

A photograph of a river scene. In the background, a dense forest of trees with varying shades of green and brown lines the riverbank. The water is calm, reflecting the sky and the surrounding trees. A small, red and white boat is visible in the middle ground on the river. The foreground shows some green vegetation on the left side of the river.

Final Report

**Wekiva River
Rock Spring Run
&
Seminole Creek**

Wild and Scenic River Study
June 1999

Southeast Support Office - National Park Service - U.S. Department of the Interior

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I. Summary of Findings

This study was undertaken at the direction of Congress to determine the potential of the Wekiva River, the Seminole Creek tributary, and the Rock Springs tributary for inclusion in the National Wild and Scenic River System. The Wekiva River and its tributaries are located in central Florida just north of the City of Orlando. The river and its tributaries flow through Orange, Seminole, and Lake Counties.

The study area includes the Rock Springs Run from its headwaters in Orange County's Kelly Park to the confluence with Wekiwa Springs Run; Wekiwa Springs Run from the main spring to the confluence with Rock Springs Run (technically forming the Wekiva River); the Wekiva River from the confluence of Wekiwa Springs Run and Rock Springs Run to its confluence with the St.

Johns River; Seminole Creek from its headwaters at Seminole Springs to the confluence with Black Water Creek; and Black Water Creek from the confluence with Seminole Creek to the confluence with the Wekiva River. The study area was expanded at the request of the Lake County Water Authority with support from the Lake County Board of County Commissioners to include Black Water Creek upstream of the confluence with Seminole Creek to its outflow from Lake Norris, a distance of approximately 9.7 miles. This brought the total length of river miles studied to approximately 45.5 miles.

Study River Segments

Approx. Total Eligible & Suitable Length for Designation

Rock Springs Run	8.8 miles	8.8 miles
Wekiwa Springs Run	.5 mile	.5 mile
Wekiva River	14.4 miles	14.4 miles
Seminole Creek	3.9 miles	0 miles
Black Water Creek (from Seminole Creek to Wekiva River)	8.2 miles	8.2 miles
Black Water Creek (from Seminole Creek to Lake Norris)	9.7 miles	9.7 miles
TOTAL	45.5 miles	41.6 miles

It was found that all the river study segments were free-flowing and had “outstandingly remarkable resources” which make them eligible for national designation.

While all the river sections were found to be eligible for designation, not all were found to be suitable for designation. A total of 41.6 river miles were found to be both eligible and suitable for designation.

Sections found to be eligible and suitable for designation include:

1. ***Wekiva River (14.9 miles)*** - the river in its entirety beginning at the main springs of Wekiwa Springs and including Wekiwa Springs Run to the confluence of the Wekiva River and the St. Johns River.

2. ***Rock Springs Run (8.8 miles)*** - the run in its entirety from its headwater at the main spring of Rock Springs to its confluence with the Wekiwa Springs Run (forming the Wekiva River).

3. ***Black Water Creek (17.9 miles)*** - the creek from Lake Norris to the confluence with the Wekiva River.

Sections found to be eligible but “**not suitable**” for designation include:

1. Seminole Creek (3.9 miles) - the entire creek from its headwaters at Seminole Springs to its confluence with Black Water Creek

Four alternatives were developed and are presented under Section VI. Alternatives and Conclusions. These include: 1. No Action/Existing Trends, 2. Congressional designation with National Park Service management, 3. Congressional designation

with State management and the establishment of a combined Federal, State, and local coordinated advisory committee 4. Secretarial designation with state management.

Alternative 3 is the recommended alternative and involves designation of the river sections found to be both eligible and suitable for designation. This includes 14.9 miles of the Wekiva River from Wekiwa Springs to the confluence with the St. Johns River, the entire 8.8 miles of Rock Springs Run, and approximately ~~14.7~~^{14.9} miles of Black Water Creek from Lake Norris to the confluence with the Wekiva River. The State of Florida would manage the designated segments as components of the National Wild and Scenic River System. An advisory committee composed of state, local, and federal agencies and the public would be established to coordinate a comprehensive management plan, make recommendation regarding water resource projects to the Secretary of the Interior, and serve as a continuing forum for issues effecting the rivers.

II. Background

Introduction

Beginning with our first early days of settlement, Americans have viewed our nation's abundance of rivers as a vast resource.

After decades of harnessing our rivers for growth and development, our environmental conscience was awakened in the 1960's to the fact that clean, natural waterways are not in endless supply. Congress, acting upon this growing public concern, passed the Wild and Scenic Rivers Act (WSRA) (Public Law 90-542) in 1968. This Act recognizes the value of rivers and their environs as outstanding natural treasures that must be protected for the enjoyment of future generations. Several rivers were designated for immediate protection and additional rivers were authorized for study as potential components of the Federally-protected system. Through the years Congress has responded to the desires of the citizenry by amending the Act to either designate or authorize study of additional rivers. In 1996 Congress passed Public Law 101-311 authorizing the study of the Wekiva River, Rock Springs Run, and Seminole Creek for potential addition to the National Wild and Scenic Rivers System.

Study Area

The Wekiva River, Rock Springs Run, and Seminole Creek are located in Orange, Seminole, and Lake Counties, Florida, (see Figure 1) approximately 10 miles northwest of Orlando. The Orlando metropolitan area has

experienced tremendous growth in the last two decades. Population projections for the year 2000 estimate over 1.33 million people will live within a 20-mile radius of the Wekiva River.

The study rivers are part of the Wekiva River Basin which also includes the Little Wekiva River which is not currently under study for inclusion into the National Wild and Scenic River System. The entire basin drains over 242 square miles. The river system represents one of the major routes of surface drainage for Orange, Seminole, and Lake Counties.

The majority of the river and creeks under study are currently under public ownership either by the State of Florida, the St. Johns River Water Management District, or Orange County. Most of the private ownership lies within Seminole County. The Wekiva River has only one crossing, State Road 46 at river mile 6.1. Rock Springs Run has no crossings. Black Water Creek has three crossings, State Road 44 at river mile 11.75, State Road 44A at river mile 11.8, and Lake Norris Road at approximately river mile 16.8.

The Wekiva River Basin is a complex ecological system of rivers, springs, seepage areas, lakes, streams, sinkholes, wetland prairies, hardwood hammocks, pine flatwoods, longleaf pine and wiregrass, xeric scrub oak, and sand pine scrub communities, all of which are located adjacent to or in the wetland and floodplain of this water dependent system. (The Wekiva River Basin: A Resource

Endangered, 1985). The rivers and streams are both spring-fed and blackwater. Blackwater streams receive most of their flow from precipitation resulting in annual rainy season over-bank flows. The study rivers are in superb ecological condition. The basin supports many species of plants and animal life, some of which are endangered, threatened, or of special concern.

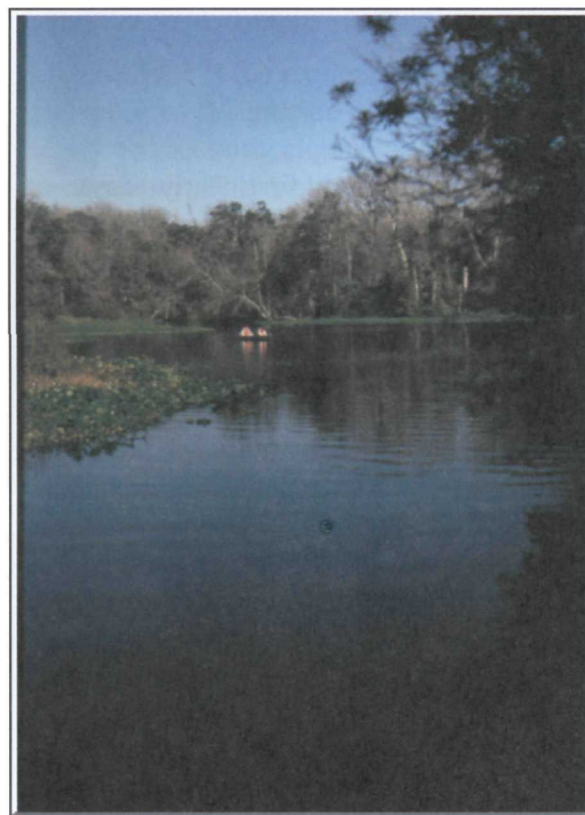
Elevations within the basin range from sea level to about 35 feet above sea level. The climate is subtropical, with an average annual temperature of around 72 degrees. Daily maximum temperatures in the summer approach the mid 90's degrees Fahrenheit. Mean annual rainfall over the Wekiwa basin is 52 inches, most of which occurs during the June-October rainy season.

(Portions of this section taken from "Wekiwa River Task Force: Report to Governor Bob Martinez, May 20, 1988.)

Wekiwa Springs and Run

The Wekiwa River actually is formed at the confluence of Wekiwa Springs Run and Rock Springs Run. Wekiwa Springs is an artesian flow located within Wekiwa Springs State Park, a 7,800 acre publicly owned park managed by the Florida Department of Environmental Protection. The Wekiwa Springs Run flows approximately one mile before connecting with Rock Springs Run to form the Wekiwa River. (It should be noted for clarification that the spelling of Wekiwa

Springs and Wekiwa Springs State Park differs from the spelling of the Wekiwa River.)



Wekiwa Springs Run - below pool area



Wekiwa Springs - pool area

Wekiwa Springs is a special natural feature. It is a second magnitude spring with exposed limestone from the Hawthorn Formation just below the water's surface. The spring discharges approximately 48 million gallons per day (MGD) of crystal clear water from at least five horizontal caverns 14 feet below the surface forming a kidney shaped pool. The spring is extremely popular for swimming and sunning activities. Estimated peak summer use of the main spring area is between 1,200 and 1,500 persons per day. The bank adjacent to part of the pool has been bulk-headed with

ladders providing swimmer access to the water. Facilities at the main spring area include paved parking, a lawn area sloping down to the pool, a canoe concession, snack bar, playground, two picnic pavilions, restrooms, and a visitor center

Rock Springs and Run

Rock Springs is located in Kelly Park, a 200 acre park owned by Orange County. Rock Springs represents one of the few areas in Central Florida where the limestone of the Hawthorn Formation is exposed. The primary discharge originates at the base of a partially submerged limestone bluff producing an average discharge of approximately 41.8 MGD. The run begins at the spring and continues down for several hundred feet until it divides into two flows. One flow forms a large public swimming area with concrete retaining walls on two sides. Both flows rejoin below the swimming area and the run then flows northward for about 1.5 miles before turning south. Rock Springs Run continues southward for approximately nine miles before meeting Wekiwa Springs Run to form the Wekiva River. Almost all of the run is in public ownership. One mile of the Rock Springs Run is within the Wekiva River Aquatic Reserve with an additional five miles forming the boundary between Wekiwa Springs State Park and Rock Springs Run State Reserve. (See Figure 3) The floodplain in this area is approximately three miles wide, east to west.



Rock Springs - pool area



Rock Springs Run

Wekiva River

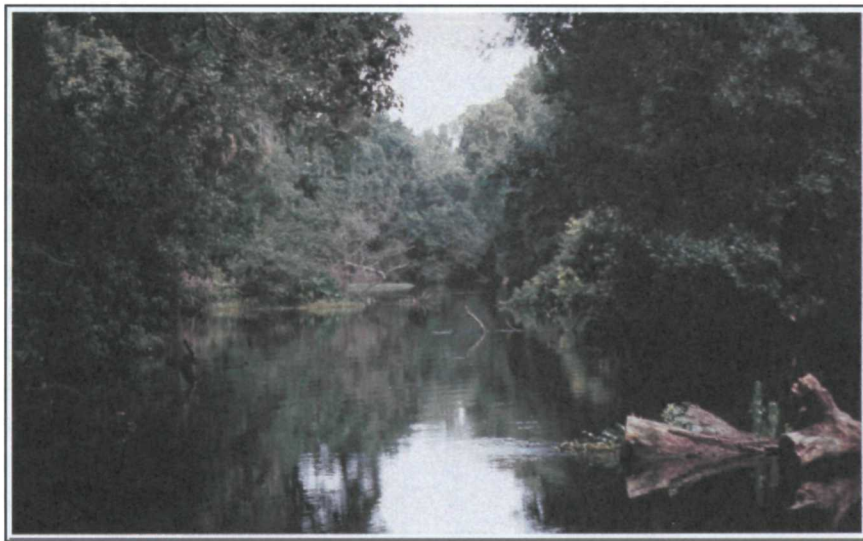
The Wekiva River forms at the confluence of Wekiwa Springs Run and Rock Springs Run and continues for approximately 14.2 miles before emptying into the St. Johns River. It is fed by natural springs of the Floridan aquifer, approximately 130 square miles of watershed in north Orange County and northwest Seminole county, and approximately 112 square mile of watershed in Lake County. One quarter mile downstream of the convergence of Wekiwa Springs Run and Rock Springs Run, the Wekiva River receives discharge from Miami Springs Run/Canal. The area between where Miami Springs joins the river and about 3.75 mile



Wekiva River - Wekiva Swamp section

further downstream, where the Little Wekiva River enters, is called Wekiva Swamp. Islands and submerged vegetation have caused low current velocities in this area which has enhanced the deposition of silt and organic debris. The water, however, remains crystal clear. Approximately six miles downstream of Wekiwa Springs the floodplain narrows and

sediments change from organic silts to sand. From here the river meanders northeasterly towards the St. Johns River. Wekiva Falls



Wekiva River

Run/Canal, a 2,000 foot tributary originating at Wekiva Falls campground, merges with the Wekiva River just south of the State Road 46 bridge. Blackwater Creek joins the Wekiva River approximately one mile upstream of the confluence of the Wekiva River and the St. Johns River.

Seminole Creek and Black Water Creek

Seminole Creek is actually a tributary of Black Water Creek which originates at Seminole Springs and travels through Seminole Swamp before joining Black Water Creek. Black Water Creek is a major tributary to the Wekiva River. Its headwaters are located at Lake Dorr in the Ocala National Forest. Upstream of the confluence with Seminole Creek, Black Water Creek is maintained by ground water seepage and a small spring which discharges into Lake Norris. The creek falls an average of 1.9 feet per mile over 16 miles between Lake Norris and the Wekiva River. It has an expansive floodplain and a sinuous and braided channel

with an abundance of deadwood snags. Springs contribute a considerable portion of the flow downstream of the confluence with Seminole Creek. (Technical Publication SJ94-1, SJRWMD).

The Seminole Creek tributary is specifically named in the Congressional study authorization. This would include Black Water Creek from the confluence with Seminole Creek to its confluence with the Wekiva River.

The Lake County Water Authority has requested that the segment of Black Water Creek from its confluence with Seminole Creek upstream to Lake Norris be included into the study for Wild and Scenic River designation. The majority of the property bordering the creek along this segment is now in public ownership and the Lake County Water Authority has been designated to

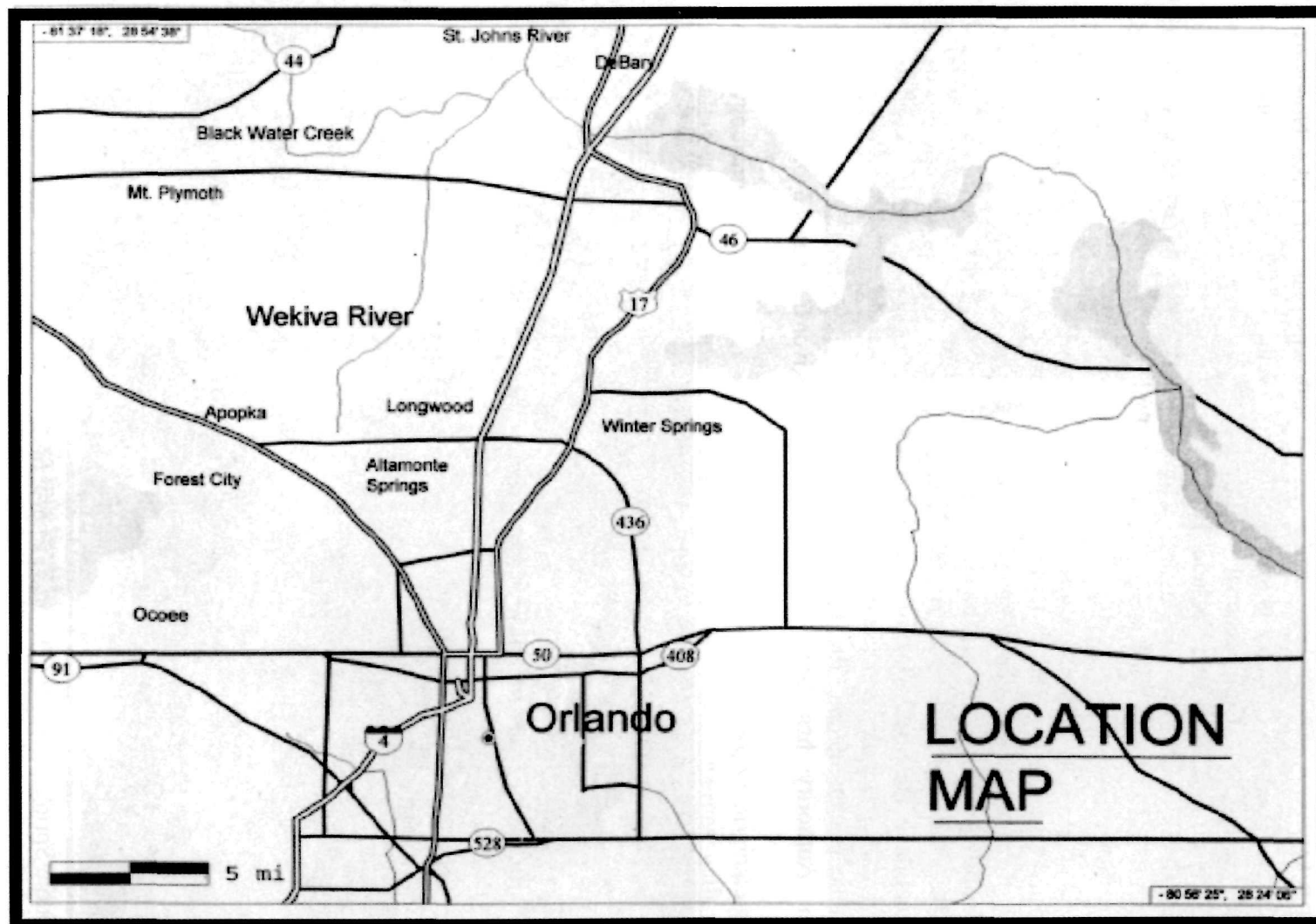
develop a management plan for the property and creek. The Florida Department of Environmental Protections has determined that the entire segment of Black Water Creek downstream of Lake Norris is classified as waters of the State of Florida.

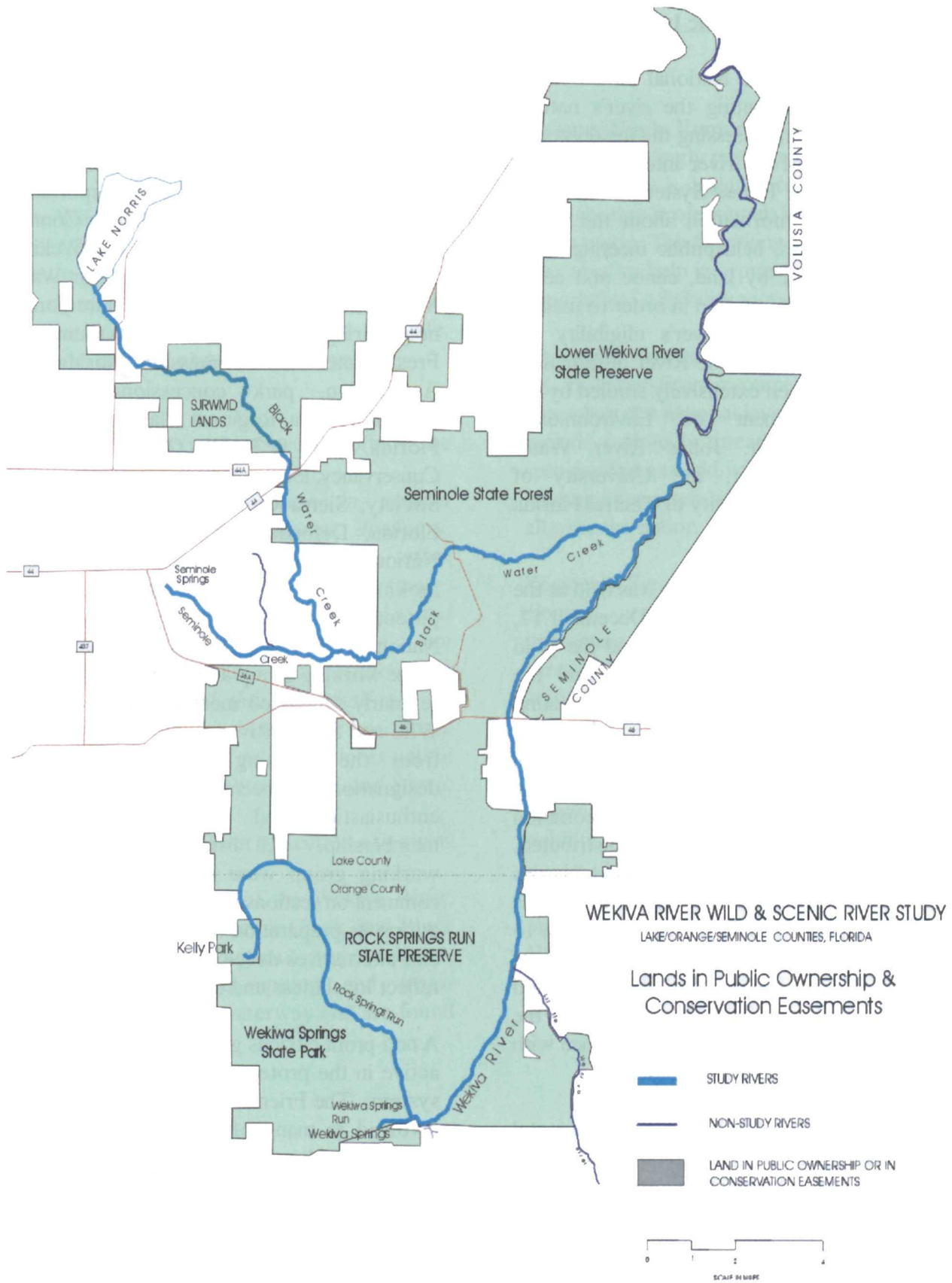


Black Water Creek - upstream of Wekiva River Confluence



Seminole Spring





Study Process and Public Involvement

In January 1997, the National Park Service (NPS) began evaluating the river's natural resource values and assessing the local interest in designation of the river into the National Wild and Scenic Rivers System. The study team gathered information about the river's natural resources, held public meetings, and studied the river by land, canoe and aerial photography interpretation in order to make a determination of the river's eligibility for National Wild and Scenic River designation. The basin has been extensively studied by the Florida Department of Environmental Protection, the St. Johns River Water Management District, the University of Florida, and the University of Central Florida (see Appendix A).

A public information workshop was held at the Wekiwa Springs State Park on December 17, 1997 to help the public understand the Wild and Scenic River Study process and the potential effects of designation. The meeting was attended by approximately 25 people including Lake County Commissioner William Good. An introductory brochure describing the Wild and Scenic Rivers Act and common questions with answers was distributed. Questions were entertained and issues discussed. Support for designation was overwhelmingly positive. No opposition to designation was voiced. A representative of the Lake County Water Authority requested that the study be extended upriver on the Black Water Creek from its convergence with Seminole Creek to Lake Norris.

The Florida Department of Environmental Protection (FDEP), Office of Ecosystem Planning and Coordination, established the Wekiva River Basin Working Group to assist in looking at environmental and developmental issues within the Wekiva River basin long prior

to the initiation of the Wild and Scenic River Study. The committee represents a broad cross section of state and local agencies, landowners, environmentalists, non-profit organizations, and recreational users. Membership includes representatives from FDEP, Florida Department of Transportation (FDOT), Orange County, Lake County, Seminole County, Friends of the Wekiva, adjacent landowners, St. Johns River Water Management District, Seminole State Forest, neighboring city agencies, Florida Game and Fresh Water Fish Commission, Florida Trail Association, park concessionaires, East Central Florida Regional Planning Council, Florida Sport & Paddle Club, The Nature Conservancy, local outfitters, Florida Audubon Society, Sierra Club, University of Central Florida, Defenders of Wildlife and Ocala National Forest. This committee has been looking at a broad spectrum of issues potentially impacting the river basin. The National Park Service has made presentations to the working group and provides updates at regularly scheduled meetings regarding the Wild and Scenic River study. The response from the working group to potential designation has been extremely supportive, enthusiastic, and unanimous by the membership. All listed members of the working group were asked to review and comment on sections of this draft study report during its preparation to assure that the plans and alternatives developed by the study team reflect local ideas and interests.

A non-profit citizens group has also been very active in the protection of the Wekiva River system. The Friends of the Wekiva has been involved in many of the State's protection efforts including the rivers' designations as "Outstanding Florida Waters". A representative of the Friends of the Wekiva sits on Wekiva River Basin Working Group.

III. Evaluation

Eligibility

The Wild and Scenic Rivers Act states that in order for a river to be eligible for designation it must be “free-flowing” and must possess one or more “outstandingly remarkable” scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values.

Free-Flowing

Free flowing is defined in Section 16(b) of the WWSRA as:

...existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures...shall not automatically bar its consideration for inclusion: Provided that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the National Wild and Scenic Rivers System.

and is applied to any river or section of a river.

All the study sections of the Wekiva River, Rock Springs Run, Seminole Creek, and Black Water Creek are without impoundment, diversion, major rip-rapping and major modifications of the waterway and are found to be free-flowing.

Outstandingly Remarkable Values

The “outstandingly remarkable” threshold within the Act is designed to be interpreted through the professional judgement of the study team. The following descriptions have been used to help interpret the “outstandingly remarkable” eligibility requirement:

Nationally Significant Resource Values - A nationally significant resource would be rare or exemplary at a national level. Examples could include nationally threatened or endangered species of plants and wildlife or a recreational boating experience which draws visitors from all over the nation.

Regionally Significant Resource Values - This element provides for the desirability of protecting a regional diversity of rivers through the national system. A regionally significant resource would be rare or exemplary at the regional level. Examples might include a regionally unusual and distinctive river related geologic feature or regionally rare or endangered plant and wildlife populations.

The Wekiwa Springs Run, Rock Springs Run, Wekiva River, Seminole Creek, and Black Water Creek have been found to have a number of “Outstandingly Remarkable Values”. These include:

- Scenic Values
- Recreational Values
- Fish and Wildlife Values
- Historic/Cultural Values
- Other Values - Water Quality

These values are described in detail in Section IV.

Classification

The Wild and Scenic Rivers Act further requires the Wekiva River Study to indicate the appropriate classifications of river segments in case the river should be designated. Rivers are classified as either wild, scenic, or recreational, depending on the river's degree of natural character. The classifications are defined as follows:

Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads

Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

The study rivers have been classified as follows:

Wekiva River (confluence with St. Johns River to Wekiwa Springs - includes Wekiwa Springs Run) Approx.

Segment	Description	Classification	Approx. Length
1 RM 0 to approx. RM 4.4	confluence with St. Johns River to southern boundary of Lower Wekiva River State Preserve along river (Wekiva River Haven)	Wild	4.4 mi
2 approx. RM 4.4 to approx. RM 7.8	southern boundary of Lower Wekiva River State Preserve to northern boundary along Wekiva River of Rock Springs State Reserve (Markham Woods Tract)	Recreational	3.4 mi
3 approx. RM 7.8 to approx. RM 13.7	northern boundary of Rock Springs Run State Reserve along river to southern boundary of Rock Springs Run State Reserve along river	Wild	5.9 mi
4 approx. RM 13.7 to Wekiwa Spring	southern boundary of Rock Springs Run State Reserve along river up Wekiwa Spring Run to Wekiwa Spring	Recreational	1.2 mi

Discussion of Classifications:

Segment 1 - RM 0 to RM 4.4 - WILD - This segment is entirely within the Lower Wekiva River State Preserve, undeveloped and without any roadway crossings.

Segment 2 - RM 4.4 to RM 7.8 - RECREATIONAL - This segment is bordered primarily by private residential development. There are a large number of associated docks and therefore much more extensive access to the river. Most of the development is older construction and relatively small in scale.

Segment 3 - RM 7.8 to RM 13.7 - WILD - This segment is bordered by Rock Springs Run State Reserve, Audubon Society conservation lands, and lands managed by the St. Johns River Water Management District. There are no river crossings or development on this segment.

Segment 4 - RM 13.7 to Wekiwa Spring - RECREATIONAL - This segment includes adjacent private lands and Wekiwa Springs Run within Wekiwa Springs State Park. The segment is a very high recreational use area with commercial canoe/boat concessioners inside and outside of the park's boundaries. Facilities at the park include paved parking, snack bar, playground, picnic pavilions, restrooms, visitor center, a lawn area sloping down to the spring pool, and canoe concession.



Segment 1



Segment 1

4 - diver in crystal clear
of Wekiwa Spring

- 2 images2

oginal

Segment 3 RM



Segment 2 - residential development



Segment 2 - residential development



Segment 2 - residential development



Segment 2 - residential dock



Segment 2 - SR 44 bridge



Segment 2 - residential dock

up Wekiwa to



Segment 3



Segment 3



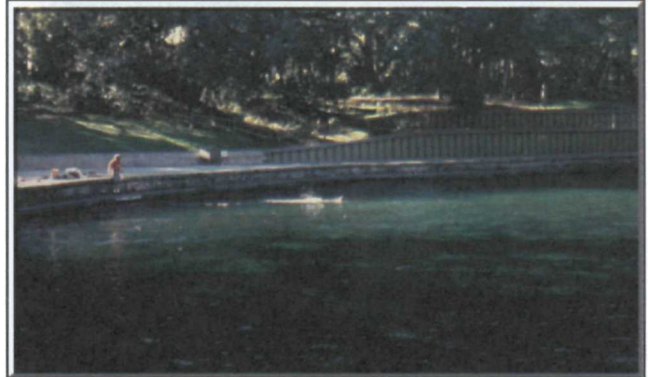
Segment 4 - Wekiwa Springs main pool



Segment 4 - canoe rental



Segment 4 - diver in crystal clear water of Wekiwa Spring



Segment 4 - Wekiwa Springs main pool

Rock Springs Run (confluence with Wekiwa Springs Run to form Wekiva River to Rock Springs)
Approx.

Segment	Description		Classification	Length
1	RM 0 to approx. RM 6.9	confluence with Wekiwa Springs Run to western most boundary of Rock Springs Run State Reserve at Rock Springs Run	Wild	6.9 mi.
2	approx. RM 6.9 to Rock Springs	western most boundary of Rock Springs Run State Reserve to Rock Springs	Recreational	1.9 mi.

Discussion of Classifications:

Segment 1 - RM 0 to RM 6.9 - WILD - This segment is entirely within Wekiwa Springs State Park and Rock Springs Run State Reserve. Access is limited to hiking trails and park service roads/trails, most of which do not join the river due to the adjacent wetlands.

Segment 2 - RM 6.9 to Rock Springs - RECREATIONAL - This segment includes Orange County's Kelly Park and residential development directly downstream of the park. The area is an intensely used recreational area primarily for canoeing and tubing. There are no river crossings but access is available from both the park and the residential lots.



Segment 1



Segment 1



Segment 2 - Rock Springs Run



Segment 2 - Rock Springs Run



Segment 2 - Swimming at Rocks Spring headwater



Segment 2 - Rock Springs pool area



Segment 2 - Rock Springs Run



Segment 2 - Rock Springs Run

Black Water Creek (confluence with Wekiva River to Lake Norris)

Segment	Description	Classification	Approx. Length
1	RM 0 to approx. RM 4 confluence with Wekiva River to approx. .25 miles downstream of Seminole Forest road crossing	Wild	4.0 mi.
2	approx. RM 4 to approx. RM 4.5 .25 miles downstream of Seminole Forest road crossing to .25 miles upstream of same crossing	Scenic	.5 mi.
3	approx. RM 4.5 to approx. RM 9 .25 miles upstream of river crossing to approx. .25 miles downstream of old RR grade crossing	Wild	4.5 mi.
4	approx. RM 9 to approx. RM 10.6 .25 miles downstream of old RR grade crossing to boundary of Seminole State Forest at Black Water Creek	Scenic	1.6 mi.
5	approx. RM 10.6 to approx. RM 11.5 boundary of Seminole State Forest at Black Water Creek to .25 downstream of State Road 44 crossing	Wild	.9 mi.
6	approx. RM 11.5 to approx. RM 12 .25 downstream of State Road 44 crossing to .25 upstream of State Road 44A crossing	Recreational	.6 mi.
7	approx. RM 12 to approx. RM 16.8 .25 miles upstream of State Road 44A crossing to .25 downstream of Lake Norris Road crossing	Wild	4.7 mi.
8	approx. RM 16.8 to Lake Norris .25 miles downstream of Lake Norris Road crossing to Black Water Creek outflow from Lake Norris	Recreational	1.1 mi.

Discussion of Classification:

Segment 1 - RM 0 to RM 4 - WILD - This segment is mostly within the Lower Wekiva River State Preserve with a small portion in the Seminole State Forest. There are no river crossings on the segment and no development.

Segment 2 - RM 4 to RM 4.5 - SCENIC - This is a half-mile segment that includes a forest service road bridge crossing. Vehicle access is controlled by the Seminole State Forest rangers. The site is used for canoe launching and fishing.

Segment 3 - RM 4.5 to RM 9 - WILD - This segment continues through Seminole State Forest and enters Seminole Swamp on private land. The river is surrounded by wetlands and remains in a wild condition.

Segment 4 - RM 9 to RM 10.6 - SCENIC - The river environment changes from wetland/swamp to more upland cleared pasture. This segment includes an old railroad tramway, culverted ranch road crossing, cleared pasture and active cattle ranching. It is very scenic but does not qualify as wild.

Segment 5 - RM 10.6 to RM 11.5 - WILD - The segment reenters the Seminole State Forest and continues to below the SR 44 crossing. There is no vehicular or rail access and the area is in a wild condition.

Segment 6 - RM 11.5 to RM 12 - RECREATIONAL - This half mile segment is crossed by SR 44A and SR 44. The highways have roadside pull-offs and appears to be extensively used for bank fishing. Some dumping has occurred adjacent to the bridges. A series of foot trails runs between the two bridges and a short distance both upstream and downstream.

Segment 7 - RM 12 to RM 16.8 - WILD - This segment is undeveloped and remains in its natural state. Much of the adjacent land is under the management of the Lake County Water Authority and the St. Johns River Water Management District.

Segment 8 - RM 16.8 to Lake Norris - RECREATIONAL - Adjacent land use along this segment is primarily agricultural with improved pasture and some residential development. Lake Norris Road runs parallel to and crosses the segment just downstream of Lake Norris.



Segment 1



Segment 1



Segment 1



Segment 3



Segment 5



Segment 6 - SR 44A crossing



Segment 6 - SR 44 crossing



Segment 7

Seminole Creek (confluence with Black Water Creek to Seminole Spring)

Segment		Description	Classification	Approx. Length
1	RM 0 to Seminole Spring	confluence with Black Water Creek to Seminole Spring	Wild	3.9

Discussion of Classification:

Segment 1 - RM 0 to Seminole Spring - WILD - The majority of the segment runs through wetlands known as Seminole Swamp and protected by adjacent wetlands. The headwaters are several springs and sinks which are surrounded by hammock and unimproved pasture. The area is in a single private ownership and well taken care of. It provides a unique example within the system of the aqua blue springs, sinks, and other features of a karst topography in its natural setting.



Seminole Spring



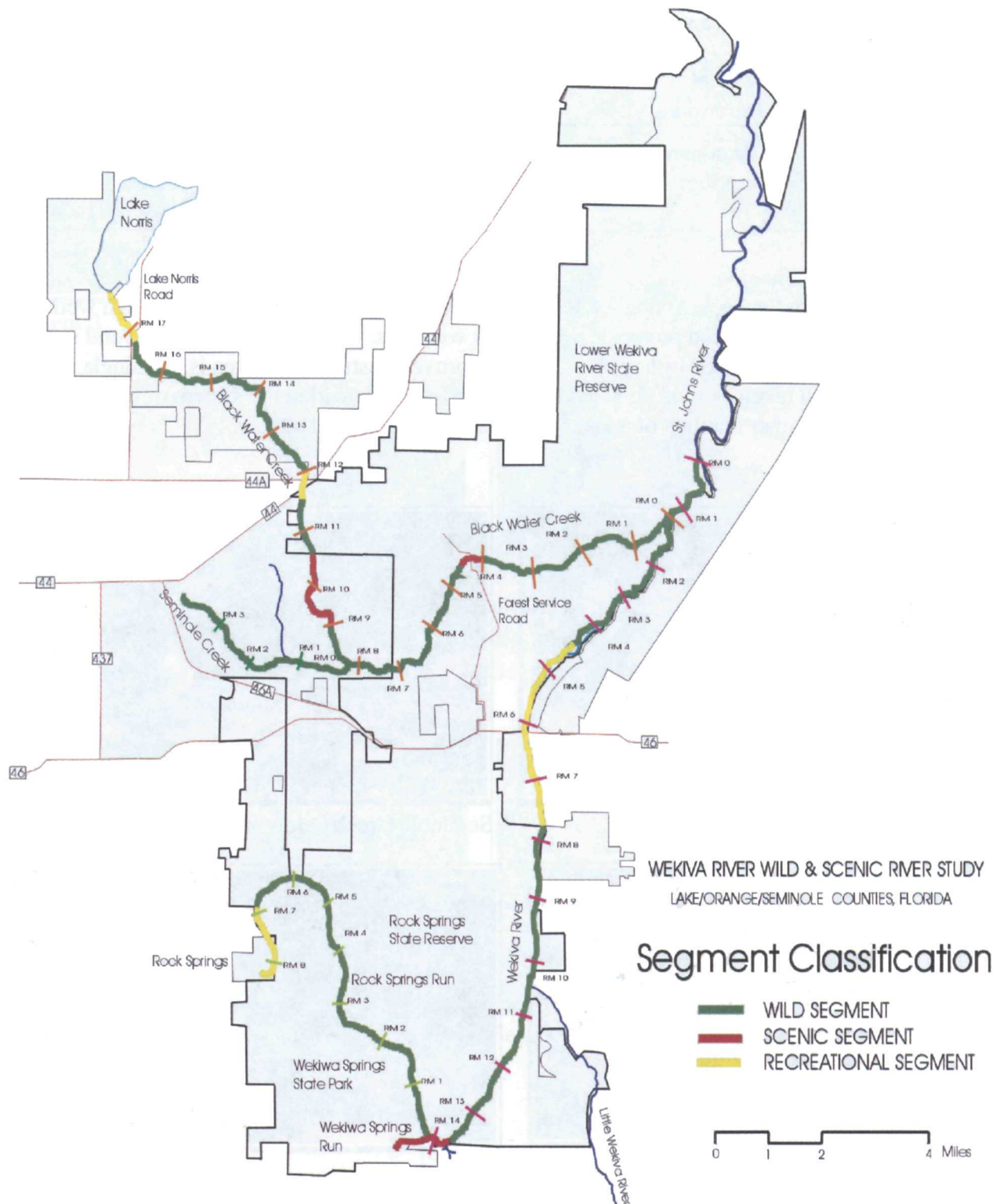
Seminole Creek below spring



One of several feeder springs to Seminole Creek



Seminole Spring



Suitability

In order for a river to be recommended for National Wild and Scenic River designation it must be both eligible and suitable. Factors used in helping to determine suitability include:

1. adequacy of existing **protection** measures to conserve the river's outstandingly remarkable resources
2. whether there is an existing or proposed **management framework** for the river's protection
3. strength of **support** for river protection and national designation
4. **effects of designation** on other uses of the land and water base, neighboring communities, etc.

Protection - All of the study rivers were found to be well protected through existing state and local mechanisms. The State of Florida has recognized the value and importance of protecting the Wekiva River basin through the passage of the Wekiva River Protection Act. Much of the study area is currently in public ownership. All of the study river segments except for portions of Seminole Creek have been determined by the Florida Department of Environmental Protection to be considered waters of the State.

Management Framework - Management plans are in place for the public lands under different state and county agencies and divisions including:

- * Florida Department of Environmental Protection - Division of Recreation and Parks
- * Florida Department of Agriculture and Consumer Affairs - Division of Forestry
- * St. Johns River Water Management District
- * Orange County - Parks and Recreation Department

Support - There is very strong, broad based support for designation of the study rivers with one exception. All of Seminole Creek and approximately 4.5 miles of Black Water Creek lie within a single privately owned parcel of land often referred to as Seminole Woods (see Suitability Map, Fig. 4). The tract has been in one family's ownership for several generations and managed primarily for silviculture and cattle. While the resource has been very well managed, is well protected and certainly eligible for designation, the landowner does not desire to have the portion of Black Water Creek and Seminole Creek within their property designated.

Effect of Designation - Designation will provide for protection from Federally funded or assisted water resources projects which would negatively impact the rivers and will not have significant negative impacts. Due to the amount of the area already in public ownership there may be no fee title acquisition of private lands by the Secretary of the Interior and the Secretary of Agriculture on any of these study rivers as per Sec. 6.(b) of the Wild and Scenic River Act.

Sec. 6.(b): If 50 per centum or more of the entire acreage outside the ordinary high water mark on both sides of the river within a federally administered wild, scenic, or recreational river is owned in fee title by the United States, by the State or States with which it lies, or by political subdivisions of those States, neither the Secretary shall acquire fee title to any lands by condemnation under authority of this Act.

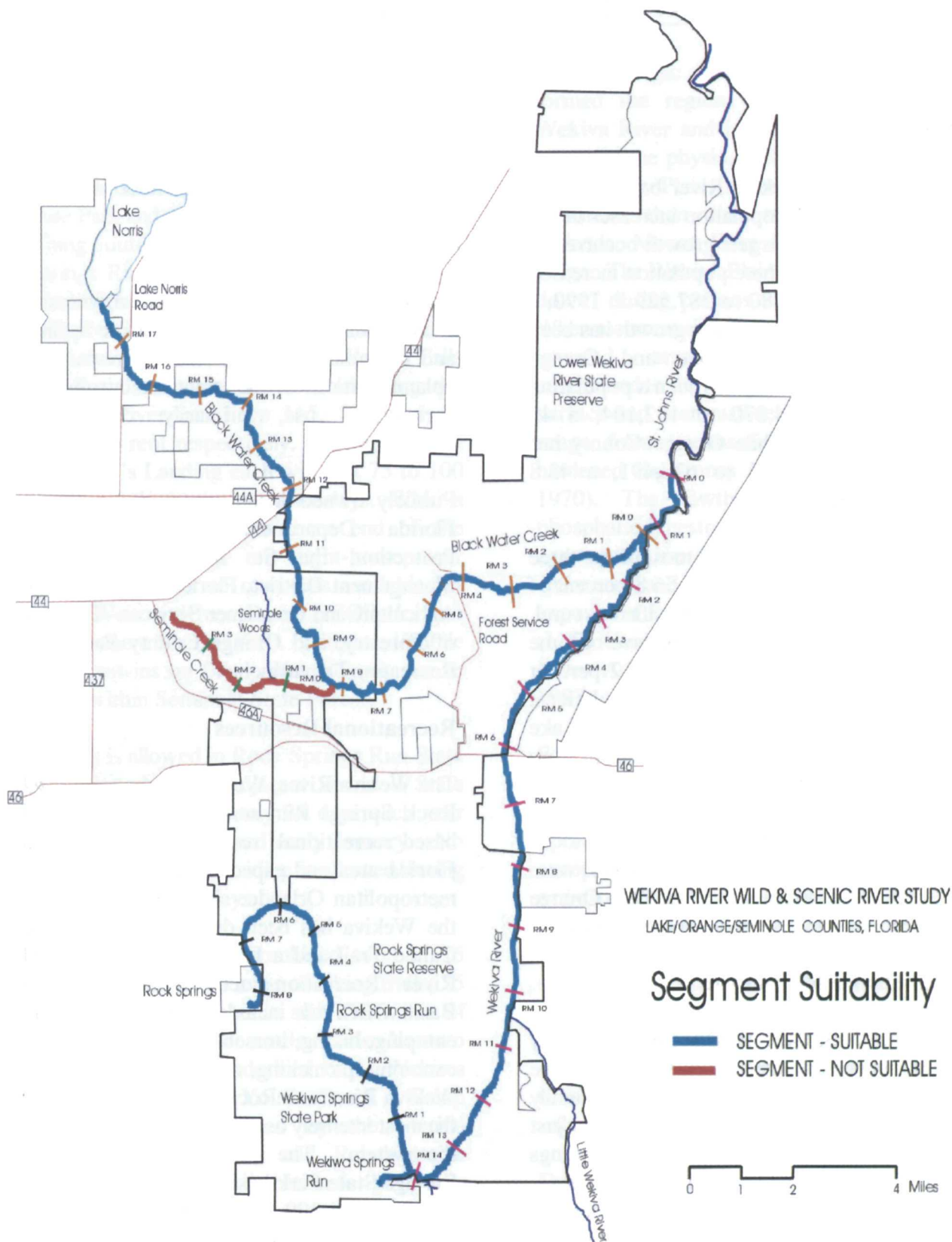
Based upon the findings above the following sections are found to be both eligible and “**suitable**” for designation:

1. Wekiva River - the river in its entirety beginning at the main springs of Wekiwa Springs and including Wekiwa Springs Run to the confluence of the Wekiva River and the St. Johns River
2. Rock Springs Run - the run in its entirety from its headwater at the main spring of Rock Springs to its confluence with the Wekiwa Springs Run (forming the Wekiva River)
3. Black Water Creek - the creek from Lake Norris downstream to the confluence with the Wekiva River.

Based upon the findings above the following sections are found to be eligible but “**not suitable**” for designation:

1. Seminole Creek - the entire creek from its headwaters at Seminole Springs to its confluence with Black Water Creek

The tract in which Seminole Creek is located has been proposed for acquisition by the State of Florida. If the tract is acquired by the State the entire Seminole Creek would become waters of the State. It is recommended that if and when the State of Florida acquires the tract containing Seminole Creek that Seminole Creek be designated as part of the National Wild and Scenic River system.



IV. The River Environment

Demographics

Counties in the Wekiva River basin all have experienced large population increases in the past decade. The largest growth occurred in Seminole County where population increased from 179,752 in 1980 to 287,529 in 1990, a change of 60 percent. Similar growth has been experienced in both Lake and Orange Counties. Lake County has seen a population increase from 104,870 to 152,104, a 45 percent increase, while Orange County has grown from 471,016 to 677,491, a 43.8 percent increase.

Lake County is the northern most of the three counties and the most rural. 56.8 percent of the population live in areas classified as rural. Seminole and Orange Counties have become much more urbanized with only 7.2 percent and 6.9 percent of the populations, respectively, living in rural areas. Lake County is becoming much more urbanized as growth moves out from Orlando northward up the Interstate 4 road corridor.

Median household incomes in 1990 were \$23,395 in Lake County, \$30,252 in Orange County, and \$35,637 in Seminole County.

Land Ownership and Use

The majority of the land adjacent to the study rivers is in public ownership (see Figure 2) The exceptions include some single family dwellings and commercial outfitters just downstream of Kelly Park on Rock Springs Run, residential development in Seminole County on the Wekiva River, a small amount of agricultural land on Black Water Creek

downstream on Lake Norris, lands held in conservation easement by the Orange County Audubon Society and a large tract of land

(Seminole Woods) under one ownership encompassing the entirety of Seminole Springs and a segment of Black Water Creek. The upland portions of the tract are currently in agricultural use, primarily cattle and silviculture.

Publicly owned lands are managed by the Florida Department of Environmental Protection, the St. Johns River Water Management District, Florida Department of Agriculture and Consumer Services - Division of Forestry, and Orange County Parks and Recreation Department.

