

**COLT CREEK STATE PARK  
UNIT MANAGEMENT PLAN**

**APPROVED PLAN**

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Recreation and Parks**

**December 14, 2007**

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	1
<b>PURPOSE AND SCOPE OF PLAN</b> .....	1
<b>MANAGEMENT PROGRAM OVERVIEW</b> .....	4
Management Authority and Responsibility .....	4
Park Goals and Objectives.....	5
Management Coordination .....	9
Public Participation .....	10
Other Designations.....	10
<b>RESOURCE MANAGEMENT COMPONENT</b>	
<b>INTRODUCTION</b> .....	11
<b>RESOURCE DESCRIPTION AND ASSESSMENT</b> .....	11
Natural Resources .....	11
Cultural Resources .....	20
<b>RESOURCE MANAGEMENT PROGRAM</b> .....	21
Special Management Considerations .....	21
Management Needs and Problems.....	21
Management Objectives .....	22
Ecological Targets.....	23
Management Measures For Natural Resources .....	24
Management Measures For Cultural Resources .....	31
Research Needs .....	32
Resource Management Schedule.....	33
Land Management Review .....	33

**LAND USE COMPONENT**

**INTRODUCTION**.....35

**EXTERNAL CONDITIONS**.....35

    Existing Use of Adjacent Lands.....36

    Planned Use of Adjacent Lands.....37

**PROPERTY ANALYSIS**.....37

    Recreation Resource Elements.....37

    Assessment of Use.....39

    Existing Facilities.....41

**CONCEPTUAL LAND USE PLAN**.....41

    Potential Uses and Proposed Facilities.....43

    Facilities Development.....47

    Existing Use and Optimum Carrying Capacity.....49

    Optimum Boundary.....49

**TABLE**

**TABLE 1 - Existing Use and Optimum Carrying Capacity**.....49

**LIST OF ADDENDA**

**ADDENDUM 1**

    Acquisition History, Advisory Group List and Staff Report..... A 1 - 1

**ADDENDUM 2**

    References Cited..... A 2 - 1

**ADDENDUM 3**

    Soil Descriptions..... A 3 - 1

**ADDENDUM 4**

Plant And Animal List ..... A 4 - 1

**ADDENDUM 5**

Designated Species List ..... A 5 - 1

**ADDENDUM 6**

Timber Management Analysis..... A 6 - 1

**ADDENDUM 7**

Priority Schedule and Cost Estimates..... A 7 - 1

**ADDITIONAL INFORMATION**

FNAI Descriptions of Natural Communities .....1

DHR Cultural Management Procedures.....9

**MAPS**

Vicinity Map .....2

Reference Map .....3

Soils Map .....13

Natural Communities Map .....15

Burn Zones Map.....26

Base Map .....40

Conceptual Land Use Plan .....42

Optimum Boundary Map .....51

## **INTRODUCTION**

Colt Creek State Park, acquired on May 31, 2006, is one of the newest additions to the Florida Park Service. This 5,067-acre property is located in Northwest Polk County approximately 16 miles north of Lakeland and 13 miles southeast of Dade City (see Vicinity and Reference Maps). The entrance is on the east side of State Road 471 approximately four miles north of U.S. Highway 98. The Vicinity Map and Reference Map provide geographic context for the park, delineate major roads, developed areas and significant land and water resources either within or nearby the park. The park lies within the 560,000 acre Green Swamp Region and is surrounded by 279,000 acres of publicly owned conservation land within the Green Swamp Area of Critical State Concern.

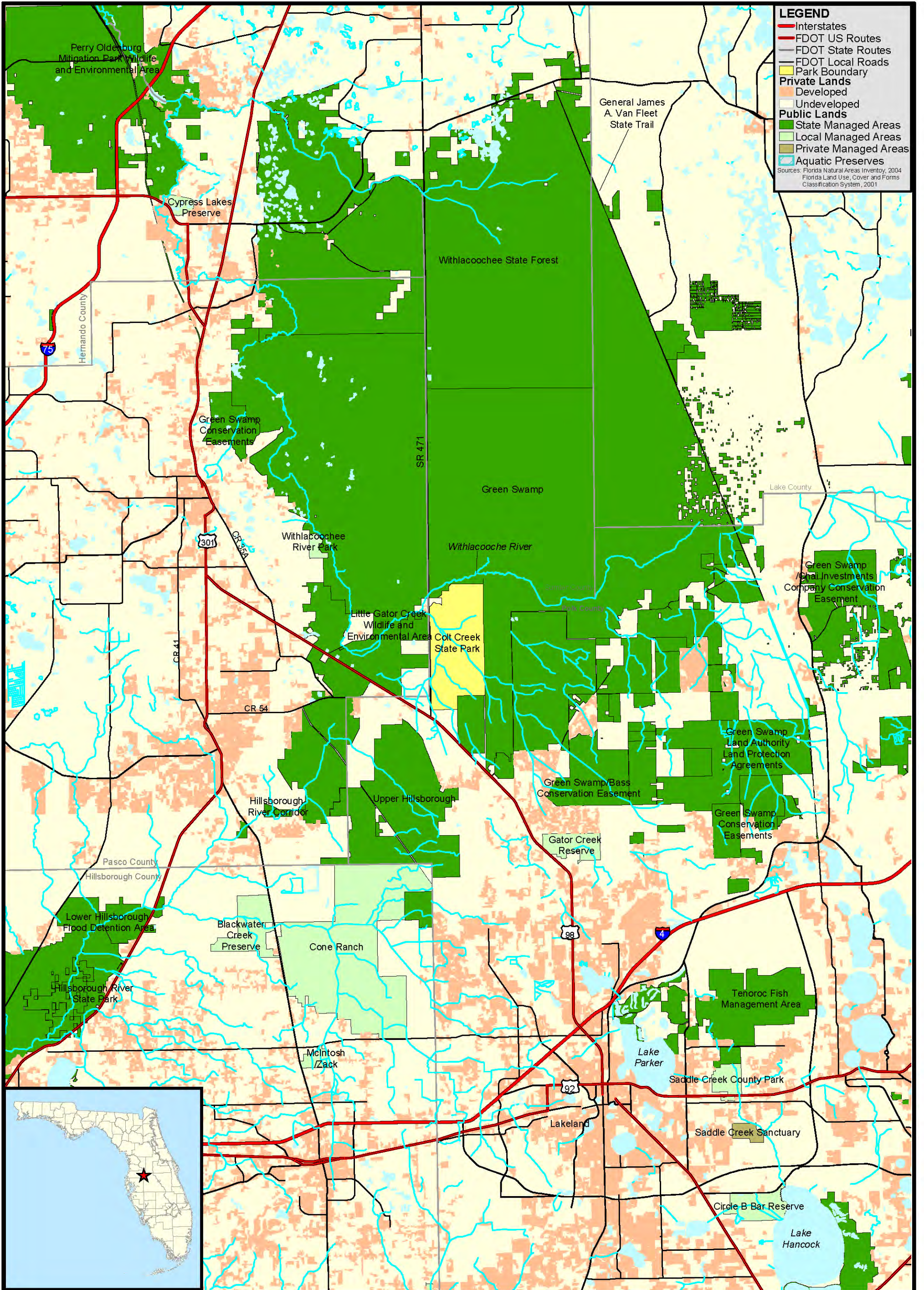
At Colt Creek State Park, public outdoor recreation and conservation is the designated single use of the property. There are no legislative or executive directives that constrain the use of this property. The park was purchased using funds provided by the Southwest Florida Water Management District, the Florida Department of Environmental Protection and Polk County Board of County Commissioners (see Addendum 1).

## **PURPOSE AND SCOPE OF THE PLAN**

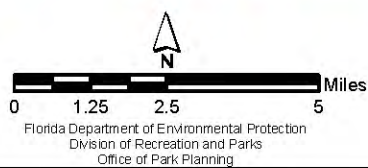
This plan serves as the basic statement of policy and direction for the management of Colt Creek State Park as a unit of Florida's state park system. It identifies the objectives, criteria and standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and intended to be consistent with the State Lands Management Plan. This is the initial management plan for this park. All development and resource alteration encompassed in this plan is subject to the granting of appropriate permits; easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

The plan consists of two interrelated components. Each component corresponds to a particular aspect of the administration of the park. The resource management component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management problems and needs are identified, and specific management objectives are established for each resource type. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, and restoration of natural conditions.



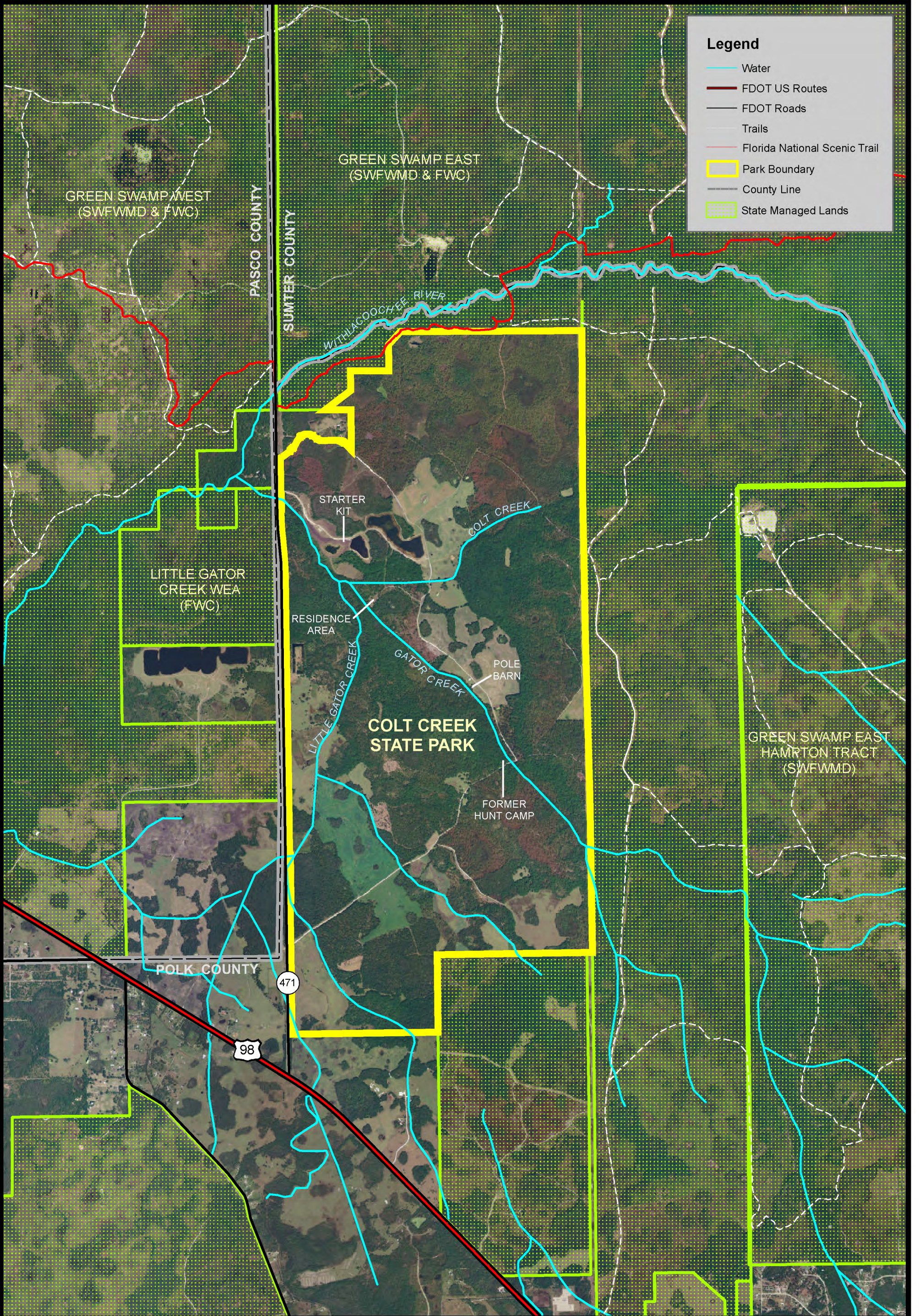


COLT CREEK STATE PARK



VICINITY MAP





**Legend**

- Water
- FDOT US Routes
- FDOT Roads
- Trails
- Florida National Scenic Trail
- Park Boundary
- County Line
- State Managed Lands

**COLT CREEK STATE PARK**

  
  
 0 1,500 3,000 6,000 Feet  
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF RECREATION AND PARKS  
 OFFICE OF PARK PLANNING

**REFERENCE MAP**



The land use component is the recreational resource allocation plan for the unit. Based on considerations such as access, population, and adjacent land uses, an optimum allocation of the physical space of the park is made, locating use areas and proposing types of facilities and volume of use to be provided.

