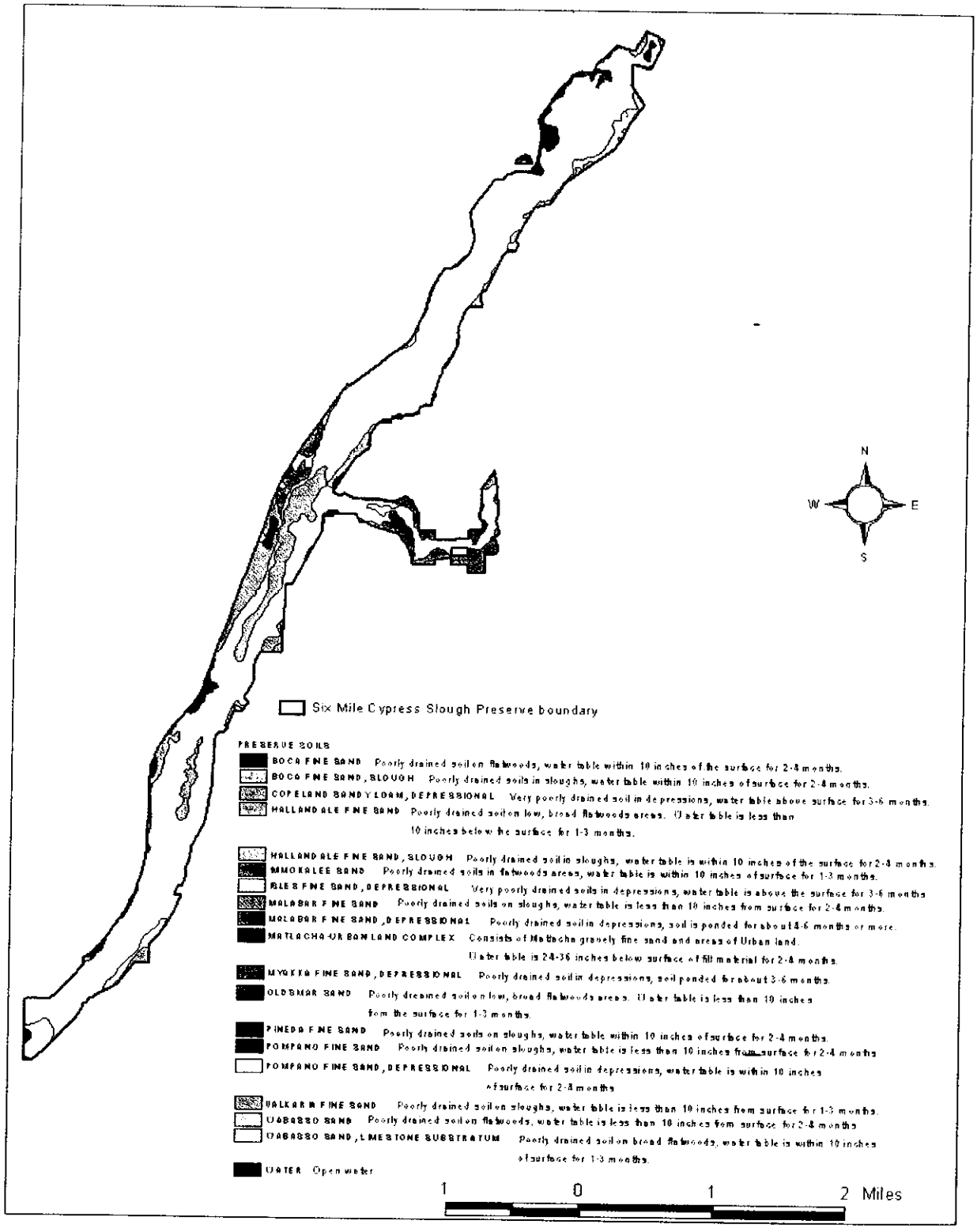


Figure 5 : SMSCP Soils



Pesticides and heavy metals are sampled once a year in July. Samples are taken once a month while there is standing water at the stations (see Figure 6 for locations). The Lee County Environmental Laboratory collects and analyzes the samples. Assistance from SFWMD will be sought to analyze data collected over the last 12 years.

D. Hydrology and Watershed

Pond Cypress, which is the type of cypress occurring within SMCSP, are found in habitats with a hydroperiod of approximately 250 days with maximum water levels of one foot (Duever et al., 1975 in Duever et al., 1986). The best method for finding the accurate hydroperiod for the slough would be a direct comparison to a similar, undisturbed cypress slough. The closest comparison is National Audubon Society's Corkscrew Swamp Sanctuary in Collier County. Bald cypress slough areas within the Corkscrew Swamp Sanctuary have a hydroperiod of approximately 290 days with an average maximum water level of approximately 2 feet (Duever et al., 1975 in Duever et al. 1986). The goal of hydrological restoration shall be to provide an optimum hydroperiod for the continued health and establishment of cypress and associated vegetation types in SMCSP. Water is the most important resource in SMCSP. It is essential that water quantity and quality be protected for the continued viability of SMCSP.

The present hydroperiod in SMCSP is unknown. Hygrogauges were installed in 1989 by SFWMD in seven locations with the Preserve boundary (see Figure 7 for locations). These gauges continually record surface water levels. The elevation of the edge of the historic slough at the south end was approximately 11 to 12 feet according to the USGS quadrangle and the Lee County contour aerials. The elevation of crest of the weirs installed at the confluence of Six Mile Cypress Slough and Ten Mile Canal in 1991 is 11 feet. Historic logging roads, berms, culverts, bridges and weirs also impact the hydroperiod of the slough.

It is critical to establish what the optimum hydroperiod for SMCSP should be, given the above stated goal. The first step shall be to establish the present hydroperiod in SMCSP. This will be done by a hydrological study recommended in Chapter 2 of this plan which will collect new data, examine existing data, use the relationship of water elevation to vegetation communities and compare the findings to hydroperiods established for other cypress communities in South Florida

1. Hydrologic Study

A study to determine the present hydroperiod, flow rates, watershed capacity, and discharge was initiated in early 1989. SFWMD funded this study through the Local Government Assistance Program. Wells and equipment to measure hydroperiod, determine flow rates and rainfall were installed in 1989. New hydrogauges were installed in 2002. A computer modeling study will be performed to determine watershed capacity and discharge rate. Map 3 gives the locations where SFWMD has installed stations.

2. Hydrological Improvements

SMCSP is approximately 9 miles long, but only one-third to one-half mile wide. The elevation from the edge of the interior ponds to the edge of the slough varies from 0.5 to 2 feet in a distance of approximately one-quarter mile. The change in elevation along the entire length of the slough is approximately one foot per mile. (Lee County Contour aerials). The portion of the slough northeast of I-75 is relatively flat in cross section while the area southwest has more of a concave cross section. Consideration of these elevation factors will be necessary for determination of the necessity of additional control structures in SMCSP.

Prior to development for agriculture, water reached the slough by overland or "sheet" flow from its watershed. (ASCS, 1944 aerials). This sheet flow was subsequently interrupted by roads and/or agricultural ditch/dike drainage systems and channeled directly into the slough. These drainage systems conveyed water to the slough more rapidly than formerly occurred via sheet flow, altering the impact on hydroperiod. Urbanization and increased impervious surface in the watershed have exacerbated this impact, which has been occurring for approximately 50 years.

SFWMD controls discharge from developments in the SMCSP watershed to 37 cubic feet per second, per square mile. Even with these limitations, water will continue to be conveyed to the slough at a quicker rate than desired for an optimum hydroperiod. One way to counteract this watershed impact is to increase the time water resides in the slough through the use of control structures, such as weirs.

3. Control Structures

Daniels Parkway

Control structures in SMCSP on the north side of Daniels Parkway have been operational since 1980. The crest elevation for the weir is 15 feet National Geodetic Vertical Datum (NGVD.) It is the same elevation as the edge of the wetlands in SMCSP in the area north of Daniels Parkway (Lee County Contour aerials). According to the contour aerials, these structures should pool water approximately 2 miles to the north to an area north of Penzance Road.

Ten-Mile Canal

Permanent control structures similar to the ones at Daniels Parkway were installed at the confluence of SMCSP with Ten Mile Canal in 1991. The Lee County Division of Transportation and Engineering (DOT) commissioned Johnson Engineering, Inc. to perform a study of the Six Mile Cypress Briarcliff Basin in April, 1987. This study was completed in January, 1988.

Figure 6 : SMCSP Water Quality Sampling Stations

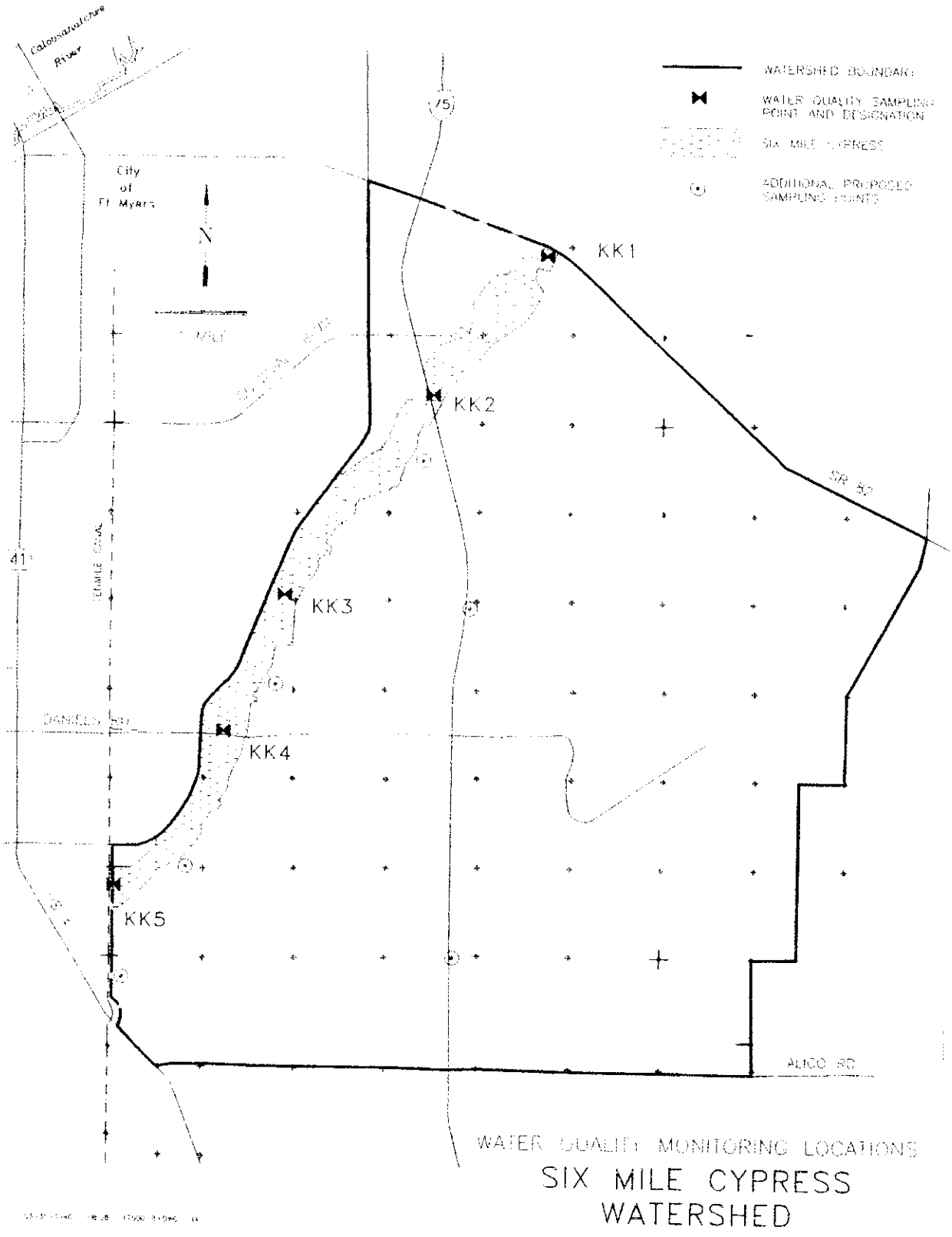
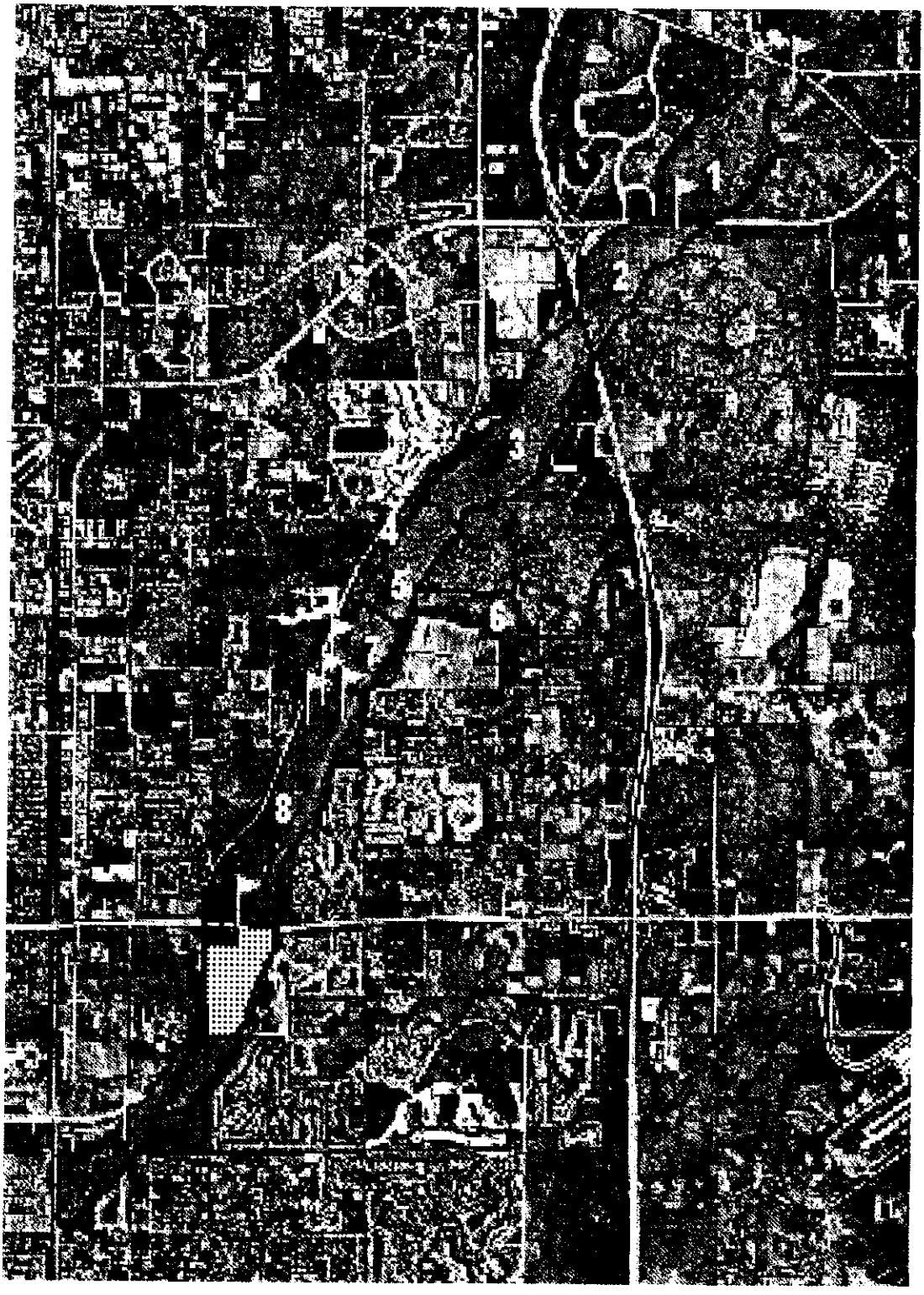


Figure 7 : SMCSP Hydroguage Location



4. Study Recommendations

1.) Commence design of replacement structures for the 2 temporary structures located at the confluence of Six Mile Cypress with Ten Mile Canal. These structures should have a total combined length of 210 feet and be at a crest elevation of 11. In conjunction with these structures, it is recommended that a small connecting channel be constructed parallel to the railroad tracks. The reason for this connection would be to better utilize the capacity of these two structures. The work includes the removal of the cross dike in Six Mile Cypress which is approximately 3,000 feet upstream from the weir sites.

2.) Construct a dike along the southerly acquisition line from the CSX Railroad bank to the intersection of the acquisition line in the FP&L easement which also is approximately at the intersection of the existing Briarcliff dike in the north side in the FP&L easement. Also, this dike should be improved along the north side of Briarcliff, east to the southwest corner of Eagle Ridge. Design of this dike would require additional topographic work to make an accurate determination of the exact size of the dike.

3.) Expedite plan preparation and construction of the 3 primary drainage ways outlined in this report. The design should provide enhancements to the present Briarcliff water management system. This work could be paid for through an MSBU since the benefits of this system would not be realized outside of the Briarcliff area. These structures were completed in 1991. Map 1 shows the location for these weirs and the berm. Construction of the drainage ways has not been done. There have been some improvements to drainage along Sand Pebble Lane, north of Briarcliff Road, as part of a road MSBU in 1997.

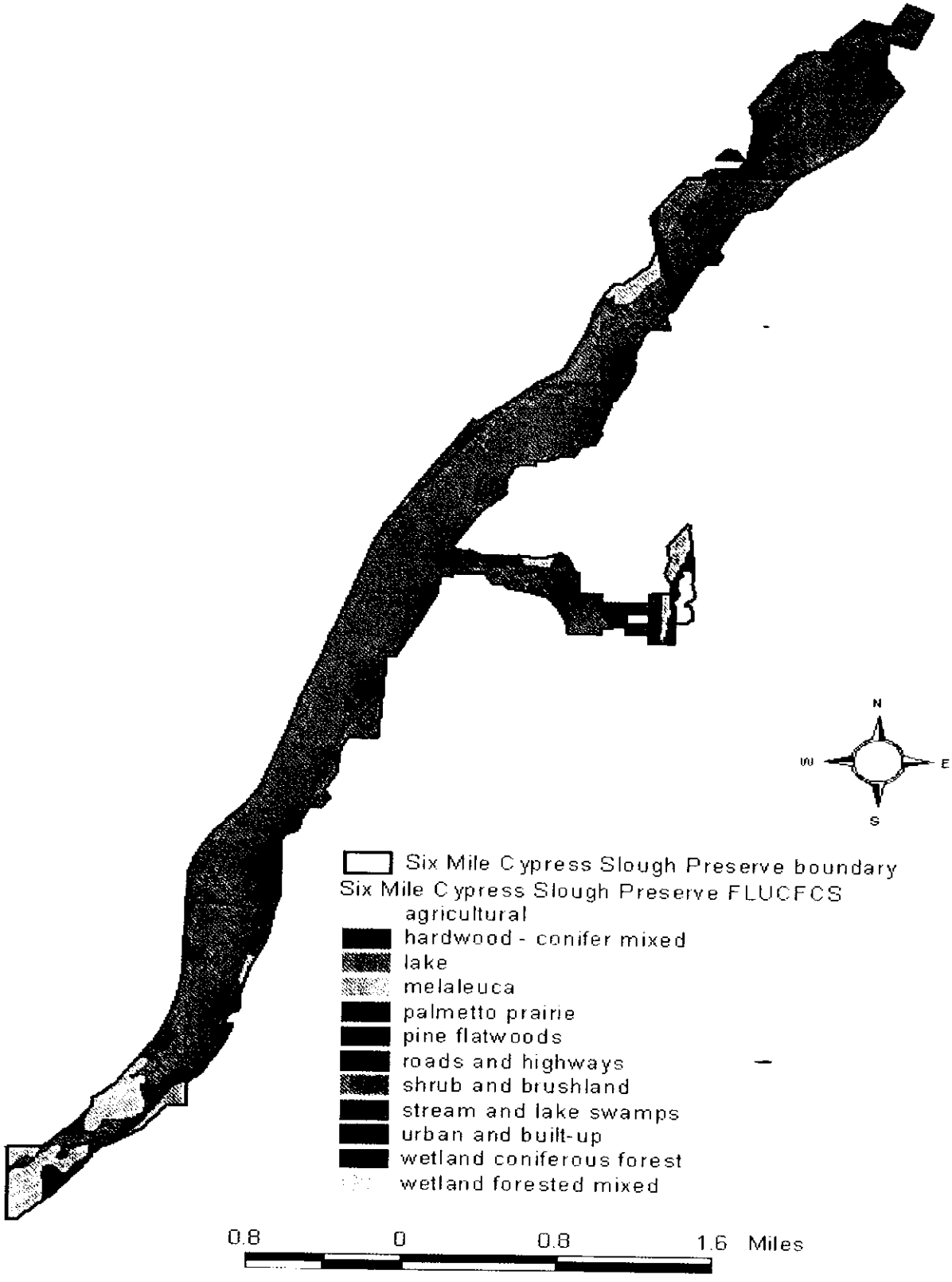
V. BIOLOGICAL RESOURCES

A. Ecosystem Function

The Cypress Slough ecosystem is comprised of a variety of smaller, well defined but interrelated plant communities. These communities provide a diversity of physical and biological habitats. During the summer the feathery pond cypress foliage restricts the amount of high intensity sunlight that reaches the evergreen fern dominated ground cover. In winter the less intense sunlight reaches this area basically unblocked. Thus, the ferns and evergreen plants photosynthesize throughout the year, while the cypress photosynthesize from approximately April through October and are dormant for the remainder of the year. The slough's temperature extremes are moderated by canopy shading and the presence of water.

Some of the ponds hold water through the dry season. They act as reservoirs for aquatic organisms which disperse into the slough during the rainy season. Ponds that dry out become lush carpets of grasses, sedges and forbs. Flow ways between the ponds function as conveyances for water in the rainy reason and as terrestrial wildlife thoroughfares in the dry season.

Figure 8 : SMCSP FLUCS Map



B. Natural Communities

The Preserve contains a wide diversity of Natural communities related to a Cypress slough. Figure 8 gives a general representation of vegetation associations using the Florida Land Use Cover and Forms Classification System (FLUCFCS). Appendix II contains a preliminary list of vascular plants found within the Preserve. Following are descriptions of the most common natural communities and vegetation found within the Preserve.

1. Cypress Swamp

The cypress forest community dominates the slough with the largest pond cypress trees occurring along the edge of the interior ponds. The monotypic stands of pond cypress in the northern portion of the slough become mixed with hardwoods in the central portion. Melaleuca becomes increasingly dominant as the slough progresses south.

Epiphytes, including ferns and orchids, are attached to the trunks of living trees and also to stumps and tree tops on the ground as a result of past logging activities. Areas where epiphytes are dense provide a dramatic visual image due to the diversity of color, shape and texture that they offer. The pond cypress trees occur in fairly dense stands throughout the forest with height and diameter gradually decreasing towards the edge of the slough. Slash pines become more frequent as the transitional zone between the cypress forest and mesic pine flatwoods is approached. The canopy in the cypress forest is closed with a limited hardwood or shrub under story. Swamp fern forms a course, dense, waist-high groundcover throughout the cypress forest. Table 2 is a partial plant list, by level of species occurring (common and scientific names are from Wunderlin 1998) for the cypress swamps within the Preserve.