Recreational Resources

The Wekiva River, Wekiwa Springs Run and Rock Springs Run serve as a major nature based recreational resource for the Central Florida area and especially highly urbanized metropolitan Orlando. The entire length of the Wekiva has been designated as a State Canoe Trail and a Florida Scenic and Wild River. Recreational activities at the Wekiva Basin GEOPark include swimming, fishing, camping, hiking, horseback riding, bicycling, canoeing, picnicking, and nature study. The Wekiva River and Rock Springs Run provide the most intensely used recreation resources of the system. The main spring at Wekiwa Springs State Park has an estimated peak use of between 1,200 and 1,500 persons per day primarily for swimming, snorkeling, and

sunning. Orange County's Kelly Park at Rock Springs is also intensely used for swimming, camping, picnicking and hiking. Wekiwa Springs Run connects with Rock Springs Run approximately one mile from Wekiwa Springs to form the Wekiva River. Both spring runs are popular canoeing resources. A concession for rental canoes is located in Wekiwa Springs State Park and four other private canoeing and tubing outfitters are located along Rock Springs Run and the Wekiva River. King's Landing is located on Rock Springs Run and rents 60-70 canoes on any given summer weekend day. Wekiva Marina, Wekiva Falls and Katie's Landing are located along the Wekiva River and have 165, 100, and 50 canoes to rent respectively. Wekiva Marina and Katie's Landing each will rent 75 to 100 canoes on the busiest summer days. Wekiva River Haven on the northern end of the Wekiva River, has ten eight-horsepower motorboats and two rowboats available for rent. (Wekiva River Basin GEOPark Unit Management Plan, FDEP). Additional public canoe put-ins on Black Water Creek can be found within Seminole State Forest.

Hunting is allowed in Rock Springs Run State Reserve and on the adjacent Seminole State Forest for approximately 24 days each year between September and early January. No camping or horseback riding is allowed during scheduled hunting days.

The GEOPark has a combined total of 15 miles of bike trails, 27 miles of hiking trails, 25 miles of equestrian trails and 110 miles of multi-use trails/service roads. It also has two camps, Camp Thunderbird and Wekiwa Springs State Park Youth Camp. Camp Thunderbird is operated by the Florida Department of Health and Rehabilitative Services for outdoor recreation for physically and mentally challenged persons. The Youth Camp is available for groups whose main purpose is providing environmental education and serves as the main Florida Park Service training center.

Natural Resources

Geology

Over geologic time, changes in sea level formed the region now occupied by the Wekiva River and its tributaries. The river occupies the physiographic region known as the Wekiva Plain, an area slightly lower in elevation than the surrounding Marion Uplands, Mount Dora Ridge, and Orlando Ridge. The Wekiva Plain was apparently "cut down" during periods of receding sea level. When recurrent rises in sea level inundated the lowered areas, deposited sediments contributed to the present Wekiva Plain. The surface and near surface deposits in the area range from unconsolidated sands to well hardened limestones and dolomites (White, 1970). The Hawthorn Formation, a sandy phosphatic limestone of late middle Miocene age (approximately 13 MYBP) underlies the entire area, and outcrops of this formation are exposed at Rock Springs and Wekiwa Spring (U.S. Geological Survey, 1980) - (Wekiva River Aquatic Preserve Management Plan, 1987).

Scenery

Other than the high use recreational areas around Wekiwa Springs Run and Rock Springs Run most of the study rivers are in an exceptionally pristine state. They present the opportunity to see a unspoiled part of natural Florida. The visual resources are exceptional. The crystal clear waters of the springs, spring runs, and the Wekiva River, the unspoiled blackwaters of Black Water Creek, the mosaic of sandhills, flatwoods, hammock, scrub and wetland communities all contribute to make the area a unique resource of national value.

Due to the exceptional visual resources of the Wekiva River basin it serves as a national, statewide and regional attraction for nature observation and education, nature photography, and scenery appreciation.

Fish and Wildlife

The Wekiva River is one of Florida's most valuable and unusual natural resources due to its location in a region of biologic transition between two climatic zones. The range of temperate zone plants overlaps the northern limit of many tropical species, giving the region one of the richest floral compositions to be found in Florida (Report to the Environmental Regulation Commission on Extending the Boundaries of the Outstanding Florida Water Designation Within the Wekiva River System, FDEP)

The ecosystem on the Wekiva River basin is delicate and complex. There are fifteen (15) definable habitats within the Wekiva Basin GEOPark:

- Wet Flatwoods
- Baygall
- Mesic Flatwoods
- Floodplain Swamp
- Scrubby Flatwoods
- Hydric Hammock
- Sandhill
- Flatwoods/Prairie/Marsh Lake
- Scrub
- Spring-Run Stream
- Upland Hardwood Forest and Blackwater Stream
- Upland Mixed Forest
- Aquatic and Terrestrial Cave
- Xeric Hammock
- Ruderal and Developed

Detailed descriptions of these habitats are located in Appendix D.

The number of species and varieties of species identified to date within just the GEOPark include:

Species Within Park (see Appendix B for complete listing)

Category	Species/ Varieties
Mammals	28
Birds	213
Reptiles	49
Amphibians	24
Fish	32
Molluscs	2
Insects	161
Arachnids	5
Crustaceans	1
Plants	527

Designated species are those listed by the Florida Natural Areas Inventory (FNAI), U.S. Fish and Wildlife Service (USFWS), the Florida Game and Fresh Water Commission (FGFWFC), and the Florida Department of Agriculture and Consumer Services (FDA) as endangered, threatened, or of special concern. It also includes species under review for inclusion in one of the above categories or those which are regulated by the Convention on International Trade in Endangered Species (CITES).

Designated Species Within Wekiva Basin
GEOPark (see Appendix C for complete listing
and rankings)

Category	Species
Mammals	6
Birds	16
Reptiles	5
Amphibians	1
Invertebrates	3
Plants	15

Of the forty-six (46) species listed as designated species six (6) are classified by the USFWS as either threatened or endangered including:

Alligator mississippiensis - American Alligator

Drymarchon corais couperi - Eastern Indigo Snake

Aphelocoma coerulescens - Florida Scrub-jay

Haliaeetus leucocephalus - Bald Eagle

Mycteria americana - Wood Stork

Trichechus manatus latirostius - West Indian Manatee

Two designated species are unique to Wekiwa Springs State Park, the Wekiwa Springs hydrobe snail and the Wekiwa Siltsnail. A third species, the Orlando cave crayfish, occurs only within the Wekiva River basin. The park has the largest known population of yellow anise in Florida. Approximately 1,800 acres have been registered with the Nature Conservancy as habitat for the species. There are four active bald eagle nests within the GEOPark and scrubjays are found in all three units of the GEOPark.

The Wekiva River basin is also part of a larger habitat area for black bear. The Florida Department of Environmental Protection is coordinating the Wekiva-Ocala Greenway running from Wekiwa Springs to the Ocala

National Forest partially in an effort to protect a habitat corridor for the Black Bear and other species. The Florida Department of Transportation has installed a prototype animal underpass on State Highway 46 to facilitate animal movement. Species movement is monitored by the Florida Park Service through the use of remote cameras.

The Wekiva River basin also has a number of plants which are considered distinctive species. Although neither rare nor designated species, their presence in the area is considered quite unusual. Distribution of the species are more closely tied to the Appalachian Mountain area than to Central Florida. Some of the populations represent the southern or near southern limits while others are disjunct populations. Species include:

Aesculus pavia - Red Buckeye

Aquarista populifolia - Florida Leucothoe

Carpinus caolineana - Hornbeam

Castanea alnifolia - Chinquapin

Coronus florida - Flowering Dogwood

Hamamelis virginiana - Witch Hazel

Liriodendron tulipifera - Tulip Poplar

Ptelea trifoliata - Water Ash

Tilia coroliniana - Carolina Basswood

Toxicodendron vernix - Poison Sumac

Historic and Cultural Resources

The Rock Springs/Wekiva area is considered to be one of the most important archaeological areas in Orange County (Stewart 1982). Over 20 archaeological and historical sites occur in the Wekiva area from Rock Springs to the St. Johns River. These sites are recorded in the Florida Master Site File.

(Text from Wekiva River Basin GEOPark Unit Management Plan)

Aboriginal period - The Wekiva Basin was used by the early Indians. This use is indicated by the presence of six middens and five mounds at Wekiwa Springs and 1 mound and 2 other sites at Markham Woods. Prior to

European settlement in Florida, native people had probably used the area for over 10,000 years.

Small test pits have been dug in several of the mounds revealing pottery fragments, animal bones, and shells. Several points and pottery fragments have been found by swimmers in the main head spring at Wekiwa Springs State Park. A wooden mortar dated from the St. John's I period was found and illegally removed from Wekiwa Springs Run. Fossil remains of various animals are found throughout the spring-runs at the unit.

Spanish-British period (1500-1820) - Central Florida was not occupied by the Europeans during this time period. Early maps show little of the Wekiva area other than a trading post and trapping area. The name "Wekiwa" is almost the only legacy of the Seminole Indians who used the area. "Wekiwa" means "spring of water" in the Creek dialect spoken by the Seminoles.

Recent period (1820-present) - By the 1820's, Central Florida was in use by early settlers, and the Wekiva River and spring appear on several military maps. There was a minor military road running from Fort Mellan (Sanford) to Fort Mason (Eustis) which passed through the unit in the spring area. The only known military action during the Second Seminole War took place on July 29, 1840, when Cochooche's camp called Wekiwa, in the swamps along the river, was attacked by troops under the command of Brevet Brigadier General Walker Keith Armistad.

Following the Second Seminole War, the area was opened up for settlement under the Armed Occupations Act. The area around Rock Springs and Wekiwa Springs became a focal point for early settlers. The town of Clay Springs was started around Wekiwa Springs. Clay Springs was named after Mr. L.H. Clay, a farmer living at the spring. The spring head served as a landing spot for suppliers.

In 1857 William Delk, a veteran of the Seminole Wars, was awarded 40 acres one half mile west of Rock Springs for his service. Cotton and cypress seem to have been the major crops. He built a sawmill and gristmill which were powered by damming Rock Springs Run. Delk seems to have left the area early in the Civil War.

Another sawmill was built in Wekiwa Springs by Robert Barnshart. This mill was located on the upper Wekiva River. A gristmill was constructed in Wekiwa Springs by Columbus Mill. Mill dammed Mill creek and his gristmill was operated until the Civil War. A mound still remains along Mill Creek, indicating the location of the dam for this mill.

After the Civil War Clay Springs became a loading and unloading point for steamships and barges. Steamboats eventually completely replaced the barges on the river. The Clyde Steamship Company began operation in 1877.

From the 1880's to 1890's tourism became important to the area. Facilities at the Wekiwa Springs included a hotel, a sanitarium, cabins, a picnic area, bathhouses and a rail toboggan ride. In 1906, the name of the springs was changed from Clay Springs to Wekiwa Springs. The recreational facilities operated until the Great Depression after which the buildings either burned or were dismantled.

During the 1930's cypress, pine, and wetland hardwoods were logged throughout the Wekiva basin by the Wilson Cypress Company. Numerous elevated tram beds and railroad grades used to haul timber run through the property. Most tramways occur in the hydric hammock and floodplain swamp communities. However, one elevated grade occurs in the sandhill community at Wekiwa Springs State Park, and runs north-south through the entire unit. This grade was constructed in the late 1850's for a passenger railway from Eustis to Orlando which never came to fruition. The grade was then used to

timber longleaf pine from Wekiwa Springs. The area was also used for turpentine and many catfaced pines and clay turpentine pots can still be found at the park. All the tramways are above the elevation of the surrounding natural communities. The tramways through the floodplain swamp and hydric hammock communities have revegetated with hardwoods while the elevated grade in the sandhills is used as a primary service road at Wekiwa Springs. The elevated grade through the sandhills is also not suitable for restoration since it is a necessary primary access route to the entire park. All the tramways are now cultural resources.

In 1941, the Apopka Sportsman's Club purchased the Wekiwa Springs area from the Wilson Cypress Company. The Club maintained the area for hunting, fishing, and other recreational uses. In 1969, the area was purchased for a state park. (Cultural resources information from Paul Barton, pers comm.)

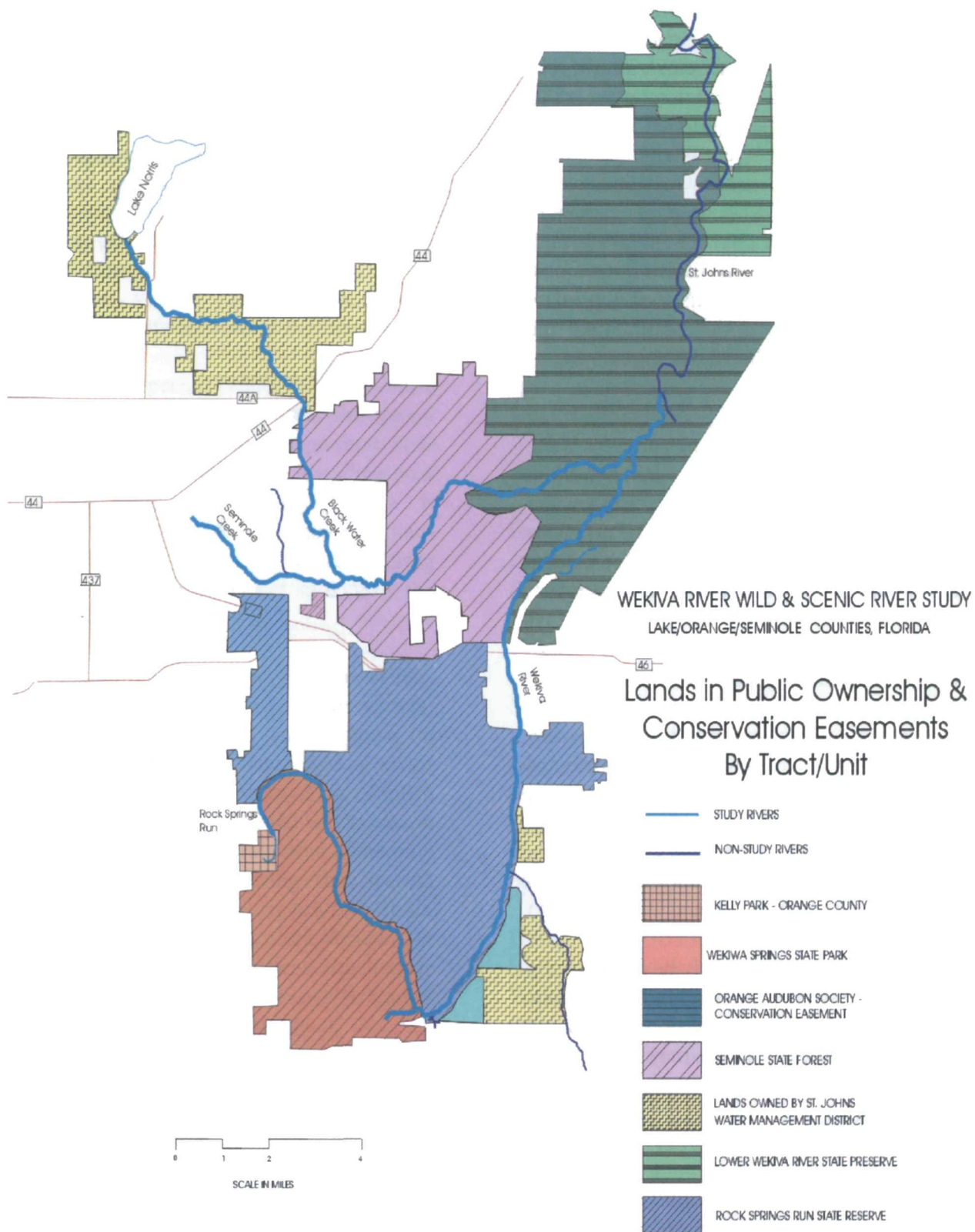
The Markham Woods tract contains portions of the original site of the settlement of Markham established around 1875. This establishment was supported by the new railroad system and Wekiva River. Three sites of cultural significance have been examined and connected with this time frame including an African-American cemetery which may contain up to 75 burials. (Weisman and Newman, 1993, Estabrock and Weant, 1991)

All of these elements certainly have regionally significant resource values and while not having been studied for inclusion as National Historic Landmark sites, may well have national significance.

Water Quality

All of the study rivers are classified as "Outstanding Florida Waters", the State of Florida's highest designation for water quality. The character of the water ranges from the crystal clear flows from the artesian springs

and spring runs to the tannin colored waters of the black water creeks. The water quality which is affected by the water quantity coming from springs and runoff from adjacent lands is without question an outstandingly remarkable resource. It is an integral factor in the popularity of the springs and rivers as recreational resources and the health and integrity of the rivers' ecosystems.



V. Summary of Existing Protection

Federal Agencies/Programs

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (ACOE) is charged with regulating waters of the United States. By definition these waters include coastal and navigable inland waters, lakes, rivers and streams; other intrastate lakes, rivers and streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, wet meadows, and certain impoundments.

Typical activities that would require permitting by the U.S. Army Corps of Engineers include the following:

- * construction of structures such as piers, wharves, docks, dockhouses, boat hoists, boathouses, floats, marinas, boat ramps, marine railways, and bulkheads
- * construction of revetment, groins, breakwaters, levees, dams, dikes, berms, weirs, and outfall structures
- * placement of wires, cables, or pipes in or above the water
- * dredging, excavation and depositing of fill and dredged material
- * construction of fill roads and placement of riprap

The authority the ACOE has over construction of small docks, piers, moorings, and platforms comes from the Rivers and Harbors Act of 1899, Section 10. Typically these activities are permitted as either Letters of Permission or General Permits. If an activity is covered by a general permit, an application to the

ACOE is not required. A person utilizing a general permit must only comply with the specific requirements stated of that permit. These same activities occurring within defined waters of the State of Florida also require permitting through the water management district which will be discussed later.

Section 404 of the Clean Water Act regulates discharge of dredged or fill material into the waters of the United States. Silviculture activities such as plowing, seeding, cultivating, minor drainage, and harvesting for the production of forest products are specifically exempted from the requirements under Section 404.

Due to the possible significant impact on rivers in or under study for inclusion in the National Wild and Scenic Rivers System, ACOE rules (61 FR 47726-47728, September 10, 1996; Nationwide Permit Conditions, General Conditions, Subsection &) provide that:

“No activity may occur in a component of the National Wild and Scenic Rivers System; or in a river officially designated by Congress as a ‘study river’ for possible inclusion in the system, while the river is in an official status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status.”

This allows the administering agency or the study agency the opportunity to evaluate the impacts of an activity before the activity is authorized under the Nationwide Permit.

The U.S. Army Corp of Engineers is also required to consult with the U.S. Fish and Wildlife Service (USFWS) if an endangered species may be impacted by an activity. The USFWS prepares a separate biological opinion and the activity may not be authorized unless it is determined that the project is not likely to jeopardize the continued existence of the species or result in the destruction of the habitat of the species.

Federal Lands

There are no Federal lands within the Wekiva River Wild and Scenic River study area.

State Agencies/Programs

Florida Department of Environmental Protection and the St. Johns River Water Management District

All of the study river segments except a portion of Seminole Creek are waters of the State of Florida. Construction in, on or over waters of the state of Florida and in estuarine areas are regulated the Florida Department of Environmental Protection (FDEP) and the five state water management districts.

The Wekiva basin is entirely within the St. Johns River Water Management District (SJRWMD). Under the Warren S. Henderson Wetlands Protection Act of 1984 regulatory authority was given to the State Department of Environmental Regulation (now FDEP) but much of the permitting authority has been delegated to the water management districts.

Permits are required for construction of such items as jetties, breakwaters, revetments, marinas, docks, wharves, piers, marine railroads, walkways, mooring structures, boat ramps, canals, locks, bridges, causeways and any dredging and filling. Minor activities such as private docks of limited size, maintenance dredging, certain boat ramps, and construction of seawalls and revetments in limited situations are exempted.

A project may not cause violations of water quality standards and in some cases may not cause degradation of the water quality itself. The project also must be found to be clearly in or not contrary to the public interest. The public interest criteria as per Section 403.918, F.S. require consideration of:

1. Public health, safety or welfare and the property of others
2. Conservation of fish and wildlife, threatened or endangered species or their habitats
3. Navigation, flow of water, erosion, or shoaling
4. Fishing, recreational values and marine productivity
5. Whether the impacts of the project will be temporary or permanent
6. Historic and archaeological resources
7. Current conditions and relative value of functions being performed by areas affected by the proposed activity

Scenic values per se are not considered public interest criteria.

Under the Warren S. Henderson Wetlands Protection Act normal and customary agricultural and silviculture operations are exempted from permitting requirements.

The St. Johns River Water Management District is also required by law to establish minimum surface water flows and levels for the Wekiva River System and to establish minimum ground water levels for the Floridian aquifer system within the Wekiva Basin (Paragraph 373.315(3), Florida Statutes (FS)). The Floridian aquifer system is the primary source of water supply in the Wekiva River surface water basin. The primary reason for establishing minimum flows and levels in the

Wekiva Basin was to ensure that flow from artesian springs emanating from the Floridan aquifer system and the base flow of each stream would be adequate to prevent significant harm to aquatic and wetland resources. Minimum recommended flows have been established for springs within the Wekiva River system. (Technical Publication SJ94-1, SJRWMD)

East Central Florida Regional Planning Council

On a regional basis Florida is divided into 11 Regional Planning Councils. The Wekiva basin lies within the East Central Florida Regional Planning Council's (ECFRPC) jurisdiction. This council establishes goals and policies that influence and direct land uses within its boundaries. Goals within its policies state:

Goal 8.3.3: By 1995, significant wetlands should be protected through a coordinated management plan by Federal, State, regional, and local governments.

Goal 10: Natural Systems and Recreational Land - Florida shall protect and acquire natural habitats and natural systems such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.

Outstanding Florida Waters

All the study rivers have been designated "Outstanding Florida Waters" by the state as part of Section 303 of the Federal Clean Water Act. The designation is the highest level of water quality protection offered by the State. Section 17-3.041 F.S., entitled "Special Protection, Outstanding Florida Waters" specifically states "It shall be the Department policy to afford the highest protection to Outstanding Florida Waters..."

Wekiva River Protection Act

The Florida Legislature passed the Wekiva

River Protection Act which created F.S. ch 369, pt. III requiring the effected counties to amend their comprehensive policy plan and land development regulations. The act mandates that the counties' goals, objectives and policies address the following implementation strategies:

- * ensure the preservation of sufficient habitat for endangered, threatened and species of special concern
- * restrictions on the clearing of native vegetation within the one-hundred-year floodplain
- * prohibition of development that is not low density residential unless development has less impact than low density residential
- * provisions for setbacks along the Wekiva River
- * restrictions on filling and alteration of wetlands
- * provisions encouraging clustering of residential development
- * provisions requiring that the density or intensity of development permitted on parcels adjacent to the river be concentrated on the portion of the parcel furthest from the river
- * provisions requiring that parcels not be subdivided so as to interfere with protection zones or setbacks
- * restriction on the location of septic tanks and drain fields in the one-hundred-year floodplain

The St. Johns River Water Management District has established the following protection zones for the Wekiva River Protection Area:

Riparian Wildlife Protection Zone (SJRWMD; Wekiva River Basin Criteria; Rule 40C-41

- (1) The wetlands abutting the Wekiva River, Little Wekiva River, Rock Springs Run, Black Water Creek, Sulphur Run, or Seminole Creek:
- (2) The uplands which are within 50 feet

landward of the landward extent of the wetlands above;

(3) The uplands which are within 550 feet landward of the stream's edge as defined as the waterward extent of the forested wetlands abutting the Wekiva River, Little Wekiva River, Rock Springs Run, Black Water Creek Sulphur Run or Seminole Creek. In the absence of forested wetlands abutting these streams, the stream's edge shall be defined as the mean annual surface water elevation of the stream: however, if hydrologic records are unavailable, the landward extent of the herbaceous emergent wetland vegetation growing in these streams shall be considered to be the stream's edge.

(4) All development activity (including building permits) located within the corridor must receive a permit from the SJRWMD.

Water Quality Protection Zone (SJRWMD); Wekiva River Basin Criteria; Rule 40C-41

(1) This zone shall extend one half mile from the Wekiva River, Little Wekiva River north of SR 436, Black Water Creek, Rock Springs Run, Seminole Creek, Sulphur Run, and shall also extend one quarter mile from any wetland abutting an Outstanding Florida Water.

(2) All development permits located within the water quality protection zone must be submitted to the State of Florida Department of Community Affairs (DCA) for certification in accordance with the DCA rule 9J-27 prior to becoming effective. Development permits include Comprehensive Plan Amendments, rezonings, zoning permits, site plans, plats, variances, special exceptions or other action permitting the development of land.

The SJRWMD will not issue a stormwater permit within the Wekiva River Protection Area until local governments certify that the activity is consistent with the county comprehensive plan and land development regulations.

State Lands

The State of Florida has extensive land holdings within the Wekiva basin (see fig. xx). The largest state owned unit is the Wekiva Basin GEOPark which is composed of Wekiwa Springs State Park, Rock Springs Run State Reserve, and the Lower Wekiva River State Preserve. The GEOPark encompasses 41,707.79 acres. A unit management plan has recently been approved. The plan will serve as the basic statement of policy and direction for the parks management. It identifies the objectives, criteria, and standards that guide each aspect of the park's administration, and sets forth specific measures that will be implemented to meet management objectives. The plan addresses resource and ecosystem management as well as land use issues such as existing and planned uses of adjacent lands, recreational resources, existing and potential uses, and carrying capacities.

Additional state owned lands include Seminole State Forest and properties of the St. Johns River Water Management District. Each agency has its own management plans for the various properties. The majority of the properties are within the study boundaries of the Wekiva-Ocala Greenway, an open-space greenway system linking Wekiwa Springs State Park in the south, north to Ocala National Forest.

County Agencies/Programs

Under F.S. ch 369, pt III, the Wekiva River Protection Act requires the affected counties, Lake, Orange, and Seminole, to amend their comprehensive policy plan and land development regulations to meet such goals, objectives and policies as stated by the act.

Orange County

Orange County provides protection to the Wekiva River in county code Article XIIL-Wekiva River Protection. Section 15-496, 15-498, 15-498 states the following: (see

appendix x for complete text of this section)

Buffer zone

(1) A buffer zone of five hundred fifty (550) feet from the landward limit of waters of the state or edge of the Wekiva River or from the landward edge of the wetlands associated with the Wekiva River.

(2) In no case shall development activities be permitted closer than five hundred fifty (550) feet from the river's edge except for created forested or herbaceous wetlands, and passive recreation when it is clearly demonstrated by the applicant that the areas shall not adversely affect aquatic and wetland-dependent wildlife, water quality, groundwater table or surface water levels .

General regulations

(1) The density and intensity of development permitted within the protection area are encouraged to cluster or concentrate on those portions of the parcel or parcels which are furthest from the surface waters or wetlands of the Wekiva River system. In order to preserve native vegetation to the maximum extent possible, clustering or submission as a residential planned development is encouraged.

(2) A survey of those species designated as endangered, threatened, or of special concern shall be required as part of all development applications when there is reasonable expectation that any such species are on the property.

(3) Within the one-hundred-year floodplain developments shall be required to minimize the clearance of native vegetation. A vegetation clearing plan must be submitted and clearing will only be permitted where necessary for roads, utilities, or pedestrian access routes.

(4) Septic tank use will be discouraged within the one-hundred-year flood plain.

(5) Developments which have the potential to degrade groundwater quality shall be prohibited.

(6) Redevelopment and postdevelopment stormwater rates shall be equal.

(7) Sufficient space shall be required

between stormwater management structures and conservation areas to ensure no adverse impact to the hydrologic regime of the wetland area.

(8) If through an archeological survey significant archaeological sites are found, then sites shall be preserved or excavated pursuant to state guidelines prior to construction on the archaeological or historic site.

(9) Rare upland habitat protection (reserved).

(10) Where landscaping is required the design shall include use of native plant species.

Development of Regional Impact (DRI)

(1) The normal numerical standards and guidelines shall be reduced by fifty (50) percent as applied to proposed developments entirely or partially located in the Wekiva River protection area.

Seminole County

Seminole County provides protection for the Wekiva River Protection Area through its Comprehensive Plan Future Land Use Element Policy 2.1.7- Wekiva River Protection and Policy 13.7.3- Wekiva River and Econlockhatchee River Protection Zone and zoning regulations.

Permitted uses

(1) Single-family residential dwellings and accessory uses compatible with future land use designations in the protection areas.

(2) Low density recreation.

(3) Agricultural uses.

Comprehensive plan amendments

(1) Outside the urban service area within the Wekiva River protection area no amendments to the comprehensive plan shall be allowed for residential density greater than one (1) dwelling unit per five (5) acres.

Zoning Regulations - Part 53 Wekiva River Protection Act

(1) The county evaluates and regulates

development within the Wekiva River Protection Area to ensure consistency with the act, provision of the Seminole County Comprehensive Plan and the designated protection zones required by the act.

Lake County

Lake County defines the Wekiva River System to include the Wekiva River, the Little Wekiva River, Black Water Creek, Rock Springs Run, Sulphur Run, Lake Norris, and Seminole Creek. The County's Future Land Use Element for the Wekiva River Protection Area is quite detailed and lengthy (see appendix x for full text). It provides for a broad mix of land uses but with limitations and restrictions designed to protect the Wekiva River System. Major elements include:

(1) Establishment of Transfer of Development Rights (TDR) Overlay Districts within the Wekiva River Protection Area in order to permit the owners of property subject to the limitations on density to utilize the development potential of that property including:

Designation of two Transfer of Development Rights Sending Areas and two Transfer of Development Rights Receiving Areas

A maximum density of one unit per ten net developable acres attainable through the use of the point rating system for Overlay District 1; a maximum density of one unit per five acres net developable acres attainable through the use of the point rating system

(2) Development of a Development Point Rating System for land proposed to be developed at densities higher than allowed under the TDR system with the following objectives:

- * Ensure environmental protection
- * Control urban sprawl

- * Maximize land use efficiency
- * Promote the efficient use of public facilities
- * Ensure that services required by development are in place or programmed concurrent with development
- * Direct appropriate growth patterns within the Wekiva River Protection Area

Setbacks

- (1) Minimum setbacks conforming with SJRWMD regulations
- (2) Minimum setbacks of 200 feet from the ordinary water mark and 50 feet from associated wetlands for development activity not regulated by SJRWMD.

Waterfront Development

- (1) No industrial or commercial uses are permitted adjacent to water bodies or adjacent to publicly owned conservation or preservation areas.
- (2) Environmental surveys are required to assess impacts of waterfront development on ground surface water quality, quantity, and hydrology; native and endangered vegetation and wildlife; wetlands and associated uplands before approval of development.
- (3) Utilization of Planned Unit Development approach wherever appropriate.

Agricultural Use

- (1) Clearing of land for commercial agricultural use require a notice of intent to include land description, vegetation, surface hydrology conditions, crop intended, time schedule of proposed activity, and an agricultural plan demonstrating the suitability of the land for the proposed use.

Silviculture

- (1) Before wetland harvesting of parcels one acre or more cumulative over one year from date of initial harvesting, a notice of intent must be approved by the Board of County Commissioners.

(2) A harvesting plan shall be presented demonstrating the suitability of the timber for harvesting.

(3) The harvesting plan shall conform to the most current Best Management Practices recommended by the Florida Division of Forestry.

County Lands

The only county owned land within the corridor is Kelly Park at Rock Springs. The 204 acre county park is managed by the Orange County Park and Recreation Department.

Private Conservation Lands

The Audubon Society owns a tract of land adjacent to the Wekiva River between RM 9 and RM 10 that is held for conservation purposes. The land is managed in conjunction with the adjacent St. Johns River Water Management lands.

VI. Alternatives and Conclusions

Alternative A- No Action/Existing Trends

Discussion: This alternative characterizes the future conditions expected in the study area without designation as a wild and scenic river. All of the sections of the Wekiva River, Rock Springs Run, Seminole Creek, and Black Water Creek are clearly eligible to be a component of the National Wild and Scenic Rivers System. The rivers are excellent examples of Florida's crystal clear spring runs and black water creeks. The State, counties, and owners of Seminole Forest have done an excellent job of preserving the rivers' outstanding scenic, natural, and recreational characteristics.

Urban pressures are expected to continue on the Wekiva River basin. This is especially true in the more rural Lake County as Orlando's metropolitan growth continues to move northward. Increased need for water resources and transportation corridors will undoubtedly result.

The Wekiva River system is very complex. Much of the flow of the system and water quality is reliant on artesian flow from the Floridan aquifer which is affected by surrounding land uses. The Wekiva River Protection Act requires the counties to provide protection mechanisms for the Wekiva River Protection Area within their local comprehensive plans, all of which vary based upon local needs. The St. Johns River Water Management District additionally has established a Riparian Wildlife Protection Zone and Water Quality

Protection Zone which applies to the Wekiva River Protection Area in all three counties. The water management district

also issues consumptive use permits for wells in the district.

Conclusion: Continued growth in the Wekiva River basin and surrounding areas will apply additional pressures on the Wekiva River system. While the state, counties, and water management district all have done an excellent job of protecting the river through varying techniques and management plans a larger forum to allow formal input and coordination directed specifically at the Wekiva River basin would be beneficial.

Alternative B - Congressional Designation of all or part of the eligible portions of the Wekiva River, Rock Springs Run, Seminole Creek, and Black Water Creek with National Park Service Management

Discussion: Under this alternative Congress would designate all or part of the eligible portion of the study rivers as a National Wild and Scenic River. The National Park Service would prepare a comprehensive management plan following designation. This plan would guide the NPS management of the designated rivers in a manner similar to other National Park Service units, and consistent with the requirements of the National Wild and Scenic Rivers Act.

Conclusion: Given the extent of existing public lands owned by the State of Florida, St. Johns River Water Management District, and Orange County and the different management plans in place on the different tracks, National Park Service management does not appear to be a needed, advantageous, or functionally possible approach to river management.

Alternative C - Congressional Designation of all or part of the eligible portions of the Wekiva River, Rock Springs Run, Seminole Creek, and Black Water Creek with State management and the establishment of a coordinated advisory committee

Discussion: Much of the Wekiva River and Wekiva River basin are in public ownership and are managed by a number of state and local agencies. Issues affecting the rivers' "outstandingly remarkable resources" cross many jurisdictions and management responsibilities. Wild and scenic river designation would provide the study rivers an additional layer of protection in which the Federal government takes a special interest in the preservation of the river.

Under this option Congress could designate all or part of the eligible portion of the study rivers as a National Wild and Scenic River. Legislation could specify that the rivers would be managed by the State of Florida and no segment would be considered a unit of the National Park System. The Secretary of the Interior would enter into cooperative agreements with the State of Florida, its relevant political subdivisions, and other relevant parties to facilitate a coordinated management plan and provide financial and other assistance for the long-term protection, conservation, and enhancement of the designated river segments. Legislation could also establish a Wekiva River Advisory Committee (Committee). The purpose of the Committee would be to work cooperatively, using the existing authorities of its members, to develop a comprehensive management approach. This would be accomplished by coordinating elements of all the existing management plans. The Committee would review and provide recommendations to the Secretary regarding any federally assisted or funded water resources projects that would have potential impacts on the "outstandingly remarkable

resources" for which the river has been designated. NPS would still be responsible for reviewing Federal or federally assisted water resource development proposals pursuant to Section 7 of the Wild and Scenic Rivers Act. The Committee would be composed of representatives of the following:

- East Central Florida Regional Planning Council
- Florida Department of Environmental Protection - Division of Recreation and Parks - Wekiva Basin GEOPark
- Florida Department of Environmental Protection - Wekiva River Aquatic Preserve
- Florida Department of Environmental Protection - Office of Ecosystem Planning and Coordination
- Florida Department of Agriculture and Consumer Affairs - Division of Forestry - Seminole State Forest
- Florida Audubon Society
- Friends of the Wekiva - private non-profit organization
- Lake County/Lake County Water Authority
- National Park Service
- Orange County/Parks and Recreation Department - Kelly Park
- Seminole County
- St. Johns River Water Management District
- Florida Fish & Wildlife Conservation Commission

Conclusion: The Wekiva River basin falls under management authority of a number of state, local and private entities each with its own management plan for lands under its jurisdiction. Wild and scenic river designation would provide the study rivers an additional layer of protection in which the Federal government takes a special interest in the preservation of the river. Legislation could address the specific issues including state management, a coordinated management plan, and the establishment of a coordinated advisory committee. In addition, Congressional designation which includes

Federal authorization of the coordinated advisory committee would provide continued Federal (NPS) involvement and oversight of the rivers' protection, in fact, would mandate a Federal, state and local government partnership. This would be accomplished without the need to include the rivers as a unit of the National Park Service.

Alternative D - Secretarial Designation of all or part of the eligible portions of the Wekiva River, Rock Springs Run, Seminole Creek, and Black Water Creek with State of Florida management under Section 2(a)(ii) of the P.L. 90-542, The Wild and Scenic Rivers Act

Discussion:

Under this alternative the values which cause the river to be qualified for the National System must be assured of permanent protection by or pursuant to State statute. To gain designation the Governor of the State of Florida must forward a letter to the Secretary of the Interior requesting that the river be added to the National System and documenting the State's program of action to provide permanent protection for the river. The 2(a)(ii) process, requires the rivers to be designated as wild, scenic, or recreational rivers by or pursuant to an act of the State of Florida legislature and to be permanently administered as wild, scenic, or recreational rivers by an agency or political subdivision of the State. The Wekiva River is currently designated a State of Florida Scenic and Wild River. Additional action may be required on Black Water Creek and Rock Springs run. The Governor of Florida would apply to the United States Secretary of the Interior for designation under Section 2(a)(ii). A review would be performed to confirm that the proposed rivers meet the criteria established under the Wild and Scenic River Act. If it meets the Secretary's requirements for a program of action, the

Secretary could designate the rivers into the National Wild and Scenic rivers System following review by affected Federal agencies.

Conclusion: Much of the Wekiva River and Wekiva River basin are in public ownership and are managed by a number of state and local agencies. Issues affecting the rivers' "outstandingly remarkable resources" cross many jurisdictions and management responsibilities.

Wild and scenic river designation would provide the study rivers an additional layer of protection from Federally funded or assisted water resource projects. The effect of this alternative is very similar to that of Alternative C. The major difference is that Federal (NPS) assistance and involvement in the development of a coordinated management plan would be eliminated. The additional process would require the Governor of the State of Florida to apply to the Secretary of the Interior for designation of the rivers under Section 2(a)(ii) of the Wild and Scenic Rivers Act. A review would be performed to confirm that the proposed rivers meet the criteria established under the Wild and Scenic Rivers Act. Once eligibility is confirmed and the Section 2(a)(ii) report reviewed by affected Federal agencies the Secretary of the Interior could designate the rivers into the National Wild and Scenic River System.

VII. Environmental Assessment of Alternatives

In addition to determining the eligibility and suitability of the Wekiva River, Rock Springs Run, and Seminole Creek for designation as part of the National Wild and Scenic Rivers System, this report must evaluate the environmental impacts which would result from implementation of the alternatives. If, as a result of this analysis it is determined that

the impacts will be significant, an environmental impact statement (EIS) will be prepared. In instances such as this where significant impacts seem unlikely, an environmental assessment (EA) is prepared. This section of the report evaluates the likely impacts of Wild and Scenic River designation on the study rivers and their environs.

ENVIRONMENTAL ASSESSMENT OF ALTERNATIVES

<u>Alternative A - No Action/Existing Conditions</u>	<u>Alternative B - Congressional Designation with National Park Service Management</u>	<u>Alternative C - Congressional Designation with State Management and Establishment of a Coordinated Advisory Committee</u>	<u>Alternative D - Secretarial Designation via Section 2(a)(ii) with State Management</u>
<p><u>DESCRIPTION OF ALTERNATIVES</u></p> <p>The rivers would not be designated as wild and scenic rivers. No coordinated management plan would be developed. Management of river segments in public ownership would continue as is.</p>	<p>All or part of the rivers would be designated as a wild and scenic river. The NPS would prepare a comprehensive management plan consistent with the requirements of the National Wild and Scenic Rivers Act and be responsible for the management of the river as such. The rivers would be incorporated as a unit of the National Park Service.</p>	<p>All or part of the rivers would be designated as a wild and scenic river. The State of Florida would be responsible for the management of the river as such. A coordinated advisory committee composed of representatives from the existing state and local management agencies, adjacent counties, citizens groups, and the NPS would be established to develop a management plan coordinating existing agency management plans consistent with the National Wild and Scenic Rivers Act and provide a forum of discussion. The rivers would not become a unit of the National Park Service</p>	<p>All or part of the rivers would be designated as a wild and scenic river. The Governor of the State of Florida would apply to the Secretary of the Interior for Secretarial designation. The State of Florida would be responsible for management of the rivers consistent with the National Wild and Scenic Rivers Act. The rivers would not become a unit of the National Park Service.</p>
<p>IMPACTS ON CULTURAL ENVIRONMENT</p> <p>The State of Florida has a data base of known archeological and historic sites. Many sites are known in the</p>	<p>The NPS would address historical, archeological, and other cultural resources as part of its river</p>	<p>Impact of this alternative are similar to those of Alternative B except that the existing managing agencies</p>	<p>Impact of this alternative are similar to those of Alternatives B except that the existing managing agencies</p>

ENVIRONMENTAL ASSESSMENT OF ALTERNATIVES - (con't)

<u>Alternative A - No Action/Existing Conditions</u>	<u>Alternative B - Congressional Designation with National park Service Management</u>	<u>Alternative C - Congressional Designation with State Management and Establishment of a Coordinated Advisory Committee</u>	<u>Alternative D - Secretarial Designation via Section 2(a)(ii) with State Management</u>
<p>Wekiva River corridor but have not been explored in depth. Sites within State owned lands are protected from development. County development regulations and comprehensive plans require site surveys and identification of archaeological sites as part of their proposed development review. The overall cultural impacts of this alternative would be negligible.</p>	<p>management plan. Through long term NPS administration and comprehensive management of the river additional archaeological research would be encouraged. Protection and interpretation of sites which might be found in the future would increase the knowledge of cultures and histories of peoples that have lived along the river. Overall cultural impacts of this alternative would be positive.</p>	<p>would be responsible for research and interpretation. Development of a coordinated management plan would allow the different managing agencies to address the cultural resources in the larger context of the river basin. Overall cultural impacts of this alternative would be positive.</p>	<p>would be responsible for research and interpretation. Overall cultural impacts of this alternative would be positive.</p>
IMPACTS ON NATURAL ENVIRONMENT			
<p>Environmental protection of the river will continue to rely on existing local, state, and federal regulations. The State of Florida has passed special protection legislation for the Wekiva River basin and the effected counties have modified their comprehensive plans and development regulations to comply. Much of the river corridor is currently in public ownership and well managed by the different agencies. The river does not currently have protection from</p>	<p>Environmental impacts under this alternative to similar to those in Alternative A except that the river corridor would have the additional protection against federally assisted water resource projects that are found to have a negative and adverse impact on the outstandingly remarkable resources from which the river was designated. Overall the impacts of this alternative would have a positive effect on the river and the adjacent corridor.</p>	<p>Environmental impacts under this alternative would be similar to those in Alternative A and Alternative B. The corridor would have existing local, state and federal protections, and protection against adverse impacts of federally assisted water resource projects. It would also have the added benefit of increased coordination and input between managing agencies, local governments, public interest groups, and the NPS through the coordinated advisory committee.</p>	<p>Environmental impacts under this alternative to similar to those in Alternative A except that the river corridor would have the additional protection against federally assisted water resource projects that are found to have a negative and adverse impact on the outstandingly remarkable resources from which the river was designated. Overall the impacts of this alternative would have a positive effect on the river and the adjacent corridor.</p>

ENVIRONMENTAL ASSESSMENT OF ALTERNATIVES - (con't.)