In the development of this plan, the potential of the park to accommodate secondary management purposes (“multiple uses”) was analyzed. These secondary purposes were considered within the context of the Division’s statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that cattle grazing of select improved pastures could be accommodated in a manner that would be compatible and not interfere with the primary purpose of resource-based outdoor recreation and conservation. This secondary management purpose is addressed in the Resource Management Component of the plan. Uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park.

The potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that multiple-use management activities would be appropriate at this park as an additional source of revenue in select areas for land management since they are compatible with the park’s primary purpose of resource-based outdoor recreation and conservation.

The use of private land managers to facilitate restoration and management of this unit was also analyzed. Decisions regarding this type of management (such as outsourcing, contracting with the private sector, use of volunteers, etc.) will be made on a case-by-case basis as necessity dictates.

## **MANAGEMENT PROGRAM OVERVIEW**

### **Management Authority and Responsibility**

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (Division) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values;



conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

The Trustees have also granted management authority of certain sovereign submerged lands to the Division under Management Agreement MA 68-086 (as amended January 19, 1988). The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely impact public recreational uses.

Many operating procedures are standard system wide and are set by policy. These procedures are outlined in the Division's Operations Manual (OM) that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, camping regulations, resource management, law enforcement, protection, safety and maintenance.

In the management of Colt Creek State Park, a balance is sought between the goals of maintaining and enhancing natural conditions and providing various recreational opportunities. Natural resource management activities are aimed at management of natural systems. Development in the park is directed toward providing public access to and within the park, and to providing recreational facilities, in a reasonable balance, that are both convenient and safe. Program emphasis is on interpretation on the park's natural, aesthetic and educational attributes.

### **Park Goals and Objectives**

The following park goals and objectives express the Division's long-term intent in managing the state park.

Estimates are developed for the funding and staff resources needed to implement the management plan based on these goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division's legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers and partnerships with agencies, local governments and the private sector, for supplementing normal legislative



appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

### **Natural Resources**

1. Protect, restore and maintain natural hydrological regimes to the greatest extent practicable.
  - A. Seek funding for and develop a hydrological restoration plan for restoring the natural drainage and flow of Gator Creek and Colt Creek by coordinating efforts with the Southwest Florida Water Management District (SWFWMD) and Polk County.
  - B. Eliminate ditches by plugging and backfilling to restore historic water levels and flow, where feasible.
  - C. Install additional culverts or box culverts under existing and future roadways to improve hydrological sheet flow while allowing for recreational use and management activities.
  - D. Evaluate the feasibility of removing the material blocking the flow of Little Gator Creek.
  - E. Monitor and evaluate hydrological restoration efforts.
2. Implement restoration of natural and highly altered communities or areas that will include the development of a restoration plan that identifies methods and provides a timeline for completion or perpetual maintenance.
  - A. Put in place long-term management activities designed to maintain open vistas of selected improved pastures.
  - B. Put in place interim management activities to manage pasture areas awaiting restoration activities.
  - C. Seek funding to initiate and gradually implement groundcover restoration of improved pastures as identified in the restoration plan.
  - D. Work with SWFWMD to identify seed collection sites within a 50-mile radius.
  - E. Implement a prescribed fire program to all fire-type communities, with emphasis on maintaining the current condition of the mesic flatwoods in the northeast corner of the park, while restoring areas that lack a normal fire regime using a 2-4 year fire interval.
  - F. Consider using timber management as a tool to restore select mesic and wet flatwoods sites, especially those that were previously planted.
3. Establish an exotic species removal and monitoring program.
  - A. GPS and create maps of all areas of exotic plant encroachment and begin initial treatment and utilize follow-up treatments to ensure eradication. Special emphasis should be placed on the eradication of cogongrass (*Imperata cylindrica*), skunk vine (*Paederia foetida*), Japanese climbing fern (*Lygodium japonicum*), and tropical soda apple (*Solanum viarum*).
  - B. Recruit volunteers interested in exotic plant removal and provide training and equipment to enable them to assist with the program.



- C. Implement a proactive approach at controlling exotic animal species including but not limited to feral hogs (*Sus scrofa*), coyotes (*Canis latrans*), and nine-banded armadillo (*Dasypus novemcinctus*).
  - D. Survey lakes, creeks and wetlands for exotic aquatic animal species and develop a plan to control them.
4. Protect, monitor and improve habitat conditions for designated species using natural systems management.
    - A. GPS and map out areas known to be inhabited by designated plant and animal species.
    - B. Conduct a preliminary survey to identify gopher tortoise (*Gopherus polyphemus*) populations and conduct burrow surveys to determine occupation of commensal species.
    - C. Continue ongoing flora and fauna surveys to identify new plant and animal species.
    - D. Provide protection of known Bald Eagle (*Haliaeetus leucocephalus*) nesting locations as identified by the Florida Fish and Wildlife Conservation Commission (FWC) and begin searching for additional nest sites.
    - E. Work with FWC to determine feasibility of reintroducing Red-Cockaded Woodpecker (*Picoides borealis*) populations into the park.
    - F. Survey for the Sherman's fox squirrel (*Sciurus niger shermani*) and Bachman's Sparrow (*Aimophila aestivalis*) to determine population size and locations.
  5. Improve basic knowledge of species occurrences and general biotic and abiotic conditions in the park.
    - A. Conduct water quality assessments of all borrow ponds and natural ponds and identify methods of improving water quality for flora, fauna and recreational use.
    - B. Conduct a yearlong survey for birds and butterflies and utilize findings to develop ID lists for park and visitor use.
    - C. Develop a vertebrate/invertebrate list for the park and continue to update the list as new species are identified.
    - D. Work with SWFWMD to establish and maintain ground water monitoring.
    - E. Work with FWC fisheries division to conduct a survey of the lakes to identify the types of game fish and other fish species present.

### **Cultural Resources**

1. Protect, restore and maintain cultural resources.
  - A. Seek funding to provide a complete archeological assessment of the park to identify both modern and archaic occupation sites.
  - B. Develop a written plan to protect and preserve the recorded archeological sites from erosion, slumpage, animal burrowing, root damage, tree fall and vandalism.
  - C. Establish monitoring measures of recorded sites for erosion, vegetation intrusion, and animal and human disturbances.



- D. Seek funding for a project to research and document the history of the park land and surrounding area.

### **Recreation**

1. Implement and provide quality resource based outdoor recreational and interpretive programs and facilities at the park.
  - A. Provide a road system that will provide visitor access to use areas and trailheads.
  - B. Develop a system of trails for hiking, bicycling and horseback riding.
  - C. Provide a picnic area near the lakes that offers shade and scenic view.
  - D. Plant appropriate native trees and shrubs around the lakes to provide shade and screening where feasible.
  - E. If feasible, provide an accessible interpretive/fitness trail around the largest lake to provide better lake access and increased recreational opportunities.
  - F. Assisted by FWC fisheries division, establish a fishing program that will allow recreational fishing of the lakes without depleting the lakes' resources.
  - G. Develop a "ranch headquarters" use area to serve as the main destination and recreational hub for the park.
  - H. Provide overnight camping facilities for a wide array of users including tent campers, RV campers, and equestrian campers.
  - I. Provide cabin accommodations as an alternative means of extended stays at the park.
  - J. Provide safe boating access to select lakes to include non-motorized watercraft such as canoes and kayaks.
  - K. Enhance nature study opportunities by providing visitors with species checklists and by installing interpretive displays of the area's history, flora and fauna throughout the park.

### **Park Administration/Operations**

1. Provide efficient and effective management of park resources and facilities while maintaining a high level of visitor service.
  - A. Pursue funding to acquire additional FTE positions as the parks operation grows in complexity.
  - B. Seek funding to accomplish goals and objectives set forth in the Unit Management Plan.
  - C. Build relationship with adjacent public land managers and establish inter-agency coordination of resource management activities.
  - D. Ensure that facilities are universally accessible and in compliance with the Americans with Disabilities Act.
  - E. Assure compliance with Division, state and federal safety guidelines and training requirements by providing training to all staff in visitor services, park information and emergency services.
  - F. Work with adjacent land managers to share information and provide

- connectivity of trails and facilities.
- G. Maintain high maintenance standards and conduct routine safety inspections to provide clean safe facilities and use areas.
  - H. Seek funding to meet staff residence needs and construct/upgrade support facilities including restrooms, shops and storage facilities.
  - I. Recruit and maintain volunteer support to assist park staff with the maintenance of park facilities, protection of park resources and implementation of park programs.
  - J. Establish and maintain effective park boundaries through fencing and posting of signs. Routinely patrol park boundary to monitor and discourage trespassing. Work with Florida Park Patrol and other state and local Law Enforcement Agencies with the intent of eliminating poaching on park property.
  - K. Establish and maintain an active public relations program that increases public awareness and support for the park including resource management activities such as prescribed burning and exotic removal.

### **Management Coordination**

The park is managed in accordance with all applicable Florida Statutes and administrative rules. Agencies having a major or direct role in the management of the park are discussed in this plan.

The Department of Agriculture and Consumer Services, Division of Forestry (DOF), assists Division staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FFWCC), assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within park boundaries. In addition, the FFWCC aids the Division with wildlife management programs, including the development and management of Watchable Wildlife programs. The Department of State, Division of Historical Resources (DHR) assists staff to assure protection of archaeological and historical sites. The Department of Environmental Protection (DEP), Office of Coastal and Aquatic Managed Areas (CAMA) aids staff in aquatic preserves management programs. The DEP, Bureau of Beaches and Wetland Resources aids staff in planning and construction activities seaward of the Coastal Construction Line. In addition, the Bureau of Beaches and Wetland Resources aid the staff in the development of erosion control projects. Emphasis is placed on protection of existing resources as well as the promotion of compatible outdoor recreational uses.

Acquisition funding for Colt Creek State Park was provided by the Southwest Florida Water Management District (SWFWMD), DEP and Polk County. The Division has worked closely with these partners during the management planning process and looks forward to building upon this healthy relationship through future coordinated efforts.



For instance, cooperation and coordination with SWFWMD will be pursued to restore impacted wetlands and drainages. Colt Creek and Gator Creek, historic blackwater streams, have been extensively ditched, diverting flow to man-made ditches. A hydrological restoration plan will be written to address the altered hydrology within the park.

### **Public Participation**

The Division provided an opportunity for public input by conducting two public workshops and an advisory group meeting. The first public workshop was held on September 21, 2006. The purpose of this meeting was to solicit public input for the new state park. The second public workshop was held on September 4, 2007. The purpose of this meeting was to present the draft management plan to the public for comment. An Advisory Group meeting was held on September 5, 2007. The purpose of this meeting was to provide the Advisory Group members the opportunity to discuss this draft management plan.

### **Other Designations**

Colt Creek State Park is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes and it is not under study for such designation. The park is a component of the Florida Greenways and Trails System.

All waters within the unit have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302 Florida Administrative Code. Surface waters in this unit are also classified as Class III waters by DEP. This unit is not adjacent to an aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (section 258.35, Florida Statutes).