Table 2. Cypress Swamp plant list

CANOPY	
Pond Cypress	*Taxodium ascendens*
Slash Pine	*Pinus elliottii*
Elm	*Ulmus americana*
Pop Ash	*Fraxinus caroliniana*
Red Maple	*Acer rubrum*
Laurel Oak	*Quercus laurifolia*
SUB-CANOPY	
Wax Myrtle	*Myrica cerifera*
Dahoon holly	*Ilex cassine*
Strangler fig	*Ficus aurea*
Pond apple	*Annona glabra*
Stiff-leaved cornel	*Cornus foemina*
Cabbage palm	*Sabal palmetto*
Button bush	*Cephalanthus occidentalis*
Brazilian pepper	*Schinus terebinthifolius*
Myrsine	*Myrsine quianensis*
Red bay	*Persea borbonia*
Greenbriar	*Smilax spp.*

Surinam cherry	*Eugenia uniflora*
Buckthorn	*Bumelia reclinata*
Groundsel tree	*Baccharis halimifolia*
Primrose willow	*Ludwigia peruviana*
EPIPHYTES (on tree trunks, stumps and logs)	
Butterfly orchid	*Encyclia tampensis*
Shell Orchid	*Encyclia cochleata*
Dingy epidendrum	*Epidendrum anceps*
Rigid epidendrum	*Epidendrum rigidum*
Twisted air plant	*Tillandsia flexuosa*
Stiff-leaved wild pine	*Tillandsia fasciculata*
Giant wild pine	*Tillandsia utriculata*
Spanish moss	*Tillandsia usneiodes*
Ball moss	*Tillandsia recurvata*
Needle air plant	*Tillandsia setacea*
Strap fern	*Campyloneuron phyllitidis*
Boston fern	*Nephrolepis exaltata*
Shoestring fern	*Vittaria lineata*
Whisk fern	*Psilotum nudum*
Golden polypody	*Phlebodium aureum*

GROUNDCOVER	
Swamp fern	*Blechnum serrulatum*
Marsh fern	*Thelypteris palustris*
Royal fern	*Osmunda regalis*
Water horehound	*Lycopus rubellus*
Pickerelweed	*Pontederia lanceolata*
Leather fern	*Acrostichum danaeifolium*
Marsh purslane	*Ludwigia palustris*
Mermaid weed	*Proserpinaca palustris*
False nettle	*Boehmeria cylindrica*
Saw grass	*Cladium jamaicensis*
Sorrel	*Oxalis sp.*
Climbing hempweed	*Mikania scandens*
Greenbrier	*Smilax spp.*
Water hyssop	*Bacopa monnieri*
Lemon bacopa	*Bacopa caroliniana*
Smartweed	*Polygonum sp.*
Grassy arrowhead	*Sagittaria graminea*
Arrowhead	*Sagittaria latifolia*
Sedge	*Carex sp.*

2. **Cypress Ponds**

Cypress ponds are found in the interior of the slough and provide the best area for wildlife observation. Dramatic vegetational changes occur on a seasonal basis. When a pond dries out, a variety of annual herbs invade the moist, highly organic substrate. When the ponds are full, aquatics such as mermaidweed, bladderwort, spatterdock, and duckweed occur (Table 3). They are classified separately from flag ponds, which are discussed next, due to the monotypic appearance of flag ponds. However, each of the ponds are different in size, depth, dominant vegetation and size of surrounding trees.

Table 3. Cypress Pond plant list

CANOPY (occur along pond margin)	
Pond cypress	*Taxodium ascendens*
Pop ash	*Fraxinus caroliniana*
Florida elm	*Ulmus americana*
Laurel oak	*Quercus laurifolia*
Red maple	*Acer Rubrum*
SUB-CANOPY	
Cattail	*Typha latifolia*
Carolina willow	*Salix caroliniana*
Primrose willow	*Ludwigia peruviana*
Boston fern	*Nephrolepis exaltata*
EPIPHYTES	
Resurrection fern	*Polypodium polypodioides*
Mistletoe	*Phoradendron serotinum*
Stiff-leaved wild pine	*Tillandsia fasciculata*
Giant wild pine	*Tillandsia utriculata*
Needle air plant	*Tillandsia setacea*
GROUND COVER (or floating)	
Bladderwort	*Utricularia foliosa*
Water hyacinth	*Eichornia crassipes*
Duckweed	*Lemna minor*
Marsh purslane	*Ludwigia palustris*
Mermaid weed	*Properpinaca palustris*
Pickerel weed	*Pontederia lanceolata*
Spatterdock	*Nuphar luteum*
Grassy arrowhead	*Sagittaria graminea*
Sedge	*Cyperus sp*
Fanwort	*Cabomba caroliniana*

3. Flag Pond

These ponds are of varying size from less than ¼ acre to several acres and are completely vegetated by fire flag or have open areas seasonally full of water, often in the central portion. See Table 4 for the plant list.

Table 4. Flag Pond plant list

Fire flag	*Thalia geniculata*
Cattail	*Typha latifolia*

4. Pine Flatwoods

Pine flatwoods fringing the central slough are mesic with scattered high, drier areas. These areas are important for terrestrial wildlife when the slough is flowing, as they offer fairly dry travel routes (Table 5).

Table 5 . Pine Flatwood plant list

CANOPY	
Slash pine	*Pinus elliottii*
Pond cypress	*Taxodium ascendens*
Melaleuca	*Melaleuca quinquenervia*
Live oak	*Quercus virginiana*
SUB-CANOPY	
Wax myrtle	*Myrica cerifera*
Buckthorn	*Bumelia reclinata*
Saw palmetto	*Serenoa repens*
Brazilian pepper	*Schinus terebinthifolius*
Melaleuca	*Melaleuca quinquenervia*
EPIPHYTES	
Stiff-leaved wild pine	*Utricularia fasciculata*
Ballmoss	*Utricularia recurvata*
GROUND COVER	
Wire grass	*Aristida stricta*
Finger grass	*Chloris glauca*
Panic grass	*Panicum sp.*
Sand cordgrass	*Spartina bakeri*
Fleabane	*Pluchea rosea*
Dog fennel	*Eupatorium capillifolium*
Bracken fern	*Pteridium aquilinum*

5. Prairie

The prairies are characterized as open, treeless, grassy areas, represented best by the area about 2 miles south of Colonial Boulevard on the east side of Six Mile Parkway (Table 6).

Table 6. Prairie plant list

CANOPY (Scattered, clumped and low)	
Pond cypress	*Taxodium ascendens*
Pop ash	*Fraxinus caroliniana*
Brazilian pepper	*Schinus terebinthifolius*
Wax myrtle	*Myrica cerifera*
GROUNDCOVER (Variable seasonally)	
Marsh purslane	*Ludwigia palustris*
Panic grass	*Panicum sp.*
Iris	*Iris hexagona*
Fogfruit	*Lippia nodiflora*
Rush	*Juncus sp.*
Fleabane	*Pluchea rosea*
Musky mint	*Hyptis alata*
Centella	*Centella asiatica*
Hydrocotyle	*Hydrocotyle umbellata*
Sand cordgrass	*Spartina bakerii*
Ladies tresses	*Spiranthes sp.*
Sedge	*Carex sp.*
Primrose willow	*Ludwigia peruviana*
Aster	*Aster sp.*

6. Hardwood Transitional

This hardwood community predominantly occurs one mile north of Penzance Road to Daniels Parkway. It also occurs south of Daniels Parkway to Ten Mile Cypress Canal.

This community reflects encroachment of hardwoods into the cypress swamp community due to ecological success and/or hydrological alteration resulting from drainage activities, land development and exclusion of the natural fire regime. Table 7 has a list of vegetation present in hardwood transitional areas.

Table 7. Hardwood Transitional plant list

CANOPY	
Florida elm	*Ulmus americana*
Laurel oak	*Quercus laurifolia*
Pop ash	*Fraxinus caroliniana*
Cabbage palm	*Sabal palmetto*
SUB CANOPY	
Red bay	*Persea borbonia*
Brazilian pepper	*Schinus terebinthifolius*
Wax myrtle	*Myrica cerifera*
EPIPHYTES	
Ghost orchid	*Polyrrhiza lindenii*
Resurrection fern	*Polypodium polypodioides*
Golden polypody	*Phlebodium aureum*
GROUNDCOVER	
Swamp fern	*Blechnum serrulatum*
Marsh fern	*Thelypteris palustris*
Royal fern	*Osmunda regalis*
Boston fern	*Nephrolepis exaltata*
Strap fern	*Campyloneuron phyllitidis*
Marsh purslane	*Ludwigia palustris*

4. Melaleuca

This invasive, exotic monoculture is predominantly represented by the Australian melaleuca tree (*Melaleuca quinquenervia*). Melaleuca invades after hydrologic alteration, disturbed soil and fire. It germinates best on bare soil with maximum light penetration. Once established, it can tolerate flooding by freshwater. It offers very little food, cover or nesting areas for wildlife, and due to its high reproduction capacity, tends to spread rapidly. Sub-canopy and groundcover are often limited or non-existent (Table 8).

Table 8. Melaleuca plant list

CANOPY	
Melaleuca	*Melaleuca quinquenervia*
Pond cypress	*Taxodium distichum*
SUB-CANOPY	
Pop ash	*Fraxinus caroliniana*
Cabbage palm	*Sabal palmetto*
GROUNDCOVER	
Swamp fern	*Blechnum serrulatum*

C. Invasive Plants

Exotic pest plants have occurred in the preserve for nearly 50 years. United States Department of Agriculture Stabilization and Control Service aerial photographs taken in 1953 indicate the presence of melaleuca (*Melaleuca quinquenervia)* in the area south of Daniels Parkway. These photographs and others of later dates indicate that melaleuca initially invaded primarily herbaceous transitional wetlands between pine/palmetto flatwoods and pond cypress strand. The initial invasion of melaleuca into the Preserve was a result of logging, fire, drainage, and the presence of seed-bearing trees nearby.

Table 9 lists the exotic species occurring in SMCSP. Exotic plant control has been underway in the Preserve since 1991. This has been done by the Florida Division of Forestry under contract to Lee County and by private contractors, county staff and volunteers.

Table 9. Exotic Plant Species Occurring within the Six Mile Cypress Slough Preserve

Scientific Name	Common Name	Vegetation Form	*EPPC Status	Site Status
Acacia auriculiformis	Earleaf acacia	tree	Category I	scattered – transitional areas
Alternanthera philoxeroides	Alligator weed	herb	Category II	
Bischofia javanica	Bishop wood	tree	Category I	scattered – transitional areas
Crotalaria pullida var. obovata	Rattlebox	broad-leaved herb		uplands
Cupaniopsis anacardioides	Carrotwood	tree	Category I	transitional to uplands
Cuphea carthagenensis	—	herb		
Cynodon dactylon	Bermuda grass	grass		disturbed areas
Cyperus esculentus	Yellow nutgrass	sedge		disturbed areas
Dactyloctenium aegyptium	Crowfoot grass	grass		
Desmodium triflorum	Beggar's lice	broad-leaved herb		disturbed areas
Eichhornia crassipes	Waterhyacinth	floating aquatic herb	Category I	In many of the ponds
Eleocharis nigrescens	Spikerush	herb (rush)		
Emilia fosbergii	Tasselflower	broad-leaved herb		transitional and disturbed areas
Eragrostis ciliaris	Gophertail lovegrass	grass	Category I	uplands
Eugenia uniflora	Surinam cherry	shrub	Category I	
Ficus microcarpa	Laurel fig	tree (often epiphytic	Category I	scattered – on stumps and logs
Gomphrena serrata	Globe Amaranth	broad-leaved herb	—	disturbed areas
Hemorthria altissimi				
Hymenachne amplexicaulis	West Indian marsh grass	grass	Category I	flow ways and marshy areas
Imperata cylindrica	Cogon grass	grass	Category I	roadsides

Leucaena Leucocephala	Lead tree	tree	Category I	disturbed areas
Lindernia crustacea		broad-leaved herb		
Lygodium microphyllum	Old World climbing fern	viney, climbing vern	Category I	scattered
Melaleuca quinquenervia	Melaleuca	tree	Category I	transitional wetlands
Murdannia nudiflora	—	herb		
Nephrolepis cordifolia	Sword fern	fern	Category I	
Panicum repens	Torpedo grass	grass	Category I	mitigation areas
Paspalum urvillei		grass		
Phyllanthus urinaria		herb		
Pistia stratiotes	Water lettuce	floating aquatic herb	Category I	ponds
Portulaca amilis		herb		
Psidium cattleianum	Strawberry guava	shrubs	Category I	transitional areas
Pteris vittata	Brake fern	fern		
Rhynchelytrum repens		herb sedge		
Sacciolepsis indica				
Schinus terebinthifolius	Brazilian pepper	large shrub	Category I	uplands and transitional wetlands
Senna pendula var. glabrata	Climbing Cassia	viney herb	Category I	Edges of ponds, under cypress
Sida cordifolia		herb		
Solanum tampicense	Wetlands nightshade	sprawling semi-woody herb	Category I	edges of ponds
Solanum viarum	Tropical soda apple	prickly herb	Category I	roadsides
Spermacoce verticillata		herb		
Spirodela punctata	Water flaxseed	floating aquatic herb		ponds
Sporobolus indicus	Dropseed	grass		
Thelypteris dentata	Downy shield fern	grass		
Urena lobata	Caesar weed	broad-leaved	Category II	

Total – 47 exotic species

*From Florida Exotic Pest Plan Council's 2001 List of Non-Native Invasive Species http://www.fleppc.org

The information in Table 9 will be used in conjunction with the Management Unit Action Plan. The treatments will be based on soils, hydrology, plant community and targeting category I and II species. The Land Stewardship Operations Manual specifies the type of herbicide for each species, method and rate of application, time of year and appropriate water level for wetlands in a prescription approach. Control in wetland areas for woody trees and shrubs will be performed when water levels are below the ground surface. It is possible that the prescription may specify different times of year or water levels for different species. For example, it is probably most effective to treat Brazilian pepper when water levels are below the ground surface. Conversely, water hyacinth should be treated during the growing season and in flooded conditions.

Control will be done in an orderly fashion from north to south, when feasible. Control methods will follow those recommended in the publications: Brazilian Pepper Management Plan for Florida (Ferriter, 1997) and Control of Non-native Plants in Natural Areas of Florida (Langeland and Stocker, 1997). The entire slough north of Daniels Parkway will be mapped using 1998 county section aerials and a Global Position System Unit (GPS). The following information will be included on the maps:

- Location and species of exotic plants
- Status of control efforts to date
- Severity of infestation
- GPS coordinates

The portion of the Preserve between Daniels Parkway and Ten Mile Canal presents a different challenge than the rest of the Preserve. The area north (upstream of Daniels Parkway) comprises approximately three-quarters of the Preserve. Exotic plants occur as scattered outliers or cells within native plant communities. In most cases, it is appropriate and cost effective to control the exotic plants occurring in this portion of the Preserve using treatment in place with no removal of exotic plant material.

The area south (downstream) of Daniels Parkway has or had large melaleuca monocultures. Treatment in place is not practical due to the large amount of biomass (standing dead trees) that would be left. Forestry Resources, Inc. (FRI) has harvested over 150 acres of mature melaleuca for use as mulch since 1989. Harvesting is done by heavy equipment used in logging operations, including feller-bunchers and log skids. Whole trees are chipped on site and blown into trailers and hauled away. Permits from the environmental regulatory agencies are required and obtained before any work is performed. A major effort is then necessary to treat stumps, root sprouts and seedlings. It can take 2-3 years to exert control to a maintenance level. The areas cleared are pushed back to primary succession with little or no canopy. Pioneering plants rapidly invade the cleared areas due to lack of competition from existing plants since there are usually very few if any groundcover species growing under the dense canopy of the melaleuca monoculture. Many of these pioneering plants are aggressive and weedy and include cattail, dog fennel, salt bush and climbing hemp weed.

It is recommended that the areas still having melaleuca monocultures not only be cleared but be restored by replanting indigenous native vegetation that can compete with the weedy species. Maintenance and monitoring are essential to successful establishment of plantings. The need to

physically remove monoculture melaleuca stands; the disturbance that results from the removal; the need to replant, and required follow-up maintenance and monitoring provides a major challenge for this portion of the preserve. The majority of the area south of Daniels Parkway to the Ten Mile Canal will be treated and replanted through a mitigation project for the extension of Metro Parkway.

D. Fauna

1. Wildlife Populations

The slough has a variety of habitats for wildlife and also serves as a wildlife corridor by providing a route from the central southwest to the central northeast parts of the county. A diversity of mammals, birds, reptiles and fish occur in the slough, some seasonally, some sporadically, and some as permanent residents.

Species of wildlife observed include white-tailed deer, raccoon, river otter, wild turkey, anhinga, wood duck, wood stork, alligator, and cottonmouth snake. This list will be continually updated for verification of occurrence of expected species, verification of breeding, and determination of habitat occurrence. A field notebook, which is used to record location of sightings, is kept for this purpose.

It will be important to continue monitoring the occurrence of wildlife in SMCSP, as a change in occurrence could serve as an indicator of either negative or positive impacts. Sightings will be transferred from the field notebook to mylar overlays or GPS layers of the SMCSP aerials. This information will be coded to entries in a notebook to enable numbers sighted, date observed, and type of use to be referenced. A computer program will be developed for storage and analyzing of this information.

2. Wildlife Habitat

The priority for wildlife habitat management will be to provide an optimum hydroperiod for a cypress swamp. This will be done by maintenance where the optimum conditions are presently being experienced or by enhancement where they are not. The hydrological study discussed in the Hydrology and Watershed section of this plan will be critical in establishing the optimum hydroperiod for SMCSP.

Elimination of exotic plants, application of prescribed fire, and restoration with native vegetation that provides for the needs of wildlife, will also be beneficial. Nest boxes have been installed for cavity nesting birds such as wood ducks, barrel owls, screech owls and woodpeckers. This effort will be continued with assistance from volunteers, non profit groups and community support projects. They will be monitored by volunteers.

3. Exotic Wildlife

The slough is inhabited by a variety of exotic wildlife, some of which are either impacting the habitat or are competing with native fish and wildlife for habitat (Table 10). The following partial list of exotic fish and wildlife will serve as a start for reviewing the impacts these species have on the Preserve. Management recommendations will be prepared based upon this evaluation.

Table 10. Exotic Wildlife SMCSP

Scientific Name		Common Name
FISH		
Clarias batrachus		Walking catfish
Tilapia mariae		Spotted tilapia
Cichlasoma portalegrensis		Black acara
Astronotus ocellatus		Oscar
Cichla sp.		Cichlid
Hoplosternum littorale		Brown hoplo
AMPHIBIANS		
Osteopilus septentrionalis		Cuban tree frog
REPTILES		
Anolis sagrei		Brown anole
MAMMALS		
Sus scrufa		Feral pig
Dasypus novemcinctus		Nine-banded armadillo

An unknown species of monkey was observed by Division of Forestry personnel in the northern portion of the Preserve in the spring of 1997. It is also possible that feral house cats and coyotes occur in or near the Preserve.

4. Exotic Wildlife Management

Fish

Assistance from the Florida Fish and Wildlife Conservation Commission and other local biologists familiar with exotic fish will be sought to inventory the species present in the Preserve and recommend any management activities for control.

Other Wildlife

A hog-trapping program was instituted in 2000 at several county preserves and parks. Trapping will be started in the preserve in 2002. Trapping efforts were started and will resume during the dry season.

E. Designated Species

All native plants and animals, as well as other natural features, are protected on state owned lands. Some species, however, need additional attention. Many plants and animals in Florida occur in such small numbers that there is concern for their ability to continue to survive within the state. As population growth continues in Florida, the number of these species is likely to increase. For stewardship purposes, "protected species" are those that are listed by the U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, or the Department of Agriculture and Consumer Services as endangered, threatened, rare or of special concern, according to their degree of endangerment. Protected species also include those that are under review by the U.S. Fish and Wildlife Service for inclusion in one of the above categories, and those species that are regulated by the Convention on International Trade on Endangered Species.

The welfare of protected species is an important concern of Lee County. In many cases, these species will benefit most from proper management of the biological communities within which they occur. The county's natural systems stewardship approach simultaneously helps preserve the various natural communities within the unit and the designated species that inhabit those communities. At times, however, additional measures are needed because of the poor condition of some communities, or because of unusual circumstances that aggravate the particular problems of a species. If such circumstances arise, then efforts will be made to evaluate the situation and take corrective action.

Table 11. Listed Plants within SMCSP

Scientific Name	Common Name	Florida Department Agriculture 1
Campyloneuron phyllitidis	Strap fern	T
Encyclia cochleata	Clam Shell orchid	T
Epidendrum rigidum	Rigid epidendrum	E
Polyrrhiza lindenii	Ghost orchid	E
Spiranthes vernalis	Spring ladies tresses	T
Tillandsia balbisiana	Air plant	T
Tillandsia fasciculata var. densispica	Wild pine	E
Harrisella filiformis	Threadroot orchid	T
Polystachya concreta	Pale flowered polystachya	E
Tillandsia utriculata	Giant wild pine	E

T = Threatened E = Endangered

1. Listed Plant Species Management

The following species listed in the publication Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida (FG and FWFC, August 1997) have been observed or are expected to occur in SMCSP (Table 11).
The following plants occur, or are thought to occur in SMCSP and are listed in the publication "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida" (FGFWFC, 1997.) This list will be updated as changes occur in the FGFWFC list, as more information is gained on the status of these species, or additional listed species are found in SMCSP.

Epiphytic orchids and bromeliads are most vulnerable to extinction in SMCSP, due to their attractiveness to collectors and their intolerance to freezing temperatures. These factors have contributed to a decrease in number and extent of some of these epiphytic species in SMCSP. This is especially true of butterfly orchid, ghost orchid, clamshell orchid and rigid epidendrum. Epiphytic orchids may be making a slow comeback, as they were found in small numbers around ponds during fieldwork conducted in1997 and 2002.

Locations where listed plants occur will be recorded on the SMCSP aerial photographs through GIS. Their locations in the field will not be marked to avoid making them conspicuous to collectors. Photographs of listed plants or communities will be dated and coded to locations on aerial maps and linked to GIS data. This information will be used as a management tool to evaluate the populations.

The Institute for Regional Conservation (IRC) conducted a very thorough botanical survey of the Preserve in late 1997 through funding provided by SFWMD. This information was used to establish a plant list fro the Preserve. IRC completed a south Florida study in 2002, the publication of IRC's study, "Rare Plants of South Florida: Their History, Conservation and Restoration" (2002) has a list of critically imperiled plants found in the preserve, recommendations for management of these species and species introduction recommendations. Appendix III has the excerpt from the report for SMCSP.

2. Listed Wildlife Management

Annual evaluation of sightings will be examined to determine use of SMCSP by listed species (Table 12, next page).

Table 12. Listed Wildlife within SMCSP

Scientific Name	Common Name	FGFWFC	USFWS	Occurence
Alligator mississippiensis	American alligator	SSC	T(S/A)	•
Drymarchon corais couperi	Eastern indigo snake	T	T	o
		BIRDS		
Ajaia ajaja	Roseate spoonbill	SSC	—	•
Aramus guarauna	Limpkin	SSC	—	•
Egretta caerulea	Little blue heron	SSC	—	•
Egretta thula	Snowy egret	SSC	—	•
Egretta tricolor	Tricolored heron	SSC	—	•
Eudocimus albus	White ibis	SSC	—	•
Haliaeetus leucocephalus	Bald eagle	T	E	•
Mycteria americana	Wood Stork	E	E	•
		MAMMALS		
Puma concolor corvi	Florida Panther	E	E	•
Ursus americanus floridanus	Florida black bear	T	—	o
Sciurus niger avicennia	Big Cypress fox squirrel	T	—	•

E = Endangered
T = Threatened
T(S/A) = Threatened due to similarity of appearance
SSC = Species of special concern

• = verified
o = expected
—

These listed species are dependent on a productive ecological system (a cypress swamp in this case) for food, cover and nesting sites. It is imperative that SMCSP be managed in a way that will ensure its continued productivity and health. The goal of management shall be to provide an optimum hydroperiod for a cypress slough and to protect the integrity of the native plant communities

3. Management Thresholds for Listed Species

"A biological threshold is a point at which an irreversible change in a population or ecosystem may occur. Managing down to a biological threshold or minimum standard is extremely dangerous, especially when that standard is poorly documented. Therefore, management thresholds need to be identified. Management thresholds are points where management must be changed to avoid an unacceptable risk to some element of biodiversity. Said another way, they are points at which the risk of reaching biological thresholds is unacceptably high" (Noss & Cooperrider, 1994). The following information provides basic information about listed species at CRP with recommended management thresholds.