<u>Alternative A - No Action/Existing Conditions</u>	<u>Alternative B - Congressional Designation with National park Service Management</u>	<u>Alternative C - Congressional Designation with State Management and Establishment of a Coordinated Advisory Committee</u>	<u>Alternative D - Secretarial Designation via Section 2(a)(ii) with State Management</u>
<p>federally assisted water resources projects. The overall impacts from this alternative could negatively effect the river and adjacent corridor due to the lack of protection from federally assisted water resources project.</p>		<p>Environmental issues would be able to be addressed and coordinated by the committee within the context of the entire river corridor as opposed to individual managed properties. Overall impacts of this alternative would have a positive effect on the river and the adjacent corridor.</p>	
<p>IMPACTS ON SOCIOECONOMIC ENVIRONMENT</p>			
<p>Alternative A does not provide Federal designation of the river and existing socioeconomic trends are expected to continue.</p>	<p>Federal designation with NPS management would have no impact on the local tax base due to the fact that no lands within the corridor may be acquired by condemnation by the Federal government as per Sec. 6(a) of the Wild and Scenic Rivers Act. Designation as a National Wild and Scenic River would enhance visibility for recreational use but the incremental increase of impacts attributable to the designation is expected to be minimal.</p>	<p>Socioeconomic impacts of Federal designation with State management and the establishment of a coordinated management committee would be similar to Alternative B. The overall impact to the river and adjacent corridor would be minimal.</p>	<p>Socioeconomic impacts of Secretarial designation and State management would be similar to Alternative B. The overall impact to the river and adjacent corridor would be minima</p>

VIII. List of Preparers and Participants

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Members of the Wekiva River Basin Working Group

APPENDIX A

REFERENCES

REFERENCES

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APPENDIX B

ANIMAL AND PLANT SPECIES WITHIN THE WEKIVA RIVER BASIN GEOPARK

Excerpted from
Wekiva River Basin GEOPark Unit Management Plan

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
American pipit	<u>Anthus rubescens</u>	21
<u>WAXWINGS</u>		
Cedar waxwing	<u>Bombycilla cedrorum</u>	21,28,35
<u>SHRIKES</u>		
Loggerhead shrike	<u>Lanius ludovicianus</u>	13
<u>STARLINGS</u>		
European starling *	<u>Sturnus vulgaris</u>	8,21
<u>VIREOS</u>		
White-eyed vireo	<u>Vireo griseus</u>	21,33,35
Solitary vireo	<u>Vireo solitarius</u>	21
Yellow-throated vireo	<u>Vireo flavifrons</u>	21,35
Philadelphia vireo	<u>Vireo philadelphicus</u>	21
Red-eyed vireo	<u>Vireo olivaceus</u>	21,35
<u>EMBERIZIDS</u>		
Blue-winged warbler	<u>Vermivora pinus</u>	35
Golden-winged warbler	<u>Vermivora chrysoptera</u>	21
Tennessee Warbler	<u>Vermivora peregrina</u>	21
Orange-crowned warbler	<u>Vermivora celata</u>	21,35
Nashville warbler	<u>Vermivora ruficapilla</u>	21
Northern parula	<u>Parula americana</u>	13,21
Yellow warbler	<u>Dendroica petechia</u>	13,21
Chestnut-sided warbler	<u>Dendroica pensylvanica</u>	21,35
Magnolia warbler	<u>Dendroica magnolia</u>	21,35
Cape may warbler	<u>Dendroica tigrina</u>	21,35
Black-throated blue warbler	<u>Dendroica caerulescens</u>	21,35
Yellow-rumped warbler	<u>Dendroica coronata</u>	8,21
Black-throated Green warbler	<u>Dendroica virens</u>	21
Blackburnian warbler	<u>Dendroica fusca</u>	21,35
Yellow-throated warbler	<u>Dendroica dominica</u>	21,35
Pine warbler	<u>Dendroica pinus</u>	8,13,21
Prairie warbler	<u>Dendroica discolor</u>	8

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Florida Scrub-jay	<u>Aphelocoma coerulescens</u>	15
American crow	<u>Corvus brachyrhynchos</u>	8,21
Fish crow	<u>Corvus ossifragus</u>	8,21
<u>TITMICE</u>		
Carolina chickadee	<u>Parus carolinensis</u>	8,21
Tufted titmouse	<u>Parus bicolor</u>	8,21
<u>NUTHATCHES</u>		
Red-breasted nuthatch	<u>Sitta canadensis</u>	8,21
Brown-headed nuthatch	<u>Sitta pusilla</u>	8,21
White-breasted nuthatch	<u>Sitta carolinensis</u>	8,21
<u>WRENS</u>		
Carolina wren	<u>Thryothorus ludovicianus</u>	21,35
House wren	<u>Troglodytes aedon</u>	21
Sedge wren	<u>Cistothorus platensis</u>	47,55
Marsh wren	<u>Cistothorus palustris</u>	47,55
<u>Muscicapids</u>		
Golden-crowned kinglet	<u>Regulus satrapa</u>	21,28,35
Ruby-crowned kinglet	<u>Regulus calendula</u>	21,28,35
Blue-gray gnatcatcher	<u>Poliocptila caerulea</u>	8,13,21,28,35
Eastern bluebird	<u>Sialia sialis</u>	8
Veery	<u>Catharus fuscescens</u>	21
Gray-checked thrush	<u>Catharus minimus</u>	21
Swainson's thrush	<u>Catharus ustulatus</u>	21
Hermit thrush	<u>Catharus guttatus</u>	21
Wood thrush	<u>Hylocichla mustelina</u>	21
American robin	<u>Turdus migratorius</u>	21,28,35
<u>MIMIC THRUSHES</u>		
Gray catbird	<u>Dumetella carolinensis</u>	21,35
Northern mockingbird	<u>Mimus polyglottos</u>	8,21,82
Brown thrasher	<u>Toxostoma rufum</u>	8,21
<u>PIPITS</u>		

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Chuck-will's-widow	<u>Caprimulgus carolinensis</u>	8,21
Whip-poor-will	<u>Caprimulgus vociferus</u>	8,21
<u>SWIFTS</u>		
Chimney swift	<u>Chaetura pelagica</u>	Flyover
<u>HUMMINGBIRDS</u>		
Ruby-throated hummingbird	<u>Archilochus colubris</u>	8,21,82
<u>KINGFISHERS</u>		
Belted kingfisher	<u>Ceryle alcyon</u>	47,53,55
<u>WOODPECKERS</u>		
Red-headed woodpecker	<u>Melanerpes erythrocephalus</u>	8,13,15
Red-bellied woodpecker	<u>Melanerpes carolinus</u>	8,21,28,35
Yellow-bellied sapsucker	<u>Sphyrapicus varius</u>	21,35
Downy woodpecker	<u>Picoides pubescens</u>	8,21
Hairy woodpecker	<u>Picoides villosus</u>	8,21
Northern flicker	<u>Colaptes auratus</u>	8,13
Pileated woodpecker	<u>Dryocopus pileatus</u>	8,21,33,35
<u>TYRANT FLYCATCHERS</u>		
Eastern wood-pewee	<u>Contopus virens</u>	21
Yellow-bellied flycatcher	<u>Empidonax flaviventris</u>	21
Acadian flycatcher	<u>Empidonax virescens</u>	21
Least flycatcher	<u>Empidonax minimus</u>	21
Eastern phoebe	<u>Sayornis phoebe</u>	21,35
Great crested flycatcher	<u>Myiarchus cinerascens</u>	8,21
Eastern kingbird	<u>Tyrannus tyrannus</u>	8,21
<u>SWALLOWS</u>		
Purple martin	<u>Progne subis</u>	Flyover
Tree swallow	<u>Tachycineta bicolor</u>	Flyover
Barn swallow	<u>Hirundo rustica</u>	Flyover
Northern rough-winged swallow	<u>Stelgidopteryx serripennis</u>	Flyover
<u>JAYS & CROWS</u>		
Blue jay	<u>Cyanocitta cristata</u>	8,21,82

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
STILTS		
Black-necked Stilt	<u>Himantopus mexicanus</u>	47
SANDPIPERS		
Greater yellowlegs	<u>Tringa melanoleuca</u>	47
Lesser yellowlegs	<u>Tringa flavipes</u>	47
Solitary sandpiper	<u>Tringa solitaria</u>	47
Spotted sandpiper	<u>Actitis macularia</u>	47,55
Western Sandpiper	<u>Calidris mauri</u>	47
Least sandpiper	<u>Calidris minutilla</u>	47
Short-billed dowitcher	<u>Limnodromus griseus</u>	47
Common snipe	<u>Gallinago gallinago</u>	8,21
American woodcock	<u>Scolopax minor</u>	8,21
GULLS & TERNS		
Bonaparte's gull	<u>Larus philadelphia</u>	Flyover
Ring-Bill gull	<u>Larus delawarensis</u>	Flyover
Herring gull	<u>Larus argentatus</u>	Flyover
Caspian tern	<u>Sterna caspia</u>	Flyover
Forster's tern	<u>Sterna forsteri</u>	47
Least tern	<u>Sterna antillarum</u>	47
DOVES		
Rock dove	<u>Columba livia</u>	8
Mourning dove	<u>Zenaida macroura</u>	8,13,21
Common ground-dove	<u>Columbina passerina</u>	8,13,21
CUCKOOS		
Yellow-billed cuckoo	<u>Coccyzus americanus</u>	21,35
OWLS		
Eastern screech-owl	<u>Otus asio</u>	13,21
Great horned owl	<u>Bubo virginianus</u>	8
Barred owl	<u>Strix varia</u>	21,28,35
GOATSUCKERS		
Common nighthawk	<u>Chordeiles minor</u>	8,21

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
<u>ACCIPITERS</u>		
Osprey	<u>Pandion haliaetus</u>	47
Swallow-tailed kite	<u>Elanoides forficatus</u>	35,33
Mississippi kite	<u>Ictinia mississippiensis</u>	Flyover
Bald eagle	<u>Haliaeetus leucocephalus</u>	8
Northern harrier	<u>Circus cyaneus</u>	8
Sharp-shinned hawk	<u>Accipiter striatus</u>	8,13,21
Cooper's hawk	<u>Accipiter cooperii</u>	8,13,21
Red-shouldered hawk	<u>Buteo lineatus</u>	8,21,35
Short-tailed hawk	<u>Buteo brachyurus</u>	Flyover
Red-tailed hawk	<u>Buteo jamaicensis</u>	8,13
<u>FALCONS</u>		
Eastern American kestrel	<u>Falco sparverius sparverius</u>	8,13
Merlin	<u>Falco columbarius</u>	8
Peregrine falcon	<u>Falco peregrinus</u>	8
<u>PHEASANTS & ALLIES</u>		
Wild turkey	<u>Meleagris gallopavo</u>	8,13,21
Northern bobwhite	<u>Colinus virginianus</u>	8,13
<u>RAILS</u>		
King rail	<u>Rallus elegans</u>	47
Virginia rail	<u>Rallus limicola</u>	47
Sora	<u>Porzana carolina</u>	47
Purple gallinule	<u>Porphyrio martinica</u>	47
Common moorhen	<u>Gallinula chloropus</u>	47,55
American coot	<u>Fulica americana</u>	47,55
<u>LIMP KIN</u>		
Limpkin	<u>Aramus guarauna</u>	47,53,55
<u>CRANES</u>		
Sandhill crane	<u>Grus canadensis pratensis</u>	8,81
<u>PLOVERS</u>		
Killdeer	<u>Charadrius vociferus</u>	8,47,81

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Double-crested cormorant	<u>Phalacrocorax auritus</u>	47
<u>ANHINGA</u>		
Anhinga	<u>Anhinga anhinga</u>	47,53,55
<u>BITTERN & HERONS</u>		
American bittern	<u>Botaurus lentiginosus</u>	47
Great blue heron	<u>Ardea herodias</u>	47,53,55
Great egret	<u>Ardea alba</u>	47,53,55
Snowy egret	<u>Egretta thula</u>	47,53,55
Little blue heron	<u>Egretta caerulea</u>	47,53,55
Tricolored heron	<u>Egretta tricolor</u>	47,53,55
Cattle egret	<u>Bubulcus ibis</u>	8
Green heron	<u>Butorides striatus</u>	47,53,55
Black-crowned night-heron	<u>Nycticorax nycticorax</u>	47
Yellow-crowned night-heron	<u>Nycticorax violaceus</u>	53,55
<u>IBISES</u>		
White ibis	<u>Eudocimus albus</u>	47,53,55
Glossy ibis	<u>Plegadis falcinellus</u>	47,55
<u>STORKS</u>		
Wood stork	<u>Mycteria americana</u>	47,53,55
<u>DUCKS & GEESE</u>		
Wood duck	<u>Aix sponsa</u>	47,53,55
Green-winged teal	<u>Anas crecca</u>	47
Mottled duck	<u>Anas fulvigula</u>	47
Blue-winged teal	<u>Anas discors</u>	47
Ring-necked duck	<u>Aythya collaris</u>	47
Hooded merganser	<u>Lophodytes cucullatus</u>	47
Red-breasted Merganser	<u>Mergus serrator</u>	47
Common Merganser	<u>Mergus merganser</u>	47
<u>AMERICAN VULTURES</u>		
Black vulture	<u>Coragyps atratus</u>	8,21
Turkey vulture	<u>Cathartes aura</u>	8,21

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Florida scarlet snake	<u>Cemophora coccinea coccinea</u>	8,13,14,15
Southern black racer	<u>Coluber constrictor priapus</u>	21,35
Southern ringneck snake	<u>Diadophis punctatus punctatus</u>	21,26,35
Eastern indigo snake	<u>Drymarchon corais couperi</u>	13,14
Corn snake	<u>Elaphe guttata guttata</u>	8,13,14,15,21,35
Yellow rat snake	<u>Elaphe obsoleta quadrivittata</u>	8,21,35
Eastern mud snake	<u>Farancia abacura abacura</u>	26,47,55
Rainbow snake	<u>Farancia erytrogramma erytrogramma</u>	53,55
Eastern hognose snake	<u>Heterodon platyrhinos</u>	8,13,14,15
Common kingsnake	<u>Lampropeltis getula</u>	35
Scarlet kingsnake	<u>Lampropeltis triangulum elapsoides</u>	8
Eastern coachwhip	<u>Masticophis flagellum flagellum</u>	13,14,15
Florida water snake	<u>Nerodia fasciata pictiventris</u>	47,53,55
Brown water snake	<u>Nerodia taxispilota</u>	47,53,55
Rough green snake	<u>Ophedrys aestivus</u>	21,35
Florida pine snake	<u>Pituophis melanoleucus mugitus</u>	13,14,15
Pine woods snake	<u>Rhadinaea flavilata</u>	8
Short-tailed snake	<u>Stilosoma extenuatum</u>	13,14,15
Florida crowned snake	<u>Tantilla relicta neilli</u>	13,14,15
Peninsula ribbon snake	<u>Thamnophis sauritus sackeni</u>	35,47
Eastern garter snake	<u>Thamnophis sirtalis sirtalis</u>	35,47
<u>ELAPIDAE</u>		
Eastern coral snake	<u>Micrurus fulvius fulvius</u>	8,21,35
<u>VIPERIDAE</u>		
Florida cottonmouth	<u>Agkistrodon piscivorus conanti</u>	47,53,55
Eastern diamondback rattlesnake	<u>Crotalus adamanteus</u>	8
Dusky pigmy rattlesnake	<u>Sistrurus mliaris barbouri</u>	8,13,14,15
<u>BIRDS</u>		
<u>GREBES</u>		
Pied-billed grebe	<u>Podilymbus podiceps</u>	47
<u>CORMORANTS</u>		

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
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POLYCHRIDAE

Green anole	<u>Anolis carolinensis carolinensis</u>	8,21,35
Brown anole *	<u>Anolis sagrei sagrei</u>	81,82,21

PHRYNOSOMATIDAE

Southern fence lizard	<u>Sceloporus undulatus undulatus</u>	8,13,14,15
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GEKKONIDAE

Indo-Pacific gecko *	<u>Hemidactylus gamotii</u>	81,82
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SCINCIDAE

Peninsula mole skink	<u>Eumeces egregius onocrepis</u>	13,14,15
Southeastern five-lined skink	<u>Eumeces inexpectatus</u>	8,13,14,15
Broadhead skink	<u>Eumeces laticeps</u>	21,26,35
Ground skink	<u>Scincella laterale</u>	8,21,26,35

TEIIDAE

Six-lined racerunner	<u>Cnemidophorus sexlineatus sexlineatus</u>	13,14,15
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CHELYDRIDAE

Common snapping turtle	<u>Chelydra serpentina</u>	55
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EMYDIDAE

Peninsula cooter	<u>Chrysemys floridana peninsularis</u>	47,53,55
Florida redbelly turtle	<u>Chrysemys nelsoni</u>	47,53,55
Florida chicken turtle	<u>Deirochelys reticularia chrysea</u>	47,53,55
Florida box turtle	<u>Terrapene carolina bauri</u>	21

KINOSTERNIDAE

Striped mud turtle	<u>Kinostemon bauri</u>	47
Florida mud turtle	<u>Kinostemon subrubrum steindachneri</u>	47,53,55
Loggerhead musk turtle	<u>Sternotherus minor minor</u>	47,53,55
Stinkpot	<u>Sternotherus odoratus</u>	47,53,55

TESTUDINIDAE

Gopher tortoise	<u>Gopherus polyphemus</u>	13,14,15
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TRIONYCHIDAE

Florida softshell	<u>Apalone ferox</u>	47,53,55
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COLUBRIDAE

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Eastern spadefoot	<u>Scaphiopus holbrooki</u>	13
<u>BUFONIDAE</u>		
Oak toad	<u>Bufo quercicus</u>	8,13,14,15
Southern toad	<u>Bufo terrestris</u>	Throughout
<u>LEPTODACTYLIDAE</u>		
Greenhouse frog *	<u>Eleuthrodactylus planirostris</u>	Throughout
<u>HYLIDAE</u>		
Florida cricket frog	<u>Acris gryllus dorsalis</u>	41,35,33,8
Green tree frog	<u>Hyla cinerea</u>	Throughout
Pinewoods tree frog	<u>Hyla femoralis</u>	8,13,15
Barking tree frog	<u>Hyla gratiosa</u>	21,14,15
Squirrel tree frog	<u>Hyla squirella</u>	Throughout
Little grass frog	<u>Pseudacris ocularis</u>	8
Southern spring peeper	<u>Pseudacris crucifer</u>	41,33,35
Florida chorus frog	<u>Pseudacris nigrita verrucosa</u>	33,35
<u>RANIDAE</u>		
Florida gopher frog	<u>Rana capito aesopus</u>	13,81
Bullfrog	<u>Rana catesbeiana</u>	47
Bronze frog	<u>Rana clamitans</u>	33,35
Pig frog	<u>Rana grylio</u>	47
Southern leopard frog	<u>Rana utricularia</u>	33,35,47
<u>MICROHYLIDAE</u>		
Eastern narrowmouth toad	<u>Gastrophryne carolinensis</u>	8,13
<u>REPTILES</u>		
<u>CROCODYLIDAE</u>		
American alligator	<u>Alligator mississippiensis</u>	47,53,55
<u>AMPHISBAENIDAE</u>		
Florida worm lizard	<u>Rhineura floridana</u>	13,14,15
<u>ANGUIDAE</u>		
Eastern slender glass lizard	<u>Ophisaurus attenuatus longicaudus</u>	21
Eastern glass lizard	<u>Ophisaurus ventralis</u>	21

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Rainwater killifish	<u>Lucania parva</u>	53,55
<u>POECILIIDAE</u>		
Mosquitofish	<u>Gambusia affinis</u>	47,53,55
Least killifish	<u>Heterandria formosa</u>	53,55
Sailfin molly	<u>Poecilia latipinna</u>	47,55
<u>CENTRARCHIDAE</u>		
Redbreast sunfish	<u>Lepomis auritus</u>	47,53,55,81
Warmouth	<u>Lepomis gulosus</u>	47,53,55
Bluegill	<u>Lepomis macrochirus</u>	47,53,55,81
Dollar sunfish	<u>Lepomis marginatus</u>	53,55
Redear sunfish	<u>Lepomis microlophus</u>	53,55,81
Spotted sunfish	<u>Lepomis punctatus</u>	53,55,81
Largemouth bass	<u>Micropterus salmoides</u>	47,53,55,81
Black crappie	<u>Pomoxis nigromaculatus</u>	53,55
<u>PERCIDAE</u>		
Swamp darter	<u>Etheostoma fusiforme</u>	53,55
Blackbanded darter	<u>Percina nigrofasciata</u>	53,55
<u>MUGILIDAE</u>		
Striped mullet	<u>Mugil cephalus</u>	53,55
<u>AMPHIBIANS</u>		
<u>PLETHODONTIDAE</u>		
Dwarf salamander	<u>Eurycea quadridigitata</u>	33,35
Slimy salamander	<u>Plethodon g robmani</u>	33,35
<u>SALAMANDRIDAE</u>		
Striped Newt	<u>Notophthalmus perstriatus</u>	
Peninsula newt	<u>Notophthalmus viridescens piaropicola</u>	46,33,35
<u>SIRENIDAE</u>		
Greater siren	<u>Siren lacertina</u>	47,55
<u>AMPHIUMIDAE</u>		
Two-toed amphiuma	<u>Amphiuma means</u>	33,46,47,53,55
<u>PELOBATIDAE</u>		

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
	<u>Formica pallidefulva</u>	8,13
MOLLUSCS		
Wekiwa Springs aphaostracon	<u>Aphaostracon monas</u>	Wekiwa Spgs.
Wekiwa siltsnail	<u>Cincinnatia wekiwa</u>	Wekiwa Spgs.
FISH		
<u>DASYATIDAE</u>		
Atlantic stingray	<u>Dasyatis sabina</u>	33,35
<u>LEPISOSTEIDAE</u>		
Longnose gar	<u>Lepisosteus osseus</u>	47,53,55
Florida gar	<u>Lepisosteus platyrhincus</u>	47,53,55
<u>AMIIDAE</u>		
Bowfin	<u>Amia calva</u>	47,53,55
<u>ESOCIDAE</u>		
Chain pickerel	<u>Esox niger</u>	47,53,55
<u>CYPRINIDAE</u>		
Ironcolor shiner	<u>Notropis chalybaeus</u>	53,55
Pugnose minnow	<u>Notropis emiliae</u>	53,55
Sailfin shiner	<u>Notropis hypselopterus</u>	53,55
Coastal shiner	<u>Notropis petersoni</u>	53,55
<u>CATOSTOMIDAE</u>		
Lake chubsucker	<u>Erimyzon sucetta</u>	47
<u>ICTALURIDAE</u>		
Brown bullhead	<u>Ictalurus nebulosus</u>	47,53,55
Channel catfish	<u>Ictalurus punctatus</u>	53,55
Tadpole madtom	<u>Noturus gyrinus</u>	53,55
<u>APHREDODERIDAE</u>		
Pirate perch	<u>Aphredoderus sayanus</u>	53,55
<u>CYPRINODONTIDAE</u>		
Golden topminnow	<u>Fundulus chrysotus</u>	53,55
Seminole killifish	<u>Fundulus seminolis</u>	53,55
Bluefin killifish	<u>Lucania goodei</u>	53,55

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
	<u>Leptothorax texanus</u>	8,13
	<u>Myrmecina americana</u>	35
	<u>Strumigenys eggersi</u> *	35
	<u>Strumigenys louisianae</u>	13,35
	<u>Strumigenys rogeri</u> *	13,35
	<u>Smithistruma angulata</u>	8
	<u>Smithistruma laevinasis</u>	35
	<u>Smithistruma ornata</u>	35
	<u>Smithistruma pulchella</u>	35
	<u>Smithistruma talpa</u>	13,35
	<u>Trichoscapa membranifera</u> *	13
	<u>Eurhopalothrix floridana</u>	35
	<u>Cyphomyrmex septentrionalis</u>	8,13,35
	<u>Trachymyrmex septentrionalis</u>	8,13
Subfamily Dolichoderinae	<u>Ochetellus glabra</u>	8
	<u>Forelius pruinosus</u>	8,13
	<u>Dorymyrmex bossuta</u>	13
	<u>Dorymyrmex bureni</u>	8,13
Subfamily Formicinae	<u>Brachymyrmex depilis</u>	8,13,35
	<u>Brachymyrmex obscurior</u>	8,13
Florida Carpenter Ant	<u>Camponotus abdominalis floridanus</u>	8,13,35
	<u>Camponotus castaneus</u>	8,35
	<u>Camponotus impressus</u>	35
	<u>Camponotus nearcticus</u>	8,13
	<u>Camponotus socius</u>	13
Cornfield Ant	<u>Lasius alienus</u>	35
	<u>Paratrechina arenivaga</u>	8,13
	<u>Paratrechina concinna</u>	8,35
	<u>Paratrechina faisonensis</u>	35
	<u>Paratrechina wojciki</u>	8,13

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
	<u>Hypoponera opaciceps</u>	13,35
	<u>Hypoponera opacior</u>	8,13,35
	<u>Leptogenys manni</u>	35
	<u>Odontomachus brunneus</u>	35
Subfamily Pseudomyrmecinae	<u>Pseudomyrmex mexicanus</u> *	13,35
	<u>Pseudomyrmex ejectus</u>	35
Subfamily Myrmicinae		
Florida Harvester Ant	<u>Pogonomyrmex badius</u>	13
	<u>Aphaenogaster carolinensis</u>	35
	<u>Aphaenogaster flemingi</u>	8
	<u>Aphaenogaster fulva</u>	35
	<u>Aphaenogaster lamellidens</u>	13
	<u>Aphaenogaster treatae</u>	8,13
	<u>Pheidole dentata</u>	8,13,35
	<u>Pheidole dentigula</u>	8,13,35
	<u>Pheidole floridana</u>	8,13,35
	<u>Pheidole moerens</u> *	8,13,35
	<u>Pheidole morrisi</u>	8,13
	<u>Cardiocondyla emeryi</u> *	13
	<u>Crematogaster ashmeadi</u>	8,13,35
	<u>Crematogaster cerasi</u>	8,13
	<u>Crematogaster minutissima</u>	35
	<u>Xenomyrmex floridanus</u>	35
	<u>Solenopsis abdita</u>	8,13,35
	<u>Solenopsis carolinensis</u>	8,13,35
	<u>Solenopsis geminata</u>	8,35
Imported Fire Ant	<u>Solenopsis invicta</u> *	8
	<u>Solenopsis nekersoni</u>	8,13
	<u>Solenopsis picta</u>	35
	<u>Leptothorax pergandei</u>	8,13

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Tropical Checkered skipper	<u>Pyrgus oileus</u>	Throughout
<u>CTENUCHIDAE</u>		
Oleander moth	<u>Syntomeida jucundissima</u>	Throughout
<u>SATURNIIDAE</u>		
Luna moth	<u>Actias luna</u>	Throughout
Imperial moth	<u>Eacles imperialis</u>	Throughout
Io moth	<u>Automeris io</u>	Throughout
Polyphemus moth	<u>Antheraea polyphemus</u>	Throughout
<u>PTEROPHORIDAE</u>		
Plume moth	<u>Oidaematophorus balanotes</u>	Throughout
<u>SPHINGIDAE</u>		
Sphinx moth	<u>Enyc lugubris</u>	Throughout
<u>LASIOCAMPIDAE</u>		
Tent caterpillar moth	<u>Malacosoma americanum</u>	13
<u>TIPULIDAE</u>		
Crane fly	<u>Tipula abdominalis</u>	35
<u>TABANIDAE</u>		
Striped horse fly	<u>Tabanus lineola</u>	Throughout
<u>MUSCIDAE</u>		
Common house fly	<u>Musca domestica</u>	Throughout
<u>BIBIONIDAE</u>		
Lovebug	<u>Plecia nearctica</u>	82
<u>CYNIPIDAE</u>		
Gall wasp	<u>Callirhytis cornigera</u>	13
<u>MUTILLIDAE</u>		
Velvet ant	<u>Dasymutilla occidentalis</u>	14,15
<u>FORMICIDAE</u>		
Subfamily Ecitoninae	<u>Neivamyrmex opacithorax</u>	8,13
Subfamily Poncrinae	<u>Proceratium silaceum</u>	35
	<u>Discothyrea testacea</u>	35
	<u>Cryptopone gilva</u>	35

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Cloudless sulfur	<u>Phoebis sennae eubule</u>	Throughout
Barred Yellow	<u>Eurema daira daira</u>	Throughout
Little sulfur	<u>Eurema lisa</u>	Throughout
Sleepy orange	<u>Eurema nicippe</u>	Throughout
Dainty sulphur	<u>Nathalis iole</u>	Throughout
Orange-barred sulphur	<u>Phoebis philea</u>	Throughout
<u>LYCAENIDAE</u>		
Red banded hairstreak	<u>Calycopis cecrops</u>	Throughout
Southern hairstreak	<u>Foxsenia favonius favonius</u>	Throughout
White M hairstreak	<u>Panhasius m-album m-album</u>	Throughout
Cassius blue	<u>Leptotes cassius theonius</u>	Throughout
Ceraunus Blue	<u>Heriargus ceraunus antibubastus</u>	Throughout
Gray hairstreak	<u>Strymon melinus melinus</u>	Throughout
<u>HELICONIIDAE</u>		
Gulf fritillary	<u>Dione vanillae nigrior</u>	Throughout
Zebra long wing	<u>Heliconius charitonius tuckeri</u>	Throughout
<u>NYMPHALIDAE</u>		
Phaon crescent	<u>Phyciodes phaon</u>	Throughout
Pearl crescent	<u>Phyciodes tharos tharos</u>	Throughout
American painted lady	<u>Vanessa virginiensis</u>	Throughout
Red Admiral	<u>Vanessa atalanta rubria</u>	Throughout
Common Buckeye	<u>Precis coenia</u>	Throughout
White Peacock	<u>Anartia jatrophae Guantanamo</u>	Throughout
Viceroy	<u>Limenitis archippus floridensis</u>	Throughout
<u>APATURIDAE</u>		
Hackberry emperor	<u>Asterocampa celtis alicia</u>	Throughout
<u>SATYRIDAE</u>		
Southern Pearly eye	<u>Enodia portlandia</u>	Throughout
Carolina satyr	<u>Hermeuptychia hermes sosybius</u>	Throughout
Little Wood Satyr	<u>Megisto cymela</u>	Throughout
Viola's Wood satyr	<u>Megisto viola</u>	Throughout

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
<u>DANAIDAE</u>		
Monarch	<u>Danaus plexippus</u>	Throughout
Queen	<u>Danaus gilippus berenice</u>	Throughout
<u>HESPERIIDAE</u>		
Yucca Giant Skipper	<u>Megathymus yuccae</u>	Throughout
Southern swarthy skipper	<u>Nastra neamathia</u>	Throughout
Clouded skipper	<u>Lerema accius</u>	Throughout
Least Skipper	<u>Ancloxypha numitor</u>	Throughout
Fiery skipper	<u>Hylephila phyleus</u>	Throughout
Dotted skipper	<u>Hesperia attalus skossonae</u>	Throughout
Tawny-edged skipper	<u>Polites themistocles</u>	Throughout
Whirlabout	<u>Polites vibex</u>	Throughout
Southern Broken dash	<u>Wallengrenia otho</u>	Throughout
Sachem	<u>Atalopedes campestris</u>	Throughout
Delaware skipper	<u>Atrytone logan</u>	Throughout
Byssus skipper	<u>Problema byssus</u>	Throughout
Palmetto skipper	<u>Euphyes arpa</u>	Throughout
Dun skipper	<u>Euphyes vestris</u>	Throughout
Monk	<u>Asbolis capucinus</u>	Throughout
Eufala Skipper	<u>Lerodea eufala</u>	Throughout
Twin-spot skipper	<u>Oligoria maculata</u>	Throughout
Ocola skipper	<u>Panoquina ocola</u>	Throughout
Silver-spotted skipper	<u>Epargyreus clarus</u>	Throughout
Long tailed skipper	<u>Urbanus proteus</u>	Throughout
Dorantes Longtail	<u>Urbanus dorantes</u>	Throughout
Southern cloudywing	<u>Thorybes bathyllus</u>	Throughout
Northern cloudywing	<u>Thorybes pylades</u>	Throughout
Confused cloudywing	<u>Thorybes confusus</u>	Throughout
Sleepy duskywing	<u>Erynnis brizo</u>	Throughout
Horace's duskywing	<u>Erynnis horatius</u>	Throughout
Zarucco duskywing	<u>Erynnis zarucco</u>	Throughout

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
INVERTEBRATES		
CRUSTACEANS		
Orlando cave crayfish	<u>Procambarus acherontis</u>	Wekiwa Spgs.
ARACHNIDS		
<u>THELYPHONIDAE</u>		
Giant vinegarone	<u>Mastigoproctus giganteus</u>	13
<u>PSEUDOCHEIRIDIIDAE</u>		
	<u>Idiogaryops paludis</u>	13
<u>CHEYLETIDAE</u>		
	<u>Mexeches hawaiiensis</u>	13
<u>PYROGLYPHIDAE</u>		
	<u>Dermatophagoides sp.</u>	13
<u>ARANEIDAE</u>		
	<u>Micrathena gracilis</u>	13
<u>THOMISIDAE</u>		
	<u>Misumenoides formosipes</u>	41
INSECTS		
<u>LEPISMATIDAE</u>		
Silverfish	<u>Lepisma saccharina</u>	82
<u>HEPTAGENIIDAE</u>		
Mayfly	<u>Heptagenia flavesceus</u>	53,55
<u>AESHNIDAE</u>		
Common green damer	<u>Anax junius</u>	53,55
Regal damer	<u>Coryphaeschna ingens</u>	53,55
Twilight damer	<u>Gynacantha nervosa</u>	53,55
<u>GOMPHIDAE</u>		
Sandhill clubtail	<u>Gomphus cavillaris</u>	82
Blackwater clubtail	<u>Gomphus dilatatus</u>	53,55
<u>LIBELLULIDAE</u>		
Blue dragonlet	<u>Erythrodiplax connata minuscula</u>	53,55
<u>COENAGRIONIDAE</u>		

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Blue damselfly	<u>Enallagma civile</u>	53,55
<u>ACRIDIDAE</u>		
Eastern lubber	<u>Romalea microptera</u>	Throughout
<u>GRYLLotalpidae</u>		
Mole cricket	<u>Scapteriscus vicinus</u>	Throughout
<u>MANTIDAE</u>		
Lichen mantis	<u>Gonatista grisea</u>	13
<u>PSEUDOCOCCIDAE</u>		
Coconut mealybug	<u>Nipaecoccus nipae</u>	21
<u>SCARABAEIDAE</u>		
Ox beetle	<u>Stategus antacus</u>	8,13
<u>ELATERIDAE</u>		
Eyed click beetle	<u>Alaus oculatus</u>	35,41
<u>CURCULIONIDAE</u>		
	<u>Gerstaeckeria hubbardi</u>	13
<u>MYRMELEONTIDAE</u>		
Spottedwinged antlion	<u>Dendroleon obsoletus</u>	13,14,15
<u>PAPILIONIDAE</u>		
Pipevine swallowtail	<u>Battus philenor philenor</u>	Throughout
Polydamas swallowtail	<u>Battus polydamas lucayae</u>	Throughout
Zebra swallowtail	<u>Eurytides marcellus floridensis</u>	Throughout
Black Swallowtail	<u>Papilio polyxenes asterius</u>	Throughout
Giant swallowtail	<u>Papilio cressphontes</u>	Throughout
Eastern tiger swallowtail	<u>Papilio glaucus australis</u>	Throughout
American swallowtail	<u>Papilio polyxenes asterius</u>	Throughout
Spicebush swallowtail	<u>Papilio troilus ilioneus</u>	Throughout
Palamedes swallowtail	<u>Papilio palamedes</u>	Throughout
<u>PIERIDAE</u>		
Checkered white	<u>Pontia protodice</u>	Throughout
Great Southern White	<u>Ascia monuste phileta</u>	Throughout
Southern dogface	<u>Colias cesonia</u>	Throughout

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Marsh rabbit	<u>Sylvilagus palustris</u>	35
Eastern cottontail	<u>Sylvilagus floridanus</u>	8,13,14
<u>SCIURIDAE</u>		
Gray squirrel	<u>Sciurus carolinensis</u>	21,82
Sherman's fox squirrel	<u>Sciurus niger shermani</u>	13
Southern flying squirrel	<u>Glaucomys volans</u>	13,21
<u>GEOMYDAE</u>		
Southeastern pocket gopher	<u>Geomys pinetis</u>	13
<u>CRICETIDAE</u>		
Rice rat	<u>Oryzomys palustris</u>	47
Cotton mouse	<u>Peromyscus gossypinus</u>	8,13
Golden mouse	<u>Ochrotomys nuttalli</u>	8
Cotton rat	<u>Sigmodon hispidus</u>	8
Eastern woodrat	<u>Neotoma floridana</u>	35
Florida mouse	<u>Podomys floridanus</u>	15
<u>MURIDAE</u>		
Black rat *	<u>Rattus rattus</u>	82
<u>CANIDAE</u>		
Red fox	<u>Vulpes vulpes</u>	13,21
Gray fox	<u>Urocyon cinereocargenteus</u>	8,13,21,35
<u>URSIDAE</u>		
Black bear	<u>Ursus americanus</u>	8,13,26,28,35
<u>PROCYONIDAE</u>		
Raccoon	<u>Procyon lotor</u>	8,13,21,35,82
<u>MUSTELIDAE</u>		
Striped skunk	<u>Mephitis mephitis</u>	21
River otter	<u>Lutra canadensis</u>	47,53,55
<u>FELIDAE</u>		
Bobcat	<u>Felis rufus</u>	8,35
<u>SUIDAE</u>		
Wild pig *	<u>Sus scrofa</u>	33,35

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
<hr/>		
<u>CERVIDAE</u>		
White-tailed deer	<u>Odocoileus virginianus</u>	8,13,21

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Sharp-tailed sparrow	<u>Ammodramus caudacutus</u>	47
Fox sparrow	<u>Passerella iliaca</u>	13
Song sparrow	<u>Melospiza melodia</u>	21
Swamp sparrow	<u>Melospiza georgiana</u>	47
White-throated sparrow	<u>Zonotrichia albicollis</u>	21
Bobolink	<u>Dolichonyx oryzivorus</u>	47
Red-winged blackbird	<u>Agelaius phoeniceus</u>	47
Eastern meadowlark	<u>Sturnella magna</u>	8
Yellow-headed blackbird	<u>Xanthocephalus xanthocephalus</u>	47
Rusty blackbird	<u>Euphagus carolinus</u>	21
Boat-tailed grackle	<u>Quiscalus major</u>	47,55
Common grackle	<u>Quiscalus quiscula</u>	21
Brown-headed cowbird	<u>Molothrus ater</u>	13
Orchard oriole	<u>Icterus spurius</u>	13
Northern oriole	<u>Icterus galbula</u>	21
<u>FRINGILLIDS</u>		
Purple finch	<u>Carpodacus purpureus</u>	21
American goldfinch	<u>Carduelis tristis</u>	21
<u>MAMMALS</u>		
<u>DIDELPHIDAE</u>		
Virginia opossum	<u>Didelphis virginiana</u>	21,26,35
<u>SORICIDAE</u>		
Short-tailed shrew	<u>Blarina brevicauda</u>	30
Least shrew	<u>Cryptotis parva</u>	8
<u>TALPIDAE</u>		
Eastern mole	<u>Scalopus aquaticus</u>	21
<u>VESPERTILIONIDAE</u>		
Eastern pipistrelle	<u>Pipistrellus subflavens</u>	Throughout
<u>DASYPODIDAE</u>		
Nine-banded armadillo *	<u>Dasypus novemcinctus</u>	21
<u>LEPORIDAE</u>		

* = Non-Native Species

ANIMALS

COMMON NAME	SCIENTIFIC NAME	PRIMARY HABITAT (for all species)
Palm warbler	<u>Dendroica palmarum</u>	21
Bay-breasted warbler	<u>Dendroica castanea</u>	13
Blackpoll warbler	<u>Dendroica striata</u>	21
Cerulean warbler	<u>Dendroica cerulea</u>	21
Black-and-white warbler	<u>Mniotilta varia</u>	21,35
American redstart	<u>Setophaga ruticilla</u>	21,35
Prothonotary warbler	<u>Protonotaria citrea</u>	33
Worm-eating warbler	<u>Helminthos vermivorus</u>	21
Swainson's warbler	<u>Limnithypis swainsonii</u>	21
Ovenbird	<u>Seiurus aurocapillus</u>	21,35
Northern waterthrush	<u>Seiurus noveboracensis</u>	21
Louisiana waterthrush	<u>Seiurus motacilla</u>	21
Connecticut warbler	<u>Oporomis agilis</u>	21
Common yellowthroat	<u>Geothlypis trichas</u>	21,35
Hooded warbler	<u>Wilsonia citrina</u>	21
Canada warbler	<u>Wilsonia canadensis</u>	21
Summer tanager	<u>Piranga rubra</u>	21
Scarlet tanager	<u>Piranga olivacea</u>	21
Northern cardinal	<u>Cardinalis cardinalis</u>	8,13,21,
Rose-breasted grosbeak	<u>Pheucticus ludovicianus</u>	21
Blue grosbeak	<u>Guiraca caerulea</u>	21
Indigo bunting	<u>Passerina cyanea</u>	21
Eastern towhee	<u>Pipilo erythrophthalmus</u>	8,13,14,15
Bachman's sparrow	<u>Aimophila aestivalis</u>	14
Chipping sparrow	<u>Spizella passerina</u>	21
Field sparrow	<u>Spizella pusilla</u>	13
Vesper sparrow	<u>Poocetes gramineus</u>	13
Savannah sparrow	<u>Passerculus sandwichensis</u>	21
Grasshopper sparrow	<u>Ammodramus savannarum</u>	13
Henslow's sparrow	<u>Ammodramus henslowii</u>	8
Le conte's sparrow	<u>Ammodramus leconteii</u>	8

* = Non-Native Species

HABITAT CODES

(41) WET FLATWOODS

(8) MESIC FLATWOODS

(15) SCRUBBY FLATWOODS

(13) SANDHILL

(14) SCRUB

(20/21) UPLAND HARDWOOD FOREST AND UPLAND MIXED FOREST

(23) XERIC HAMMOCK

(26) BAYGALL

(33) FLOODPLAIN SWAMP

(35) HYDRIC HAMMOCK

(46/47) FLATWOODS/PRAIRIE/MARSH LAKE

(55) SPRING-RUN STREAM

(53) BLACKWATER STREAM

(79/80) AQUATIC AND TERRESTRIAL CAVE

(81/82) RUDERAL AND DEVELOPED

APPENDIX C

DESIGNATED PLANT AND ANIMAL SPECIES (With Primary Habitats)

Excerpted from
Wekiva River Basin GEOPark Unit Management Plan

FNAI STATE RANK DEFINITIONS (cont.)

- SH - of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- SX - believed to be extinct throughout range
- SA - accidental in Florida, i.e., not part of the established biota
- SE - an exotic species established in Florida may be native elsewhere in North America
- SN - regularly occurring, but widely and unreliably distributed; sites for conservation hard to determine
- SU - due to lack of information, no rank or range can be assigned (e.g., SUT2).
- S? - not yet ranked (temporary)

LEGAL STATUS

- N - Not currently listed, nor currently being considered for listing, by state or federal agencies.

FEDERAL (Listed by the U. S. Fish and Wildlife Service - USFWS)

- LE - Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
- PE - Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT - Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- PT - Proposed for listing as Threatened Species.
- C - Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.
- E(S/A) - Endangered due to similarity of appearance.
- T(S/A) - Threatened due to similarity of appearance.

STATE

Animals (Listed by the Florida Game and Fresh Water Fish Commission - FGFWFC)

- LE - Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT - Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LS - Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

Plants (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

- LE - Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- LT - Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

RANK EXPLANATIONS
for FNAI Global Rank, FNAI State Rank, Federal Status, and State Status

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Game and Freshwater Fish Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- G4 = apparently secure globally (may be rare in parts of range)
- G5 = demonstrably secure globally
- GH = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GX = believed to be extinct throughout range
- GXC = extirpated from the wild but still known from captivity or cultivation
- G#? = tentative rank (e.g., G2?)
- G#G# = range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T# = rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q = rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q = same as above, but validity as subspecies or variety is questioned.
- GU = due to lack of information, no rank or range can be assigned (e.g., GUT2).
- G? = not yet ranked (temporary)

FNAI STATE RANK DEFINITIONS

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- S4 = apparently secure in Florida (may be rare in parts of range)
- S5 = demonstrably secure in Florida

ANIMALS

COMMON NAME/ SCIENTIFIC NAME	DESIGNATED SPECIES STATUS			
	FGFWFC	USFWS	CITES	FNAI
<u>Invertebrates</u>				
Wekiwa Springs aphaostracon <u>Aphaostracon monas</u>				S1
Wekiwa siltsnail <u>Cincinnatia wekiwae</u>				S1
Orlando cave crayfish <u>Procambarus acherontis</u>				S1
<u>Aphibians</u>				
Florida gopher frog <u>Rana capito aesopus</u>	SSC			S3
<u>Reptiles</u>				
American alligator <u>Alligator mississippiensis</u>	SSC	T(S/A)	II	S4
Eastern indigo snake <u>Drymarchon corais couperi</u>	T	T		S3
Gopher tortoise <u>Gopherus polyphemus</u>	SSC			S3
Florida pine snake <u>Pituophis melanoleucus mugitus</u>	SSC			S?
Short-tailed snake <u>Stilosoma extenuatum</u>	T			S3
<u>Birds</u>				
Bachman's sparrow <u>Almophila aestivalis</u>				S?
Florida Scrub-jay <u>Aphelocoma coerulescens</u>	T	T		S3
Limpkin <u>Aramus quarauna</u>	SSC			S3
Northern harrier <u>Circus cyaneus</u>			II	
Little blue heron <u>Egretta caerulea</u>	SSC			S4
Snowy egret <u>Egretta thula</u>	SSC			S4
Tricolored heron <u>Egretta tricolor</u>	SSC			S4
Swallow-tailed kite <u>Elanoides forficatus</u>				S2S3
White ibis <u>Eudocimus albus</u>	SSC			S4
Merlin <u>Falco columbarius</u>			II	SU
Peregrine falcon <u>Falco peregrinus</u>				S2
Eastern American kestrel <u>Falco sparverius sparverius</u>			II	
Sandhill crane <u>Grus canadensis pratensis</u>	T		II	S2S3
Bald eagle <u>Haliaeetus leucocephalus</u>	T	T	I	S3
Wood stork <u>Mycteria americana</u>	E	E		S2
Yellow-crowned night-heron <u>Nyctanassa violacea</u>				S3?
Osprey <u>Pandion haliaetus</u>			II	S3S4
Glossy Ibis <u>Plegadis falcinellus</u>				S2
Hairy woodpecker <u>Picoides villosus</u>				S3?

DESIGNATED SPECIES

PLANTS

COMMON NAME/ SCIENTIFIC NAME	DESIGNATED SPECIES STATUS			
	FDA	USFWS	CITES	FNAI
Spring coralroot <u>Corallorhiza wisteriana</u>		II		
Butterfly orchid <u>Encyclia tampensis</u>	CE	II		
Garberia <u>Garberia heterophylla</u>	T			
Rein orchid <u>Habenaria odontopetala</u>		II		
Water spider orchid <u>Habenaria repens</u>		II		
Star anise <u>Illicium parviflorum</u>	E			S1
Catesby's lily <u>Lilium catesbaei</u>	T			S3
Cardinal flower <u>Lobelia cardinalis</u>	T			
Hand Fern <u>Ophioglossum palmatum</u>	E			S2
Cinnamon fern <u>Osmunda cunnamomea</u>	CE			
Royal fern <u>Osmunda regalis</u>	CE			
Blue butterwort <u>Pinguicula caerulea</u>	T			
Needle palm <u>Rhapidophyllum hystrix</u>	CE			
Queen's delight <u>Stillingia sylvatica ssp. tenuis</u>				S2
Florida arrowroot <u>Zamia integrifolia</u>	CE	II		

ANIMALS

COMMON NAME/ SCIENTIFIC NAME	DESIGNATED SPECIES STATUS			
	FGFWFC	USFWS	CITES	FNAI
<u>Mammals</u>				
River otter <u>Lutra canadensis</u>			II	
Bobcat <u>Lynx rufus</u>			II	
Florida mouse <u>Peromyscus floridanus</u>	SSC			S3
Sherman's fox squirrel <u>Sciurus niger shermani</u>	SSC			S2
West Indian manatee <u>Trichechus manatus latirostris</u>	E	E	I	S2?
Black bear <u>Ursus americanus floridanus</u>	T		III	S2

APPENDIX D

NATURAL COMMUNITIES DESCRIPTIONS (Primary Habitats)

Excerpted from
Wekiva River GEOPark Unit Management Plan

NATURAL COMMUNITY DESCRIPTIONS

(41) WET FLATWOODS - (synonyms: low flatwoods, moist pine barren, hydric flatwoods, pond-pine flatwoods, pocosin, cabbage palm/pine savannah or flatwoods). Wet Flatwoods are characterized as relatively open-canopy forests of scattered pine trees or cabbage palms with either thick shrubby understory and very sparse ground cover, or a sparse understory and a dense ground cover of hydrophytic herbs and shrubs. Several variations exist between these extremes. Typical plants include pond pine, slash pine, sweetbay, spikerush, beakrush, sedges, dwarf wax myrtle, gallberry, titi, saw palmetto, creeping beggarweed, deer tongue, gay feather, greenbrier, bluestem, and pitcher plants. Typical animals include oak toad, cricket frog, chorus frog, black racer, yellow rat snake, diamondback rattlesnake, pygmy rattlesnake, red-shouldered hawk, bobwhite, opossum, cottontail rabbit, cotton rat, cotton mouse, raccoon, striped skunk, bobcat, and white-tailed deer.

Wet Flatwoods occur on relatively flat, poorly drained terrain. The soils typically consist of 1 to 3 feet of acidic sands generally overlying an organic hardpan or clay layer. Cabbage palm flatwoods tend to occur on more circumneutral sands (pH 6.0 - 7.5) underlain by marl or shell beds. The hardpan substantially reduces the percolation of water below and above its surface. During the rainy season, water frequently stands on the surface, inundating the flatwoods for 1 or more months per year. During the drier seasons, ground water is less accessible for many plants whose roots fail to penetrate the hardpan. Thus, many plants are under the stress of water saturation during the wet seasons, and under the stress of dehydration during the dry seasons.

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

Wet Flatwoods are closely associated with and often grade into Hydric Hammock, Mesic Flatwoods, Wet Prairie, or Basin Swamp. Wet Flatwoods may also grade into Dome Swamp or Strand Swamp, but the absence of a Wet Prairie ecotone suggests that the hydrology has been disturbed.

Although Wet Flatwoods may have been an abundant biological community of the Coastal Plain at one time, examples with an intact overstory and understory, without exotics, and with the potential for future maintenance by fire are rare. They are relatively resilient to overstory damage but recover poorly when the ground cover or hydrology has been disturbed. Wet Flatwoods are vulnerable to disruptions of fire and hydrological regimes. Exotic plants readily invade Wet Flatwoods in south Florida and must be controlled promptly.

(8) MESIC FLATWOODS - (synonyms: pine flatwoods, pine savannahs pine barrens). Mesic Flatwoods are characterized as an open canopy forest of widely spaced pine trees with little or no understory but a dense ground cover of herbs and shrubs. Several variations of Mesic Flatwoods are recognized, the most common associations being longleaf pine - wiregrass - runner oak and slash pine - gallberry - saw palmetto. Other typical plants

include: St. Johns-wort, dwarf huckleberry, fetterbush, dwarf wax myrtle, stagger bush, blueberry, gopher apple, tar flower, bog buttons, blackroot, false foxglove, white-topped aster, yellow-eyed grass, and cutthroat grass. Typical animals of Mesic Flatwoods include: oak toad, little grass frog, narrowmouth toad, black racer, red rat snake, southeastern kestrel, brown-headed nuthatch, pine warbler, Bachman's sparrow, cotton rat, cotton mouse, black bear, raccoon, gray fox, bobcat, and white-tailed deer.

Mesic Flatwoods occur on relatively flat, moderately to poorly drained terrain. The soils typically consist of 1-3 feet of acidic sands generally overlying an organic hardpan or clayey subsoil. The hardpan substantially reduces the percolation of water below and above its surface. During the rainy seasons, water frequently stands on the hardpan's surface and briefly inundates much of the flatwoods; while during the drier seasons, ground water is unobtainable for many plants whose roots fail to penetrate the hardpan. Thus, many plants are under the stress of water saturation during the wet seasons and under the stress of dehydration during the dry seasons.

