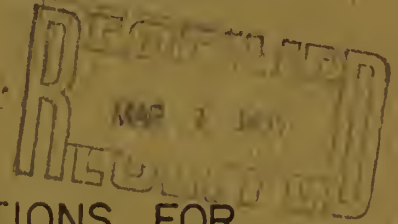


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DSP-BLP-C-2-9-73



REPORT CA-73-2

FINAL REPORT AND RECOMMENDATIONS FOR  
THE BIG CYPRESS AREA OF  
CRITICAL STATE CONCERN

TO THE STATE OF FLORIDA ADMINISTRATION COMMISSION

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GOVERNOR

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SECRETARY OF STATE

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Division of State Planning  
Bureau of Land and Water Management



*Mark D. Stern*

DSP-BLP-C-2-9-73

REPORT NO. CA 73-2

FINAL REPORT AND RECOMMENDATIONS

FOR

THE BIG CYPRESS AREA OF CRITICAL STATE CONCERN

COLLIER, DADE AND MONROE COUNTIES, FLORIDA

OCTOBER, 1973

TO THE

STATE OF FLORIDA

ADMINISTRATION COMMISSION

BY THE

DEPARTMENT OF ADMINISTRATION

DIVISION OF STATE PLANNING

BUREAU OF LAND PLANNING

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## REPORT IN BRIEF

In 1973 the Florida Legislature passed the Big Cypress Conservation Act for the purpose of conserving and protecting the natural and economic resources and scenic beauty of the Big Cypress Area of Florida. In enacting this law, the Legislature declared that uncontrolled development within the Big Cypress Area would have a significant regional and state-wide impact upon environmental and natural resources and designated the Big Cypress Area as an Area of Critical State Concern. The Division of State Planning was directed to recommend a definitive boundary and land development regulations for this Area to the Administration Commission. In addition, the Legislature appropriated \$40 million for acquisition of the proposed Federal Big Cypress National Fresh Water Reserve. This sum is to be matched by approximately \$116 million of Federal funds.

Pursuant to the Big Cypress Conservation Act of 1973, the Critical Area must include the proposed Federal Big Cypress National Fresh Water Reserve together with contiguous land and water areas ecologically linked to the Everglades National Park, estuarine fisheries of South Florida, or the fresh water aquifer of South Florida. After analysis, the Division of State Planning concluded that the major development pressures affecting these specified resources relate to an important ecological link--water. Deprived of the normal quantity, quality and flow of ground and surface waters, all of the resources on which the Critical Area boundary must be based are severely threatened.

After studying the Big Cypress Watershed, the Division determined that at the present time the proposed purchase area, as well as related resources of state and regional concern, can best be protected by the adoption and enforcement of land development regulations aimed at protecting the vital water resources within the Big Cypress Critical Area. Therefore, it is recommended that the Administration Commission adopt the Critical Area boundary described in Appendices A and B and land development regulations outlined in Section IV of this report in order to implement Chapter 73-131, Laws of Florida, The Big Cypress Conservation Act of 1973.



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## SECTION I

### INTRODUCTION

The purpose of this report is to provide background information regarding the recommended boundary and land development regulations for the Big Cypress Area of Critical State Concern.<sup>1</sup>

The regional and statewide importance of the natural and economic resources and scenic beauty of the Big Cypress Area was recognized by the Florida Legislature with the passage of the Big Cypress Conservation Act of 1973 (Chapter 73-131, Laws of Florida).<sup>2</sup> By this Act the Legislature appropriated \$40 million for acquisition of the proposed Federal Big Cypress National Fresh Water Reserve. This state sum is to be matched by approximately \$116 million of federal funds. In addition, pursuant to the Florida Environmental Land and Water Management Act of 1972, the Legislature designated the Big Cypress Area as an Area of Critical State Concern and directed the Division of State Planning to recommend a definitive boundary and land development regulations for the Area to the Administration Commission<sup>3</sup> within 120 days after July 1, 1973.

Pursuant to the Big Cypress Conservation Act of 1973, the Critical Area must include the proposed Federal Big Cypress National Fresh Water Reserve, together with contiguous land and water areas ecologically linked to the

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<sup>1</sup>Area of Critical State Concern -- A geographical area of regional or statewide importance which is recognized as such by the Legislature or Administration Commission and formally designated as an Area of Critical State Concern. See Section 380.05(2), Florida Statutes, for a more definitive statement.

<sup>2</sup>See Appendix C for copies of the Big Cypress Conservation Act of 1973 and the Environmental Land and Water Management Act of 1972.

<sup>3</sup>Administration Commission -- The Governor and Cabinet.

Everglades National Park, estuarine fisheries of South Florida, or the fresh water aquifer of South Florida. The Big Cypress legislation also granted the Department of Natural Resources eminent domain power within the Big Cypress Critical Area and exempted the Critical Area from the acreage limitation placed upon the Administration Commission in designating Areas of Critical State Concern.<sup>4</sup>

The Division's study of the Big Cypress Area actually began prior to the passage of the Big Cypress Conservation Act. On February 23, 1973, Governor Reubin O'D. Askew directed the Division to investigate the desirability of designating all, or part of, the Big Cypress Area as an Area of Critical State Concern. A report to the Administration Commission recommending that the Big Cypress Area be designated an Area of Critical State Concern was in the final stage of preparation when the Legislature enacted The Big Cypress Conservation Act of 1973. Pursuant to this legislative mandate, the Division expanded the scope of the Big Cypress Area Study.

Representatives from local, state, federal, and private agencies and public interest groups provided valuable assistance in compiling research, identifying problems, proposing possible approaches and reviewing draft report materials. Throughout the study, field investigations and public meetings were conducted in the Big Cypress Area. Three formal public meetings were held during the period September 5 through September 7 in Everglades City, Immokalee, and Naples. These meetings were convened during evening hours to facilitate public participation. As a result, this report reflects the efforts of a large number of individuals and agencies for which the Division is deeply appreciative.

Before final recommendations were developed, the Division carefully reviewed preliminary findings in light of the intent of the Legislature in enacting the Big Cypress legislation. Although an initial study of the entire Big Cypress Watershed was undertaken by the Division, a review of Chapter 73-131, Laws of Florida, supplemented by public

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<sup>4</sup>Section 380.05(17) provides "At no time shall the administration commission designate a land area to be an area of critical state concern if the effect of such designation would be to subject more than 5 percent of the land of the state to supervision under this section, except that if any supervision by the state is retained, the area shall be considered to be included within the limitations of this subsection."

hearings and interviews with key sponsors of the legislation indicated that the Legislature intended to designate the proposed Federal Big Cypress National Fresh Water Reserve and those ecologically linked areas directly contiguous to the proposed purchase Area as the Area of Critical State Concern. This approach recognizes the necessity of protecting the resources within a major state and federal investment area. Moreover, it is consistent with the Legislature's decisions to grant the Department of Natural Resources power of eminent domain within the Critical Area and to exempt the Big Cypress Area from the maximum Critical Area acreage restrictions. Therefore, the recommended Critical Area boundary includes the proposed acquisition area and only those contiguous areas which are necessary to protect the environmental and natural resources of regional and statewide importance in, and related to the proposed Reserve. However, if at a future date, the Division concludes that a more expansive area is required to supplement the Critical Area recommended in this report, it will pursue such action consistent with the regular procedures outlined in Section 380.05, Florida Statutes.

Finally, it is important to note that while the implementation of report recommendations will resolve many existing and potential problems in the Big Cypress Area, it will not resolve all of them. A more complete resolution of land and water management conflicts in the Big Cypress Area will require a more exhaustive and comprehensive planning and management program at all levels of government.

The remainder of this report is organized as follows. Section II, "Location and Description of the Big Cypress Watershed" provides background information important to an understanding of the area's problems and the Division's recommendations. Section III, "Boundary Analysis and Recommendations" discusses the proposed critical area boundary. Section IV, "Land Development Regulation Recommendations" explains the approach taken in developing the recommended regulations and delineates the proposed regulations. Finally, Section V, "Conclusions" briefly summarizes several key concepts of the report.





SECTION II  
LOCATION AND DESCRIPTION OF  
THE BIG CYPRESS WATERSHED

An analysis of available information and field surveys indicates that water is the most important ecological factor linking the Proposed National Fresh Water Reserve to the other resources of state concern specified by the Florida Legislature in the Big Cypress Conservation Act of 1973. Therefore, the Big Cypress Watershed, identified by the United States Geological Survey, was selected as the initial Study Area. This Study Area is not the actual Big Cypress Critical Area discussed in Section III.

Location

The Big Cypress Watershed encompasses approximately 2,450 square miles or 1,568,000 acres of southwest Florida (See Figure 1). It has a circular configuration and measures approximately 60 miles east to west and 50 miles north to south. Several key features of the area include the Everglades National Park and Ten Thousand Islands to the south; the Naples urban area to the west; the Big Cypress Federal Seminole Reservation, the Florida Miccosukee Indian Reservation, and Water Conservation Area 3 to the east; and the Immokalee Community to the north. Alligator Alley (Everglades Parkway) and Tamiami Trail (U.S. 41) traverse the area (See Figure 2).

Conditions and Trends

Natural Factors

The Big Cypress Watershed forms a recognizable hydrologic unit in southwest Florida, as indicated in Figure 3. The Watershed is subdivided into three subdrainage basins--A, B, and C (See Figure 3). Subdrainage basin A comprises approximately 450 square miles. Surface water in basin A flows

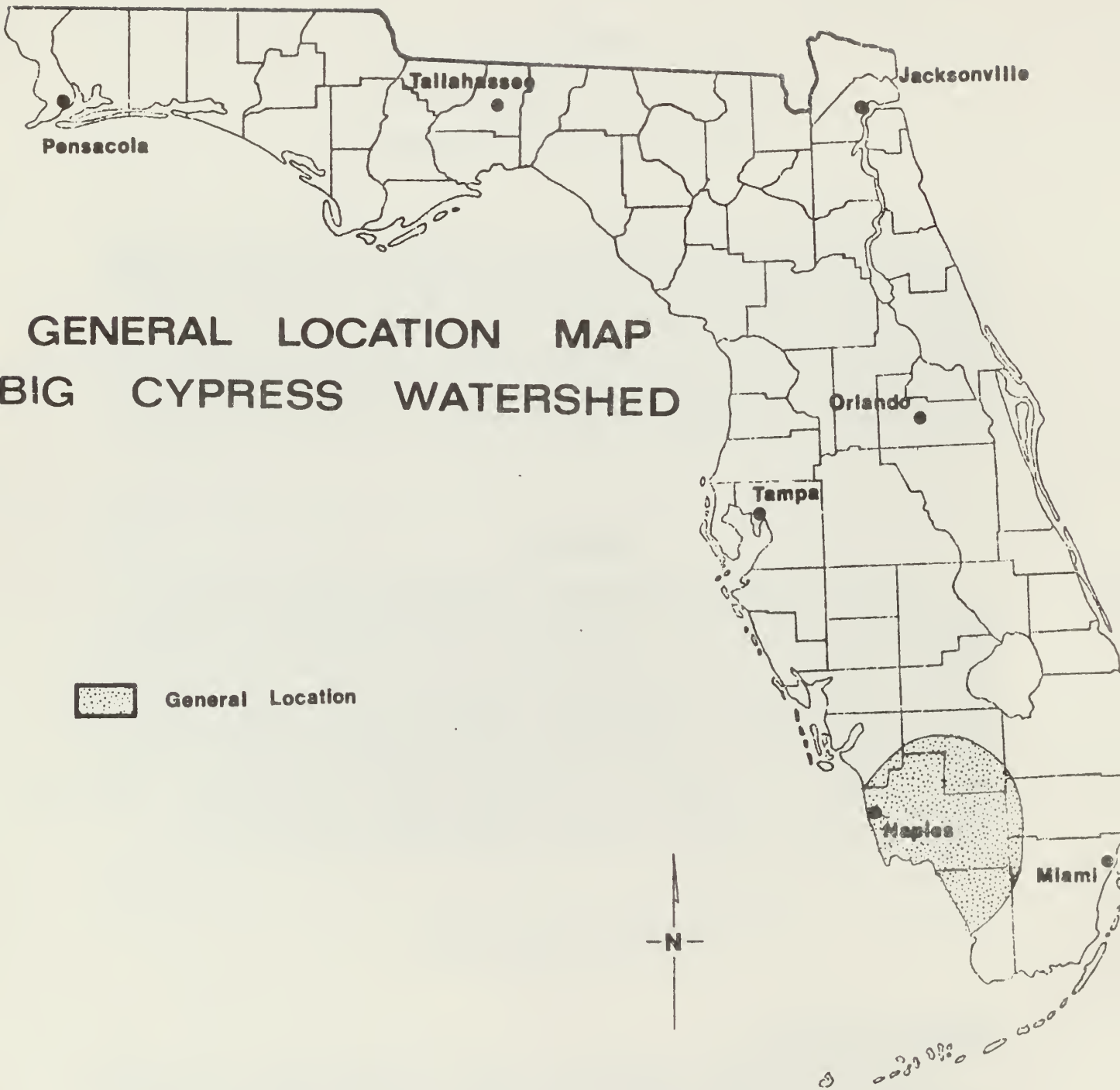


Figure 1.



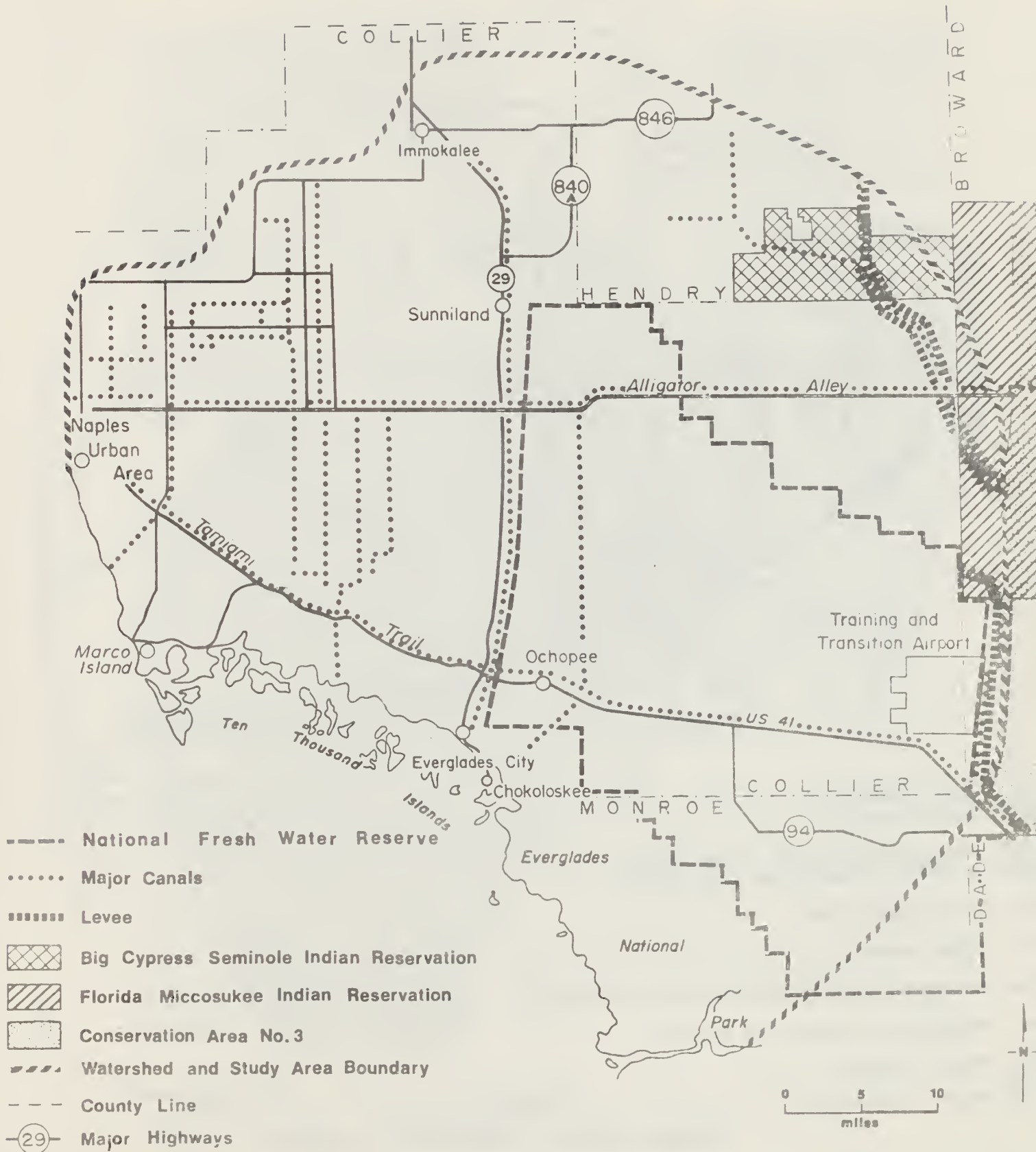


Figure 2.