FLORIDA PANTHER

The Florida panther (*Puma concolor coryi*) is a subspecies of the cougar (*Puma concolor*). The Florida panther became a subspecies due to isolation from other populations of cougar. The U. S. Fish and Wildlife agency has designated the Florida Panther as Endangered. Southwest Florida and the everglades are the main habitat for the Florida Panther.

MANAGEMENT RECOMMENDATIONS

Male Florida panthers have a home range of approximately 310 square miles. Due to increasing development and growing urban interface, the area available for young male Panthers to establish there own home range is diminishing. The Preserve offers a natural corridor for Florida panthers to travel, hunt and use for their home range. It is important to document any sightings and tracking with other agencies of panthers through the Preserve. Specific areas of use by panthers will be maintained with limited public access use where possible.

EXOTIC ANIMAL CONTROL

Feral hogs will to be trapped and removed from the slough where they are identified as a nuisance. Even though feral hogs are consumed by Florida panther, there is other prey for them within the slough such as white tailed deer and raccoons.

MANAGEMENT THRESHOLD

The slough is 9 miles long and approximately 0.5 to1 mile wide with land development adjacent and major through ways bisecting the slough. It is important to maintain the Preserve as a corridor for the Florida panther.

AMERICAN ALLIGATOR

The American alligator (Alligator mississippiensis) occurs in many of the ponds in the Preserve. US Fish and Wildlife designates this species as threatened due to its similarity to the endangered American crocodile (*Crocodylus acutus*). The American alligator ranges from South Carolina, west to Texas and south throughout Florida.

MANAGEMENT RECOMMENDATIONS

Currently there are numerous alligators that live, breed and or feed within the Preserve. Surveying the slough for an accurate population and nesting areas is necessary to protect there habitats. The man source of diet for the American alligator is comprised fish and turtles. Through hydrologic restoration, extending the hydroperiod, the depressional areas within the slough will retain water longer. This will increase the time period fish will be an available food source for the alligators.

MANAGEMENT THRESHOLD

Due to development of adjacent lands and roadways, young alligators will have an increasingly difficult time finding there own territory. Maintaining the slough as a corridor and increasing connections to conservation areas will enable the younger alligators to find their own territory. However, alligators will eat their young if over crowding becomes an issue.

EASTERN INDIGO SNAKE

"The Eastern indigo is the longest North American snake, with a maximum recorded length of 8.6 feet. The coloration is iridescent black, but the throat is typically red, coral or white. The scales of the indigo snake are smooth. It occurs in habitats ranging from mangrove swamps and wet prairies to xeric pinelands and scrub. The species feeds on virtually any vertebrate small enough for it to overpower. Prey includes fish, frogs, toads, lizards, snakes, small turtles, birds and small mammals. Indigo snakes are completely diurnal. They actively search for prey, especially favoring the edge of wetlands where frogs and snakes abound" (Moler, 1992).

MANAGEMENT RECOMMENDATION

Indigo snakes occurring at the preserve will be protected through public education and enforcement of park rules to prevent indigo snakes from being taken or harmed by park visitors. Exotic plant and animal control, prescribed burning, and hydrological restoration are activities that have a positive effect on the indigo snake population at the preserve.

MANAGEMENT THRESHOLD

Population estimates of indigo snakes are very difficult to obtain due to their secretive behavior. Sightings will be recorded by a GPS coordinate. A log will be kept to compare sightings over time, by management unit.

WOOD STORK

"The wood stork is a large, long-legged wading bird with a wingspread of five to five and one-half feet. Wood storks feed primarily in water between 2-15 inches deep where the water is relatively calm and uncluttered by aquatic vegetation (Kahl 1964 Coulten 1989). Almost any shallow wetland depression where fish become concentrated may be good feeding habitat. However, all sites must have sufficiently long annual hydroperiods or adequately strong hydrological connections with more permanent water to produce or make available necessary densities of fish as prey for storks." (Rodgers et al, 1992).

EXOTIC PLANT CONTROL

Control of Brazilian pepper and other exotic vegetation occurring in wetland areas will ensure the habitat is open and accessible to wood storks.

HABITAT ENHANCEMENT

Restoration of the hydrology of wetlands areas at the preserve and continual ongoing exotic plant control efforts will hopefully improve the habitat value for wood storks and other wading birds. Monitoring of the hydroperiod of wetland at the preserve will be necessary to obtain existing conditions. Success of enhancement activities can then be evaluated.

MANAGEMENT THRESHOLD

Wood storks are wide ranging species and their presence or absence from wetlands at the preserve may be a function of relative abundance of fish at other wetlands, it is not possible to determine a management threshold for this species at the preserve. Wetlands at the preserve will be monitored to provide a qualitative account of wood stork use.

SHERMAN'S FOX SQUIRREL

"Sherman's is the largest of the Southeastern fox squirrels. The top of the head is typically black, with nose and ears white. The remainder of the pelage is quite variable falling within one of the basic color morphs: all dark, all tan, dark over tan and tan over dark. The mature, fire maintained longleaf pine – turkey oaks sand hills and flatwoods are the optimum habitat for Sherman's fox squirrels. Moore (1957) considered longleaf pine seeds and turkey oak acorns to be primary foods. Tree cavities occasionally are used for nesting with leaf nests used extensively. These are usually located in large oaks and often contain Spanish moss. Sherman's fox squirrels are diurnal, solitary animals. Adults generally are seen together only during the breeding season" (Humphrey, 1992).

MANAGEMENT RECOMMENDATIONS

Regular burning at intervals recommended by FNAI will be important for maintaining the habitat for fox squirrels. Control of scattered Brazilian pepper and Old World climbing fern in the area where fox squirrels have been sited will be scheduled at regular intervals. Field work to track and record the use of the preserve by fox squirrels will be incorporated into the schedule of on-site staff.

MANAGEMENT THRESHOLD

Maintenance and enhancement of the mature slash pine and live oak hammock habitats is necessary to meet the habitat requirements of the fox squirrel.

F. Biological Diversity

"A common misconception is that biodiversity is equivalent to species diversity -- the more species in an area, the greater its biodiversity." (Noss & Cooperrider, 1994). Biodiversity is defined as "the variety of life and its processes; it includes the variety of living organisms, the genetic differences among them, the communities and ecosystems in which they occur, and the ecological

and evolutionary processes that keep them functioning, yet ever changing and adapting." (Noss & Cooperrider, 1994).

Maintaining, and ever increasing the biodiversity in the preserve is the primary goal of all land stewardship activities that will be implemented through the recommendations of this plan. These activities will include prescribed burning, debris removal, hydrological restoration, water quantity and quality monitoring, exotic plant and animal control and wildlife habitat enhancement.

VI. Cultural Resources

A. Archaeological Resources

According to the Lee County Master Site Plan, there are no records of archeological sites within the Preserve. There has not been a specific study for the Preserve to date.

B. Land Use

There is no evidence of former home sites, ranches or camps within the preserve. The dense vegetation and seasonal flooding would most likely have precluded these types of uses. Anecdotal accounts from residents indicate that the slough was very different before the virgin cypress were logged in the 1950s. The stand density was less with fewer larger trees occupying the strand. The transitional wetlands and pine flatwoods were also more open.

The apparent land uses of the preserve were native range grazing, as evidenced by fence lines that run throughout the preserve, logging as indicated by large stumps, and hunting. Old maps indicate the slough as part of the Lee Wildlife Management Area, that was managed by the Florida Game and Freshwater Fish Commission, which is now known as the Florida Fish & Wildlife Conservation Commission. This management area occupies privately owned land and as land was developed the management area was discontinued.

The preserve is now protected as conservation lands and the only allowable use is nature study and hiking. Hunting and off-road vehicles are not allowed. There probably are still instances of both of these illegal uses occurring.

C. Public Interest

The citizens of Lee County overwhelmingly approved a referendum in 1976 to add 25 cents per thousand dollars taxable value to their property taxes to purchase and protect the slough. Since then, all land within the original acquisition project has either been purchased or protected as indicated on the ownership map excluding the FRI Parcel (see Figure 9). The South Florida Water Management District assisted in the purchase of the preserve through the Save Our Rivers (SOR) Program. A tributary flowing to the slough was added to the acquisition program in 1988 of which a portion has been purchased by SOR as Phase II of the acquisition program and additional

portions are being pursued through the Lee County "Conservation 2020" program. This program was established in a 1996 Referendum when the voters of Lee County approved a countywide conservation land acquisition program.

D. Human Caused Disturbances:

The slough has been affected by a number of disturbances which have altered its hydrology, natural fire regime, topography, and habitat structure and composition.

1. Hydrological Disturbances

The most significant hydrological impact to the slough occurred in the 1920s when the Ten Mile Canal was constructed near its southern, downstream end. The canal cut across the slough at a point where 2 channels, one to Mullock Creek and one to Hendry Creek, diverged. These are both tributaries that flow into northern Estero Bay Aquatic Preserve. The Ten Mile Canal also empties into the same area.

The construction of the canal effectively dropped the control elevation from the approximately 12' NGVD that of the surrounding land to approximately 6'NGVD (that of the elevation of the water in the canal) in a linear distance of less than 300'. As discussed in Section IV A.6. the average drop in elevation of the slough is less than one foot per mile. Thus, the canal "pulled the plug" on the slough and allowed water to quickly flow out of the slough into the canal and reduced the hydroperiod of at least the portion of the slough between the Ten Mile Canal and Daniel's Parkway where weirs were installed in 1991.

Other disturbances affecting hydrology include berms constructed in several areas to contain water in the slough during the rainy season and ditches allowing run-off from adjacent agricultural fields to drain more quickly into the slough.

In order to restore the hydrology of the southern portion of the slough, a compromise was made. Two weirs were constructed upstream of Ten Mile Canal in the slough. A berm was constructed from the railroad grade, which parallels Ten Mile Canal, to northeast of the Florida Power and Light right-of-way to prevent the slough, during peak flood stage, from reflooding its historic floodplain. This floodplain had been developed subsequent to the construction of Ten Mile Canal and could not be reclaimed for economic and social reasons. It included the "Briarcliff" development that is located in the slough's floodplain.

2. Topographic Disturbances

Berms and swales created as part of efforts to drain adjacent lands, or to prevent the water in the slough from flooding adjacent agricultural or residential property, have been constructed in a number of locations in the preserve. Fire breaks plowed by the Florida Division of Forestry (DOF) during fire suppression efforts to contain fires started either by arsonists or natural causes also occur throughout the preserve.

3. Fire Regime Disturbances:

Fire occurred on a landscape scale prior to human alteration of the land by construction of roads, agricultural development, and berms/canals.
The role of fire in maintaining natural systems was poorly understood until the last twenty years or so. Fire suppression was and is a disturbance of the natural regime. It allows unhealthy accumulations of fuel and brush which when fire does occur can result in a catastrophic situation where canopy trees are killed.

4. Roads

The long, narrow shape of the preserve, its north-south orientation, and its wetland character have made it a barrier to east-west transportation corridors. There is evidence of at least three at grade roads crossing the preserve that provided access to areas on both sides of the preserve for activities including hunting, logging, and farming. These roads are no longer used and vegetation has grown in them. There is also evidence of a road south of the Interstate 75 crossing of the preserve that was built on an elevated berm and had several bridges over deeper water areas. Portions of these bridges are still visible.

A railroad grade and several bridges cross the slough near its confluence with Ten Mile Canal. Colonial Boulevard crosses the slough near its north end and has a large bridge with a shelf to accommodate wildlife crossing under the road. Interstate 75 crosses the slough and has box culvert bridges. Penzance Boulevard started out many years ago as a gravel farm road and crossed the preserve near its mid-portion. It became wider and higher as residential development occurred to the east of the slough. The portion crossing the preserve was removed in 1994 as a trade-off for the construction of the Metro Parkway extension which is proposed to cross the preserve east of Ten Mile Canal. This road may be built by 2005.

Daniel's Parkway crosses the preserve at a location abut two-thirds of the way from its north end. The road acts as a berm and there are two fixed crest weirs with adjustable gates on the upstream (north) side of the road.
Florida Power and Light has an easement to cross the preserve about a mile from the southern end of the preserve. This crossing is at natural grade and a gate prevents through traffic.

All these crossings and roads have impacts including providing locations where invasive, exotic pest plants can become established, forming barriers to wildlife travel, serving as points for trash and debris to be thrown and being different (higher or lower elevations) than the surrounding lands.

VII. FACTORS INFLUENCING MANAGEMENT

A. Natural Trends and Disturbances

Natural trends influencing management include ecological succession, variability in timing and amount of precipitation and population cycles of fish and wildlife.
These trends may influence timing of a variety of land stewardship activities including exotic pest plant control and prescribed burning.

The preserve has been or is subject to periodic natural disturbances including hurricanes, lightning-induced fires, flooding, drought, and infrequent freezing temperatures. These disturbances affect the biodiversity of the preserve. ". . . . community diversity within a regional ecosystem is not only a function of topographic or landform diversity, but also a function of natural disturbance cycles. These disturbance cycles may be generated by the activities of animals or by climatic or geological events such as fire, flooding . . . . . In any case, they are unending." (Noss & Cooperrider, 1994). Some of the disturbances in combination can have greater impacts than alone. For example, a fire following a freeze may be more severe due to an increased amount of dry fuel. Freezes can kill epiphytic orchids, many of which are listed species.

Hurricanes can result in catastrophic impacts to a forested area and could blow down, break tops from or weaken the trees in the preserve. Weakened, stressed slash pines are often susceptible to invasion by wood burrowing beetles which can kill a significant number of trees in a localized area quickly. The last major hurricane to pass through Lee County was Hurricane Donna in 1960. If a hurricane impacts the preserve it may be necessary to remove dead or stressed trees to prevent a major secondary loss of tree canopy and structure.

It will be important to document disturbances as they occur to allow them to be used as reference points for future management activities. This will be done using GPS/GIS technology.

B. External Influences

The best way to protect a water body is to protect its watershed. The watershed of the preserve is rapidly urbanizing. This will result in increased run-off that can contain fertilizers, oils and other chemicals that are commonly used in an urban environment. Hopefully retention areas will hold and filter this run-off and allow a pulsed release of water into the slough. Through County resolutions and permit requirements, all development of lands will not exceed 37 cfs. This will help to control water flow into the slough to a more natural state.

C. Legal Obligations

Lee County has a Memorandum of Understanding (Appendix I) with the South Florida Water Management District that identifies Lee County as the manager of the preserve which is primarily owned by Lee County and SFWMD. This MOU has certain obligations, requirements and constraints including establishment of guidelines for resource-based public use and maintaining the

ecological integrity of the preserve.

Lee County has an agreement with the Cross Creek of Fort Myers Community Association that allows Lee County to conduct land stewardship activities within the approximately 41-acre portion of the preserve owned by the association.

The following are legal responsibilities that the county may have.

1. Permitting

Land Stewardship activities may involve obtaining permits from appropriate agencies in order to conduct these activities. Examples include permits from the Florida Division of Forestry for prescribed burning and permits from environmental regulatory agencies for using heavy equipment in wetlands to remove exotic vegetation. Permits will be obtained in all cases where they are required.

2. Other Legal Restraints

No other legal constraints are in place that affect the preserve.

3. Relationship to other Plans

This plan is being revised and amended in its entirety to incorporate information gathered since the first plan, the original land management plan prepared in 1988, and to address issues and opportunities which will enhance the overall viability of the SMCSP. For this revised plan to take effect, this revision shall be approved by the BOCC and the SFWMD Governing Board. It is the intent of both the BOCC and the SFWMD that this plan shall be revised within 5 years of its completion.

D. Management Constraints

The main constraints to management are funding and staffing. Efforts to obtain funding and staffing through grants and other sources will continue. Please see the Action Plan for specifics and timing.

1. Mitigation

Mitigation has been, and will continue to be, an important part of the restoration program of the preserve. The various mitigation areas and programs will be discussed below in detail.

ON SITE MITIGATION

Daniels Parkway Mitigation

Mitigation in the preserve began in the early 1990s due to a need to mitigate for impact to wetlands from the widening of Daniels Parkway and extension of Colonial Boulevard. The mitigation for Daniels Parkway occurred in an area along the east side of Six Mile Cypress Parkway and north of Daniels Parkway. Mitigation consisted of removal of melaleuca monocultures, lowering the existing elevation and planting native vegetation primarily cypress. This mitigation area has basically reached the success criteria required by the permit. The planted vegetation has become established and exotic plant control, which was the main challenge, has been brought to a maintenance level.

Colonial Boulevard Extension Mitigation

The extension of Colonial Boulevard through the preserve was a major and lengthy controversy. Mitigation consisted of activities similar to that done for Daniels Parkway in 3 locations on the east and west sides of the preserve near Penzance Boulevard. This mitigation area has also met the required success criteria. Exotic and invasive plants, including melaleuca, torpedo grass, vines and cattail continue to provide a control challenge. These species are mostly at a maintenance level of control.

Briarcliff Berm and Weirs

Initial Phase

Mitigation was required for the replacement weirs at Ten Mile Canal and its associated berm. Upstream of the weirs, a melaleuca monoculture was cleared using heavy equipment, and native vegetation was planted. This project has met its required success criteria; however, melaleuca saplings continue to invade the area and cattail has formed several monotypic stands.

Completion Phase

The Briarcliff Berm project was completed in 2002. Mitigation and associated enhancements included removal of melaleuca which is the dominant vegetation, and excavation of a shallow pond with an extensive littoral zone, which will be planted with aquatic, emergent native vegetation. The purpose of this pond is to provide a habitat type, found infrequently in the slough watershed.

OFF SITE MITIGATION

The preserve is approved for offsite mitigation through the Florida Department of Environmental Protection (DEP), the South Florida Water Management District (SFWMD), and the U.S. Army Corps of Engineers (COE). This allows developers, individual property owners and government agencies to mitigate for impacts to their wetlands by contributing to an established fund for exotic pest plant control. The funds are accumulated to a point (approximately $8,000) where there is enough to have a contractor work for at least a week on a specific site. In some cases, monitoring reports to the regulatory agencies are required. Lee County Parks and Recreation staff are working to establish a formal procedure for offsite mitigation handled through DEP as is now requested by the Florida Legislature. This applies not only to SMCSP but to other county preserves as well. Staff will seek approval from SFWMD for offsite mitigation to continue in the preserve.

2. Boundary Protection

FENCING

Fencing and gates were installed in the late 1980s at areas to deter off-road vehicles, prevent dumping, illegal entry, alcohol use and tree cutting. The fencing has deterred the majority these activities. Additional signage, fences and gates will be installed to increase protection efforts. The boundary will continue to be patrolled by park rangers to determine where problems exist.

SIGNAGE

Approximately 2 miles of the approximately 20 mile boundary has been posted with one of the above signs at 500 foot intervals. Boundary posting will continue as personnel is available. Signs will be posted on fence posts or on free-standing posts. Signs will not be nailed into trees.

3. Fire Management

The Preserve has several areas with fire dependent communities. Due to the proximity of major roadways, residential areas and Southwest Florida International Airport, smoke management will be the most influential factor for prescribed burning within the Preserve. Mechanical fuel reduction and small burn units are both useful tools in achieving the burn goals and smoke management goals. The use of fire to maintain pyric communities is essential in preserving the natural balance within these habitats.

FIRE ECOLOGY

The activities of man have altered these plant communities, but not their dependence on fire. According to Robertson (1954), over 70% of the approximately 100 herbaceous and low-shrub species endemic to south Florida occur in communities now maintained by periodic fire. Robertson's observations indicate that many of the species associated with pinelands can be shaded out by encroaching hardwoods within 5 or 6 years if fire is excluded. Therefore, without fire, many pineland communities would have long ago become hardwood hammock communities.

Although fire is a natural component of south Florida, it can be very destructive. Detrimental fire effects include consumption of organic soil, damage to vegetation, impact on aesthetics, damage to wildlife and wildlife habitat and spread of fire adaptive exotic species.

Some of the vital functions of fire, based on a list by Wright and Heinselman, include:

FUNCTIONS

1. Fire influences the physical-chemical environment by:
   a. Directly releasing mineral elements as ash.
   b. Indirectly releasing elements by increasing decomposition rates.
   c. Volatilizing some nutrients.
   d. Reducing plant cover and thereby increasing insulation.
   e. Changing soil temperatures because of increased insulation.

2. Fire regulates dry-matter production and accumulation by:
   a. Recycling the stems, foliage, bark, and wood of plants.
   b. Consuming litter, humus layers, and occasionally increments of organic soil.
   c. Creating a large reservoir of dead organic matter by killing, but not consuming vegetation.
   d. Usually stimulating increased primary production.

3. Fire controls plant species and communities by:
   a. Triggering the release of seeds.
   b. Altering seedbeds.
   c. Temporarily eliminating or reducing competition for moisture, nutrients, heat and light.
   d. Stimulating vegetative reproduction of top-killed plants.
   e. Stimulating the flowering and fruiting of many shrubs and herbs.
   f. Selectively eliminating components of a plant community.
   g. Influencing community composition and successional stage through its frequency and/or intensity.

4. Fire determines wildlife habitat patterns and populations by:
   a. Usually increasing the amount, availability, and palatability of food for herbivores.
   b. Regulating yields of nut and berry producing plants.
   c. Regulating insect populations which are important food sources for many birds.
   d. Controlling the scale of the total vegetative mosaic through fire size, intensity, and frequency.
   e. Regulating macro-invertebrate and small fish populations.

5. Fire influences insects, parasites, fungi, etc., by:
   a. Regulating the total vegetative mosaic and age structure of individual within it.
   b. Sanitizing plants against pathogens such as brown spot on longleaf pine.
   c. Producing charcoal which can stimulate ectomycorrhizae.

Many of these processes and functions can be influenced by regulating the intensity and timing of a fire. Fires can be set at specified intervals during particular physiological stages of plant growth under selected fuel and weather conditions. Smoke Management will be the critical limiting factor for prescribed fires, due to its urbanizing watershed, major thru-ways and close proximity to I-75.

The publication Guide to the Natural Communities of Florida (FNAI & DNR, 1990) recommends the following for the communities found in SMCSP:

Fire Dependent Communities

MESIC FLATWOODS

"Another important physical factor in Mesic Flatwoods is fire, which probably occurred every 1 to 8 years during pre-Columbian times. Nearly all plants and animals inhabiting this community are adapted to periodic fires; several species depend on fire for their continued existence. Without relatively frequent fires, Mesic Flatwoods succeed into hardwood-dominated forests whose closed canopy can essentially eliminate the ground cover herbs and shrubs. Additionally, the dense layer of litter that accumulates on unburned sites can eliminate the reproduction of pines which require a mineral soil substrate for proper germination. Thus, the integrity of the Mesic Flatwoods community is dependent on periodic fires. However, fires that are too frequent or too hot would eliminate pine recruitment and eventually transform Mesic Flatwoods into Dry Prairie."

WET FLATWOODS

"Another important physical factor in Wet Flatwoods is fire. Natural fires probably occurred every 3 to 10 years during pre-Columbian times. Nearly all plants and animals inhabiting this community are adapted to periodic fires, and several species depend on fires for their continued existence. Without relatively frequent fires, Wet Flatwoods succeed into hardwood dominated forests whose closed canopy would essentially eliminate the ground cover herbs and shrubs. In fact, much of the variation in community structure is probably associated with fire frequency. Thus, the longer the period of time since the last fire, the more developed will be the under story shrubs. If the under story is allowed to grow for too long, the accumulation of needle drop and the height of flammable under story shrubs will increase the probability of a catastrophic canopy fire."

STRAND SWAMPS

"Fire occurs in Strand Swamps on a cycle of perhaps 30 to 200 years, with the largest trees on the deepest peat towards the center of the strand burning least frequently. Fire is essential

for maintenance of this NC; without fire, hardwood invasion and peat accumulation would convert the strand to Bottomland Forest in a few hundred years. Cypress is very tolerant of light surface fires, but muck fires burning into the peat can kill the trees, lower the ground surface, and transform a Strand into a slough.

The classic examples of Strand Swamp, those with tropical species, occur mainly in Collier County, Florida, where the Fakahatchee Strand is perhaps the finest example. Strand Swamps also occur in other areas of the southeastern coastal plain. Strand Swamps are extremely vulnerable to local as well as regional hydrological modifications. Most Strands were heavily disturbed by logging but many have recovered well and there are a few small strands that are thought to be virgin."