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

Mesic Flatwoods are closely associated with and often grade into Wet Flatwoods, Dry Prairie, or Scrubby Flatwoods. The differences between these communities are generally related to minor topographic changes. Wet Flatwoods occupy the lower wetter areas, while Scrubby Flatwoods occupy the higher drier areas.

Mesic Flatwoods are the most widespread biological community in Florida, occupying an estimated 30 to 50% of the state's uplands. However, very few undisturbed areas of Mesic Flatwoods exist because of habitat mismanagement and silvicultural, agricultural, or residential development. Mesic Flatwoods are often fairly resilient, and with proper management they can generally be restored.

(15) SCRUBBY FLATWOODS - (synonyms: xeric flatwoods, dry flatwoods). Scrubby Flatwoods are characterized as an open canopy forest of widely scattered pine trees with a sparse shrubby understory and numerous areas of barren white sand. The vegetation is a combination of Scrub and Mesic Flatwoods species; Scrubby Flatwoods often occupy broad transitions or ecotones between these communities. Typical plants include longleaf pine, slash pine, sand live oak, Chapman's oak, myrtle oak, scrub oak, saw palmetto, staggerbush, wiregrass, dwarf blueberry, gopher apple, rusty lyonia, tarflower, golden-aster, lichens, silkbay, garberia, huckleberry, goldenrod, runner oak, pinweeds, and frostweed.

Scrubby Flatwoods generally occur intermingled with Mesic Flatwoods along slightly elevated relictual sandbars and dunes. The white sandy soil is several feet deep and drains rapidly. However, the water table is unlikely to be very deep. Scrubby Flatwoods normally do not flood even under extremely wet conditions. Temperatures and humidities of air and soil in Scrubby Flatwoods fluctuate substantially more than in most other communities because the scattered overstory, sparse understory, and barren sands of Scrubby Flatwoods do not ameliorate daily and seasonal changes very well.

Although the elevated, deeper sandy soils of scrubby flatwoods engender a drier environment than the surrounding mesic flatwoods, the general sparsity of ground vegetation and the greater proportion of relatively incombustible scrub-oak leaf litter reduces the frequency of naturally occurring fires. Only after a long absence of fire and during periods of drought does the leaf litter become sufficiently combustible and concentrated enough to support an ecological burn. Several species of plants in Scrubby Flatwoods are typical scrub plants which endure only when long intervals between fires occur. Thus, a periodicity of approximately 8 to 25 years between fires appears to be natural for this community.

Scrubby Flatwoods are associated with and often grade into Mesic Flatwoods, Scrub, Dry Prairie or Sandhills. This community is essentially a Mesic Flatwoods with a Scrub understory.

(13) SANDHILL - (synonyms: longleaf pine - turkey oak, longleaf pine - xerophytic oak, longleaf pine - deciduous oak, high pine). Sandhills are characterized as a forest of widely spaced pine trees with a sparse understory of deciduous oaks and a fairly dense ground cover of grasses and herbs on rolling hills of sand. The most typical associations are dominated by longleaf pine, turkey oak, and wiregrass. Other typical plants include bluejack oak, sand post oak, sparkleberry, persimmon, winged sumac, pinewoods dropseed, Indian grass, wild buckwheat, queen's delight, yellow foxglove, bracken fern, runner oak, goats rue, partridge pea, milk pea, dollarweeds, wild indigo, gopher apple, and golden-aster. Typical animals include tiger salamander, barking treefrog, spadefoot toad, gopher frog, gopher tortoise, worm lizard, fence lizard, mole skink, indigo snake, coachwhip snake, pine snake, short-tailed snake, crowned snake, eastern diamondback rattlesnake, bobwhite, ground dove, red-headed woodpecker, rufous-sided towhee, fox squirrel and pocket gopher.

Sandhills occur on hilltops and slopes of gently rolling hills. Their soils are composed of deep, marine-deposited, yellowish sands that are well-drained and relatively sterile. The easily leached soil nutrients are brought back to the surface by the burrowing habits of some sandhill animals. Sandhills are important aquifer recharge areas because the porous sands allow water to move rapidly through with little runoff and minimal evaporation. The deep sandy soils help create a xeric environment that is accentuated by the scattered overstory, which allows more sunlight to penetrate and warm the ground. The absence of a closed canopy also allows Sandhills to cool more rapidly at night and to retain less air moisture. Thus, temperature and humidity fluctuations are generally greater in Sandhills than in nearby closed canopy forests.

Fire is a dominant factor in the ecology of this community. Sandhills are a fire climax community, being dependent on frequent ground fires to reduce hardwood competition and to perpetuate pines and grasses. The natural fire frequency appears to be every 2 to 5 years. Without frequent fires, Sandhills may eventually succeed to Xeric Hammock. Unburned or cutover Sandhills may be dominated by turkey oak.

Sandhills are often associated with and grade into Scrub, Scrubby Flatwoods, Mesic Flatwoods, Upland Pine Forest, or Xeric Hammock. Sandhills were widespread throughout the Coastal Plain, but most have been degraded by timbering, overgrazing, plowing, fire exclusion, and other disturbances. Much of Florida's Sandhill communities have been converted to citrus groves, pastures, pine plantations, or residential and commercial developments. Thus, the importance of properly managing the remaining tracts is accentuated.

(14) SCRUB - (synonyms: sand pine scrub, Florida scrub, sand scrub, rosemary scrub, oak scrub). Scrub occurs in many forms, but is often characterized as a closed to open canopy forest of sand pines with dense clumps or vast thickets of scrub oaks and other shrubs dominating the understory. The ground cover is generally very sparse, being dominated by ground lichens or, rarely, herbs. Open patches of barren sand are common. Where the overstory of sand pines is widely scattered or absent altogether, the understory and barren sands are exposed to more intense sunlight. Typical plants include sand pine, sand live oak, myrtle oak, Chapman's oak, scrub oak, saw palmetto, rosemary, rusty lyonia, ground lichens, scrub hickory, scrub palmetto, hog plum, silk bay, beak rush, milk peas, and stagger bush. Typical animals include red widow spider, scrub wolf spider, oak toad, Florida scrub lizard, blue-tailed mole skink, sand skink, six-lined racerunner, coachwhip, ground dove, scrub jay, loggerhead shrike, yellow-rumped warbler, rufous-sided towhee, Florida mouse, and spotted skunk. Scrubs of the Lake Wales Ridge are notable for the large number of narrowly endemic plants and animals that occur in them.

Scrub occurs on sand ridges along former shorelines. Some of the sand ridges originated as wind-deposited dunes, others as wave-washed sand bars. Some Scrub soils are composed of well-washed, deep sands that are brilliant white at the surface; some Scrubs occur on yellow sands. The loose sands drain rapidly, creating very xeric conditions for which the plants appear to have evolved several water conservation strategies.

Scrub is essentially a fire maintained community. Ground vegetation is extremely sparse and leaf fall is minimal, thus reducing the chance of frequent ground fires. As the sand pines mature, however, they retain most of their branches and build up large fuel supplies in their crowns. When a fire does occur, this fuel supply, in combination with the resinous needles and high stand density, ensures a hot, fast burning fire. Such fires allow for the regeneration of the Scrub community which might otherwise succeed to Xeric Hammock. The minerals in the vegetation are deposited on the bare sand as ashes, and the heat of the fire generally facilitates the release of pine seeds. As discerned from the life histories of the dominant plants, scrub probably burns catastrophically once every 20 to 80 years or longer.

Scrub is associated with and often grades into Sandhill, Scrubby Flatwoods, Coastal Strand, and Xeric Hammock. Some Xeric Hammocks are advanced successional stages of Scrub, making intermediate stages difficult to classify. Scrub occurs almost exclusively in Florida, although coastal scrubs extend into adjacent Alabama and Georgia.

Because Scrub occurs on high dry ground and is not an aesthetically pleasing habitat, at least to the uninitiated, this ecosystem and its many endangered and threatened species are rapidly being lost to development. Scrub is also readily damaged by off-road vehicle traffic or even foot traffic, which destroys the delicate ground cover and allows the loose sand to erode. Ground lichens may require 50 years or more to recover.

(20/21) UPLAND HARDWOOD FOREST AND UPLAND MIXED FOREST - (synonyms: mesic hammock, climax hardwoods, upland hardwoods, beech-magnolia climax, oakmagnolia climax, pine-oak-hickory association, southern mixed hardwoods, clay hills hammocks, Piedmont forest). Upland Hardwood Forests and Upland Mixed Forests are characterized as well-developed, closed-canopy forests of upland hardwoods on rolling hills. These communities have quite similar physical environments and share many species, including southern magnolia, pignut hickory, sweetgum, Florida maple, devil's walking stick, American hornbeam, redbud, flowering dogwood, Carolina holly, American holly, eastern hophornbeam, spruce pine, loblolly pine, live oak, and swamp chestnut oak, among others. The primary difference between these communities is that Upland Mixed Forests generally lack shortleaf pine, American beech and other more northern species that typically occur in

Upland Hardwood Forests. This is predominantly a result of minor climatic differences, Upland Hardwood Forests being most common in Northern panhandle Florida, and Upland Mixed Forests being most common in northern and central peninsula Florida. Other typical plants include gum bumelia, hackberry, persimmon, red cedar, red mulberry, wild olive, redbay, laurel cherry, black cherry, bluff oak, water oak, cabbage palm, basswood, winged elm, Florida elm, sparkleberry, Hercules' club, slippery elm, beautyberry, partridgeberry, sarsaparilla vine, greenbrier, trilliums, beech drops, passion flower, bedstraw, strawberry bush, silverbell, caric sedges, fringe tree, horse sugar, white oak, and blackgum. Typical animals include slimy salamander, Cope's gray treefrog, bronze frog, box turtle, eastern glass lizard, green anole, broadhead skink, ground skink, red-bellied snake, gray rat snake, rough green snake, coral snake, woodcock, barred owl, pileated woodpecker, shrews, eastern mole, gray squirrel, wood rat, cotton mouse, gray fox, and white-tailed deer.

Upland Hardwood and Mixed Forests occur on rolling hills that often have limestone or phosphatic rock near the surface and occasionally as outcrops. Soils are generally sandy-clays or clayey sands with substantial organic and often calcareous components. The topography and clayey soils increase surface water runoff, although this is counterbalanced by the moisture retention properties of clays and by the often thick layer of leaf mulch which helps conserve soil moisture and create decidedly mesic conditions. Furthermore, the canopy is densely closed, except during winter in areas where deciduous trees predominate. Thus, air movement and light penetration are generally low, making the humidity high and relatively constant. Because of these conditions Upland Hardwood and Mixed Forests rarely burn.

Upland Hardwood Forests and Upland Mixed Forests are climax communities for their respective geographic locations. They are often associated with and grade into Upland Pine Forest, Slope Forest or Xeric Hammock. Occasionally, Upland Mixed Forests may also grade into Maritime Hammock or Prairie Hammock. During early stages of succession, Upland Hardwood and Mixed Forest may be difficult to distinguish from Upland Pine Forests that have not been burned for several years. Disturbed sites may require hundreds of years to reach full development with species compositions representative of climax conditions.

Silvicultural, agricultural, industrial, and residential developments have already eliminated the vast bulk of these communities. These activities are continuing at an accelerated pace in many areas, such that the few remnant mature examples are in urgent need of protection and proper management.

(23) XERIC HAMMOCK - (synonyms: xeric forest, sand hammock, live oak forest, oak woodland, oak hammock). Xeric Hammock is characterized as either a scrubby, dense, low canopy forest with little understory other than palmetto, or a multi-storied forest of tall trees with an open or closed canopy. Several gradations between these extremes exist. Typical plants include live oak, sand live oak, laurel oak, turkey oak, blackjack oak, red oak, sand post oak, staggerbush, saw palmetto, sparkleberry, pignut hickory, southern magnolia, redbay, American holly, wild olive, black cherry, fox grape, beautyberry, bluejack oak, Chapman's oak, persimmon, and yaupon. Typical animals include barking treefrog, spadefoot toad, gopher tortoise, worm lizard, fence lizard, black racer, red rat snake, hognose snake, crowned snake, screech-owl, turkey, blue jay, eastern mole, gray squirrel, and eastern flying squirrel.

Xeric Hammock is an advanced successional stage of Scrub or Sandhill. The variation in vegetation structure is predominantly due to the original community from which it developed. In all cases, however, the soils consist primarily of deep, excessively-drained sands that were derived from old dune systems. The sparsity of herbs and the relatively

incombustible oak litter preclude most fires from invading Xeric Hammock. When fire does occur, it is nearly always catastrophic and may revert Xeric Hammock into another community type. Xeric Hammock only develops on sites that have been protected from fire for 30 or more years.

Xeric Hammocks are often associated with and grade into Scrub, Sandhill, Upland Mixed Forest or Slope Forest. The species composition of Xeric Hammock is also often similar to Prairie Hammock and Maritime Hammock. Xeric Hammock is often considered the climax community on sandy uplands.

Xeric Hammock occurs generally as isolated patches that rarely cover extensive areas. Mature examples are rare, and scrub derived types have always been scarce. Because of its general location on high ground with big trees, Xeric Hammock is prime residential property, especially when near the coast. Remaining tracts of Xeric Hammock require protection from fire and development.

(26) BAYGALL - (synonyms: seepage swamp, bayhead, bay swamp). Baygalls are generally characterized as densely forested, peat-filled seepage depressions often at the base of sandy slopes. The canopy is composed of tall, densely packed, generally straight-boled evergreen hardwoods dominated by sweetbay, swamp red bay, and loblolly bay. A more or less open understory of shrubs and ferns commonly occurs, while sphagnum mats are often interlaced with the convoluted tree roots. Other typical plants include dahoon holly, Atlantic white cedar, fetterbush, male-berry, myrtle-leaved holly, large gallberry, wax myrtle, odorless wax myrtle, hurrah-bush, dog-hobble, white alder, possumhaw, red chokeberry, Virginia willow, laurel greenbrier, poison ivy, cinnamon fern, chain fern, wild grape, netted chain fern, sweetgum, cypress, lizard's tail, and needle palm. Typical animals include mole salamander, southern dusky salamander, southern mud salamander, opossum, southeastern shrew, short-tailed shrew, marsh rabbit, black bear, raccoon, southern mink, and bobcat.

Baygalls typically develop at the base of a slope where seepage usually maintains a saturated peat substrate. They may also be located at the edges of floodplains or in other flat areas where high lowland water tables help maintain soil moisture. Baygall Spoils are generally composed of peat with an acidic pH (3.5 - 4.5).

Since Baygalls rarely dry out enough to burn, the normal fire interval in these communities is probably 50-100 years or more. After a fire, bay trees usually resprout from the roots and replace themselves, but severe fires may change a Baygall into a different community. If only a small amount of surface peat is removed, a Baygall may be replaced by a Wet Flatwoods community. If the ground surface is lowered considerably, willows may invade, followed by a cypress-gum community. With recurrent fire, the site will become a shrub bog. If the subsurface peat does not burn and fire and hydrological regimes are undisturbed, a burned out bay forest may be replaced by a stand of white cedar.

Baygall is often associated with and may grade into Seepage Slope, Floodplain Forest or Floodplain Swamp. The species composition of Baygalls frequently overlaps with Bog, Dome Swamp, Basin Swamp, Strand Swamp, Bottomland Forest, Wet Flatwoods, and Hydric Hammock.

Baygalls are dependent upon seepage flow and a high water table. Alterations in the local or regional hydrology could impact Baygall communities. They may also need fire protection during droughts, especially if water tables are lowered. Baygalls are vulnerable to logging, peat mining, and conversion to agricultural land. When drained, the peat soils

are valued for farming, although they then begin to oxidize and disappear. The renewed interest in mining peat as fuel may place greater pressure on these wetlands.

(33) FLOODPLAIN SWAMP - (synonyms: river swamp, bottomland hardwoods, seasonally flooded basins of flats, oak-gum-cypress, cypress-tupelo, slough, oxbow, back swamp). Floodplain Swamps occur on flooded soils along stream channels and in low spots and oxbows within river floodplains. Dominant trees are usually buttressed hydrophytic trees such as cypress and tupelo; the understory and ground cover are generally very sparse. Other typical plants include ogeechee tupelo, water tupelo, swamp titi, wax myrtle, dahoon holly, myrtle-leaved holly, large galberry, possumhaw, hurrah-bush, white alder, lizard's tail, leather fern, royal fern, marsh fern, soft rush, laurel greenbrier, hazel alder, hawthorn, and swamp privet.

Floodplain Swamps harbor a diverse array of animals including both temporary and permanent residents. Typical animals include marbled salamander, mole salamander, amphiuma, Alabama waterdog, Southern dusky salamander, two-lined salamander, three-lined salamander, dwarf salamander, slimy salamander, rusty mud salamander, southern toad, cricket frog, bird-voiced treefrog, gray treefrog, bullfrog, river frog, Southern leopard frog, alligator, river cooter, stinkpot, Southeastern five-lined skink, broadhead skink, mud snake, rainbow snake, redbelly water snake, brown water snake, glossy crayfish snake, black swamp snake, cottonmouth, yellow-crowned night-heron, wood duck, swallowtail kite, Mississippi kite, redshouldered hawk, woodcock, barred owl, chimney swift, hairy woodpecker, pileated woodpecker, Acadian flycatcher, Carolina wren, veery, white-eyed vireo, red-eyed vireo, parula warbler, prothonotary warbler, hooded warbler, Swainson's warbler, cardinal, towhee, opossum, southeastern shrew, short-tailed shrew, beaver, wood rat, rice rat, cotton mouse, golden mouse, bear, raccoon, and bobcat.

Soils of Floodplain Swamps are highly variable mixtures of sand, organic, and alluvial materials, although some sites, especially within sloughs or on smaller streams, may have considerable peat accumulation. Floodplain Swamps are flooded for most of the year, with sites along channels inundated by aerobic flowing water while those of sloughs and backswamps are flooded with anerobic water for extensive periods of time. Soils and hydroperiods determine species composition and community structure. Seasonal and often prolonged inundations restrict the growth of most shrubs and herbs, leaving most of the ground surface open or thinly mantled with leaf litter. Floods redistribute detrital accumulations to other portions of the floodplain or into the main river channel. This rich organic debris is essential to the functional integrity of downriver ecosystems such as estuaries. These swamps are usually too wet to support fire.

Floodplain Swamps are often associated with and grade into Floodplain Forest or Hydric hammock, and occasionally Baygall. The species composition of Floodplain Swamps is frequently similar to the Slough, Strand Swamp, Dome Swamp, and Basin Swamp communities.

Alteration of the hydroperiod by impoundments or river diversions and the disruption of floodplain communities by forestry or agriculture have devastating consequences to entire river and bay systems. Many plant and animal species, both onsite and down river, depend upon the presence and natural fluctuations of these swamps for survival and reproduction.

(35) HYDRIC HAMMOCK - (synonyms: wetland hardwood hammock, wet hammock). Hydric Hammock is characterized as a well developed hardwood and cabbage palm forest with a variable understory often dominated by palms and ferns. Typical plants include cabbage palm, diamond-leaf oak, red cedar, red maple, swamp bay, sweetbay,

water oak, southern magnolia, wax myrtle, saw palmetto, bluestem palmetto, needle palm, poison ivy, dahoon holly, myrsine, hackberry, sweetgum, loblolly pine, Florida elm, swamp chestnut oak, American hornbeam, Walter viburnum, royal fern, peppervine, rattanvine, yellow jessamine, and Virginia creeper. Typical animals include green anole, flycatchers, warblers, and gray squirrel.

Hydric Hammock occurs on low, flat, wet sites where limestone may be near the surface and frequently outcrops. Soils are sands with considerable organic material that, although generally saturated, are inundated only for short periods following heavy rains. The normal hydroperiod is seldom over 60 days per year. Because of their generally saturated soils and the sparsity of herbaceous ground cover, Hydric Hammocks rarely burn.

Hydric Hammock occurs as patches in a variety of lowland situations, often in association with springs or karst seepage, and in extensive forests covering lowlands just inland of coastal communities. Hydric Hammock generally grades into Floodplain Swamp, Strand Swamp, Basin Swamp, Baygall, Wet Flatwoods, Coastal Berm, Maritime Hammock, Slope Forest, Upland Mixed Forest, or Upland Hardwood Forest. Hydric Hammock is often difficult to differentiate from Bottomland Forest, prairie Hammock, and Floodplain Forest.

The normal hydrological regime must be maintained in Hydric Hammock. If the water table is lowered, Hydric Hammock will gradually change to mesic conditions. If the hammock is flooded, many trees will die and eventually be replaced by more hydrophytic species.

(46/47) FLATWOODS/PRAIRIE/MARSH LAKE - (synonyms: Flatwoods pond, ephemeral pond, grass pond, St. John's wort pond, freshwater lake, pineland depression, swale, prairie pond). The distinctions between these communities, and from Depression Marsh, are often quite subtle, because of their successional interrelationships. Depression Marsh is characterized as a shallow, generally round or elliptical depression vegetated with concentric bands of hydrophytic herbaceous plants. Depending upon the depth and slope of the depression, an open water zone with or without floating plants may occur at the center. The open water zone is considered to be a Marsh Lake if it is small in comparison to the surrounding marsh. Otherwise, the system is considered to be a Flatwoods Lake or a Prairie Lake, depending upon the surrounding community.

Both Flatwoods Lake and Prairie Lake are surrounded by either a sparse, Wet Prairie-like zone or a dense ring of saw palmetto and other shrubs. Typical plants include spikerush, yellow-eyed grasses, St. John's wort, chain fern, coastal plain willow, maidencane, wax myrtle, water primrose, floating heart, buttonbush, fire flag, pickerelweed, arrowhead bladderworts, bottlebrush threeawn, toothache grass, star rush, bulrushes, sawgrass, and nut sedge. Many animals utilize marshes primarily for feeding and breeding areas but spend most of their time in other habitats. Other animals are more dependent on marshes, spending most of their time within them. Typical animals include amphiuma, lesser siren, greater siren, cricket frog, green treefrog, bullfrog, pig frog, leopard frog, alligator, eastern mud snake, banded water snake, green water snake, striped crayfish snake, black swamp snake, American bittern, least bittern, great blue heron, tricolored heron, green-backed heron, black-crowned night-heron, great egret, snowy egret, little blue heron, white ibis, glossy ibis, bald eagle, northern harrier, king rail, Virginia rail, sora, limpkin, long-billed marsh wren, yellowthroat, red-winged blackbird, boat-tailed grackle, and Florida water rat.

The depressions in which these communities develop are typically formed by one of two geological processes: (1) solution holes form in the underlying limestone, causing surface sands to slump into a circular depression; or (2) during higher sea levels, offshore currents, waves, and winds scoured depressions that became seasonally or permanently

inundated after the seas regressed. Soils in these depressions generally consist of acidic sands with some peat and occasionally a clay lens.

Water is derived mostly from runoff from the immediately surrounding uplands. These NC's function as aquifer recharge areas by acting as reservoirs which release groundwater when adjacent water tables drop during drought periods. Water generally remains throughout the year in a Flatwoods/Prairie Lake or a Marsh Lake, although water levels may fluctuate substantially.

(55) SPRING-RUN STREAM - (synonyms: calcareous stream, spring, or creek). Spring-run Streams are characterized as perennial water courses which derive most, if not all, of their water from artesian openings in the underground aquifer. Waters issuing from the aquifer are generally clear, circumneutral to slightly alkaline (pH = 7.0 - 8.2), and perennially cool (66 - 75F). These conditions saturate the water with important minerals, allow light to penetrate deeply, and reduce the limiting effects of environmental fluctuations, all of which are conducive for plant growth. Thus, Spring-run Streams are among the most productive aquatic habitats. Typical plants include tape grass, wild rice, giant cutgrass, arrowheads, southern naiads, pondweeds, and chara. Typical animals include mollusks, stoneflies, mayflies, caddisflies, simuliids, chironomids, American alligator, alligator snapping turtle, Suwannee cooter, loggerhead musk turtle, rainbow snake, red-belly watersnake, brown watersnake, and many fishes.

Spring-run Streams generally have sand bottoms or exposed limestone along their central channel. Calcareous silts may form thick deposits in quiet shallow zones, while leaf drift and other debris collect around fallen trees and quiet basins. The latter, along with limestone outcrops and rock debris, form important aquatic habitats for many small aquatic organisms. When undisturbed, submerged aquatic vegetation clothes most of the spring-run stream bottom and provides shelter and an abundant food source for the extensive web of life.

The water emanating from the aquifer is generally clear because of the filtering and absorbing actions of the soils and aquifer limestones through which the water percolates and flows. When the water is deep, it may appear bluish because of light-refraction characteristics that are similar to those which cause the sky to be blue on clear days. If the water sources for the aquifer are substantially influenced by nearby swamps or flatwoods, the spring-run may temporarily become stained with tannins and other dissolved organics during or following periods of heavy rains. When extensive underground cavities connect the spring caverns with nearby sinks and swallow holes, the spring-run may become turbid with suspended particulates during and following heavy rains and floods. Conversely during periods of low rainfall, the aquifer can become supersaturated with calcium, carbonates, and other ions. These chemicals readily precipitate when water reaches the surface, causing the spring head or boil to appear milky.

Human activities affect flow rates by withdrawing water from the aquifer through deep wells. When withdrawal is substantial within the recharge area, spring flow is reduced or, in some cases, ceases entirely. Normal flow rates may return when excessive withdrawals are eliminated.

People can also substantially affect the quality of spring waters. Agricultural, residential, and industrial pollutants may readily leach through soils, especially when they are improperly applied or disposed. If polluted groundwater infiltrates the deep aquifer feeding a Spring-run Stream, recovery may not be possible. Applications of herbicides to control aquatic plant growth are also detrimental, because their use often induces eutrophication of the stream.

Other human-related impacts to Spring-run Streams include the destruction of aquatic vegetation by overuse or misuse, and the introduction and proliferation of exotic plants and animals. Both of these impacts may be very difficult to control. Overuse is likely to increase because of the limited number of publicly-owned springs and the desires of an increasing population to enjoy their clean, cool, aesthetic qualities and unique recreational opportunities. Exotic species are often severely detrimental to native species, and they may also disrupt recreational activities. A delicate balance between recreation and preservation must be sought.

(53) BLACKWATER STREAM - (synonyms: blackwater river, blackwater creek). Blackwater Streams are characterized as perennial or intermittent seasonal watercourses originating deep in sandy lowlands where extensive wetlands with organic soils function as reservoirs, collecting rainfall and discharging it slowly to the stream. The tea-colored waters of Blackwater Streams are laden with tannins, particulates, and dissolved organic matter and iron derived from drainage through swamps and marshes. They generally are acidic (pH = 4.0 - 6.0), but may become circumneutral or slightly alkaline during low-flow stages when influenced by alkaline groundwater. Water temperatures may fluctuate substantially and are generally correlated with seasonal fluctuations in air temperature. The dark-colored water reduces light penetration and, thus, inhibits photosynthesis and the growth of submerged aquatic plants. Emergent and floating aquatic vegetation may occur along shallower and slower moving sections, but their presence is often reduced because of typically steep banks and considerable seasonal fluctuations in water level. Typical plants include golden club, smartweed, sedges, and grasses. Typical animals include river longnose gar, gizzard shad, threadfin shad, redbfin pickerel, chain pickerel, ironcolor shiner, Ohooppee shiner, weed shiner, blacktail shiner, chubsucker, channel catfish, banded topminnow, pygmy killifish mosquitofish, mud sunfish, flier, everglades pygmy sunfish, banded sunfish, redbreast sunfish, dollar sunfish, stumpknocker, spotted bass, black crappie, darters, Alabama waterdog, river frog, alligator, snapping turtle, alligator snapping turtle, river cooter, Florida cooter, peninsula cooter, stinkpot, spiny softshell, red-belly watersnake, brown watersnake, beaver, and river otter.

Blackwater Streams have sandy bottoms overlain by organics and frequently underlain by limestone. Limestone outcrops may also occur. Blackwater Streams generally lack the continuous extensive floodplains and natural levees of Alluvial Streams. Instead, they typically have high, steep banks alternating with Floodplain Swamps. High banks confine water movement except during major floods. The absence of significant quantities of suspended sediments reduces their ability to construct natural levees.

Blackwater Streams are the most widely distributed and numerous Riverine systems in the southeast Coastal Plain. Very few, however, have escaped major disturbances and alteration. Clearcutting adjacent forested lands is one of the more devastating alterations for this community. Additionally, the limited buffering capacity of Blackwater Streams intensifies the detrimental impacts of agricultural and industrial effluents.

(79/80) AQUATIC AND TERRESTRIAL CAVE - (synonyms: cave, cavern grotto, chamber, chimney, sink, swallow hole, spring rise). Aquatic and Terrestrial Caves are characterized as cavities below the surface of the ground in karst areas of the state. A cave system may contain portions classified as Terrestrial Caves and portions classified as Aquatic Caves. The latter vary from shallow pools highly susceptible to disturbance, to more stable, totally submerged systems. Because all caves initially develop under aquatic conditions, Terrestrial Caves can be considered essentially dry Aquatic Caves. The limestone aquifers that underlie the entire state of Florida could be considered vast Aquatic Cave communities. Troglobites (also called phreatobites) are organisms specially evolved to

survive in deep cave habitats. The occasional observation of various species of troglobites in deep water wells from several regions in the state suggests that this community could be widespread. However, the dependence of troglobites on detrital inputs and other nutrients imported from the surface generally limits the distribution of well developed Aquatic Cave communities to karst areas with surface connections.

The area around cave entrances may be densely vegetated with species from the surrounding Natural Community. Within the cave, however, illumination levels and, thereby, vegetation densities drop rapidly with increased distance from the entrance. Within the limits of light penetration, called the twilight zone, species of algae, mosses, liverworts, and an occasional fern or herbaceous plant may grow. Beyond the twilight zone, plants are generally absent or limited to a few inconspicuous species of fungi that grow on guano or other organic debris. Thus, Subterranean Natural Communities differ from most other Natural Communities in that living plants are not dominant elements.

Animals inhabiting Subterranean Natural Communities are generally divided into three groups according to their cave adaptations: troglloxenes, trogllophiles, and trogllobites. Troglloxenes spend much of their time in caves, but they must periodically return to the surface to feed or breed. Woodrats, harvestmen, cave crickets, some salamanders, and many species of bats are typical examples of troglloxenes. Trogllophiles may regularly live in caves, but their conspecifics also inhabit surface communities with moist microhabitats. Cave orb spiders, and some crickets, fish and salamanders are typical examples of trogllophiles. Trogllobites are obligatory cave dwellers with special adaptations for living in complete darkness. Blind cave crayfish, blind cave salamander, cave amphipods, cave shrimp, cave snail, and cave isopods are typical trogllobites in Florida's Aquatic Caves; cave mites, some cave spiders and springtails, and a cave earwig are typical trogllobites in some Terrestrial Caves in north Florida. Even though they never leave their cave environments, trogllobites and trogllophiles depend on outside energy sources, such as detritus that washes in through sinkholes and other cave entrances. Fecal materials derived from troglloxenes which feed outside the cave are also important nutrients for trogllobites. Without these energy subsidies, the trogllobitic elements could not exist.

Two geologic processes are predominantly responsible for the development of caves: phreatic and vadose. Phreatic processes occur below the aquifer's surface where ground water is confined and subjected to hydrostatic pressure. Vadose processes occur at the top or above the aquifer, where air enters the passageways and water flows freely under the influence of gravity. In both processes, the dissolution and corrosion of limestone play active roles in enlarging cave passageways. These forces differ primarily in the slopes of the passageways which result. Phreatic passageways are generally circular or elliptic, while vadose passageways are more triangular with the broad base of the triangle at the bottom. All limestone caves begin development under phreatic conditions in the aquifer. As water tables drop, vadose conditions eventually replace phreatic conditions. If the water table then rises, another reversal of processes occurs. Because water tables have fluctuated substantially with fluctuating sea levels during the Pleistocene and other geologic epochs, most caves in Florida exhibit both phreatic and vadose characteristics.

Since limestone caves initially develop in the aquifer, they are frequently associated with aquifer-related surface features. Thus, a Spring Run Stream issues from an Aquatic Cave, while Sinkhole Lakes and occasionally Blackwater Streams lead into Aquatic Caves. Similarly, Terrestrial Caves may occur at the bottoms of dry sinkholes or be associated with ancient springs, swallow holes or Aquatic Caves that have since been exposed by lower water tables. Typically, Terrestrial Caves may also exhibit aquatic conditions during periods of heavy rainfall, or vice versa during droughts. Additionally, Terrestrial Caves may harbor relatively permanent pools or lakes that are formed in natural depressions in the floor of

the cave from the buildup of rimstone, or where the aquifer inundates the lower cavities. Thus, Terrestrial and Aquatic Caves often occur together.

Cave waters are generally clear, with deep water appearing bluish. The water may become stained brown from tannins leached from decaying plant matter nearby and carried in with rainwater. The water may also become milky white if fine limestone mud from the bottom of the Aquatic Cave is suspended in the water column following disturbance. A bottom substrate of organic silts can also muddy the water with suspended particles. Waters are generally circumneutral to alkaline with a high mineral content (particularly calcium bicarbonate and magnesium) and with constant temperature. Flowing water within Aquatic Caves generally has a lower pH, is often undersaturated with respect to carbonates, and has a relatively richer fauna. Contrastingly, pools that are fed by seepage or dripping water are generally characterized by a high pH, high concentration of dissolved carbonates, low content of organic matter suitable for food, and a sparse fauna. Cave water characteristics may also vary seasonally because of fluvial inputs from interconnected surface streams, or because of detrital pulses and other surface inputs during periods of substantial aquifer recharge. In general, however, Aquifer Caves are very stable environments with relatively constant physical and chemical characteristics.

Terrestrial Caves also are very stable environments, having relatively constant temperatures and humidities. Within the cave, however, these factors may vary with location. For example, the twilight zone (nearest to the light source) is generally warmer and experiences more temperature and humidity fluctuations than does the middle zone, a dark zone that is subject to air circulation due to "cave breathing" phenomena. The deep zone, when it occurs, is the most stable zone of a Terrestrial Cave, because the air in it is essentially static. Terrestrial Cave faunas often partition their distributions according to these zones, with troglloxenes being more common in the twilight and middle zones and troglobites being more common in the deep zone.

Subterranean Natural Communities are extremely fragile. Their faunas are adapted to very stable environments and have a limited ability to survive even minor environmental perturbations. Terrestrial Caves are threatened by disturbances of spelunkers. The mere entry into a bat roosting, maternity, or hibernation cave is often sufficient to cause abandonment by bats, thereby causing a major reduction in an important energy source for the remainder of the cave ecosystem.

Alterations in or around cave entrances will often upset detrital input levels and may also induce significant changes in air circulation patterns and the cave microclimate. Aquatic Caves are threatened by pollution of ground and surface waters from agricultural, industrial, and residential sources, as well as by disturbances from divers. The unique troglobitic species generally have very low population levels and can be severely impacted by overcollection or by changes in nutrient input levels that result from surface manipulations or hydrological alterations. Thus, special precautions and management procedures must be invoked to protect these unique, fragile communities from deleterious activities.

(81/82) RUDERAL AND DEVELOPED. - Ruderal areas are characterized by having the natural substrate or the biological community overwhelmingly altered as a result of human activity. Native vegetation is sparse and is often replaced by weedy or exotic species. These areas require a long-term restoration effort.

Developed areas consist of natural biological communities that have been replaced or nearly replaced by structures or permanently cleared areas such as roads, visitor facilities, campgrounds, recreation areas, parking lots or concessions.

APPENDIX E

STATE OF FLORIDA STATUTES
INCORPORATING THE WEKIVA RIVER
PROTECTION ACT

CHAPTER 369 FLORIDA STATUTES: PART III WEKIVA RIVER PROTECTION

369.301 Short title.-

This part may be cited as the "Wekiva River Protection Act."

History.- s. 1, ch. 88-121; s. 26, ch. 88-393.

369.303 Definitions.-

As used in this part:

- (1) "Council" means the East Central Florida Regional Planning Council.
- (2) "Counties" means Orange, Seminole, and Lake Counties.
- (3) "Department" means the Department of Community Affairs.
- (4) "Development of regional impact" means a development which is subject to the review procedures established by s. 380.06 or s. 380.065, and s. 380.07.
- (5) "Land development regulation" means a regulation covered by the definition in s. 163.3164(23) and any of the types of regulations described in s. 163.3202.
- (6) "Local comprehensive plan" means a comprehensive plan adopted pursuant to ss. 163.3164-163.3215.
- (7) "Revised comprehensive plan" means a comprehensive plan prepared pursuant to ss. 163.3164-163.3215 which has been revised pursuant to chapters 85-55, 86-191, and 87-338, Laws of Florida, and subsequent laws amending said sections.
- (8) "Wekiva River development permit" means any zoning permit, subdivision approval, rezoning, special exception, variance, site plan approval, or other official action of local government having the effect of permitting the development of land in the Wekiva River Protection Area. "Wekiva River development permit" shall not include a building permit, certificate of occupancy, or other permit relating to the compliance of a development with applicable electrical, plumbing, or other building codes.
- (9) "Wekiva River Protection Area" means the lands within: Township 18 south range 28 east; Township 18 south range 29 east; Township 19 south range 28 east, less those lands lying west of a line formed by County Road 437, State Road 46, and County Road 435; Township 19 south range 29 east; Township 20 south range 28 east, less all lands lying west of County Road 435; and Township 20 south range 29 east, less all those lands east of Markham Woods Road.
- (10) "Wekiva River System" means the Wekiva River, the Little Wekiva River, Black Water Creek, Rock Springs Run, Sulphur Run, and Seminole Creek.

History.- s. 1, ch. 88-121; s. 26, ch. 88-393; s. 46, ch. 91-221; s. 4, ch. 93-206.

369.305 Review of local comprehensive plans, land development regulations, Wekiva River development permits, and amendments.-

(1) it is the intent of the Legislature that comprehensive plans and land development regulations of Orange, Lake, and Seminole Counties be revised to protect the Wekiva River Protection Area prior to the due dates established in ss. 163.3167(2) and 163.3202 and chapter 9J-12, Florida Administrative Code. It is also the intent of the Legislature that the counties emphasize this important state resource in their planning and regulation efforts. Therefore, each county shall, by April 1, 1989, review and amend those portions of its local comprehensive plan and its land development regulations applicable to the Wekiva River Protection Area, and, if necessary, adopt additional land development regulations which are applicable to the Wekiva River Protection Area to meet the following criteria:

(a) Each county's local comprehensive plan shall contain goals, policies, and objectives which result in the protection of the:

1. Water quantity, water quality, and hydrology of the Wekiva River System;
2. Wetlands associated with the Wekiva River System;
3. Aquatic and wetland-dependent wildlife species associated with the Wekiva River System;
4. Habitat within the Wekiva River Protection Area of species designated pursuant to rules 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code; and
5. Native vegetation within the Wekiva River Protection Area.

(b) The various land uses and densities and intensities of development permitted by the local comprehensive plan shall protect the resources enumerated in paragraph (a) and the rural character of the Wekiva River Protection Area. The plan shall also include:

1. Provisions to ensure the preservation of sufficient habitat for feeding, nesting, roosting, and resting so as to maintain viable populations of species designated pursuant to rules 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code, within the Wekiva River Protection Area.
2. Restrictions on the clearing of native vegetation within the 100-year flood plain.

local comprehensive plans, and any amendments, which are applicable to portions of the Wekiva River Protection Area for compliance with the provisions of subsection (1) in addition to its review of local comprehensive plans and amendments for compliance as defined in s. 163.3184; and all the procedures and penalties described in s. 163.3184 shall be applicable to this review.

(8) The department may adopt reasonable rules and orders to implement the provisions of this section.

History.- s. 1, ch. 88-121; s. 26, ch. 88-393.

369.307 Developments of regional impact in the Wekiva River Protection Area; land acquisition.-

(1) Notwithstanding the provisions of s. 380.06(15), the counties shall consider and issue the development permits applicable to a proposed development of regional impact which is located partially or wholly within the Wekiva River Protection Area at the same time as the development order approving, approving with conditions, or denying a development of regional impact.

(2) Notwithstanding the provisions of s. 380.0651 or any other provisions of chapter 380, the numerical standards and guidelines provided in chapter 28-24, Florida Administrative Code, shall be reduced by 50 percent as applied to proposed developments entirely or partially located within the Wekiva River Protection Area.

(3) The Wekiva River Protection Area is hereby declared to be a natural resource of state and regional importance. The East Central Florida Regional Planning Council shall adopt policies as part of its comprehensive regional policy plan and regional issues list which will protect the water quantity, water quality, hydrology, wetlands, aquatic and wetland-dependent wildlife species, habitat of species designated pursuant to rules 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code, and native vegetation in the Wekiva River Protection Area. The council shall also cooperate with the department in the department's implementation of the provisions of s. 369.305.

(4) The provisions of s. 369.305 of this act shall be inapplicable to developments of regional impact in the Wekiva River Protection Area if an application for development approval was filed prior to June 1, 1988, and in the event that a development order is issued pursuant to such application on or before April 1, 1989.

(5) The Department of Natural Resources is directed to proceed to negotiate for acquisition of conservation and recreation lands projects within the Wekiva River Protection Area provided that such projects have been deemed qualified under statutory and rule criteria for purchase and have been placed on the priority list for acquisition by the advisory council created in s. 259.035.

History.- s. 1, ch. 88-121; s. 26, ch. 88-393; s. 14, ch. 89-116.

369.309 Airboats prohibited; exceptions; penalties.-

(1) The operation of an airboat on the Wekiva River System shall be prohibited. For the purposes of this section, an airboat is any boat, sled, skiff, or swamp vessel that is pushed, pulled, or propelled by air power generated by a nondetachable motor of more than 10 horsepower.

(2) The provisions of this section shall not apply in the case of an emergency or to any employee of a municipal, county, state, or federal agency or their agents on official government business.

(3) Persons convicted for violation of this section shall be guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

History.- s. 1, ch. 90-81.

CHAPTER 9J-27 FLORIDA ADMINISTRATIVE CODE

9J-27.001 Purpose

The purpose of these rules and regulations is to establish procedures for the review and determination of compliance of local comprehensive plans and land development regulations pursuant to s. 369.305(1) through (4), F.S. The rule also establishes procedures for the review and certification of local comprehensive plan amendments and amendments to land development regulations which apply to the Wekiva River Protection Area, and of Wekiva River development permits solely within Wekiva River Protection Zones, pursuant to s. 369.305(5), Florida Statutes.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 369.301, 369.303, 369.305 FS. History-New 2-4-89.

9J-27.002 Definitions

As used in this Chapter, the terms defined in Section 369.303, F.S., shall have the meanings provided in that section. In addition, the following definitions are provided to clarify terms used in the Chapter:

(1) "Development" has the meaning given to it in s. 380.04, F.S.

(2) "Goal" means the long-term end toward which programs or activities are ultimately directed.

(3) "Policy" means the way in which programs and activities are conducted to achieve an identified goal.

(4) "Wekiva River development permit" means any zoning permit, subdivision approval, rezoning, special exception, variance, site plan approval, or other official action of local government having the effect of permitting the development of land in the Wekiva River Protection Area. "Wekiva River development permit" shall not include a building permit, certificate of occupancy, or other permit relating to the compliance of a development with applicable electrical, plumbing, or other building codes.

(5) "Wekiva River Protection Area" means the lands within: Township 18 south range 28 east; Township 18 south range 29 east; Township 19 south range 28 east, less those lands lying west of a line formed by County Road 437, State Road 46, and County Road 435; Township 19 south range 29 east; Township 20 south range 28 east, less all lands lying west of County Road 435; and Township 20 south range 29 east, less all those lands east of Markham Woods Road.

(6) "Wekiva River Protection Zone" means the Water Quality Protection Zone, the Water Quantity Protection Zone, or the Riparian Habitat Protection Zone established by the St. Johns River Water Management District in Rule 40C-41.063(3)(c) - (e), F.A.C.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 163.3164, 369.303, 380.04 FS. History-New 2-4-89.

9J-27.003 Intent

It is the intent of these rules that Lake, Orange and Seminole Counties shall adopt and administer local comprehensive plans and land development regulations and issue development permits that protect the Wekiva River Protection Area pursuant to the provisions of Subsections 369.305(1) through (5), F.S.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 369.305 FS. History-New 2-4-89.

9J-27.004 Effective Period

The procedures established in this rule shall remain effective in each county until the submission due date for the county's revised comprehensive plans as established by s. 163.3167(2) and Chapter 9J-12, Florida Administrative Code.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 369.305 FS. History-New 2-4-89.

9J-27.005 Review Procedures for Comprehensive Plans and Land Development Regulations

The Department shall apply the following procedures in the review and determination of compliance of any local comprehensive plan or land development regulation, as amended or supplemented, adopted pursuant to s. 369.305(1) through (4), F.S.

(1) Each county shall, by April 1, 1989, review and amend those portions of its local comprehensive plan and its land development regulations applicable to the Wekiva River Protection Area, and, if necessary, adopt additional land development regulations which are applicable to the Wekiva River Protection Area, to meet the criteria specified in Subsection 369.305(1), F.S. The comprehensive plan policies shall describe how the local government's programs, activities, and land development regulations will be initiated, modified or continued to implement the comprehensive plan so as to meet the criteria in s. 369.305(1)(a) - (d), F.S.

(2) Each county shall, within 10 days of adopting any necessary amendments to its local comprehensive plan and land development regulations or new land development regulations, submit them to the Department in accordance with Rule 9J-27.008, F.A.C.

9J-27.007 Preliminary Review of Proposed Comprehensive Plans and Amendments

If requested by the local government, the Department shall perform a preliminary review of proposed comprehensive plan amendments for consistency with the provisions contained in ss. 369.305(1), F.S., when said amendments are transmitted to the Department pursuant to s. 163.3184(3), F.S.

(1) If a preliminary review of a comprehensive plan amendment proposed to satisfy the requirements of ss. 369.305(1) through (4), F.S., is requested, and if the amendment is adopted in a form substantially unchanged from that which was proposed or in a form substantially changed to comply with comments received from the preliminary review, then the Department shall make its determination of compliance and petition the Governor and Cabinet to confirm its determination within thirty (30) days of receipt of the final adopted amendment by the Department.

(2) If a preliminary review of a comprehensive plan amendment subject to review pursuant to the provisions of s. 369.305(5), F.S., is requested, and if the amendment is adopted in a form substantially unchanged from that which was proposed or in a form substantially changed to comply with comments received after the preliminary review, then the Department shall issue its Notice of Certification or Denial of Certification within thirty (30) days of receipt of the final adopted amendment by the Department. If a rezoning for a land use change solely within a Wekiva River Protection Zone is adopted concurrently with the comprehensive plan amendment approving the change, the Department shall, upon request of the local government, issue a Notice of Certification or Denial of Certification for the rezoning when it issues a Notice for the comprehensive plan amendment.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 369.305 FS. History-New 2-4-89.

9J-27.008 Submittal

(1) The local government shall submit adopted local comprehensive plan amendments to the Department pursuant to the provisions of Rule 9J-11.011, F.A.C.

(2) The local government shall transmit a legible copy of a land development regulation or land development regulation amendment that applies to the Wekiva River Protection Area or of a Wekiva River development permit solely within Wekiva River protection zones with all pertinent attachments to the Director, Division of Resource Planning and Management, Department of Community Affairs, 2740 Centerview Drive, Tallahassee, Florida 32399. A copy of the local ordinance, development, or other legal instrument adopting the regulation or development permit shall also be transmitted. The transmitted document shall be certified by the clerk of the county as being true, correct and complete. A document which is not certified or is not complete shall not be deemed to have been submitted to the Department, and the appropriate review period shall not commence until the submission of a document which is both complete and certified.

Specific Authority 120.53(1)(b), 369.305(8) FS. Law Implemented 369.305(2), (5) FS. History-New 2-4-89.

CHAPTER 40.- FLORIDA ADMINISTRATIVE CODE

40C-4.041 Permitting Thresholds.

(1) Unless expressly exempt by sections 373.406 and 403.813, F.S., or section 40C-4.051 or 40C-44.051, F.A.C., an individual or general permit must be obtained from the District prior to the construction, alteration, operation, maintenance, abandonment or removal of any dam, impoundment, reservoir, appurtenant work or works and for the maintenance and operation of existing agricultural surface water management systems or the construction of new agricultural surface water management systems.