# BIG CYPRESS STUDY AREA

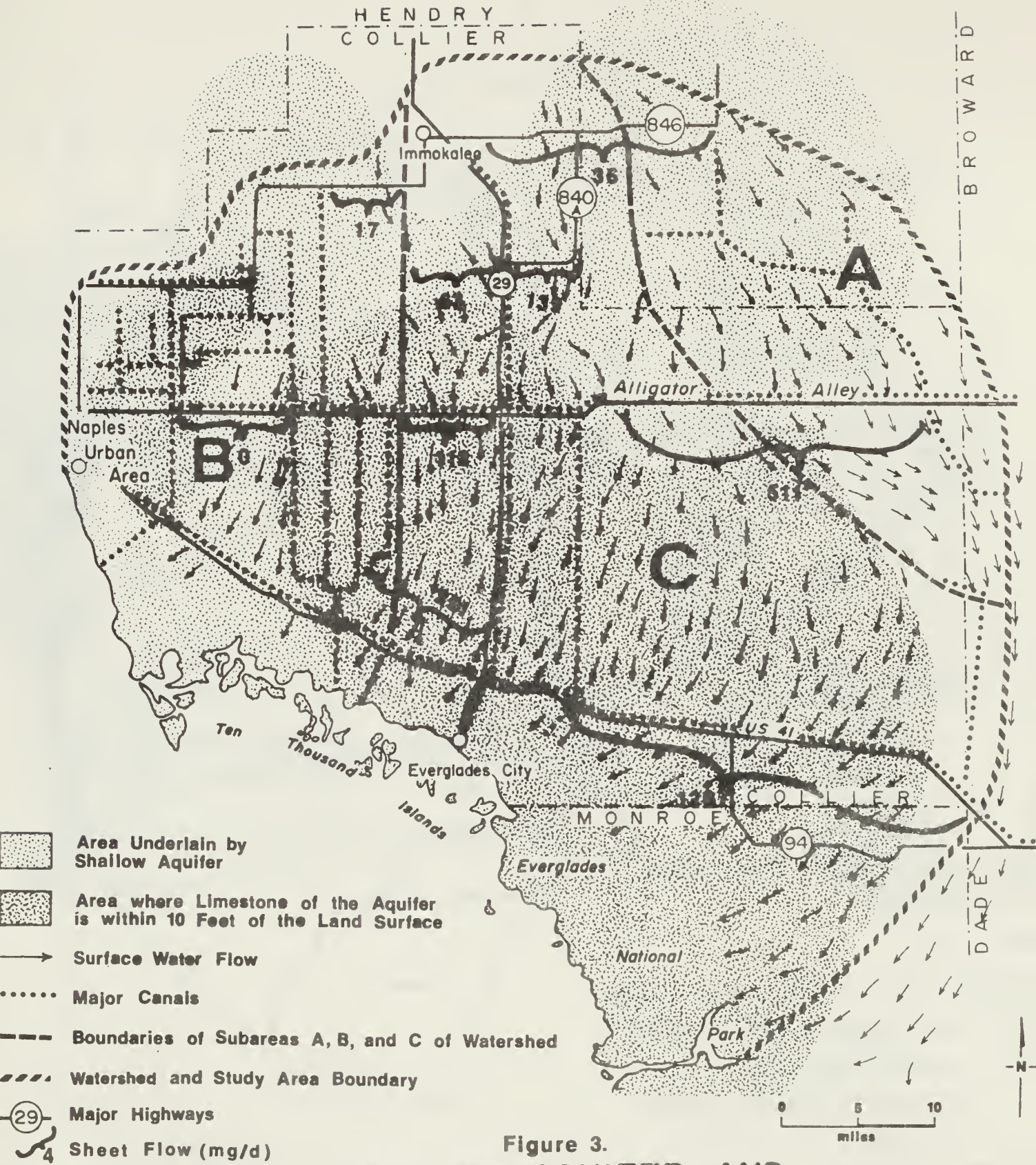


Figure 3.  
**SHALLOW AQUIFER AND  
 SURFACE WATER FLOW PATTERNS**



southeastward through the Florida Miccosukee Indian Reservation into Conservation Area 3 and then southward into the Everglades National Park. During periods of high water, surface water in basin A, particularly south of Alligator Alley, may overflow into basin C. Subdrainage basin B includes 550 square miles and surface water from this basin flows southward and westward predominantly through manmade structures and canals to the Ten Thousand Islands and the Gulf of Mexico. Subdrainage basin C includes the Collier County section of the Okaloacoochee Slough, Deep Lake Strand, and a major portion of the Fakahatchee Strand. Surface waters from this basin flow in sheets or sloughs directly into the northwestern portion of the Everglades National Park and the southeastern Ten Thousand Islands. Figures 2 and 3 depict key drainage and development patterns in the three subdrainage areas. Portions of basin B are undergoing extensive canalization and development. In contrast, large portions of basin A and C remain undeveloped or are devoted to agricultural use.

Land in the Big Cypress Watershed is generally low lying, poorly drained, sand and limestone flatland. Soils are predominantly fine sands over limestone or marl, marls or sandy marls, with varying amounts of organic matter interspersed within or overlying the sands or marls. The elevation of the region ranges from mean sea level to 25 to 30 feet; however, most of the region is below fifteen feet in elevation. The Watershed is characterized by minimal slope (between .2 and .5 foot per mile north to south and .3 foot per mile east to west), which is covered with extensive areas of standing or slowly moving surface water during the wet season. In addition, much of the land within the Watershed possesses natural development limitations since it consists of lower lying wetlands such as swamps, marshes, strands and sloughs.

The shallow aquifer of southwest Florida underlies most of the Big Cypress Watershed and extends slightly north of the Watershed into Hendry and Lee Counties (See Figure 3). It is the primary source of potable groundwater for urban and agricultural use in the Big Cypress Area. Generally, the aquifer is thickest at the coast and thins to the northeast, east and southwest wedging out at the Dade and Broward County lines. It is underlain by materials of low permeability which also act as the confining layer of the underlying Florida Aquifer. In many places within the Watershed, the limestone aquifer comes to the surface and in almost all cases is very shallow.

Shallow aquifer recharge is primarily by infiltration from rainfall within the Watershed. During rainy seasons the aquifer and overlaying soils are saturated until water levels reach the land surface, and overland flow occurs. The quality of ground water is generally good, but salt water intrusion occurs inland of coastal areas during dry years.

The area's subtropical climate is characterized by long, warm summers and short, mild winters and heavy seasonal rainfall. The rains begin in June and end in September or October with little precipitation during the remainder of the year. Rainfall averages 53 inches per year. Much of the Watershed has water at or on the soil surface for as long as four to six months after seasonal rains cease. This prolonged inundation period is due to slow natural drainage. The rate of standing surface water recession within the Watershed has been observed to be approximately .02 feet per day and surface flow velocities range from 0-1,500 feet per day.

The Watershed's vegetative patterns and wildlife distribution are diverse and abundant. Differences in vegetation and wildlife largely depend on relative elevation, soils and water. The major plant communities area: 1) pine-palmetto flatwoods, 2) cypress swamp and freshwater marsh, 3) prairie, 4) hammock forests, and 5) tidal marsh and mangrove swamp. Of the resident wildlife species, seventeen are classified by the United States Fish and Wildlife Service as rare or endangered. The better known of these seventeen include: the American alligator, wood ibis, Florida kite, southern bald eagle, and Florida panther.

### Manmade

Most of the land within the Watershed is not highly developed at the present time. Approximately 1 percent of the area could be classified as urban, however, some 7 percent of the area is proposed for urban use. The remainder of the area is in agricultural use or is undeveloped.

The most apparent land use changes impacting the Big Cypress Area are the proposed urban uses in the vicinity of Naples, Golden Gate Estates, Capri and Marco Islands, Ochopee, Everglades City and Immokalee (See Figure 2). Most urban growth is proposed for the western portion of the Watershed.

Land used for agricultural purposes is extensive and continues to increase at a slow rate. Approximately 410,000 acres in Collier County and much of Hendry County that lies in the Watershed is devoted to agriculture. Most agricultural activities are located north of Alligator Alley (Everglades Parkway) and east of Golden Gate Estates. The two main agricultural activities in the Watershed are truck farming and cattle production.

There are a number of residences and other establishments scattered throughout undeveloped portions of the Watershed. Some of these are without road access particularly during wet periods of the year.

Man has most significantly impacted the Big Cypress Area through the construction of drainage and transportation systems. Drainage facilities in surface flow areas tend to encourage land development; thereafter, further drainage is demanded for flood protection by new residents and property owners. Drainage structures may have severely affected the Watershed by altering a number of natural conditions related to the quantity and quality of water, as well as the natural surface water flow regime. Canals which have extensively drained portions of the Watershed include: Cocoahatchee River Canal, Golden Gate Canal, Henderson Creek Canal, Fahka Union Canal, Barron River Canal, Turner River Canal, L-28 Interceptor Canal, and Tamiami Canal.

The construction of paved roads in conjunction with canal systems has encouraged some development in previously undeveloped portions of the Watershed. Major highways and other paved roads include State Road 84 (Alligator Alley or Everglades Parkway), U.S. Highway 41 (Tamiami Trail), and State Roads 92, 951, 858, 846, 840, 29, 840A, and 31. Permanent roads are generally accompanied by drainage structures which may potentially impact on natural water systems in a manner similar to the water control structures previously noted. Moreover, even roads without adjacent drainage facilities can alter the natural flow and distribution of surface and ground waters.

The distribution of population within the Watershed in 1970 is depicted in Figure 4. Increased population will stimulate additional development activity. Anticipated growth for the area is reflected in the past and projected population figures for Collier County, which comprises most of the Watershed.

TABLE I

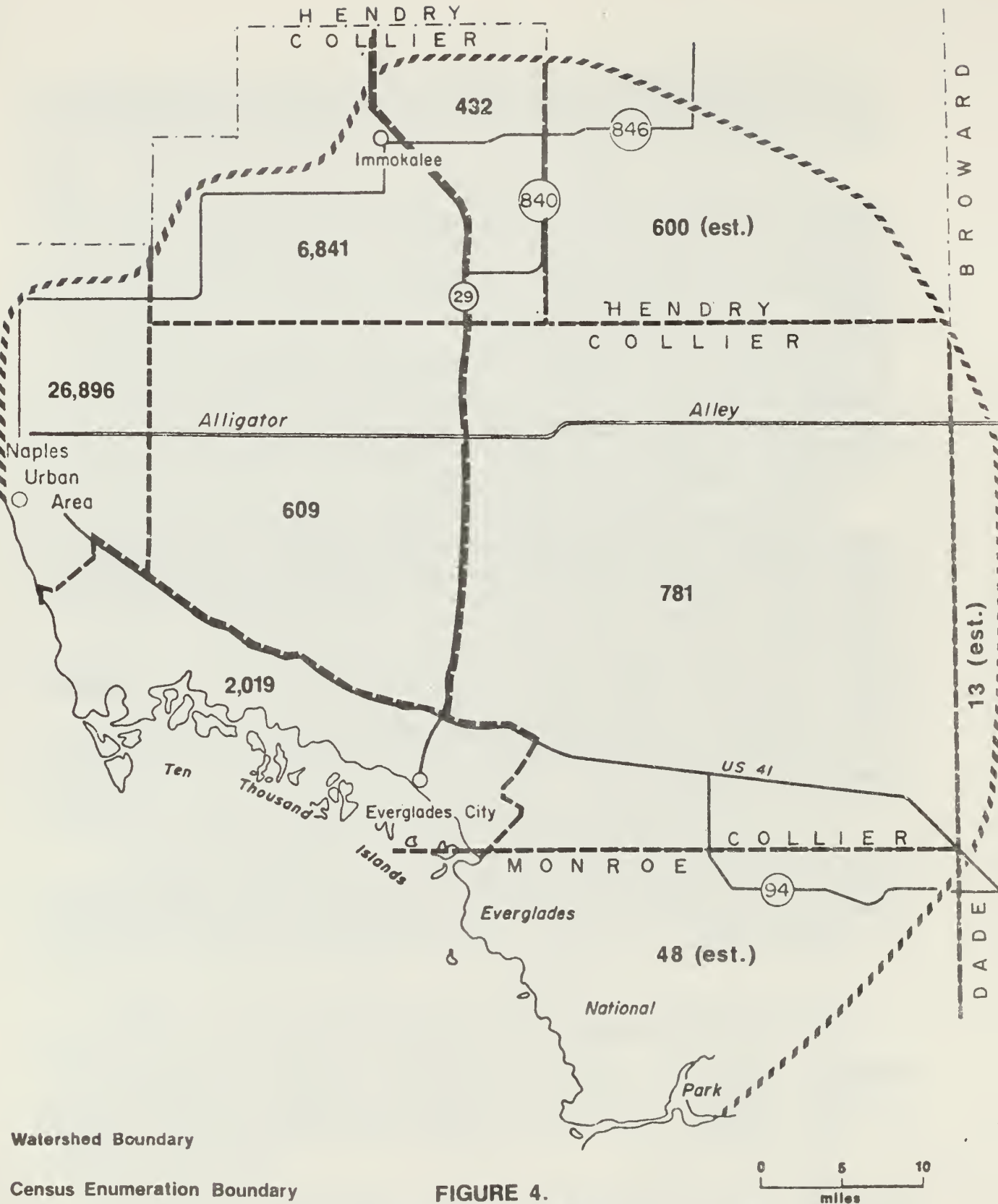
Past and Projected Population By Year<sup>5</sup>

<u>County</u>	<u>1960</u>	<u>1970</u>	<u>1972</u> <sup>6</sup>	<u>1980</u>	<u>1990</u>
Collier	16,000	38,040	44,468	80,600	127,500

<sup>5</sup>Source: University of Florida, Bureau of Economic and Business Research, Bulletin No. 26, July, 1973.

<sup>6</sup>Source: Department of Administration, "Florida Estimates of Population, July 1, 1972, State, Counties and Municipalities," State of Florida.





While these statistics will not apply to eastern Collier County to the extent applicable to the Naples urban area, they provide a strong indication of future growth trends and accompanying development pressures.