E. Public Access and Passive Recreation

1. Historical Uses

Public use of Six Mile Slough (before Lee County began acquisition in 1979) consisted primarily of hunting and fishing. There was use by nature enthusiasts, orchid collectors, cypress clock collecting area and historic use as a horse carcass depository. Since County acquisition began has been by the Lee County School Board, Department of Environmental Education. A wet trail that enters SMCSP on its west side just south of Penzance Road has been in use since 1981. This trail is used to instruct students about the importance of the swamp. Occasional field trips have also been conducted in SMCSP by the Calusa Nature Center and the local chapters of the National Audubon Society, the Sierra Club and the Native Plant Society. Evidence of use by individuals driving off-road vehicles (ATV's) or riding horses has also been observed for the past several years.

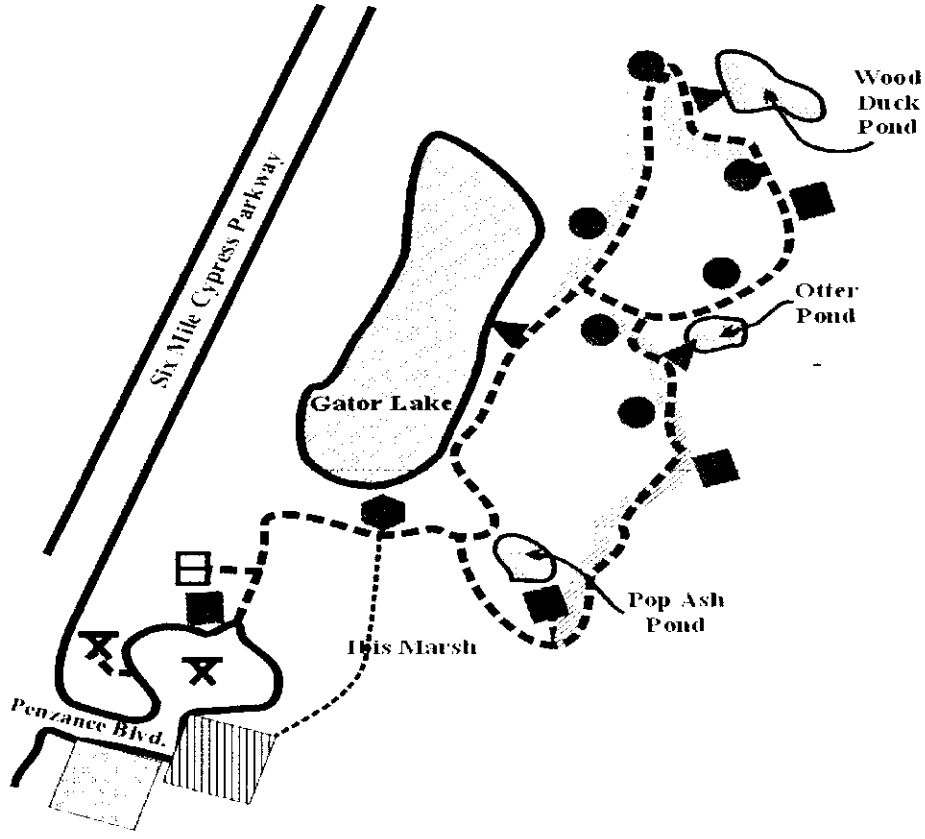
2. Allowable Uses

The uses allowed by the Lee County Parks and Recreation Ordinance and the SMCSP Management Plan (1986) include nature study, hiking, picnicking, fishing, and horseback riding, provided facilities are offered in such a manner that the natural character of SMCSP will be protected. Areas where these types of uses can occur are limited by the nature of the SMCSP itself, both in terms of its dense vegetation and its limited access points.

3. Recommended Uses

Resource based recreational uses are the only appropriate types of recreation for SMCSP. All uses must be carefully evaluated to ensure that they are compatible with the area being considered for their development.

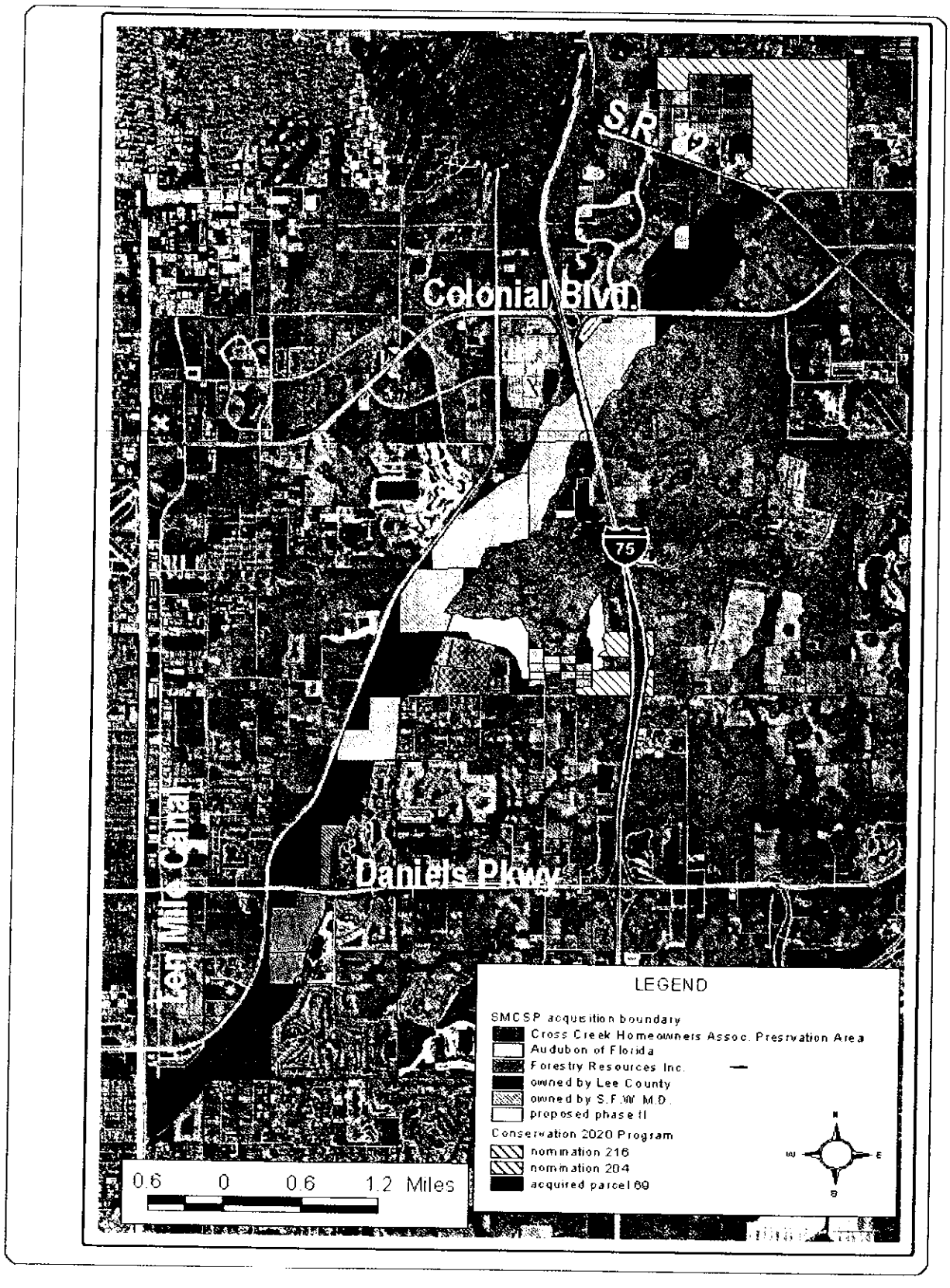
Figure 9 : SMSCP Master Site Plan



Interpretive Facility Legend

- *Boardwalk Trail*
- *Shelter / Photo Blind*
- *Seating Enclave*
- *Observation Deck*
- *Amphitheater*
- *Restrooms*
- *Picnic Areas*
- *Proposed visitor center*
- *Proposed additional parking*
- *Proposed new boardwalk*

Figure 10 : SMSCP Acquistion Map



The Six Mile Cypress Slough Preserve Interpretive Facility was opened to the public in October 1991. Attendance has averaged approximately 35,000 annually. The facility includes a parking area, restrooms, two picnic areas, an amphitheater, a 1.2 mile boardwalk with seating areas, interpretive signs, overlooks, and a photo blind. Guided walks are offered on a regularly scheduled basis. The staff naturalist and approximately 25 volunteers provide a variety of programs. There are plans to provide additional facilities, including a visitor's center that is included in the sites Master Plan (see Figure 9).

F. Acquisition

Approval of the acquisition of the slough by the BOCC began in 1976 (see Appendix IV). Lee County partnered with SFWMD through the Save Our Rivers program to acquire the parcel within the acquisition boundary. In 1988, Lee County entered into an agreement with SFWMD to establish Lee County Parks and Recreation as the agency responsible for managing the Preserve (see Appendix I).

The total acreage of the slough is 2,200 acres. Of this total, Lee County owns 1,036 acres, SFWMD, 839 acres, Forestry Resources Inc. 136 acres, Cross Creek Homeowners Association, 47 acres, and the Audubon of Florida, 15 acres (see Figure 10).

The remaining portion of Phase II consists of 125 acres. The goal is to complete acquisition of Phase II, which is a tributary of the slough and is referred to as the "arm" by September 2003. Phase II is an approved Save Our Rivers Project through the South Florida Water Management District. It is unlikely that all of the parcels in Phase II will be acquired by the County. However, some parcels may be protected as conservation easements from nearby development proposals. With the approval of the BOCC and SFWMD, the conservation areas may be deeded to the county for long term maintenance and incorporated into the boundary of the Preserve.

Lee County voters approved the "Conservation 2020" land acquisition program in 1996. One 39 acre parcel adjacent to the preserve in Section 30, Range 45, Township 25, has been acquired by this program and two additional parcels have been nominated for purchase. The acquisition goal for the Preserve should focus acquiring adjacent property to the slough through conservation easements or through the 2020 program.

In 1991 County Commissioners approved Resolution No. 91-11-22 to potentially grant Florida Gulf Coast University the land use of 320 acres within the Preserve. No action has occurred to date.

VI. MANAGEMENT ACTION PLAN

A. Goals and Strategies:

VI. MANAGEMENT ACTION PLAN

HYDROLOGY

Goal: To determine the current hydroperiod and then restore the hydroperiod of the slough to that of similar relatively undisturbed natural systems.

Objective (restoration): The hydroperiod of the preserve will be restored through the use of weirs, pumps, and berms. The target hydroperiod will be 250 days with maximum water levels of one foot.

Management Activities:

- Analysis of historic hydrology data
- Construct berms, weirs, pumps and other flow altering devices as need to restore the hydroperiod
- Establish a monitoring program for wetlands to determine their hydroperiod before and after restoration activities.
- Monitoring of aquatic indicator animal species (frogs) is also recommended.
- Create habitats to increase hydrology and wildlife community sustainability

Performance Standard: The hydroperiod in the preserve shall be 250 days with a maximum water level of one foot at least 3 out of every 5 years.

EXOTIC SPECIES CONTROL - PLANT

Goal: To control targeted exotic plants to at least a maintenance level.

Objective: The preserve will be sectioned into management units that include removal methods, herbicide use and level of infestation for all exotic plants. Exotic species on resource areas managed by Lee County are controlled or removed in accordance with established policies and procedures as detailed in the Land Stewardship Operations Manual. This manual is used to guide stewardship activities on all county preserves and resource-based parks, and to provide a source of information and control techniques for these activities.

Management Activities:

- Develop an Invasive Plant Action Plan
- Management units with GPS data, invasive plant list, % infestation and treatment level
- Secure funding for treatment
- Establish a working group of Land Steward volunteers for invasive plant removal
- Metro Parkway Mitigation Project coordination with Johnson Engineering and FDOT.
- Develop a pond survey protocol to identify area of aquatic plant infestation.

Performance Measure: The entire Preserve will be initially treated. Each management unit will be treated aggressively until maintenance level control is needed. Maintenance level control will be achieved by hand pulling or treating in place with appropriate herbicides in a period of 10 working days every 6 months. There will be no seed bearing exotic plants occurring in the preserve when a unit reaches maintenance level control.

Exotic Species Control - Animal

Goal: To control targeted exotic animals to at least a maintenance level.

Objective: Establish a control program for wild hogs that is safe, humane and complies with all regulations regarding disease concerns.

Table 5 lists exotic animals documented at the preserve.

Management Activities:

- Document and GPS data for sightings of all exotic animals
- Exotic animal survey
- Continue hog trapping

Performance Measures: The entire Preserve will be continually monitored for exotic animals. Control methods will be used at any documented area of infestation until the animal is completely removed.

Water Quality

Goal: Water quality shall be comparable to similar, natural systems such as the Big Cypress National Preserve.

Objective: Continue monitoring water quality, analyze data, and compare to that of other natural areas.

Management Activities:

- Analyze all water quality data
- Comparison of water quality to similar natural areas
- Continue water quality monitoring
- Continued involvement in Watershed issues

Performance Standard: Water quality will not fall below current levels or that of similar, natural areas.

Prescribed Burning

Goal: Reestablish a fire regime conducive to maintenance of pyric plant communities. Pyric communities experience fire at intervals recognized by Florida Natural Areas Inventory or other organizations as natural. Many of Florida's biological communities are adapted to fire. Historically, lightning initiated fires spread slowly and traveled long distances before being extinguished naturally. Today, however, most naturally occurring

fires are suppressed to prevent loss of life and property. Where natural fire frequency has been suppressed, fire must be periodically introduced to maintain fire adapted communities.

Objective: The objectives of prescribed burning are to create natural conditions for a particular community, and to maintain ecological diversity within the preserve's biological communities. Partition the site into management units and prepare a burn plan for each unit. Schedule burns at intervals appropriate for the particular plant community.

Management Activities:

- Develop management units
- Write prescriptions for each unit
- Work cooperatively with DOF on prescription areas and management of wildfires that occur within Preserve boundaries

Performance Standard: All prescribed burns in the preserve are conducted under permit from the Department of Agriculture and Consumer Services, Division of Forestry. Within the Management Unit Action Plan, detailed burn prescriptions will be developed. Post burn evaluations will be competed for each prescribed fire.

Public Use Facilities

Goal: Provide safe, clean well maintained facilities that serve the needs of the public.

Objective: Schedule quarterly inspections of all facilities and prioritize and schedule maintenance as needed to keep the facilities safe, clean and attractive.

Management Activities:

- Continued boardwalk improvements when funding is available
- Replace signage as needed
- Pursue the development of a Visitors Center in Coordination with the Friend of SMCSP

Performance Standard: Facilities will be barrier free, clean at all times, and repairs will be made in a timely manner.

Public Use Programs

Goal: Provide regularly scheduled and special programs that allow visitors to develop a "sense of place" for the southwest Florida environment. Provide an understanding of basic ecological concepts and encourage visitors to conserve and protect natural resources.

Objective: Offer regularly scheduled guided walks where the interpretive programs helps participants develop a "Sense of Place" for the southwest Florida environment, provide an understanding of basic ecological concepts and encourage them to conserve and protect natural resources.

Management Activities:

- Continue volunteer training

Performance Standard: A public use survey will be given to randomly select visitors to test the effect of the interpretive program.

Boundary Protection

Goal: To protect the boundary from encroachments, dumping, off-road vehicles (ATVs) and poaching. To comply with ordinance 90-56 of Lee county (see Appendix V) and work cooperatively with the County Rangers.

Objective: Protect the boundary of the Preserve with signage, gates, fencing, planting or other barriers to prevent unauthorized uses from occurring.

Management Activities:

- Document all citations giving or reports of illegal activities within the Preserve
- Map target areas of enforcement and boundary protection needs
- Obtain additional or replacement gates and fences where needed
- Develop new signage for access areas
- Post boundary signs on all boundary fences within the preserve

Performance Standard: No unauthorized access or activities within the preserve.

Habitat and Wildlife Management

Goal: To protect, restore and document all natural community flora and fauna within the preserve. This process will include the restoration of all non-native communities and the creation of historic habitat.

Objective: All communities within the Preserve will be mapped and surveyed for exotic species and protected species of both plant and animal. Eradication of invasive species will be controlled to a maintenance level. Protect species will be surveyed and mapped for ongoing monitoring.

Management Activities:

- GPS data for communities within the preserve
- GPS data on all exotic species within the preserve
- GPS date on all protected species within the preserve
- Habitat enhancement and restoration to non-native communities
- Creation of diverse wildlife areas
- Removal of historic use barbed wire fences for wildlife movement
- Nest box installation and monitoring
- Possible fish ladders for the weirs

Performance Standard: Removal of all invasive species to a maintenance level. Protection and documentation of all listed species without decline in population or abundance over a five year trend analysis.

B. Management Unit Action Plan
(see next section for the plan)

Six Mile Cypress Slough Preserve Management Unit Action Plan

I. Overview of the Action Plan

II. SMCSP Boundary map with management units

III. Unit 1 through Unit 11 - Description and Plan

A. Description of Management Unit
B. Hydrology
C. Invasive Plant Management
    1) Infestation type and %
    2) Current control efforts
    3) Scope of work for future control
    4) Funding
D. Invasive Animals
    1) Current control efforts
    2) Scope of work for future control
E. Listed flora and fauna management
    1) species mapping and photo points
    2) tracking
F. Fire Management
    1) Fire dependent communities
    2) Prescriptions for
G. Pond Survey Information
H. Special Considerations or Needs

I. OVERVIEW

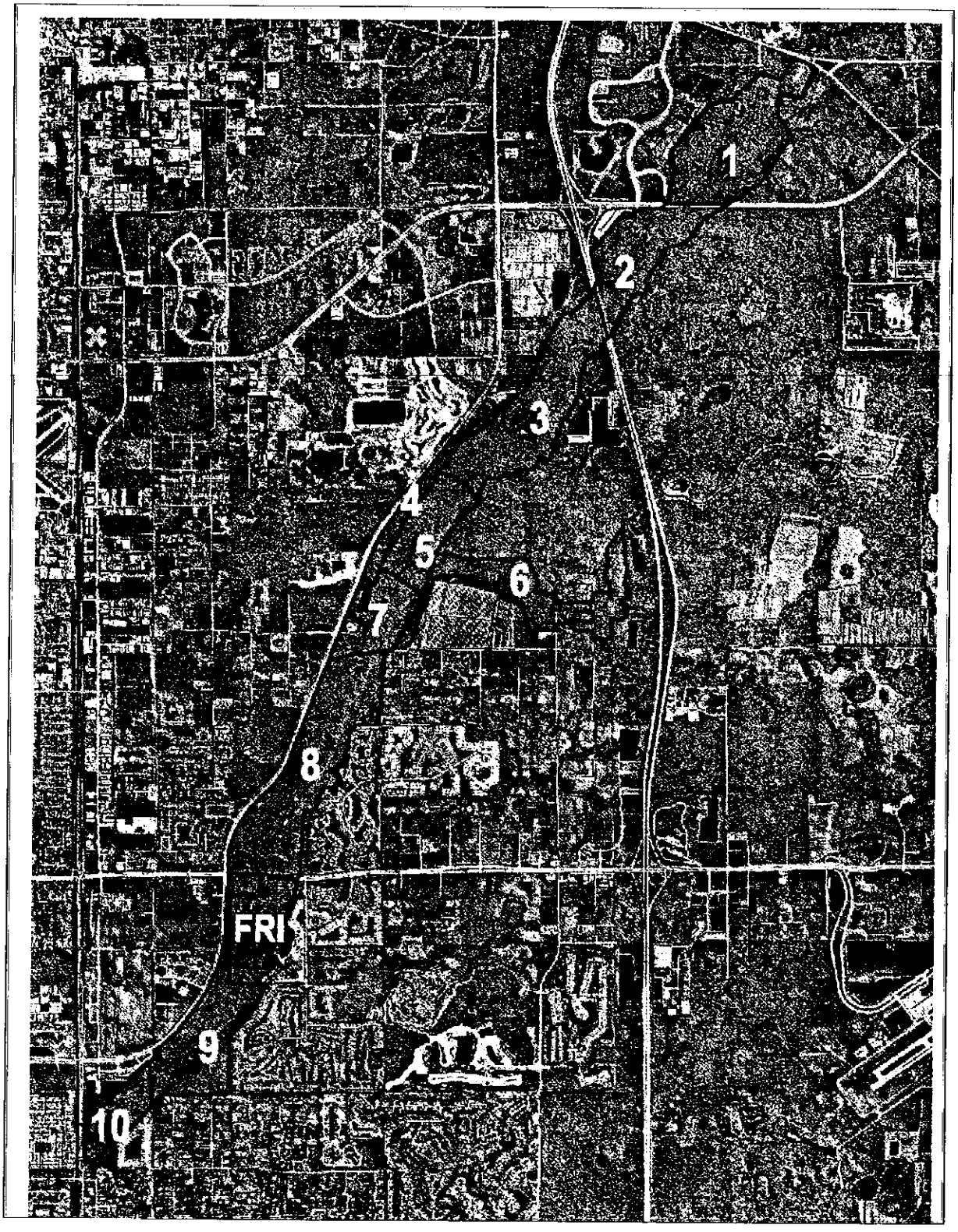
Six Mile Cypress Slough Preserve is a 2,200 acre preserve located in southwest Florida, Lee County (See Figure 1 of Land Stewardship Plan). Due to the size and shape, nine miles long and approximately 1 mile wide, the preserve is highly impacted by surrounding land development. The cypress slough ecosystem is defined by hydrology. The slough is inundated with constant flow during the rainy season and retreats to only having small amounts of standing water in ponds during the dry season. All vegetation, communities and wildlife are dependent on the hydrology of the slough. All of the impacts by surrounding development and bisecting roads of the Preserve affect the hydrology.

This action plan is being prepared as a guide to systematically approach land stewardship management goals. Ten Management Units have been created by relating natural communities, hydrology, natural or man made boundaries and public use. These Management Units will be used to focus land stewardship efforts in hydrologic restoration, invasive species control, flora and fauna surveys, fire management, water quality analysis and to address any special needs within the Unit. As external influences change, this plan will be adapted to meet the challenges. It is the goal of the Land Stewardship Plan to "...identify Preserve resources, develop ways to protect those resources and implement restoration activities..." This action plan will be critical in implementing, tracking and prioritizing these activities.

The following action plan is a starting point for initiating, tracking and compiling data for land stewardship activities. This plan will be used to guide activities and organize the information needed to make educated decisions on restoration efforts form 2002 to 2007.

II. SMCSP BOUNDARY MAP WITH MANAGEMENT UNITS

Figure 1. Management units within SMCSP



III. UNIT DESCRIPTIONS AND PLANS

UNIT 1

A. Unit 1 is located at the northern terminus of the Preserve (see map1). State Road 82 is the northern boundary of the unit and Colonial Blvd. is the southern boundary of the unit. Unit 1 encompasses ~318 acres. Agricultural lands border the east and west of the unit. The unit is comprised of ponds, cypress slough, hardwood hammocks and hydric pine flatwoods.

B. Hydrology – State Road 82 has altered the sheet flow into the northern boundary of the slough. There are existing culverts that allow some passage of sheet flow from the headwaters region under State Road 82. Throughout the unit, there are intermittent ponds which will hold water longer than the surrounding slough. At the south end of the Unit, water crosses under Colonial Blvd through two bridges.

There is a hydrogauge located on state Road 82, the north boundary. The water level information gathered at this station is the furthest north point of information for the slough. In comparison to the other six gauges, this gauge may show initial sheet flow into the slough. This information will be compared the further south gauges to determine the water level response time through out the slough.