(2) The District issues three types of surface water management permits: conceptual approval permits, individual permits and general permits.

(a) A conceptual approval permit may be issued for projects that are to be developed in phases. A letter of conceptual approval does not authorize any construction.

(b) An individual or general permit is required prior to the construction, alteration, operation, maintenance, abandonment or removal of a surface water management system which:

1. Is capable of impounding a volume of water of forty or more acre feet; or
2. Serves a project with a total land area equal to or exceeding forty acres; or
3. Serves a project with a total land area equal to or exceeding ten acres, when any part of the project is located within the Wekiva River Hydrologic Basin north of State Road 436, or within the Econlockhatchee River Hydrologic Basin; or
4. Provides for the placement of twelve or more acres of impervious surface which constitutes 40 or more percent of the total land area; or
5. Provides for the placement of one half acre or more of impervious surface, when any of the impervious surface is located within the Wekiva River Hydrologic Basin north of State Road 436; or
6. Provides for the placement of two acres or more of impervious surface, when any of the impervious surface is located within the Econlockhatchee River Hydrologic Basin; or
7. Contains a traversing work which traverses:
 - a. A stream or other watercourse with a drainage area of five or more square miles upstream from the traversing work; or
 - b. An impoundment with more than ten acres of surface area; or
8. Contains a surface water management system which serves an area of five or more contiguous acres of wetlands with a direct hydrologic connection to:
 - a. A stream or other watercourse with a drainage area of five or more square miles; or
 - b. An impoundment with no outfall, which is not wholly owned by the applicant and which is ten acres or greater in size; or
 - c. A wetland not wholly owned by the applicant.
9. Is wholly or partially located within the Wekiva River Hydrologic Basin's Riparian Habitat Protection Zone as described in Paragraph 40C-41.063(3)(e);
10. Consists of or includes filling in, excavation in, or drainage of a wetland which is not isolated when any of the filling, excavation, or drainage is located within the Econlockhatchee River Hydrologic Basin; or
11. Is wholly or partially located within any isolated wetland.

(c) A general permit will be issued for specific classes of surface water management systems which satisfy the thresholds and conditions of Chapter 40C-40, F.A.C. A general permit may authorize the construction, alteration, operation, maintenance, abandonment, or removal of a system.

(d) An individual permit may be issued for projects which do not qualify for general permits under the provisions of Chapter 40C-40, F.A.C. An individual permit may authorize the construction, alteration, operation, maintenance, abandonment or removal of a system.

(e) An individual or general permit may be issued for the maintenance and operation of existing agricultural surface water management systems or the construction of new agricultural surface water management systems which satisfy the water quality practices and performance standards of chapter 40C-44, F.A.C.

CHAPTER 373 FLORIDA STATUTES: SECTION 415

373.415 Protection zones; duties of the St. Johns River Water Management District.—

(1) Not later than November 1, 1988, the St. Johns River Water Management District shall adopt rules establishing protection zones adjacent to the watercourses in the Wekiva River System, as designated in s. 369.303(10). Such protection zones shall be sufficiently wide to prevent harm to the Wekiva River System, including water quality, water quantity, hydrology, wetlands, and aquatic and wetland-dependent wildlife species, caused by any of the activities regulated under this part. Factors on which the widths of the protection zones shall be based shall include, but not be limited to:

(a) The biological significance of the wetlands and uplands adjacent to the designated watercourses in the Wekiva River System, including the nesting, feeding, breeding, and resting needs of aquatic species and wetland-dependent wildlife species.

(b) The sensitivity of these species to disturbance, including the short-term and long-term adaptability to disturbance of the more sensitive species, both migratory and resident.

(c) The susceptibility of these lands to erosion, including the slope, soils, runoff characteristics, and vegetative cover.

In addition, the rules may establish permitting thresholds, permitting exemptions, or general permits, if such thresholds, exemptions, or general permits do not allow significant adverse impacts to the Wekiva River System to occur individually or cumulatively.

(2) Notwithstanding the provisions of s. 120.60, the St. Johns River Water Management District shall not issue any permit under this part within the Wekiva River Protection Area, as defined in s. 369.303(9), until the appropriate local government has provided written notification to the district that the proposed activity is consistent with the local comprehensive plan and is in compliance with any land development regulation in effect in the area where the development will take place. The district may, however, inform any property owner who makes a request for such information as to the location of the protection zone or zones on his property. However, if a development proposal is amended as the result of the review by the district, a permit may be issued prior to the development proposal being returned, if necessary, to the local government for additional review.

(3) Not later than March 1, 1991, the St. Johns River Water Management District shall develop a groundwater basin resource availability inventory as provided in s. 373.0395 for the Wekiva River Protection Area and shall establish minimum flows and minimum water levels for surface watercourses in the Wekiva River System and minimum water levels for the groundwater in the aquifer underlying the Wekiva Basin as depicted on the map entitled "Wekiva Basin, 40C—41" which is on file at the offices of the St. Johns River Water Management District.

(4) Nothing in this section shall affect the authority of the water management districts created by this chapter to adopt similar protection zones for other watercourses.

(5) Nothing in this section shall affect the authority of the water management districts created by this chapter to decline to issue permits for development which have not been determined to be consistent with local comprehensive plans or in compliance with land development regulations in areas outside the Wekiva River Protection Area.

(6) Nothing in this section shall affect the authority of counties or municipalities to establish setbacks from any surface waters or watercourses.

(7) The provisions of s. 373.617 are applicable to final actions of the St. Johns River Water Management District with respect to a permit or permits issued pursuant to this section.

History.— s. 2, ch. 88—121; s. 27, ch. 88—393.

before flowing across this undisturbed vegetation. Construction or alteration of limited scope necessary for outfall structures may occur within this area of undisturbed vegetation.

b. Construction of the following perimeter controls at all outfall points to the Outstanding Florida Water or its abutting wetlands must be completed prior to the start of any construction or alteration of the remainder of the system:

I. Stormwater discharge facility meeting the requirements of chapter 40C-42;

II. Sedimentation trap or basin located immediately upstream of the stormwater discharge facility referred to above; and

III. Spreader swale to reduce the velocity of discharge from the stormwater facility to non-erosive rates before discharge to wetlands abutting the Outstanding Florida Water.

These perimeter controls must be maintained routinely and operated throughout construction or alteration of the entire system. A minimum 25 foot width of undisturbed vegetation must be retained landward of the Outstanding Florida Water or the abutting wetland, whichever is more landward. Construction or alteration of limited scope necessary for outfall structures may occur within this area of undisturbed vegetation.

c. During construction or alteration, no direct discharge to the Outstanding Florida Water or its abutting wetland may occur during the 10 year 24 hour storm event or due to discharge from dewatering activities. Any on-site storage required to satisfy this criteria must be available (recovered) within 14 days following the rainfall event. A minimum 25 foot width of undisturbed vegetation must be retained landward of the Outstanding Florida Water or the abutting wetland, whichever is more landward. Construction or alteration of limited scope necessary for outfall structures may occur within this area of undisturbed vegetation. In determining whether construction or alteration is of "limited scope necessary", pursuant to any of the three presumptive criteria above, the District shall require that the area of disturbance be minimized and that the length of time between initial disturbance and stabilization of the area also be minimized.

(d) Standard for Limiting Drawdown- A Water Quantity Protection Zone shall extend 300 feet landward of the landward extent of Black Water Swamp and the wetlands abutting the Wekiva River, Little Wekiva River, Rock Springs Run, Black Water Creek, Sulphur Run, Seminole Creek, Lake Norris, and Lake Dorr. As part of providing reasonable assurance that the standard set forth in Subparagraph 40C-4.301(2)(a)6. is met, where any part of a system located within this zone will cause a drawdown, the applicant must provide reasonable assurance that construction, alteration, operation, or maintenance of the system will not cause ground water table drawdowns which would adversely affect the functions provided to aquatic and wetland dependent species (see Subsections 10.7.4 and 10.7.5, Applicant's Handbook: Management and Storage of Surface Waters) by the referenced wetlands.

The applicant shall provide an analysis which includes a determination of the magnitude and areal extent of any drawdowns, based on site specific hydrogeologic data collected by the applicant, as well as a description of the referenced wetlands, the functions provided by these wetlands, and the predicted impacts to these functions.

It is presumed that the part of this standard regarding drawdown effects will be met if the following criteria is met:

A ground water table drawdown must not occur within the Water Quantity Protection Zone.

(e) Standard for Riparian Wildlife Habitat

1. The applicant must provide reasonable assurance that the construction or alteration of a system will not adversely affect the abundance, food sources, or habitat (including its use to satisfy nesting, breeding and resting needs) of aquatic or wetland dependent species provided by the following designated Riparian Habitat Protection Zone:

a. The wetlands abutting the Wekiva River, Little Wekiva River, Rock Springs Run, Black Water Creek, Sulphur Run, or Seminole Creek;

b. The uplands which are within 50 feet landward of the landward extent of the wetlands above.

c. The uplands which are within 550 feet landward of the stream's edge as defined, for the purpose of this subsection, as the waterward extent of the forested wetlands abutting the Wekiva River, Little Wekiva River, Rock Springs Run, Black Water Creek, Sulphur Run or Seminole

(b) Applicants for a stormwater management permit which do not propose to meet at least the minimum design features in paragraph (a) above, may seek approval for the alternative design through the District's individual permit process. However, the applicant must provide reasonable assurance that the water quality standards of chapter 17-302, F.A.C., and the requirements of section 17-28.700 are met.

Specific Authority 373.044, 373.113, 373.171, 373.415 FS. Law Implemented 373.413, 373.415, 373.416, 373.426 FS. History-New 12-7-83, Amended 5-17-87, 8-30-88, 8-1-89, 4-3-91, 9-25-91, 7-14-92.

40C-8.021 Definitions.

Unless the context indicates otherwise, the following terms shall have the following meanings.

(1) "Blackwater Creek" means that watercourse designated Blackwater Creek within the Wekiva River Hydrologic Basin as defined by section 40C-41.023, F.A.C.

(2) "Minimum frequent high" means a chronically high surface water level or flow with an associated frequency and duration that allows for inundation of the floodplain at a depth and duration sufficient to maintain wetland functions.

(3) "Minimum infrequent high" means an acutely high surface water level or flow with an associated frequency and duration that is expected to be reached or exceeded during or immediately after periods of high rainfall so as to allow for inundation of a floodplain at a depth and duration sufficient to maintain biota and the exchange of nutrients and detrital material.

(4) "Minimum average" means the surface water level or flow necessary over a long period to maintain the integrity of hydric soils and wetland plant communities.

(5) "Minimum frequent low" means a chronically low surface water level or flow that generally occurs only during periods of reduced rainfall. This level is intended to prevent deleterious effects to the composition and structure of floodplain soils, the species composition and structure of floodplain and instream biotic communities, and the linkage of aquatic and floodplain food webs.

(6) "Minimum infrequent low" means an acutely low surface water level or flow with an associated frequency and duration which may occur during periods of extreme drought below which there will be a significant negative impact on the biota of the surface water which includes associated wetlands.

(7) "NGVD" means National Geodetic Vertical Datum of 1929.

(8) "Phased Restriction" means the level or flow (based on the past 30 consecutive day average level or flow) at which a water use shortage phase (Phases I - IV as defined by 40C-21.251, F.A.C.), is declared and its associated restrictions imposed.

(9) "Wekiva River" means that watercourse designated Wekiva River within the Wekiva River Hydrologic Basin as defined by section 40C-41.023, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.042, 373.415 FS. History-New 9-16-92.

APPENDIX F

COUNTY REGULATIONS FOR THE PROTECTION OF THE WEKIVA RIVER BASIN .

ORANGE COUNTY, FLORIDA .

- (6) The date on which the stormwater assessment is due.

(b) Stormwater assessments imposed against governmental property shall be due on the same date as all other stormwater assessments and, if applicable, shall be subject to the same discounts for early payment.

(c) A stormwater assessment shall become delinquent if it is not paid within thirty (30) days from the date any installment is due. The county shall notify the owner of any government property that is delinquent in payment of its stormwater assessment within sixty (60) days from the date the stormwater assessment was due. Such notice shall state in effect that the county will initiate a mandamus or other appropriate judicial action to compel payment.

(d) All costs, fees and expenses, including reasonable attorney fees and title search expenses, related to any mandamus or other action as described herein shall be included in any judgment or decree rendered therein. All delinquent owners of government property against which a mandamus or other appropriate action is filed shall be liable for an apportioned amount of reasonable costs and expenses incurred by the county, including reasonable attorney fees, in collection of such delinquent stormwater assessments and any other costs incurred by the county as a result of such delinquent stormwater assessments including, but not limited to, costs paid for draws on a credit facility and the same shall be collectible as a part of or in addition to, the costs of the action.

(e) As an alternative to the foregoing, a stormwater assessment imposed against government property may be collected on the bill for any utility service provided to such governmental property. The board may contract for such billing services with any utility not owned by the county. (Ord. No. 96-20, § 4.04, 7-23-96)

Secs. 15-484—15-490. Reserved.

ARTICLE XIII. WEKIVA RIVER PROTECTION*

Sec. 15-491. Short title.

This article may be cited as the "Wekiva River Protection Ordinance."

(Ord. No. 91-29, § 2(Exh. A), 12-10-91)

*Editor's note—Ord. No. 91-29, § 2(Exh. A), approved Dec. 10, 1991, set out the county's Land Development Code which included provisions relative to Wekiva River protection. Such provisions have been codified herein as art. XIII, §§ 15-491—15-499, at the discretion of the editor.

State law references—Wekiva river protection, F.S. § 369.301 et seq.; F.A.C. ch. 9J-27.

Sec. 15-492. Legislative findings.

The board of county commissioners finds as follows:

- (1) The Florida Legislature approved the Wekiva River Protection Act which created F.S. ch. 369, pt. III, and this act requires the county to amend its comprehensive policy plan and land development regulations in accordance with the act.
- (2) The county amended its comprehensive plan in April 1989 (Ordinance No. 89-04), pursuant to the state act and as set forth in the Wekiva River Small Area Study (Orange County Planning Department, 1988).
- (3) The Wekiva River Protection Act mandates that the comprehensive plan shall contain goals, objectives and policies which result in the protection of water quality, quantity and hydrology; wetlands; wildlife; endangered, threatened and species of special concern; and native vegetation.
- (4) The rural character of the area in the immediate vicinity of the Wekiva River must be protected.
- (5) The Wekiva River Protection Act mandates that such goals, objectives and policies address nine (9) implementation strategies including provisions to ensure the preservation of sufficient habitat for endangered, threatened and species of special concern; restrictions on the clearing of native vegetation within the one-hundred-year floodplain; prohibition of development that is not low density residential unless development has less impact than low density residential; provisions for setbacks along the Wekiva River; restrictions on filling and alteration of wetlands; provisions encouraging clustering of residential development; provisions requiring that the density or intensity of development permitted on parcels adjacent to the river be concentrated on the portion of the parcel furthest from the river; provisions requiring that parcels not be subdivided so as to interfere with protection zones or setbacks; and restrictions on the location of septic tanks and drainfields in the one-hundred-year floodplain.
- (6) The Wekiva River has been designated by the state as an outstanding Florida water.
- (7) The Wekiva River forms a unique habitat in the county.
- (8) The Wekiva River represents a major route of surface drainage from portions of Orange, Lake and Seminole Counties.
- (9) Areas adjacent to the Wekiva River are environmentally sensitive.
- (10) Water related resources of the Wekiva River support an abundance of wildlife, and many of the wildlife species are listed by the Florida Game and Freshwater Fish Commission and the U.S. Fish and Wildlife Service as endangered, threatened or of special concern.
- (11) Uncontrolled development in the vicinity of the Wekiva River will have an adverse impact on this natural resource.

(Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-493. Purposes and intent.

This article is established to implement the requirements of the state-enacted Wekiva River Protection Act and implement the goals and objectives of the comprehensive policy plan. These regulations seek to preserve and enhance the values of the Wekiva River area as well as to promote the public health, safety and general welfare of the county. These regulations enacted pursuant to the comprehensive policy plan and F.S. ch. 369 protect this unique scenic natural river area for the following stated purposes:

- (1) To protect and enhance the values of the natural river in the interest of present and future generations;

- (2) To protect the economic value of this scenic resource from unwise and disorderly development which may adversely pollute, destroy or otherwise impair its beneficial use and preservation;
- (3) To prevent ecological and aesthetic damage which may result from overcrowding and overuse or unwise and disorderly development;
- (4) To permit reasonable and compatible uses of land which complement the natural characteristics of the river and further the purposes of this article;
- (5) To limit the intensity of use, density of population and type and amount of development, while still allowing some reasonable use of property, in order to protect and enhance the natural river values and to thereby carefully guide the expenditure of funds for public improvements and services in an orderly fashion, in keeping with the character of the natural river area, the purposes for its designation, and the community as a whole;
- (6) To conserve the river water quantity and prevent further degradation of its quality, purity, clarity and free-flowing condition;
- (7) To provide for the conservation of soil, of river bed and banks and of adjoining uplands;
- (8) To protect the natural floodwater storage capacity of the river floodplain and to prevent flood damages and associated public relief expenditures created by improper construction of structures in the floodplain;
- (9) To protect and enhance fish, wildlife and their habitat;
- (10) To protect boating and recreational values and uses of the river;
- (11) To protect historic values of the river and adjoining uplands;
- (12) To protect individuals from investing funds in structures proposed for location on lands unsuited for such development because of high groundwater, erosion or vulnerability to flood damage; and

- (13) To preserve the rural character of the areas adjacent to the Wekiva River.

(Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-494. Area affected.

Those unincorporated lands of the county within the Wekiva River protection area. The state-designated protection area means the land within: Township 18 South, Range 28 East; Township 18 South, Range 29 East; Township 19 South, Range 28 East, less those lands lying west of a line formed by County Road 437, State Road 46, and County Road 435; Township 19 South, Range 29 East; Township 20 South, Range 28 East, less all lands lying west of County Road 435; and Township 20 South, Range 29 East, less all those lands east of Longwood Markham Road (F.A.C. § 9J-27.002(5)). (Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-495. Applicability.

(a) Except as otherwise provided herein, all development within the Wekiva River protection area shall comply with and shall be accomplished in accordance with the requirements of this article.

(b) Except as otherwise provided herein, this article and the provisions of this article shall apply to all development and applications for development permits (as the term "development" is defined by F.S. § 380.04, as may be amended or replaced from time to time, and the term "development permit" is defined by F.S. § 163.3164(7), as may be amended from time to time, relating to property located within the Wekiva River protection area).

(c) The provisions of this article shall not be applicable to the following projects or properties if the below listed approval was issued prior to April 5, 1989:

- (1) Developments of regional impact that have received a final development order issued pursuant to F.S. § 380.06, which development order has not expired and is in good standing;
- (2) Platted lots resulting from approved plats lawfully recorded and approved under the provisions of the land development regula-

tions of the county that have infrastructure improvements or structures constructed in accordance with county regulations;

- (3) Projects that have received an unexpired county approved site plan, an unexpired county approved preliminary subdivision plan or an unexpired waiver to subdivision requirements on or before the effective date of Ordinance No. 91-29 and have lawfully commenced and are proceeding in good faith in the development approval process in accordance with the land development regulations of the county.

(d) Existing lawful uses of property, buildings and structures shall not be required to be removed or otherwise modified as a result of the standards or requirements set forth in this article. The destruction or temporary discontinuation of any such lawful uses, building or structure shall not prohibit the renewed use or reconstruction of the building or structure, but only in its preexisting form and in accordance with the land development regulations. The burden shall be on the property owner to demonstrate that existing land uses, buildings and structures qualify as pre-existing conditions.

(Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-496. Regulations.

(a) *Buffer zone.*

- (1) A buffer zone is hereby established five hundred fifty (550) feet from the landward limit of waters of the state (F.A.C. § 17-4.022) or edge of the Wekiva River, or from the landward edge of the wetlands associated with the Wekiva River.
- (2) In no case shall development activities be permitted closer than five hundred fifty (550) feet from the river's edge except for created forested or herbaceous wetlands, and passive recreation when it is clearly demonstrated by the applicant that the areas shall not adversely affect aquatic and wetland-dependent wildlife, water quality, groundwater table or surface water levels.

(b) *General regulations.*

- (1) The density and intensity of development permitted within the protection area are

encouraged to cluster or concentrate on those portions of the parcel or parcels which are furthest from the surface waters or wetlands of the Wekiva River system. In order to preserve native vegetation to the maximum extent possible, clustering or submission as a residential planned development (P-D) is encouraged.

- (2) A survey of those species designated as an endangered, a threatened species or a species of special concern pursuant to F.A.C. §§ 39-27.003, 39-27.004 and 39-27.005, as may be amended or replaced from time to time, shall be required as a part of all development applications when there is reasonable expectation as determined by the county, based upon the range and habitat requirements of these species, that any of such species may utilize any habitat within the boundaries of the property sought to be developed within the protection area. Such surveys shall utilize the "Wildlife Methodology Guidelines" published by the Florida Game and Freshwater Fish Commission. If endangered, threatened or species of special concern are found on the project site, any proposed development within the habitat of the species shall protect the values of the habitat for that species. A management plan shall be required of the development for the protection of these listed species and shall become part of the conditions of approval for the project.
- (3) Within the one-hundred-year floodplain, developments shall be required to minimize the clearance of native vegetation. Prior to construction plan submittal, a vegetation clearing plan shall be submitted to the county for review and approval. Clearing of vegetation will only be permitted where necessary for roads, utilities or pedestrian access routes approved by the county as part of the development approval process.
- (4) Within the one-hundred-year floodplain, septic tank use shall be discouraged. In order to obtain a septic tank permit within the floodplain, the applicant must demonstrate that there will be no detriment to

river water quality. Where public utilities are available, new development will be required to hook up to these facilities.

- (5) Developments which have the potential to degrade groundwater quality shall be prohibited.
 - (6) Development in the protection area shall comply with the stormwater requirements of this Code (section 15-461 et seq.). Including, but not limited to, predevelopment and post-development stormwater rates shall be equal.
 - (7) Developments in the protection area shall comply with the requirements of the conservation ordinance (section 15-361 et seq.). Sufficient separation shall be required between stormwater management structures and conservation areas to ensure no adverse impact to the hydrologic regime of the wetland area.
 - (8) All proposed development within the protection area shall submit as part of the development application a statement for the Florida Division of Historical Resources or an archaeological consultant as to the potential for any archaeological or historical resources on the project site. If, in the opinion of the division or consultant, the project's location and/or nature is likely to contain such a resource, then a systematic, professional archaeological and historical survey shall be completed and submitted for review. If significant archaeological sites are found, then sites shall be preserved or excavated pursuant to state guidelines prior to construction on the archaeological or historical site.
 - (9) Rare upland habitat protection (reserved).
 - (10) Where landscaping is required, the design shall include the use of native plant species and removal of understory vegetation to the greatest extent practical, in order that wildlife habitat will be preserved and maintained and the landscaped areas will blend into nearby natural areas.
- (c) *Developments of regional impact.* As required by F.S. § 369.307, the numerical standards and

guidelines provided in F.A.C. ch. 28-24, as may be amended or replaced from time to time, shall be reduced by fifty (50) percent as applied to proposed developments entirely or partially located within the Wekiva River protection area. (Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-497. Permitted uses.

The following general uses are permitted in the protection area:

- (1) Single-family residential dwellings and accessory uses compatible with future land use designations in the protection area.
 - (2) Low intensity recreation.
 - (3) Agricultural uses.
- (Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-498. Comprehensive plan amendments.

Outside the urban service area within the Wekiva River protection area no amendments to the comprehensive plan shall be allowed for residential density greater than one (1) dwelling unit per five (5) acres.

(Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Sec. 15-499. Review and appeal.

(a) *Review.* The county planning director shall determine if an application for a development permit for a project is within the Wekiva River protection area and/or if the project is located in the Wekiva River buffer area and therefore subject to these regulations and if the proposed development is in compliance with these regulations.

(b) Appeal-general.

- (1) The owner/applicant of the property may appeal the director's determination to the chairman of the development review committee (DRC) as that committee is established by the county subdivision regulations. The appeal must be submitted in writing within fifteen (15) calendar days of receipt of the written determination. The property owner/applicant shall submit to the DRC as part of the written appeal a

scaled drawing of the property contained in the application indicating future land use designation of the property according to the comprehensive policy plan, a legal description of the property, the current zoning of the property, the proposed land use designation, the proposed zoning, and a conceptual plan of the proposed use contemplated by the application.

- (2) The DRC shall hold a hearing on the appeal at the next available meeting. At least ten (10) days written notice of the hearing shall be provided to the property owner/applicant. The DRC shall either affirm, reverse or modify the planning director's determination of whether the property is located in the Wekiva River protection area and/or if the project is located in the river buffer zone and/or if the project is in compliance with the provisions of this article.

(c) *Appeal to the board of county commissioners.* The property owner/applicant may appeal the DRC determination within fifteen (15) days of receipt of the written determination to the board of county commissioners. The board of county commissioners shall hold a hearing on the appeal within sixty (60) days upon receipt of the written appeal. At least ten (10) days written notice of the hearing shall be provided to the property owner/applicant. At the close of the hearing, the board of county commissioners shall uphold, reverse or modify the development review committee's determination.

(d) *Review of board of county commissioner's appeal decisions.* Any person aggrieved by the board of county commissioner's decision on an appeal under these regulations may file a petition for writ of certiorari in the circuit court of the county in accordance with the procedures for appeals set forth in section 30-46 of the County Code. (Ord. No. 91-29, § 2(Exh. A), 12-10-91)

Secs. 15-500—15-550. Reserved.

ARTICLE XIV. INCINERATOR MANAGEMENT

Sec. 15-551. Short title.

This article shall be known and may be cited as the "Incinerator Management Ordinance of Orange County, Florida."
(Ord. No. 92-41, § 1, 12-22-92)

Sec. 15-552. Legislative findings and intent.

(a) The board of county commissioners is concerned with the potential adverse effects of incinerators upon the health, safety and welfare of the people of the county.

(b) The board of county commissioners is particularly concerned with the potential adverse effects of biomedical waste incinerators and facilities upon the air quality and environment of the county.

(c) The Florida Department of Environmental Regulation permits each incinerator facility on an individual basis. As long as each facility operates in accordance with the structural requirements and emission standards, a state permit may be issued without regard for the cumulative effect of the facilities in the county. Since the issue of air quality rests solely with the pollutants emitted by the incinerator facilities, this article is based on a cumulative factor as opposed to addressing incinerators individually.

(d) Section 704 of the Orange County Charter authorizes the board of county commissioners to adopt ordinances, such as this article, which set minimum standards for the protection of the environment by regulating air pollution, and such ordinances shall be applicable in the unincorporated and incorporated areas of the county.

(e) The potential harmful effect of the pollutants emitted by the various types of incinerator facilities differs in magnitude and degree based on the type of each facility and what it is permitted to incinerate. Because the pollutants emitted from incinerator facilities other than biomedical waste incinerators are of a type that is deemed less detrimental to the citizens of the county and otherwise do not contain pollutants which can be deemed particularly hazardous to the citizens, only biomedical waste incinerators shall be required to comply with that portion of these regulations pertaining to the requirement to obtain a certificate of need.

(f) The county recognizes that ash emitting from wood waste incinerators may cause surrounding property owners distress; however, it is determined that this issue can be adequately addressed

through the special exception public hearing process and nuisance laws.

(g) The county generates a calculated approximate of nine and seven-tenths (9.7) tons of biomedical wastes per day. The county has calculated burning capacity of sixty-nine and two-tenths (69.2) tons per day. (This calculation represents all facilities that have obtained either a construction or operating permit from the state department of environmental regulation in the county both public and/or private and regardless of whether the facility is actively being operated or not.)

(h) The state department of environmental regulation current permitting system does not take into account incineration needs based on generated waste calculations. According to the biological waste report prepared by Michael Hivett, Florida Bureau of Air Regulations, dated October 19, 1992, the central district of the state provides for fifty-six (56) percent of the off-site incineration capacity for the entire state. The central district consists of eight (8) counties including Volusia, Marion, Lake, Seminole, Orange, Osceola, Brevard and Indian River. The facilities "provide very close to enough capacity (292 tons per day) to treat all medical waste generated in the State of Florida including the wastes that would otherwise be treated on-site."

(i) The functions and activities of the existing incinerator facilities in the county, the possible adverse effects of each type of facility on air quality, as well as the current level of wastes generated within the county mandate that the county promulgate this article to manage incinerator facilities on a cumulative impact basis within the county.

(j) The county recognizes that waste from other areas is sometimes imported into the county for disposal by incineration. There is no appreciable distinction between in-county and out-of-county waste.

(k) The county believes that the health, safety and welfare interests of the citizens of the county will best be served by incinerator management on a cumulative basis to facilitate air quality; and further, the county believes its interest in air

quality outweighs any potential incidental effect on interstate commerce that may be caused by these incinerator management regulations.

(l) The county recognizes that it has a duty to dispose of the waste it generates and provide for disposal of a fair share of all waste regardless of the source of that waste.

(m) To further these ends, the county shall regulate the flow of all waste to be incinerated regardless of its origin. The number of incinerator facilities shall be regulated, not the source of the waste those facilities incinerate.
(Ord. No. 92-41, § 1, 12-22-92)

Sec. 15-553. Purpose.

The purpose of this article is to establish procedures to regulate the cumulative effect of incinerators in the county so as to safeguard the health, safety and welfare concerns of the people of the county while recognizing the duty and obligation to be responsible for disposal of waste regardless of the source of such waste.
(Ord. No. 92-41, § 1, 12-22-92)

Sec. 15-554. Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted to give this article its most reasonable application, consistent with state law and other county regulations. In the event of any conflict between the definitions contained herein and those definitions contained in state rules which likewise regulate incinerators, the definitions contained herein shall control. The following words and phrases shall have the following meanings unless the context requires otherwise:

Air curtain incinerator facility, see definition of wood waste incinerator facility.

Biomedical "biohazardous" waste incinerator facility shall mean property, structures and other appurtenances and improvements on the land used for incineration of the following:

Any solid or liquid waste which may present a threat of infection to humans. The term includes, but is not limited to, nonliquid tissue and body parts from humans and other primates; labora-

LAKE COUNTY, FLORIDA

CHAPTER VII WEKIVA RIVER REGULATIONS

7.00.00 General.

7.00.00 General.

7.00.01 Purpose and Intent.

- A. **7.00.01 Purpose and Intent.** The purpose and intent of this Chapter is the protection of the Wekiva River System, including water quantity, Water Quality, and hydrology; associated Wetlands; Aquatic and wetland-dependent wildlife species; habitat within the Wekiva River Protection Area of species designated pursuant to Rules 39-27.003, 39-27.004 and 39-27.005, Florida Administrative Code; and Native Vegetation within the Wekiva River Protection Area.
- B. **General Requirements.** All Lots whether Lots of Records, Recorded Buildable Lots of Records, or simply metes and bound parcels, that are located within the Wekiva River Protection Area must go through either the Determination of Vested Rights or Non-Exempt Parcels of Land Application when applying for a Building Permit for a primary structure.

(Ord. No. 1995-9, § 1, 5-3-95)

7.00.02 "A-1-40" Wekiva River Protection Area Overlay District 1.

- A. **Purpose and Intent.** The purpose and intent of the district is to provide an area where low-Density rural Development can occur while preserving Environmentally Sensitive areas. The continued use of the Land for traditional agricultural purposes is maintained where consistent with Best Management Practices and policies of the Lake County Comprehensive Plan. This overlay district will protect Environmentally Sensitive areas while encouraging rural uses which prevent further Encroachment by urban uses. This district Permits, with certain exceptions, as provided in Section 7.00.09, a maximum residential Density of one (1) Dwelling Unit per forty (40) net developable acres with a maximum Density of one (1) Dwelling Unit per ten (10) net developable acres through the use of the Development point rating system set forth in Section 7.00.06 of this chapter.

B. **Density and Lot Size Requirements.**

1. The following Density requirements Shall apply to parcels of Land within this District unless exempted due to a determination of vested rights or determined to be a non-exempt parcel under Section 7.00.09:

One (1) single-family unit having a minimum Living Area of eight hundred fifty (850) square feet which may include three hundred (300) square feet of attached screened area, garages, Carports or utility areas. Each Parcel of Land Shall have a minimum useable Land Area of not less than forty (40) Net Acres and Shall have a maximum Density of one (1) Dwelling Unit per forty (40) net developable

acres. A maximum Density of one (1) Dwelling Unit per ten (10) net developable acres is attainable through the use of the Development point rating system set forth in Section 7.00.06 of this chapter.

7.00.03 "A-1-20" Wekiva River Protection Area Overlay District 2.

A. Purpose and Intent. The purpose of the district is to provide an area where low-Density rural Development can occur while preserving Environmentally Sensitive areas. The continued use of the Land for traditional agricultural purposes is maintained where consistent with Best Management Practices and policies of the Lake County Comprehensive Plan. This overlay district will protect Environmentally Sensitive areas while encouraging rural uses which prevent further Encroachment by urban uses. To further conserve agricultural uses of the Land, Clustering of units is encouraged to maintain usable Open Space for agricultural, Conservation and recreation purposes. This district Permits, with certain exceptions, as provided in Section 7.00.09, a maximum residential Density of one (1) Dwelling Unit per twenty (20) net developable acres with a maximum Density of one (1) Dwelling Unit per five (5) net developable acres through the use of the Development point rating system set forth in Section 7.00.06 of this chapter.

B. Density and Lot Size Requirements.

- 1.. The following Density requirements Shall apply to parcels of Land within this district unless exempted due to a determination of vested rights or determined to be a non-exempt parcel under Section 7.00.09:

One (1) single-family unit having a minimum Living Area of eight hundred fifty (850) square feet which may include three hundred (300) square feet of attached screened area, garages, Carports or utility areas. Each Parcel of Land Shall have a minimum useable Land Area of not less than twenty (20) Net Acres and Shall have a maximum Density of one (1) Dwelling Unit per twenty (20) net developable acres. A Density of one (1) Dwelling Unit per five (5) net developable acres is attainable through the use of the Development point rating system set forth in Section 7.00.06 of this chapter. Density may be increased to a maximum of one (1) Dwelling Unit per one (1) net acre through the use of the Development point rating system and purchase of transferable Development Rights in the Receiving Area Number One as identified in Sections 7.00.06 and 7.00.08.

7.00.04 Permitted Uses in the Wekiva River Protection Area.

A. Residential Uses.

1. Single-family unit meeting the requirements for minimum Living Area and maximum Density as provided in Section 7.00.02B for the A-1-40 district, and Section 7.00.02B for the A-1-20 district.
2. Cluster Housing.

B. Other Permitted Uses.

1. Accessory Buildings or Structures incidental thereto.
2. Accessory Apartments may be allowed in agricultural and residential zoning districts provided that all of the following requirements Shall be met:
 - a. No more than one (1) Accessory Apartment Shall be Permitted on any residential Lot.
 - b. Accessory Apartments may be attached to a principal or Accessory Structure or be freestanding.

- c. An Accessory Apartment Shall not exceed 800 square feet of principal Structure (under roof), or twenty-five (25) percent of the gross square footage of the principal Structure which ever is less.
 - d. The Accessory Apartment Shall be located and designed not to interfere with the appearance of the principal Structure as a one-family Dwelling Unit.
 - e. In no case Shall the guest or servant quarters be constructed prior to the principle Dwelling Unit.
- 3. Establishments primarily engaged in the production of field crops, plants and Trees, i.e., Silviculture; nurseries; greenhouses and normal related Accessories thereto; sod farms and the production of bulbs, flowers; vegetables, citrus, peaches, berries and nut seed and crops.
- 4. Farm Accessory Structure, such as barns, pole sheds and other outBuildings.
- 5. Establishments for the keeping, grazing or feeding of livestock, i.e., mules, burros, horses, cattle, sheep and goats. This Subsection Shall include dairies, riding academies and horse-breeding farms provided that all pens, Buildings or Structures used for milking, feeding or sheltering such livestock Shall maintain a two-hundred-foot Setback from the nearest Right-of-Way line of any public Street, Road or highway or the adjacent boundary of property owned by others. However, on Lots or Tracts of ten (10) acres or more, one (1) stable or barn to house not more than three (3) horses or cattle or any combination of three (3) horses or cattle may maintain a seventy-five-foot Setback rather than a two-hundred-foot Setback from the nearest Right-of-Way line of any public Street, Road or highway or the adjacent boundary of property owned by others.
- 6. Establishments for the keeping and breeding of rabbits, chinchillas, up to fifty (50) poultry or nutria.
- 7. Apiaries.
- 8. Veterinary Clinics provided that any open runs, animal service and confinement areas Shall be located not less than two hundred (200) feet from the nearest Right-of-Way line of any public Street, Road or highway or the adjacent boundary of property owned by others.
- 9. Roadside farm stands provided that such stands Shall be used to show and sell products raised or produced on the farmland of which they are a part and may be composed of a minimum Structure.
- 10. Commercial Development within the Wekiva River Protection Area, as defined in Chapter 369, Part III, Florida Statutes, Shall be allowed as follows:
 - a. Commercial Development within the Wekiva River Protection Area Shall only be Permitted in the CP Planned Commercial District, or within a residential PUD Planned Unit Development.
 - b. The Commercial Development Shall be located within the interior of a PUD at increments no greater than one (1) acre per five hundred (500) Dwelling Units.

- c. Commercial uses Shall not be Permitted adjacent to water bodies within the Wekiva River Protection Area, as defined in Chapter 369, Florida Statutes, Part III.
- d. No Land adjacent to publicly-owned Conservation or preservation areas within the Wekiva River Protection Area, as defined in F.S. Ch. 369, Pt. III, Shall be Developed for commercial uses.
- e. Commercial Development Shall be restricted to the following intersections:
 - (1) SR 44 and CR 437
 - (2) CR 44A and CR 437
 - (3) SR 46 and CR 437
 - (4) SR 44 in the vicinity of the Royal Trails Subdivision;
 - (5) SR 46 and CR 435.

Commercial Development Shall not exceed two (2) acres in the aggregate at each intersection, and Shall be Developed under the "CP" Planned Commercial District, as provided for in these Regulations in Chapter III.

- f. The commercial uses Permitted in the RP Residential Professional District Shall only be Permitted in the Wekiva River Protection Area if located at one of the intersections, or areas within the Wekiva River Protection Area identified in (e), (g), or (h).
 - g. Limited Commercial Development will also be considered in the Pine Lakes and Cassia areas when densities increase and a small area study conducted by the Lake County Planning Department determines the need for such Development. A Land Use plan amendment Shall be processed pursuant to Chapter 163, Florida Statutes, to Permit any commercial uses in the Pine Lakes and Cassia areas.
 - h. No commercial uses Shall be considered in the vicinity of the proposed interchange of the proposed northwest beltway until the completion of the beltway interchange, and after a small area study to determine appropriate uses and locations has been conducted by the Lake County Planning Department. A Land Use plan amendment Shall be processed pursuant to Chapter 163, Florida Statutes, to Permit any commercial uses in the vicinity of the proposed interchange.
 - i. Commercial facilities may be Permitted, operated or leased by local, State or Federal agencies or established non-profit entities on Conservation or preservation Lands which are owned by the public or such non-profit entity. Such uses Shall be related solely to the use and enjoyment of such Lands by the public.
11. Expansion of services and major Arterial Roads beyond planned urban areas Shall be restricted, unless it can be demonstrated that such services, such as central water and sewer facilities, will have less harmful impacts upon the environment than if they were prohibited. However, such Improvements or Con-

struction Shall follow the path of existing Rights-of-Way to the greatest practical extent.

12. All expressway interchanges within the Wekiva River Protection Area, as defined in Chapter 369, Part III, Florida Statutes, Shall be Developed as planned units under the CFD Community Facilities District provided for in these Regulations in Chapter III.
13. Parcels of Land adjacent to the Surface Waters and Watercourses of the Wekiva River System, including the Wekiva River, Black Water Creek, Sulphur Run, Lake Norris, and Seminole Creek, Shall not be subdivided so as to interfere with the implementation of protection zones as established pursuant to Section 373.415, Florida Statutes or Section 7.00.05.D of this Chapter.
14. Any Land Use that would Significantly alter surface and subSurface Water levels and have an adverse effect on the environment Shall be prohibited, unless such impacts can be successfully mitigated in accordance with accepted Mitigation policies and practices. Such Mitigation Shall be subject to approval by Lake County.
15. Aquatic and wetland-dependent wildlife species associated with the Wekiva River System Shall be protected through the protection of Wetlands, associated habitat and Aquatic systems in accordance with Chapter 369, Part III, Florida Statutes, Wekiva River Protection.
16. The Excavation of borrow pits within the Wekiva River Protection Area may be Permitted only after approval by the Board of County Commissioners. It is the intent herein to limit the Excavation of borrow pits to those necessary for the Construction of or improvement to highways or other public Works projects within the Wekiva River Protection Area.

C. Prohibited Uses.

1. Mining Activities Shall be prohibited within the Wekiva River Protection Area. Expansion of existing Mining Activities within the Wekiva River Protection Shall be subject to the provisions of the Lake County Code and the approval of the Board of County Commissioners.
2. New Industrial Development Shall be prohibited in the Wekiva River Protection Area.
3. No Land adjacent to publicly-owned Conservation or preservation areas within the Wekiva River Protection Area, as defined in Chapter 369, Part III, Florida Statutes, Shall be Developed for industrial uses, other than what is vested.
4. The keeping, grazing or feeding of livestock Shall not be Permitted within the A-1-40 Overlay District within the Riparian Habitat Protection Zones created pursuant to Chapter 373, Florida Statutes.

D. Uses Permitted in the "A-1-40" Overlay District 1 and A-1-20 Overlay District Only After Conditional Use. The Planning and Zoning Commission and the Board of County Commissioners Shall ensure that the conditions imposed in conditional use Permits meet the requirements of the Lake County Code.

1. Poultry ranches.
2. Hog ranches.
3. Educational institutions.
4. Grove caretaking and Maintenance.
5. Citrus and produce transporting operation.
6. Mushroom farms.
7. Fish farms.
8. Home Occupations.

This Subsection includes the following occupations and activities and is subject to the following rules and regulations:

a. Permitted Home Occupations:

- (1) Physicians, doctor, dentist, veterinarian for consultation or emergency treatment or limited practice but not general practice of the profession.
- (2) Attorneys, Architects, Engineer, clergymen and other professional Persons for consultation but not general practice of the profession.
- (3) Artists, custom dressmaking, antiques or other customary Home Occupation.

b. Rules and Regulations for Home Occupations:

- (1) The use Shall be conducted by a member of the immediate family residing on the premises and entirely within a Structure.
- (2) A limitation of one (1) Person outside the immediate family may assist in the operation of the Home Occupation.
- (3) No chemical, electrical or mechanical equipment is to be used except that which is normally used for purely domestic, household purposes or which is specifically approved by the Board of County Commissioners and is enumerated within the conditional use Permit.
- (4) No commodity or stores Shall be stockpiled or stored on the premises, nor Shall a display of products be visible from the Street.
- (5) No external evidence or Sign that the Dwelling Unit is being used for the Home Occupation other than one (1) unanimated, non-illuminated, flat window Sign having a total area of not more than one hundred forty-four (144) square inches Shall be allowed.
- (6) The area devoted to the Home Occupation Shall not be the dominant use of the Dwelling. The Board Shall approve a Building plan showing the

area to be allowed for use as a Home Occupation. The Building plan Shall be submitted at the time of the application for a conditional use Permit.

9. [Reserved.]

10. Camps.

(Ord. No. 1994-12, § 1, 8-16-94)

7.00.05 General Requirements

- A. **Lot Configuration.** To promote protection of Environmentally Sensitive areas, Development Shall utilize the concept of Clustering of units, concentrating units on those portions of a Parcel of Land farthest away from publicly owned Conservation or preservation Lands, and from the Surface Waters and Wetlands of the Wekiva River System and the Wekiva River Protection Area; where possible, Development, so long as such configuration would have less impact on natural resources than if Developed at lower densities under its overlay district zoning classification; and so long as all other requirements of the Lake County Comprehensive Plan, Lake County Land Development Regulations set forth in the Lake County Code, regulations of the St. Johns River Water Management District, regulations of the Florida Department of Environmental Regulation and Chapter 369, Florida Statutes, the Wekiva River Protection Act are met.
- B. **Lot Width.** Minimum width of Lots, parcels or Tracts, however designated, Shall be one hundred fifty (150) feet measured along the property line or lines contiguous to any Street, Road, highway or Easement for ingress or egress, however stated.
- C. **Setbacks.**
1. Property adjacent to state, federal and County secondary highways Shall maintain a fifty-foot Setback from the highway Right-of-Way for any Structure. Property adjacent to Roads other than state, federal and County secondary highways Shall maintain for any Structure a Setback of sixty-two (62) feet from the centerline of the Roadway or twenty-five (25) feet from the Road Right-of-Way, whichever is greater.
 2. In the case of Easements for ingress or egress, whether public or private, where such Easements have been legally created, the Setback Shall be sixty-two (62) feet from the centerline of such Easement.
 3. The Building Line from any rear or side property line Shall be:
 - a. Single-family Dwelling Units Twenty-five (25) feet.
 - b. Farm Accessory Structures Twenty-five (25) feet except as otherwise provided herein.
 4. For double-Frontage property, the house address Shall be designated as the front of the property, and the front Setback requirements set forth in Sections 7.00.03, E., 1. Shall be applied on the Street considered the house address Street. Double Frontage Shall mean: Property adjacent to two (2) dedicated Rights-of-Way or two (2) ingress and egress Easements or a dedicated Right-of-Way and an ingress and egress Easement whether public or private.
 5. Land proposed to be Developed on the Wekiva River, Blackwater Creek, Sulphur Run, Seminole Creek, and Lake Norris Shall adhere to the following minimum

Setback requirements from Wetlands and water bodies for all Development Activity proposed within the Wekiva River Protection Area, as appropriate:

- (1) Those Lands subject to the Setback requirements of the St. Johns River Water Management District, established pursuant to F.S. § 373.415, Shall conform to said Setbacks.
 - (2) Where Setbacks for such Development Activity are not regulated by the St. Johns River Water Management District, the following minimum Setbacks Shall be established: two hundred (200) feet from the Ordinary High Water mark or fifty (50) feet from associated Wetlands, whichever is farther.
- D. Wetlands and Floodplains. Wetlands and Floodplains in the Wekiva River Protection Area Shall be protected pursuant to Chapter 6.01.00 of this Code.
- E. Survey Required. For the proposed Development within the Wekiva River Protection Area as defined in Chapter 369, Part III, Florida Statutes, an environmental survey Shall be conducted in accordance with a County-approved methodology to assess the impacts of Development on ground and Surface Water Quality, quantity and hydrology, native and endangered vegetation and wildlife species, Wetlands and associated Uplands before granting approval of any proposed Development.
- F. Preservation of Natural Habitats. Preserve natural habitats essential to any animals or plants designated pursuant to F.S. §§ 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code, and F.S. § 581.185 (5) (a) and (b), partially as they apply to the Wekiva River Protection Area. The preservation of such habitat Shall ensure sufficient habitat exists for feeding, nesting, roosting, resting, traveling and migration, so as to maintain Viable Populations of those species listed.
- G. Native Vegetation. Native Vegetation within the Wekiva River Protection Area and the One Hundred-Year Floodplain within the Wekiva River Protection Area Shall be preserved to the greatest extent possible. Therefore, Clearing of Native Vegetation Shall be limited to only those areas approved in accordance with a vegetation survey and protection plan submitted to, and approved by, Lake County, with the exception of those activities necessary for normal yard Maintenance and those areas devoted to agricultural and silvicultural uses as follows:
1. Agricultural Uses. Recognizing Agriculture as an important and necessary economic activity within Florida and Lake County, adequate and appropriate Land and water Shall be reserved for its continuance. Agriculture is also recognized as a legitimate and productive use of Lands within the Wekiva River Protection Area.
 - a. All Lands within the Wekiva River Protection Area presently in use for a particular form of Agriculture, such as grazing, row crops, fruit production or other agricultural uses of comparable agronomic or cultural intensity, may continue to be used in the same manner.