### Legal and Administrative Considerations

There are only two incorporated municipalities completely or partially within the Watershed: The City of Naples and Everglades City. There are parts of five counties (Collier, Monroe, Dade, Broward and Hendry) within the Watershed. Each of these jurisdictions has building, zoning and/or planning regulations and enforcement or administrative functions. Unincorporated towns within the Study Area include Ochopee, Marco Island, Immokalee and a number of small communities. These communities have no regulatory powers and are subject to county regulations.

Portions of the Florida Miccosukee Indian Reservation and the Big Cypress Federal Seminole Reservation also lie within the Study Area. The proposed Federal Big Cypress National Fresh Water Reserve is located adjacent to the north, northwest boundary of Everglades National Park. It includes over 500,000 acres in subdrainage basin C and covers portions of Collier, Monroe, and Dade Counties (See Figure 2). At the present time, the State owns less than four percent of the area.





## SECTION III

### BOUNDARY ANALYSIS AND RECOMMENDATIONS

In accordance with Chapter 73-131, Laws of Florida, the Division of State Planning recommends that the boundary discussed within this Section of the report and legally described in Appendix A and depicted in Appendix B be adopted as a definitive boundary for the Big Cypress Area of Critical State Concern. The bases for the selection of the recommended boundary are discussed below.

#### General

The Big Cypress Conservation Act of 1973 defines the "Big Cypress Area" as including the proposed Federal Big Cypress National Fresh Water Reserve and contiguous land and water areas which are ecologically linked with the Everglades National Park, estuarine fisheries of South Florida, or the freshwater aquifer of South Florida. Because of the importance of water to all of these resources, the Big Cypress Watershed, as identified by the United States Geological Survey, was selected as the general area to be studied. After an investigation of the relationship of water to the resources of state concern, the proposed Critical Area boundary was identified.

In the following pages, the importance of the resources of state concern, the relationships of water to these resources, and a discussion of the boundary recommendation are presented.

#### Resources of State Concern

The resources of state concern, specified by Chapter 73-131, Laws of Florida, and generally described in this subsection, are significant for a variety of reasons. Several of the key values of these resources are identified in the following paragraphs. It is important to note that each resource is not an isolated entity but rather includes,

contributes to, or is dependent on, each of the other resources.

### Fresh Water Aquifer of South Florida

A broad interpretation of the legislative standard "the fresh water aquifer of South Florida" could include a geographical area of South Florida encompassing the Biscayne Aquifer, the aquifer of southwest Florida (Big Cypress), the Hawthorne Aquifer of Lee County, an unnamed aquifer in Palm Beach County, and the Floridan Aquifer. However, the shallow aquifer of southwest Florida was identified by the Division of State Planning as the resource of concern since it relates most directly to the other specified resources of state concern in the Big Cypress Area. It is of particular importance since it underlies the Proposed Federal Big Cypress National Fresh Water Reserve, much of Everglades National Park, and lands within the Watershed which contribute surface water, directly or indirectly, to the proposed Reserve and Park. This aquifer is described in Section II of this report, and is graphically depicted in Figures 3 and 5.

The United States Geological Survey described the shallow aquifer of Southwest Florida in the following terms:

"An extensive shallow aquifer underlies the Big Cypress Swamp and adjacent area of southwest Florida.... This aquifer represents a principal factor in the present and future growth and development in southwest Florida. The shallow aquifer beneath the west part of the Big Cypress Swamp is the source of municipal and irrigation water for most of that area. The section of aquifer beneath the central part of the Big Cypress will probably be the prime potential source of water for future municipal demands along the rapidly urbanizing coastal and adjoining interior areas. Important as the Biscayne Aquifer is to the hydrologic system in southeast Florida, equally important is the shallow aquifer to the hydrologic system in southwest Florida and the future growth of the area."<sup>7</sup>

More specifically, this aquifer is valuable because:

1. It provides a source of fresh water for present and future urbanizing communities along the southwest coast of Florida; and

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<sup>7</sup> Howard Klein, The Shallow Aquifer of Southwest Florida. (United States Geological Survey, Map Series No. 53), 1972.

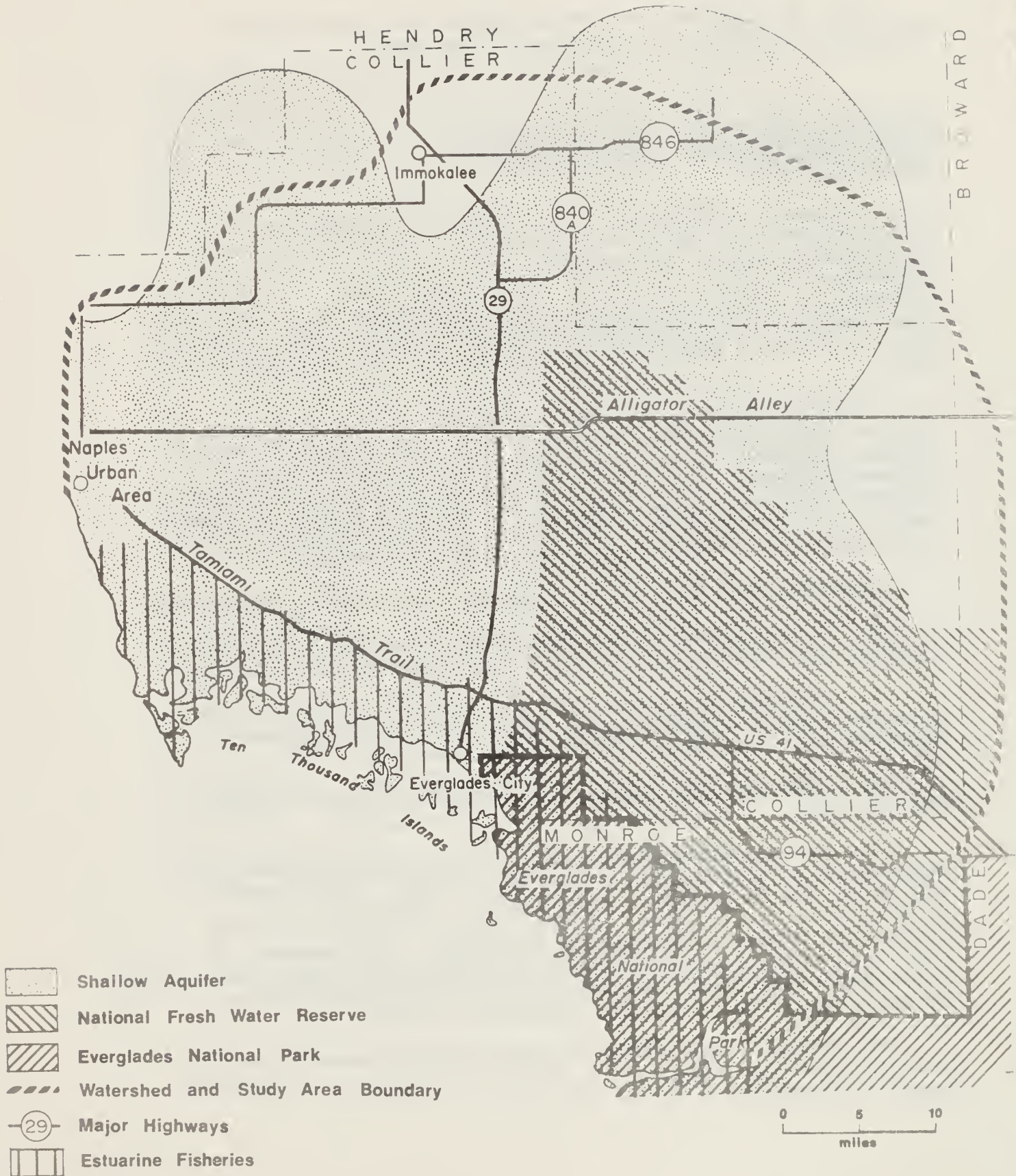


Figure 5.

# RESOURCES OF STATE CONCERN



2. It supplies irrigation water for agricultural purposes during the dry season of the year.

Proposed Federal Big Cypress National  
Fresh Water Reserve and Everglades  
National Park

Pursuant to Chapter 73-131, Laws of Florida, the proposed Federal Big Cypress National Fresh Water Reserve is included within the Critical Area boundary. This Area comprises a major portion of Subdrainage Basin C, discussed in Section II of this report, and is contiguous to the northwest portion of the Everglades National Park. The location of the proposed Reserve is graphically shown in Figures 2 and 5.

Further, the Big Cypress Conservation Act specifically includes the Everglades National Park (See Figure 5) as one of the resources to be considered in preparing boundary recommendations. Because the proposed Reserve and the Park (1) are adjacent to one another and share a common boundary, and (2) are inextricably related to one another by the key ecological link--water--they are discussed together.

The proposed Reserve is important because it encompasses:

1. A large portion of the shallow aquifer of southwest Florida, the importance of which has already been discussed;
2. A large portion of the land within the Big Cypress Area over which surface water flows into the Everglades National Park and related estuaries; and
3. Over 500,000 acres of important wildlife habitat and shelter.

The Everglades National Park is a unique resource of importance to the region, state and Nation. Public recognition of the biological, historical, educational, and recreational significance of the Park is indicated by the increasing number of visits to the Park. For example, in 1972, according to the National Park Service, there were 1,773,302 visitors to the Park. This is a substantial increase from the 1,293,484 visitors in 1971.

The overall importance of the proposed Reserve and Park was indicated by Rogers C. B. Morton, Secretary of Interior, when he observed:

"Everglades National Park, authorized in 1934, represents one of the most unique ecosystems in the world. The biological values of the park however depend on fresh water supplies, and considerably more than half of the 1,400,533 acres within the authorized boundaries is dependent upon the Big Cypress for its supply of fresh water.

\* \* \* \* \*

"The Big Cypress Watershed serves as a natural water storage area, and supplements the man-made storage areas in conservation areas one, two, and three, that are considered vital for the protection of an adequate fresh water supply for South Florida.

"Aside from its water supply benefits, Big Cypress is a highly significant resource in itself. The Big Cypress is a wilderness of sloughs, tree islands (or hammocks) and bay and cypress heads. Cypress dominates, and gives the area its name. Large portions of Big Cypress have so far experienced little man-made disturbance. Nearly all the wildlife species native to semitropical Florida are contained within the watershed. Big Cypress provides important feeding, nesting, and wintering areas, as well as a resting place for migrating birds. Acquisition of the Big Cypress Swamp would preserve important habitat for at least nine species of wildlife determined by the Secretary of the Interior to be threatened with extinction. To species that have far wider ranges, Big Cypress, along with the adjacent Everglades National Park, serves as a stronghold or retreat."<sup>8</sup>

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<sup>8</sup> Letter to Carl Albert, Speaker of the House of Representatives, from Rogers C. B. Morton, Secretary of the Interior, February 15, 1973.

## Estuarine Fisheries of South Florida

The legislative standard "estuarine fisheries of South Florida" could be interpreted to include the estuarine fisheries associated with the entire coastal zone of South Florida, including the Florida Keys. However, for purposes of the Big Cypress Critical Area, discussion will focus on the estuarine fisheries and related ecosystems of the Big Cypress Watershed, which relate most directly to the proposed Federal Big Cypress National Fresh Water Reserve and the Everglades National Park. The generalized location of the estuarine fisheries in the estuary ecosystem is shown in Figure 5. A review of this Figure indicates the geographic proximity of the estuarine fisheries to all the other resources of state concern, particularly the Everglades National Park.

The estuarine fisheries and related ecosystems are important as a natural resource because:

1. The estuarine zone of the Big Cypress Watershed and Everglades National Park comprises the single most important commercial and sport fishing nursery grounds in the State of Florida;

2. seventy-five percent of the most frequently caught sport fish along this coastal zone are dependent on the estuary waters as a food source and as habitat during early portions of their life cycle. The economic value of the Gulf sports fisheries industry is conservatively estimated at 125 million dollars;

3. More than ninety percent of the Gulf commercial catch spends the juvenile portion of their life cycle in estuary zones. The economic value of the 1972 Gulf commercial catch is conservatively estimated at 232 million dollars; and

4. The estuarine zone provides recreation for millions of residents and tourists.

## Importance Of Water To Resources Of State Concern

The proposed Federal Big Cypress National Fresh Water Reserve, Everglades National Park, estuarine fisheries of south Florida and freshwater aquifer of south Florida are dependent upon an adequate supply of freshwater to maintain their economic and natural resource value. An adequate

freshwater supply for these resources in the Big Cypress Area must approximate the quantity, quality, and flow of water which naturally exists. These are a critical part of the environmental conditions which shape and maintain the biological communities in the Big Cypress Area and the Everglades National Park. The purpose of this subsection is to generally describe certain key relationships of water to these resources and to indicate how land development activities may adversely alter the freshwater supply of these resources.

### Relationships Of Water To Resources

The quantity, quality and flow regime of freshwater is of prime importance to the Proposed Federal Big Cypress National Fresh Water Reserve, Everglades National Park, aquifer and estuarine fisheries. The flow regime of high quality freshwater (i.e., the distribution, retention time, and velocity) is of vital significance to the Area. Surface freshwater moves slowly southward at a rate of between 0-1,500 feet per day. This slow movement is a result of the almost imperceptible slope of the land, seasonal rainfall, and friction provided by dense vegetation of the area. These factors extend the period of inundation for several months beyond the period of actual rainfall. This prolonged wet period coupled with periodic drought are the environmental conditions necessary for the maintenance of biological communities in the Big Cypress Area and the Everglades National Park.