## RESOURCE MANAGEMENT COMPONENT

### INTRODUCTION

The Division of Recreation and Parks has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park and identifies the methods that will be used to manage them. The stated management measures in this plan are consistent with the Department's overall mission in ecosystem management. Cited references are contained in Addendum 2.

The Division's philosophy of resource management is natural systems management. Primary emphasis is on restoring and maintaining, to the degree practicable, the natural processes that shape the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management may be implemented when the recovery or persistence of a species is problematic provided it is compatible with natural systems management.

The management goal of cultural resources is to preserve sites and objects that represent all of Florida's cultural periods as well as significant historic events or persons. This goal may entail active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management is often affected by conditions and occurrences beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program (to assess resource conditions, evaluate management activities and refine management actions), review of local comprehensive plans and review of permit applications for park/ecosystem impacts.

### RESOURCE DESCRIPTION AND ASSESSMENT

#### Natural Resources

##### Topography

Lands within Colt Creek State Park are relatively flat, with an average elevation of 90 feet above mean sea level. The highest spots that occur naturally are located in the mesic flatwoods community and the improved pastures toward the southeast corner of the park, where elevations reach 98 to 99 feet. The property slopes gradually to the northwest, toward the Withlacoochee River.

##### Geology

The Ocala Uplift is the underlying structure of the Withlacoochee River Basin. The



Uplift is post-Oligocene an anticline that is tension-faulted and runs in a northwest to southwest direction in the basin (SWFWMD, 2001). A large amount of weathering and erosion has occurred on the Uplift, creating the Green Swamp and Withlacoochee River basins. Limestone can be seen at the surface of the ground throughout the property, but mainly in the northern portion of the park, north of the borrow pit lakes. Where the limestone deposits are weathered by rainfall and storm events, they become pitted and fragmented leaving hollow crevices in the rock that can hold water. The limestone outcroppings below the surface also play a role in water retention in the Green Swamp. Limestone is a porous rock that acts as a sponge to absorb and hold water for long periods.

### **Soils**

The Natural Resources Conservation Service (formerly the U.S. Soil Conservation Service) identified 13 soil types in Colt Creek State Park in the Soil Survey of Polk County (Ford et. al, 1990). The locations of these soil types within the unit are shown on the Soils Map. Addendum 3 contains detailed descriptions of the soil series within this unit. A soil series is a general description of a category of soils that are similar but different based on slope or elevation.

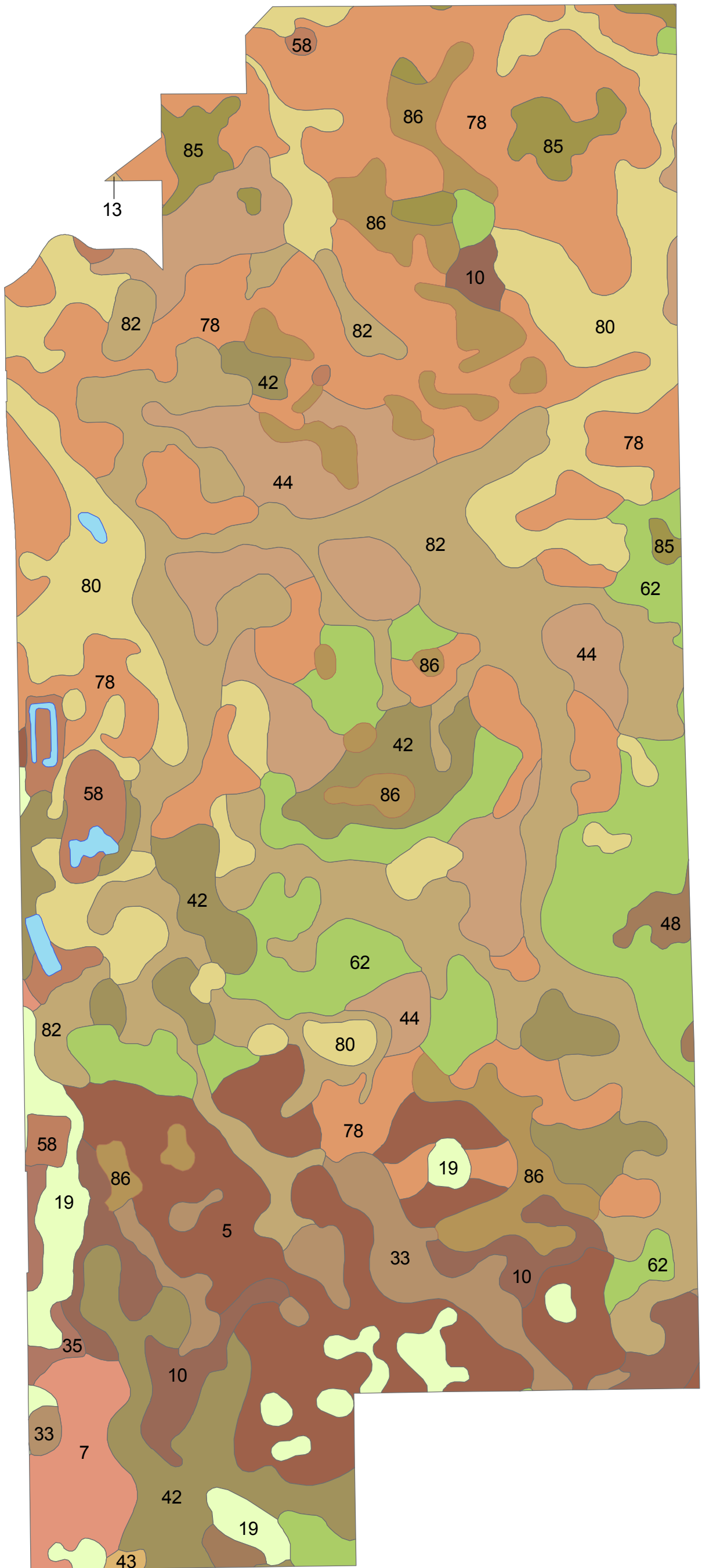
### **Minerals**

Valuable mineral resources, such as oil, gas or phosphate are not known in this area; however, portions of the property where the three large lakes now reside are pits from a past limestone mining operation. Limestone occurs near the surface of the ground throughout the park. In the slightly higher elevated mesic flatwoods community to the north of the borrow pit lakes, limestone outcroppings are exposed. The exposed outcroppings give the appearance of the pine rockland natural community found in extreme south Florida. The uniqueness of these limestone outcroppings in the Florida Park Service makes the protection of the mesic flatwoods essential.

### **Hydrology**

Colt Creek State Park lies within the region known as the Green Swamp. The Green Swamp is an area that covers about 870 square miles in central Florida and is the headwaters for four major rivers: the Ocklawaha, Peace, Hillsborough, and Withlacoochee. The park is split between the Withlacoochee and the Hillsborough river drainage basins. The majority of the park, including the northern and eastern portion, is within the Withlacoochee River basin. The southwest corner of the park is within the Hillsborough River basin.

Within the Withlacoochee Basin section of the park are three small creeks, which ultimately drain into the Withlacoochee River. Gator Creek flows into the park from the southeast, exits the park near the northwestern corner, and flows a short distance further before discharging into the Withlacoochee River. Colt Creek flows into the park from the east before discharging into Gator Creek on the west side of the park. Little Gator Creek meets Gator Creek near the junction with Colt Creek and from there flows



**LEGEND**

- 5-EauGallie fine sand
- 7-Pomona fine sand
- 10-Malabar fine sand
- 13-Samsula muck
- 19-Floridana mucky fine sand, depressional
- 33-Holopaw fine sand, depressional
- 35-Hontoon muck
- 42-Felda fine sand
- 43-Oldsmar fine sand
- 44-Paisley fine sand
- 48-Chobee fine sandy loam, depressional
- 58-Udorthents, excavated
- 62-Wabasso fine sand
- 78-Paisley fine sand, stony subsurface
- 80-Chobee fine sandy loam, frequently flooded
- 82-Felda fine sand, frequently flooded
- 85-Winder fine sand, depressional
- 86-Felda fine sand, depressional
- Water



off the park to the west and into the Withlacoochee River. During high water events, the flow can be reversed in these creek systems. All of these creeks were canalized to some extent during the 1950s and as a result, the hydrology of the park has been greatly altered. In addition, many drainage ditches were created to drain the land for cattle grazing.

Several borrow pits are present on the park. At least three of these pits were created as the result of former limestone mining operations and are quite large and very deep, up to 80 feet.

Many natural wetlands remain on the park including numerous cypress domes, depression marshes, and floodplain forests. The extent of damage to these systems because of hydrological alteration is not yet fully known.

### **Natural Communities**

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors, such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that areas which are similar with respect to these factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs.

The park contains seven distinct natural communities (see Natural Communities Map) in addition to ruderal and developed areas. Park specific assessments of the existing natural communities are provided in the narrative below. A list of plants and animals occurring in the unit is contained in Addendum 4.

**Mesic flatwoods.** This is the most widespread of the upland natural communities in the park. Although a large portion of the original flatwoods were converted to pasture or pine plantation, mined or heavily impacted by altered fire regimes, 670 acres have been well managed with fire and are presently in good to excellent condition. These higher quality flatwoods, located largely in the northern half of the park, are the pristine natural resource on the property and should be a primary focus for protection and resource management.

The flatwoods occur on relatively flat to gently sloping soils in a mosaic of habitats that is co-dominated by numerous dome swamps. Widespread limestone outcroppings are an unusual feature of the flatwoods, especially in proximity to the Withlacoochee River. Native groundcover diversity is high in the more frequently burned, less-





**LEGEND**

- 8 - Mesic Flatwoods-1853.71 ac.
- 9 - Mesic Hammock-4.23 ac.
- 29 - Bottland Forest-149.10 ac.
- 31 - Depression Marsh-21.63 ac.
- 32 - Dome Swamp-985.95 ac.
- 33 - Floodplain Forest-700.55 ac.
- 35 - Floodplain Swamp-130.78 ac.
- 84 - Ruderal-1221.03 ac.



disturbed areas. Herbaceous groundcover includes wiregrass (*Aristida beyrichiana*), pineywoods dropseed (*Sporobolus junceus*), lopsided Indiangrass (*Sorghastrum secundum*), broomsedge (*Andropogon virginicus*), prairie clover (*Dalea carnea* var. *carnea*), rattlesnake master (*Eryngium yuccifolium*), rose-rush (*Lygodesmia aphylla*), showy milkwort (*Polygala grandiflora*), Leavenworth's tickseed (*Coreopsis leavenworthii*), maid Marian (*Rhexia nashii*), four petal St. John's-wort (*Hypericum tetrapetalum*), gopher apple (*Licania michauxii*) and black senna (*Seymeria cassiodes*). Shrub species include saw palmetto (*Serenoa repens*), dwarf live oak (*Quercus minima*), running oak (*Q. elliotii*), shiny blueberry (*Vaccinium myrsinites*), fetterbush (*Lyonia lucida*), rusty lyonia (*L. ferruginea*), and gallberry (*Ilex glabra*). Second-growth stands of longleaf pine (*Pinus palustris*) are the dominant canopy species over most flatwoods, although slash pine (*P. elliotii*) is common in some areas (perhaps from past plantings).

The highest priority management needs of the mesic flatwoods include frequent prescribed fire and aggressive control of apparently localized infestations of cogongrass (*Imperata cylindrica*).

**Mesic hammock.** A small area of this community type has developed near the central portion of the western half of section 29 adjacent to the southeast portion of the largest mine pit lake. Based on old aerial images and the presence of a few remnant longleaf pines (at least one living catface pine), scattered pine stumps and other vegetation, this hammock developed on what was mesic flatwoods in the past. The entire northern edge of the hammock is bordered by the mine pit lake and a large pasture, resulting in a drier microclimate and more exposure to storm winds than would occur in a more complete forest matrix.