- b. The Clearing of Land for commercial agricultural use within the Wekiva River Protection Area will be Permitted, provided that the following conditions are met and approved by the Board of County Commissioners.
 - (1) A notice of intent Shall be provided to Lake County prior to any Clearing for agricultural uses. This notice of intent Shall include as a minimum: a description of the Land to be converted including the area, location, vegetation; the surface hydrological conditions; the crop or livestock enterprise intended; and a time schedule for the proposed activity.
 - (2) An agricultural plan Shall be presented demonstrating the suitability of the Land for the proposed use. Such a plan may be prepared directly by the Applicant, a consultant, or the U.S. Department of Agriculture, Soil Conservation Service. The plan Shall conform to Best Management Practices recommended by the U.S. Department of Agriculture, Soil Conservation Service.
 - (3) Approval Shall have been received by any regulatory agencies having jurisdiction.
- 2. Silviculture in Wekiva River Protection Area. Silviculture is recognized as a legitimate and productive use of Lands within the Wekiva River Protection Area.
 - a. All areas currently in use for the production of pine Trees, or other Trees not found in Wetlands, may continue to be used in the same manner.
 - b. Before harvesting cypress, or other species of Trees found in Wetlands areas, for all parcels of Land one (1) acre or more, cumulative over a one (1) year period from date of initial harvesting, a notice of intent must be approved by the Board of County Commissioners. At a minimum, the notice of intent Shall include a description of the Land to be harvested, including the area, location, vegetation, surface hydrological condition and a time schedule fore the harvesting activity.
 - c. A harvesting plan Shall be presented demonstrating the suitability of the Timber for harvesting. Such a plan may be prepared directly by the Applicant, the Florida Division of Forestry, or a consultant.
 - d. The harvesting plan Shall conform to the most current Best Management Practices recommended by the Florida Division of Forestry.
- H. Central Water Systems. Central Sewer Systems Shall be required within the Wekiva River Protection Area, as defined in Chapter 369, Part III, Florida Statutes, where such provision is shown to be economically feasible or environmentally necessary. Upon receipt of justification from the Applicant that central sewer is not necessary, the County Shall make the final determination as to the need for central sewer.

The Development of a regional Sewage treatment system is encouraged in order to augment the feasibility and desirability of providing central Sewage treatment facilities consistent with policies in the Potable Water Sub-element for service to occur within the Mt. Plymouth-Sorrento Urban Compact Node when densities are such that centralized services are feasible.

The provision of a central Sewer System within the Wekiva River Hydrologic Basin Protection Zones Shall be required by the year 2000 or earlier if feasible. Such provision Shall be through public or private sources, or a combination thereof and Shall be utilized where sufficient Density can be attained (making centralized facilities cost effective) through application of the Density point rating system (in a clustered Development).

- I. **Water Conservation.** In order to conserve supplies of potable water, Lake County Shall restrict the use of potable water for Landscape irrigation consistent with policy of the Lake County Comprehensive Plan, as reproduced in 1. below, or employ and/or conserve Native Vegetation, or use other species with drought-resistant properties in their Landscaping to the greatest extent practicable. Native or drought-resistant plants include, but are not limited to, those in the Florida Native Plant Society's Native Plants for Landscaping in Florida, or comparable guidelines prepared by the FDACS, FGFWFC, FDNR, RPC, or the WMD's.

1. **Wastewater Treatment and Reuse.** Lake County Shall require that the disposal of Effluents from all wastewater treatment plants comply with State, Federal, Regional and local regulations. A remedial action and enforcement plan which encourages non-caustic treatment methods, Shall be implemented by 1992. By 1993, the County Shall cooperate with municipal and private utilities in preparing a grey water treatment and reuse program and Shall address the needs of this program within the future Land Use plan and Development regulations.

7.00.06 Development Point Rating System. In order to be considered for an increase in Density, Lands proposed to be Developed within the Wekiva River Protection Area Shall be evaluated according to the following Development point rating system, except that Lands within Receiving Area Number Two are not subject to the Development point system in order to receive an increase in Density. The objectives of these criteria are: To ensure environmental protection; control urban sprawl; maximize Land Use efficiency; promote the efficient use of public facilities; ensure that services required by Development are in place or are programmed concurrent with impacts of Development; and to direct appropriate growth patterns within the Wekiva River Protection Area. The achievement of Development points Shall not bind the Lake County Board of County Commissioners to grant an increase in Density.

The application of the Development point system criteria and the achievement of points are based upon the location of the Land within the Wekiva River Protection Area. Not all criteria will be specially applicable to a Parcel of Land proposed for Development.

A. Point System Rating Criteria.

	Points
1. Submission of project as a Planned Unit Development (5 points possible)	5
2. Project is contained wholly within TDR receiving zone outside the Mount Plymouth-Sorrento Urban Compact Node (5 points possible)	5

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3. Purchase of TDRs sufficient to reach Density of one (1) Dwelling per net acre (5 points possible) 5
4. Innovation in Site design by providing more Open Space and protecting Environmentally Sensitive Land than would be protected under existing regulations (80 points possible) 5
 - a. Incorporation of pervious pavement or grassed parking 1
 - b. Preservation of Native Vegetation within the One Hundred-Year Floodplain 2
 - c. Zero disturbance or Encroachment within the One Hundred-year Floodplain 5
 - d. Restriction of intensity of Development adjacent to publicly owned Lands. If property is not adjacent to publicly owned Lands, 5 points can be granted (5 points possible) 5
 - (1) 150-foot Buffer 5
 - (2) 100-foot Buffer 4
 - (3) 50-foot Buffer 3
 - e. Preservation of existing Native Vegetation (upland and wetland species) 10
 - f. Use of Native Vegetation in Landscaping 2
 - g. Buffers on Wetlands (10 points possible) 10
 - (1) 35 feet 10
 - (2) 25 feet 5
 - (3) 10 feet 3
 - h. Dedication of natural areas for preservation (Uplands only; Wetlands are already required to be dedicated) (20 points possible) 20
 - i. Preservation of existing hydrological patterns (surface and Groundwater); must demonstrate minimum interruption of surface and Groundwater flow regime (minimize Groundwater withdrawals and maximize Recharge) (5 points possible) 5
 - j. Clustering of units to promote common Open Space, passive recreation and reservation of Environmentally Sensitive areas 10
 - k. If 70 points are attained, an additional 10 points may be granted 10
5. If it can be demonstrated that the Development Tract or parcel does not have any preexisting environmental constraints and therefore not afforded the ability to achieve points, the proposed Development can receive 67 points. An example of this type of property would be one that has historically (greater than ten (10) years) been used for citrus production, has no Wetlands and not Natural Upland Communities remaining On-Site. An Additional ten (10) points Shall be available for Clustering of units. An Additional one (1) point Shall be available for incorporation of pervious pavement or grassed

	Points
parking, and an Additional two (2) points Shall be available for the use of Native Vegetation in Landscaping	67
6. Contributes to the expansion of an existing or proposed wildlife corridor (on or Off-Site) (10 points possible)	10
7. Provides sufficient habitat for feeding, nesting, roosting and resting so as to maintain Viable Populations of species designated pursuant to Rules 39-27.003, 39.27.004 and 39-27.005, Florida Administrative Code (on or Off-Site) (5 points possible)	5
8. Provision of affordable housing (5 points possible)	5
a. 15 percent of project units for moderate-, low or very low-income housing	5
b. 5 percent of project units for moderate-, low or very low-income housing	2
9. Vehicular Access to an Arterial Road with level of service (LOS) "C" average daily trips (ADT) or better; 10 points can be granted for making Improvements to bring up the level of service to LOS C (10 points possible)	10
a. Directly adjacent (existing or proposed)	10
b. Within 1 mile via collector (existing or proposed)	7
c. Greater than 1 mile via collector (existing or proposed)	5
d. Less than 2 miles via Local Roads	2
10. Potable water supply (10 points possible)	10
a. Within an existing public supply system franchise area with excess capacity or the Creation of a franchise	10
b. Central system	7
c. Private well	2
11. Sanitary sewer service (10 points possible)	10
a. Within an existing public supply system franchise area with excess capacity or the Creation of a franchise	10
b. Central system	7
c. Innovative septic system	5
d. Septic tank	0
12. Irrigation water supply (10 points possible)	10
a. Grey water reuse (dual water system)	10
b. Surface Water	5
c. Surficial Aquifer	2
d. Potable water	0
13. Fire protection (5 points possible)	5
a. Dedication of Land and/or facilities sufficient to meet the requirements of the project	5

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- b. Within a fire district having a rating of 7 or better and within 3 miles from a fire station..... 5
 - c. Within a fire district having a rating of 7 or better and more than 3 miles from a fire station..... 4
 - d. Within a fire district having a rating of 8 to 9 and within 3 miles from a fire station 4
 - e. Within a fire district having a rating of 8 to 9 1
- 14. Proximity to public schools (5 points possible)..... 5
 - a. Dedication of sufficient acreage to satisfy the requirements of the Lake County School District (on or Off-Site). 5
 - b. Within 1/2-mile radius of an existing school and linked by side-walks and/or bicycle paths..... 5
 - c. Within 1/2-mile radius of an existing school 4
 - d. Within 1-mile radius of an existing school and linked by side-walks and/or bicycle paths..... 4
 - e. Within 1-mile radius of an existing school 1
- 15. Neighborhood parks (5 points possible)5
 - a. Within 1/2-mile radius of a Developed park and linked by side-walks and/or bicycle paths..... 5
 - b. Dedication of parkland and provision of facilities that meet the County's level of service. Facility must be open to the general public..... 5
 - c. Dedication of Environmentally Sensitive Land that is suited for passive recreation 5
 - d. Within 1/2-mile radius of Developed park 2
 - e. Within 1-mile radius of a Developed park and linked by side-walks and/or bicycle paths..... 3
 - f. Within 1-mile radius of a Developed park 1
- 16. Other (5 points possible)..... 5
- 17. Density evaluation tables.
 - a. The one (1) unit per forty (40) net developable acres category contains a maximum of 160 possible points (A-1-40):

<i>Points Scored</i>	<i>Maximum Number of Units per Net Developable Acre</i>
120-160	1.0 per 10.0 acres
100-119	1.0 per 20.0 acres
70-99	1.0 per 30.0 acres
> 70	1.0 per 40.0 acres

- b. The one (1) unit per twenty net developable acres category contains a maximum of one hundred seventy-five (175) possible points (A-1-20):

<i>Points Scored</i>	<i>Maximum Number of Units per Net Developable Acre</i>
140–175	1.0 per 1.0 acre
130–139	1.0 per 1.5 acres
110–129	1.0 per 2.0 acres
100–109	1.0 per 3.0 acres
80–99	1.0 per 4.0 acres
60–70	1.0 per 5.0 acres
50–59	1.0 per 10.0 acres
> 49	1.0 per 20.0 acres

18. In Addition to the above, the performance incentives will be used as a guide to evaluate all residential project densities during:
- The review of an application for a Development Permit.
 - The review of a Development of regional impact (DRI) pursuant to F.S. Ch. 380.
 - The preparation of any future sector or small area plans.

7.00.07 Submittal Requirements for Development Permits within the Wekiva Protection Area. The following information Shall be submitted in narrative or graphic form or both, as appropriate, as part of the application for a Development Permit within the Wekiva River Protection Area. This information is supplemental to any other submittal requirements contained in the Lake County Code:

A. General Information.

- Soil classifications.
- Surface and Groundwater hydrology.

B. Wetlands and Uplands.

- Type and percent of biological communities existing on-site and described using the florida Land Use and Cover Classification System (FLUCCS).
- A typical vegetative inventory of the following:
 - Overstory of canopy (Trees).
 - Understory or subcanopy (Shrubs, small Trees).

3. A typical animal/wildlife inventory using the methodology of the Florida Game and Freshwater Fish Commission.
 - a. Mammals.
 - b. Birds.
 - c. Reptiles.
 - d. Fish.
 4. Pre-and Post-Development acreage/percent of Wetlands and Uplands.
 5. Monitoring programs (ongoing) for wetland and upland systems.
 6. Burrow and fill requirements.
- C. Wildlife Corridors (U.S. Fish and Wildlife Criteria).
1. Pre- and Post-Development acreage of corridors.
 2. Impact of Development on corridors.
 3. Proposed Management, monitoring and Maintenance measures for protection of corridors.
- D. Designated Wildlife and Vegetation.
1. List designated wildlife as specified in Chapter 39, Section 39-27.003, 39-27.004 and 39-27.005, Florida Administrative Code.
 2. List vegetation specified in F.S. 581.185(5)(a) and (b).
 3. Pre- and Post-Development acreage of designated vegetation and wildlife.
 4. Plan for protection of designated plant and animal species.
- E. Buffers.
1. Building Setbacks from:
 - a. Wetlands.
 - b. Uplands.
 - c. Wildlife corridor.
 - d. Publicly owned Conservation/preservation Lands.
 - e. Wekiva River or other Surface Water bodies.
 2. Acreage of Buffers.
 3. Types of Buffers, i.e., vegetative (Trees, shrub or combination), masonry, fence, berms, etc.
 4. Use within Buffers, (i.e., parks, recreational Boardwalks, nature trails, bike paths, nonuse, etc.)
 5. Percent or acreage of property dedicated to the County for Conservation Easements or deeded to the County for public purpose.
- F. Water Resource Management Complete Statement and Calculations of the Following:
1. Water Quality and quantity for both pre- and Post-Development:
 - a. Hydrological evaluation of Development.

- b. Plans for Conservation of potable water, such as reuse of wastewater (treated Effluent and/or gray water, including use of natural vegetation to reduce irrigation needs).
 - c. Recharge and Discharge areas/Recharge mechanisms.
 - d. Potential contamination and abatement procedures.
 - e. Use of underdrains/side drains.
 - f. Degree of salt water Encroachment in the Floridan Aquifer.
- G. Air Quality.
 - 1. Emission sources: Residential (fireplaces, type of heat oil, gas, heat pump).
 - 2. Monitoring plans/mechanisms.
- H. Storm and Wastewater Management.
 - 1. Stormwater:
 - a. Calculations.
 - b. Retention/Detention design:
 - (1) Type of system (wet, dry, on-line, off-line, etc.)
 - (2) Pond/Swale:
 - (a) Volume.
 - (b) Elevations.
 - (c) Overflow mechanisms.
 - (d) Flood elevations.
 - (e) Discharge point (internal, to Tributary, to Wekiva River).
 - (3) Culvert, pipe, channel hydraulics.
 - (4) Soil borings.
 - (5) Energy dissipation/Erosion and Sediment-control measures.
 - (a) Grading/drainage plan:
 - 1) Materials used (pervious/impervious).
 - 2) Percent pervious/Impervious Surface.
 - (b) Monitoring plans/mechanisms.
 - 2. Wastewater:
 - a. Collection:
 - (1) Pump stations:
 - (a) Wet well water level control elevations.
 - (b) Emergency pump Connection.
 - (c) Backup pump (at least two (2) pumps total in pump station).
 - (d) Elevation above One Hundred-Year Flood elevation.

- (2) Gravity lines:
 - (a) Slopes
 - (b) Clearance from waterlines.
- b. Treatment system:
 - (1) Type (septic-conventional or nonconventional, On-Site, low pressure, etc., package plan On-Site or Off-Site, regional plant-On-Site or Off-Site)
 - (2) Siting:
 - (a) Relation to One Hundred-Year Flood elevation.
 - (b) Adjacent property.
 - (3) Plant:
 - (a) General process.
 - (b) Bypass.
 - (c) Hydraulic profile.
 - (d) Flow diagram.
- c. Effluent disposal method:
 - (1) Sprayfield.
 - (2) Perc pond.
 - (3) Reuse.
 - (4) Wetland:
 - (a) Location of Disposal Area.
 - (b) Analysis:
 - 1) Soil report
 - a) Soil type.
 - b) Groundwater depth.
 - c) K factor.
 - d) Confining layers.
 - 2) Impact on Groundwater Quality/quantity.
- d. Design:
 - (1) Application.
 - (2) Load/rest schedule.
 - (3) Pond on steep slope:
 - (a) Dam design for berms; seepage prevention.
 - (b) Riprap for influent flow.
 - (4) Pond bottom compared to soil profile.
 - (5) Overflow.
 - (6) Elevations.
 - (7) Buffers.
 - (8) Nearby potable wells.

e. Monitoring wells:

- (1) Background Upstream.
- (2) Compliance Downstream.

I. Potable Water System.

1. Type (individual wells, package plant, regional plant).
2. Location (On-Site, Off-Site).
3. Withdrawal Rate/consumptive use.
4. Treatment methods.
5. Impact on Aquifer.

7.00.08 Transfer of Development Rights.

A. Intent. It is the intent of this Section to establish the mechanism and criteria for the Transfer of Development Rights consistent with Ordinance No. 1989-3, the Wekiva River Protection Area Amendment to the Lake County Comprehensive Plan adopted by reference in Section 17-2.01 of the Lake County Code of Ordinances.

B. Sending Areas.

1. Sending Area Number One. Land within the Wekiva River Protection Area, as defined in Chapter 2, and within the farthest boundary of the Wekiva River Hydrologic Basin Protection Zones, established pursuant to F.S. § 373.415, and not vested pursuant to Section 7.00.09 Shall be allowed a maximum Density of one (1) Dwelling Unit per forty (40) Net Acres. However, Density may be increased to a maximum of one (1) Dwelling Unit per ten (10) Net Acres through the application of the Development point rating system established in Section 7.00.06. This area within the Wekiva River Protection Area, as shown on Exhibit "A", the Wekiva River Protection Area Transferable Development Rights Sending and Receiving Areas Map, is hereby designated as Sending Area Number One for Transfer of Development Rights. Transferable Development Rights of a particular parcel Shall be calculated based upon the Gross Density allowable under the zoning classification in existence immediately prior to the effective date of this Section.

2. Sending Area Number Two. Land within the Wekiva River Protection Area, as defined in Chapter 2, outside the Wekiva River Hydrologic Basin Protection Zone, established pursuant to F.S. § 373.415, Florida Statutes, and outside the Mount Plymouth-Sorrento Urban Compact Node and outside Receiving Area Number One and not vested pursuant to Section 7.00.09 Shall be allowed at a maximum Density of one (1) Dwelling Unit per twenty (20) Net Acres. However, Density may be increased to a maximum of one (1) Dwelling Unit per five (5) Net Acres through the application of the Development point rating system established in Section 7.00.06, Lake County Code.

This area within the Wekiva River Protection Area, as shown on Exhibit "A", the Wekiva River Protection Area Transferable Development Rights Sending and

Receiving Areas Map, is hereby designated as Sending Area Number Two for transferable Development Rights. Transferable Development Rights of a particular parcel Shall be calculated based upon the Gross Density allowable under the zoning classification in existence immediately prior to the effective date of this Section.

C. Receiving Areas.

1. Receiving Area Number One. Land within the Wekiva River Protection Area described below Shall have a maximum Density of one (1) Dwelling Unit per twenty (20) Net Acres. However, Density may be increased to a maximum of one (1) Dwelling Unit per five (5) Net Acres through the application of the Development point rating system set forth in Section 7.00.06. Density may also be increased to a maximum of one (1) Dwelling Unit per one (1) net acre utilizing the Development point rating system and through the purchase and utilization of transferable Development Rights from Sending Areas Number One and Two.

This area is outside Sending Areas Number One and Two and the Mount Plymouth-Sorrento Urban Compact Node as designated on Exhibit "A", the Wekiva River Protection Areas Transferable Development Rights Sending and Receiving Areas Map, on file in the planning department and Building department:

Beginning at the southwest corner of Township 18 South, Range 28 East; thence north along the west line of Twp. 18 South, Range 28 East to the northwest corner of the south $\frac{1}{2}$ of Section 30, Twp. 18 S, R 28 E; thence east along the north line of the south $\frac{1}{2}$ of Section 30 to the northeast corner thereof; thence south along the east line of Section 30 to the southeast corner thereof; thence east along the north line of Section 32, Twp. 18 S, Range 28 East to the centerline of Ranch Road (4-6588); thence south along the centerline of Ranch Road to a point on the north line of the south $\frac{1}{2}$ of Section 32; thence east along the north line of the south $\frac{1}{2}$ of Section 32 and continuing east along the north line of the south $\frac{1}{2}$ of Sections 33 and 34 to the northeast corner of the west $\frac{1}{2}$ of the southwest $\frac{1}{4}$ of Section 34, Twp. 18 S, R 28 E, which point is on a line with the northerly extension of the centerline of Huff Road (4-5991); thence south along the east line of the west $\frac{1}{2}$ of the southwest $\frac{1}{4}$ of Section 34 to SR 44A and its intersection with the centerline of Huff Road; thence continuing south and southwest along the centerline of Huff Road (4-5991) and west along the centerline of West Huff Road (4-5789) to the west line of Section 4, Twp. 19 S, R 28 E; thence south along the west line of Section 4 to the southwest corner thereof; thence west along the north line of Section 8, Twp. 19 S, R 28 E to the northwest corner of the east $\frac{1}{2}$ of said Section 8; thence south along the west line of the east $\frac{1}{2}$ of Section 8 to the south line of said Section 8; thence continuing south along the west line of the northeast $\frac{1}{4}$ of Section 17, Twp. 19 S, R 28 E to the southwest corner of the northeast $\frac{1}{4}$ of Section 17; thence east along the south line of the northeast $\frac{1}{4}$ of Section 17 to the

east line of Section 17; thence south along the east line of Section 17 to the southeast corner thereof; thence continuing south along the west line of Section 21, Twp. 19S, R 28 E to the northwest corner of the south $\frac{1}{2}$ of Section 22, Twp. 19 S, R 28 E to the east line of Section 22; thence south along the east line of Section 22 to the centerline of SR 46; thence southwest and west along the centerline of SR 46 to the east line of Section 28, Twp. 19 S, R 28 E; thence north along the east line of Section 28 to the northeast corner thereof; thence west along the north line of Section 28 along the north line of Section 29, Twp. 19 S, R 28 E to the northwest corner of Section 29; thence north along the west line of Section 20, Twp. 19 S, R 28 E to the northwest corner thereof; thence east along the south line of Section 17, Twp. 19 S, R 28 E to the southeast corner of the southwest $\frac{1}{4}$ of the southwest $\frac{1}{4}$ of Section 17; thence north along the east line of the southwest $\frac{1}{4}$ of the southwest

4; of Section 17 to the northeast corner of the southwest $\frac{1}{4}$ of the southwest $\frac{1}{4}$ of Section 17; thence north along the west line of Section 17 to the northeast corner of the south $\frac{1}{2}$ of Section 18, Twp. 19 S, R 28 E; thence west along the north line of the south $\frac{1}{2}$ of Section 18, Twp. 19 S, R 28 E; thence west along the north line of the south $\frac{1}{2}$ of Section 18 to the centerline of CR 437; thence north along the centerline of CR 437 to the south line of Twp. 18 S, R 28 E; thence west along the south line of Twp. 18 S, R 28 E; to the point of beginning.

2. Receiving Area Number Two. Lands within the Mount Plymouth-Sorrento Urban Compact Node, as designated in Exhibit "A", the Wekiva River Protection Area Transferable Development Rights Sending and Receiving Map, on file in the Lake County Planning Department and Building Department, may be Developed up to a maximum Density of five and one-half (5.5) Dwelling Units per one (1) net acre through the purchase and use of transferable Development Rights from Sending Areas Number One and Two and utilizing the "R-1-6" residential district, the "RP" residential professional district or the "PUD" Planned Unit Development district, as set forth in the Lake County Code. Any increase in Density above that Permitted by the zoning classification in place immediately prior to the effective date of this Section Shall require the purchase and use of transferable Development Rights. The Development point rating system Shall not be required to achieve the maximum Density Permitted as stated above.
- D. Transfer of Development Rights. Development Rights existing on property located within Sending Areas Number One and Two, as described in Section 7.00.08, B., above, may be transferred pursuant to the procedure contained in the Section to Receiving Areas Number One and Two, as described in Section 7.00.08, C., above within the Wekiva River Protection Area. The Board may authorize the transfer where such action will serve to implement the Wekiva River Protection Area Amendment to the Lake County Comprehensive Plan, Ordinance No. 1989-3.
1. Issuance of transferable Development Rights. Transferable Development Rights Shall be measured and issued in Dwelling Units based upon Gross Acreage. The

number of Dwelling Units Permitted Shall be Permitted pursuant to the zoning classification of the property in existence immediately prior to the effective date of this Section. A numbering system Shall be created and followed by Lake County to identify particular Development Rights issued and transferred pursuant to this Section. The Transfer of Development Rights Shall be granted through the approval of a transfer Permit by the Board.

2. Change of zoning. Upon the issuance and Transfer of Development Rights in accordance with this Section, the zoning classification on the property from which the Development Rights are derived Shall be changed to reflect the absence of the rights transferred and the appropriate zoning classification. This Shall be accomplished through the approval of an application for rezoning.
3. Approval procedure for transfer Permit. An application for a transfer Permit Shall be processed simultaneously with a rezoning application for the property, both of which Shall be initiated by the property Owner at the same time. The rezoning application Shall be for the applicable zoning classification reflecting the reduction in Density:
 - a. Application for transfer Permit. A property Owner desiring to obtain permission to transfer Development Rights from particular property within a Sending Area to a individual or legal entity Shall apply for issuance of a transfer Permit. Such application Shall be filed with the director of planning and Development on a form provided by the County which Shall include the following:
 - (1) Name, address and telephone number of the Applicant and the Applicant's agent if any;
 - (2) Legal description of the sending property in the Sending Area;
 - (3) Survey drawn to scale of not less than one (1) inch equals four hundred (400) feet showing existing Land Uses on the secondary property and any existing Streets, Structures, Watercourses and Easements within or adjacent to the property. The map Shall include a north directional arrow and Shall also show the Gross Acreage of the sending property;
 - (4) The zoning classification in existence on the sending property in the Sending Area immediately prior to the effective date of this Section;
 - (5) The proposed conveyance creating the Development limitation for the sending property in the Sending Area;
 - (6) Evidence of title of the sending property;
 - (7) Such fee as the Board may establish by resolution.
 - b. Agency review. The County Manager or designee Shall review the application for a transfer Permit and, upon a determination that the application is complete and the transfer is authorized by this Section, Shall forward said application for transfer Permit with the application for rezoning to the planning and zoning Commission.

- c. Planning and zoning Commission review. The planning and zoning Commission Shall review the application for rezoning and, after notice and hearing as required by Chapter 14, Shall make a recommendation on the application for rezoning to the Board for approval, approval with conditions or denial.
 - d. Board of County Commissioners action. The Board Shall review the application for rezoning and the recommendations of the planning and zoning Commission and, after notice and hearing as required by F.S. Ch. 125, § 125.66, Shall approve, approve with modifications or deny the application for a transfer Permit at the same time the rezoning application is considered. Such approval Shall be conditioned upon delivery to the County of a recordable conveyance creating a Development limitation subject to approval by the County Attorney. The conveyance Shall be recorded together with a copy of the transfer Permit in the public records of Lake County.
4. Assignment of Transferred Development Rights.
- a. An application for assignment of transferred Development Rights Shall be filed with the director of planning and Development concurrently with a rezoning application for the property within the Receiving Area to which the Density Shall be assigned.
 - b. In Addition to the information required in Chapter 14 for a rezoning application, the Applicant Shall provide the following:
 - (1) Name, address and telephone number of the Applicant and the Applicant's agent if any;
 - (2) Legal description of the receiving property in the Receiving Area;
 - (3) Survey drawn to scale of not less than one (1) inch equals four hundred (400) feet showing existing Land Uses on the receiving property and any existing Streets, Structures, Watercourses and Easements within or adjacent to the property. The map Shall include a north directional arrow and Shall also show the net acreage of the receiving property;
 - (4) The Base Density of the existing zoning on the receiving property in the Receiving Area;
 - (5) Copy of recorded document(s) conveying the transferred Development Rights;
 - (6) The proposed conveyance assigning the transferred Density to the receiving property in the Receiving Area;
 - (7) Evidence of title of the receiving property;
 - (8) All information required by Section 7.00.07, so that the Development point rating system may be applied;
 - (9) Such fee as the Board may establish by resolution.

5. Recordation of Transferred Development Rights.**a. Clerk of the Board of County Commissioners.**

- (1) Upon issuance of a transfer Permit by the Board, the Clerk of the Board Shall register the identifying numbers of such transferred Development Rights together with the name and address of the Person or legal entity to whom they are issued, the sending property from which they are being transferred and the individual or legal entity to whom they are being transferred.**
- (2) The transferee Shall register with the Clerk of the Board the receiving property within the Receiving Area to which the transferee is applying the transferred Development Rights.**
- (3) In the event of an assignment, the name and address of the assignee and the receiving property in the Receiving Area to which they are assigned must be registered with the Clerk of the Board identifying the rights assigned prior to their exercise by assignee. All assignments Shall also be recorded in the public records of Lake County for the sending property for which the transfer Permit was issued.**

b. The County Manager or Designee. The County Manager or designee Shall establish a register which Shall include at a minimum:

- (1) Numbering system for applications for transfer Permits.**
- (2) A numbering system to identify sending properties and receiving properties.**
- (3) Tracking system for transferred densities.**
- (4) Any other information deemed necessary.**

6. Extinguishment of Rights.

- a. The transfer of any Development Rights from any given sending property Shall be conclusively deemed a total transfer of the Development Rights for that sending property pursuant to this Section.**
- b. Transfer of particular Development Rights Shall extinguish such rights on the sending property.**
- c. The Transfer of Development Rights from a sending property Shall forever restrict the use of that sending property to those uses allowable in the A-1-40 or A-1-20 Wekiva River Protection Area Overlay Districts, and no other use of whatever kind or nature Shall be Permitted or constructed upon said sending property. This restriction Shall constitute a covenant running with the Land and Shall be binding upon descendants, heirs and assigns. In the event all Dwelling Unit Density rights are transferred, only those remaining uses Permitted within the applicable zoning district Shall be Permitted on the sending property.**

7. Reassignment of transferred Development Rights. Where Development Rights have been assigned to a Receiving Area in accordance with the requirements of

this Section and where those rights have not been utilized by the transferee or assignee of those rights, the Development Rights originally transferred may be reconveyed to another receiving property within a Receiving Area provided that all conditions required by this Section are met. Reconveyance of Development Rights Shall be approved by the Board and recorded in the public records of Lake County.

7.00.09 Determination of Vested Rights for Development within the Wekiva River Protection Area.

- A. A Landowner may be entitled to develop at a Density greater than that Permitted in Sections 7.00.02 and 7.00.03, the A-1-40 and A-1-20 Wekiva River Protection Area Overlay Districts if the Landowner's property is vested pursuant to Section 1.02.
- B. A determination that a Landowner is entitled to develop at a Density greater than Permitted in Subsections 7.00.02 and 7.00.03 does not exempt the Development from compliance with all applicable provisions of these Regulations.

Lake County Future Land Use Element

The study shall be performed in accordance with the Flood Insurance Study Guidelines and Specifications for Flood Contractors (FEMA Publication 37). The purpose of this study shall be to map more precisely the extent of the 100-year floodplain. Subdivisions with septic tanks shall be designed so that each lot has at least one acre of upland not contained within the floodplain. The one acre upland area must be of sufficient size and shape to accommodate the proposed structures, including septic tank and drainfield, without any part infringing into the floodplain or any required septic tank setback.

Policy 1A-2.11: New Road Construction In the Core/Conservation Area. In the Core/Conservation land use category, the County shall not construct nor use public funds for the construction of new roads. The County may maintain roads in the Core/Conservation area. In addition, the County may improve or upgrade roads within this area provided the improvement or upgrading is necessary for the public safety, health or welfare.

Policy 1A-2.12: Prohibition of New Mines In the GSACSC. All new peat or phosphate mines in the Green Swamp ACSC shall be prohibited.

Policy 1A-2.13: Prohibition of Industrial Uses In the GSACSC. All new industrial land uses in the Green Swamp ACSC shall be prohibited.

GOAL 2: WEKIVA RIVER PROTECTION AREA. THE GOAL IN ESTABLISHING THE WEKIVA RIVER PROTECTION AREA IS THE PROTECTION AND ENHANCEMENT OF THE WATER QUALITY, WATER QUANTITY, HYDROLOGY, WETLANDS, NATIVE VEGETATION AND WILDLIFE OF THE WEKIVA RIVER SYSTEM AND THE WEKIVA RIVER PROTECTION AREA IN LAKE COUNTY, THROUGH THE PROVISION OF COMPATIBLE LAND USES AND APPROPRIATE DEVELOPMENT REGULATIONS.

OBJECTIVE 1-20: DEVELOPMENT WITHIN THE WEKIVA RIVER PROTECTION AREA WITHIN LAKE COUNTY, PURSUANT TO CHAPTER 369, PART III, FLORIDA STATUTES AND LAKE COUNTY ORDINANCE 1989-3. Lands Designated in Chapter 369, Part III, Florida Statutes, as the Wekiva River Protection Area Shall Be Protected as a Natural System to the Greatest Extent Possible Through the Regulation of Land Use Densities and Intensities.

Policy 1-20.1: Definitions Applicable to Wekiva River Protection Area. The following definitions shall apply to the Wekiva River Protection Area as defined in Chapter 369, Part III, Florida Statutes and the Lake County Comprehensive Plan.

The purpose of this Policy is to eliminate ambiguity by providing a full definition of certain words and phrases which are used within the Wekiva River Protection Area. Should the definitions contained under this Policy conflict with the definitions contained elsewhere in the Lake County Comprehensive Plan or in the Lake County Code or in the Land Development Regulations, the following definitions shall apply only to the Wekiva River Protection Area, as defined in Chapter 369, Part III, Florida Statutes. These definitions, currently codified within Appendix B, Zoning Ordinance Article IV, Section 40.0, shall be codified within the Land Development Regulations.

Agriculture - The use of the land for agricultural purposes, including farming, dairying and pasturage, apiculture, horticulture, floriculture, viticulture, forestry, animal and poultry husbandry, and the necessary accessory uses for packing, treating, or storing the produce raised thereon.

Aquatic - See surface-waters.

Aquatic Dependent Wildlife Species - Any wildlife species whose life cycle depends in whole or in part on an aquatic environment.

Base density - The maximum number of dwelling units permitted by the zoning classification of property in a receiving area computed on the net acreage of the property without the use of transferred development rights.

Lake County Future Land Use Element

Board - Board of County Commissioners of Lake County, Florida.

Clustering or Cluster Development - A development design technique that concentrates buildings in specific areas of a site to allow the remaining land to be used for recreation, common open space, and preservation of environmentally sensitive natural features.

Commercial Development - C1, C2, or CP zoning as defined in the Lake County Code or Land Development Regulations, as amended from time to time.

Density - a ratio of dwelling units per unit of land.

Designated Vegetation - Those species designated pursuant to Chapter 581, Section 581.185(5)(a) and (5)(b), Florida Statutes.

Designated Wildlife - Those species designated pursuant to Chapter 39, Sections 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code.

Development - The carrying out of any building activity or mining operation or the making of any material changes in the use or appearance of any structure or land, so as to adapt the land to non-agricultural purposes, and the dividing of the land into three or more parcels.

Development approval - Final approval by Lake County of a development permit.

Development permit - means any zoning permit, subdivision approval, rezoning, special exception, variance, site plan approval, or other official action of local government having the effect of permitting the development of land in the Wekiva River Protection Area. A Wekiva River development permit shall not include a building permit, certificate of occupancy, or other permit relating to the compliance of a development with applicable electrical, plumbing, or other building codes.

Development rights - the potential for the improvement of a parcel of real property, measured in dwelling units per gross acre, which exists because of the zoning classification of the parcel.

Easement - means any strip of land created by a subdivider for public or private utilities, drainage, sanitation, or other specified uses having limitations, the title to which shall remain in the name of the property owner, subject to the right of use designated in the reservation of the servitude.

Environmentally sensitive - ecological systems which are sensitive to development impacts and provide important natural functions for maintenance of environmental quality and wildlife habitat.

Flood Plain - any normally dry land area that is susceptible to being inundated by waters from any source.

Gross acre - includes the entire area of a parcel of land excluding road right of way.

Gross density - For the determination of transferable development rights within the Wekiva River Protection Area gross density shall mean the total number of dwelling units permissible on a parcel of land based upon the zoning in place immediately prior to March 12, 1990, and depicted on Map I-5.

Groundwater - water beneath the surface of the ground whether or not flowing through known or definite channels.

Improvements - physical changes made to raw land, and structures placed on or under the land surface in order to make the land more usable.

Lake County - a political subdivision of the State of Florida, the governing body of which is the Board of County Commissioners.

Lake County Future Land Use Element

Lot - a portion of land or a building or structure capable of being legally identified. The word "lot" includes the words "plot", "parcel", "condominium" or "cooperative unit" or "tract".

Low Density Residential Development - within the Wekiva River Protection Area shall be the same as Rural Density Residential Development as defined below.

Mean high water mark - See ordinary high water mark.

Mount Plymouth-Sorrento Urban Compact Node - The Mt.Plymouth-Sorrento Urban Compact Node shall mean the following area; Sections 24, 25 and 36, Township 19 South, Range 27 East; the Southwest 1/4 of the Southwest 1/4 of Section 17, Township 19 South, Range 28 East; the South 1/2 of Section 18, Township 19 South, Range 28 East; all of Sections 19, 28, 29, 30, 31, 32, and 33, Township 19 South, Range 28 East.

Native Vegetation - Plants that are indigenous to the State of Florida.

Neighborhood Commercial development - CP zoning as defined by the Lake County Code or Land Development Regulations, as amended from time to time.

Net Acre - derived by subtracting the following from the entire area of a parcel of land: All wetlands as defined by the St. Johns River Water Management District or the Lake County Code or Land Development Regulations; lands within the Wekiva River Hydrologic Basin Riparian Habitat Protection Zones established pursuant to Section 373.415, Florida Statutes; areas within the 100 year floodplain; road rights-of-way; and easements for ingress and egress.

Net Density - the number of dwelling units per net acre.

One Hundred (100) yr. floodplain - The regulatory flood which is representative of large floods known to have occurred generally in the area and reasonably characteristic of what can be expected to occur on a particular stream. The regulatory flood generally has a flood frequency of approximately 100 years as determined from analysis of floods in a particular area. The area of the 100 year floodplain will be that shown on the Federal Emergency Management Administration Map used by Lake County, United States Geological Survey Floodprone maps, regional or State agency area specific studies, or the area established by site-specific engineering or hydrological studies prepared by the applicant utilizing accepted engineering practices. Areas inundated during a 100-year flood event or identified by the National Flood Insurance Program as an A zone or V zone on Flood Insurance Rate Maps or Flood Hazard Boundary Maps.

Open space - Means any parcel of land essentially unimproved and set aside, dedicated, designated, or reserved for public or private use of enjoyment, or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space. Open space, does not include wetlands, man-made lakes, wet or dry retention or detention areas, natural bodies of water, impervious surfaces, or active recreation sites and facilities, such as tennis courts or golf driving ranges. The grassed areas of golf courses may be counted as open space.

Ordinary high water mark - as defined and determined by the St. Johns River Water Management District.

Parcel - see lot.

Permitted - any development for which all required permits have been issued.

Plot - see lot.

Receiving area - the areas described in Policy 1-20.4 in the Future Land Use Element of the Lake County Comprehensive Plan, for development beyond its base density through the transfer of development rights or the Development Point Rating System, or both as appropriate. The Mount Plymouth-Sorrento Urban Compact Node Receiving Area is limited to a maximum density of five and one-half (5.5) dwelling units per net acre. The portion of the Plymouth-Sorrento Urban Compact Node which is not within the Wekiva River Protection Area boundary is not a receiving area for TDR's and the allowable maximum density for these lands is five and one-half (5.5) dwelling units per net acre.

Lake County Future Land Use Element

Regulatory Flood - see one hundred year flood definition.

Right-of-Way - means any land dedicated, deeded, used, or to be used for a street, alley, walkway, boulevard, drainage facility, access for ingress and egress, or other purpose by the public, certain designated individuals, or governing bodies.

Road - a general term used to describe a right-of-way which provides for vehicular and pedestrian movement between certain points which may provide for vehicular and pedestrian access to properties adjacent to it, and which may also provide for the location of underground utilities; whether designated as a street, highway, thoroughfare, parkway, freeway, road, avenue, boulevard, lane, place, court or however designated whenever dedicated for public use and accepted by the Board of County Commissioners.

Roadway - a portion of the street right-of-way which contains the street pavement, swale, curb and gutter, and is used primarily for vehicular movement and secondarily for stormwater drainage.

Rural Density Residential Development - less than or equal to one dwelling unit per gross acre.

Sending Area - The area designated "A-1-40" and "A-1-20" Wekiva River Protection Area Overlay Districts on Exhibit "A", and described in Policy 1-20.4, the Land Use Element of the Comprehensive Plan, Section 699.31, Lake County Code, and designated on the Wekiva River Protection Area Transferable Development Rights Sending and Receiving Map on file in the Lake County Planning Department and Building Department.

Silviculture - a process, following accepted forest management principles, whereby the crops constituting forests are tended, harvested, and reforested either by natural or artificial reforestation, or both.

Site Alteration - activity including, but not limited to removal of, or damage to, vegetation, burning, filling, ditching, dredging, drainage, excavation, earth moving, water containment and changes in the natural flow regime.

Site plan approval - a process for the review and approval of a development plan prior to the issuance of a development permit.

Street - see road.

Surface waters - water upon the surface of the earth, whether contained in bounds created naturally, artificially, or defused. Water from natural springs shall be classified as surface water when it exits from the springs on the earth's surface.

Timber - any wood for which any useful articles may be made or which may be used to the advantage in any class of manufacture or construction.

Transfer of Development Rights (TDR) - the conveyance of development rights, to an individual or legal entity, from a sending area by deed, easement or other legal instrument, as approved by the County Attorney for Lake County, assignment to another parcel of land in a receiving area, and recordation of the conveyance in the Public Records of Lake County, Florida.

Tract - see lot.

Uplands - as defined in Appendix B, Zoning Regulations, Section 40.1010, Lake County Code, and all land that is not wetlands or waterbodies.

Urban density - more than one (1) unit per gross acre.

Usable land area - See net acre.

Viable population - any species population that is of sufficient quantity to self-propagate and continue in existence without outside intervention.

Lake County Future Land Use Element

Water bodies - Wekiva River, the Little Wekiva River, Black Water Creek, Rock Springs Run, Sulphur Run, Seminole Creek and Lake Norris.

Waterfront - any lot or parcel bordering on a water body.

Wekiva River Protection Area - means the lands within Township 18 South, Range 28 East; Township 18 South, Range 29 East; Township 19 South, Range 28 East, less those lands lying west of a line bounded by County Road 437, State Road 46 and County Road 435; Township 19 South, Range 29 East; Township 20 South, Range 28 East, less all lands lying west of County Road 435; and Township 20 South, Range 29 East, less all those lands east of Markham Woods Road.

Wekiva River System - means the Wekiva River, the Little Wekiva River, Black Water Creek, Rock Springs Run, Sulphur Run, Lake Norris and Seminole Creek.

Wetland Dependent Wildlife Species - any wildlife species whose life cycle depends in whole or in part on a wetland environment.

Wetlands - hydrologically sensitive areas identified by the St. Johns River Water Management District regulations and Appendix B, Zoning Regulations, Section 41.58, Lake County Code or Land Development Regulations as amended from time to time.

Policy 1-20.2: **Expansion of Public Facilities and Services within the Wekiva River Protection Area.** Lake County shall restrict expansion of services and major arterial roads beyond planned urban areas, unless it can be demonstrated that such services, such as central water and sewer facilities, will have less harmful impacts upon the environment than if they were prohibited. However, such improvements or construction shall follow the path of existing rights-of-way to the greatest practical extent.

Policy 1-20.3: **Vested Development within the Wekiva River Protection Area.** Land within the Wekiva River Protection Area as defined in Chapter 369, Florida Statutes, Part III, may be developed at the density permitted by the zoning classification in place immediately prior to March 12, 1990 and depicted on Map I-5, providing that:

1. A plat of the property based upon the zoning classification in place immediately prior to March 12, 1990, and depicted on Map I-5, has been recorded in the Public Records of Lake County, Florida. The recorded plat property may be developed based upon the zoning density classification in place immediately prior to March 12, 1990.
2. A complete application for site plan approval was filed prior to December 21, 1989, the effective date of Ordinance No. 1989-12, which imposed a moratorium on development permit applications within the Wekiva River Protection Area, was based upon the zoning classification in place immediately prior to March 12, 1990 and was approved by the County.
3. A complete application for preliminary plat approval was filed prior to December 21, 1989, the effective date of Ordinance No. 1989-12, which placed a moratorium on development applications within the Wekiva River Protection Area, and was based upon the zoning classification in place immediately prior to March 12, 1990. A final plat processed after a preliminary plat submitted prior to December 21, 1989, and subsequently approved by the Lake County Board of County Commissioners, shall be subject to the Lake County Code provisions in effect immediately prior to December 21, 1989.
4. Commercial zoning within the Wekiva River Protection Area existing on March 12, 1990, is vested for commercial uses and designated on Map I-3, "Future Land Use Map" Series, whether or not a site plan has been previously approved and if a site plan has not been previously approved, County approval is required.
5. Application is made to the County for a determination of vested rights.

Lake County Future Land Use Element

Policy 1-20.4: Density and Intensity of Land Use Within the Wekiva River Protection Area. Lake County shall set the following limitations on density within the Wekiva River Protection Area which are deemed necessary in order to protect and enhance the natural resources contained therein. In order to implement this policy, the overlay districts provided for in this section have been created to restrict permitted density.

1. General Provisions. Land within the Wekiva River Protection Area proposed to be developed at densities higher than allowed under the "A-1-40" Wekiva River Protection Area Overlay District 1 and the "A-1-20" Wekiva River Protection Area Overlay District 2 set forth below, must comply with the Development Point Rating System also described below. Such development shall utilize the concept of clustering of units, promote protection of environmentally sensitive areas, concentrate units on those portions of a parcel of land farthest away from publicly owned conservation or preservation lands, and from the surface waters and wetlands of the Wekiva River System and the Wekiva River Protection Area; shall have less impact on natural resources than if developed at lower densities under its overlay district zoning classification; and shall otherwise meet all other requirements of the Lake County Comprehensive Plan, Lake County Land Development Regulations set forth in the Lake County Code, regulations of the St. Johns River Water Management District, regulations of the Florida Department of Environmental Regulation and Chapter 369, Florida Statutes, the Wekiva River Protection Act. Development shall provide central water and sewer facilities where such facilities are shown to be economically feasible or environmentally necessary, as determined by the County.

2. Transfer of Development Rights Within the Wekiva River Protection Area. In order to permit the owners of property subject to the limitation on density established herein to utilize the development potential of that property, a system of transferability of development rights is desirable. In order to facilitate such a system, Sending Areas and Receiving Areas are hereby established and identified.

- a. Sending Area Number One - "A-1-40" Wekiva River Protection Area Overlay District 1.

Land within the Wekiva River Protection Area, and within the farthest boundary of the Wekiva River Hydrologic Basin Protection Zones, established pursuant to Chapter 473, Florida Statutes, Section 473.415 and not vested pursuant to Policy 1-20.3, above, shall be allowed a maximum density of one (1) dwelling unit per forty (40) net acres. This shall be known as the "A-1-40" Wekiva River Protection Area Overlay District 1. Density may be increased to a maximum of one (1) dwelling unit per ten (10) net acres through the application of the Development Point Rating System described below.

This area is hereby designated as Sending Area Number One for transferable development rights, as shown on Exhibit "A", Map I-4, the Wekiva River Protection Area Transferable Development Rights Sending and Receiving Area Map, attached hereto and incorporated herein. Transferable development rights shall be calculated on the gross density permitted under the zoning classification for the particular sending parcel in place immediately prior to March 12, 1990.

- b. Sending Area Number Two - "A-1-20" Wekiva River Protection Area Overlay District 2.