Key examples of the water relationships are as follows. First, the productivity and maintenance of the flora and fauna of the estuaries are dependent upon the transfer of nutrients and lowered salinities that are provided by the extended period of freshwater flow. The estuarine fisheries and related inland areas are depicted in Figure 6. Second, the surface freshwater flow from the Big Cypress to the Everglades National Park is vital to the Park. The Reserve comprises most of Subdrainage Basin C of the Big Cypress Watershed, which contributes surface freshwater directly to the Park and related estuaries. This surface water inflow from Subdrainage Basin C supplies approximately half of the total surface water flow received by the Park. The geographic area of major influence on these resources is shown in Figure 6. The particular importance of the additional freshwater flow from the Big Cypress Area is reflected in the affect of surface flow from outside the Park boundaries on the surface flow of



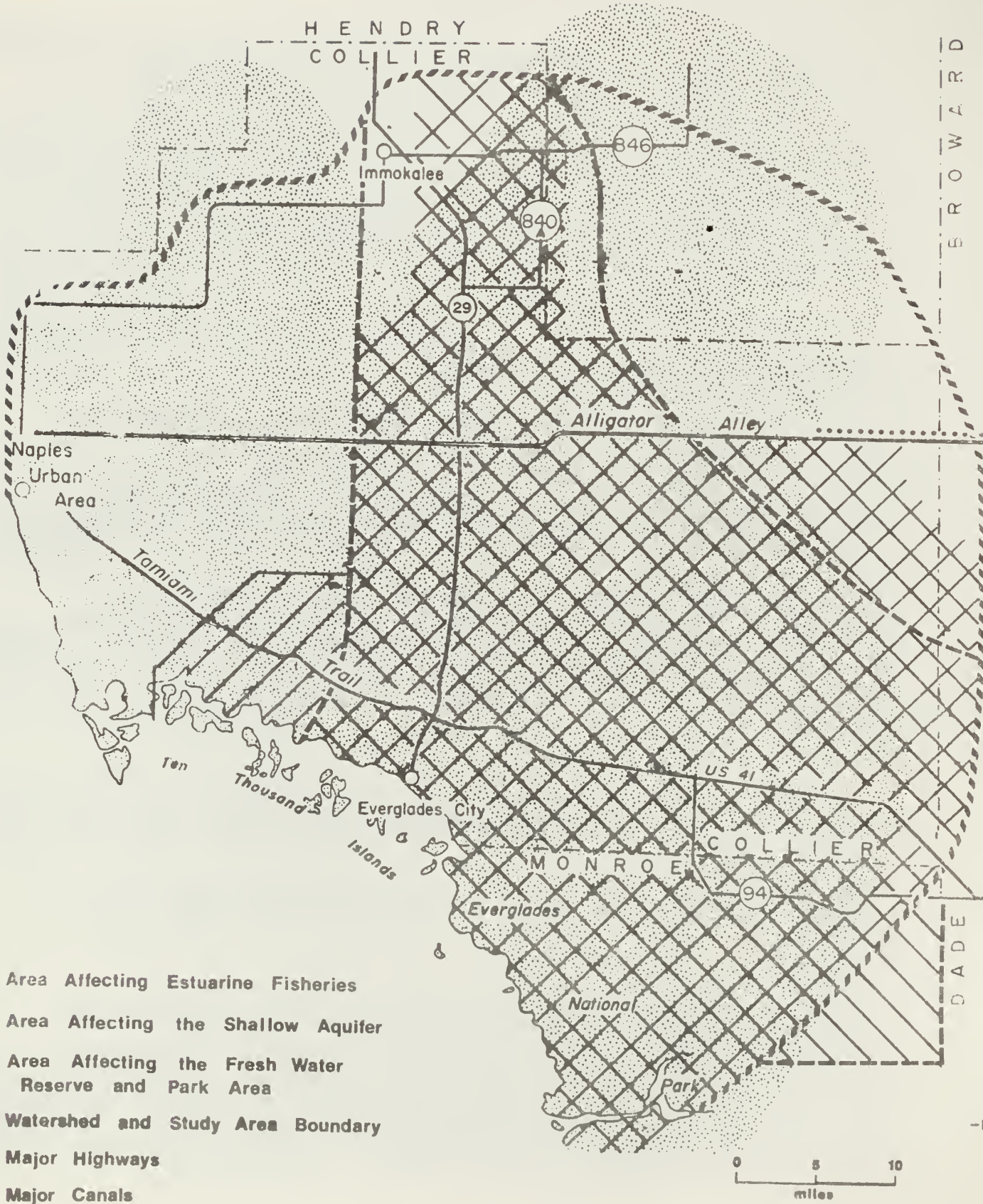


Figure 6.

**GEOGRAPHIC AREAS AFFECTING RESOURCES**



the Park and the related estuarine zone. The additional surface water (1) provides added head pressure which allows freshwater to flow through the dense vegetation to coastal estuaries, and (2) extends the period of inundation which is needed by existing biological communities.

Finally, the importance of water to the shallow aquifer of southwest Florida should be noted. An aquifer is a water bearing stratum of permeable rock, sand or gravel. Therefore, water is the principle element of concern for the shallow aquifer of southwest Florida. The Big Cypress Watershed is particularly important to this shallow aquifer since recharge of most of this aquifer is by infiltration from rainfall within the Watershed. The general geographic relationship of the Watershed to this aquifer is shown in Figure 6. Without the necessary amount of high quality freshwater, the value of the aquifer as a water supply for urbanizing areas and agriculture would be diminished. While freshwater is needed to serve urban and agricultural areas, certain amounts of freshwater may also be needed to create enough head pressure to prevent the more dense salt water from the Gulf, and possibly the highly mineralized water from the Floridan aquifer, from encroaching on the freshwater storage capacity of the shallow aquifer.

In summary, ground and surface water are extremely important to the protection of the freshwater supply of southwest Florida and the continuation of the productivity and maintenance of the proposed Reserve, Park, and estuarine fisheries. In Figure 6, geographic areas which generally influence resources of state concern are depicted. Generally, these areas of influence are those areas which have not been extensively altered by land development activities and relate most closely to the proposed Reserve and Park.

#### Effects Of Land Development Activity On The Resources

The conversion of agricultural or undeveloped land to residential, commercial or industrial urban uses can have adverse impacts on many existing natural resource systems. The paragraphs below describe how various land development activities may adversely affect resources of state concern directly, or indirectly by altering the quantity, quality and flow of water.

1. Canal drainage systems lower ground and surface water levels and are designed to prevent flooding of a development site. The effects of canals can be more extensive than the destruction of natural conditions at the immediate construction site. The actual effects of each canal will depend on its location, size and design.

In the Big Cypress Area, canals may drain storm waters rapidly, thereby changing the natural, extended wet season which is vital to the Everglades National Park and estuarine fisheries. Drainage systems connecting directly to the estuarine zone can discharge vast amounts of storm water, possibly with pollutants from urban storm water runoff, solid wastes or sanitary sewage, during the wet season and very little freshwater during the dry season. This would result in drastic changes in the range of salinities and a reduction of the normal supply of nutrients which would reduce productivity of existing organisms. Also, drainage which alters the flow of freshwater could change the essential period of inundation and the flow of water to the estuarine fisheries.

Canals can also affect water levels in the water table and the quality of groundwater. Water table levels can be changed by the rapid removal of stormwater, thereby limiting the possibility of aquifer recharge. In addition, during the dry season, groundwater may be lost by seepage into and through deep canals, particularly those which penetrate the shallow aquifer. Salt water intrusion into the aquifer may occur where groundwater levels have been extensively lowered and where salt water barriers are not included in canals which penetrate the shallow aquifer. Further, polluted urban runoff can contaminate localized portions of the groundwater supply by seepage, especially during the dry season.

2. Filling land will impact resources in the Big Cypress Area by destroying natural vegetation. More importantly, depending on the extent and location of fill construction, filling could effect all of the resources of state concern by altering the quantity, quality and flow of surface water upon which aquifer recharge and ecologic communities of the Park and estuarine fisheries are dependent.

3. Removing natural vegetative ground cover can also adversely affect resources of state concern. First, aquifer recharge can be decreased by an increased rate of surface water runoff. Second, surface water quality can

be degraded by increased soil erosion and the loss of natural filtering provided by the vegetation.

4. Water quality problems created by the improper disposal of solid wastes, sanitary sewage and storm water runoff can adversely affect all of the resources of state concern depending upon physical conditions in the vicinity of the source of pollution. For example, groundwater can be more easily contaminated where the limestone of the aquifer is at, or near, the land surface since there is greater potential for polluted waters to reach the aquifer. Moreover, the ecologic communities of the estuarine fisheries and the Park could be contaminated where they are deprived of the natural filtration of waters flowing from northern portions of the Watershed.

5. Nonpermeable surfaces often reduce the amount of available groundwater recharge area and concentrate and collect polluted urban runoff. This runoff can contaminate surface and ground water.

6. Pumping water for municipal purposes can affect the available groundwater supply. In communities located near the coast, overpumping could result in salt water intrusion into the aquifer. Pumpage is usually the reason for the greatest loss of water during the dry period when agricultural and urban areas increase demands for groundwater.

7. Nonpotable, mineralized water from the Floridan aquifer can contaminate the shallow aquifer if deep wells are not properly drilled and cased, valved, or sealed.

### Boundary Recommendations

It is recommended that the Administration Commission adopt the boundary legally described in Appendix A and depicted in the Appendix B Map Supplement as the boundary for the Big Cypress Area of Critical State Concern.

The recommended boundary includes the Proposed Federal Fresh Water Reserve, as well as the Okaloacoochee Slough, Fakahatchee Strand and ecologically linked, contiguous coastal areas. Based on the foregoing discussion, this boundary comprises the minimum area necessary to protect the Proposed Federal Big Cypress National Fresh Water Reserve, the Everglades National Park and related resources. Specific reasons for establishing the above mentioned boundary are as follows:

1. Pursuant to Chapter 73-131, Laws of Florida, the proposed Big Cypress National Fresh Water Reserve must be included in the Area of Critical State Concern;

2. That portion of Subdrainage Basin C (including the Okaloacoochee Slough and the proposed Reserve) which provides direct surface flow to the Everglades National Park is included;

3. A portion of Subdrainage Basin A which overflows into the proposed Reserve (Subdrainage Basin C) during periods of highwater flow is included;

4. The coastal estuarine zone and relatively unaltered higher lands contributing most of the freshwater supply to the estuarine fisheries are included; particularly those proximately related to the Park; and

5. About 50 percent of the shallow aquifer of southwest Florida, including most portions where limestone of the aquifer is at or near the land surface, is included.

There are two classifications of exclusions from the Critical Area boundaries. First, existing municipalities and urbanizing areas are excluded because of pre-existing urban development and their commitment to urbanization. These areas include Everglades City and Ochopee. Second, the Miccosukee Indian Reservation has been excluded pursuant to Chapter 73-131, Laws of Florida.

If additional information indicates the necessity of amending the Big Cypress Area of Critical State Concern boundary, the Division of State Planning will analyze this information and, if appropriate, submit additional recommendations to the Administration Commission.



## SECTION IV

### LAND DEVELOPMENT REGULATION RECOMMENDATIONS

#### Introduction

In accordance with Section 380.05, Florida Statutes, and Chapter 73-131, Laws of Florida, the Department of Administration, Division of State Planning recommends that the land development regulations set forth in this section of the report be adopted for the Big Cypress Area of Critical State Concern.

This section of the report sets forth the recommended regulations and provides discussion and commentary on the approach taken in drafting the regulations and the objectives and specific intent of each regulation.

RULES

OF

THE DEPARTMENT OF ADMINISTRATION

ADMINISTRATION COMMISSION

CHAPTER 22F-3

LAND PLANNING

PART III

BOUNDARY AND REGULATIONS FOR BIG CYPRESS

AREA OF CRITICAL STATE CONCERN

- 22F-3.01 Boundary
- 22F-3.02 Purpose
- 22F-3.03 Definitions
- 22F-3.04 Agricultural Exemption
- 22F-3.05 Vested Rights in Property
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- 22F-3.15 Amendments
- 22F-3.16 Separability

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

22F-3.01 Boundary (see Appendix A).

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

### 22F-3.02 Purpose.

Pursuant to Section 7, Article II, of the Florida Constitution, Section 380.05, Florida Statutes, and Chapter 73-131, Laws of Florida, it is the purpose of these regulations to conserve and protect the natural, environmental and economic resources and the scenic beauty of the Big Cypress Area, including the proposed Federal Big Cypress National Fresh Water Reserve, the Everglades National Park, and ecologically related wetlands, estuarine fisheries and the fresh water aquifer, and ecologically related areas. It is the further purpose of these regulations to provide a land and water management system that will preserve water quality, provide for the optimum utilization of the limited water resources of the area, facilitate orderly and well-planned development, and protect the health, welfare, safety and quality of life of the residents of the state. To effectively and equitably accomplish such purposes these regulations should be implemented by local governments through existing administrative processes and all existing rights of private property should be preserved in accordance with the constitutions of the State of Florida and the United States.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

### 22F-3.03 Definitions.

All terms defined in Section 380.031, Florida Statutes, shall have the meanings ascribed to them by that section. In addition, as used in these regulations:

- (1) "Coastal Waters" means the waters of the state where either tidal influence exists or where saline water occurs.
- (2) "Development" shall have the meaning ascribed to it in Section 380.04, Florida Statutes.
- (3) "Drainage Facilities" means any canal, ditch, culvert, dike or other facility which lowers the ground water table, acts as a conduit, diverts or directs the flow of water or otherwise affects the natural flow regime.
- (4) "Finger Canals" means modification or construction of a lake or pond so that the square of 15% of the shoreline measured in feet, exceeds the surface area measured in square feet for the same measuring period.
- (5) "Hydro-period" means that portion of the annual hydrologic cycle during which water is at or on the soil surface.
- (6) "Natural Flow Regime" means the velocity, volume and direction of the surface or ground water flow occurring at any given point in the current hydroperiod for any given portion of the Area of Critical State Concern.

(7) "Site Alteration, Alteration or Altered" means development including but not limited to removal of, or damage to, vegetation, burning, filling, ditching, dredging, draining, excavation, earth moving, water containment and changes in the natural flow regime, or the effects of such actions.

(8) "Total Site" means land which is under common ownership or is part of a common plan of development, rental, advertising or sale.

(9) "Transportation Facilities" means public and private roadways, roadbeds, waterways, aqueducts, pipelines, transmission lines, public and private airports, and facilities necessary for their maintenance and use, including but not limited to borrow pits and drainage works.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.04 Agricultural Exemption

The use of any land for the purpose of growing plants, crops, trees, and other agricultural or forestry products, raising livestock or for other purposes directly related to all such uses are exempt from these regulations. Lands lying fallow are deemed to be used for agricultural purposes. However, whenever any person carries out any activity defined in Section 380, Florida Statutes, as development or applies for a development permit, as defined in Section 380, Florida Statutes, to develop exempted land, these regulations shall apply to such application and to such land.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.05 Vested Rights In Property

Where vested rights in property exist pursuant to Section 380.05 (15), Florida Statutes, these regulations shall not abridge them.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.06 Site Alteration.

(1) Site alteration shall be limited to 10% of the total site size, and installation of nonpermeable surfaces shall not exceed 50% of any such area. However, a minimum of 2,500 square feet may be altered on any permitted site.



(2) Except for roads, any nonpermeable surface greater than 20,000 square feet shall provide for release of surface run off, collected or uncollected, in a manner approximating the natural surface water flow regime of the area.

(3) Soils exposed during site alteration shall be stabilized and retention ponds or performance equivalent structures or systems maintained in order to retain run off and siltation on the construction site. Restoration of vegetation to site alteration areas shall be substantially completed within 180 days following completion of a development. Revegetation shall be accomplished with pre-existing species or other suitable species except that undesirable exotic species (see list below) shall not be replanted or propagated.

Australian pine - Casuarina equisetifolia  
 Bishopwood - Bischofia javanica  
 Brazilian pepper (holly) - Shinus terebinthifolius  
 Castor bean - Ricinus communis  
 Common papaya - Carica papaya  
 Common snakeplant - Sansevieria trifasciata  
 Day jessamine - Cestrum diurnum  
 Hunters robe - Raphidophora aurea  
 Melaleuca (cajeput) - Melaleuca leucadendra  
 Queensland umbrella tree - Schefflera actinophylla  
 Trailing wedelia - Wedelia trilobata

(4) No mangrove trees or salt marsh grasses shall be destroyed or otherwise altered. Plants specifically protected in this regulation include:

Red mangrove - Rhizophora mangle  
 Black mangrove - Avicennia nitida  
 White mangrove - Laguncularia racemosa  
 Needlerush - Juncus roemerianus  
 Salt cordgrasses - Spartina alterniflora, S. patens,  
S. cynosuroides, S. spartinae  
 Seashore saltgrass - Distichlis spicata

(5) Fill areas and related dredge or borrow ponds shall be aligned substantially in the direction of local surface water flows and shall be separated from other fill areas and ponds by unaltered areas of vegetation of comparable size. Dredge or borrow ponds shall provide for the release of storm waters as sheet flow from their downstream end into unaltered areas of vegetation. Access roads to and between fill areas shall provide for the passage of water in a manner approximating the natural flow regime and designed to accommodate the 50 year storm. Fill areas and related ponds shall not substantially retain or divert the total flow in or to a slough or strand or significantly impede tidal action in any portion of the estuarine zone.

(6) Man-made lakes, ponds, or other containment works shall be constructed with a maximum slope of 30 degrees to a depth of six feet of water. Whenever mineral extraction is completed in new quarrying lakes, shore line sloping, revegetation and disposal of spoils or tailings shall be completed before abandonment. Existing quarrying lakes are exempt from this provision, except that whenever any person carries out any activity defined in Section 380.04, Florida Statutes, as development or applies for a development permit as defined in Section 380.031, Florida Statutes, to develop any existing quarrying lake area, these regulations shall apply.