The mesic hammock contains a hardwood canopy dominated by mature, widely spaced live oaks that are covered with Spanish moss (*Tillandsia usneoides*) and reach a height of 50 feet or more. Resurrection fern (*Pleopeltis polypodioides*) is abundant on the oaks. Other tree species include sweetgum and pignut hickory. This was the only observed location of pignut during a park assessment in August 2006; it appears to be rare in the park. Other species in the hammock include saw palmetto, fringe tree (*Chionanthus virginicus*), American beautyberry (*Callicarpa americana*), yaupon (*Ilex vomitoria*), cabbage palm (*Sabal palmetto*), muscadine grape (*Vitis rotundifolia*), and yellow jessamine (*Gelsemium sempervirens*). Groundcover species diversity is low in this community - likely due in part to hog rooting.

Management of this community (and other examples, if found) would be protection from feral hogs and fire. If park facilities were located in this hammock, care should be taken to protect the few pignut hickories and catface longleaf pines. The invasive exotic Caesarweed (*Urena lobata*) occurs in the hammock, but is of low concern compared to other exotic plants in the park.



**Bottomland forest.** The park contains bottomland forest that occurs in a number of locations in the southern portion of the park in low-lying depressions that are rarely inundated. Historically, these forests only contained water during extreme rainfall and flooding events; due to the ditching of the property, many of these forests are dry year round. Aerial photography from 1941 show areas currently occupied by bottomland forest having an open canopy and often connected to and following natural drainages that flowed into Gator Creek.

Bottomland forest is characterized by a dense canopy of live oak (*Q. virginiana*), water oak (*Q. nigra*), laurel oak, (*Q. laurifolia*), red maple (*Acer rubrum*), and pignut hickory (*Carya glabra*) with a dense subcanopy of sabal palms. A number of species occur in the understory and ground cover including wax myrtle, common buttonbush (*Cephalanthus occidentalis*), and royal fern (*Osmunda regalis*).

Hydrological restoration of Gator Creek and the removal of man-made ditches are needed to restore this community to its historic condition.

**Depression marsh.** The best examples of this habitat have a relatively diverse, intact native groundcover with species including maidencane (*Panicum hemotomon*), sand cordgrass (*Spartina bakeri*), water hyssop (*Bacopa caroliniana*), creeping spotflower (*Spilanthes virgata*), buttonweed (*Diodea virginianum*), white-top sedge (*Dicromena colorata*), winged loosestrife (*Lythrum alatum* var. *lanceolatum*), and St. John's-wort (*Hypericum cistifolium*).

Depression marsh is one of the rarest habitats in the park. Highest management priorities should be hydrological restoration, water and vegetation monitoring, removal of feral hogs, and frequent prescribed burning to control tree and shrub encroachment. Torpedograce poses a major threat to this community.

**Dome.** Dome swamps are a dominant feature in the park. Most are embedded in a matrix of pine flatwoods - which is typical of the Green Swamp landscape. Habitat quality varies widely, but the park's domes are generally in good to fair condition. Disturbances include a shortened hydroperiod due to ditching and water diversions, a lowered water table due to nearby well fields, an altered fire regime and widespread impacts by feral hogs (*Sus scrofa*).

Although most or all of the larger bald cypress (*Taxodium distichum*) were logged out of the domes prior to state acquisition, the species still appears to be the dominant tree in most domes. In some cases, a shortened hydroperiod and/or a lowered water table have resulted in the death and toppling of cypress along perimeters of the domes and the widespread invasion of laurel oak (*Q. laurifolia*) and water oak (*Q. nigra*). The latter is not a normal widespread component of dome swamp interiors, but large individuals are dominant in major portions of most of the park's examples. Other common tree

species include sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), popash (*Fraxinus caroliniana*), and American elm (*Ulmus americana*). Herbaceous vegetation is continuous in many domes, with interior groundcover often dominated by sawgrass (*Cladium jamaicensis*) and ecotones along a disturbed area usually dominated by the invasive exotic torpedograss (*Panicum repens*). Widespread char on cypress trunks in many domes indicate that fire has passed through domes in recent years – probably not nearly as common of an occurrence prior to hydrological disturbances. Unless water levels rise in domes, park staff cannot expect to use many of the domes as firebreaks. Other species in dome interiors include Virginia willow (*Itea virginica*), large sedge (*Carex gigantea*), swamp milkweed (*Asclepias incarnata*), Virginia iris (*Iris virginica*) and squarestem (*Melanthera nivea*).

Dome-flatwoods ecotones have been heavily impacted by feral hogs and altered hydrology. In at least one case, the previous owner converted the ecotone to a narrow bahiagrass pasture (*Paspalum notatum* var. *saurae*) in the southwest ¼ of Section 18. No intact ecotones were found during three days of inspection August 14-16, 2006, and hogs have turned over the soil in most or all ecotones. Native groundcover diversity is low, but includes orange milkwort (*Polygala lutea*), pink sundew (*Drosera capillaris*), Maidencane (*Panicum hemitomon*) and pipeworts (*Lachnocaulon* sp.). Skyflower (*Hydrolea corymbosa*) and cinnamon fern (*Osmunda cinnamomea*) occur in wetter ditches connecting some domes. A dome with a narrow overgrown seepage ecotone occurs in the north ½ of SE 1/4 of SW 1/4 of Section 17, with species including fetterbush, loblolly bay (*Gordonia lasianthus*), red chokeberry (*Photonia pyrifolia*), and laurel greenbriar (*Smilax laurifolia*).

The highest priority management needs of the dome swamps include hydrological restoration, and aggressive sustained removal of feral hogs. Torpedograss is dominant in the vast majority of dome-flatwoods ecotones (facilitated by hog rooting); removal of this grass may be an insurmountable task. The invasive exotic skunkvine (*Paederia foetida*) occurs in the upper to mid slopes of some domes; hydroperiod restoration would be the most effective way to remove this noxious weed from swamps.

**Floodplain forest.** This community is associated with Gator Creek drain, Colt Creek drain, and Little Gator Creek drain. Its original extent and configuration is unknown, since the community has been greatly affected by ditches that were dug in the early 1950s to drain the surrounding communities. Species present include: bald cypress, water oak, laurel oak, sweetgum, hackberry, Walter's viburnum (*Viburnum obovatum*), rattan vine, silverling, bluestem palmetto (*Sabal minor*), and common yellowstar grass (*Hypoxis curtissii*).

The highest management priority for this community type is to alleviate the impacts of ditching as much as possible.

**Floodplain swamp.** The floodplain swamp occurs as strips of hydric forest embedded within the floodplain forest community along Colt and Gator Creeks. This community is generally in fair to poor condition. Common canopy species include bald cypress, sweetgum, and swamp tupelo (*Nyssa biflora*).

Alligatorflag (*Thalia geniculata*) is common within areas devoid of trees where depressions hold water yearlong.

**Ruderal.** A majority of the ruderal area is improved pasture located throughout the park in large open areas. Groundcover consists of common pasture grasses such as bahiagrass (*Paspalum notatum* var. *saurae*), foxtail (*Setaria* sp.), crabgrass, and durban crowfootgrass (*Dactyloctenium aegyptium*) with dog fennel and sicklepod found in patches throughout.

Most of the pastures were historically mesic flatwoods, occurring on slightly higher ridges than the surrounding wetlands. Land clearing began in the late 1940s and continued until the acquisition of the park in 2006. The remaining ruderal areas consist of shallow wetlands created to provide water for cattle and large borrow pits from past limestone mining operations. The borrow pits contain water which offers recreational opportunities for visitors. These pits are believed to be extremely deep (up to 80 feet) in some areas.

The highest management priority for ruderal areas would be controlling invasive exotics in the improved pastures and controlling the channeled apple snail (*Pomacea canaliculata*) in the borrow pit lakes. Torpedograss, cogongrass, tropical soda apple (*Solanum viarum*), and Caesarweed are abundant in the improved pastures.

A cattle lease may be needed as an interim management practice to control the vegetation height within selected improved pastures. The park will evaluate the feasibility of a cattle lease at Colt Creek State Park.

### **Designated Species**

Designated species are those that are listed by the Florida Natural Areas Inventory (FNAI), U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), and the Florida Department of Agriculture and Consumer Services (FDA) as endangered, threatened or of special concern. Addendum 5 contains a list of the designated species and their designated status for this park. Management measures will be addressed later in this plan.

Overall, management activities on the park will be based on an ecosystem management approach. Listed species are declining statewide and/or nationally and often require special management attention to ensure their continued survival. Parks or preserves usually encompass only a fragment of a species' original habitat, and habitat on



adjacent lands can be lost to development. Development and land conversion has restricted movement within many species' ranges to small, disjunct fragments. For many listed species, government-managed lands offer the best hope for survival. The designated species found on the park will benefit from the large-scale natural systems management approach that will be used.

A top management priority for the park is to maintain or increase existing populations of listed species of plants and animals occurring on site. Species that are more common will also be managed and inventories of all plants and animals found within the preserve will be maintained. There are currently 18 designated species that have been observed at Colt Creek State Park: 2 plants and 16 animals (Addendum 5). A recovery plan has been developed, the Bald Eagle and Wood Stork. Management activities will be based on recommendations for the recovery of each of these species.

### **Special Natural Features**

Limestone occurs near the surface of the ground throughout the park. In the slightly higher elevated mesic flatwoods community to the north of the borrow pit lakes, limestone outcroppings are exposed. The exposed outcroppings give the appearance of the pine rockland natural community found in extreme south Florida. The uniqueness of these limestone outcroppings in the Florida Park Service makes the protection of the mesic flatwoods a must. Additional research is needed to ascertain the origin and historic significance of this feature.

### **Cultural Resources**

Evaluating the condition of cultural resources is accomplished using a three part evaluative scale, expressed as good, fair, and poor. These terms describe the present state of affairs, rather than comparing what exists against the ideal, a newly constructed component. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair judgment is cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action to reestablish physical stability.

The Florida Master Site File (FMSF) lists one site (FMSF PO00215) which is partially within the park. Other cultural resources occur in the Colt Creek area on adjacent public lands, and additional unknown cultural resources may exist in the park. Based on a preliminary site assessment by staff from the Bureau of Archaeological Research, there is the potential for more cultural and/or historic sites at this unit.

## RESOURCE MANAGEMENT PROGRAM

### Special Management Considerations

#### Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the Division's statutory responsibilities, and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of early successional communities such as sand pine scrub and coastal strand.

During the development of this plan, an analysis was made regarding the feasibility of timber management activities for this park (see Addendum 6). It was then determined that the primary management objectives of the unit could be met without conducting timber management activities for this management plan cycle. Timber management will be reevaluated during the next revision of this management plan.

#### Additional Considerations

Management of natural communities is often enhanced by physically restoring areas that have been disturbed or otherwise manipulated by people. Such management is often achieved in the course of hydrologic, scenic or other restoration measures such that two or more management goals can often be achieved simultaneously. Most of the disturbed sites of the park are large-scale and will require cooperation from other agencies to achieve restoration. The priority areas include restoring Gator Creek and Colt Creek and evaluating the condition of Little Gator Creek.

#### **Management Needs and Problems**

1. Past land management practices on this property have greatly altered the historic flow patterns of both Colt Creek and Gator Creek. Restoring these flows will limit the amount of recreational activities the park can provide; therefore, more research and collaboration with SWFWMD will need to be conducted prior to hydrological restoration.
2. Restoring the improved pastures will require a restoration plan and funding. In the interim, a cattle agreement would control weeds and keep down the vegetation height in the pastures until funding becomes available to begin the restoration process. The pastures adjacent to the proposed ranch and equestrian campground will be managed as a pasture. The open vistas will be preserved, but wetlands and wetland connections within the pastures will be restored to the fullest extent possible.

3. The altered hydrology of the park has led to a decrease in water that the wetlands historically contained, which may prevent them from holding a prescribed fire during the drier seasons. Consideration must be given if these areas are used as natural fire breaks.
4. The presence of cattle on the property will aid in the spreading of invasive exotics. Cogongrass has spread throughout the park and is encroaching into the pristine mesic flatwoods. Special attention and care should be given during the initial treatment of exotics to prevent destroying surrounding native groundcover species such as wiregrass and saw palmetto.
5. No written burn history is available for this property; however, conversations with the previous owner reveal that the past fire regimes have for the most part been conducted in the fall and winter months (October, January and February). Additional funds will be needed to restore fire-suppressed communities.