Land within the Wekiva River Protection Area, outside the Wekiva River Hydrologic Basin Protection Zones established pursuant to Chapter 473, Section 473.415, Florida Statutes, outside the Mount Plymouth-Sorrento Urban Compact Node, not vested pursuant to Policy 1-20.3 above, and excluding the area described below as Receiving Area Number One, shall be allowed a maximum density of one (1) dwelling unit per twenty (20) net acres. This area is a portion of the "A-1-20" Wekiva River Protection Area Overlay District 2. Density may be increased to a maximum of one (1) dwelling unit per five (5) net acres through the application of the Development Point Rating System described below.

This area is hereby designated as Sending Area Number Two for transferable development rights as shown on Exhibit "A", Map I-4. Transferable development rights shall be

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calculated on the gross density permitted under the zoning classification for the particular sending parcel in place immediately prior to March 12, 1990.

c. **Receiving Area Number One - "A-1-20", Wekiva River Protection Area Overlay District 2.**

Land within the area described below shall have a maximum density of one (1) dwelling unit per twenty (20) net acres and is a portion of the "A-1-20" Wekiva River Protection Area Overlay District 2. Density may be increased to a maximum of one (1) dwelling unit per five (5) net acres through the application of the Development Point Rating System described below. Density may be also increased to a maximum of one (1) dwelling unit per one (1) net acre utilizing the Development Point Rating System in conjunction with the purchase and utilization of Transferable Development Rights from Sending Areas Numbers One and Two.

This area is hereby designated as Receiving Area Number One for transferable development rights as shown on Exhibit "A", Map I-4, and is described as follows:

Beginning at the Southwest corner of Township 18 South, Range 28 East, thence north along the west line of Twp 18 South, Range 28 East to the northwest corner of the South 1/2 of Section 30, Twp 18 S, R 28E; thence east along the north line of the south 1/2 of Section 30 to the northeast corner thereof; thence south along the east line of Section 30 to the southeast corner thereof; thence east along the north line of Section 32, Twp 18 S, Range 28E. to the centerline of Ranch Road (4-6588); thence south along the centerline of Ranch Road to a point on the north line of the south 1/2 of Section 32; thence east along the north line of the south 1/2 of Section 32, and continuing east along the north line of the south 1/2 of Sections 33 and 34 to the northeast corner of the west 1/2 of the southwest 1/4 of Section 34, Twp 18 S, R 28 E., which point is on a line with the northerly extension of the centerline of Huff Road (4-5991); thence south along the east line of the west 1/2 of the southwest 1/4 of Section 34 to SR 44A and its intersection with the centerline of Huff Road; thence continuing south and southwest along the centerline of Huff Road (4-5991) and west along the centerline of West Huff Road (4-5789) to the west line of Section 4, Twp 19 S, R 28 E; thence south along the west line of Section 4 to the southwest corner thereof; thence west along the north line of Section 8, Twp 19 S, R 28 E to the northwest corner of the east 1/2 of said Section 8; thence south along the west line of the east 1/2 of Section 8 to the south line of said Section 8; thence continuing south along the west line of the northeast 1/4 of Section 17, Twp 19 S, R 28 E to the southwest corner of the northeast 1/4 of Section 17; thence east along the south line of the northeast 1/4 of Section 17 to the east line of Section 17; thence south along the east line of Section 17 to the southeast corner thereof; thence continuing south along the west line of Section 21, Twp 19 S, R 28 E to the northwest corner of the south 1/2 of Section 21; thence east along the north line of the south 1/2 of Section 21 to the east line of Section 21; thence continuing east along the north line of the south 1/2 of Section 22, Twp 19 S, R 28 E to the east line of Section 22; thence south along the east line of Section 22 to the centerline of SR 46; thence southwest and west along the centerline of SR 46 to the east line of Section 28, Twp 19 S, R 28 E; thence north along the east line of Section 28 to the northeast corner thereof; thence west along the north line of Section 28 and along the north line of Section 29, Twp 19 S, R 28E to the northwest corner of Section 29; thence north along the west line of Section 20, Twp 19 S, R 28 E to the northwest corner thereof; thence east along the south line of Section 17, Twp 19 S, Range 28 E to the southeast corner of the southwest 1/4 of the southwest 1/4 of Section 17; thence north along the east line of the southwest 1/4 of the southwest 1/4 of Section 17 to the northeast corner of the southwest 1/4 of the southwest 1/4 of Section 17; thence west along the north line of the southwest 1/4 of the southwest 1/4 of Section 17 to the west line of Section 17; thence north along the west line of Section 17 to the northeast corner of the south 1/2 of Section 18, Twp 19 S, R 28 E; thence west along the north line of the south 1/2 of Section 18 to the centerline of CR 437; thence north along the centerline of CR 437 to the south line of Twp 18 S, R 28 E; thence west along the south line of Twp 18 S, R 28 E to the point of beginning.

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d. Receiving Area Number Two.

Lands which are within the Mount Plymouth-Sorrento Urban Compact Node and also within the Wekiva River Protection Area Boundary may be developed to a maximum density of five and one-half (5.5) dwelling units per one (1) net acre through the purchase and use of Transferable Development Rights (TDR's) from Sending Areas Numbers One and Two. These lands must utilize the "R-5" Residential district, the "RP" Residential Professional district, or the "PUD" Planned Unit Development district, as provided in the Lake County Land Development Regulations, Lake County Code. Any increase in density above that permitted by the zoning classification in place immediately prior to March 12, 1990, shall require the purchase and use of TDR's development rights.

Lands within the Mount Plymouth-Sorrento Urban Compact Node and outside of the Wekiva River Protection Area Boundary may be developed to a maximum density of five and one-half (5.5) dwelling units per one (1) net acre and shall utilize the development regulations of Lake County which pertain to the Urban land use category. TDR's will not apply to these lands.

This area is hereby designated as Receiving Area Number Two for Transferable Development Rights as shown on Exhibit "A", Map I-4.

Policy 1-20.5: Development Point Rating System and Submittal Requirements for Development Permits Within the Wekiva River Protection Area. Where applicable, lands proposed to be developed within the Wekiva River Protection Area shall be evaluated according to the following Development Point Rating System in order to be considered for an increase in density. The objectives of these criteria are: to ensure environmental protection; control urban sprawl; maximize land use efficiency; promote the efficient use of public facilities; ensure that services required by development are in place or are programmed concurrent with development impacts; and to direct appropriate growth patterns within the Wekiva River Protection Area. The achievement of density points shall not bind the Lake County Board of County Commissioners to grant an increase in density. The application of the Development Point Rating System criteria and the achievement of points are based upon the location of land within the Wekiva River Protection Area. Not all criteria will be specifically applicable to a parcel of land proposed for development.

POINT SYSTEM RATING CRITERIA

The Point System Rating Criteria are as follows:

	<u>POINTS</u>
1. Submission of Project as a Planned Unit Development. (5 points possible)	5
2. Project is contained wholly within TDR receiving zone outside the Mt. Plymouth-Sorrento Urban Compact Node. (5 points possible)	5
3. Purchase of TDR's sufficient to reach density of one (1) dwelling unit per net acre. (5 points possible)	5
4. Innovation in Site Design by Providing More Open Space and Protecting Environmentally Sensitive Land than would be protected under existing regulations. (80 points possible)	80
a. Incorporation of Pervious Pavement or Grassed Parking	1
b. Preservation of Native Vegetation within the 100 year Floodplain	2
c. Zero Disturbance or Encroachment within the 100 year Floodplain	5

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d.	Restriction of Intensity of Development Adjacent to Publicly Owned Lands. If property is not adjacent to publicly owned lands, 5 points can be granted. (5 points possible)	5
1.	150 foot buffer	5
2.	100 foot buffer	4
3.	50 foot buffer	3
e.	Preservation of existing Native Vegetation (upland and wetland species)	10
f.	Use of Native Vegetation in Landscaping	2
g.	Buffers on Wetlands (10 points possible)	10
1.	35 feet	10
2.	25 feet	5
3.	10 feet	3
h.	Dedication of Natural Areas for Preservation (uplands only - wetlands are already required to be dedicated). (20 points possible)	20
1.	25 percent of each natural upland habitat type	20
2.	10 percent of each natural upland habitat type	15
3.	5 percent of each natural upland habitat type	10
i.	Preservation of Existing Hydrological Patterns (surface and groundwater) Must demonstrate minimum interruption of surface and groundwater flow regime (minimize groundwater withdrawals and maximize recharge). (5 points possible)	5
j.	Clustering of units to promote common open space, passive recreation, and preservation of environmentally sensitive areas.	10
k.	If 70 points are attained, an additional 10 points may be granted.	10
5.	If it can be demonstrated that the development tract or parcel does not have any pre-existing environmental constraints and therefore not afforded the ability to achieve points, the proposed development can receive 67 points. An example of this type of property would be one that has historically (greater than 10 years) been used for citrus production, has no wetlands and no natural upland communities remaining on-site. An additional ten (10) points shall be available for clustering of units. An additional one (1) point shall be available for incorporation of pervious pavement or grassed parking and an additional two (2) points shall be available for the use of native vegetation in landscaping.	67
6.	Contributes to the Expansion of an Existing or Proposed Wildlife Corridor (on or off-site). (10 points possible)	10
7.	Provides Sufficient Habitat for Feeding, Nesting, Roosting, and Resting so as to Maintain Viable Populations of Species Designated Pursuant to Rules 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code (on or off-site). (5 points possible)	5
8.	Provision of Affordable Housing. (5 points possible)	5
a.	15 percent of project units for moderate, low, or very low income housing.	5

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	b.	5 percent of project units for moderate, low, or very low income housing.	2
9.		Vehicular Access to an Arterial Road with Level of Service (LOS) "C" Average Daily Trips (ADT) or better. Ten points can be granted for making improvements to bring up the Level of Service to LOS "C". (10 points possible)	10
	- a.	Directly Adjacent (existing or proposed)	10
	b.	Within 1 mile via collector (existing or proposed)	7
	c.	Greater than 1 mile via collector (existing or proposed)	5
	d.	Less than 2 miles via local roads	2
10.		Potable Water Supply. (10 points possible)	10
	a.	Within an Existing Public Supply System Franchise Area with excess capacity or the creation of a franchise.	10
	b.	Central system	7
	c.	Private well	0
11.		Sanitary Sewer Service. (10 points possible)	10
	a.	Within an Existing Wastewater Treatment Franchise Area with excess capacity or the creation of a franchise.	10
	b.	Central system	7
	c.	Innovative septic system	5
	d.	Septic tank	0
12.		Irrigation Water Supply. (10 points possible)	10
	a.	Grey water reuse (dual water system)	10
	b.	Surface water	5
	c.	Surfacial aquifer	2
	d.	Potable Water	0
13.		Fire Protection. (5 points possible)	5
	a.	Dedication of land and/or facilities sufficient to meet the requirements of the project.	5
	b.	Within a fire district having a rating of 7 or better and within 3 miles from a fire station.	3
	c.	Within a fire district having a rating of 7 or better and more than 3 miles from a fire station.	2

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|-----|---|---|
| d. | Within a fire district having a rating of 8 to 9 and within 3 miles from a fire station. | 2 |
| e. | Within a fire district having a rating of 8 to 9. | 1 |
| 14. | Proximity to Public Schools. (5 points possible) | 5 |
| a. | Dedication of sufficient acreage to satisfy the requirements of the Lake County School District (on or off-site). | 5 |
| b. | Within 1/2 mile radius of an existing school and linked by sidewalks and/or bicycle paths. | 5 |
| c. | Within 1/2 mile radius of an existing school. | 4 |
| d. | Within one mile radius of an existing school and linked by sidewalks and/or bicycle paths. | 4 |
| e. | Within one mile radius of an existing school. | 1 |
| 15. | Neighborhood Parks. (5 points) | 5 |
| a. | Within 1/2 mile radius of a developed park and linked by sidewalks and/or bicycle paths. | 5 |
| b. | Dedication of park land and provision of facilities that meet the County's Level of Service. Facility must be open to the general public. | 5 |
| c. | Dedication of environmentally sensitive land that is suited for passive recreation. | 5 |
| d. | Within 1/2 mile radius of a developed park. | 2 |
| e. | Within one mile radius of a developed park and linked by sidewalks and/or bicycle paths. | 3 |
| f. | Within one mile radius of a developed park. | 1 |
| 16. | Other. (5 points possible) | 5 |

The Board of County Commissioners may within its discretion, grant additional points up to a maximum of five (5) points, to developers who opt to provide facilities, land or funds for facilities not specifically identified in the criteria set out above. This provision may also include voluntary impact fees over and above those required by the Lake County Code.

17. DENSITY EVALUATION TABLES

- A. The one (1) unit per forty (40) net developable acres category contains a maximum of 160 possible points.
("A-1-40")

POINTS SCORED	MAXIMUM NUMBER OF UNITS PER NET DEVELOPABLE ACRE
120 - 160	1.0 PER 10.0 ACRES
100 - 119	1.0 PER 20.0 ACRES
70 - 99	1.0 PER 30.0 ACRES
< 70	1.0 PER 40.0 ACRES

- B. The one (1) unit per twenty (20) net developable acres category contains a maximum of 175 possible points.
("A-1 - 20")

POINTS SCORED	MAXIMUM NUMBER OF UNITS PER NET DEVELOPABLE ACRE
140 - 175	1.0 PER 1.0 ACRE
130 - 139	1.0 PER 1.5 ACRES
110 - 129	1.0 PER 2.0 ACRES
100 - 109	1.0 PER 3.0 ACRES
80 - 99	1.0 PER 4.0 ACRES
60 - 79	1.0 PER 5.0 ACRES
50 - 59	1.0 PER 10.0 ACRES
<49	1.0 PER 20.0 ACRES

18. In addition to the above review of a proposed development, the performance incentives will be used as a guide to evaluate all residential project densities during:

1. The review of an application for a development permit initiated by a property owner or an authorized agent.
2. The review of a Development of Regional Impact (DRI), pursuant to Chapter 380, Florida Statutes.
3. The preparation of any future sector or small area plans.

SUBMITTAL REQUIREMENTS FOR DEVELOPMENT PERMITS WITHIN THE WEKIVA RIVER PROTECTION AREA.

The following information shall be submitted in narrative or graphic form, or both, as appropriate, as part of the application for a development permit within the Wekiva River Protection Area. The information is supplemental to any other submittal requirements contained in the Lake County Code.

1. General Information:
 - A. Legal Description and Location Map.
 - B. Property survey showing the location of Wekiva River Hydrologic Basin Protection Zones.
 - C. Soil Classifications.
 - D. Surface and groundwater hydrology.

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2. **Wetlands and Uplands:**
 - A. Type and percent of biological communities existing on site and described using the Florida Land Use and Cover Classification System (FLUCCS).
 - B. A typical vegetative inventory of the following:
 1. Overstory or canopy (trees).
 2. Understory or sub-canopy (shrubs, small trees).
 - C. A typical animal/wildlife inventory using methodology of the Florida Game and Fresh Water Fish Commission.
 1. Mammals
 2. Birds
 3. Reptiles
 4. Fish
 - D. Pre and post-development acreage/percent of wetlands and uplands.
 - E. Monitoring programs (ongoing) for wetland and upland systems.
 - F. Borrow and fill requirements.
3. **Wildlife Corridors (U.S. Fish and Wildlife Criteria):**
 - A. Pre and post-development acreage of corridors.
 - B. Impact of development on corridors.
 - C. Proposed management, monitoring and maintenance measures for protection of corridors.
4. **Designated Wildlife and Vegetation:**
 - A. List designated wildlife as specified in Chapter 39, Sections 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code.
 - B. List vegetation specified in Section 581.185 (5) (a), (b), Florida Statutes.
 - C. Pre and post-development acreage of designated vegetation and wildlife.
 - D. Plan for protection of designated plant and animal species.
5. **Buffers:**
 - A. Building setbacks from:
 1. Wetlands
 2. Uplands
 3. Wildlife corridor

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4. Publicly owned conservation/preservation lands
5. Wekiva River or other surface water bodies
- B. Acreage of Buffers
- C. Types of buffers, i.e.; vegetative (trees, shrub, or combination), masonry, fence, berms, etc.
- D. Use within buffers (i.e.; parks, recreational boardwalks, nature trails, bike paths, non-use, etc.)
- E. Percent/Acreage of property dedicated to County for conservation easements or deeded to County for public purpose.
6. Water Resource Management:

Complete statement and calculations of the following:
 - A. Water quality and quantity for both pre and post- development.
 1. hydrological evaluation of development
 2. plans for conservation of potable water such as reuse of waste water (treated effluent and/or grey water including use of natural vegetation to reduce irrigation needs)
 3. recharge and discharge areas/recharge mechanisms
 4. potential contamination and abatement procedures
 5. use of underdrains/side drains
 6. degree of salt water encroachment in the Floridan Aquifer
7. Air Quality:
 - A. Emission Sources
 1. Residential (fireplaces, type of heat-oil, gas, heat pump)
 - B. Monitoring Plans/Mechanisms
8. Storm and Waste Water Management:
 - A. Stormwater
 1. Calculations
 2. Retention/detention design
 - a. Type of system (wet, dry, on-line, off-line, etc.)
 - b. Pond/Swale
 - (1) volume

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- (2) elevations
- (3) overflow mechanisms
- (4) flood elevations
- (5) discharge point (internal, to tributary, to Wekiva River)
- c. Culvert, pipe, channel hydraulics
- d. Soil borings
- e. Energy dissipation/erosion and sediment control measures.
 - (1) Grading/drainage plan
 - (a) Materials Used (pervious/impervious)
 - (b) Percent pervious/impervious surface
 - (2) Monitoring plans/mechanisms

B. Wastewater

1. Collection

- a. Pump stations
 - (1) wet well water level control elevations
 - (2) emergency pump connection
 - (3) backup pump (at least two pumps total in pump station)
 - (4) elevation above 100-year flood elevation
- b. Gravity lines
 - (1) slopes
 - (2) clearance from water lines

2. Treatment System

- a. Type (septic-conventional/ nonconventional, on-site-low pressure, etc., package plant on-site/off-site, regional plant-on-site/off-site)
- b. Siting
 - (1) relation to 100-year flood elevation
 - (2) adjacent property
- c. Plant
 - (1) general process

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- (2) bypass
 - (3) Hydraulic profile
 - (4) Flow diagram
 - 3. Effluent disposal method
 - a. sprayfield
 - b. perc pond
 - c. reuse
 - d. wetland
 - (1) Location of disposal area
 - (2) Analysis
 - (a) soil report
 - (i) soil type
 - (ii) groundwater depth
 - (iii) K factor
 - (iv) confining layers
 - (b) impact on groundwater quality/quantity
4. Design
 - a. application
 - b. load/rest schedule
 - c. pond on steep slope
 - (1) dam design for berms; seepage prevention
 - (2) rip rap for influent flow
 - d. pond bottom compared to soil profile
 - e. overflow
 - f. elevations
 - g. buffers
 - h. nearby potable wells

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5. **Monitoring wells**
 - a. background - upstream
 - b. compliance - downstream
9. **Potable Water System:**
 - A. Type (individual wells, package plant, regional plant)
 - B. Location (on-site, off-site)
 - C. Withdrawal rate/consumptive use
 - D. Treatment Methods
 - E. Impact on aquifer

Policy 1-20.6: **Non-Exempt Parcels**. Parcels of lands within the Wekiva River Protection Area, not exempted due to a determination of vested rights, under single ownership and twenty (20) or forty (40) acres or less in total area, depending upon the land's location within the Wekiva River Protection Area, as of March 12, 1990, shall be allowed a maximum of one (1) dwelling unit provided that a minimum of 12,500 square feet is not classified as open waterbodies and wetlands under the jurisdiction of Lake County or St. Johns River Water Management District, or within the Wekiva River Basin Riparian Habitat Protection Zone established pursuant to Chapter 373, Florida Statutes, Section 373.415, or designated flood prone areas by the Federal Emergency Management Administration. Any easement existing on a parcel of land under this policy may be utilized in the calculation of the required minimum area of 12,500 square feet.

Policy 1-20.7: **Setbacks**. The following minimum setback requirements from wetlands and water bodies shall apply to all development activity proposed within the Wekiva River Protection Area, as appropriate:

1. Land proposed to be developed under Policy 1-20.3, Vested Development within the Wekiva River Protection Area, or Policy 1-20.6, Non-Exempt Parcels, on the Wekiva River, Blackwater Creek, Sulphur Run, Seminole Creek, and Lake Norris:
 - a. Those lands subject to the setback requirements of the St. Johns River Water Management District, established pursuant to Section 373.415, Florida Statutes, shall conform to said setbacks.
 - b. Where setbacks for such development activity are not regulated by the St. Johns River Water Management District, the following minimum setbacks shall be established: 200 feet from the ordinary high water mark, 50 feet from associated wetlands, or as provided in the Lake County Code or Land Development Regulations, whichever is farther.
2. Land proposed to be developed under Policy 1-20.4, Density and Intensity of Land Use Within the Wekiva River Protection Area, on the Wekiva River, Blackwater Creek, Sulphur Run, Seminole Creek, and Lake Norris:
 - a. Minimum setbacks shall conform to those required by the St. Johns River Water Management District, established pursuant to Section 373.415, Florida Statutes.
 - b. Where setbacks for such development activity are not regulated by the St. Johns River Water Management District, the following minimum setbacks shall be established: 200 feet from the ordinary high water mark, 50 feet from associated wetlands, or as provided in the Lake County Code, whichever is farther.

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Policy 1-20.8: Restrictions on Land Adjacent to Conservation or Preservation Area. No land adjacent to publicly-owned conservation or preservation areas within the Wekiva River Protection Area shall be developed for commercial or industrial uses.

Policy 1-20.9: General Prohibitions. Parcels of land adjacent to the surface waters and watercourses of the Wekiva River System, including the Wekiva River, Black Water Creek, Sulphur Run, Lake Norris, and Seminole Creek, shall not be subdivided so as to interfere with the implementation of protection zones as established pursuant to Section 373.415, Florida Statutes; any applicable setbacks from the surface waters and wetlands in the Wekiva River System and in the Wekiva River Protection Area which are established by Lake County; or the policy requiring the concentration of development in the Wekiva River Protection Area as far from the surface waters and wetlands of the Wekiva River System as practicable.

Policy 1-20.10: Lakeshore and Waterfront Development. Lakeshore and waterfront development shall occur in a manner which will enhance its natural character, avoid damage to indigenous environmental factors and assure an adequate amount of public access to waterfront and lakeshore areas within the limits defined by the environmental requirements of Lake County Land Development Regulations, the St. Johns River Water Management District and other state, regional and local agencies having jurisdiction over such areas.

- A. Industrial or commercial uses shall not be permitted adjacent to water bodies.
- B. Purchase waterfront areas and islands for public use when identified as an environmentally sensitive resource through listing as a C.A.R.L. project.
- C. Require environmental surveys to be conducted in accordance with a County approved methodology to assess the impacts of waterfront development on ground and surface water quality, quantity, and hydrology; native and endangered vegetation and wildlife species; wetlands and associated uplands before granting approval of the proposed development. This policy shall apply to proposed developments requiring approval by Lake County pursuant to Appendix C, Subdivision Ordinance, or the "PUD" Planned Unit Development District regulations, Section 696, Lake County Code.
- D. Utilize the Planned Unit Development approach to waterfront development wherever appropriate in order to maintain the best possible controls over such developments.
- E. Require setbacks in conformance with Chapter 40C-41, F.A.C. and those of the Lake County Comprehensive Plan and Land Development Regulations to ensure safety, protect environmental factors and conserve public shores as established by local, State and Federal agencies to protect environmental factors and conserve public and private waterfront areas.

Policy 1-20.11: Location of Commercial Development. Commercial areas shall be developed in clearly defined complexes, harmoniously related to surrounding land use, traffic flow and the Lake County Comprehensive Plan.

- A. Expressway interchanges within the Wekiva River Protection Area shall be developed as Planned Units under the Public Facilities District (PFD) classification as contained in the Lake County Code.
- B. Commercial Zoning District within the Wekiva River Protection Area existing on March 12, 1990, is vested for commercial use whether or not a site plan has been previously approved, and if a site plan has not been previously approved, County approval is required.
- C. Commercial and Industrial uses permitted in the Wekiva River Protection Area are depicted on the "Future Land Use Map" Series (Map I-3). Commercial and Residential uses are permitted in the Industrial Land Use category when the alternate use shall result in a reduction in density or intensity.
- D. Commercial development within the Wekiva River Protection Area, except as provided in subsection B above, shall be discouraged. Such development shall be restricted to the following intersections:

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SR 44 and CR 437;
CR 44A and CR 437;
SR 46 and CR 437;
SR 44 in the vicinity of the Royal Trails subdivision;
SR 46 and CR 435.

Commercial development shall not exceed two (2) acres in the aggregate at each intersection, and shall be developed under the "CP" Planned Commercial zoning classification as contained in the Lake County Code. Limited commercial development will also be considered in the Pine Lakes and Cassia areas when densities increase and a small area study conducted by the Lake County Planning Department determines the need for such development. A land use plan amendment shall be processed pursuant to Chapter 163, Florida Statutes, to permit any commercial uses in the Pine Lakes and Cassia areas. Commercial development will also be allowed as a part of a "PUD" Planned Unit Development which shall be located interior to the PUD, in increments of one (1) acre per 500 dwelling units. No commercial uses shall be considered in the vicinity of the proposed interchange of the proposed northwest beltway until the completion of the beltway interchange, and after a small area study to determine appropriate uses and locations has been conducted by the Lake County Planning Department. A land use plan amendment shall be processed pursuant to Chapter 163, Florida Statutes, to permit any commercial uses in the vicinity of the proposed interchange.

- E. Commercial facilities may be permitted, operated or leased by local, State or Federal agencies or established non-profit entities on conservation or preservation lands which are owned by the public or such non-profit entity. Such uses shall be related solely to the use and enjoyment of such lands by the public.

Policy 1-20.12: Industrial Development. Industrial development shall be prohibited within the Wekiva River Protection Area.

Policy 1-20.13: Maintenance of Open Space System. An open space system shall be maintained to serve the needs of people and shall range from neighborhood to regional scale. Such system shall also include recreation and conservational elements and shall conform with open space requirements of residential (25%) and commercial (20%).

- A. Establish flood zones along streams or rivers. Such flood zones shall qualify for open space requirements. Regulate the use of flood prone areas for purposes compatible with the hydrological character of the area. Recreation and water storage are beneficial uses of flood prone areas.
- B. Forbid building within swamps and marshes, except in accordance with the Comprehensive Plan Policy 1-2.1 and policies found within the Conservation Element, the Lake County Code, or in accordance with a wetland alteration/mitigation plan approved by Lake County.
- C. Require all structures to have floor elevations at least eighteen (18) inches above the 100-year flood plain, and also require all public improvements such as roads, sewer and water lines, etc. to be designed to meet the criteria of the Flood Disaster Act of 1973, Public Law 93-234 and other applicable Federal, State and local requirements.
- D. Native vegetation within the 100-year flood plain in the Wekiva River Protection Area shall be preserved to the greatest extent possible. Therefore, clearing of native vegetation shall be limited to only those areas approved in accordance with a vegetation survey and protection plan submitted to and approved by Lake County, with the exception of those areas devoted to agricultural uses as specified under Policy 1-20.15 and 1-20.16 of this Future Land Use Element and those activities necessary for normal yard maintenance.

Policy 1-20.14: Consideration of Environmental Factors. Full consideration shall be given to environmental factors within Lake County as they pertain to land use.

Lake County Future Land Use Element

- A. The County shall work towards establishing and maintaining the natural state of the Wekiva River System and the Wekiva River Protection Area.

Policy 1-20.15: Agricultural Uses. Recognizing agriculture as an important and necessary economic activity within Florida and Lake County, adequate and appropriate land and water shall be reserved for its continuance. Agriculture is also recognized as a legitimate and productive use of lands within the Wekiva River Protection Area.

- A. All lands within the Wekiva River Protection Area presently in use for a particular form of agriculture, such as grazing, row crops, fruit production or other agricultural uses of comparable agronomic or cultural intensity, may continue to be used in the same manner.
- B. The clearing of land for commercial agricultural use within the Wekiva River Protection Area will be permitted, provided that the following conditions are met and approved by the Board of County Commissioners.
1. A notice of intent shall be provided to Lake County prior to any clearing for agricultural uses. This notice of intent shall include as a minimum: a description of the land to be converted including the area, location, vegetation; the surface hydrological conditions; the crop or livestock enterprise intended; and a time schedule for the proposed activity.
 2. An agricultural plan shall be presented demonstrating the suitability of the land for the proposed use. Such a plan may be prepared directly by the applicant, a consultant, or the U.S. Department of Agriculture, Soil Conservation Service. The plan shall conform to best management practices recommended by the U.S. Department of Agriculture, Soil Conservation Service.
 3. Approval shall have been received by any regulatory agencies having jurisdiction.

Policy 1-20.16: Silviculture in Wekiva River Protection Area. Silviculture is recognized as a legitimate and productive use of lands within the Wekiva River Protection Area.

- A. All areas currently in use for the production of pine trees, or other trees not found in wetlands, may continue to be used in the same manner.
- B. Before harvesting cypress, or other species of trees found in wetland areas, for all parcels of land one (1) acre or more, cumulative over a one (1) year period from date of initial harvesting, a notice of intent must be approved by the Board of County Commissioners. At a minimum, the notice of intent shall include a description of the land to be harvested, including the area, location, vegetation, surface hydrological condition and a time schedule for the harvesting activity.
- C. A harvesting plan shall be presented demonstrating the suitability of the timber for harvesting. Such a plan may be prepared directly by the applicant, the Florida Division of Forestry, or a consultant.
- D. The harvesting plan shall conform to the most current Best Management Practices recommended by the Florida Division of Forestry.

Policy 1-20.17: Definition of The Mount Plymouth - Sorrento Urban Compact Node. The Mount Plymouth-Sorrento Urban Compact Node is defined as follows:

Sections 24, 25, and 36, Township 19 South, Range 27 East; the Southwest 1/4 of the Southwest 1/4 of Section 17, Township 19 South, Range 28 East; the South 1/2 of Section 18, Township 19 South, Range 28 East; all of Sections 19, 28, 29, 30, 31, 32, and 33, Township 19 South, Range 28 East.

Policy 1-20.18: Review of the Lake County Comprehensive Plan and Land Development Regulations in the Wekiva River Protection Area. By 1996, Lake County shall review the Comprehensive Plan and the Land Development Regulations which affect the Wekiva River Protection Area in Lake County for their effectiveness in meeting the

Lake County Future Land Use Element

requirements of Section 369.301, Florida Statutes and shall, if necessary, amend the Comprehensive Plan and Land Development Regulations.

OBJECTIVE 1-21: LAND USE ISSUES RELATED TO CONSERVATION OF WATER RESOURCES, WETLANDS, FLOODPLAINS, NATURAL HABITATS, NATURAL VEGETATION, ENVIRONMENTALLY SENSITIVE AREAS, AND MINING ACTIVITIES.

Within the Wekiva River Protection Area, Lake County Shall Protect the Features of the Natural Environment through the Following Policies.

Policy 1-21.1: Surface and Subsurface Hydrology. The hydrology of a site should be utilized in determining land use as opposed to land use determining hydrology. This would entail discouraging any land use that would significantly alter surface and subsurface water levels and have an adverse effect on the environment, unless such impacts can be successfully mitigated in accordance with accepted mitigation policies and practices. Such mitigation shall be subject to approval by Lake County.

Policy 1-21.2: Reduction of Density of Waterfront Development. Lake County shall implement policies aimed at controlling the density of waterfront development.

Policy 1-21.3: Protection of the Water Quantity, Water Quality and Hydrology of the Wekiva River System. Special consideration shall be given to the protection of the water quantity, water quality and hydrology of the Wekiva River System as defined in Chapter 369, Part III, Florida Statutes.

Policy 1-21.4: Restriction of Development within the Floodplain. Floodplain maps prepared by FEMA shall be used in the development of the theory of the people water principle: in existing urbanized areas, keep the water from interfering with the people. In all other areas, keep the people from interfering with the water.

Policy 1-21.5: Protection and Conservation of Wetland Areas. Lake County shall implement policies which are aimed at protecting and conserving wetland areas.

Policy 1-21.6: Protection of Wetlands and Wetlands Systems. It is the intent of the Lake County Board of County Commissioners to protect wetlands and wetlands systems to the maximum extent possible, within the limitations contained in the Lake County Code and Land Development Regulations. In furtherance of this intent, it shall be the policy of Lake County that regulations governing the alteration of wetlands, or the mitigation of such alteration, within the Wekiva River Protection Area shall apply to all development as defined in the Lake County Code and Land Development Regulations, and to agricultural and silvicultural activities, as well.

Policy 1-21.7: Preservation of Natural Habitats within the Wekiva River Protection Area. Preserve natural habitats essential to any animals or plants designated pursuant to Chapter 39, Sections 39-27.003, 39-27.004, and 39-27.005, Florida Administrative Code, and Section 581.185(5)(a) and (b), Florida Statutes, particularly as they apply to the Wekiva River Protection Area. The preservation of such habitat shall ensure sufficient habitat exists for feeding, nesting, roosting, resting, traveling and migration, so as to maintain viable populations of those species listed.

Policy 1-21.8: Preservation of Native Vegetation within the Wekiva River Protection Area. Native vegetation within the Wekiva River Protection Area shall be preserved to the greatest extent possible. Therefore, clearing of native vegetation shall be limited to only those areas approved in accordance with a vegetation survey and protection plan submitted to, and approved by, Lake County, with the exception of those areas devoted to agricultural uses as specified under Policy 1-20.15 Agricultural Uses and Policy 1-20.16: Silviculture in Wekiva River Protection Area and those activities necessary for normal yard maintenance.

Policy 1-21.9: Protection of Aquatic and Wetland-dependent Wildlife Species Associated with the Wekiva River System. Aquatic and wetland-dependent wildlife species associated with the Wekiva River System shall be protected through the protection of wetlands, associated habitat and aquatic systems.

Lake County Future Land Use Element

Policy 1-21.10: **Mining Activities within the Wekiva River Protection Area.** Mining activities shall be prohibited within the Wekiva River Protection Area. Expansion of existing mining activities within the Wekiva River Protection Area shall be subject to the provisions of the Lake County Code and the approval of the Board of County Commissioners.

The excavation of borrow pits within the Wekiva River Protection Area may be permitted only after approval by the Board of County Commissioners. It is the intent herein to limit the excavation of borrow pits to those necessary for the construction of or improvement to highways or other public works projects within the Wekiva River Protection Area.

OBJECTIVE 1-22: PRESERVE THOSE ENVIRONMENTALLY SENSITIVE AREAS IDENTIFIED IN ENVIRONMENTAL STUDIES AND REPORTS. Lake County Shall Preserve those Environmentally Sensitive Areas Identified in Environmental Studies and Reports Sponsored or Approved by the Board of County Commissioners in Order to Safeguard Lake County's Resources for Present and Future Residents and Particularly those Areas Within the Wekiva River Protection Area.

Policy 1-22.1: **Encourage Acquisition of Environmentally Sensitive Areas.** Lake County shall support and actively encourage acquisition of Environmentally Sensitive Areas by donation or purchase by Federal, State or units of local government and non-profit groups that would preserve them in their natural state.

Policy 1-22.2: **Funding Mechanism to Acquire Environmentally Valuable Lands.** In support of the preservation of the natural systems of the Wekiva River Protection Area, by 1993, the Board of County Commissioners shall establish a funding mechanism to acquire, or to assist in the acquisition of, environmentally valuable lands. Such mechanism shall be established with the approval of the electorate of Lake County through a referendum consistent with the policies in the Conservation and Recreation Element.

OBJECTIVE 1-23: DISCOURAGEMENT OF PRACTICES THAT DEplete POTABLE WATER SUPPLIES AND THE PROMOTION OF CONSERVATION PRACTICES. Lake County Shall Discourage Wasteful Practices that Would Deplete Supplies of Potable Water and Shall Promote Conservation Practices.

Policy 1-23.1: **Provision of Central Water Systems within the Wekiva River Protection Area.** Central Water Systems shall be required within the Wekiva River Protection Area where provision of such a system is shown to be economically feasible or environmentally necessary, as determined by the County. The development of a regional water supply system is encouraged in order to augment the feasibility and desirability of providing central water supply facilities consistent with policies in the Potable Water Sub-element for service to occur within the Mt. Plymouth-Sorrento Urban Compact Node when densities are such that centralized services are feasible.

Policy 1-23.2: **Central Water System within the Wekiva River Hydrologic Basin Protection Zones.** The provision of a Central Water System within the Wekiva River Hydrologic Basin Protection Zones shall be required by the year 2000 or earlier if economically feasible. Such provision shall be through public or private sources, or a combination thereof and shall be utilized where sufficient density can be attained (making centralized facilities cost effective) through application of the density point rating system (in a clustered development).

OBJECTIVE 1-24: SEWAGE TREATMENT AND DISPOSAL FACILITIES. Lake County Shall Encourage the Development of Sewage Handling and Disposal Facilities that Utilize the Best Available Technology In Order To Minimize Any Detrimental Effect To The Environment.

Policy 1-24.1: **Provision of Sewer Water Systems within the Wekiva River Protection Area.** Central sewer systems shall be required within the Wekiva River Protection Area where provision of such system is shown to be economically feasible or environmentally necessary, as determined by the County. The development of a regional sewage treatment

Lake County Future Land Use Element

system is encouraged in order to augment the feasibility and desirability of providing central sewage treatment facilities consistent with policies in the Potable Water Sub-element for service to occur within the Mt. Plymouth-Sorrento Urban Compact Node when densities are such that centralized services are feasible.

Policy 1-24.2: Central Sewer System within the Wekiva River Hydrologic Basin Protection Zones. The provision of a central sewer system within the Wekiva River Hydrologic Basin Protection Zones shall be required by the year 2000 or earlier if feasible. Such provision shall be through public or private sources, or a combination thereof and shall be utilized where sufficient density can be attained (making centralized facilities cost effective) through application of the density point rating system (in a clustered development).

OBJECTIVE 1-25: PROVISION OF ACTIVITY-BASED RECREATION FACILITIES. Lake County Shall Provide Recreational Areas In Such a Manner that Activity-based Facilities Will Be Located in Urban Areas and Urban Compact Nodes.

Policy 1-25.1: Acquisition of Open Space Areas. Open space areas shall be acquired, if economically feasible, in advance of urban encroachment in order to ensure their continued value as open space. These open space areas include those "buffers" as identified in the Lake County Land Use Element; and any "Environmentally Sensitive Areas" identified in the Conservation Element of the Lake County Comprehensive Plan; and the environmentally sensitive lands of the Wekiva River Protection Area.

SEMINOLE COUNTY, FLORIDA

FUTURE LAND USE ELEMENT GOALS, OBJECTIVES AND POLICIES

GOAL: TO DEVELOP A FUTURE LAND USE PLAN THAT ACHIEVES AN APPROPRIATE BALANCE BETWEEN PUBLIC AND PRIVATE INTERESTS IN THE:

- Protection of the environment;
- Creation of favorable economic conditions;
- Provision of adequate housing;
- Provision of adequate services and facilities;
- Maintenance of established residential neighborhoods;
- Protection of Rural and Agricultural Areas; and
- Protection of private property rights.

OBJECTIVE 2.1: NATURAL, HISTORIC AND ARCHAEOLOGICAL RESOURCES

The County shall ensure that, pursuant to Article II, Section 7 of the Constitution of the State of Florida, natural, historic and archaeological resources are protected for the enjoyment of the County's residents through Land Development Code provisions and Comprehensive Plan policies as follows:

Policy 2.1.7 Wekiva River Protection

The County shall regulate the development of land along the Wekiva River and its wetlands and tributaries to implement Protection Zone policies and regulations regarding maintaining rural density and character, development setbacks, concentrating allowable development farthest from surface waters and wetlands where permitted, minimizing development impacts on water quantity and quality, and restricting open space areas to passive recreational uses.

Regardless of the land use designation or zoning classification assigned to any parcel of property located within the Wekiva River Protection Area as defined in Section 369.303(9), Florida Statutes (1989), or its successor provisions, no development may be approved upon parcels so located unless the proposed development conforms to the provisions of the Wekiva River Protection Act (Part III, Chapter 369, Florida Statutes (1989); Chapters 88-121 and 88-393, Laws of Florida) or its successor provisions and the provisions of this Plan adopted to conform to said Act.

CONSERVATION ELEMENT GOALS, OBJECTIVES AND POLICIES

GOAL: PRESERVE, PROPERLY MANAGE AND, WHERE POSSIBLE, ENHANCE THE QUANTITY, QUALITY AND FUNCTION OF SEMINOLE COUNTY'S NATURAL RESOURCES FOR EXISTING AND FUTURE GENERATIONS; TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING NATURAL RESOURCES: AIR, SURFACE WATERS, GROUNDWATER SUPPLIES, SOILS/MINERALS, NATIVE HABITAT AND WILDLIFE, FLOODPLAIN, ENDANGERED, THREATENED AND SPECIES OF SPECIAL CONCERN, OPEN SPACES, AQUIFER RECHARGE AREAS, AND HISTORIC AND ARCHAEOLOGICAL RESOURCES

OBJECTIVE 4.2: SURFACE WATER PROTECTION

The County shall establish an ongoing surface water quality program, by 1993, which will protect and, where feasible, enhance the quality of surface waters.

Policy 4.2.5 Wekiva River

The County shall continue to manage and regulate development along the Wekiva River to ensure its continued designation as an Outstanding Florida Water Body and consistent with the Wekiva River Protection Act. (See Future Land Use Element for other policies relating to the Wekiva River).

RECREATION AND OPEN SPACE ELEMENT GOALS, OBJECTIVES AND POLICIES

GOAL: THE COUNTY SHALL PROVIDE A HIGH QUALITY RECREATION AND OPEN SPACE SYSTEM THAT PROVIDES LANDS, FACILITIES AND PROGRAMS TO ADEQUATELY SERVE THE NEEDS OF THE CURRENT AND FUTURE RESIDENTS OF SEMINOLE COUNTY.

THE COUNTY SHALL ESTABLISH AND MAINTAIN A SYSTEM OF OPEN SPACES WHICH PRESERVES SIGNIFICANT ENVIRONMENTAL LANDS, PROVIDES WILDLIFE HABITAT CORRIDORS WHICH PROVIDES PASSIVE RECREATIONAL OPPORTUNITIES.

OBJECTIVE 13.7: OPEN SPACE PRESERVATION

The County shall develop a system of open spaces through the preservation and/or acquisition of significant lands, native habitat and habitat of endangered, threatened and species of special concern.

Policy 13.7.3 Wekiva and Econlockhatchee River Protection Zone

The County shall enforce all clearing and building setbacks or protection/buffer zones and areas along the Wekiva River, and Econlockhatchee River and such other water bodies as imposed by rules of the St. Johns River Water Management District, any State agency or as may be otherwise imposed by law, provided that a minimum 200 foot clearing and building setback shall be set along the Wekiva River, as measured from the ordinary high water elevation or the landward limit of established conservation areas, to serve as a scenic and environmental buffer to maintain the status quo of the natural environment and prevent public harms.

Taken From: Seminole County's Land Development Code

Chapter 30

ZONING REGULATIONS

PART 53 WEKIVA RIVER PROTECTION ACT

Sec. 30.1001 Wekiva River Protection Act provisions.

Seminole County shall evaluate and regulate all development within the Wekiva River Protection Area as defined in Section 369.303(9), Florida Statutes, or its successor provision, to ensure consistency with the said Act, the provisions of the Seminole County Comprehensive Plan adopted to conform to said Act and the designated protection zones as required by the Act and defined by Chapter 40C, Florida Administrative Code, including coordination with appropriate agencies as necessary. (Part XXXII, § 1, Ord. No. 92-5, 3-30-92).

Sec. 30.1002 Determination of protection area/zone boundaries.

When a proposed development relates to real property located in or near the edge of a designated protection zone as designated by the Wekiva River Protection Act and as defined by Chapter 40C, Florida Administrative Code, the applicant shall submit proof of compliance with all agency regulations applicable to the subject property in conformance with the Act, or proof of exemption thereto. Such proof of compliance or exemption shall be required prior to the issuance of such permits by the County. (Part XXXII, § 2, Ord. No. 92-5, 3-30-92).

Secs. 30.1003 - 30.1020 Reserved.

APPENDIX G

INTRODUCTORY BROCHURE

Wekiva River, Rock Springs Run, and Seminole Creek Wild & Scenic River Study

Foreword

On October 19, 1996 Congress under Public Law 104-331 authorized the National Park Service to undertake a study of the Wekiva River, Rock Springs Run, and Seminole Creek for inclusion into the National Wild and Scenic River System.

The purpose of this document is two-fold: First, we want to explain to you – the public, the landowners, the elected officials, the concerned residents along the river – what is involved in designating a wild and scenic river and what it will mean to you. Second, we need your input and assistance. We need to know what questions you feel must be addressed so that you can be certain about the impacts – or more specifically, lack of impacts – to you from designation. We need to know what environmental factors the NPS should consider in our environmental analysis. And we need your assistance in identifying and documenting the outstanding resources of the Wekiva River, Rock Springs Run and Seminole Creek.

The Wild & Scenic River Designation Process

Enacted in 1968, the WSRRA was intended to preserve selected free-flowing rivers in their natural condition for the use and enjoyment of the public. This alternative to dam construction was intended to balance the nation's water-resources development policies with river conservation and recreation goals. Designated rivers receive protection from new hydropower projects and from other federally assisted water-resource projects – as defined through grants, licenses, permits or funding – that would alter the river's free-flowing characteristics, or have a direct and adverse effect on the river's outstanding resources.

The WSRRA established two processes by which a river could enter the National Wild and Scenic Rivers System (National System). One is through direct congressional designation. This is frequently preceded by a congressional amendment to Section 5(a) of the WSRRA, authorizing a study to assess a river's qualifications for the National System before Congress takes action to designate the river. Management of these rivers is then usually handled by a federal or state agency, although there are instances of local management of congressionally designated rivers.

Rivers can also be added to the National System by the Secretary of the Interior (Secretary). Section 2(a)(ii) of the WSRRA allows the governor of a state to apply to the Secretary for national designation. The NPS then evaluates whether the requirements of Section 2(a)(ii) have been met

and prepares a draft report and an assessment of the environmental impacts of designation. The NPS also publishes a notice of proposed designation in the *Federal Register* and notifies affected federal agencies of the pending action. Following a 90-day comment period for federal agencies and a concurrent 45-day comment period for the public, the NPS advises the Secretary of its findings. If the NPS finds – and the Secretary agrees – that the application meets the requirements, the Secretary publishes a notice of designation in the *Federal Register*, and the river is added to the National System.

Rivers designated under Section 2(a)(ii) receive the same protection afforded all rivers in the National System. Rivers designated through this process are routinely managed by the state rather than the federal government, except for those lands owned by the federal government. Section 2(a)(ii) is ideally suited to rivers where there is a strong tradition of state or local management and protection of the river.

When a river is added through Section 2(a)(ii), it is done with the condition that it be managed without cost to the federal government. This means that there can be no condemnation or other acquisition of lands by the federal government related to wild and scenic river designation. This prohibition does not extend to state and local governments.

For a river to qualify for the National System through Section 2(a)(ii) of the WSRA, four requirements must be met.

- 1) The river must first be designated as a component of a state's wild or scenic rivers system by, or pursuant to, an act of the legislature of that state.
- 2) Management of the river must be administered by an agency or political subdivision of the state, except for those lands already administered by an agency of the federal government.
- 3) The river must meet eligibility criteria common to all national wild and scenic rivers, i.e., the river must be free-flowing as determined by standards set by the Departments of the Interior and Agriculture and possess one or more outstanding resources of significance to the region or nation.
- 4) There must be effective mechanisms and regulations in place – local, state or federal – to provide for the long-term protection of those resources for which the river was deemed eligible.

In addition, if designated through either process, the river is given one of three classifications. Each classification carries with it different responsibilities in management and protection. A designated river can be divided into several different segments, with each segment having a different classification. As defined by the WSRA, the three classes of rivers are:

- 1) *Wild river areas* – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- 2) *Scenic river areas* – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- 3) *Recreational river areas* – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Finally, a proposed wild and scenic designation must be evaluated for potential impacts to the environment as required by the NEPA, and both the proposal and the NEPA documentation must be circulated to appropriate federal agencies for review as required by both the NEPA and the WSRA. The NPS also releases the report and NEPA documentation for extensive public review and comment.