(7) Finger canals shall not be constructed in the Critical Area.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.07 Drainage.

(1) Existing drainage facilities shall not be modified so as to discharge water to any coastal waters, either directly or through existing drainage facilities. Existing drainage facilities shall not be expanded in capacity or length except in conformance with paragraph no. 2 below; however, modifications may be made to existing facilities that will raise the ground water table or limit salt water intrusion.

(2) New drainage facilities shall release water in a manner approximating the natural local surface flow regime, through a spreader pond or performance equivalent structure or system, either on site or to a natural retention, or natural filtration and flow area. New drainage facilities shall also maintain a ground water level sufficient to protect wetland vegetation through the use of weirs or performance equivalent structures or systems. Said facilities shall not retain, divert, or otherwise block or channel the naturally occurring flows in a strand, slough, or estuarine area.

(3) New drainage facilities shall not discharge water to any coastal waters either directly or through existing drainage facilities.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

## 22F-3.08 Transportation.

(1) Transportation facilities which would retain, divert or otherwise block surface water flows shall provide for the re-establishment of sheet flow through the use of interceptor spreader systems or performance equivalent structures and shall provide for passage of stream, stream or slough waters through the use of bridges, culverts, piling construction or performance equivalent structures or systems. Channelization of such areas shall be the minimum length necessary to maintain reasonable flow and prevent weed blockage.

(2) Transportation facilities, constructed substantially parallel to the local surface flow, shall maintain a ground water level sufficient to protect wetland vegetation through the use of weirs or performance equivalent structures or systems and as feasible, the flows in such works shall be released to natural retention filtration and flow areas.

(3) Transportation facility construction sites shall provide for siltation and runoff control through the use of settling ponds, soil fixing or performance equivalent structures or systems.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

## 22F-3.09 Structure Installation.

(1) Placement of structures shall be accomplished in a manner that will not adversely affect surface water flow or tidal action.

(2) Minimum lowest floor elevation permitted for structures shall be at or above the 100 year flood level, as established by the Administrator of the Federal Flood Insurance Administration. The construction of any structure shall meet additional Federal Flood Insurance Land Management and Use Criteria (24 CFR 1910), as administered by the appropriate local agency.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

## 22F-3.10 Enforcement

All land development regulations adopted by the Administration Commission under Section 380.05, Florida Statutes, and Chapter 73-131, Laws of Florida, shall be administered by the local government as if the regulations

constitute or are a part of the local land development regulations.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.11 Variances.

Variance procedures provided in local ordinances shall apply to the Area of Critical State Concern. However, in addition to the standards provided in such ordinances, no variance shall be granted for any development within the Critical Area unless such development is designed, consistent with Critical Area regulations, to have minimum adverse impact on the Area's water storage capacity, surface water and estuarine fisheries. The applicant shall have the affirmative burden of establishing that the development will not have an adverse impact on such resources.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.12 Appeals.

Appeals from a local government's decisions on development orders in the Area of Critical State Concern shall be made to the Florida Land and Water Adjudicatory Commission by filing a notice of appeal with the Commission in accordance with Section 380.07, Florida Statutes.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.13 Relation To Local Codes.

In case of a conflict between Big Cypress Critical Area regulations and other regulations which are a proper exercise of authority of a governmental jurisdiction, the more restrictive of the provisions shall govern.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.14 Local Plans and Codes Conformity.

Comprehensive plans, comprehensive plan elements, and functional plans and development codes affecting the Critical Area



shall support the achievement of the Big Cypress Critical Area objectives and regulations.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New

#### 22F-3.15 Amendments.

Upon adoption by the County Commission of any land development regulations which would apply to the Critical Area, such regulations shall be transmitted to the Department of Administration, Division of State Planning for review. If the Division finds that such regulations comply with the principles for guiding development specified in the regulations adopted by the Administration Commission pursuant to Chapter 73-131, Laws of Florida, the Division by rule shall approve the submitted regulations. Approved regulations shall supersede any regulations previously adopted for the Critical Area.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

#### 22F-3.16 Separability.

If any one or more of the provisions of these regulations or the application of such provisions to any situation, circumstance or person shall for any reason be held invalid, such invalidity shall not affect any other provision of these regulations or the application of such regulations to any other situation, circumstance or person.

General Authority 380, Florida Statutes. Law Implemented Chapter 73-131, Laws of Florida. History - New.

### Comment on Regulatory Approaches and Objectives

In preparing to draft land development regulations for local application, the Division of State Planning closely researched the physical and biological environment of the Big Cypress and the legal and administrative aspects and alternatives for guiding development in the area.

The diversity of natural conditions evident in field studies in the Big Cypress Area indicated the need for an approach to guiding land development that is based to some degree on the natural limitations of the lands within the recommended Critical Area and the general suitability of the these lands for development. Such an approach was developed through an examination of the characteristics of the water regime, soil composition and dominant vegetative communities of the Area. In the delineation of the boundaries of the Critical Area discussed in Section III of this report, water and soil wetness characteristics were given the greatest attention because, as shown in that section, the National Park, and the Reserve, as well as the related estuaries and aquifer, are more sensitive to changes in the water regime than to any other component of the natural landscape. The land sensitivity approach was also used in the drafting of the regulations where again, major emphasis was placed on maintenance of the quantity, quality and other characteristics of the natural water regime.

### General Objectives

This section sets forth the specific objectives and rationale for the various regulations:

To minimize and localize the adverse impacts of development on the Everglades National Park, the proposed Federal Big Cypress National Fresh Water Reserve and the ecologically linked estuaries and aquifer of the Big Cypress Area of Critical State Concern;

To maintain the natural surface water flow regime upon which the resources and scenic beauty of the Big Cypress depend;

To maintain the level of the freshwater aquifer upon which future urban and agricultural growth, as well as other resources in the area depend;

To protect the aquifer against contamination and salt water intrusion and maximize the opportunity for safe recharge;

To maintain sufficient areas of natural and other suitable vegetative cover so as to provide for the natural filtration and friction upon which the water quality, aquifer recharge capability and hydro-period of the area depend;

To protect the native vegetative communities and fish and wildlife habitats of the area through the maintenance of the water table and flow regime;

To control the destruction of certain native species and planting and propagation of undesirable exotic species;

To establish general procedures for the administration and enforcement of the regulations based upon, and consistent with, local ordinances and to provide for local flexibility in the administration and amendment of the regulations; and

To protect the health, safety and welfare of the citizens of, and visitors to, the Big Cypress Area and the state.

### Commentary on Regulations

#### Site Alteration Regulations

Provision 1. of the Site Alteration regulations limits site alteration and nonpermeable surface installation to an area consistent with the natural limitations and suitability for development of a given type of land in the area. This provision is designed to leave sufficient land and vegetation in a natural state to provide for the maintenance of the natural functions of the Big Cypress system (i.e., water supply, hydro-period extension, filtration, recharge and maintenance of wildlife habitat).

The regulation is designed to protect sufficient natural land area to allow for the overland flow of freshwater to the National Park and estuarine fisheries areas so that the function, productivity and economic value of those resources to the state and its citizens are maintained.

The timing of the freshwater flow to the area's resources is critical. Too much water at one time can be as destructive as not enough. The provision is designed to protect the dense plant growth, which in combination with

the minimal slope of the land, slows the velocity of surface water so that flow to the Park and estuaries continues for months after the seasonal rains have stopped.

This slowing action also holds the water on the land long enough to allow recharge of the water supply aquifer of the area, even where the limestone aquifer cap has relatively low permeability. Further, the low velocity of the water, combined with the natural processes of the vegetative cover, allow for pollutant settling, filtering, absorption and use by the plant community, producing higher quality water to the resources, plant nutrition, soil building and soil conditioning.

In sharp contrast to areas of natural vegetation, non-permeable surfaces accelerate water flow and provide no opportunity for settling, filtration or recharge. Thus, there is a necessity for limiting the area of their installation.

The regulation is also designed to protect the small lot owner by providing that a minimum of 2,500 square feet may be altered or covered with nonpermeable surfaces. The 2,500 square foot area on a minimum sized lot (60 feet by 100 feet), will provide for the construction of a larger than average home (1,800 square feet), a 30 foot drive and an out building.

The approach taken in the development of this regulation is consistent with the development controls instituted for Agricultural Districts in Collier and Dade Counties (Collier County Zoning Regulations: Section 11.23-24-Agricultural District, revised March 1972 and Section 11.7-9 revised March 1970. Dade County Zoning Codes, Article XXXIII, Section 33-280-81). The Collier County regulations provide for maximum lot coverage limitations of 30% in A-1 and A-2 agricultural use zones. Except for a scattering of small A-2 and higher use zones, all of the Critical Area in Collier County is zoned A-1 agricultural. The Dade County Code provides for maximum lot coverage in its agricultural zone of 15% (25% for lots smaller than 1 acre based on variance). The basic difference in approach is that the county zoning limitations are applied to all land suitable for agriculture, without regard to the environmental sensitivity of the particular location. The Critical Area site alteration limitation is responsive to the sensitivity of the land to development and to the impact of development in one location, on the resources of another location.



Regulation 2. limits the size of nonpermeable surfaces from which runoff may be allowed to flow unchecked. Large impervious cover areas, such as large parking lots or warehouse roofs, can channel and accelerate runoff water to a degree unacceptable to the natural systems of the area. Such runoff can erode soils, locally accelerate flows and overload the capability of the vegetative cover to filter pollutants. Gradual releases from retention ponds or similar systems will allow for some settling out of pollutants and retention of litter and other solid waste associated with the facilities of the size proposed to be regulated. The provisions of the regulation would not apply to most residential and small commercial structures (e.g., convenience stores).

Regulation 3. requires soil stabilization and runoff retention on construction sites and restoration of vegetation to areas stripped during construction. It further bans the replanting or propagation of certain undesirable exotic species, which are not responsive to the food and shelter needs of native plants and animals and which have no natural enemies to check their growth as they crowd out native plants and trees.

The soil stabilization and revegetation provisions, like 1. and 2., are designed to reduce runoff velocity and protect against overloading the filtering capability of the plant growth.

The fourth Site Alteration Regulation. prohibits the destruction or other alteration of mangroves and salt marsh grasses. Mangrove trees and salt marsh grasses are as critical to the productivity of the estuarine zone as an adequate supply of high quality fresh water. Mangroves and salt marsh grasses share the essential biological functions of providing nutrients to animal life, filtering pollutants, and sheltering juvenile fish populations and other marine life among their roots and stalks. In addition, mangrove trees also serve as nature's "engineers." In this function, the trees root along the tops of oyster beds and other outcroppings providing filtering current breaks and dams which collect waterborne soils behind them and slowly, build the coastline out onto the continental shelf. Mangroves also function as large wave breaks and, if left undisturbed, can provide protection for low inland areas, by severely reducing the force of even massive

hurricane waves. These mangrove forests and salt marsh grasses form a significant portion of the nursery grounds for Florida's 232 million dollar Gulf commercial fishing industry, as well as sport fishing which brings hundreds of thousands of visitors to Florida's West Coast annually.

Regulation 5. establishes performance standards for land filling operations. This regulation is designed to allow for the essential natural functions of surface flow, storm runoff and vegetative filtration, even in areas of relatively intensive development. The provisions allow dredging and filling, where not otherwise prohibited, as long as the natural systems are maintained around the dredge ponds and fill islands.

Site Alteration Regulation 6. guides the design of man-made lakes, ponds and other containment structures, including quarrying lakes and off-site borrow pits. The limitation of the maximum slope from the shoreline of 30 degrees to a depth of 6 feet of water is designed to protect against drowning of humans, especially children, or animals who play or drink at the water's edge. Vertical or nearly vertical sides on such water containments can become deadly traps for a child or animal when ground waters recede in the dry season, leaving sheer sides 3 to 5 feet above the water level. The 30 degree maximum sloping also provides for the establishment of a littoral zone for plant growth which helps to promote fish and wildlife propagation and removes or fixes nutrients and other pollutants which can lead to lake eutrophication. The provisions on new quarries will prevent the abandonment of quarries while they are still in an unsightly and unsafe condition. Existing quarries are exempt from this provision, however, the regulation shall apply if such lakes are developed.

Site Alteration Regulation 7. prohibits the construction of finger canals in the Critical Area. These relatively short canals, which connect with larger water bodies, were originally designed to increase the area available for development as waterfront property. In the past, the propensity of finger canals to collect runoff and septic tank seepage, in combination with the lack of flushing action in such structures, has created serious water quality degradation and in some cases major health hazards. Such degradation can produce severe

localized contamination of the aquifer and promote lake eutrophication, endangering water supplies, preventing water based recreation and reducing surrounding land values.

### Drainage Regulations

Drainage Regulations 1. and 3. regulate the location of discharge from drainage canals. The provisions of regulation 1. apply only to existing canals which do not discharge to coastal waters. These provisions are designed to regulate the expansion of facilities and encourage the use of salt water intrusion and ground water loss control systems. Regulations 1. and 3. will prevent waste of freshwater through discharge into the Gulf. Direct discharge through canals, of upland surface waters, diverts those waters from critical, water dependent resources and greatly disrupts the surface water flow regime. Waters which would have maintained natural vegetation and wildlife, provided increased productivity and economic value to the estuaries or Park, or seeped into the aquifer for public and agricultural water supplies, lose their value when treated as waste and dumped into the Gulf.

It is estimated that the average daily flow (200 million gallons per day) through only a single canal (The Farka Union) in the 1971-72 season would have been sufficient to provide water supply for 1.5 million people, plus the irrigation needs of all the fruit and vegetable acreage in Collier County. In high flow periods, the Barron River Canal, which diverts water from large areas of the Okaloacoochee Slough, transports at least 150 million gallons of water per day, straight to the Gulf, thus bypassing its natural path through the Deep Lake and Fakahatchee Strands and depriving the aquifer, Park and estuarine resources of the use of that water. Moreover, the very act of discharging to coastal waters can have serious adverse impacts. The severe and rapid changes in salinity which occur at drainage canal discharge locations due to the heavy flows of the rainy season can have disastrous effects on the marine life in the estuaries.

Similarly destructive, has been the loss of ground water through canals which penetrate the aquifer. In some parts of the Watershed, ground water losses to drainage canals have been estimated by U.S.G.S. to produce 2 to 4

foot reductions in the ground water table. This is not only a disastrous loss of water supply, but can also be a direct contributor to massive salt water intrusion. Because of density differences in salt and freshwater, a 2 foot decrease in the level of freshwater can cause an 80 foot intrusion of salt water into the aquifer.

Drainage Regulation 2. provides standards for the construction of new canals which will work with the natural processes of the area to protect the water dependent resources, and to prevent the adverse impacts of unregulated drainage systems. These performance standards provide for release to natural flow areas from canals and other drainage structures, protection of ground water level, and prevention of water diversion from natural flow and retention areas and water dependent critical resources.

### Transportation Regulations

The provisions of Transportation Regulation 1. permit construction of transportation facilities which allow for passage and re-establishment of natural surface flows and minimize diversion, retention or acceleration of such flows.

Regulation 2. is designed to minimize the adverse impacts of facilities which generally parallel surface flows, especially drainage systems and excavations which have the potential for lowering the ground water table as well as diverting some surface flow.

The third Transportation Regulation is designed to minimize the short term, but potentially damaging effects of transportation facilities construction. It also requires on site containment of siltation and erosion caused by rain and washdown.