C. Invasive Plant Management
   1. Unit 1 has areas of high infestation rates within the shallow ponds and the transition zones between the slough and uplands.
   2. Initial treatment had occurred throughout the northern half of the unit. Species that have been treated include Brazilian pepper, wetlands night shade, para grass, melaleuca and Old World climbing fern. Initial treatment will continue on this unit during the dry season and as funding is available and water levels allow access.
   3. Unit 1 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant control will occur yearly.
   4. Funding will be sought after through mitigation and from annual operating funds.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time. There are trails and evidence of wild hogs in this unit.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

F. Fire Management

1. The hydric pine flatwood area in the southeast portion of the unit will be evaluated to determine if a fire regime is appropriate for that sight. Other fire management issues may involve using fire to suppress exotic vegetation in heavily infested areas of new growth.
2. Fire prescriptions will be developed for areas identified to have a need for a fire regime.

G. Pond Survey information

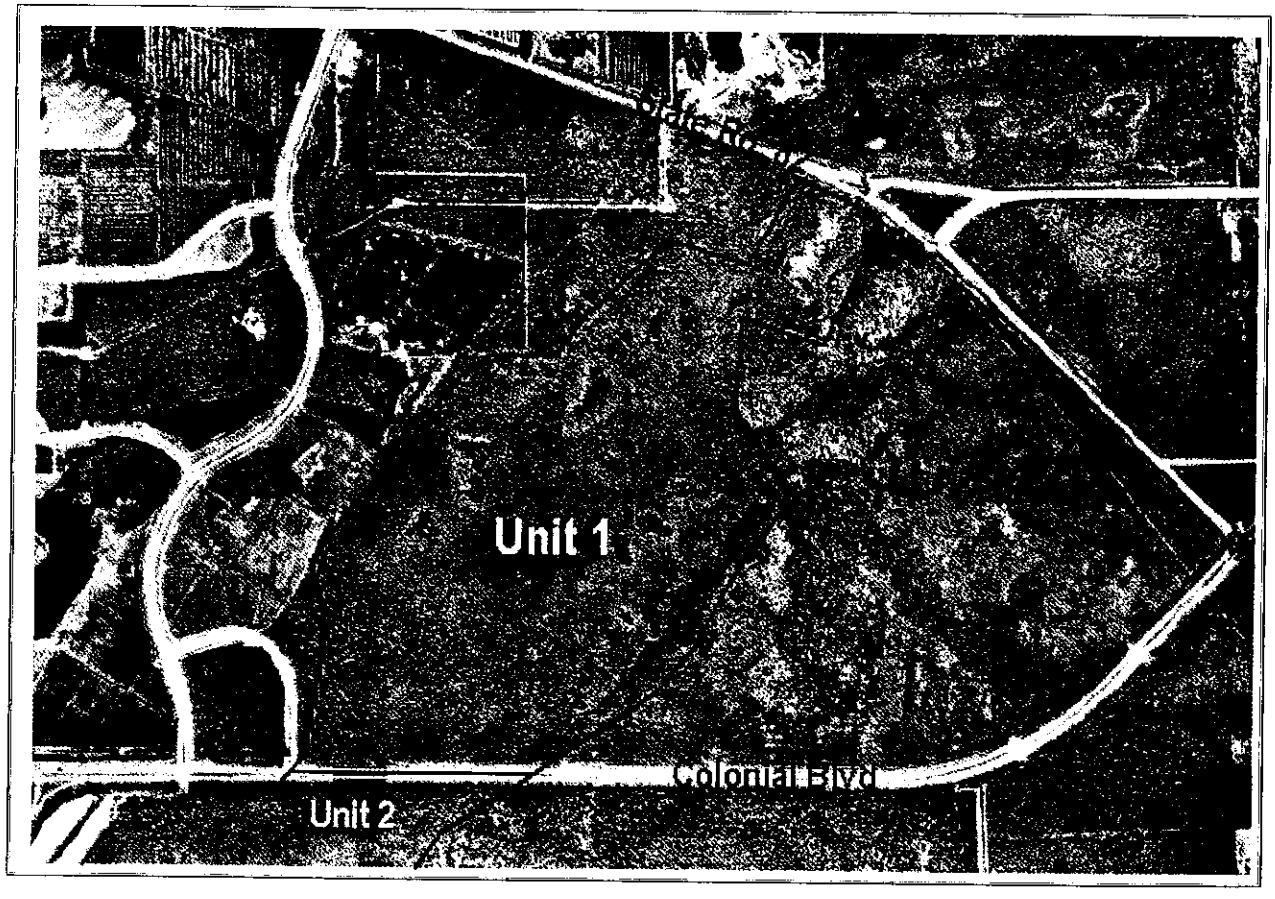
There are 5 ponds that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs

1. Public Use – On the southern boundary of Unit 1, along Colonial Blvd., there is a gate with a walking trail. No permanent parking facility, signage, or marked access point is provided. This trail is used by staff or groups associated with the Preserve.

Boundary Protection – There is limited fencing around the boundary of the unit. Further boundary signage and fencing would increase the public awareness of the Preserve

Map 1. Management Unit 1 for SMCSP



UNIT 2

A. Unit 2 is bordered to the north by Colonial Blvd. and to the south by I-75 and is ~203 acres in size (see map 2). The unit is predominately comprised of cypress with a fringe of uplands. Within the cypress area, there are intermittent ponds. The unit is bordered to the west by a commercial/developed parcel and to the east by fallow agricultural/cattle fields.

B. Hydrology – Colonial Blvd has altered the sheet flow from unit 1 to unit 2. There are two bridges that pass under State Road 82 affecting the historic flow of the slough. At the southern boundary of the unit a bridge allows water to flow under I-75. There is a hydrogauge located within unit 2 next to the I-75 bridge.

C. Invasive Plant Management

1. Infestation –Aerial photographs and field observations around the borders of the unit indicate that there are areas of high infestation and areas of very low infestation. Through field surveys and ground truthing, this area will be mapped to identify areas of exotic plant infestation.
2. Current control efforts – The area will be mapped for the presence and % infestation of exotic vegetation.
3. Future control - Mapping will occur and then planning for control/treatment methods will be developed.
4. Funding will be sought after through mitigation and from annual operating funds.

D. Invasive Animals

1. There are no current efforts for invasive animal control within this unit at this time.
2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna

1. Listed species will be identified, mapped and photo documentation will be recorded. During fieldwork days and other surveys, all listed species will be documented.
2. Tracking of listed species will be specific to the species.

F. Fire Management

At this time, there are no areas within this unit that will be evaluated for fir management.

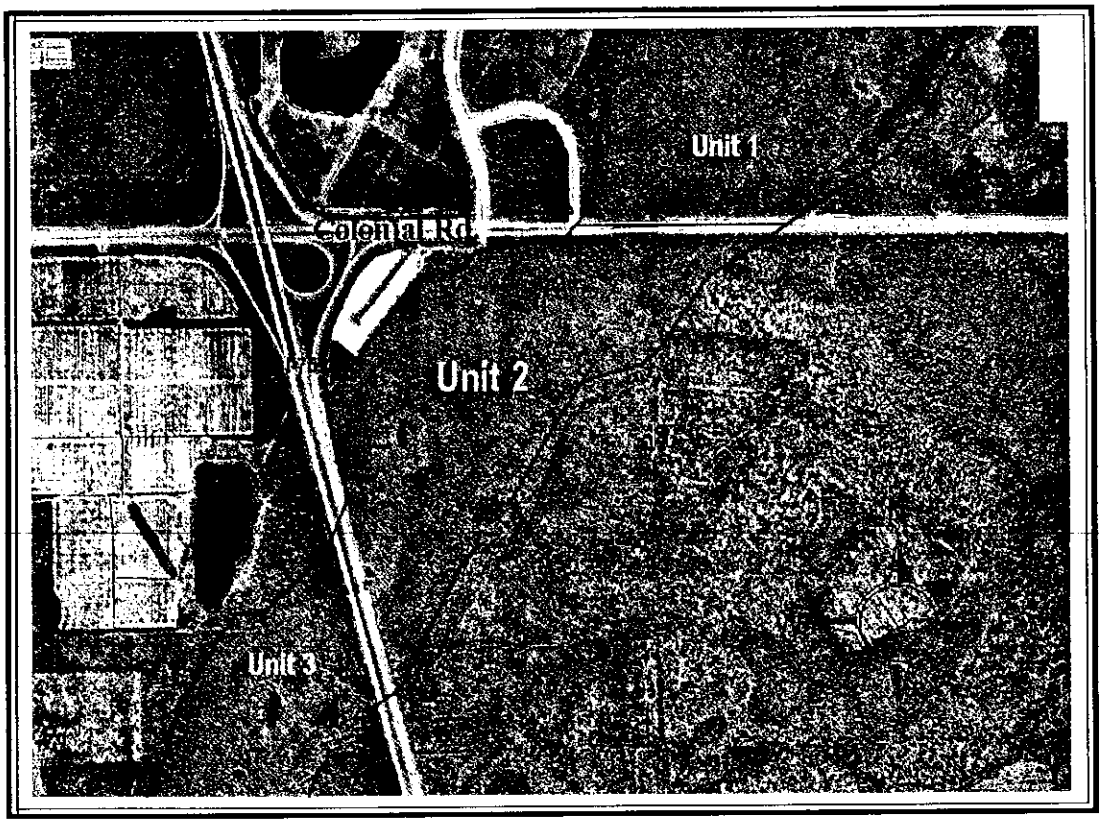
G. Pond Survey information

There are 4 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs

1. Boundary Protection – There is limited fencing around the boundary of the unit. Further boundary signage and fencing would provide further protection of the slough and increase the public awareness of the Preserve. Boundary fencing on the east boundary may discourage cattle from grazing within the preserve.

Map 2. Management Unit 2 for SMCSP



UNIT 3

A. Unit 3 is ~327 acres (see map 3). The northern boundary is I-75 and the southern boundary is adjacent to Unit 4, a hardwood hammock/ slash pine habitat along the west and an old logging road to the south. The logging road is a two trail with depression areas. The unit is comprised by cypress slough, scattered ponds and transitional areas to upland of the east boundary.

B. Hydrology – The bridge on I-75 allows water to pass from Unit 2 to Unit 3. Adjacent lands to the unit have impacted the hydrology of this unit severely. Sheet flow has been disrupted by development, agriculture or creation of lakes. Further development is planned for these areas.

C. Invasive Plant Management
   1. Infestation - Unit 3 has low infestation throughout the central portion of the slough. Transitional areas have melaleuca, Brazilian pepper and other exotic species.
   2. Current control - Initial treatment of scattered areas of infestation has occurred.
   1. Future control - Unit 3 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
   2. Funding will be sought after through mitigation and yearly budget funds.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

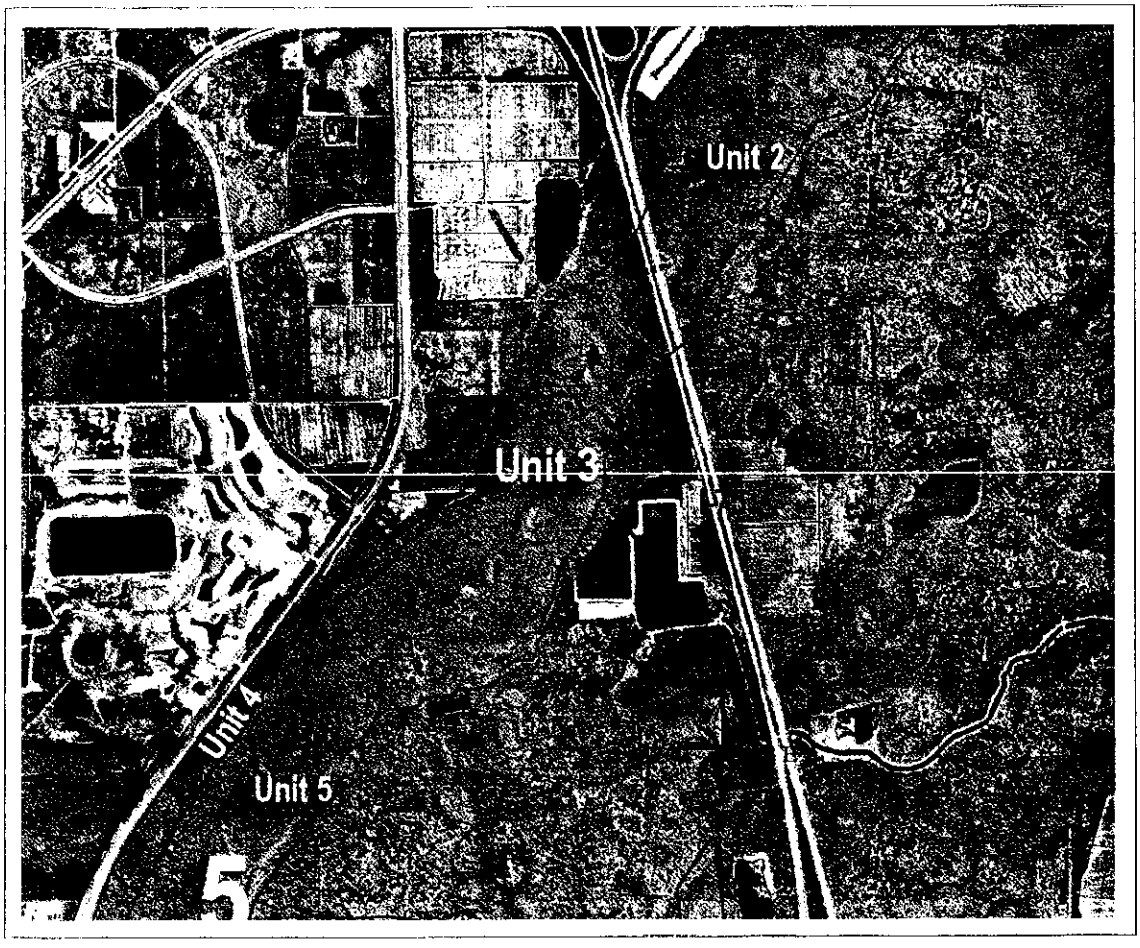
F. Fire Management
   At this time, there are no areas within this unit that will be evaluated for fir management.

G. Pond Survey information
   There are 4 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs

1. Public Use – The logging trail that bisects the slough is used by staff and groups associated with the Preserve. No signage is provided at the entrance to the trail to provide limited, staff regulated use.
2. Boundary Protection There is limited fencing around the boundary of the unit. Further boundary signage and fencing would increase the public awareness and protection of the Preserve.

Map 3. Management Unit 3 for SMCSP



UNIT 4

A. Unit 4 is ~69 acres (see map 4). The unit is a strand of pine flatwood mixed with hardwood hammock. It is a narrow unit that borders both units 3 and 4 on the east and Six Mile Cypress Parkway on the west.

B. Hydrology - This unit is a transitional upland from the slough. Historic sheet flow of this unit was stopped by Six Mile Cypress Parkway.

C. Infestation This Unit has some areas of infestation including melaleuca, Brazilian pepper and other exotic species.

1. Current control - Initial treatment of scattered areas of infestation has occurred.
2. Future control - Unit 4 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
3. Funding will be sought after through mitigation and yearly budget funds.

D. Invasive Animals
1. There are no current efforts for invasive animal control within this unit at this time.
2. Any sightings of invasive animals will be documented and control efforts will be implemented.

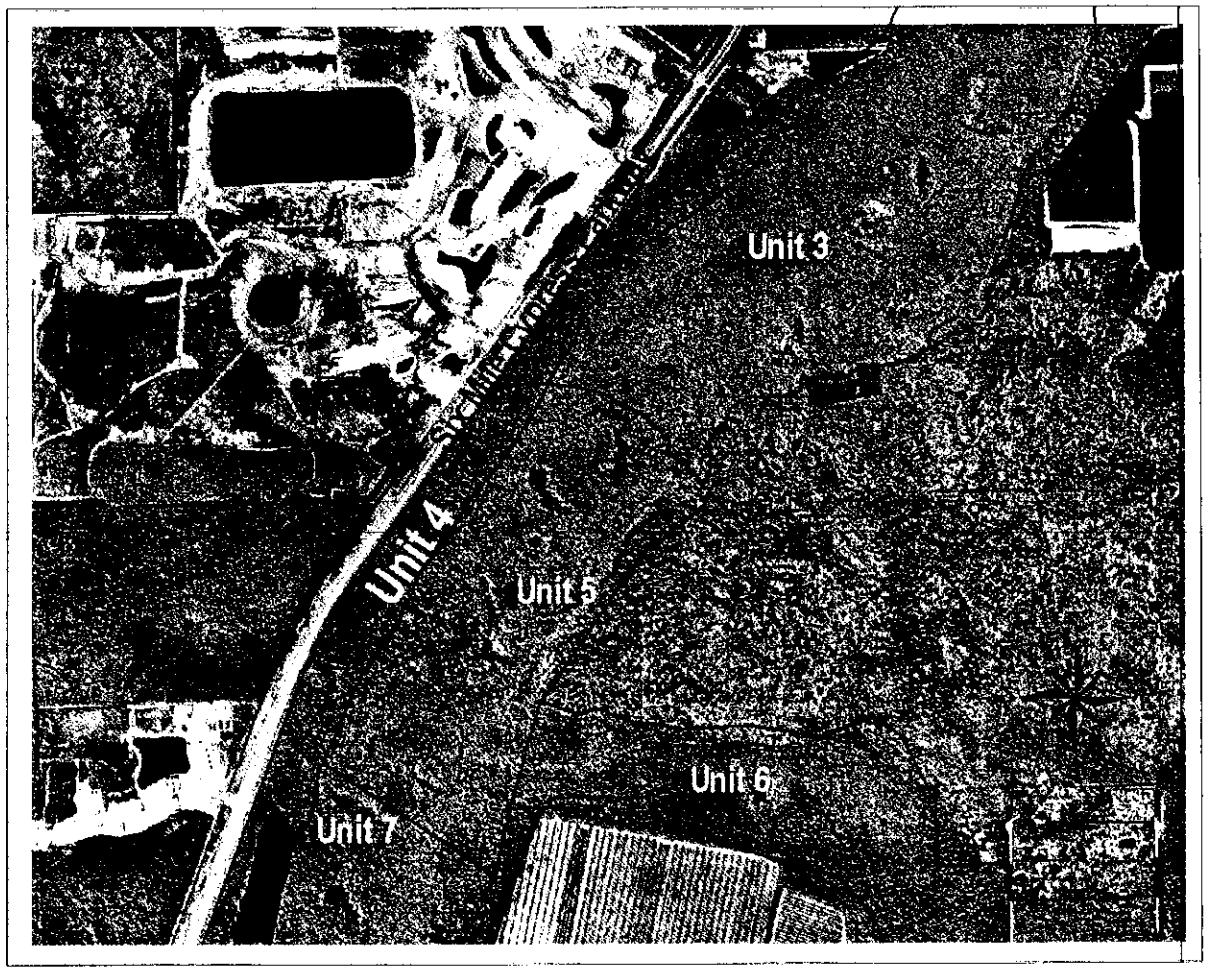
E. Listed Flora and Fauna
1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
2. Tracking of listed species will be specific to the species.

F. Fire Management
This unit will be divided into burn units and prescriptions will be developed for each unit. Fire breaks/lines may need to be installed to reach management objectives and to help control smoke management issues. Mechanical brush management may be used for site preparation to reduce fuel loads.

G. Pond Survey information
There are no ponds within this unit.

H. Special Consideration or Needs
1. Boundary Protection – Fencing and boundary signs should be installed on the west boundary of this unit, along Six Mile Cypress Parkway. Further boundary signage and fencing would increase the public awareness of the Preserve and discourage unauthorized access and activities.

Map 4. Management Unit 4 for SMCSP



UNIT 5

A. Unit 5 is ~147 acres (see map 5). The unit is bordered by units 3, 4 , 6 and 7. A section of the east boundary borders private property. The north boundary of the unit is adjacent to unit 3, separated by the two trail logging road. The majority of the unit is comprised of cypress slough habitat.

B. Hydrology Water flows through the slough from unit 3 into unit 5, divided by a two trail logging road. The logging trail may alter the sheet flow minimally. Development of the property to the east of the unit will greatly affect the hydrology and water quality of this unit.

C. Invasive Plant Management

1. Infestation - Unit 4 has low infestation throughout the central portion of the slough. Transitional areas have melaleuca, Brazilian pepper and other exotic species.
2. Current control - Initial treatment of scattered areas of infestation has occurred.

1. Future control - Unit 4 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
2. Funding will be sought after through mitigation and yearly budget funds.

D. Invasive Animals

1. There are no current efforts for invasive animal control within this unit at this time.
2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna

1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
2. Tracking of listed species will be specific to the species.

F. Fire Management

At this time, there are no areas within this unit that will be evaluated for fir management.

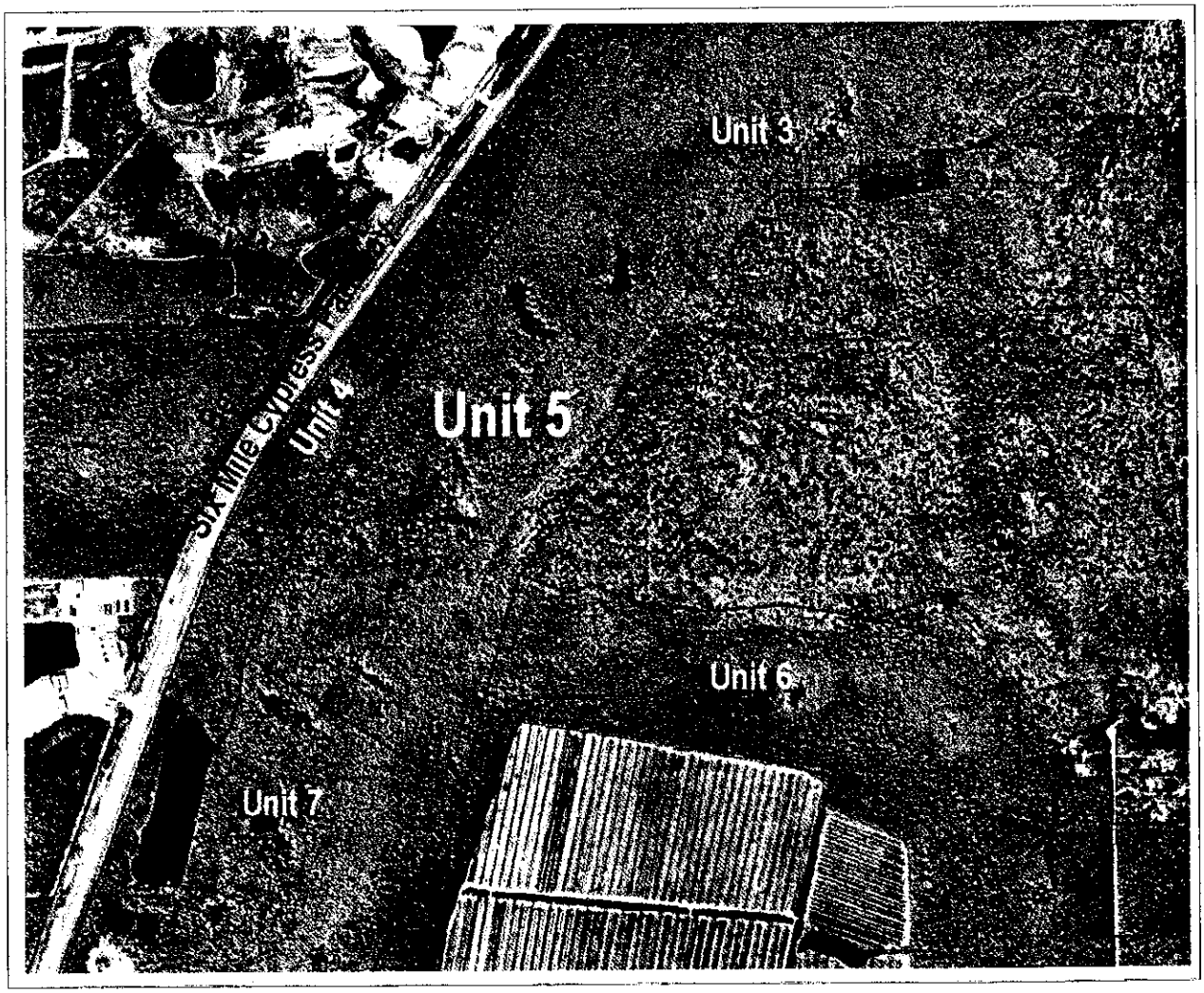
G. Pond Survey information

There are 3 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs

1. Public Use – The logging trail that bisects the slough is used by staff and groups associated with the Preserve. Access is limited due to finding the access area. No signage is provided.
2. Boundary Protection – Boundary signage and fencing on the east boundary adjacent to the private parcel would help prevent unauthorized access or activities within the Preserve.