### **Management Objectives**

The resources administered by the Division are divided into two principal categories: natural resources and cultural resources. The Division's primary objective in natural resource management is to maintain and restore, to the extent possible, to the conditions that existed before the ecological disruptions caused by man. The objective for managing cultural resources is to protect these resources from human-related and natural threats. This will arrest deterioration and help preserve the cultural resources for future generations to enjoy.

#### **Natural Resources**

1. Conserve, protect, and manage natural communities, significant habitat, and ecological systems.
  - A. Survey for exotic plant and animal species and develop and implement an exotic species removal program
  - B. Develop and implement a prescribed fire program to maintain fire as an ecosystem process with emphasis on maintaining the current condition of the flatwoods in the northeast corner of the park while restoring areas that lack a normal fire regime
  - C. Seek funding for additional staff to aid in the preparation, implementation, and evaluation of resource management
  - D. Monitor the effects of prescribed fire on listed plant and animal species
2. Restore the original hydrology of the park to the greatest extent practicable.
  - A. Develop a plan for restoring the natural drainage and flow of Gator Creek and Colt Creek by coordinating efforts with the Southwest Florida Water Management District (SWFWMD) and Polk County
  - B. Seek funding for carrying out the restoration plan
  - C. Eliminate ditches by plugging or backfilling where feasible
  - D. Evaluate raised roads and roads that may impede water flow. Relocate roads and close roads wherever practicable



- E. Install additional culverts under existing and future roadways to improve hydrological flow and maintain existing and future access for recreational use and management activities
- F. Monitor and evaluate hydrological restoration efforts
- 3. Maintain or increase populations of listed plant and animal species occurring in the park.
  - A. Explore opportunities for wildlife connectivity, linkages, and wildlife crossings between other public lands nearby
  - B. Survey and monitor populations of Sherman's fox squirrel
  - C. Survey and monitor populations of gopher tortoises
  - D. Complete a small mammal survey
  - E. Conduct surveys for other listed species
  - F. Develop and implement a prescribed fire program
- 4. Restore highly altered or severely impacted natural communities.
  - A. Develop a restoration plan for these areas identifying clear goals, targets, and timeline
  - B. Seek funding to initiate and gradually implement groundcover restoration of ruderal flatwoods and improved pastures as identified in the restoration plan.
  - C. Work with surrounding land managers to locate areas for native species seed collection within a 50-mile radius from the park.
  - D. Where feasible, put in place interim management activities to control and maintain exotic grasses and weeds in pastures awaiting restoration, which may include cattle grazing and haying.
  - E. Put in place long-term management activities designed to maintain open vistas of the improved pastures adjacent to the proposed ranch while restoring wetlands and wetland connections.

### **Cultural Resources**

1. Seek funding to provide a complete archeological assessment of the park to identify both modern and archaic occupation sites
2. Develop a plan to protect and preserve the recorded archaeological sites
3. Conduct ground disturbing activities in accordance with DHR guidelines
4. Seek funding for a project to research and document the history of the park land and surrounding area and use the findings to create educational and interpretive programs
5. Improve public awareness and encourage protection of cultural resources through education and enforcement of agency rules and regulations

### **Ecological Targets**

#### **Mesic Flatwoods**

1. Canopy cover of mature pines of multiple age classes (at least 3 age classes).
2. Herbaceous groundcover covering at least 50% of the community
3. Saw-palmetto shrub component making up no more than 75% of the shrub cover.

4. Variety of shrubs in addition to saw palmetto, including but not limited to: fetterbush, rusty lyonia, gallberry, and tarflower.

### **Management Measures for Natural Resources**

#### **Hydrology**

The overall hydrology of the park has been severely altered by past activities and land use. Extensive ditching has resulted in reduced hydroperiods for most of the park's wetlands. Large areas of both uplands and wetlands have been cleared to create cattle pasture or for limestone mining. Other areas of the park have been logged of pine or cypress and some of these areas have been planted in slash pine rows. All of these activities have affected the hydrology of the park.

The canalization of the creek systems on the park coupled with the extensive ditching and draining of other areas has had a tremendous impact on the area's hydrology. Restoration activities should address these problems and efforts should be made to back-fill as many of the ditches as possible and to restore the original flow of the creek systems. It is likely that Colt Creek could be rerouted to flow through the original channel and the ditch, which carries the flow, could be back-filled and restored to the historic floodplain forest community. The park and SWFWMD have begun to investigate possible restoration strategies for Colt Creek. A hydrological model will need to be developed in order to determine if restoration is feasible. An access road or park drive will need to be accommodated in this area by either elevating the roadway or using a series of box culverts to prevent damming.

There are many existing roads and fire lines on the park that are near the edges of wetlands. Efforts should be made maintain roads and fire lines that are needed and to allow unneeded ones to re-vegetate. Roads and fire lines bordering wetlands that are needed and maintained should be used only when necessary to minimize the impact to adjacent wetlands. Some wetlands may benefit from the installation of culverts or low water crossings across these roads. Further investigation should be done to determine if existing roads and fire lines are adversely impacting wetlands.

There are known sites on the park that have been used as waste spray fields. The park also has about 1,300 acres of pasture that potentially could be a source of fertilizer and/or herbicide/pesticide runoff. Surface and groundwater should be monitored closely for contaminants at multiple locations throughout the park. In addition, more investigation should be done to find potential contaminant sources and if found, they should be handled appropriately and monitored closely.

Many of the dome swamps and mesic flatwoods that were once present in the park in the current improved pasture, have been cut and cleared. These areas could potentially be restored to their historical condition.

The Hillsborough River Basin portion of the park, located in the southwest corner, has been proposed as a potential mitigation project site by the SWFWMD. The conceptual mitigation plan includes large-scale restoration of both wetlands and uplands. Much of this area has been cleared for pasture, ditched, and drained. Restoration activities will include ditch filling, pasture restoration and enhancement of existing natural communities. Along with restoring disturbed habitats to natural communities that once existed in the park, new wetlands may be created. These areas will enhance the appearance of the landscape while creating valuable marsh habitat for wildlife. Division staff will work with SWFWMD and Polk County to develop a hydrological restoration plan for this area before restoration work moves forward.

Care should be taken to keep cattle fenced and away from wetlands as much as possible to prevent damage caused by hooves, grazing, and nutrient input. In addition, cattle should be kept away from ditches and creeks that could potentially carry wastes downstream and contaminate other wetland systems.

Management will comply with best management practices to maintain or improve the existing water quality on site and will take measures to prevent soil erosion or other impacts to water resources.

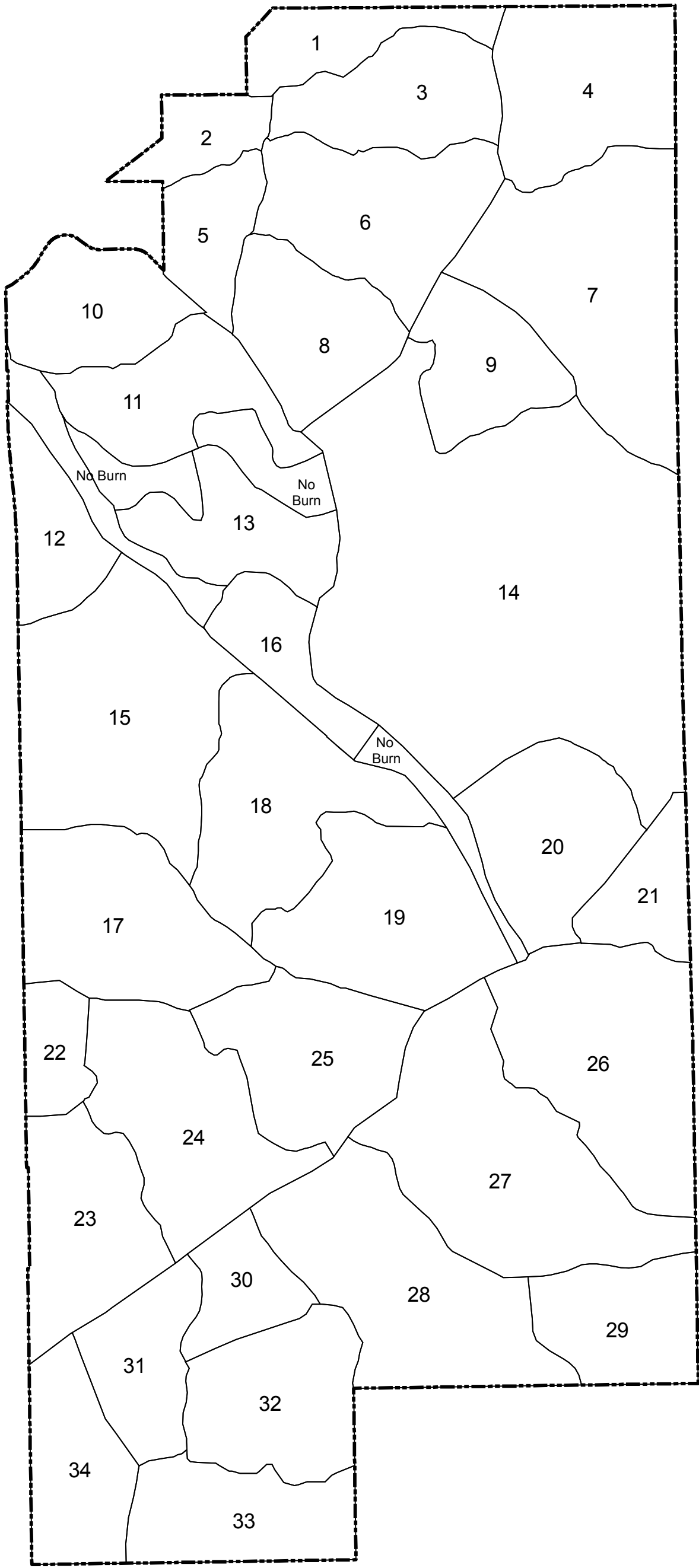
### **Prescribed Burning**

The objectives of prescribed burning are to create those conditions that are most natural for a particular community, and to maintain ecological diversity within the unit's natural communities. To meet these objectives, the park is partitioned into burn zones, and burn prescriptions are implemented for each zone. The park burn plan is updated annually to meet current conditions. All prescribed burns are conducted with authorization from the Department of Agriculture and Consumer Services, Division of Forestry (DOF). Wildfire suppression activities will be coordinated between the Division and the DOF.

There are 1,879 total burn acres at this unit divided into 34 burn zones (see Burn Zones Map). Both fuel reduction and restoration burns are necessary. Since a majority of the property is dominated by mesic flatwoods, all zones will have a target fire return interval of 2-4 years. Each year an annual burn proposal is developed. Fire will be the main restoration tool, but additional methods such as mechanical removal of hardwoods and palmettos should be considered. These issues will be addressed in the annual burn proposal for the park.

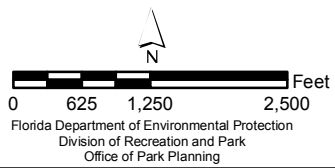
At the time of acquisition there was no written record of burn history for Colt Creek; conversations with the previous owner revealed that the past fire regimes have been conducted in the fall and winter months (October, January, and February). The main purpose of these fires was to burn the groundcover in order to provide new herbaceous





**LEGEND**  
- - - - Park Boundary  
□ Burn Zones

COLT CREEK  
STATE PARK



BURN ZONES  
MAP

growth of plants high in nutritional value. This provided food for the cattle during the cooler times of the year when the pastures were non-productive as a food source for the cattle operation. Special care was taken to “back fire” for the most part in order to reduce “needle drop” which is detrimental to cattle grazing in the flatwoods community. These slow burning cooler fires have produced very good groundcover, but have not allowed the pine trees to burn as they would during a natural fire event resulting in some areas to become “overgrown” with pine trees. This point could be argued since many groundcover species (such as wiregrass and other grasses) show a decreased germination rate after being burned using only cooler fires. In addition, cooler fires typically encourage hardwood species to grow as opposed to herbaceous species.