## Structure Installation Regulations

Structure Installation Regulation 1. provides a performance standard for the placement of structures so that they will not impede or otherwise adversely affect the natural flow regime in sloughs or strands or the tidal action in estuaries. While most residential structures would not be a problem in this regard, large commercial, recreational and industrial structures, and any related fill areas, might severely impact a slough, strand, or estuarine channel or marsh.

The provisions of Regulation 2. are consistent with the provisions of the Federal Flood Insurance Administration of the United States Department of Housing and Urban Development. The regulation is designed to assure that new structures constructed in the Big Cypress Area will meet these flood proofing requirements, thereby obviating the demand for regional drainage programs which (1) would impose massive damage on the resources of state concern and (2) have not proven their value in hurricane wave type flood control to which the heavily populated portions of the area are prone. The entire area is also subject to a second type of flooding, the storm rain flood. The extreme cases of the two types of flooding are normally described as the 100 year flood and the 100 year storm. These 100 year levels describe the highest flood tides and waves and the greatest amount of rainfall per acre, respectively, as statistical measures of occurrence. While statistically, such floods occur once in every hundred years, in reality they may not occur in any given 300 year period or they may occur three times in a single year.

The federal regulations as currently written and applied to the area, address only the 100 year coastal flood hazard from hurricane flood and wave action. They provide for local adoption and enforcement of minimum elevation and other building codes designed to minimize life and property losses in flood prone areas. Collier County has already applied for inclusion in the federal flood insurance program and the Administrator of that program will be establishing official 100 year flood levels for the county within a few months.

## General Provisions

The general provisions recognize and support local government enforcement and variance procedures, appeals and amendments. Further, these provisions allow and encourage the concerned local units to develop regulations, which will afford even stronger protection for the resources of critical state concern. Moreover, the regulations require that local comprehensive and functional planning support the objectives of these regulations.

SECTION V  
CONCLUSION

This report has consistently underscored the regional and statewide significance of the Big Cypress Area. The recommended boundary for the Area of Critical State Concern recognizes the binding ecological links between the proposed Federal Big Cypress National Fresh Water Reserve, Everglades National Park, and contiguous estuarine coastal areas. In sum, the Big Cypress Area must be viewed as a composite of interrelated natural systems. Hence, proposed critical area regulations recognize the necessity to preserve coastal mangroves and marshes for fish nurseries, protect vulnerable aquifer recharge areas, protect fresh-water swamps and marshes for water storage, and preserve naturally vegetated areas for their ability to slow down surface water flow and absorb pollutants. Underpinning this approach is an appreciation that barring undesirable development activity, nature will continue to perform these essential functions in a recurring, self-maintaining and non-inflationary manner. In conclusion, it is significant to reiterate a theme recently emphasized by the Division of State Planning in its projections of this State's future based on current trends: "Florida's future depends largely upon how wisely these natural systems are protected and utilized for the benefit of all."<sup>8</sup>

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<sup>8</sup>Division of State Planning, "Florida 10 Million: A Scenario of Florida's Future Based on Current Trends," DSP-BCP-S-1-8-73, September 1, 1973, p. 62.





APPENDIX A

Big Cypress Area of Critical State Concern

Legal Description



APPENDIX A

All that certain lot, piece or parcel of land situate lying and being in Collier, Dade and Monroe Counties in the State of Florida being more particularly bounded and described as follows:

Beginning at a point in the Northerly right of way line of State Road 84 (Alligator Alley), which point is the Southwest corner of Section 36 in Township 49 South, Range 28 East and running thence

- (1) Turning and running North along the West line of Sections 36, 25, 24 and 13 in Township 49 South, Range 28 East, a distance of four miles; thence
- (2) Turning and running East along the Northerly line of Section 13, Township 49 South, Range 28 East and Section 18, Township 49 South, Range 29 East, a distance of two miles; thence
- (3) Turning and running North along the Westerly line of Sections 8 and 5 in Township 49 South, Range 29 East, a distance of two miles; thence
- (4) Turning and running East along the Northerly line of Sections 5, 4 and 3 in Township 49 South, Range 29 East, a distance of three miles; thence
- (5) Turning and running North along the West line of Sections 35 and 26 in Township 48 South, Range 29 East, a distance of two miles; thence
- (6) Turning and running East along the North line of Sections

- 26 and 25 in Township 48 South, Range 29 East and continuing East along the North line of Sections 30 and 29 in Township 48 South, Range 30 East to the point of intersection with the Easterly right of way line of State Road 29; thence
- (7) Turning and running North along the East right of way line of State Road 29 to a point which point is the Northwest corner of Section 29 in Township 47 South, Range 30 East; thence
- (8) Continuing North along the West line of Sections 20, 17, 8 and 5 in Township 47 South, Range 30 East, and still North along the West line of Sections 32, 29, 20, 17 and 8 in Township 46 South, Range 30 East, a distance of nine miles; thence
- (9) Turning and running East along the North line of Sections 8, 9, 10, 11 and 12 in Township 46 South, Range 30 East, a distance of five miles to the Hendry County line; thence
- (10) Turning and running South along the boundary line between Hendry and Collier Counties which line is also the boundary line between Ranges 30 and 31 East, a distance of seventeen miles; thence
- (11) Turning and running East along the Hendry and Collier County boundary line, which line is also the boundary line between Townships 48 and 49 South, a distance of four miles; thence
- (12) Turning and running South along the East line of Sections 3 and 10 in Township 49 South, Range 31 East, a distance of



two miles; thence

- (13) Turning and running East along the North line of Section 14 in Township 49 South, Range 31 East, a distance of one mile; thence
- (14) Turning and running South along the East line of Section 14 in Township 49 South, Range 31 East, a distance of one mile; thence
- (15) Turning and running East along the North line of Section 24 in Township 49 South, Range 31 East and Section 19 in Township 49 South, Range 32 East, a distance of two miles; thence
- (16) Turning and running South along the East line of Sections 19, 30 and 31 in Township 49 South, Range 32 East to the point of intersection with the Southerly right of way line of State Road 84 (Alligator Alley); thence
- (17) Turning and running East along the Southerly right of way line of State Road 84 (Alligator Alley) to its point of intersection with the Westerly right of way line of Canal L-28, a distance of sixteen miles more or less; thence
- (18) Turning and running Southeasterly along the Southerly right of way line of Canal L-28 to its point of intersection with the boundary line between Collier and Broward Counties; thence
- (19) Turning and running South along the Collier and Broward Counties line to a point which point is the point of intersection of Broward, Collier and Dade Counties on the boundary

line between Townships 51 and 52 South, a distance of eleven miles; thence

- (20) Turning and running East along the Broward and Dade Counties boundary line, which line is also the boundary line between Townships 51 and 52 South to the point of intersection with the Westerly right of way line of the Central and Southern Florida Flood Control District Levee L-28; thence
- (21) Turning and running South in Dade County along the Westerly right of way line of Levee L-28 to its point of intersection with the Southerly right of way line of Tamiami Trail (U.S. Route 41, State Road 90); thence
- (22) Along the Southerly right of way line of Tamiami Trail (U.S. 41, State Road 90) in a Southeasterly direction to its point of intersection with the North right of way line of State Road 94; thence
- (23) Turning and running West along State Road 94 to its point of intersection with the Northwest corner of Everglades National Park in Dade County which point is in the Northwest corner of Section 20 in Township 54 South, Range 35 East; thence
- (24) In a Southerly, Westerly and Northerly direction along the boundary of Everglades National Park to the point which is the Western most point of the Everglades National Park adjacent to Round Key of the Ten Thousand Islands in Gullivan Bay; thence

- (25) On a line in a Westerly direction, one mile seaward of the most Southerly of the Ten Thousand Islands to a point, which point is the Southeastern tip of Cape Romano; in Section 15, Township 53 South, Range 26 East; thence
- (26) Turning and running Northwesterly along the West shore of Morgan Beach to a point in the South side of Caxambas Pass, which point is the Northeast corner of Section 32 in Township 52 South, Range 26 East; thence
- (27) In Easterly and Northerly direction across Caxambas Pass, Barfield Bay and Blue Hill Creek along the mean high tide line of the South shore of Marco Island and continuing along the South and East shore of Goodland to a point, which point is the point of intersection of the South right of way line of State Road 92 with the South line of Section 18 in Township 52 South, Range 27 East; thence
- (28) In a Northeasterly direction along the South right of way line of State Road 92 to its point of intersection with the West line of Section 33 in Township 51 South, Range 27 East; thence
- (29) Turning and running South along the West line of Section 33 in Township 51 South, Range 27 East; thence
- (30) Still South along the West line of Sections 4, 9 and 16 in Township 52 South, Range 27 East, a distance of three miles; thence
- (31) Turning and running East along the South line of Section 16 in Township 52 South, Range 27 East, a distance of one mile; thence

- (32) Turning and running North along the East line of Section 16 in Township 52 South, Range 27 East, a distance of one mile; thence
- (33) Turning and running East along the South line of Section 10 in Township 52 South, Range 27 East, a distance of one mile; thence
- (34) Turning and running North along the East line of Sections 11 and 2 in Township 52 South, Range 27 East, a distance of two miles; thence
- (35) Turning and running East along the boundary line between Townships 51 and 52 South which line is also the South line of Section 35, in Township 51 South, Range 27 East, a distance of one mile; thence
- (36) Turning and running North along the East line of Sections 35 and 26 in Township 51 South, Range 27 East, a distance of two miles; thence
- (37) Turning and running East along the North line of Section 25 in Township 51 South, Range 27 East and the North line of Sections 30, 29, 28, 27 and 26 in Township 51 South, Range 28 East, a distance of six miles; thence
- (38) Turning and running North along the West line of Sections 24, 13, 12 and 1 in Township 51 South, Range 28 East and North along the West line of Sections 36, 25, 24, 13, 12 and 1 in Township 50 South, Range 28 East, a distance of ten miles to the point or place of beginning.



Specifically exempting herefrom the following described urban areas:

- (1) The unincorporated areas of Ochopee being more particularly bounded and described as follows:

All that certain lot, piece or parcel of ground situate lying and being in Collier County, State of Florida, consisting of Sections 27, 28, 33 and 34 in Township 52 South, Range 30 East.

- (2) The incorporated areas of Everglades City situate lying and being in Collier County, State of Florida, consisting of portions of Sections 11, 14, 15 and 23 in Township 53 South, Range 29 East.

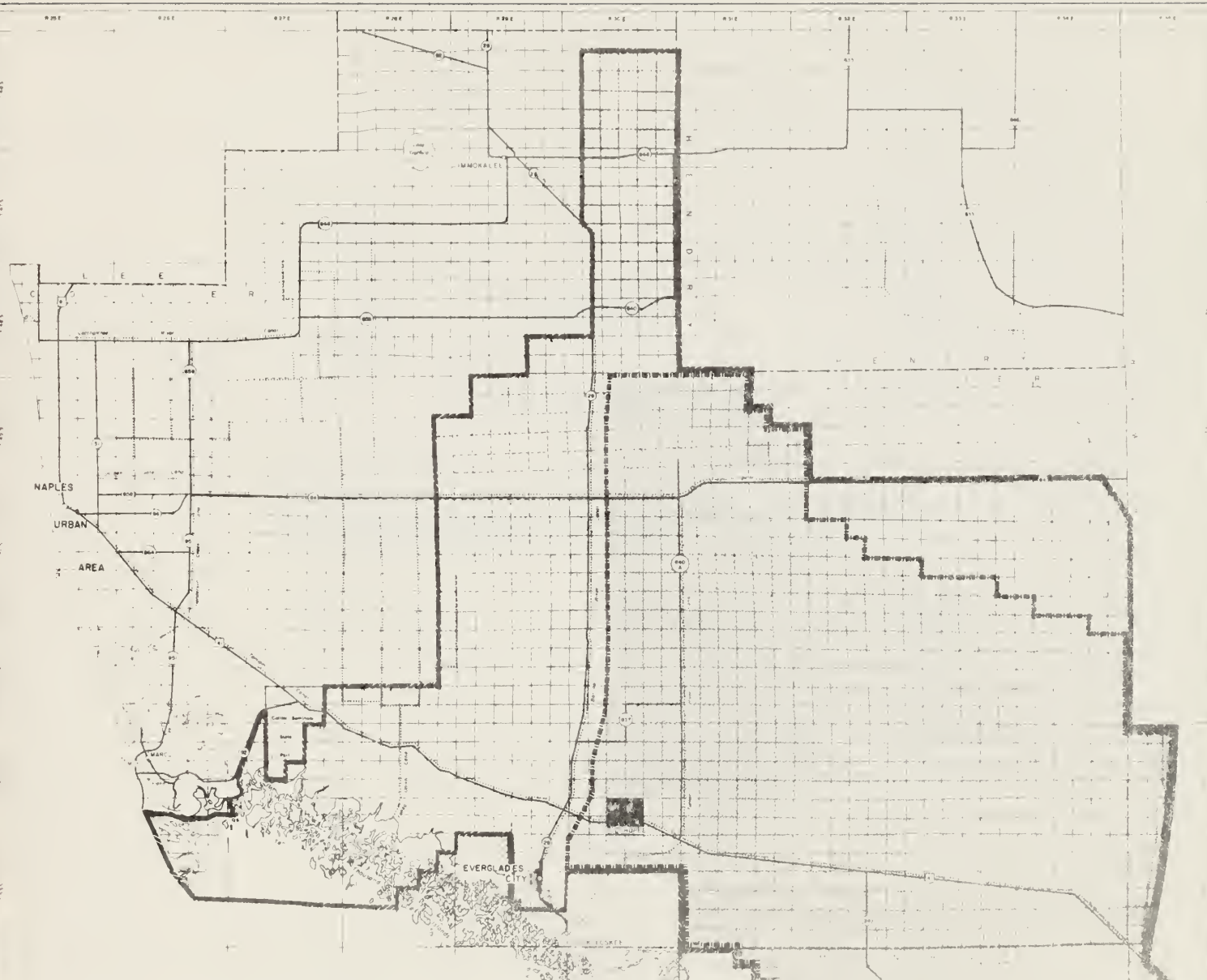


APPENDIX B

Proposed Big Cypress Area Of Critical State Concern



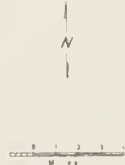




BIG CYPRESS AREA OF CRITICAL STATE CONCERN

	Critical Area Boundary
	National Fresh Water Reserve Boundary
	National Fresh Water Reserve
	Area Inside the Critical Area but Outside the National Fresh Water Reserve
	Excluded Urban Areas
	Everglades National Park
	County Lines
	Major Roads
	Canals

Adopted by Rule Nov 20, 1973





APPENDIX C

Statutory Authority:

The Big Cypress Conservation Act of 1973

The Environmental Land and Water Management  
Act of 1972





## APPENDIX C

### CHAPTER 73-131

#### Committee Substitute for House Bill No. 1762

AN ACT relating to the Big Cypress Area, including the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, and the land and water areas contiguous thereto; creating section 380.055 Florida Statutes, designating the Big Cypress Area as an area of critical state concern; providing that the Big Cypress Area is exempt from specified provisions of the Florida Environmental Land and Water Management Act of 1972; providing definitions; providing procedures; authorizing the acquisition of land and water areas within the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, with forty million dollars in state funds; authorizing the donation and conveyance of title in areas so acquired together with unencumbered funds remaining from the forty million dollars set aside for acquisition to the federal government, contingent upon action by Congress; providing definitions; providing for the exercise of the power of eminent domain within the Big Cypress Area; providing an appropriation for the department of natural resources; providing for preservation of Indian rights; providing severability; providing an effective date.