Map 5. Management Unit 5 for SMCSP



UNIT 6

A. Unit 6 is ~202 acres (see map 6). This Unit is referred to as "the arm" of the slough. It extends east of the slough. A tributary, smaller slough area feeds into the central slough through this unit. Parcels to complete the unit boundary are in the process of being acquired or protected through development permit requirements.

B. Hydrology – Sheet flow has been disrupted by development, agriculture and road construction. Further development is planned for these areas.

C. Invasive Plant Management
   1. Infestation - Unit 6 has low infestation throughout the central portion of the slough. Transitional areas have melaleuca, Brazilian pepper and other exotic species.
   2. Current control - Initial treatment of scattered areas of infestation has occurred.
   3. Future control - Unit 6 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
   4. Funding will be sought after through mitigation and yearly budget funds.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

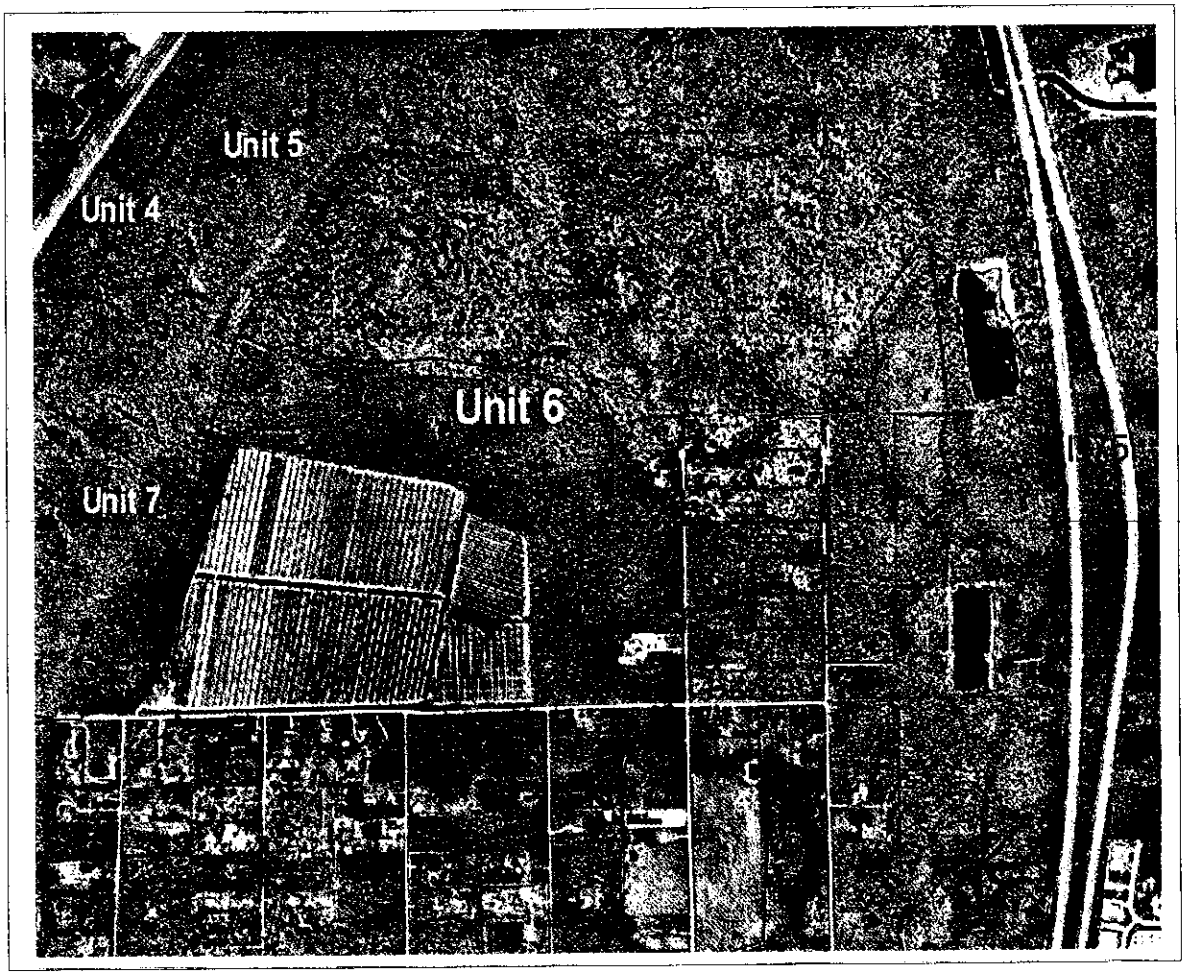
E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

F. Fire Management
   This unit will be surveyed as parcels are acquired to determine if any of the communities dependent on fire are present. If pyric communities are identified, burn prescriptions will be developed.

G. Pond Survey information
   There are 2 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs
   1. Public Use – There are no official areas of public use. If unauthorized use is observed, it will be documented.
   2. Boundary Protection There is limited fencing around the boundary of the unit. Further boundary signage and fencing would increase the public awareness of the Preserve.

Map 6. Management Unit 6 for SMCSP



UNIT 7

A. Unit Description- Unit 7 is ~135 acres (see map 7). This unit includes a man made lake, public access facilities, boardwalk and parking area (collectively called the interpretive facility). Six Mile Cypress Parkway is the eastern boundary of the unit and the western boundary is adjacent to private parcels with agricultural fields. The unit was historically crossed from east to west by Penzance Rd. This Road was removed in 1994. The central portion of the unit is comprised of cypress slough habitat with scattered ponds, the western edge of the unit has a cypress mitigation area and hydric pine flatwoods. There are two cypress mitigation areas within this unit. The first, is west of the Gator lake and the second, is near the first section of boardwalk.

B. Hydrology - The water flows from unit 5 into unit 7 without a boundary altering flow. Within unit 7 there are numerous impacts of the hydrology. Alligator Lake was created when fill material was needed to build Six Mile Cypress Parkway. Public access facilities, including parking area, public restrooms, septic drainage, boardwalk with amphitheater and viewing decks and an education wet trail all have impacts on the hydrology of this unit. The removal of Penzance Road, a dirt road that bisected the slough, has been a successful restoration effort to restore sheet flow in this unit. There is a hydrogauge located on the north side of the removed Penzance roadbed.

C. Invasive Plant Management
    1. Infestation - Unit 7 has low infestation throughout the central portion of the slough. Transitional areas have melaleuca, Brazilian pepper and other exotic species. In and around the pond areas, exotic plants have been documented and treated including wetlands nightshade, water hyacinth and water lettuce. A few small areas have been treated for old world climbing fern.
    2. Current control - Initial treatment of scattered areas of infestation has occurred.
    3. Future control - Unit 7 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
    4. Small projects of exotic vegetation control will be treated by land steward volunteers. Funding for larger projects will be sought after through mitigation and yearly budget funds.

D. Invasive Animals
    1. Initial control of wild hogs has taken place within this Unit. A contractor, with Lee County, was hired to trap and remove the animals in 2002 and will resume his efforts when water levels subside in 2003.
    2. Any sightings of invasive animals will be documented and further control efforts will be implemented.

E. Listed Flora and Fauna
    1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
    2. Tracking of listed species will be specific to the species.

F. Fire Management

At this time, there are no areas within this unit that will be evaluated for fir management.

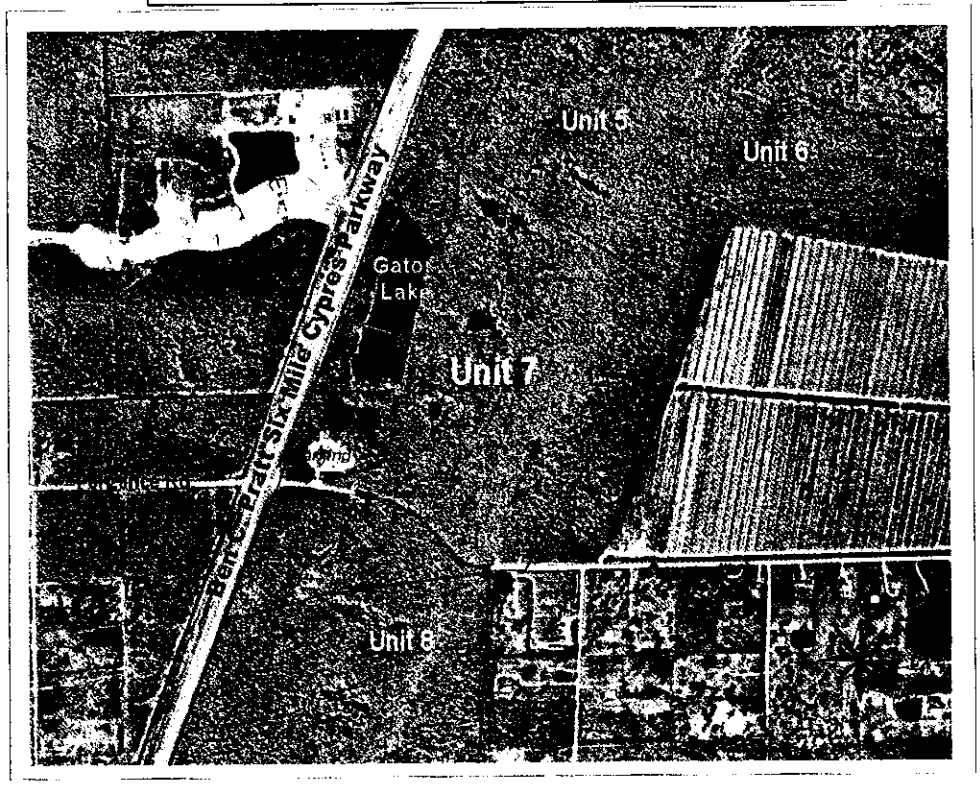
G. Pond Survey information

There are 4 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs

1. Public Use – Due to the focused public access within this unit, exotic vegetation, exotic animal, fire management practices and ongoing studies will be performed in coordination with the preserve's education staff. Land steward volunteers will be recruited to work on projects in this Unit along with other appropriate projects. Fishing activities will be restricted to the designated fishing pier at Gator Lake. Public access points will be clearly marked and unauthorized access points will be targeted for signage.
2. Additional Facilities – The Friends of Six Mile Cypress Slough Preserve are in the process of planning addition facilities within this unit.
3. Boundary Protection – Additional boundary signage and fencing would help prevent unauthorized access or activities within the Preserve.
4. There are two mitigation areas within this unit. The first is west of Gator Lake next to Six Mile Cypress Parkway. This mitigation area is 5.3 acres and primarily consists of pond cypress. The second mitigation area, 2.9 acres of pond cypress, is bisected by the beginning portion of the boardwalk. Ongoing monitoring and maintenance of these mitigation areas will include exotic infestation control, vine control and photo points.

Map 7. Management Unit 7 for SMCSP



UNIT 8

A. Unit 8 is ~389 acres (see map 8). The central portion of this unit is cypress slough with scattered ponds. The boundary to the west is Six Mile Cypress Parkway and to the east there are residential areas and a landscape nursery. The western edge of the unit has areas of pine flatwood and upland hammock. On the east side of the unit there is a cypress mitigation area. The southern boundary of the unit is Daniels Parkway.

B. Hydrology –The water flows from unit 7 into unit 8 without a barrier.

C. Invasive Plant Management
   1. Infestation - Unit 3 has low infestation throughout the central portion of the slough. Transitional areas have melaleuca, Brazilian pepper and other exotic species.
   2. Current control - Initial treatment of scattered areas of infestation has occurred.
   3. Future control - Unit 3 will be mapped with GPS information to show areas of exotic plant infestation and treatment methods used. Maintenance for exotic plant removal will occur yearly.
   4. Funding will be sought after through mitigation and yearly budget funds.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

F. Fire Management
   At this time, there are no areas within this unit that will be evaluated for fir management.

G. Pond Survey information
   There are 4 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs
   1. Public Use – The logging trail that bisects the slough is used by staff and groups associated with the Preserve. Access is limited due to finding the access area. No signage is provided.
   2. Boundary Protection – There is limited fencing around the boundary of the unit. Further boundary signage and fencing would increase the public awareness of the Preserve.

3. There is a mitigation area on the east side of the unit. Primarily, pond cypress and pond apple were planted in a 6.8 acre area. Ongoing monitoring and maintenance of these mitigation areas will include exotic infestation control, vine control and photo points.

Map 8. Management Unit 8 for SMCSP

UNIT 9

A. Unit 9 is ~249 acres (see map 9). Daniels Parkway is the northern boundary of this unit and the FPL right of way is the southern boundary. The central part of the unit is infested with Melaleuca and other exotic plant species. The western boundary includes a former agricultural field that has been replanted with native vegetation. On the eastern boundary there are residential communities. A portion of the eastern boundary has a man made berm to control flooding in these communities. A pond/wetland was created on the eastern boundary of the unit and was planted with native plants in August 2002.

B. Hydrology –Water flows into this unit under Daniels Parkway over two fixed crest weirs with gates that can be opened for flood protection of adjacent residential areas. The ditching and berm that are associated with the residential areas has disrupted natural sheet flow and drainage.

C. Invasive Plant Management
   1. Infestation – This unit is heavily infested with melaleuca. Old world climbing fern, Brazilian pepper and wetlands nightshade are also scattered throughout the unit.
   2. Current control – Treatment of small areas of Melaleuca, wetland nightshade and Brazilian pepper have been treated. There are Melaleuca snags standing in some treated areas due to girdling.
   3. Future control – This unit will be part of the Metro Parkway mitigation site. All Category I invasive exotic plants will be treated or removed. This project is slated to begin in 2003-4.
   4. Funding will be obtained through the Metro Parkway mitigation project.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

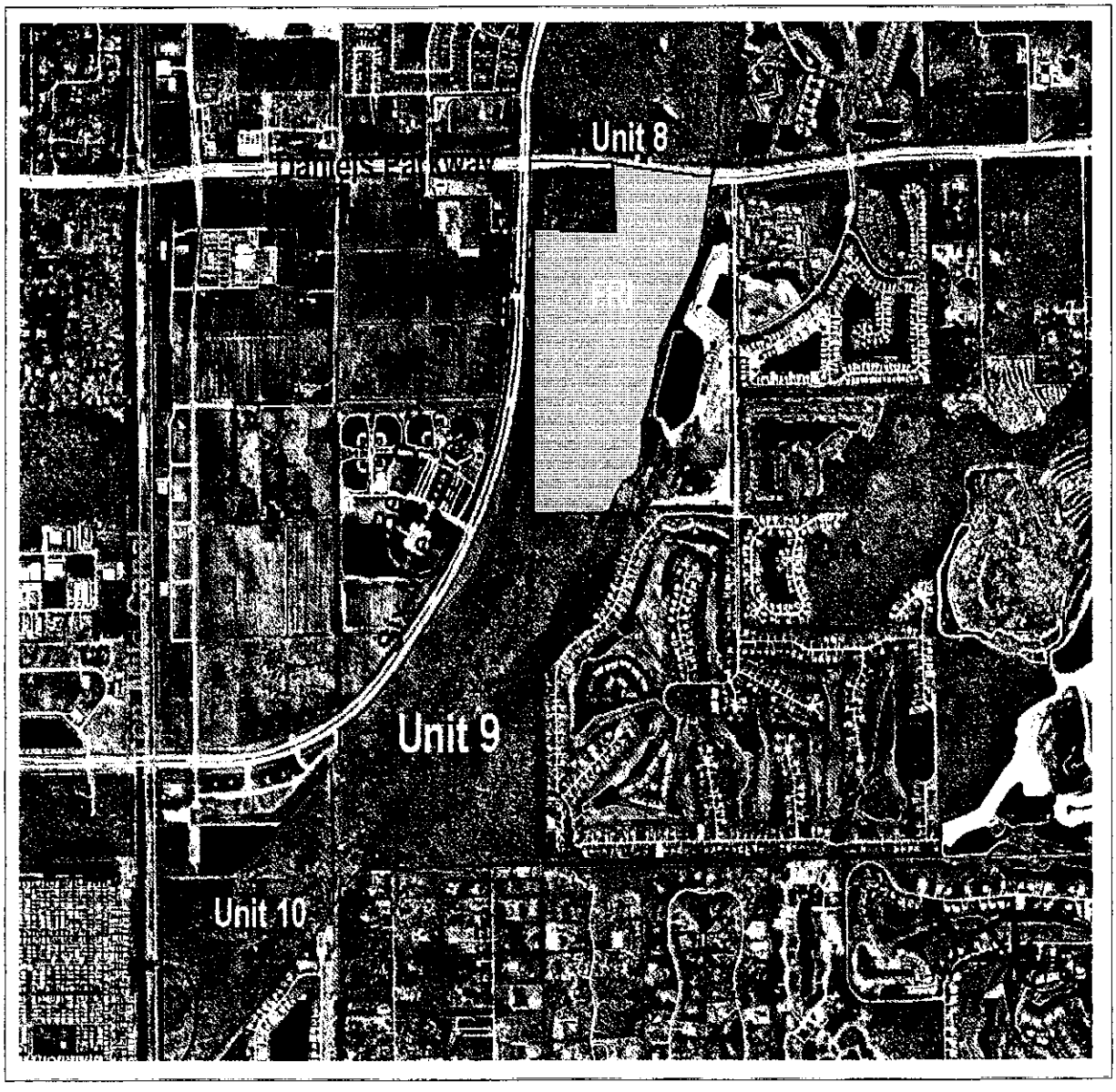
E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

F. Fire Management
   At this time, there are no areas within this unit that will be evaluated for fire management.

G. Pond Survey information
   There are 3 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

11. Special Consideration or Needs
    1. Public Use – There is currently ATV and off road vehicles that are unlawfully accessing the Preserve within this unit. Future plans for hiking trails along the berm will be considered.
    2. Boundary Protection - Currently, a portion of the eastern berm has been fenced and gated to prevent unauthorized access by ATVs and off road vehicles. Further boundary signage and fencing would increase the public awareness of the Preserve.

Map 9. Management Unit 9 for SMCSP



UNIT 10

A. Unit 10 is ~99 acres (see map 10). The northern boundary of the unit is the FPL access road and the southern boundary is the terminus of the entire slough at the Ten Mile Canal. This unit is heavily infested with Melaleuca. The western boundary is adjacent to a man made pond and commercial properties. The eastern boundary has a berm along the length of the unit to protect adjacent residential areas.

B. Hydrology – Water flows across the FPL Right of Way from unit 9 into unit 10. The berm on the eastern boundary prevents natural drainage and the ability for a high water flood plain to exist. There is a "horseshoe" flow way connecting both fixed crest weirs that discharge into the 10 mile canal. One of the weirs can be opened for flood prevention.

C. Invasive Plant Management
   1. Infestation - This unit is heavily infested with Melaleuca. Old world climbing fern, Brazilian pepper and wetlands nightshade are also scattered throughout the unit.
   2. Current control – There are no current control efforts within this unit.
   3. Future control – This unit will be part of the Metro Parkway mitigation site. All category I invasive exotic plants will be treated or removed. This project is slated to begin in 2003-4.
   4. Funding will be obtained through the Metro Parkway mitigation project.

D. Invasive Animals
   1. There are no current efforts for invasive animal control within this unit at this time.
   2. Any sightings of invasive animals will be documented and control efforts will be implemented.

E. Listed Flora and Fauna
   1. Listed species will be identified, mapped and photo documentation will be recorded. During field work days and other surveys, all listed species will be documented.
   2. Tracking of listed species will be specific to the species.

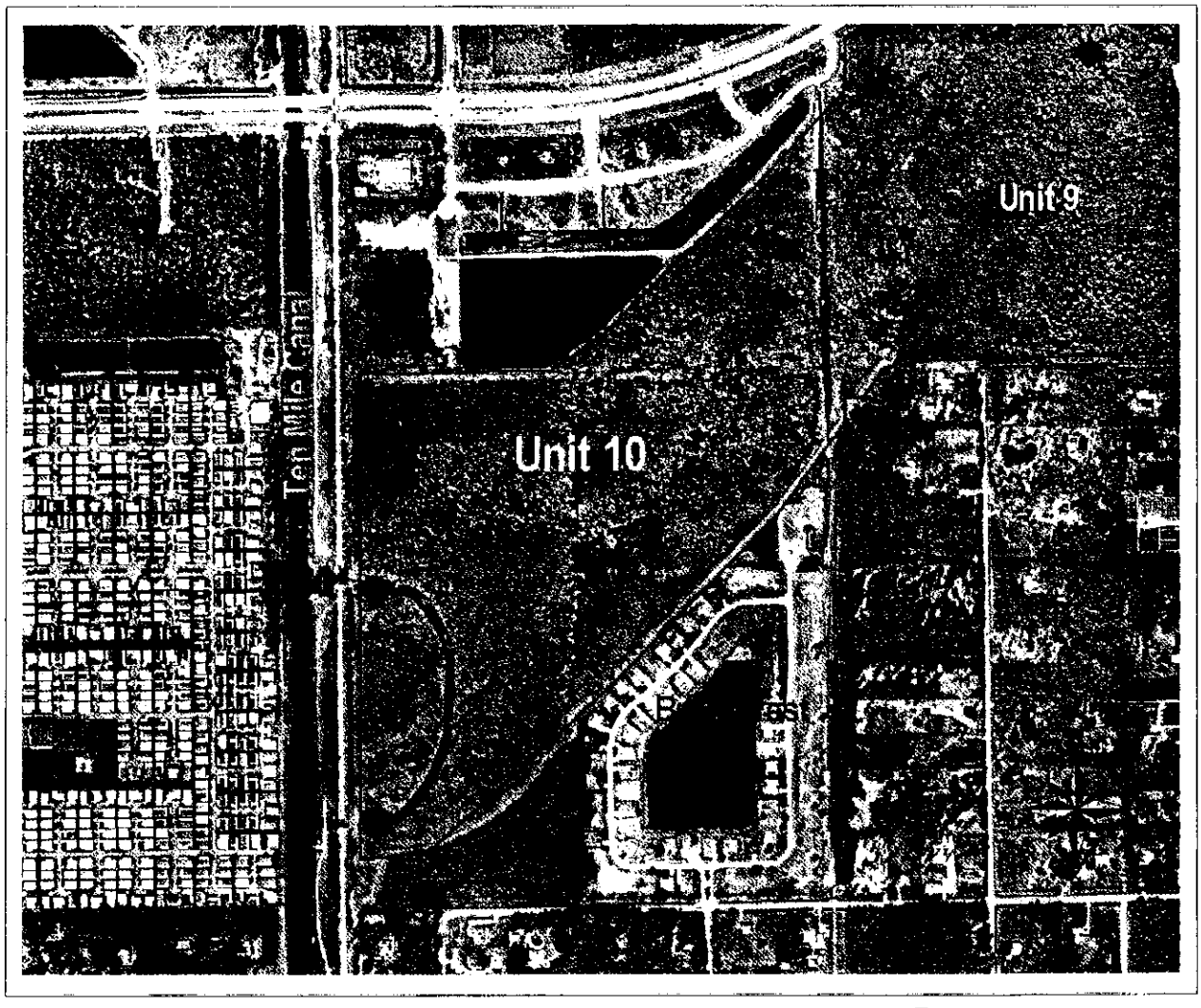
F. Fire Management
   At this time, there are no areas within this unit that will be evaluated for fire management.

G. Pond Survey information
   There are 2 areas that have been selected to survey. The information collected in the survey will be recorded and linked to GPS information. Annual surveys will be conducted at each site.

H. Special Consideration or Needs
   1. Public Use – There is currently ATV and off road vehicles that are unlawfully accessing the Preserve within this unit. Future plans for hiking trails along the berm will be looked at.