Colt Creek State Park can be generally divided into three types of natural community conditions. The first condition is where the natural communities are in good shape and require “maintenance” burning. The second condition is where the natural communities, due to fire suppression, have progressed to various stages of succession. The third condition, which dominates the park’s acreage, contains areas that are either pasture or pine plantation.

The flatwoods located on the northern portion of the property are in “maintenance” condition and could be placed on a growing season 2-4 year burn cycle. There are recent fire scars on the pine trunks and a good presence of herbaceous ground cover. Cypress domes located within the flatwoods are in good, fire-maintained condition as well.

The southern portion of the property shows evidence of fire exclusion. Winter fuel-reduction burns will be required in some areas before they will safely burn or benefit ecologically from a growing season burn. Some areas may benefit from mechanical or herbicide treatment before burning.

The property is traversed by many roads that could be used as fire lines. Some roads however may need to be closed especially those located close to wetlands. Further reconnaissance is needed to determine burn zones if current roads are sufficient to act as fire lines and if additional fire lines are needed. The condition of the perimeter fireline also needs more investigation. The north perimeter line is in good condition.

### **Designated Species Protection**

The welfare of designated species is an important concern of the Division. In many cases, these species will benefit most from proper management of their natural communities. At times, however, additional management measures are needed because of the poor condition of some communities, or because of unusual circumstances that aggravate the particular problems of a species. To avoid duplication of efforts and conserve staff resources, the Division will consult and coordinate with appropriate

federal, state and local agencies for management of designated species. Specifically, data collected by the FWC and USFWS as part of their ongoing research and monitoring programs will be reviewed periodically to inform management of decisions that may have an impact on designated species at the park.

The designated species found at the unit will largely benefit from the restoration of ecological processes and habitat, specifically prescribed burning and hydrological restoration.

**Sherman's fox squirrel (*Sciurus niger shermani*).** This species has been documented in numerous areas of the park. A unit-wide survey should be conducted to ascertain the size and extent of the fox squirrel population and possible nesting locations. Management for this species would include maintaining the mesic flatwoods through prescribed fire in order to increase forage and an open canopy condition.

**Bachman's Sparrow (*Aimophila aestivalis*).** This species appears to be abundant in the 670 acres of pristine mesic flatwoods community on the north end of the park. A monthly bird survey that will survey for the sparrow and determine its abundance within the park is planned to begin in January 2007. Management of the natural community and protection is similar to the fox squirrel by maintaining an open canopy of pines in the mesic flatwoods.

**Florida Sandhill Crane (*Grus canadensis pratensis*).** This subspecies resides in Florida year round and the park offers an abundance of crane habitat. An active fire management program on the park will benefit the cranes by providing the open vegetation structure they prefer. No special management activities beyond the fire management program are needed to maintain sandhill cranes.

**Gopher tortoise (*Gopherus polyphemus*).** Gopher tortoises occur within the unit in small numbers. Burrow surveys for tortoises in burn zones with suitable habitat will need to be conducted following prescribed burns in order to further assess the status of the population according to protocol developed by Cox et. al, 1994.

**Bald Eagle (*Haliaeetus leucocephalus*).** Bald Eagles currently nest within the park and The Bald Eagle Management Guidelines developed by the U.S. Fish and Wildlife Service will be strictly followed to protect the birds throughout the year.

**Limpkin (*Aramus guarauna*).** Limpkins appear to be abundant on the property and can be seen regularly along the banks of the borrow pit lakes, ditches, and natural water features. No special attention is needed for this species except to improve and increase habitat through hydrological restoration.

**Wading birds.** A number of listed wading birds species use the park for feeding and

resting. No special attention is needed for these species except to continue the fire management program and to improve or increase habitat through hydrological restoration.

**Red-Cockaded Woodpecker (*Picoides borealis*).** Although this species has not been seen on this site, it is likely that it occurred onsite in the past. FPS will work with FWC and USFWS to determine the feasibility of reintroducing Red-Cockaded Woodpeckers into the park.

### **Exotic Species Control**

Exotic species are those plants or animals that are not native to Florida, but were introduced because of human-related activities. Exotics have fewer natural enemies and may have a higher survival rate than do native species, as well. They may also harbor diseases or parasites that significantly affect non-resistant native species. Consequently, it is the strategy of the Division to remove exotic species from native natural communities. Several exotic plant and animal species have been observed on Colt Creek.

**Plants.** An effort should be made to eradicate all exotic plants from the park, with priority given to exotics occurring in or encroaching upon natural areas. Exotic plant surveys should be conducted to determine the extent to which the park is infested. Exotic plant locations and extent of coverage should be mapped using GPS and GIS technology for all occurrences. A determination needs to be made if current infestations can be treated using current staff or if additional personnel or volunteers are needed. Contract services may be required. Grant monies should be applied for when available to help with the cost of exotic plant removal. Once treatment has begun, follow up surveys should be conducted and treatment results evaluated. Sites should be regularly monitored and re-treated as needed. Periodically areas of the park not known to contain exotic plants should be surveyed to check for new occurrences.

Consideration should be given when conducting management activities within areas containing exotics plants. It is important that current exotic locations be mapped and anyone (staff, contractors, etc.) operating equipment in the park be made aware of their locations to avoid spreading exotic plants. When using prescribed fire, exotic plants, such as climbing fern and cogongrass, may be a concern because of the increase in fire intensity and the possible spreading of spores.

Treatments using herbicides and mechanical treatment will be used to control invasive exotic plants. Herbicides will be used sparingly.

**Animals.** An effort should be made to eradicate exotic animals from the park. Feral hogs, nine-banded armadillos (*Dasypus novemcinctus*), and coyotes (*Canis latrans*) are established at the park. Of these three, feral hogs pose the greatest threat to the unit's



resources. Staff should pursue aggressive removal efforts targeted at hogs and coyotes. Coyotes are opportunistic feeders and can soon overpopulate an area. If left uncontrolled they can pose threat to a variety of game and listed species. The level of ecological damage that armadillos can have has likely been underestimated by many resource managers. Staff should make a concerted effort to remove as many armadillos as possible during the early spring of each year prior to the breeding season. This has been shown to reduce the need for reduction efforts during the remainder of the year.

Non-native fish species, such as tilapia (*Tilapia mossambica*); currently occur in streams on the park. Where fishing is allowed, no limit should be placed on exotic fish (current FWC fishing regulations should be followed).

Exotic apple snails are present throughout the park. Research has shown that this species will eat all of the available vegetation within ponds and lakes. A removal plan will need to be developed and implemented.

### **Problem Species**

Problem species are defined as native species whose habits create specific management problems or concerns. Occasionally, problem species are also a designated species, such as alligators. The Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species that are considered a threat or problem.

The American alligator can pose a problem in the proposed lake day-use areas. Only when the alligators show signs of aggression and pose a threat to the safety of visitors will they be removed from the park after consulting with FWC.

Raccoons (*Procyon lotor*) may become a nuisance to campers at this unit. When appropriate, raccoons will be removed to protect visitors from possible harm.

### **Special Management Considerations**

Numerous improved pastures are present throughout the park and require different forms of management to protect the natural and cultural resources of the park. The pastures adjacent to the proposed ranch facility will be preserved as part of the cultural history that will be interpreted to visitors of the park. These pastures will provide beautiful vistas for wildlife viewing and space for special events. In order to maintain the vistas of these pastures, cattle may be used to control nuisance plant species as well as control the height of the vegetation. Another management practice that may be used to control vegetation growth and to maintain the open vistas is a haying agreement. Haying the pastures around the ranch will also allow visitors to see the methods that cattle ranchers use to maintain their land. Wetlands and wetland connections that exist or once existed within the pastures adjacent to the ranch will be restored.

The pastures that occur elsewhere in the park may present problems for park staff. Restoration activities will not begin on all the pastures at the same time. To restore improved pastures to an intact mesic flatwoods community, significant funds, time, equipment and materials will be needed. As restoration begins on one pasture, the remaining pastures will need to be maintained to control exotic species and to prevent the spread of nuisance species. Cattle grazing and haying of the pastures may be needed to maintain these pastures until restoration efforts begin to prevent the pasture from succeeding past a burnable condition (i.e. a dog fennel pasture). If this approach is taken, the cattle should remain in the pasture and not have access to public use areas. Once cattle are restricted from natural streams in order to keep the cattle from fouling and eroding streams, it will be necessary to find other sources of water for the cattle by means of troughs and wells.

### **Management Measures for Cultural Resources**

The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to approval of the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case-by-case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should prepare for locating and evaluating historic resources, both archaeological sites and historic structures.

The general objective for the management of the cultural resources at Colt Creek State Park is to protect, preserve and interpret the prehistoric and historic resources of the parks. Because of the presence of recorded archaeological sites within the park, and the probability of more currently unidentified sites, management measures for cultural resources should include monitoring the recorded sites and performing additional surveys.

Any ground disturbing activities will be conducted in accordance with DHR guidelines

and Division standards, which specifies that all such activities be subjected to review according to the Division's Cultural Resources Matrix, and that appropriate activities be submitted for comment to the DHR in accordance with Chapter 267, Florida Statutes.

If any additional archaeological surveys locate and identify any prehistoric and/or historic sites, management measures for cultural resources should develop a phased plan for managing the resources in the context of their surroundings. This should include developing a workable written plan for the physical management of the identified resources. The plan should outline approved methodologies for executing the plan and training staff and volunteers to manage the cultural resources of the park.

The park currently has a sufficient number of staff who have been trained and certified as archaeological monitors. As the composition of the park's staff changes over time, efforts should be made to insure that there is always at least one staff member who is a certified archaeological monitor.

## **Research Needs**

### **Natural Resources**

Any research or other activity that involves the collection of plant or animal species on park property requires a collecting permit from the Department of Environmental Protection. Additional permits from the Florida Fish and Wildlife Conservation Commission, the Department of Agriculture and Consumer Services, or the U.S. Fish and Wildlife Service may also be required.

Hydrological monitoring needs to be conducted to determine water levels and quality of groundwater and surface water. Contacts need to be established with the Southwest Florida Water Management District and the U. S. Geological Survey to establish and install monitoring wells to look at water levels at different aquifer depths and the interaction between surface lake levels and the surficial aquifer. Data collection will provide baseline information as water withdrawals continue to increase in the area.

There is a need for a comprehensive invertebrate species survey, bat survey, herpetological survey, small mammal survey, and bird survey. The survey and monitoring of gopher tortoises to estimate population size and recruitment should take place.

Methods for pasture restoration within the Green Swamp area need to be investigated. Research on upland restoration techniques should be supported.

### **Cultural Resources**

Research is needed for possible evidence or documentation on the activities of the cattle, timber, turpentine, farming and transportation industries, and the acquisition and operational history of Colt Creek State Park.

### **Resource Management Schedule**

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is contained in Addendum 7. Cost estimates for conducting priority management activities are based on the most cost effective methods and recommendations currently available.

### **Land Management Review**

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled in the name of the Board of Trustees of the Internal Improvement Trust Fund (board) are being managed for the purposes for which they were acquired and in accordance with a land management plan adopted pursuant to s. 259.032, the board of trustees, acting through the Department of Environmental Protection (department). The managing agency shall consider the findings and recommendations of the land management review team in finalizing the required update of its management plan.

A land management review has not been conducted for Colt Creek State Park.





## **LAND USE COMPONENT**

### **INTRODUCTION**

Land use planning and park development decisions for the state park system are based on the dual responsibilities of the Division of Recreation and Parks. These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation and management, through public workshops, and environmental groups. With this approach, the Division objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use, and specific areas within the park that will be given special protection, are identified. The land use component then summarizes the current conceptual land use plan for the park, identifying the existing or proposed activities suited to the resource base of the park. Any new facilities needed to support the proposed activities are described and located in general terms.