*Be It Enacted by the Legislature of the State of Florida:*

Section 1. Short title.—This act shall be known and may be cited as “The Big Cypress Conservation Act of 1973.”

Section 2. Section 380.055, Florida Statutes, is created to read:

380.055 Big Cypress Area.—

(1) It is the intent of the legislature to conserve and protect the natural resources and scenic beauty of the Big Cypress Area of Florida. It is the finding of the legislature that the Big Cypress Area is an area containing and having a significant impact upon environmental and natural resources of regional and statewide importance, and that designation of the area as an area of critical state concern is desirable and necessary to accomplish the purposes of “The Florida Environmental Land and Water Management Act of 1972,” and to implement Section 7 of Article II of the state constitution.

(2) The Big Cypress Area, defined as provided in this subsection, is hereby designated as an area of critical state concern.

(a) The term “Big Cypress Area” means the area generally depicted on the map entitled “Boundary Map, Big Cypress National Fresh Water Reserve, Florida,” numbered BC-91,001 and dated November 1971, which is on file and available for public inspection in the office of the National Park Service, Department of the Interior, Washington, D. C. and in the office of the trustees of the internal improvement trust fund, Tallahassee, which is the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, together with such contiguous land and water areas as are ecologically linked with the Everglades National Park, certain of the estuarine fisheries of south Florida, or the fresh water aquifer of south Florida, whose definitive boundaries shall be set in the following manner: Within one hundred twenty days following the effective date of this act, the state land planning agency shall recommend definitive boundaries for the Big Cypress Area to the administration commission, after giving notice

to all local governments and regional planning agencies which include within their boundaries any part of the area proposed to be included in the Big Cypress Area and holding such hearings as the state land planning agency deems appropriate. Within forty-five days following receipt of the recommended boundaries, the administration commission shall adopt, modify or reject the recommendation and shall by rule establish the boundaries of the area defined as the Big Cypress Area.

(b) The provisions of subsections (5), (6), (7), (8), (10), (11), (12), (14), and (17) of section 380.05 and subsection (9) of section 380.09, Florida Statutes, shall not apply to the Big Cypress Area. All other provisions of this chapter shall apply to the Big Cypress Area. Any provision of this chapter to the contrary notwithstanding, the state land planning agency has the exclusive right, and its duty shall be, to submit recommended land development regulations applicable to the Big Cypress Area to the administration commission concurrent with the boundaries recommended pursuant to paragraph (a) of this subsection. The administration commission shall either reject the recommendation as tendered or adopt the same by rule with or without modification. The commission shall specify the extent to which regulations adopted pursuant to this act supersede local land development regulations.

### Section 3. Acquisition of Big Cypress National Fresh Water Reserve.—

(1) It is the intent of the legislature to provide the means to accomplish an agreement between the state of Florida and the government of the United States, whereby the state will contribute towards the cost of a program of acquisition of land and water areas and related rights and interests within the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida. It is the intent of the legislature that the governor and the cabinet begin immediately an acquisition program within the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, on behalf of the state pending action by the government of the United States in the Big Cypress area.

(2) The governor and cabinet shall set aside from the proceeds of the full faith and credit bonds authorized by the "Land Conservation Act of 1972," or from other funds authorized, appropriated or allocated for the acquisition of environmentally endangered lands, or from both sources, forty million dollars for acquisition of the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, or portions thereof.

(3) The governor and the cabinet are empowered to acquire land and water areas within the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, in order to conserve and protect the natural resources and scenic beauty therein and, subject to enactment by Congress of authorization and appropriation necessary to acquire with federal funds the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, to donate and convey title in land and water areas so acquired or currently owned by the state to the government of the United States or its agency together with any unencumbered funds remaining from the forty million dollars set aside for acquisition of the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, pursuant to this act. In making such acquisitions, the governor and the cabinet shall give priority to those land and water areas within the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida, which

are essential to the integrity of the environment, the destruction of which would cause irreparable damage to the Everglades National Park, the estuarine fisheries of south Florida, or the underlying fresh water aquifer.

(4) There is hereby appropriated from the general revenues of the state the sum of ninety-four thousand dollars to the department of natural resources for necessary and incidental expenses related to the planning, negotiation and execution of a land acquisition program for the conservation and protection of the area proposed as the Federal Big Cypress National Fresh Water Reserve, Florida.

(5) It is the finding of the legislature that the Big Cypress Area, as a water storage and recharge area, is an integral part of the water resources of any water management district of which the Big Cypress Area is or may be a part. It is the legislative intent that there be close cooperation and coordination of efforts between the water management district and the department of natural resources in carrying out the intents and purposes of this act. The governor and cabinet as head of the department of natural resources are authorized to delegate to the water management district, or to a board therein, any power authorized in this act to be exercised by the department, and the district or basin is authorized to accept the powers delegated to it and shall have the power and duty to carry out the intents and purposes of this act to the fullest extent possible within its capabilities and its resources.

Section 4. Eminent domain within Big Cypress area.—The governor and the cabinet as the head of the department of natural resources are empowered and authorized to acquire by the exercise of the power of eminent domain any land or water areas, related resources and property, and any and all rights, title and interest in such land or water areas, related resources and other property, lying within the boundaries of the Big Cypress Area. The legislature finds that the exercise of the power of eminent domain within the Big Cypress Area to accomplish the purposes of this act is necessary and for a public purpose.

Section 5. Indian rights.—Notwithstanding any provision of this act to the contrary, members of the Miccosukee Tribe of Indians of Florida and members of the Seminole Tribe of Florida may continue their usual and customary use and occupancy of lands and waters within the Big Cypress Area, including hunting, fishing and trapping on a subsistence basis and traditional tribal ceremonials. Nothing in this act shall be construed to deny or impair, or authorize the denial or impairment, of any rights granted by or pursuant to Chapter 285, Florida Statutes, relative to Indian Reservation and Affairs and the lands of the Seminole Tribe of Florida and of the Miccosukee Tribe of Indians of Florida as described in Section 285.06 (1), Florida Statutes, shall be excluded from the Big Cypress Area as defined in this act.

Section 6. Severability.—If any provision of this act or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions of this act which are declared severable.

Section 7. This act shall take effect July 1, 1973.

Approved by the Governor June 7, 1973.

Filed in Office Secretary of State June 8, 1973.





## CHAPTER 380

ENVIRONMENTAL LAND AND WATER  
MANAGEMENT

- 380.012 Short title. *(New)*  
 380.021 Purpose. *(New)*  
 380.031 Definitions. *(New)*  
 380.04 Definition of development. *(New)*  
 380.05 Areas of critical state concern. *(New)*  
 380.06 Developments of regional impact. *(New)*  
 380.07 Florida land and water adjudicatory commission. *(New)*  
 380.08 Protection of landowners' rights. *(New)*  
 380.09 Environmental land management study committee. *(New)*  
 380.10 Adoption of standards and guidelines. *(New)*

**380.012 Short title.**—This chapter shall be known and may be cited as "The Florida Environmental Land and Water Management Act of 1972."

History.—§1, ch. 72-117

**380.021 Purpose.**—It is the legislative intent that, in order to protect the natural resources and environment of this state as provided in §7, Art. II of the state constitution, insure a water management system that will reverse the deterioration of water quality and provide optimum utilization of our limited water resources, facilitate orderly and well-planned development, and protect the health, welfare, safety, and quality of life of the residents of this state, it is necessary adequately to plan for and guide growth and development within this state. In order to accomplish these purposes, it is necessary that the state establish land and water management policies to guide and coordinate local decisions relating to growth and development; that such state land and water management policies should to the maximum possible extent, be implemented by local governments through existing processes for the guidance of growth and development; and that all the existing rights of private property be preserved in accord with the constitutions of this state and of the United States.

History.—§2, ch. 72-117

**380.031 Definitions.**—As used in this chapter:

(1) "Administration commission" or "commission" means the governor and the cabinet, and for purposes of this chapter the commission shall act on a simple majority.

(2) "Development order" means any order granting, denying, or granting with conditions an application for a development permit.

(3) A "development permit" includes any building permit, zoning permit, plat approval, or rezoning, certification, variance, or other action having the effect of permitting development as defined in this chapter.

(4) "Developer" means any person including a governmental agency, undertaking any development as defined in this chapter.

(5) "Governmental agency" means:

(a) The United States or any department, commission, agency, or other instrumentality thereof;

(b) This state or any department, commission, agency, or other instrumentality thereof;

(c) Any local government, as defined in this chapter, or any department, commission, agency, or other instrumentality thereof;

(d) Any school board or other special district, authority, or other governmental entity.

(6) "Land" means the earth, water, and air

above, below, or on the surface, and including any improvements or structures customarily regarded as land.

(7) "Land development regulations" include local zoning, subdivision, ordinance, and other regulations controlling the development of land.

(8) "Land use" means the development that has occurred on land.

(9) "Local government" means any county or municipality and, where relevant, any joint airport zoning board.

(10) "Major public facility" means any publicly owned facility of more than local significance.

(11) "Parcel of land" means any quantity of land capable of being described with such definiteness that its location and boundaries may be established which is designated by its owner or developer as land to be used or developed as a unit, or which has been used or developed as a unit.

(12) "Person" means an individual, corporation, governmental agency, business, joint estate, trust, partnership, association, two or more persons having a joint or common interest, or any other legal entity.

(13) "Regional planning agency" means an agency designated by the state land planning agency to exercise responsibility under this chapter in a particular region.

(14) "Rule" means a rule adopted under chapter 120.

(15) "State land development plan" means a comprehensive statewide plan or any portion thereof setting forth state land development policies.

(16) "State land planning agency" means the agency designated by law to coordinate statewide comprehensive planning.

(17) "Structure" means any thing constructed, installed, or placed, in any form, which requires a location on a parcel of land. It includes a movable structure while it is located on land which can be used for housing, business, commercial, agricultural, or other purposes, temporarily or permanently. Structures do not include fences, billboards, swimming pools, poles, pipelines, transmission lines, track and advertising signs.

History.—§3, ch. 72-117

**380.04 Definition of development.**—

(1) Development means the carrying out of any building or mining operation or the making of any material change in the use or appearance of any structure or land, and the dividing of land into three or more parcels.

(2) The following activities on any parcel of land do not constitute development as defined in this section:

(a) A reconstruction, alteration, or repair, or material change in the external appearance of a structure on land.

(b) A change in the intensity of use of land.



such as an increase in the number of dwelling units in a structure or on land or a material increase in the number of businesses, manufacturing establishments, offices, or dwelling units in a structure or on land.

(c) Alteration of a shore or bank of a sea-coast, river, stream, lake, pond, or canal, including any coastal construction as defined in §161.021.

(d) Commencement of drilling, except to obtain soil samples, mining, or excavation on a parcel of land.

(e) Demolition of a structure.

(f) Clearing of land as an adjunct of construction.

(g) Deposit of refuse, solid or liquid waste, or fill on a parcel of land.

(3) The following operations or uses shall not be taken for the purpose of this chapter to involve development as defined in this section:

(a) Work by a highway or road agency or railroad company for the maintenance or improvement of a road or railroad track, if the work is carried out on land within the boundaries of the right-of-way.

(b) Work by any utility and other persons engaged in the distribution or transmission of gas or water, for the purpose of inspecting, repairing, renewing, or constructing on established rights-of-way any sewers, mains, pipes, cables, utility tunnels, power lines, towers, poles, tracks, or the like.

(c) Work for the maintenance, renewal, improvement, or alteration of any structure, if the work affects only the interior or the color of the structure or the decoration of the exterior of the structure.

(d) The use of any structure or land devoted to dwelling uses for any purpose customarily incidental to enjoyment of the dwelling.

(e) The use of any land for the purpose of growing plants, crops, trees, and other agricultural or forestry products; raising livestock; or for other agricultural purposes.

(f) A change in use of land or structure from a use within a class specified in an ordinance or code to another use in the same class.

(g) A change in the ownership or form of ownership of any parcel or structure.

(h) The creation or termination of rights of access, riparian rights, easements, covenants concerning development of land, or other rights in land.

(i) "Development," as designated in an ordinance, rule, or development permit includes all other development customarily associated with it unless otherwise specified. When applicable to the context development refers to the actual developing or to the result of development. Reference to any specific operation is not intended to mean that the operation or activity, when part of other operations or activities, is not development. Reference to particular

operations is not intended to limit the generality of subsection (1).

History.—§1, ch. 72-47.

### 380.05 Areas of critical state concern.—

(1)(a) The state land planning agency may from time to time recommend to the administration commission specific areas of critical state concern. In its recommendation the agency shall specify the boundaries of the proposed areas and state the reasons why the particular area proposed is of critical concern to the state or region, the dangers that would result from uncontrolled or inadequate development of the area, and the advantages that would be achieved from the development of the area in a coordinated manner and recommend specific principles for guiding the development of the area. However, prior to the designation of any area of critical state concern by the administration commission, an inventory of lands owned by the state shall be filed with the state land planning agency. The state land planning agency shall request all political subdivisions and other public agencies of the state and the federal government to submit an inventory of lands owned within the State of Florida.

(b) Within forty-five days following receipt of a recommendation from the agency, the administration commission shall either reject the recommendation as tendered or adopt the same with or without modification and by rule designate the area of critical state concern and the principles for guiding the development of the area.

(2) An area of critical state concern may be designated only for:

\*(a) An area containing, or having a significant impact upon, environmental, historical, natural, or archaeological resources of regional or statewide importance.

(b) An area significantly affected by, or having a significant effect upon, an existing or proposed major public facility or other area of major public investment.

(c) A proposed area of major development potential, which may include a proposed site of a new community, designated in a state land development plan.

(3) Each regional planning agency may recommend to the state land planning agency from time to time areas wholly or partially within its jurisdiction that meet the criteria for areas of critical state concern as defined in this section. Each regional planning agency shall solicit from the local governments within its jurisdiction suggestions as to areas to be recommended. A local government in an area where there is no regional planning agency may recommend to the state land planning agency from time to time areas wholly or partially within its jurisdiction that meet the criteria for areas of critical state concern as defined in this section. If the state land planning agency determines and designate as an

area of critical state concern an area substantially similar to one that has been recommended by a regional planning agency or local government, it shall respond in writing to the regional planning agency or local government as to its reasons therefor.

(4) Prior to submitting any recommendation to the administration commission under subsection (1) of this section, the state land planning agency shall give notice to all local governments and regional planning agencies that coincide with its boundaries any part of any area of critical state concern proposed to be designated by the rule, in addition to any notice otherwise required under chapter 120.

(5) After the adoption of a rule designating an area of critical state concern the local government having jurisdiction may submit to the state land planning agency its existing land development regulations for the area, if any, or shall prepare, adopt and submit new or modified regulations, taking into consideration the principles set forth in the rule designating the area as well as the factors that it would normally consider.

(6) If the state land planning agency finds that the land development regulations submitted by a local government comply with the principles for guiding the development of the area specified under the rule designating the area, the state land planning agency shall by rule approve the land development regulations. No proposed land development regulation within an area of critical state concern becomes effective until the state land planning agency rule approving it becomes effective.

(7) The state land planning agency and any applicable regional planning agency shall, to the extent possible, provide technical assistance to local governments in the preparation of land development regulations for areas of critical state concern.