Eligibility for the National System

There are two physical requirements that must meet for a river to be eligible for the National System. It must be free flowing, as defined by the Departments of Agriculture and the Interior, and it must have at least one “outstandingly remarkable resource,” i.e., one resource important to the region or nation.

Free-Flowing Condition

Free-flowing, as defined in section 16(b) of the WSRA, is applied to “any river or section of a river,” and means:

. . . existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures . . . shall not automatically bar its consideration for inclusion: Provided, that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the National Wild and Scenic Rivers System..

The initial findings of the NPS are that the entire segment, which contains no dams or diversion structures, is free-flowing.

Outstandingly Remarkable Resources

The second criterion that a river must meet to be eligible for inclusion in the National System is that it must possess one or more outstandingly remarkable resource. The term "outstandingly remarkable" is not precisely defined in the WSRA. As directed by 1982 interagency guidelines, the determination of whether or not a river area contains outstandingly remarkable resources is based on the professional judgement of the study team. However, the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) in the Pacific Northwest have developed standards for certain categories of values; these standards have become widely accepted by both agencies. As these standards have been consistently upheld and are widely used, the NPS frequently applies them to Section 2(a)(ii) evaluations. Under the USFS/BLM criteria, the river is judged on eight different classes of resources – scenic, recreational, geological, fish, wildlife, prehistoric, historic, and a catch-all category, "other" – as described below.

Recreation Resources

Recreational opportunities are, or have the potential to be, unique enough to attract visitors from outside the region of comparison. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting and boating/rafting.

Interpretive opportunities may be exceptional and attract, or have the potential to attract, visitors from outside the region of comparison.

The river may provide, or have the potential to provide, settings for national or regional usage or competitive events.

Fish Resources

Fish values may be judged on the relative merits of either fish populations or habitat or Native American cultural use – or a combination of these river-related conditions. Consideration shall be given for potential as well as existing values.

The river is internationally, nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed threatened, endangered and sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

Wildlife Resources

Wildlife values shall be judged on the relative merits of either wildlife populations or habitat or Native American cultural use – or a combination of these conditions.

Populations – *The river or area within the river corridor contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique, or populations of federal or state listed or candidate threatened, endangered and sensitive species. Diversity of species is an important consideration and could in itself lead to a determination of outstandingly remarkable.*

Habitat – *The river or area within the river corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate threatened, endangered and sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.*

Scenic Resources

The landscape elements of landform, vegetation, water, color and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment.

Geological Resources

The river or the area within the river corridor contains an example(s) of a geologic feature, process, or phenomena that is rare, unusual, or unique to the region of comparison. The feature(s) may be in an unusually active stage of development, represent a “textbook” example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial and other geologic structures).

Prehistoric Resources

The river or area within the river corridor contains a site(s) where there is evidence of occupation or use by Native Americans. Sites must have rare or unusual characteristics or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes.

Historic Resources

The river or area within the river corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, or one-of-a-kind in the region. An historic site(s) and/or feature(s) in most cases is 50 years or older.

Other Resource Values

While most river values of regional or national significance can be described under one of the other categories, sometimes there is a resource or traditional use of the river that is unique and does not fit any of the standard categories. An example can be found on the Klamath River in Oregon. There, the BLM and the NPS found that the river had been used continuously by three different Native American tribes for religious and spiritual purposes for at least the last 7,000 years. The agencies determined this to be a unique, nationally significant value, and Native American Traditional Use was determined to be an outstandingly remarkable resource. Under USFS and BLM guidelines, the criteria for an outstandingly remarkable rating are:

While no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of additional river-related values consistent with the foregoing guidance will be completed – including, but not limited to, hydrologic, paleontologic, ecologic and botanic resources.

Wekiva River Assessment

In assessing how the Wekiva River compares to these criteria, we will be working with experts in the various state agencies to determine if a particular resource, or resource category, is unique or exemplary. Is it important to the region? To the nation? Is the resource unique to the area? Is the Wekiva River the finest example of that resource in the area? Let's use the Klamath River in Oregon as an example again. Many rivers in Oregon offer whitewater boating opportunities. However, the Klamath is one of the very few that provide opportunities year-round. Likewise, traditional Native American use sites are not rare in Oregon. However, there are very few areas where sites are as varied, as densely clustered, or as observable as in the Klamath Canyon, so prehistory was identified as an outstandingly remarkable resource.

This is the type of analysis that we will be conducting in coordination with state experts. We would appreciate your input into the specific resources that you believe should be addressed. These will be the resources that the river must be managed for in order to be included in the National System.

Classification

After determining a river's eligibility for inclusion in the National System, it must be classified according to the category – wild, scenic or recreational – that best fits each eligible segment. Classification is based on the degree of naturalness and extent of development of the river and its adjacent lands as they exist at the time of the study.

Under the national classifications, a wild river would be an undeveloped river with limited access by trail. The existence of a few inconspicuous roads leading to the boundary of the river area at

the time of study would not necessarily bar wild river classification. To qualify for scenic classification, the river segment should not show substantial evidence of human activity. The portion of the watershed within the boundary of a scenic river may have some discernible existing development. A recreational classification would be appropriate in developed areas, such as where a river runs parallel to roads or railroads, with adjacent lands that have agricultural, commercial, or other developments – provided that the waterway remains generally natural and riverine in appearance.

Water resource development, shoreline development, accessibility, and water quality are the criteria that are considered when determining classification. Each criterion is important, but their collective intent is more important. Although each classification permits existing development, the criteria do not imply that additional inconsistent development is permitted in the future. Developments that are compatible with designation would be allowed, provided they are carried out in an environmentally sound manner. The classification of the river, or individual segment, prescribes the appropriate management plans and prescriptions. In other words, the classification will help to determine the compatible, appropriate activities that could occur on the river.

We will work with the state agencies to determine the appropriate classification for each segment of the river. However, as previously noted, we would appreciate your input on the best manner in which to segment the river for designation purposes.

Questions & Answers on Wild & Scenic Rivers

These Questions & Answers have been taken from other publications. Most of the answers are generic to the WSRA and the National System as a whole.

Q. What is the purpose of the WSRA and of designating rivers? How should these rivers be managed?

A. The WSRA provides a national policy and program to preserve and protect selected rivers, or segments of rivers, in their free-flowing condition in the National System. Section 1(b) states:

It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

Section 10(a) states:

Each component of the National Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values which caused it to be included without limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeological, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

Q. How many miles of river have been protected under the National System?

A. Currently, some 154 river segments comprising 10,815 miles have been afforded protection in the National System. These nationally recognized rivers comprise some of the nation's greatest diversity of recreational, natural and cultural resources, offering great scientific interest and scenic beauty. By contrast, approximately 600,000 miles of once free-flowing rivers have been inundated by about 60,000 dams.

Q. How are rivers designated into the National System?

A. There are two ways rivers are designated:

1. By Act of Congress. Rivers designated by Congress are listed in Section 3(a) of the WSRA.

2. By the Secretary of the Interior. The Secretary may designate a river if it is presently protected in a state river system by or pursuant to state law(s), and the governor applies for national designation. The Secretary must find the segment eligible (using the same eligibility criteria as for federally managed rivers) and must determine that the state is providing adequate protection and has the resources for management. The river is to be permanently administered by the state. Applications by states are evaluated and processed by the NPS.

Q. What qualifies a river for the National System?

- A. To be eligible for designation, a river must be free-flowing and contain at least one "outstandingly remarkable value," i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values.

Q. What is the definition of "outstandingly remarkable value?"

- A. In the WSRA, river values identified include scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The Act does not further define outstandingly remarkable values. Agency resource professionals interpret and develop criteria in evaluating river values (unique, rare, or exemplary) based on professional judgment on a regional, physiographic, or geographic comparative basis.

Q. Must a river segment be of any particular length or be "boatable or floatable" in order to be eligible?

- A. No.

Q. How are river corridor boundaries determined?

- A. Corridor boundaries are established to protect the free-flowing nature, water quality, and outstandingly remarkable values for which the river was designated. Federal agencies often delineate boundaries based on natural or man-made features (canyon rims, roads and ridge tops, etc.) and legally identifiable property lines. Under the NCNSRA, boundaries "shall be the visual horizon or such distance from each shoreline as may be determined to be necessary by the [managing agency], but shall not be less than 20 feet."

Q. When and how are rivers classified?

- A. River segments are tentatively classified during study as either wild, scenic, or recreational based on the level of access and development along the river. The following factors are generally used for classification of river segments: accessibility, primitive nature, number and kind of developments, and water quality.

Q. What is the difference between a "wild," "scenic," and/or "recreational" river?

- A. Designated river segments are classified and administered under one of the following as defined in Section 2(b) of the WSRA:

***Wild river areas:** Those rivers, or sections of rivers, that are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.*

***Scenic river areas:** Those rivers where shorelines or watersheds are largely undeveloped, but accessible in places by roads, i.e., roads may cross but generally not parallel the river. (They are usually more developed than wild and less developed than recreational.) This classification does not mean that scenery is considered to be an outstandingly remarkable resource.*

***Recreational river areas:** Those rivers which may be readily accessible by road or railroad, may have some development along the shoreline, and may have had some impoundment or diversion in the past. This classification, however, does not mean that recreation is an outstandingly remarkable resource, nor that the segment must be managed or developed for recreational activities.*

- Q. Once a river segment has been given a classification and designated, how are its values protected?

- A. The identified outstandingly remarkable values are afforded adequate protection, subject to valid existing rights. Affording adequate protection requires sound resource management decisions. Specific management prescriptions for designated rivers provide protection in the following ways:

Free-flowing Values. The free-flowing characteristics cannot be modified to allow stream impoundments, diversions, channelization, and/or rip-rapping, to the extent authorized under law.

River-Related Values. Each segment shall be managed to protect identified outstandingly remarkable values (subject to valid existing rights), and, to the extent practicable, such values shall be enhanced.

Classification Impacts. Management and development of the river and its corridor should not be modified, subject to valid existing rights, to the degree that its classification would be affected (i.e., its classification cannot be changed from wild to scenic, or from scenic to recreational).

- Q. Who protects rivers designated under Section 2 of the WSRA by the Secretary?

- A. The law states that rivers designated under Section 2(a)(ii) "shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands." The NPS does provide ongoing technical assistance and partnership efforts with local managers and stakeholders

on many of these rivers. Primarily, protection remains the responsibility of the state and/or local governmental entity, except where federal lands are involved. The Secretary makes determinations of the effects of federal or federally assisted water resources projects pursuant to Section 7 of the WSRA.

Q. What are the results of national wild and scenic river designation?

A. Wild and scenic river designation seeks to maintain and enhance a river's current natural condition and provide for public use consistent with retaining those values. Designation affords certain legal protection from adverse development, e.g., no new dams can be constructed, nor federally assisted water resource development projects allowed, if they would adversely affect designated river values. Where private lands are involved, the managing agency works with local governments and landowners to develop protective measures.

Q. What are some of the social and economic benefits of wild and scenic river designation?

A. Some benefits may include, but are not limited to: providing managers mechanisms or tools to maintain free-flowing conditions (i.e., protect river values through the assessment of hydroelectric facilities or water resource development projects within the river); protection of water quality and/or outstandingly remarkable river values; and, if a management plan objective, promoting economic development, tourism, or recreational use.

Q. Will designation likely cause changes in property values?

A. Wild and scenic river designations generally cause property values to remain stable or increase because people know they are living in or near a special resource which is being protected.

Q. What is the effect of designation on agriculture uses and livestock grazing practices?

A. Generally, existing agricultural practices (e.g., livestock grazing) would not be affected by designation. Since the WSRA does not give federal agencies authority to regulate private land, any effect to agricultural practices would be through technical assistance, unless otherwise regulated by local zoning ordinances or state regulations. Again, however, the NPS will ensure that allowable practices are consistent with designation.

Activities and practices inside the corridor are dependent on the type of classification (wild, scenic, and/or recreational), the values for which the river was designated, and land use management objectives. The level of protection should be commensurate with the identified river values. As a state-administered river, the state river management plan will determine agricultural practices.

Guidelines issued by the Secretary of Agriculture and the Secretary of the Interior indicate that livestock grazing and agricultural practices should be similar in nature and intensity to those present in the area at the time of designation. Grazing is permitted under wild, scenic, or recreational classifications, but will be managed to maintain the values for which the river was designated.

Q. - Will timber harvest activities be affected either inside or outside the river corridor?

A. Private timber management practices are guided by state and local authorities along with management agencies who may provide technical assistance to mitigate noncompatible or inappropriate activities. Under Section 2(a)(ii) of the WSRa, the federal government cannot restrict private timber harvesting practices. However, before the river is designated, the NPS will ensure that allowable harvest practices are consistent with the values for which the river is being added to the National System.

Q. What are the effects of designation on federally assisted water resources projects?

A. Section 7 of the WSRa prohibits any department or agency of the United States from assisting in the construction of any water resources project that would have a "direct and adverse" effect on the values for which the river was established. It also precludes federal assistance to projects below/above a designated river that have been determined to "invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present . . . as of the date of designation . . ." The "direct and adverse" standard applies to projects within the river corridor, while the "invade or unreasonably diminish" standard applies to projects outside the corridor.

Q. Will designation as wild and scenic guarantee continuous and adequate water flows?

A. Wild and scenic river designation alone does not guarantee a continuous instream flow or protect natural flow conditions. In areas where quantity of instream flows is at issue, only secured water management agreements, instream flow reservations, or legislative action can help ensure minimum flows related to those values for which the river was designated.

Q. What impact does wild and scenic river designation have on water quality?

A. Congress declared their intent to protect the water quality of rivers added to the National System in Section 1(b) of the WSRa. River-administering agencies should cooperate with the Environmental Protection Agency and state water pollution control agencies to eliminate or diminish water pollution. Certain states (Arkansas, Florida, North Carolina, Oregon, et al) have used alternative forms of designation, e.g., "outstanding or exceptional resource waters," as an opportunity to provide the highest water quality standard for designated rivers.

- Q. What are the effects of wild and scenic river designation on future needs to develop or expand existing rights-of-way?**
- A.** Wild and scenic river designation seeks to protect and enhance a river's current condition. Water projects proposed (or assisted) by a federal agency that may affect the river's free-flowing condition, not automatically prohibited by the WSRRA, are subject to an evaluation by the river administering agency (or, in the case of 2(a)(ii) rivers, the NPS on behalf of the Secretary). Those projects found to have a negative effect on the values for which the river was added to the National System are typically prohibited through the authority of the proposing or assisting agency.
- Existing farms, homes and cabins, with their associated rights-of-way, along the river can continue to be used as they were before designation. Whether or not new structures can be built, or existing rights-of-way expanded, depends on state and local regulations, easement agreements, and the river management plan. Generally, the classifications reflect the level of development at time of designation, and condition future development levels to that compatible with such classifications (e.g., recreational classification allows parallel roads, bridges, etc.).
- Q. What restrictions and procedures apply to construction, improvement, or maintenance of private roads within wild and scenic river corridors?**
- A.** Maintenance of roads generally would not be affected. In consultation with landowners involved through coordinated management planning, every effort would be made to eliminate or reduce adverse impacts for any proposals for road improvement, realignment and/or new construction. If a proposed new road would have a negative impact on river values, the administering agency will work with the landowner(s) to mitigate the proposal.
- Q. Will wild and scenic river designation lead to restrictions on recreational use of rivers?**
- A.** Recreational use of our nation's rivers is increasing in both magnitude and extent, i.e., the types of recreational activities pursued and the technologies being used. Limitations on wild and scenic rivers and other rivers are necessary in some cases to protect resource and social values. Importantly, whether, and/or how, to restrict recreational use is a key issue in the planning process, which includes extensive local and regional public involvement.
- Q. Will the public still have access to public lands within wild and scenic river areas for hunting and fishing?**
- A.** Yes, to the extent that the state allows hunting and fishing in the area; both are regulated under state laws. Designation does not open new areas to either activity.
- Q. Does the public always have the right to float wild and scenic rivers?**

- A. Wild and scenic river designation does not change the existing rights and restrictions. In certain cases, depending on legal access, navigability, etc., the right to float may depend upon the ownership and jurisdictional nature of the subsurface and/or adjacent lands. Regardless, river users do not have the right to use, occupy, or cross private property without permission, right-of-way, easement, etc.
- Q. **Will designation cause restricted boating access?**
- A. Generally, no. Restrictions on boating access and the implementation of entry permit systems (rationing and/or allocation) are not usually related to designation. Limitations on boating usually relate to the amount of use and/or types of users. Those rivers with use levels or types of use beyond acceptable limits (i.e., resulting in impacts to the values) may necessitate restricted access regardless of designation.
- Q. **Are motorized boats allowed on designated wild and scenic rivers?**
- A. Yes. Motors are allowed on designated wild and scenic rivers subject to state intent and river management objectives defined in state legislation and through the river planning process.
- Q. **Will facilities, such as campsites, restrooms, or access ramps be provided by state agencies?**
- A. These facilities will be provided if they are consistent with the management plan for each river and subject to the availability of funds.
- Q. **Will camping be restricted within the corridors? How is it to be enforced?**
- A. Camping is often important to the enjoyment of wild and scenic rivers. As a condition of use, and in line with management objectives for the river area, the managing agency may specify that camping will be permitted only in designated locations. Enforcement of camping restrictions and limitations can be through indirect means (brochures, maps, signs, etc.) and/or direct means (permits, enforcement personnel, etc.).
- Q. **Will designation increase recreational use and unauthorized uses on private land?**
- A. Many of the nation's rivers have received increased use in recent years. River use may increase slightly or not at all as a result of designation. Unauthorized uses should not increase since the managing agency will provide maps and signs to direct use to publicly owned access sites. No use of private lands is allowed unless special arrangements are made with the landowner. Private landowners are still entitled to post their property with "No Trespassing" signs, or require users to obtain landowner permission.

- Q. Will designation affect existing landowners ability to restrict, give permission, and otherwise control who is on the riverbanks?**
- A. No. However, the public still has the right to float navigable waterways in accordance with state laws.
- Q. -Can the private landowner sell land in the river corridor after the river is designated?**
- A. Yes. The ability of the owner to buy or sell private property is not affected.
- Q. What restrictions apply to residences, farm buildings and other buildings? Will landowners lose any use or development rights?**
- A. Existing buildings are fully compatible with wild and scenic river designation. Specific management goals for new construction are best addressed through individual river management plans. Federal guidelines allow different degrees of development along rivers classified as wild, scenic, or recreational. There is a wide range of uses compatible with these classifications so long as the overall values and character of the river corridor is maintained. River management plans prescribe land use or development limitations to protect outstandingly remarkable river values.
- Q. Will designation allow the federal government to regulate or zone private lands, or require local governments to implement zoning?**
- A. Under the WSRA, the federal government has no authority to regulate or zone private lands on state-administered 2(a)(ii) rivers. Land use controls on private lands are solely a matter of state regulations and local zoning. Although the WSRA includes provisions encouraging the protection of river values through state and local land use planning, there are no binding provisions on local governments. However, in the case of 2(a)(ii) rivers, the NPS would not recommend designation to the Secretary if effective state and local protection mechanisms were not guaranteed.
- Q. How will the federal government monitor and evaluate activities on private land?**
- A. The federal government will not be involved in monitoring or evaluating activities on private lands..
- Q. Do the agencies encourage citizen involvement in the wild and scenic river management planning process?**
- A. Yes. The agencies serve the public in formulating river management plans. The public and local and tribal governments are essential participants in developing an acceptable plan that both protects and enhances the values for which the river was added to the National System

Abbreviations:

BLM	Bureau of Land Management
National System	National Wild and Scenic Rivers System
NCNSRA	North Carolina Natural and Scenic Rivers Act
NEPA	National Environmental Policy Act
NPS	National Park Service
Secretary	Secretary of the Interior
USFS	United States Forest Service
WSRA	(National) Wild and Scenic Rivers Act

For More Information:

Joe Cooley
National Park Service
Atlanta Federal Center, 1924 Building
100 Alabama Street, Southwest
Atlanta, Georgia 30303
Telephone: (404) 562-3175
E-mail: joe_cooley@nps.gov
[://www.nps.gov/ccso/wildrivers.htm](http://www.nps.gov/ccso/wildrivers.htm)

APPENDIX H

PUBLIC AND AGENCY COMMENTS ON
“WEKIVA RIVER, ROCK SPRINGS RUN,
& SEMINOLE CREEK WILD AND SCENIC
RIVER STUDY - DRAFT REPORT”



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

CESAJ-PD-ER

22 April 1999

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers,
(Attn: CECW-PE)

SUBJECT: Wekiva River, Rock Spring Run, and Seminole Creek Wild and Scenic
River Study, Draft Report Comments

1. In response to the 18 March 1999 memorandum (enclosed) concerning the above subject, find Jacksonville District response below.
2. Since there are no authorized Jacksonville District, U. S. Army Corps of Engineer (Corps) projects in the water bodies proposed for Wild and Scenic River (W&SR) designation, there are no Corps concerns at this time. Coordination with the National Park Service revealed the Corps Aquatic Plant Control activities in the area will not be jeopardized by W&SR designation but will be an integral aspect of maintaining the natural native ecosystem.
3. Direct all questions concerning this memorandum to Mr. Paul Stevenson of my staff at 904-232-2130.

FOR THE COMMANDER:

Encl

A handwritten signature in cursive script, reading "James C. Duck".

JAMES C. DUCK
Chief, Planning Division



Florida Department of Transportation

JEB BUSH
GOVERNOR

THOMAS F. BARRY, JR.
SECRETARY

Environmental Managemant Office

719 So. Woodland Blvd.

DeLand, FL 32720

U.S. Dept of the Interior
National Park Service
Atlanta Federal Center
1924 Building
100 Alabama St. S.W.
Atlanta, Georgia 30303

Attn: Joseph Cooley

Dear Mr. Cooley:

Thank you for the opportunity to review and comment on the enclosed Wild and Scenic River Study for the Wekiva River. It is well written, well organized, and readable. We ask that you send us a copy of the final draft. Any such designation could greatly affect transportation projects in our district.

We wish you and your staff continued success as you move forward with this project.

Sincerely yours,

William G. Walsh

Environmental Scientist

Florida Dept. Of Transportation

5/5/99



JOE:

Very much Appreciate To opportunity
To Review The DRAFT. I Decided To
make Corrections Directly in the
Document to hopefully make it
EASIER for you.

Great Job! I know this was a lot
of work.

If you need Anything AT All,
Please give us A call

Thanks,

A handwritten signature in cursive script, which appears to read "John Fillyaw".

John Fillyaw

P.S. - I only Reviewed The TEXT,
None of The APPENDICES.



Jeb Bush
Governor

Department of Environmental Protection

Wekiva Basin GEOPark
1800 Wekiwa Circle
Apopka, FL 32712

David B. Struhs
Secretary

March 16, 1999

Joseph L. Cooley
National Park Service
100 Alabama St. SW
1924 Bldg
Atlanta, GA 30303

Dear Joe:

Attached are my comments on the draft report of Wekiva system Wild and Scenic River Study. I have also enclosed revised copies of appendices from the current management plan for the Wekiva Basin GEOPark. If you would like a copy of the final document please let me know.

My comments are minor. Please view them as suggestions. Great job on the study. Please do not hesitate to contact me if you have any questions on my comments or if I can be of further assistance.

Sincerely,

Parks Small, Park Biologist
Wekiva Basin GEOPark

cc: John Fillyaw



Department of Environmental Protection

Lawton Chiles
Governor

8300 West State Road 46
Sanford, Florida 32771

Virginia B. Wetherell
Secretary

26 May 1999

Mr. Joseph Cooley, Landscape Architect
Recreation and Conservation Division
National Park Service, Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St., S.W.
Atlanta, Georgia 30303

RE: Wekiva River, Rock Springs Run, Seminole Creek and Black Water Creek
Wild and Scenic River Study


Dear Mr. Cooley:

Thank you for the opportunity to review the Draft Wild and Scenic River Study Report prepared for the Wekiva River, Rock Springs Run, and Seminole Creek. I appreciate all the National Park Services staff time and effort dedicated to this project. As Manager of the Wekiva River Aquatic Preserve, I support the designation of all segments proposed and specifically request that the Seminole Creek and Black Water Creek segments which were found "not suitable" (page 26) be reevaluated for suitability. It appears the rationale for the "not suitable" determination is based solely on a request by the adjacent upland property owner. Please consider that Seminole Creek and Black Water Creek, waterward of the Ordinary High Water Line, are likely state-owned submerged lands, and as such are held in trust for the people of Florida. DEP's Bureau of Survey and Mapping, Title and Land Records Section, can determine the states claim for ownership. DEP has already designated this section, and all others within the study area, as Outstanding Florida Waters, as acknowledged on page 33 of the report. Seminole and Black Water Creeks are important components of the Wekiva Basin ecosystem. If they were omitted from classification, they would be obvious "missing links."

I am also requesting at this time that three miles of the lower Little Wekiva River be included as a "Recreational" segment. This reach of the river is heavily utilized by canoers and has significant recreational value. It is designated as an aquatic preserve and is bordered by extensive dedicated conservation areas. The St. Johns River Water Management District in conjunction with the Little Wekiva River Task Force has committed over one million dollars to upstream restoration projects that will help to maintain the ecological and scenic values of this reach of the river. This reach of the Little Wekiva River is within the Wekiva River Protection Area and has strong broad based support from numerous citizen groups and agency staff.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

26 May 1999
Mr. Joseph Cooley
Page 2

The following comments further address the above stated issues and other minor inconsistencies found within the report:

Summary – As stated above, please designate Seminole Creek and Black Water Creek segments as “suitable.” These segments are free flowing, and have “outstanding remarkable resources.” Public use of these riverine areas is not pre-empted by upland ownership. The remote segment of Black Water Creek represents one of the few relatively pristine areas in central Florida where recreational canoers and kayakers can experience a near-wilderness experience. The finding of “not suitable” should not be based solely on a request from adjacent upland owners.

Page 5, Paragraph 4, Line 9 – Black Water Creek is also crossed by the forest service road within Seminole State Forest, as referenced on page 20 of the report.

Page 7, Paragraph 2, Line 33 - Figure 3 is referenced but no figures are labeled. Figures should be labeled.

Page 12, Paragraph 3, Line 4 - Should be “...established the Wekiva River Basin Ecosystem Working Group to assist...”

Page 12, Paragraph 5, Line 8 – Should be “...sits on the Wekiva River Basin Ecosystem Working Group.”

Page 14, Paragraph 1, Line 5 – Should be “classified as either wild...”

Page 15 - For clarity, please consider naming the river segment and the proposed classification in all photo description (EX: Segment 1 photograph would read “Segment 1, lower Wekiva River, WILD”

Page 15 Paragraph 1, Line 8 - Should be Florida Audubon Society (FAS)

Page 16, Recreational photos – For clarity, please consider adding name of waterbody and classification.

Page 16, Photograph Segment 2 – Should be S.R. 46 bridge.

Page 17, Segment 3 – This is Shell Island, an important archeological midden in the Wekiva River.

Page 21, 22, 23 – Photo’s are labeled inconsistently. For clarity, please consider labeling as requested above (page 15).

26 May 1999
Mr. Joseph Cooley
Page 3

Page 24 – Figure not numbered.

Page 24 – Consider designation of the lower 3 miles of the Little Wekiva River as “RECREATIONAL” as requested above.

Page 25 – Management Framework – Please add “ Division of Marine Resources” after Division of Recreational and Parks. The Wekiva River Aquatic Preserve Management Plan, adopted in 1987, is administered through this division.

Page 26 – As requested above, please classify Seminole Creek and Black Water Creek as “suitable.” These riverine systems are important components in the Wekiva Basin ecosystem.

Page 27 – As requested above, please classify Seminole Creek and Black Water Creek as “suitable.”

Page 31 – Other listed species are:

Fish	Designated Status		
	FDA	GFC	FWS
Bluenose shiner <i>Pteronotropis welaka</i>			SSC

Page 35, Paragraph 1, Line 1 – U.S. Army Corp prefers to be referenced as “USACE”

Page 38, State Lands –Figure referenced as “xx”

Page 39, Paragraph 1 – Other state-owned lands include all state-owned submerged lands associated with the Wekiva River and its tributaries. Lands waterward of the ordinary high water line are sovereign submerged lands managed co-operatively by DEP Division of Recreation and Parks and Division of Marine Resources, Bureau of Coastal and Aquatic Managed Areas (CAMA). The aquatic preserve program is administered through CAMA. The Wekiva River Aquatic Preserve Management Plan was adopted in 1987. The plan addresses resource management issues and policies related to the aquatic preserve.

26 May 1999
Mr. Joseph Cooley
Page 4

Page 39, Paragraph 2, Line 8 – Should be “Wekiwa Springs State Park”

Page 39, Paragraph 2, Line 9 – “...south,...” (delete space)

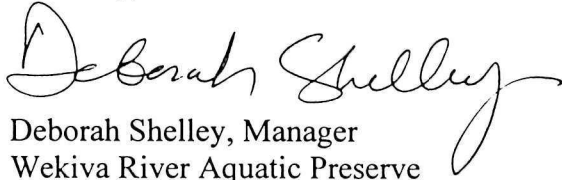
Page 43 – As Manager of the Wekiva River Aquatic Preserve, I support “Alternative C.” Many individuals from the groups listed have worked with the Wekiva Basin Ecosystem Working Group to accomplish various management goals and could continue to do so as members of the proposed “coordinated management committee.”

Page 49- Incorrect agency, not FDEP, not sure what it is.

Page 49 – Incorrect spelling and title, should be - Deborah Shelley, Manager, Wekiva River Aquatic Preserve, Florida Department of Environmental Protection, Bureau of Coastal and Aquatic Managed Areas.

Thank you for the opportunity to review this draft report. Please call me at 407.330.6727 if you have any questions or comments. I will be out of the office for the month of June, but please leave a message if important.

Sincerely,

A handwritten signature in cursive script that reads "Deborah Shelley". The signature is written in black ink and is positioned above the printed name and title.

Deborah Shelley, Manager
Wekiva River Aquatic Preserve



FLORIDA GAME AND FRESH WATER FISH COMMISSION



QUINTON L. HEDGEPEETH, DDS MRS. GILBERT W. HUMPHREY THOMAS B. KIBLER JAMES L. "JAMIE" ADAMS JR. JULIE K. MORRIS
Miami Miccosukee Lakeland Bushnell Sarasota

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

April 27, 1999

DIVISION OF WILDLIFE
FRANK MONTALBANO, Director
TIM BREAUULT, Assistant Director
FARRIS BRYANT BUILDING
620 South Meridian Street
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(850) 488-3831
TDD (850) 488-9542
FAX (850) 921-7793

Joseph Cooley
National Park Service
Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St., S.W.
Atlanta, GA 30303

Dear Mr. Cooley:

I received the draft report entitled "Wekiva River Rock Spring Run and Seminole Creek Wild and Scenic River Study, December 1998" and reviewed its contents as requested.

I must start by stating that I am no expert on this type of study, but I have commented where I thought it appropriate. Overall, the draft looked good and did an excellent job of describing the area and its resources. I made several marginal notes that are marked with orange tabs on the document itself. These are relatively minor edits and clarifications and should not be difficult to address. I did think that the document was lacking in the analysis of each option and the different impacts associated with each. Few scientific studies were cited and many statements of fact were made without supporting material or documentation. It seems to me that the intent of the report is to compare and contrast the alternatives, yet this section of the document received the least amount of detail and attention (7 pages out of 49, 3 of which were a table). I suggest revising this section by providing more detail on the analyses used and clearly stating how each alternative differs from the others.

I appreciate the opportunity to review this report and hope that my comments are helpful.

Sincerely:

Thomas H. Eason

Thomas H. Eason
Leader, Bear Management Section

THE/W1126
fn\bear files\correspondence\cooley.wpd



ENVIRONMENTAL PROTECTION DIVISION

ANNA H. LONG, *Manager*

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May 27, 1999

Joseph Cooley, Landscape Architect
United States Department of Interior
National Park Service
Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St. SW
Atlanta, Georgia 30303

Dear Mr. Cooley:

Thank you for the opportunity to review the Draft Report of Wekiva River Rock Spring Run and Seminole Creek Wild and Scenic River Study. The following are the Orange County Environmental Protection Divisions Comments:

Section V. Summary of Existing Protection:

Please note that Orange County Environmental Protection Division has an ordinance governing the construction of Docks, Boat Ramps, and Mooring Structures, as well as an ordinance governing dredge and fill activities. Attached is a copy of the above referenced ordinances.

Section VI. Alternatives and Conclusions:

If Alternative C were chosen, the Orange County Environmental Protection Division would like to have a representative on the Wekiva River Coordinated Management Committee.

Once again thank you for the opportunity to comment on the Draft Report Wekiva River Rock Spring Run & Seminole Creek Wild and Scenic River Study. If you have any questions or comments regarding this letter please contact me at (407) 836-1481.

Sincerely,

Beth Jackson
Sr. Environmental Specialist

BJ/PT/AHL:bk

PT

Attachment

BRINGING RIVERS TO LIFE



May 15, 1999

BY FAX

Joe Cooley
National Park Service
Atlanta Federal Center, 1924 Building
100 Alabama Street, Southwest
Atlanta, Georgia 30303

Re: Wekiva River National Wild and Scenic River Study Draft Report

Dear Mr. Cooley:

American Rivers is the nation's leading river conservation organization. In its twenty-six year history, we have worked extensively to protect and restore rivers under the federal Wild and Scenic Rivers Act (the "Act") and other statutes, and has actively assisted states and local groups with their river conservation efforts.

The Wekiva River and its tributaries are excellent candidates for the National Wild and Scenic Rivers program. Rivers are eligible for inclusion in the program if they are free-flowing and possess at least one outstandingly remarkable value. The Wekiva River National Wild and Scenic River Study Draft Report (the "Report") states that the entire river is free-flowing. It also details not just one, but five outstandingly remarkable values in the areas of recreation, scenery, fish and wildlife, history and culture, and water quality. Moreover, as a uniquely pristine river in a rapidly developing part of Florida, the Wekiva River is a resource that needs protection through the Wild and Scenic Rivers Act.

Outstandingly Remarkable Values

The Report documents important findings of at least five outstandingly remarkable values. The areas of recreation, scenery, and wildlife are particularly outstanding and are important to the region. Thousands of swimmers enjoy the Wekiva River's spring-fed waters during the summer months, and boating is very popular. There is a thriving recreation industry on the Wekiva River. Outside of the high-use recreation areas, the river is mostly pristine, with very few man-made structures such as roads.

The Wekiva River has at least fourteen ecosystems that provide habitat for hundreds of animal and plant species. Of particular note are the federally endangered West Indian

manatee, the federally threatened American alligator, and several other species listed on the 1997 Florida Natural Areas Inventory, and by the Florida Game and Fresh Water Fish Commission. The Wekiva River provides critical habitat that must be protected.

The Report states the area has over 20 important archaeological sites dating from the aboriginal period to the Civil War. In addition, the Wekiva River, the Rock Springs Run, Black Water Creek, and Seminole Creek are all “Outstanding Florida Waters.” The pure, clean water is a primary reason for the popularity of the Wekiva River as a recreation site, and it is the foundation of the River’s spectacular habitat.

In this rapidly developing part of Florida near the city of Orlando, care must be taken to conserve the recreational resources, scenery, habitat, historical sites, and high-quality water that remain. While many local and state protections exist, they may not be enough to protect the Wekiva River.

Evaluation of Protection and Management

The Wekiva River has many existing protections. Extensive public lands, including three state parks that encompass almost 42,000 acres, surround the Wekiva River. The St. Johns River Water Management District (SJRWMD) owns the majority of the land along Black Water Creek. The Wekiva River and its tributaries are protected through state statutes for the SJRWMD, the “Outstanding Florida Waters” listing (as part of Section 303 of the Federal Clean Water Act), and the Wekiva River Protection Act. In addition, the Wekiva River is a Florida State Wild and Scenic River. Designating the Wekiva River as a National Wild and Scenic River follows the state, county, and watershed management goals already in place for the River.

Moreover, adding the Wekiva River and its tributaries to the National Wild and Scenic River system will provide federal protection for the river in the face of increasing development pressures. The designation would bring national recognition to the river, as well as federal resources to protect it.

American Rivers supports designating the entire eligible study area, including the Wekiva River, Rock Springs Run, Black Water Creek, and Seminole Creek, as a Wild and Scenic River. We offer the following reservations:

At the time of the study, the National Park Service found all sections, with the exception of Seminole Creek and a portion of Black Water Creek, suitable for Wild and Scenic River designation. These sections run through Seminole Woods, which is privately owned. In determining which sections of a river are suitable for designation, the agency must look at a number of factors, including but not limited to: incompatible uses on non-federal lands, alternatives for protecting river values other than wild and scenic designation, local interest in designation or non-designation of the river, and ability of the agency to manage and/or protect the river area or segment as a Wild and Scenic River. The owner of Seminole Woods has expressed interest in conservation of the natural values of the streams on his property, but at the time of the study the owner did not favor

designation. While there is little evidence an incompatible use will arise, there is also little assurance that if one did arise, the managing bodies would be able to protect the Wild and Scenic River.

Black Water Creek, however, has been determined to be navigable, giving the state of Florida title to bed and bank. In addition, the portion of Black Water Creek upstream of Seminole Woods is mostly on public lands and was determined to be suitable in the Report. The state entitlement may provide some authority for the state to protect the free-flowing character, the water quality, and the outstandingly remarkable values of the Wekiva River. In the interest of protecting with some consistency the entire length of Black Water Creek, rather than only the upstream segment, we recommend designating the entire length of Black Water Creek as part of the Wekiva Wild and Scenic River. We agree that Seminole Creek may not be suitable for designation at this time, but we urge the National Park Service to consider carefully the final suitability recommendation, as Seminole Creek does have significant outstandingly remarkable values that should be protected.

Classification

American Rivers agrees with the proposed classifications of river segments set forth in the report.

Environmental Assessment

American Rivers supports Alternative C of the Environmental Assessment. This alternative allows state management of the river through a coordinated management body comprised of representatives from the National Park Service, the state, the counties, local officials, and citizen groups. The Wekiva River is currently managed by state, local, and private entities, all with varying responsibilities towards protecting the river. A coordinated management body for the Wild and Scenic River would provide vision for management of the entire Wekiva River watershed. Alternative C would also ensure input from all parties responsible for the future management of the Wekiva River. This type of management alternative has been successful on other Wild and Scenic Rivers, including Wildcat Brook (NH); the Maurice River (NJ); the Farmington River (CT); the Lamprey River (NH); and the most recent additions to the Wild and Scenic Rivers system--the Sudbury, Assabet, and Concord Rivers in Massachusetts.

In the event that the governor of Florida decides to seek designation of the Wekiva River and its tributaries through the 2(a)(ii) process, American Rivers would also support Alternative D of the Environmental Assessment.

Conclusion

The Wekiva River's important resources and values are threatened by rapid development in the area. The Wild and Scenic River Act of 1968 was created to "protect and enhance" the resources and values of select rivers. American Rivers finds the Wekiva River to be

an outstanding candidate for Wild and Scenic River designation. American Rivers also supports formulating a management partnership as described under Alternative C of the Environmental Assessment.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Kristen McDonald', written over a horizontal line.

Kristen McDonald
Conservation Assistant

cc: Governor Jeb Bush
Congressman Bill McCollum
Senator Bob Graham
Senator Connie Mack
Bruce Babbitt, U.S. Secretary of the Interior
Don Barry, Assistant Secretary for Fish, Wildlife, and Parks
George Frampton, Acting Chair, CEQ
John Haubert, National Park Service
Fred Harden, Friends of the Wekiva River



Central Florida Group

Keith Schue
30641 Edgewood Street
Mount Plymouth, FL 32776

Mr. Joseph Cooley
Recreation and Conservation Division
Nation Park Service, Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St., S.W.
Atlanta, Georgia 30303

May 28, 1999

Dear Mr. Cooley,

I am writing on behalf of the Sierra Club Central Florida Group regarding the Draft Report of the Wild and Scenic River Study, dated December 1998. We fully support and encourage inclusion of the Wekiva River, Rock Springs Run, Black Water Creek, and Seminole Creek in the National Wild and Scenic River System.

The Central Florida Sierra Club also strongly supports recommendations by the Florida Department of Environmental Protection (Deborah Shelley-Wekiva Aquatic Preserve Manager) that segments of Seminole Creek and Black Water Creek within the Seminole Woods property of Lake County be included. Ecologically these segments, which contain the beautiful Seminole Springs and associated smaller springs, are very "suitable" to receive designation. As state-owned submerged lands recognized as Outstanding Florida Waters, Seminole Creek and Black Water Creek should not be excluded from the Wild and Scenic designation solely at the request of an adjacent upland property owner. Furthermore, this part of the river system represents a critical piece of the Wekiva/Ocala connection corridor, important to a variety of wildlife including listed species such as the threatened Florida Black Bear. Although segments of Seminole Creek and Blackwater Creek within the Seminole Woods property are presently maintained in a pristine state, a request to specifically exclude these sections is cause for concern. The federal Wild and Scenic designation will help ensure that restrictions against logging in floodplain areas are respected.

The Sierra Club Central Florida Group also supports the Florida DEP request for inclusion of the Little Wekiva River as a Recreational segment due to its particular scenic and recreational value.

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In addition to the preceding general recommendations, the following editorial comments apply:

In the map on page 34 of the draft report, the overlay of public lands appears to be offset with respect to the river system and state roads.

In this same picture on page 34, land adjacent to the Wekiva River labeled as being owned by the Orange Audubon Society may actually belong to the Florida Audubon Society. This should be verified.

On page 40, the draft report states that Seminole County requires that "Outside the urban service area within the Wekiva River Protection Area no amendments to the comprehensive plan shall be allowed for residential density greater than one dwelling unit per five acres." This statement is not correct. Land-use designation in the area allow for up to one unit per acre, and in recent times higher development densities approved by Seminole County have been found objectionable by state agencies and environmental groups. We recommend that the draft text be modified and a statement added to the effect: "Seminole County policies regarding the Wekiva River Protection Area have been identified by the Florida Department of Community Affairs and various environmental organizations as requiring further attention."

The Sierra Club Central Florida Group appreciates your consideration of these comments. Please do not hesitate to contact me if I can be of any further assistance.

Thank you,

A handwritten signature in cursive script that reads "Keith Schue".

Keith Schue
Wekiva Issue Chair
Sierra Club Central Florida Group

407-942-6800 (office)
352-383-3085 (home)

PHARES M. HEINDL, P.A.

Attorney at Law

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Practice Areas

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Wrongful Death
Product Liability
Medical Malpractice
Toxic Torts
Workers' Compensation

Phares M. Heindl*†

*Board Certified Civil Trial Lawyer

† Also Admitted in California

June 4, 1999

Mr. Joseph Cooley
Recreation and Conservation Division
Nation Park Service, Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama Street, SW.
Atlanta, GA 30303

Dear Mr. Cooley,

I am writing on behalf of the Friends of Wekiva River regarding the Draft Report of the Wild and Scenic River Study, dated December 1998. We fully support and encourage inclusion of the Wekiva River, Rock Springs Run, Black Water Creek, and Seminole Creek in the National Wild and Scenic River System.

The Friends of Wekiva River supports recommendations by the Florida Department of Environmental Protection (Deborah Shelley-Wekiva Aquatic Preserve Manager) that segments of Seminole Creek and Black Water Creek within the Seminole Woods property of Lake County be included. Ecologically these segments, which contain beautiful Seminole Springs and associated smaller springs, are very "suitable" to receive designation. As state-owned submerged lands recognized as Outstanding Florida Waters, Seminole Creek and Black Water Creek should not be excluded from the Wild and Scenic designation solely at the request of an adjacent upland property owner. Furthermore, this part of the river system represents a critical piece of the Wekiva/Ocala connection corridor, important to a variety of wildlife including listed species such as the threatened Florida Black Bear. Although segments of the Seminole Creek and Blackwater Creek within the Seminole Woods property are presently maintained in a pristine state, a request to specifically exclude these sections is cause for concern.

Sincerely,



Phares M. Heindl, Esquire
President Friends of Wekiva River

PMH:aes

Wekiva Falls Resort @ Mastodon Springs
30700 Wekiva River Road - Sorrento, Florida 32776
Disney Area, Orange & Seminole County Ph: (407) 830-9828, Fax: (407) 444-2703; Lake County Ph: (352) 383-8055

Mr. Joe Cooley, Coordinator
Wekiva River Study
National Park Service
Atlanta Federal Center
1924 Building
100 Alabama St., Southwest
Atlanta, Georgia 30303

September 21, 1998

Via FAX to: (404) 562-3282

Ref: Unconditional endorsement: Longterm Protection & Management Proposal

Dear Mr. Cooley:

This letter resends and supersedes my conditional endorsement of your "Longterm Protection & Management Proposal", as was transmitted to you via my letter dated September 20, 1998, which you may not have yet received.

After reviewing Section 7 of the Wild and Scenic Rivers Act, which you were kind enough to fax me today, I note the moratorium applies only to "water resource projects that would have a direct and adverse effect on the values for which such river might be designated ...", therefore,

I now feel the concerns expressed in my September 20, 1998 letter are not valid, since water resources restoration activities which Congressman Mica and myself are seeking the U.S. Army Corps of Engineers to implement, via enforcement action against the St. Johns River Water Management District (SJRWMD), for their unpermitted and illegal dredge & fill activities, would have a beneficial effect on the values for which the Wekiva river and its related tributaries might be designated.

It appears the SJRWMD has violated the "Water Resources Project Moratorium" if federal funds were part of the "Orlando Beltway Mitigation" funds, covertly used by the SJRWMD to accomplish the above referenced dredge & fill, which adversely affected water quality.

If your study determines that federal funds were used for the illegal dredge and fill, in violation of the moratorium, I would appreciate the National Park Service joining forces with the U.S. Army Corps of Engineers to bring about the full and complete restoration I seek.

I look forward to soon receiving a copy of your draft report.

With best regards, I remain

Very truly yours,
WEKIVA FALLS RESORT



C. E. Middlebrooks
Co-owner

1584 Outlook Street
Orlando, Florida 32806-7806
December 22, 1997

Mr. Joseph L. Cooley
National Park Service, Southeast Region
Atlanta Federal Center, 1924 Building,
100 Alabama St., Southwest
Atlanta, GA 30303

Dear Mr. Cooley,

I am writing to support the designation of the Wekiva River, Rock Springs Run, and Blackwater Creek as a National Wild and Scenic River. I attended the December 17, 1997 public meeting at Wekiwa Springs State Park regarding the Wild and Scenic River Study and wanted to express my support and give my perspective on the values of these river systems.

I have done volunteer bird surveys in the Wekiva River Basin since 1977, most recently helping with a monthly survey at Wekiwa Springs State Park where our territory was the upper half of Rock Springs Run. On several of our three-hour trips, we saw no people from Kings Landing to Big Buck Camp. What a refreshing contrast to I-4! The basin has a wide diversity of bird species, including several threatened and endangered species.

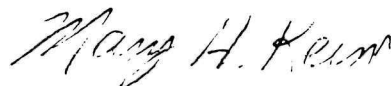
For the last four years, I have served as co-compiler for the Wekiva River, FL Fourth of July Butterfly Count sponsored by the North American Butterfly Association. These counts are patterned after Christmas Bird Counts. The Wekiva River butterfly count circle is identical to the Wekiva River Christmas Bird Count circle. From those four butterfly count days alone, 59 butterfly species have been recorded.

My husband and I have led seven Orange Audubon Society field trips to what is now the Wekiva Basin GEOPark since 1987. The area provides excellent opportunities for outdoor recreation such as canoeing, hiking, wildlife observation and photography.

The management practices, such as prescribed burns and exotic species removal, make the Wekiva Basin one of the best places in Central Florida to see natural habitats. When I taught a Seminole Community College class about Florida Ecosystems, we did much of our field work at the Wekiva Basin GEOPark.

The Wekiva Basin has important wildlife, scenic, recreation, and education values and I support federal designation of Wild and Scenic River to help protect these resources.

Sincerely,

A handwritten signature in cursive script that reads "Mary H. Keim".

Mary H. Keim