2. Boundary Protection – There are two gates on the berm to prevent unauthorized access by ATVs and off road vehicles. Further boundary signage and fencing would increase the public awareness of the Preserve.

Map 10. Management Unit 10 for SMCSP



A. Projected Timetable for Implementation

ACTION	GOAL	AGENCY/ CONTRACTOR	COST	START DATE	END DATE	PERFOMANCE MEASURE
Analysis of hydrologic data	Determine current hydroperiod	Lee County P & R SFWMD	n/a	November 2002	January 2003	Hydrology report with management recommendations
Water quality analysis	Determine current water quality and trends	Lee County P & R Lee County Natural Resources	n/a	November 2002	April 2003	Water quality report with management recommendations
Exotic vegetation mapping north of Daniels Pkwy.	Habitat mapping with species and % infestation	Lee County P & R	n/a	October 2002	June 2003	Complete exotic vegetation map
Completion of the pond survey (first year)	Survey all designated ponds with the same protocol	Lee County P & R	n/a	September 2002	November 2003	Pond survey report
Metro Parkway Mitigation Plan	Work cooperatively to finalize the plan and initiate the project	Lee County P&R, Johnson Engineering and FDOT	~2 million	Planning process is currently underway	project implementation 2003-4	Completion of project with ongoing maintenance
Identification / acquisition of buffer parcels	Map and identify owners of potential areas of acquisition	Lee County P&R, FOSMCSP, Lee County 2020 program	unknown	Currently	Ongoing	Cooperation with 2020 program acquisition efforts
Finish initial treatment of exotic plants north of Daniels Pkwy.	Work with contractors and Friends group to treat and maintain treated areas	Lee County P& R, County Contractors, FOSMCSP	unknown	Currently	December 2003	Complete initial treatment of exotic plants north of Daniels Pkwy
Removal of exotic animals	Record sightings and locate traps in heavily used areas	Lee County P&R, County Contractors	unknown	Currently	Ongoing	Yearly report on hog trapping efforts
Develop burn prescriptions / implement fire breaks	Work with DOF to approve burn plans for site specific areas	Lee County P&R, Florida DOF	n/a	January 2003	June 2003	Prescription and site preparation for each site
Boundary protection, fencing and signage	Continue fencing and use of signage for protection and public awareness.	Lee County P&R	n/a	Currently	May 2004	Boundary signs and fencing in all appropriate areas
Collection of data for listed species	During mapping and pond surveys collect data	Lee County P&R	n/a	Ongoing	Ongoing	Yearly report
Establish wildlife monitoring protocols	Research and compile information and techniques	Lee County P&R	n/a	Ongoing	Ongoing	Yearly report
Maintain cypress mitigation areas	Organize work days to maintain cypress areas	Lee County P&R, FOSMCSP	n/a	Ongoing	Ongoing	Photo documentation and yearly progress reports
Install SMCSP signage on major throughways	Propose signage on major roadways that bisect the slough.	Lee County P&R, FDOT, FOSMCSP	unknown	2004	2005	Installation of signs

Acronyms: Lee County P&R – Lee County Parks and Recreation SFWMD – South Florida Water Management District FDOT – Florida Department of Transportation
FOSMCSP – Friends of Six Mile Cypress Slough Preserve Florida DOF – Florida Division of Forestry

VIII FUNDING

Funding for projects within the slough will be allocated from the annual budget, mitigation projects and grant opportunities. Within the next five years the largest project slated for the Preserve is the Metro Parkway Mitigation Project, funded by FDOT this project will cost approximately 2 million dollars. Other projects may be funded through off-site mitigation for exotic control or restoration of wetlands. Grant writing will be an essential part of continued wildlife and vegetation studies. The nature center that is slated to be built near the existing interpretive facility will be an accumulation of private funds, Lee County funds and fund raising from the FOSMCSP.

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LIST OF APPENDICES

Appendix 1. MANAGEMENT AGREEMENT

AGREEMENT

THIS AGREEMENT, entered into this 5th day of January, 1988, between the SOUTH FLORIDA WATER MANAGEMENT DISTRICT, a public corporation of the State of Florida, (hereinafter referred to as the DISTRICT); and LEE COUNTY, a political subdivision of the State of Florida, (hereinafter referred to as the COUNTY).

WITNESSETH:

WHEREAS, the DISTRICT owns approximately 550.09 acres in the Six Mile Cypress Slough Preserve in Lee County, acquired with funds from the "Save Our Rivers" (S.O.R.) land acquisition program; and

WHEREAS, the "Save Our Rivers" Legislation called for the management and maintenance of lands acquired with S.O.R. funds "in an environmentally acceptable manner, and to the extent practicable, in such a way as to restore and protect their natural state and condition"; and

WHEREAS, the aforesaid legislation encourages the use of lands acquired with S.O.R. funds for public outdoor recreational activities compatible with the primary goal of environmental protection and enhancement; and

WHEREAS, management of these lands for environmental enhancement and outdoor recreational purposes may properly be served by their operation as a Nature Preserve.

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00) and the mutual covenants and agreements hereinafter contained and in the interest of the public served by both parties, the DISTRICT and COUNTY agree as follows:

1-5-88
C.4L

1. The purpose of this Agreement is to promote the restoration and protection of the fish and wildlife resources, habitat, and related environmental values of the tracts described herein by providing for the control and management of the public outdoor recreational activities conducted thereon and by the implementation of resource management practices.

2. The COUNTY shall undertake the environmental and recreational management of the DISTRICT owned lands described in "Exhibit A", in concert with its management of COUNTY owned lands in the proposed Nature Preserve.

3. The maintenance of the hydrologic regime and the performance of the DISTRICT'S water management responsibilities may affect the County's performance of it's responsibilities under this agreement.

4. The COUNTY must establish guidelines governing use of the property for passive resource-oriented recreational pursuits including but not limited to hiking, picnicking, fishing, nature observation and photography.

5. The COUNTY may conduct or allow to be conducted interpretive tours and programs designed to educate the public about the area's unique ecology.

6. The COUNTY may conduct habitat maintenance activities such as prescribed burning and exotic species control attendant to maintaining natural plant communities and associations.

7. The COUNTY shall control all activities to the extent necessary to prevent overuse of, and damage to, the natural features of the areas.

8. The COUNTY must obtain the DISTRICT'S written approval prior to the finalization of all development plans.

9. All costs for the development, use, operation, maintenance and administration of said property as a Nature Preserve will be the sole obligation of the COUNTY.

10. The DISTRICT hereby reserves for its own use and exempts from this Agreement:

a. Specifically, all water management uses including, but not limited to, periodic inundation, construction of works and appurtenant works. Water management uses shall take priority over all other uses including those general public recreational uses herein granted to the COUNTY, provided that the COUNTY may install and maintain water control devices as part of the management plan, consistent with DISTRICT purposes and subject to the prior approval of the DISTRICT.

b. Additionally, all uses not compatible with water management uses or with the DISTRICT'S property ownership interests, covenants, or limitations that require the land to be managed and maintained in an environmentally acceptable manner so as to restore and protect its natural state and condition. The DISTRICT shall notify the COUNTY in advance of these types of activities.

c. Generally, all other uses of the property not specifically agreed upon with the COUNTY.

11. This Agreement shall expire five (5) years from its effective date but shall be renewable automatically, absent notice of termination, for each of four (4) successive terms of five (5) years each (or a total agreement term not to exceed 25 years) at the expiration of each term.

12. The COUNTY will maintain the property above described and all improvements and appurtenances erected and located thereon in a safe, clean and serviceable condition at all times during the term of this Agreement.

13. The COUNTY and the DISTRICT will meet at least once annually to review and to discuss the management activities authorized by this Agreement and to consider any changes in the Agreement and additional rules and regulation governing public use of the lands covered by the Agreement that may be deeme

appropriate. The COUNTY shall prepare and submit for discussion at the meeting a yearly summary report to include:

a. COUNTY management and program activities

b. Status of environmental conditions

c. Status of public use

d. Review of special problems and concerns encountered ove previous year

14. The COUNTY shall submit a Six Mile Cypress Slough Pr Management Plan to the DISTRICT'S Governing Board for approval no later th (6) months from execution of this Agreement by all parties. Any subse changes to the Plan are subject to the prior approval of the DISTRICT's Gove Board.

15. Access to the managed areas under this Agreement shall be limite

a. DISTRICT and COUNTY personnel while on official busines such persons representing other agencies, units of governi and private firms as may be authorized by the DISTRICT time to time to perform work in the areas.

b. Members of the general public pursuing authorized recreat activities in accordance with rules and regulations o COUNTY.

16. The COUNTY shall neither transfer nor assign this Agreemen subcontract management of the resources or any part thereof nor grant interest, privileges or licenses whatsoever in connection with this Agree without the prior written consent of the DISTRICT.

17. To the extent permitted by Florida law, the COUNTY agre indemnify and hold harmless the DISTRICT from any claims made agains

above. Nothing contained herein shall be construed as a waiver of sovereign immunity enjoyed by the parties.

18. If and when the DISTRICT completes, under S.O.R. or other land purchasing programs, its acquisition of additional lands in or contiguous to the property described herein, the DISTRICT and the COUNTY may consider the possible addition of any such lands to this Agreement.

19. The COUNTY agrees and certifies that it will comply with Title VI of the Civil Rights Act of 1964 (PL 88-352) and other enabling acts and regulations, and accordingly no person in the United States shall, on the grounds of race, sex, creed, handicap or national origin, be excluded from participation in, be denied the benefits of or be otherwise subjected to discrimination in the management and operation of the property described herein.

20. Both parties agree that there is no conflict of interest by either party in the execution and performance of this contract.

21. This Agreement may be terminated by either party by giving the other party notice of such termination one year before the effective date of termination, or renewal under paragraph 11 above.

IN WITNESS WHEREOF, the parties hereto have set their hands on the day, month and year first above written.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BY ITS GOVERNING BOARD

By: _____ Chairman

TRW Legal Form Approved SFWMD Office of Counsel

By: _____ Date 10/9/87

LEE COUNTY

By: Bill Fussell

Title CHAIRMAN

APPROVED AS TO FORM

COUNTY ATTORNEY

Exhibit "A"

LEGAL DESCRIPTION

A tract or parcel of land lying in the South half (S 1/2) of the Northeast quarter (NE 1/4), Section 17, Township 45 South, Range 25 East, Lee County, Florida which tract or parcel is described as follows:

From the northwest corner of said fraction run southerly along the west line of said fraction for 30 feet to the south line of a country road right-of-way as described in deed recorded in Official Record Book 1141 at page 1315, Lee County Records and the point of Beginning. From said Point of Beginning run easterly along said southerly line for 75.26 feet to an intersection with the westerly line of Six Mile Parkway (250 feet wide) as described in deed recorded in Official Record Book 1141 at page 1316 of said Public Records; thence run S 20° 01' 31" W along said westerly right-of-way line to an intersection with the west line of said fraction; thence run northerly along said west line for 205.36 feet to the point of beginning.

Containing 0.18 acre more or less.

The northeast quarter (NE 1/4) of the northeast quarter (NE 1/4) and all that part of the south half (S 1/2) of the northeast quarter (NE 1/4). Section 17' Township 45 South. Range 25 East, Lee County, Florida lying easterly of the right of way for SIX MILE PARKWAY (250 feet wide) as described in deed recorded in Official Record Book 1141 at page 1316, Lee County Records.

Containing 111.56 acres more or less.

Bearings hereinabove mentioned are based on the centerline survey of Six Mile Parkway.

A tract or parcel of land lying in Section 4, Township 45 South, Range 25 East, Lee County, Florida which tract or Parcel is described as follows:

Beginning at the quarter (1/4) corner on the south line of said Section 4 run S 88° 54' 33" W along the south line of the southwest quarter (SW 1/4) for 1333.88 feet to the southwest corner of the southeast quarter (SE 1/4) of said southwest quarter (SW 1/4); thence run N 00° 39' 46" W along the west line of said fraction for 806.10 feet to an intersection with the southeasterly line of Six Mile Parkway (250 feet wide); thence run N 35° 40' 10" E along said southeasterly line for 1961.51 feet; thence run S 51°

49' 52" E for 126.50 feet; thence run N 52° 52' 58" E for 1397.72 feet; thence run N 50° 00' 12" E for 688.65 feet; thence run N 63° 58' 51" E for 792.50 feet; thence run N 43° 45' 13" E for 85.07 feet to the south line of the northeast quarter (NE 1/4) of the northeast quarter (NE 1/4) of said Section 4; thence run N 89° 06' 52" E along said south line for 303.10 feet to east line of said Section 4; thence run S 00° 44' 18" E along said east line for 2686.12 feet; thence run S 54° 05' 41" W for 115.77 feet; thence run S 73° 00' 00" W for 140.00 feet; thence run S 55° 10' 52" W for 58.82 feet; thence run N 86° 54' 50" W for 285.36 feet; thence run S 55° 29' 34" W for 156.24 feet; thence run S 71° 11' 29" W for 95.05 feet; thence run S 89° 11' 21" W for 322.80 feet; thence run S 06° 16' 04" W for 108.85 feet; thence run S 70° 16' 25" W for 105.12 feet; thence run S 85° 38' 37" W for 379.20 feet; thence run S 56° 35' 29" W for 169.92 feet; thence run S 18° 14' 51" W for 91.84 feet; thence run S 37° 53' 09" W for 246.16 feet; thence run S 01° 23' 55" E for 277.78 feet; thence run S 31° 38' 12" W for 261.19 feet to the south line of the southeast quarter (SE 1/4) of said Section 4; thence run S 88° 54' 33" W along said south line for 607.87 feet to the Point of Beginning.

Containing 209.02 acres more or less.

Bearings hereinabove mentioned are Plane Coordinate for the Florida West Zone.

A tract or parcel of land lying in the west half (W 1/2) of Section 3, Township 45 South, Range 25 East, Lee County, Florida, which tract or parcel is described as follows:

Beginning at the northwest corner of said section run N 88° 37' 03" E along the north line of said section for 1947.00 feet; thence run S 35° 18' 33" W for 275.65 feet; thence run S 14° 53' 23" W for 323.53 feet; thence run S 27° 12' 26" W for 210.15 feet; thence run S 12° 09' 26" W for 251.79 feet; thence run S 04° 51' 27" E for 340.19 feet; thence run S 18° 42' 09" W for 150.86 feet; thence run S 26° 26' 39" W for 300.81 feet; thence run S 17° 03' 20" W for 110.45 feet; thence run S 32° 54' 59" W for 155.78 feet; thence run S 31° 07' 28" W for 305.01 feet; thence run S 45° 09' 10" W for 183.23 feet; thence run S 20° 55' 15" W for 222.23 feet; thence run S 15° 41' 59" W for 368.41 feet; thence run S 23° 59' 40" W for 476.74 feet; thence run S 62° 35' 10" E for 105.53 feet; thence run S 44° 41' 03" W for 147.83 feet; thence run S 10° 07' 57" W for 139.90 feet; thence run S 27° 24' 50" W for

106.63 feet; thence run S 05° 09' 54" W for 54.09 feet; thence run N 85° 03' 36" W for 211.24 feet; thence run S 67° 21' 52" W for 230.59 feet; thence run S 24° 05' 48" W for 100.09 feet; thence run S 10° 33' 57" W for 104.79 feet to the west line of said Section 3; thence run N 00° 44' 18" W for 4004.55 feet to the Point of Beginning.

Containing 104.49 acres more or less.

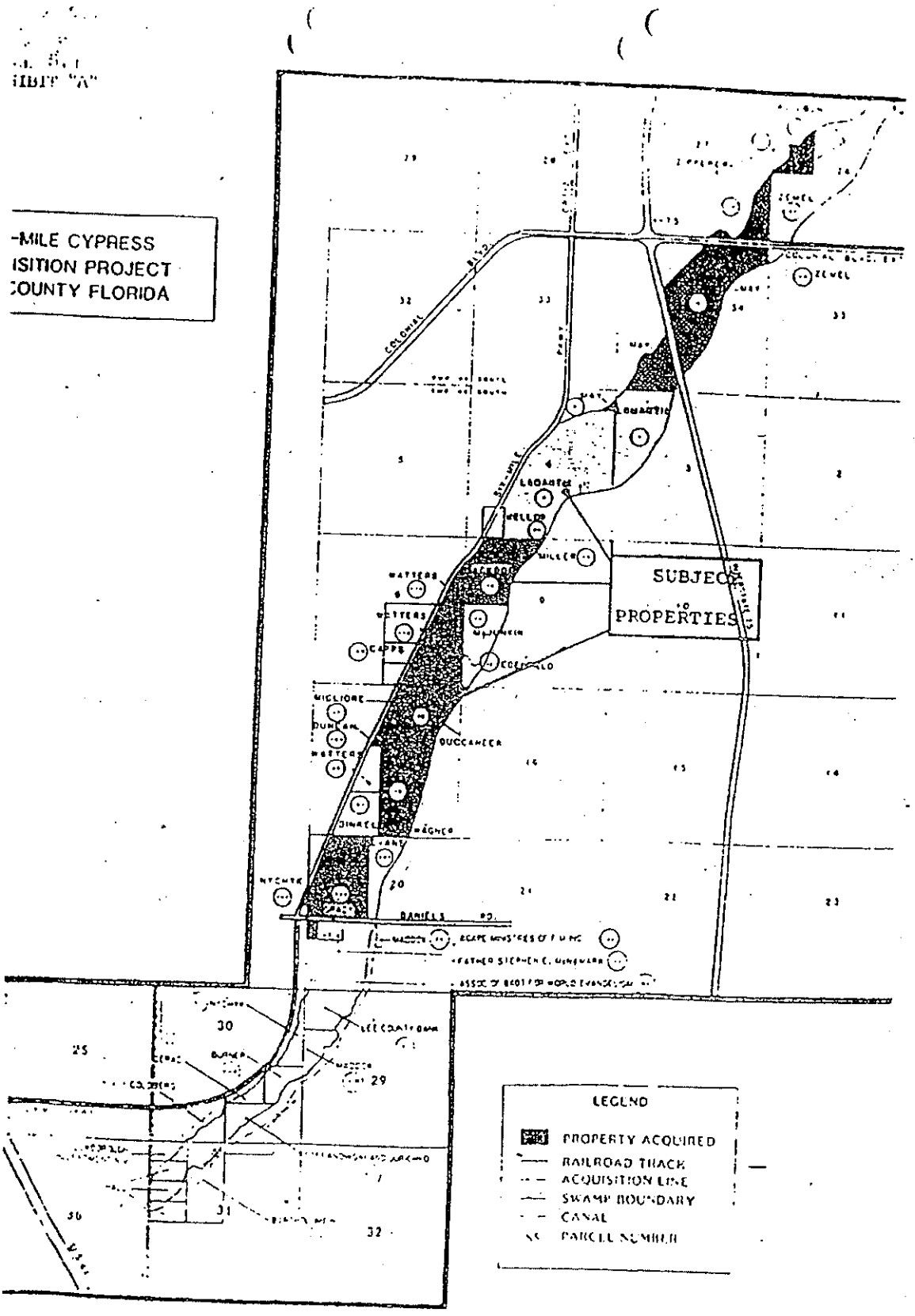
Bearings hereinabove mentioned are Plane Coordinate for the Florida West Zone.

A tract or parcel of land lying in the northwest quarter (NW 1/4) of Section 9, Township 45 South, Range 25 East, Lee County, Florida which tract or parcel is described as follows:

Beginning at the northeast corner of said fraction run S 01° 17' 12" E along the east line of said fraction for 445 feet; thence run S 54° 15' W for 138 feet; thence run S 23° 38' W for 156 feet; thence run S 32° 50' W for 333 feet; thence run S 45° 48' W for 116 feet; thence run S 10° 11' 22" W for 145.26 feet; thence run S 35° 11' 22" W for 391.20 feet; thence run S 42° 54' W for 198 feet; thence run S 16° 37' W for 137 feet; thence run S 18° 19' E for 116 feet; thence run S 64° 29' 06" E for 374.25 feet; thence run S 17° 28' 25" W for 620.57 feet; thence run N 76° 21' 58" W for 268.08 feet; thence run S 69° 31' 50" W for 105.28 feet; thence run S 42° 27' 53" W for 89.83 feet to an intersection with the south line of said fraction; thence run S 88° 48' 54" W along said south line for 1502.99 feet to the southwest corner of said fraction; thence run N 01° 42' 49" W along the west line of said fraction and said section for 1631.64 feet to an intersection with the southeasterly line of Six Mile Parkway (250 feet wide); thence run northeasterly, along said southeasterly line along the arc of a curve to the right of radius 5604.58 feet (chord bearing N 32° 45' 28" E) for 569.60 feet to a point of tangency; thence continue along said southeasterly line N 35° 40' 10" E for 684.23 feet to an intersection with the north line of said fraction and said section; thence run N 88° 54' 33" E along said north line for 1930.02 feet to the Point of Beginning.

Containing 124.84 acres more or less.

Bearings hereinabove mentioned are Plane Coordinate for the Florida West Zone.



PAGE 5 of EXHIBIT "A"

Agenda Item No. C-4-G

RESOLUTION NO. 87-7-10

RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS, LEE COUNTY, AUTHORIZING CONVEYANCE OF COUNTY OWNED LAND IN THE SIX MILE CYPRESS ACQUISITION PROJECT TO THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) A PUBLIC CORPORATION OF THE STATE OF FLORIDA UNDER THE SAVE OUR RIVERS PROGRAM (S.O.R.) FOR $1,221,221.00.

WHEREAS, the South Florida Water Management District (SFWMD) is allocated Two Million Dollars from the Save Our Rivers Program to Lee County for the purpose of completion of the Six Mile Cypress Acquisition Project.

WHEREAS, on March 13, 1987, the SFWMD made application for and granted to purchase 550.09 acres from Lee County for $1,221,221.00 which is the appraised value paid for the 550.09 acres by the County pursuant to appraisals obtained by the County and approved by the SFWMD under the S.O.R. Program. The balance of the S.O.R.'s allocation ($778,779.00) will be issued to the County only after this amount is expended and more funds are necessary to complete the acquisition,

WHEREAS, the appraised value of the parcels remaining to be acquired is estimated to be $1,469,700.00 and the County presently has $497,265.50 remaining in its acquisition fund,

WHEREAS, pursuant to Section 125.38 F.S., the Board of County Commissioners has authority to sell County property to the SFWMD and that the sale of said land does not require advertisement because the SFWMD is an public corporation of the State of Florida, pursuant to Section 373.069 F.S.,

WHEREAS, the Board of County Commissioners has determined and is satisfied that the property is not needed for County purposes in that it will be in public ownership under the State of Florida's Save Our Rivers Program through the SFWMD for water management, conservation and recreational purposes and that the proceeds from the sale will enable the County to acquire additional lands in the Six Mile Cypress Project.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, that this Board accepts the appraised Fair Market Value offering for purchase of the 550.09 acres in the Six Mile Cypress Acquisition Project in the amount of $1,221,221.00; authorizes conveyance of said land as described in Exhibit A to the South Florida Water Management District under the Save Our Rivers Program; and authorizes the execution of the Purchase Agreement and the County Deed for and behalf of Lee County for such purposes, in substantially the forms attached hereto and made a part hereof.

The foregoing Resolution was offered by Commissioner Slisher, who moved its adoption. The motion was seconded by Commissioner Wallace, and upon being put to a vote, the vote was as follows:

District #1	-	Porter J. Goss	AYE
District #2	-	Charles L. Bigelow	ABSENT
District #3	-	Mary Ann Wallace	AYE
District #4	-	Bill Fussell	AYE
District #5	-	Donald D. Slisher	AYE

This Resolution was duly passed and adopted this 21st day of July, 1987.