(8) If any local government fails to transmit land development regulations within six months after the adoption of a rule designating an area of critical state concern, or if the regulations transmitted do not comply with the principles for guiding development set out in the rule designating the area of critical state concern, in either case, within one hundred twenty days, the state land planning agency shall submit to the administration commission recommended land development regulations applicable to that local government's portion of the area of critical state concern unless it determines that the area is no longer of critical state concern. Within forty-five days following receipt of a recommendation from the agency, the administration commission shall either reject the recommendation as tendered or adopt the same with or without modification and by rule establish land development regulations applicable to that local government's portion of the area of critical state concern. In the rule, the administration commission shall specify the extent to which its land develop-

ment regulations shall supersede local land development regulations or be supplementary thereto. Notice of any proposed rule issued under this section shall be given to all local governments and regional planning agencies in the area of critical state concern, in addition to any other notice requirements applicable. The land development regulations adopted by the administration commission under this section may include any type of regulation that could have been adopted by the local government. Any land development regulations adopted by the administration commission under this section shall be administered by the local government as if the regulations constituted, or were part of, the local land development regulations.

(9) If the state land planning agency determines that the administration of the local regulations is inadequate to protect the state or regional interest, the state land planning agency may institute appropriate judicial proceedings to compel proper enforcement of the land development regulations.

(10) At any time after the adoption of land development regulations by the administration commission under this section, a local government may propose land development regulations under subsection (5) which, if approved by the state land planning agency as provided in subsection (6), shall supersede any regulations adopted under subsection (8) of this section.

(11) Land development regulations adopted by a local government in an area of critical state concern may be amended or rescinded by the local government, but the amendment or rescission becomes effective only upon approval thereof by the state land planning agency under subsection (6) in the same manner as the approval of original regulations. Land development regulations for an area of critical state concern adopted by the administration commission under subsection (8) may be amended by rule in the same manner as for original adoption.

(12) If, within twelve months after the adoption of the rule designating an area of critical state concern, land development regulations for the district have not become effective under either subsection (6) or subsection (8) the designation of the area as an area of critical state concern terminates. No part of said area may be redesignated until at least twelve months after the date the designation terminates.

(13) No provision shall be taken in development within any area of critical state concern except in accordance with this chapter.

(14) If an area of critical state concern has been designated under subsection (1) and if land development regulations for the area of critical state concern have not yet become effective under subsection (6) or subsection (8) a local government may, prior to development, submit regulations with such land development regulations as were in effect immediately prior to the designation of the area as an area of critical state concern.

(15) Neither the designation of an area of critical state concern nor the adoption of any regulations for such an area shall in any way limit or modify the rights of any person to complete any development that has been authorized by registration of a subdivision pursuant to chapter 478, by recordation pursuant to local subdivision plat law, or by a building permit or other authorization to commence development on which there has been reliance and a change of position, and which registration or recordation was accomplished, or which permit or authorization was issued, prior to the approval under subsection (6), or the adoption under subsection (8), of land development regulations for the area of critical state concern. If a developer has by his actions in reliance on prior regulations obtained vested or other legal rights that in law would have prevented a local government from changing those regulations in a way adverse to his interests, nothing in this chapter authorizes any governmental agency to abridge those rights.

(16) In addition to any other notice required to be given under the local land development regulations, the local government shall give notice to the state land planning agency of any application for a development permit in any area of critical state concern, except to the extent that the state land planning agency has in writing waived its right to such notice in regard to all or certain classes of such applications. The state land planning agency may by rule specify additional classes of persons who shall have the right to receive notices of and participate in hearings under this section.

(17) Within the twelve-month period following July 1, 1972, the administration commission shall not designate more than five hundred thousand acres as areas of critical state concern. At no time shall the administration commission designate a land area to be an area of critical state concern if the effect of such designation would be to subject more than 5 percent of the land of the state to supervision under this section, except that if any supervision by the state is retained, the area shall be considered to be included within the limitations of this subsection.

(18) The administration commission may by rule terminate, partially or wholly, the designation of any area of critical state concern.

History.—S, ch. 72-417.

\*Note.—§11, ch. 72-417 provides that no area shall be designated as an area of critical state concern pursuant to paragraph (2)(a) until a favorable vote at a referendum on a state bond program for the acquisition of lands of environmental importance to the state or region.

### 380.06 Developments of regional impact.—

(1) "Development of regional impact," as used in this section, means any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county.

(2) Prior to February 1, 1973, the state land

planning agency, after consultation with the environmental land management study committee established pursuant to §380.09, shall recommend to the administration commission specific guidelines and standards for adoption pursuant to this subsection. Prior to March 15, 1973, the administration commission shall by rule adopt guidelines and standards to be used in determining whether particular developments shall be presumed to be of regional impact. Such rules shall not become effective prior to July 1, 1973. In adopting its guidelines and standards, the administration commission shall consider and be guided by:

(a) The extent to which the development would create or alleviate environmental problems such as air or water pollution or noise;

(b) The amount of pedestrian or vehicular traffic likely to be generated;

(c) The number of persons likely to be residents, employees, or otherwise present;

(d) The size of the site to be occupied;

(e) The likelihood that additional or subsidiary development will be generated, and

(f) The unique qualities of particular areas of the state.

(3) Each regional planning agency may recommend to the state land planning agency from time to time types of development for designation as developments of regional impact under subsection (2). Each regional planning agency shall solicit from the local governments within its jurisdiction suggestions regarding developments to be recommended.

(4)(a) If any developer is in doubt whether his proposed development would be a development of regional impact, he may request a determination from the state land planning agency. Within sixty days of the receipt of such request, the state land planning agency shall issue a binding letter of interpretation with respect to the proposed development.

(b) Requests for determinations made pursuant to this subsection shall be in writing and in such form as prescribed by the state land planning agency.

(5) A developer may undertake development of regional impact if:

(a) The land on which the development is proposed is within the jurisdiction of a local government that has adopted a zoning ordinance under chapter 163 or chapter 176 or under appropriate special or local laws and the development has been approved under the requirements of this section, or

(b) The land on which the development is proposed is within an area of critical state concern and the development has been approved under the requirements of §380.05; or

(c) The developer has given written notice to the state land planning agency and to any local government having jurisdiction to adopt zoning or subdivision regulations for the area in which the development is proposed, and after ninety days have passed no zoning or subdivision reg-



ulations have been adopted or designation of area of critical state concern issued.

(6) If the development of regional impact is to be located within the jurisdiction of a local government that has adopted a zoning ordinance, the developer shall file an application for development approval with the appropriate local government having jurisdiction. The application shall contain, in addition to such other matters as may be required, a statement that the developer proposes to undertake a development of regional impact as defined under this section.

(7) The appropriate local government shall give notice and hold a hearing on the application in the same manner as for a rezoning under §176.051 or as provided under the appropriate special or local law and shall comply with the following additional requirements:

(a) The notice of hearing shall state that the proposed development would be a development of regional impact;

(b) The notice shall be published and given in the usual manner, but at least four weeks in advance of the hearing, and

(c) The notice shall be given to the state land planning agency, to the applicable regional planning agency, and to such other persons as may have been designated by the state land planning agency as entitled to receive such notices.

(8) Within thirty days after receipt of the notice required in subsection (7)(c), the regional planning agency, if one has been designated for the area including the local government, shall prepare and submit to the local government a report and recommendations on the regional impact of the proposed development. In preparing its report and recommendations the regional planning agency shall consider whether, and the extent to which:

(a) The development will have a favorable or unfavorable impact on the environment and natural resources of the region;

(b) The development will have a favorable or unfavorable impact on the economy of the region;

(c) The development will efficiently use or unduly burden water, sewer, solid waste disposal, or other necessary public facilities;

(d) The development will efficiently use or unduly burden public transportation facilities;

(e) The development will favorably or adversely affect the ability of people to find adequate housing reasonably accessible to their places of employment, and

(f) The development complies or does not comply with such other criteria for determining regional impact as the regional planning agency shall deem appropriate.

(9) The state land planning agency shall print each week and mail to any person upon payment of a reasonable charge to cover costs of preparation and mailing, a list of all notices of applications for developments of regional im-

port that have been filed with the state land planning agency.

(10) If the development is in an area of critical state concern, the local government shall approve it only if it complies with the local development regulations therefor under §176.051.

(11) If the development is not located in an area of critical state concern, in considering whether the development shall be approved, denied, or approved subject to conditions, restrictions or limitations, the local government shall consider whether, and the extent to which:

(a) The development unreasonably interferes with the achievement of the objectives of an adopted state land development plan applicable to the area;

(b) The development is consistent with the local land development regulations; and

(c) The development is consistent with the report and recommendations of the regional planning agency submitted pursuant to subsection (8) of this section.

(12) Nothing in this section shall limit or modify the rights of any person to complete the development that has been authorized by registration of a subdivision pursuant to chapter 478, by recordation pursuant to local subdivision plat law, or by a building permit or other authorization to commence development of which there has been reliance and a change of position, and which registration or recordation was accomplished, or which permit or authorization was issued, prior to the effective date of the rules issued by the administration commission pursuant to subsection (2) of this section. If a developer has, by his actions in reliance on prior regulations, obtained vested or other legal rights that in law would have prevented the government from changing those regulations in a way adverse to his interests, nothing in this chapter authorizes any government to retroactively abridge those rights.

History.—§6, ch. 72-117.

### 380.07 Florida land and water adjudicatory commission.—

(1) There is hereby created the Florida Land and Water Adjudicatory Commission, which shall consist of the Administrator and Commission.

(2) Whenever any local government issues an order or development order in any area of critical state concern, or in regard to any development of regional impact, a copy of such order shall be transmitted to the state land planning agency and the owner or developer of the property affected by such order. Within thirty days after the order is rendered, either the owner, developer, an appropriate regional planning agency, or the state land planning agency may appeal the order to the Florida land and water adjudicatory commission by filing a notice of appeal with the commission. The appellant shall furnish a copy of the notice of appeal to the opposing party, as the case may be, and to the local government which issued

the order. The filing of the notice of appeal shall stay the effectiveness of the order, and shall stay any judicial proceedings in relation to the development order, until after the completion of the appeal process. Upon motion and good cause shown the Florida land and water adjudicatory commission may permit materially affected parties to intervene in the appeal.

(3) Prior to issuing an order, the Florida land and water adjudicatory commission shall hold a hearing pursuant to the provisions of part II, chapter 120. The commission shall encourage the submission of appeals on the record made below in cases in which the development order was issued after a full and complete hearing before the local government or an agency thereof.

(4) The Florida land and water adjudicatory commission shall have the power to designate a hearing officer to conduct hearings, who shall have the power to issue notices of hearings and subpoenas requiring the attendance of witnesses and the production of evidence, to administer oaths, and to take testimony as may be necessary or in conformity with this chapter. Such hearing officer shall certify and file with the commission recommendations, findings of fact and a proposed order.

(5) Within one hundred twenty days, the Florida land and water adjudicatory commission shall issue a decision granting or denying permission to develop pursuant to the standards of this chapter, and may attach conditions and restrictions to its decisions. Decisions of the commission shall contain a statement of the reasons therefor. Decisions of the commission are subject to judicial review under part III of chapter 120.

History.—87, ch. 72-317.

#### 380.08 Protection of landowners' rights.—

(1) Nothing in this chapter authorizes any governmental agency to adopt a rule or regulation or issue any order that is unduly restrictive or constitutes a taking of property without the payment of full compensation, in violation of the constitutions of this state or of the United States.

(2) If any governmental agency authorized to adopt a rule or regulation or issue any order under this chapter shall determine that, to achieve the purposes of this chapter, it is in the public interest to acquire the fee simple or lesser interest in any parcel of land, such agency shall so certify to the state land planning agency, the board of trustees of the internal improvement trust fund, and other appropriate governmental agencies.

(3) If any governmental agency denies a development permit under this chapter, it shall specify its reasons in writing and indicate any changes in the development proposal that would make it eligible to receive the permit.

History.—85, ch. 72-317.

#### 380.09 Environmental land management study committee.—

(1) There is hereby created an Environmental Land Management Study Committee to consist of fifteen members. The governor shall appoint nine members and designate one as chairman. The governor shall include among the members appointed by him one representative from each of the following environmental interests, organized labor, business interests, the home construction industry, the academic community, the land sales industry, the real estate profession, and agriculture interests and shall consider other professions and occupations which may be affected by the provisions of this chapter. The president of the senate shall appoint three members and the speaker of the house shall appoint three members. Members of the committee shall serve without compensation, but shall be reimbursed for all necessary expenditures in the performance of their duties. The committee shall continue in existence until its duties are terminated, but not later than June 30, 1974.

(2) The committee shall study all facets of land resource management and land development regulation with a view toward insuring that Florida's land use laws give the highest quality of human amenities and environmental protection consistent with a sound and economic pattern of well planned development, and shall recommend such new legislation or amendments to existing legislation as are needed to achieve that goal.

(3) As part of its work the committee shall review the land use laws of other states, the relevant federal laws, the progress of the American Law Institute's project to draft a model land development code, and the general pattern of court decisions in the land use area. The committee shall examine techniques for encouraging new types of well planned development, including methods of regulating planned unit developments and new communities.

(4) The committee shall also consult with local governments and regional planning agencies regarding their land use problems and with relevant state agencies, including the Florida environmental inventory council, created under §370.0212, and it shall obtain the views of the public, including the views of businesses and professions concerned with use of land, and of other interested groups.

(5) The committee shall prepare and submit to the governor and the legislature not later than December 30, 1973, a report which shall contain:

(a) Such proposals for changes in legislation as are recommended by the committee;

(b) Drafts of model development ordinances which will assist local governments in adopting development ordinances as required by this chapter;

(c) Analyses of and comments on other relevant state-commissioned studies and reports, including reports prepared by the Florida en-



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vironmental inventory council, created under §370.0212;

(d) Review of, and recommendations on, the current status and effectiveness of regional planning agencies with regard to land and water management; and

(e) Such other findings and recommendations as the committee chooses to make.

(6) The committee shall prepare and submit an interim report to the governor not later than December 31, 1972, and to the legislature not later than March 15, 1973.

(7) The committee shall employ an executive director and may employ such other staff and consultants as needed to carry out its functions.

(8) The department of administration shall provide necessary staff to the committee.

(9) Prior to submitting any recommendation or issuing any rule under this chapter, the state land planning agency shall consult with and obtain the advice of the committee.

History.—§9, ch. 72-317

**380.10 Adoption of standards and guidelines.—**

(1) The initial standards and guidelines adopted by the administration commission pursuant to §380.06(2) shall be transmitted to the secretary of the senate and the clerk of the house of representatives for presentation to the next regular session of the legislature. These initial standards and guidelines shall then be approved or disapproved by concurrent resolution of the legislature or be modified by law, and, upon concurrence by both houses of the legislature, the provisions of the standards and guidelines thereof shall become effective as the initial standards and guidelines of the administration commission. In the event the legislature disapproves the initial standards and guidelines, the administration commission shall adopt by rule new standards and guidelines and submit said standards and guidelines to the legislature pursuant to this section.

(2) Subsequent to the regular session of the legislature the standards and guidelines may be revised subject to the provisions of this act without legislative approval.

History.—§10, ch. 72-317



APPENDIX D

Estimated Land Area of the Proposed National Fresh  
Water Reserve and the Recommended Area of  
Critical State Concern - By County



Appendix D.

Estimated Land Area of the Proposed National Fresh Water Reserve and the Recommended Area of Critical State Concern - By County

County	Reserve		Land Contiguous To Reserve		Total Area of Critical Concern	
	Sq. Mi.	Acres	Sq. Mi.	Acres	Sq. Mi.	Acres
Collier	659	421,760	446	285,440	1105	707,200
Monroe	197	126,080	-0-	-0-	197	126,080
Dade	40	25,100	-0-	-0-	40	25,600
Total	896	573,440	446	285,440	1342	858,800

\*% C.A. = Areas of Critical State Concern





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