### **EXTERNAL CONDITIONS**

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, regional demographics, adjacent land uses and park interaction with other facilities.

Colt Creek State Park is located within Polk County, about thirteen miles northwest of Lakeland and the Interstate 4 corridor in central Florida. The populations of Polk and the adjacent Hillsborough, Pasco, Sumter and Lake Counties have grown 42 percent since 1990, and are projected to grow an additional 36 percent by 2020 (BEER, University of Florida, 2006). The median age for Polk County is 39.4 years, which reflects the state average (BEER, University of Florida, 2006). Over 4 million people reside within 50 miles of the park, which includes the cities of Lakeland, Orlando and Tampa (Census, 2000).

Colt Creek State Park is a new state park. The state acquired the 5,067-acre property

in May 2006 through a joint effort with the Southwest Florida Water Management District (SWFWMD) and Polk County. The park was opened to the public for limited access in January 2007. As facilities and recreational use areas become developed, the park is expected to attract many visitors from both near and far. The park is also located short distances from both Interstate 4 and Interstate 75, major corridors for tourist travel in Florida. These future visitors are expected to provide a significant, direct economic impact to the local economy.

### **Existing Use of Adjacent Lands**

The state park is situated east of State Road 471 between U.S. Highway 98 and the Withlacoochee River and is adjacent to nearly 173,000 acres of publicly owned conservation lands within the expansive Green Swamp Area of Critical State Concern. The park is also adjacent to existing agricultural lands and a few rural residential areas.

The Polk County Future Land Use Map (2005) designates the park property for Agricultural-Rural Residential land uses. According to the Land Development Code, some of the park uses and recreation development proposed in this plan require a conditional use permit. Division staff is working with Polk County Land Development Division to coordinate this and other development regulation issues. The Division has also been talking with SWFWMD about road elevations, stormwater treatment criteria, wetland permitting and restoration.

Immediately north of the state park boundary lies the Green Swamp Wilderness Preserve-East Tract that is managed by SWFWMD. The 67,670-acre East Tract offers hiking, bicycling, primitive group camps and fishing. The Florida Fish and Wildlife Conservation Commission (FWC) manages the scheduled hunts that take place at certain times throughout the year. Immediately east of the state park is known as the Hampton Tract which is also managed by SWFWMD. This area is particularly popular with equestrian groups and offers trails and a group camp. Of note, there is also one single family home adjacent to the northwest corner of the state park.

To the north of the Green Swamp Wilderness Preserve is the Withlacoochee State Forest-Richloam Tract which is cooperatively managed by the Florida Division of Forestry (DOF) and FWC as a Wildlife Management Area (WMA). In addition to seasonal hunting, this 58,146-acre forest provides opportunities for hiking, horseback riding, bicycling, picnicking and fishing.

To the west of the park, across State Road 471, are two additional publicly owned properties. The 37,350-acre West Tract of the Green Swamp Wilderness Preserve is managed by SWFWMD while FWC manages the hunts. The West Tract offers similar recreational opportunities as the East Tract plus horseback riding and remote wilderness paddling on the Withlacoochee River. The 566-acre Little Gator Creek

Wildlife and Environmental Area (WEA) is managed by FWC. The WEA is home to a large wood stork rookery and provides a nature trail and observation deck. Also along the west side of State Road 471 are two additional rural residential areas. Between the park's southern boundary and U.S. Highway 98 is improved pasture.

The park has the potential to connect to nearly 200 miles of shared-use trails on these neighboring conservation lands including more than 13 miles of the Florida National Scenic Trail that traverses the Green Swamp Wilderness Preserve to the north of the park.

### **Planned Use of Adjacent Lands**

Since the park is mostly surrounded by publicly owned conservation land, there is limited potential for future growth and development adjacent to the park. The Polk County Future Land Use Map (2005) identifies all properties east and south of the park as "agriculture/rural residential." This designation would allow the private landowner to the south of the park to build single-family homes at a density of one dwelling unit per five acres. Across State Road 471 in Pasco County, the public properties are designated for "conservation" land use and the private properties are allocated for "agricultural" land use (2005). The "agricultural" designation allows agriculture, mining, agro-industrial uses, small commercial uses, recreation facilities and rural residential uses at a density of one dwelling unit per ten acres. In addition, a "conservation" land use category has been applied to the public lands north of the Withlacoochee River in Sumter County (2005).

The Florida Department of Transportation (FDOT) has not identified any road expansion projects for either U.S. Highway 98 or State Road 471 near the state park in their 2007-2011 Work Program. However, some commercial growth along the U.S. Highway 98 corridor near the park should be expected in the future as Lakeland continues to sprawl to the north and the park becomes a popular destination.

### **PROPERTY ANALYSIS**

Effective planning requires a thorough understanding of the unit's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. The unit's recreation resource elements are examined to identify the opportunities and constraints they present for recreational development. Past and present uses are assessed for their effects on the property, compatibility with the site, and relation to the unit's classification.

#### **Recreation Resource Elements**

This section assesses the unit's recreation resource elements those physical qualities that, either singly or in certain combinations, supports the various resource-based recreation activities. Breaking down the property into such elements provides a means for measuring the property's capability to support individual recreation activities. This process also analyzes the existing spatial factors that either favor or



limit the provision of each activity.

### **Land Area**

The park consists of 5,067-acre mosaic of pine flatwoods, cypress domes, hardwood swamps and improved pasture. The park contains seven distinct natural communities, five of them wetlands. Over 1,000 acres of the park are ruderal areas in cleared pasture and manmade lakes. The upland communities provide many opportunities for trail use, camping and wildlife observation. However, flooding during the wet season could make recreational activities difficult at times.

### **Water Area**

The park is located within the southwest corner of the Green Swamp. The swamp is a critical recharge area for the Floridan aquifer and serves as the headwaters of the Hillsborough, Withlacoochee, Peace and Ocklawaha rivers. The park contains altered portions of Gator Creek and Colt Creek, its namesake. These creeks are tributaries of the Withlacoochee River that flows just to the north of the park boundary. These creeks are not navigable by small boat or canoe/kayak. The Resource Management Component (RMC) of this management plan discusses the potential for hydrological restoration.

The northwest portion of the park also contains a grouping of three man-made lakes which are remnants of a limestone mining operation. From east to west, the lakes are approximately 3, 7 and 26 acres respectively at normal water levels. The smallest lake is relatively shallow with aquatic growth. The two larger lakes reportedly contain deep holes that drop sharply in places to 80 feet below the surface. Fishing could become a popular activity as the larger lakes have been stocked over the years. In addition, it is unlikely that a swimming area could be provided in any of the lakes due to public health concerns.

Of note, the portion of the Withlacoochee River directly north of the park boundary has drawn interest from paddlers. All indications are that the river is much smaller above the confluence with Gator Creek and does not provide a useable recreational resource. Division staff will continue to monitor this stretch of the river and explore the possibility of maintaining a canoe/kayak trail. If determined to be feasible and the SWFWMD provides the Division with management interest for the property between the current park boundary and the Withlacoochee River, the Division will support developing a canoe/kayak launch and parking area in the park in the future.

### **Natural Scenery**

The lakes area offers the most scenic views in the park and would make attractive backdrops for many recreational uses. The open pasture areas also provide scenic vistas not commonly available in state parks. In addition, the pastures serve as a reminder of the significant role that ranching has played in Florida's history.

### **Significant Wildlife Habitat**

The park provides habitat for abundant native wildlife including the gopher tortoise, bald eagle, alligator, white-tailed deer, wild turkey, fox, bobcat, bobwhite quail, sandhill crane and wood storks.

### **Archaeological and Historical Features**

The park is located in the upper reaches of the Withlacoochee River basin where chert-bearing limestone occurs near the surface and once represented a likely source of raw material for stone tool production in prehistoric times (Dunbar & Porter, 2006). Not much is known about the park property specifically, however, surrounding lands contain known sites indicating that people camped, lived and hunted in the area for at least 14,000 years. Archaeological site testing and evaluation is recommended prior to any planned ground disturbing activity.

### **Assessment of Use**

All legal boundaries, significant natural features, structures, facilities, roads and trails existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

#### **Past Uses**

The property has been used in the past for a turpentine operation, logging and cattle grazing.

#### **Recreational Uses**

Former landowners have enjoyed horseback riding, hunting, and fishing on the property.

#### **Other Uses**

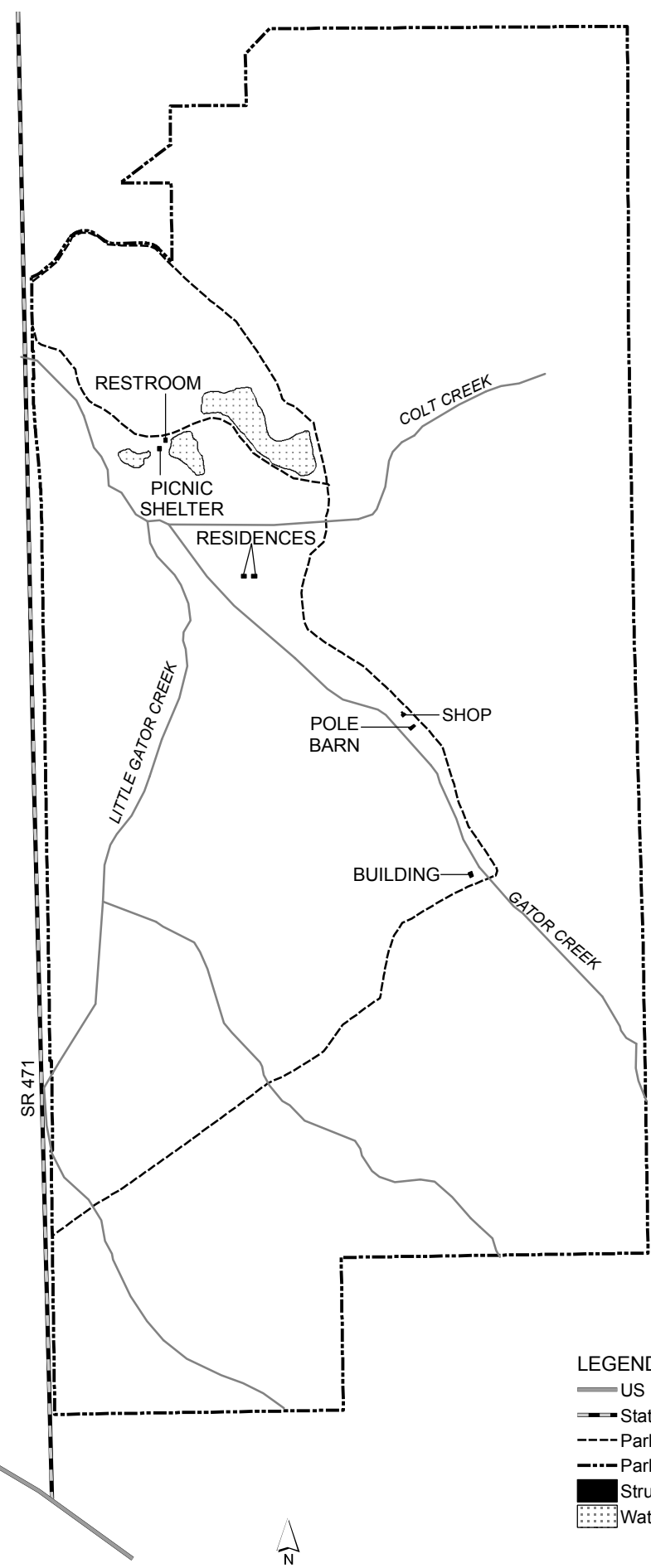
The Division will consider establishing a cattle lease and/or haying agreement for portions of the park property in order to maintain select pastures.