LEE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

By: Bill Fussell
Chairman

CHARLIE GREEN, CLERK

By: Mary Armentrout
Deputy Clerk

Approved by County Attorney as to form and legal sufficiency. James Yaeger

(0655n)

SECTION THREE

AUTHORITY AND ESTATE

By virtue of the authority granted to the Board of County Commissioners of Lee County by Chapters 73, 74, 125, and 127, Florida Statutes, and all other statutory or common law which shall grant to the Board the power to institute and proceed with acquiring property under the exercise of the power of eminent domain, the Board hereby authorizes and directs the County Attorney's Office to commence and prosecute any and all proceedings necessary to acquire in fee simple the property described in Exhibit "A" for the above-described public use or purpose.

The foregoing Resolution was offered by Commissioner Manning, who moved its adoption. The motion was seconded by Commissioner Wallace, and, upon being put to a vote was as follows:

CHARLES L. BIGELOW	-	ABSENT
BILL FUSSELL	-	ABSENT
MARY ANN WALLACE	-	AYE
DONALD D. SLISHER	-	AYE
JOHN E. MANNING	-	AYE

DULY PASSED AND ADOPTED this 3rd day of August, 1988.

ATTEST:
CHARLIE GREEN, CLERK

By: Janet S. Forbes
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

By: Bill Fussell
Chairman

Approved as to Form:

Lee County Attorney's Office

(5501L)

RESOLUTION NO. 88-8-5

RESOLUTION OF NECESSITY
SIX MILE CYPRESS SLOUGH PRESERVE

WHEREAS, the Board of County Commissioners of Lee County, Florida, desires to exercise its right to condemn property for public use or purpose and that the property to be condemned is necessary for that use.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, that:

SECTION ONE

The Board of County Commissioners Resolution No. 76-7-16 provides for the acquisition of Six Mile Cypress Slough Preserve located in central Lee County. It contains approximately 2,000 acres and extends in a northeast to southwest direction, generally south of State Road 82 at Buckingham Road; east of US 41, and north of Alico Road, with a parallel orientation to the Caloosahatchee River. Approximately 1,554± acres of this 2,000 have been acquired through voluntary acquisition or are protected by Planned Unit Developments.

SECTION TWO

USE, NECESSITY AND DESCRIPTION OF PROPERTY

The Board finds that the property described in the attached Exhibit "A" attached hereto consisting of 13 pages and identified as Parcel Numbers N2A, N2B, N6B, N15, N20, S1, S5 and S10 is necessary and being acquired for the following use or purpose:

To ensure continuity and unity of ownership or control of the Six Mile Cypress Slough and to enable the implementation of the Six Mile Cypress Management Plan. The Management Plan and concomitant control of the land will allow restriction of the Slough's use to preservation of land, water supply and wildlife, and certain public recreation facilities to be developed and managed by the County in cooperation with the State of Florida Save our Rivers Program, as well as any public use or plan the County deems necessary to facilitate the preservation of Six Mile Cypress Slough.

Appendix 2. PRELIMINARY LIST OF VASCULAR PLANTS

Appendix II Preliminary Vascular Plant List for Six Mile Cypress Slough Preserve

Bold = Exotic; *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Acacia auriculiformis	No	Mesic	<1	1-100	South	Australia	GB 958
Acalypha gracilliens							
Acer rubrum							
Acmella oppositifolia var. repens							
Agrostichum danaeifolium							
Aeschynomene americana							
Agalinis fasciculata							
Agalinis linifolia							
Aletris lutea							
Alternanthera philoxeroides	Yes	Wet	1-100	101-1,000	Throughout	South America	
Amaranthus australis							
Ambrosia artemisiifolia							
Ammannia latifolia							
Ampelopsis arborea							
Amphicarpum muhlenbergianum							
Anachelium cochleatum var. triandrum							
Andropogon glomeratus var. pumilus							
Andropogon virginicus var. decipiens							
Andropogon virginicus var. glaucus							
Annona glabra							
Aristida beyrichiana							
Aristida palustris							
Aristida patula							
Aristida purpurascens							
Aristida spiciformis							
Asclepias incarnata							
Asclepias lanceolata							
Asimina reticulata							
Aster bracei							
Aster carolinianus							
Aster subulatus							
Axonopus fissifolius							
Axonopus furcatus							
Azolla caroliniana							
Baccharis angustifolia							
Baccharis glomeruliflora							
Baccharis halimifolia							
Bacopa carolinana							
Bacopa monnieri							
Bafaria racemosa							
Bidens alba var. radiata							
Bigelowia nudata ssp. australis							
Bischofiajavanica	Yes	Mesic	<1	1-100	South, Central	Tropical Asia	
Blechnum semilatum							

Bold = Exotic; *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Boehmeria cylindrica							
Buchnera americana							
Burmannia capitata							
Callicarpa americana							
Campyloneurum phyllitidis							
Canna flaccida							
Carex gigantea							
Carex lupulina							
Carex vexans							
Carphephorus corymbosus							
Carphephorus odoratissimus							
Carya aquatica							
Cassytha filiformis							
Cenchrus incertus							
Centella asiatica							
Cephalanthus occidentalis							
Chamaecrista nictitans var. aspera							
Chamaesyce hirta							
Chamaesyce hypericifolia							
Chamaesyce hyssopifolia							
Chamaesyce opthalmica							
Chaptalia tomentosa							
Chrysopogon pauciflorus							
Cirsium horridulum							
Cladium jamaicense							
Coelorachis rugosa							
Commelina diffusa							
Commelina diffusa var. gigas							
Conoclinum coelestinum							
Conyza canadensis var. pusilla							
Coreopsis tinctoria							
Coreopsis leavenworthii							
Crinum americanum							
Crotalaria pallida var. obovata	No	Mesic	<1	1-100	Throughout	Africa	
Crotalaria rotundifolia							
Crotpn glandulosus var. glandulosus							
Cupaniopsis anacardioides	Yes	Mesic	<1	1-100	South, Central	Australia	
Cuphea carthagenensis	No	Wet	<1	101-1,000	Throughout	South and Central America	
Cuscuta pentagona							
Cynanchum scoparium							
Cynodon dactylon	No	Mesic	1-100	1,001-10,000	Throughout	Africa	BW 520
Cyperus articulatus							
Cyperus croceus							
Cyperus distinctus							

Bold = Exotic; *Italics* = Cultivated

Six Mile Cypress Preserve - Preliminary List of Vascular Plants

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Cyperus erythrorhizos							
Cyperus esculentus	No	Mesic	<1	101-1,000	Throughout	Old World	BW 497
Cyperus haspan							
Cyperus ligularis							
Cyperus odoratus							
Cyperus polystachyos							
Cyperus retrorsus							
Cyperus surinamensis							
Dactyloctenium aegyptium	No	Mesic	<1	101-1,000	Throughout	Old World Tropics	
Desmodium incanum							
Desmodium triflorum	No	Mesic	<1	1,001-10,000	Throughout	Old World	
Dichanthelium aciculare							
Dichanthelium commutatum							
Diodia virginiana							
Drosera capillaris							
Dyschoriste oblongifolia							
Echinochloa paludigena							
Echinochloa walteri							
Eclipta prostrata							
Eichhornia crassipes		Wet	1-100	1,001-10,000	Throughout	Brazil	BW 528
Eleocharis baldwinii							
Eleocharis cellulosa							
Eleocharis geniculata							
Eleocharis nigrescens	Yes	Mesic	1-100	1,001-10,000	Throughout	Pantropical	BW 766
Elephantopus elatus							
Eryonurus tripsacoides							
Elytraria caroliniensis var. angustifolia							
Emilia fosbergii				101-1,000	Throughout	Old World	BW519
Encyclia tampensis							
Epidendrum rigidum							
Eragrostis ciliaris	No	Mesic	<1	1-100	Throughout	New World Tropics	
Eragrostis elliottii							
Eragrostis virginica							
Erechtites hieracifolia							
Erigeron quercifolius							
Erigeron vernus							
Eriocaulon decangulare							

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Eriochloa michauxii							
Eryngium baldwinii							
Eryngium yuccifolium							
Eulophia alta							
Eupatorium capillifolium							
Eupatorium leptophyllum							
Eupatorium mikanioides							
Eupatorium mohrii							
Eupatorium rotundifolium							
Euphorbia polyphylla							
Eustachys glauca							
Eustachys petraea							
Euthamia caroliniana							
Evolvulus sericeus							
Ficus aurea							
Ficus microcarpa	Yes	Mesic	<1	1-100	South, Central	Old World	8W 179
Fimbristylis autumnalis							
Fimbristylis puberula							
Fimbristylis spadicea							
Flaveria linearis							
Fraxinus caroliniana							
Fuirena breviseta							
Fuirena pumila							
Fuirena scirpoidea							
Galactia elliotii							
Galactia regularis							
Gaura angustifolia							
Gaylussacia dumosa							
Gomphrena serrata	No	Mesic	<1	1-100	Throughout	Tropical America	8W 525
Gratiola ramosa							
Habenaria quinqueseta							
Harrisella filiformis							
Hedyotis procumbens							
Hedyotis uniflora							
Helianthus debilis							
Heliotropium polyphyllum							
Hemarthria altissima	No	Mesic	<1	1-100	South, Central	Pantropical	8W 172
Heterotheca subaxillaris							
Hieracium megacephalon							
Hydrocotyle umbellata							
Hydrocotyle verticillata							
Hydrolea corymbosa							
Hymenachne amplexicaulis	Yes	Wet	1-100	1,001-10,000	South, Central	West Indies	GB 964
Hypericum brachyphyllum							

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Vouche
Hypericum cistifolium							

Hypericum fasciculatum							
Hypericum hypericoides							
Hypericum reductum							
Hypericum tetrapetalum							
Hypoxis curtissii							
Hypoxis juncea							
Hyptis alata							
Ilex cassine							
Ilex glabra							
Ipomoea alba							
Ipomoea sagittata							
Iris hexagona							
Iva microcephala							
Juncus effusus var. solutus							
Juncus marginatus							
Juncus megacephalus							
Juncus polycephalus							
Juncus scirpoides							
Juniperus virginiana							
Justicia angusta							
Lachnocaulon anceps							
Lachnocaulon engleri							
Lechea torrey							
Leersia hexandra							
Lemna valdiviana							
Leptochloa fascicularis							
Leucaena leucocephala	No	Mesic	<1	1-100	South, Central, North	Caribbean?	
Liatris gracilis							
Liatris tenuifolia							
Lilium catesbaei							
Lindernia crustacea	No	Mesic	~1	101-1,000	Throughout	Indo-Malaya	BW 764
Lindernia dubia var. anagatiidae							
Linum medium var. texanum							
Lipocarpha micrantha							
Liquidambar styraciflua							
Lobelia glandulosa							
Lobelia paludosa							
Ludwigia alata							
Ludwigia curtissii							
Ludwigia maritima							
Ludwigia microcarpa							
Ludwigia octovalvis							
Ludwigia peruviana							

Bold Exotic; *Italics* Cultivated

Six Mile Cypress Preserve - Preliminary List of Vascular Plants

Bold = Exotic; *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Ludwigia repens							
Ludwigia simpsonii							
Lycopus rubellus							
Lygodesmia aphylla							
Lygodium microphyllum	Yes	Wet	<1	1-100	South, Central	Asia	BW510
Lyonia fruticosa							
Lythrum alatum var. lanceolatum							
Magnolia virginiana							
Malaxis spicata							
Mecardonia acuminata ssp. peninsularis							
Melaleuca quinquenervia	Yes	Wet	1-100	10,001-100,000	South, Central	Australia	
Melanthera nivea							
Melochia spicata							
Melothria pendula							
Micranthemum umbrosum							
Mikania scandens							
Mitreola petiolata							
Mitreola sessilifolid							
Muhlenbergia capillaris							
Murdannia nudiflora	No	Mesic	<1	1-100	Throughout	Asia	BW 774
Myrica cerifera							
Myriophyllum heterophyllum							
Nephrolepis cordifolia	Yes	Mesic	<1	101-1,000	Throughout	Unknown	
Nephrolepis exaltata							
Nothoscordum bivalve							
Nymphaea elegans							
Nyssa *sylvatica var. biflora*							
Osmunda regalis var. spectabilis							
Oxalis corniculata							
Oxypolis filiformis							
Panicum anceps							
Panicum dichotomiflorum							
Panicum hemitomon							
Panicum hians							
Panicum repens	Yes	Wet	1-100	1,001-10,000	Throughout	Tropical America	BW 524
Panicum rigidulum							
Panicum tenerum							
Parthenocissus quinquefolia							
Paspalum laeve							
Paspalum monostachyum							
Paspalum notatum	No	Mesic	1-100	1,001-10,000	Throughout	South America	
Paspalum repens							
Paspalum setaceum							
Paspalum urvillе	No	Mesic	<1	101-1,000	Throughout	South America	BW 527

Six Mile Cypress Preserve - Preliminary List of Vascular Plants

Bold = Exotic; *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range
Passiflora suberosa						
Pectis glaucescens						
Pectis linearifolia						
Persea palustris						
Phlebodium aureum						
Phoradendron leucarpum						
F;hyla nodiflora						
F;hyllanthus caroliniensis var. saxicola						
Phyllanthus urinaria	No	Mesic	<1	1-100	Throughout	Old World
Ph ysalis walter						
Phystegia purpurea						
Piloblephis rigida						
Pinguicula pumila						
Pinguicula sp.						
Pinus elliothi var. densa						
PTnqueta carolinana						
Pistia stratiotes	Yes	Wet	1-100	>100,000	Throughout	Tropical America
Pluchea odorata						
Piuchea rosea						
Polygala balduinji						
Polygala grandiflora						
Polygala incarnata						
Polygala lutea						
Polygala setacea						
Polygonella polygama var. polygama						
Polygonum densiflorum						
Polygonum hydropiperoides						
Polygonum punctatum						
Polypodium polypodioides var. michauxiana						
Polypremum procumbens						
Polystachya concreta						
Pontederia cordata						
Portulaca amilis	No	Mesic	<1	1-100	Throughout	South America
Proserpinaca palustris						
Proserpinaca pectinata						
Psidium cattielanum	Yes	Mesic	(1	1-100	South, Central	Tropical America
Psilotum nudum						
Psychotria suizneri						
Pteridium aquilinum var. caudatum						
Pteridium aquilinum var. pseudocaudatum						
Pteri5 vittata	Yes	Mesic	<1	101-1,000	Throughout	Eastern Asia
Pterocaulon pyncnostachyum						
Ptilimnium capillaceum						
Quercus laurifolia						

Six Mile Cypress Preserve - Preliminary List of Vascular Plants

Bold = Exotic; *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range	Voucher
Quercus minima							
Quercus virginiana							
Rapanea punctata							
Rhexia mariana							
Rhexia nuttallii							
Rhynchelytrum repens	No	Mesic	1-100	101-1,000	Throughout	South Africa	BW 524
Rhynchospora colorata							
Rhynchospora corniculata							
Rhynchospora divergens							
Rhynchospora fascicularis							
Rhynchospora fernaldii							
Rhynchospora intermedia							
Rhynchospora inundata							
Rhynchospora microcarpa							
Rhynchospora millacea							
Rhynchospora nitens							
Rhynchospora odorata							
Rhynchospora tracyi							
Rotala ramosior							
Rudbeckia hirta							
Ruellia sp.							
Rumex verticillatus							
Sabal palmetto							
Sabatia bartramii							
Sabatia brevifolia							
Sabatia calycina							
Sabatia stellaris							
Saccharum giganteum							
Sacciolepis indica	Yes	Mesic	1-100	1,001-10,000	Throughout	India	BW 763
Sacciolepis strata							
Sacoila lanceolata							
Sagittaria filiformis							
Sagittaria graminea var. chapmanii							
Sagittaria lancifolia							
Salix caroliniana							
Salvinia minima							
Samolus ebracteatus							
Sarcostemma clausum							
Schinus terebinthifolius	Yes	Mesic	101-1,000	>100,000	South, Central, North	Brazil and Paraguay	BW 783
Schizachyrium rhizomatum							
Schoenolirion albiflorum							
Schoenus nigricans							
Scirpus pungens							
Scirpus tabernaemontani							

Additional Species
Six Mile Cypress Preserve - Preliminary List of Vascular Plants

Bold = Exotic: *Italics* = Cultivated

	Nat. Area?	Habitat	Acreage	Pop. Size	Florida Range	Natural Range
Dioscorea bulbifera	**Yes**	**Mesic**	**<1**	**1-100**	**Throughout**	**Asia**
Manisura rugosa						
Solanum diphyllum	**Yes**	**Mesic**	**<1**	**1-100**	**South Florida**	**Asia**

Appendix 3.IRC: Excerpt from "Rare Plants of South Florida: Their History and Restoration"

Six Mile Cypress Slough Preserve

Location: Lee County.
Manager: Lee County.
Size: 2089.51 acres (Jue et al., 2001).

Existing plant data: Terrestrial Environmental Specialists, Inc. (1984) and Bradley et al. (1997b) prepared preliminary lists of vascular plants. The authors have made field observations. R. Clark, the authors, and others have collected herbarium specimens. The IRC Website (Gann et al., 2001b) provides an amended list of vascular plants.

Critically imperiled plants protected only at Six Mile Cypress Slough Preserve: Crowpoison (*Nothoscordum bivalve*).
Other critically imperiled plants present at the site: Giant sedge (*Carex gigantea*), rough barnyard grass (*Echinochloa muricata*), Engler's bogbuttons (*Lachnocaulon engleri*), shade mudflower (*Micranthemum umbrosum*), Browne's savory (*Micromeria brownei* var. *pilosiuscula*), oak mistletoe (*Phoradendron leucarpum*), Fernald's beaksedge (*Rhynchospora fernaldii*), American elm (*Ulmus americana*), and Florida mudmidget (*Wolffiella gladiata*).

Extirpated plants collected in the vicinity of the site: Smallfruit spikerush (*Eleocharis microcarpa*).

Preliminary recommendations:

- Voucher *Carex gigantea*, *Micranthemum umbrosum*, *Micromeria brownei* var. *pilosiuscula*, and *Wolffiella gladiata*.
- Map all critically imperiled plants at least every three years.
- Monitor all critically imperiled plants at least every year.
- Consider introduction of *Eleocharis microcarpa*.

Additional data:

Listed Plants:	**US**	**FL**	**FNAI**
Elytraria caroliniensis var. *angustifolia*			S2
Encyclia cochleata		E	S2
Encyclia tampensis		C	
Epidendrum anceps		E	
Epidendrum rigidum		E	
Harrisella filiformis		T	
Lilium catesbaei		T	
Osmunda regalis var. *spectabilis*		C	
Polystachya concreta		E	
Sacoila lanceolata var. *lanceolata*		T	
Tillandsia balbisiana		T	
Tillandsia fasciculata var. *densispica*		E	
Tillandsia flexuosa		T	S3
Tillandsia utriculata		E	
Tillandsia variabilis		T	
Tripsacum floridanum		T	S2
Vernonia blodgettii			S3

FLEPPC Category I Exotics: *Acacia auriculiformis, Bischofia javanica, Cupaniopsis anacardioides, Eichhornia crassipes, Eugenia uniflora, Ficus microcarpa, Hymenachne amplexicaulis, Lygodium microphyllum, Melaleuca quinquenervia, Nephrolepis cordifolia, Panicum repens, Pistia stratiotes, Psidium cattleianum, Schinus terebinthifolius, Senna pendula* var. *glabrata, Solanum tampicense, Solanum viarum,* and *Urochloa mutica.*

FLEPPC Category II Exotics: *Alternanthera philoxeroides, Leucaena leucocephala, Pteris vittata, Rhynchelytrum repens, Urena lobata,* and *Wedelia trilobata.*

Appendix 4. Lee County BOCC Resolution #76-7-16

Resolution No. 76-7-16

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

WHEREAS, the Board of County Commissioners of Lee County, Florida, is vitally interested in preserving the natural beauty and environment of Lee County; and,

WHEREAS, the Six-Mile Cypress Swamp performs many functions which not only serve to enhance and preserve the sensitive environmental nature of Lee County, but also is vitally important to the continued health and welfare of the citizens of Lee County; and,

WHEREAS, the best interest of the citizens of Lee County, Florida, will be served by the purchase of the Six-Mile Cypress Swamp in order to protect the swamp and to provide for water conservation, wildlife management and recreational facilities.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, that:

SECTION ONE.

This property is being purchased to preserve the Six-Mile Cypress Swamp and to provide for water conservation, wildlife management and recreational facilities.

SECTION TWO.

The boundaries of the proposed purchase of the Six-Mile Cypress Swamp consists of the following lands or portions thereof:

A strip or parcel of cypress land running Southeasterly-Northeasterly and varying in width from one thousand feet (1,000') to two thousand five hundred feet (2,500') lying in Sections 26, 27, 34 and 35, Township 44 South, Range 25 East and in Sections 3, 4, 8, 9, 17, 20, 29, 30 and 31, Township 45 South, Range 25 East; as shown on U.S. Geological Quadrangle map entitled— "Fort Myers S.E., Fla." (N2630-W8145/7.5) 1958- photo revised 1972. Said parcel of land being commonly referred to as "The Six Mile Cypress".

SECTION THREE.

EXPENDITURE.

The maximum millage assessment shall be 0.5 mills per year for a maximum levy of two consecutive years in order to purchase the

Six-Mile Cypress Swamp or such portions thereto, which said maximum millage assessment will allow and to provide for water conservation, wildlife management and recreational facilities. This millage assessment shall be in addition to the ten mill cap as set forth by the Florida Constitution for local taxes for all county purposes.

SECTION FOUR.

EFFECTIVE DATE.

This Resolution shall be effective upon the affirmative vote of a majority of those voting in the General Election to be held on the 2nd day of November, 1976. All qualified electors in Lee County shall be entitled to participate.

SECTION FIVE.

POLLING PLACE.

Said election shall be held at the polling places heretofore designated in Lee County, Florida.

SECTION SIX.

HOURS OF ELECTION.

The polls shall be open at 7 o'clock a.m. and close at 7 o'clock p.m. Said election shall be conducted according to the requirements of law governing General Elections excepting as herein otherwise provided. Absentee voting shall be permitted upon compliance of applicable provisions of general law. The ballot to be used in said election shall be that portion of cardboard or paper or other material within the ballot frame of the voting machine which shall contain the question to be voted upon and which said ballot shall be in substantially the following form:

OFFICIAL BALLOT.

REFERENDUM ELECTION.

DO YOU FAVOR THE IMPOSITION OF A MILLAGE LEVY OF .5 MILLS PER YEAR FOR A MAXIMUM LEVY OF TWO CONSECUTIVE YEARS TO PURCHASE THE SIX-MILE CYPRESS SWAMP OR SUCH PORTIONS THEREOF WHICH CAN BE PURCHASED PURSUANT TO SAID MILLAGE LEVY, TO PROVIDE FOR WATER CONSERVATION, WILDLIFE MANAGEMENT AND RECREATIONAL FACILITIES.

FOR _____

AGAINST _____

SECTION SEVEN.

CANVASSING.

Said election officials shall conduct said election, canvass the ballots and certify the same to the Board of County Commissioners of Lee County, Florida, who shall canvass the same and declare the results thereof and such return shall be recorded in the Minutes of the Board at the first meeting after such certification.

SECTION EIGHT.

DELIVERING BALLOTS.

Delivering the ballots to the election officials shall be in the manner and form as required therein at a General Election.

SECTION NINE.

Be it further resolved that publication of notice of this Referendum shall be had in a newspaper of general circulation in Lee County, Florida; the first publication to be made not less than thirty (30) days prior to the 2nd day of November, 1976, and that said notice be published once a week for four (4) consecutive weeks and that said Referendum Election be otherwise held in accordance with the Election Laws of the State of Florida.

THE FOREGOING RESOLUTION was offered by Commissioner Sayers who moved its adoption. The motion was seconded by Commissioner Bowen and, upon being put to a vote, the vote was as follows:

DICK SAYERS	AYE
L. H. BOB WHAN	AYE
JAMES M. SWEENEY, JR.	ABSENT
BETTY BOWEN	AYE
GEORGE A. GOLDTRAP, JR.	AYE

DULY PASSED AND ADOPTED in regular session this 14th day of July, 1976.

ATTEST:
SAL GERACI, CLERK

By: _____
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

By: _____
Chairman

Approved As To Form.
By _____
County Attorney