#### **Protected Zones**

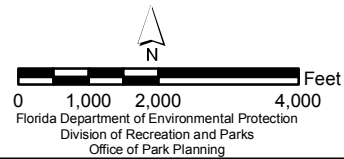
A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis.

At Colt Creek State Park, the bottomland forests, depression marshes, domes, floodplain forests, floodplain swamps and select mesic flatwood areas have been designated as protected zones as delineated on the Conceptual Land Use Plan.

# COLT CREEK STATE PARK



- LEGEND**
- US Highway
  - - - State Road
  - · · Park Road Unpaved
  - - - Park Boundary
  - Structures
  - ▨ Water Bodies



BASEMAP

## Existing Facilities

### Recreation Facilities

This property is a new addition to the state park system. A basic amenities package called a “starter kit” was recently installed for the lakes area to allow limited public access to the property. The starter kit consists of a picnic shelter, restroom, interpretive kiosk and stabilized parking area.

### Support Facilities

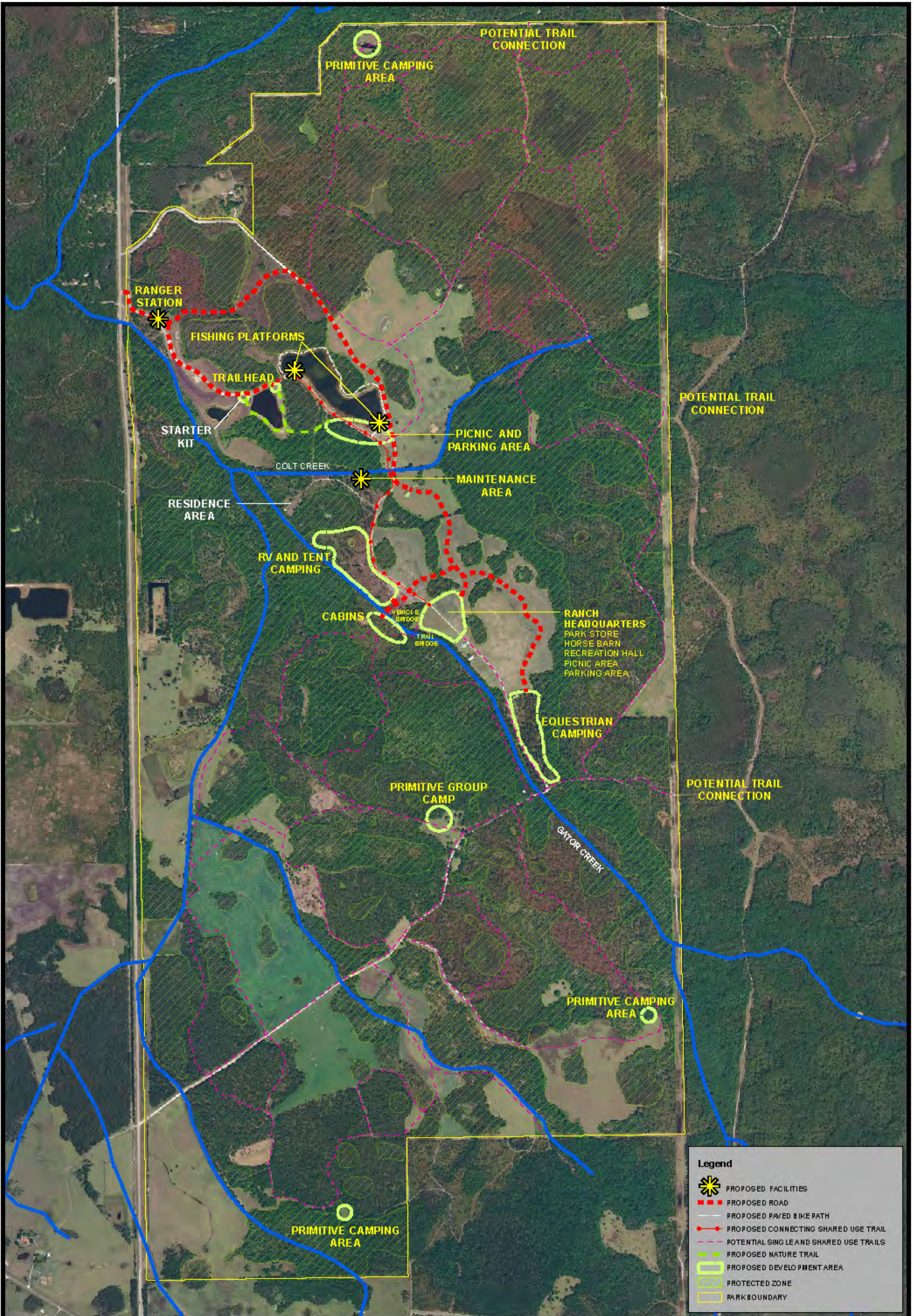
An entrance gate has been established off State Road 471 near the northwest corner of the property. A stabilized road delivers visitors to the starter kit area. A large pole barn, a metal building, a wooden shed and an old hunting cabin were left behind by the previous landowner. In addition, two ranger residences have recently been placed in the park.

## CONCEPTUAL LAND USE PLAN

The following narrative represents the current conceptual land use proposal for this park. As new information is provided regarding the environment of the park, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions (see Conceptual Land Use Plan). A detailed development plan for the park and a site plan for specific facilities will be developed based on this conceptual land use plan, as funding becomes available.

During the development of the unit management plan, the Division assesses potential impacts of proposed uses on the resources of the property. Uses that could result in unacceptable impacts are not included in the conceptual land use plan. Potential impacts are more thoroughly identified and assessed through the site planning process once funding is available for the development project. At that stage, design elements, such as sewage disposal and stormwater management, and design constraints, such as designated species or cultural site locations, are more thoroughly investigated. Advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Stormwater management systems are designed to minimize impervious surfaces to the greatest extent feasible. All facilities are designed and constructed using best management practices to eliminate impacts and mitigating those that cannot be avoided. Federal, state and local permit and regulatory requirements are met by the final design of the projects. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, the park staff monitors conditions to ensure that impacts remain within acceptable levels.





**Legend**

- PROPOSED FACILITIES
- PROPOSED ROAD
- PROPOSED PAVED BIKE PATH
- PROPOSED CONNECTING SHARED USE TRAIL
- POTENTIAL SINGLE AND SHARED USE TRAILS
- PROPOSED NATURE TRAIL
- PROPOSED DEVELOPMENT AREA
- PROTECTED ZONE
- PARK BOUNDARY

# COLT CREEK STATE PARK



# CONCEPTUAL LAND USE PLAN



## Potential Uses and Proposed Facilities

Colt Creek State Park has potential to become a popular destination. Due to its connectivity to nearly 173,000 acres of publicly owned conservation lands and its proximity to major cities and highways, this 5,067-acre park should appeal to visitors from both near and far. It is envisioned that the park will serve as the recreational hub for the conservation lands within the Green Swamp since most of the existing public access areas provide only limited facilities. Park development recommended in this plan is intended to reflect the cultural history of this longtime cattle ranch and capitalize on the scenic qualities of the open pastures, the man-made lakes, and the well-managed mesic flatwoods. Trail use and camping are expected to be popular pursuits at the park while the lakes area will support a variety of recreational activities. However, the flood-prone nature of the property will likely result in seasonal closure of parts or all of the park. The following text discusses the conceptual land use plan for the park:

### Recreation Facilities

**Entrance Station and Park Road.** Beginning at the new entrance gate, a paved network of roads is recommended that will deliver visitors to each of the use areas proposed in this plan. The proposed roads will utilize existing service roads and open pasture, to the extent possible. A ranger station with office space is recommended approximately 1000 feet inside the entrance gate. From this point, the park road would split. The existing route to the starter kit area would remain as a spur road to this day-use area. Most visitors, however, would be routed to the north around the lakes before heading south through open pastures with branches terminating at the proposed ranch headquarters and camping and cabin areas as shown on the Conceptual Land Use Plan.

**Small Lakes Trailhead Area.** The area between the two smaller lakes is the location of the initial park development. A starter kit consisting of a picnic shelter, portable restroom, interpretive kiosk, and parking area has been placed there. This plan recommends expanding this day-use area in the future to serve as a trailhead and picnic area. Recommended facilities include an additional picnic shelter, a permanent small picnic area restroom, signage to orient trail users, and additional parking. Trees and shrubs should be planted in this day-use area to provide shade and screening and enhance the aesthetic quality of the area.

From this trailhead, visitors could access the extensive network of proposed hiking, equestrian and biking trails as well as a proposed paved trail that would circumnavigate the larger lake and link with the other recommended use areas within the park, as discussed below.

**Large Lake Picnic Area.** Another lakeside day-use area is recommended for the

southeastern shoreline of the largest man-made lake. This area is appealing for picnicking, fishing, and canoe/kayaking. Two medium-sized screened picnic shelters, scattered picnic tables, two fishing platforms, restroom and parking are recommended. The park should seek assistance from FWC fisheries specialists to establish a program that will support a catch-and-release recreational fishing of the lakes without depleting the lake's resources.

**Trails.** It is envisioned that this park will serve as the gateway to the 173,000 contiguous acres of public land within the Green Swamp. In addition to providing trail access to and from the adjacent conservation lands, the park would also support trail users by providing a variety of overnight accommodations, trail and camping supplies, and other trail-related visitor services. It is also the intent of the Conceptual Land Use Plan to introduce the urbanized regional population to the cultural landscape of an old Florida ranch and encourage non-vehicular access to the park's natural areas and recreational amenities by providing a variety of trail types.

The extensive network of existing service roads on the property will be used to create a system of trails for hikers, equestrians and bicyclists. The total length of potential trail is approximately thirty miles. To the extent possible, trail designations will separate equestrian, bicycle and hiking trail users, but shared-use alignments will be implemented as needed for protection of the park's resources, visitor safety and convenience and operational efficiency.

The trail network will connect to existing trails on adjacent conservation lands. In particular, a hiking trail will link the park to the Florida National Scenic Trail that runs directly north of the park boundary before turning north and crossing the Withlacoochee River. Likewise, an equestrian trail will be routed to the eastern boundary to connect with the popular equestrian trails within the Hampton Tract of the Green Swamp Wilderness Preserve, managed by the SWFWMD.

The trail system also provides opportunities for interpretation of the park's natural resources and history. A series of interpretive displays and signs are recommended along the trails in strategic locations that will highlight water quality and quantity issues, the role of the Green Swamp as a major point of recharge to the Floridan Aquifer, upland and wetland restoration efforts within the park and the Green Swamp region, the history of ranching and other agricultural land uses in Florida, and Native American use of this chert-rich area of the state. Trail kiosks will also provide visitors with watchable wildlife tips and species checklists to enhance opportunities for wildlife observation.

Up to five primitive campsites are recommended along the park's trail network to support multiple-day excursions. Each campsite should offer a stabilized tent area with a fire ring. The exact placement of these campsites will be determined during

future trail planning; the areas identified on the CLUP are just preliminary recommendations. The primitive campsites will be designed for all trail user groups, and necessary accommodations for equestrian campers with horses will be provided.

An important element of the park's trail concept is the paved trail, eight to ten feet in width, recommended to circumnavigate the larger lake and to link the lake area trailhead with the proposed ranch headquarters and camping areas to the south. This universally accessible interpretive/fitness and biking trail will provide extensive opportunities for walking, jogging, bicycling and skating for visitors of all ages and abilities, and provide non-vehicular access to park amenities for overnight and day-use guests.

**Ranch Headquarters.** A centrally located “ranch headquarters” is recommended to serve as the main destination of the park where visitors can choose from a variety of recreational opportunities. The proposed facilities within the ranch headquarters area include a large picnic area with several large and medium-sized screened picnic shelters, playground and restroom; a recreation hall or large group shelter; a park store; a horse rental stable; a registration and administrative office with gift shop; and the park’s main trailhead area with interpretive kiosks, trail orientation information, equestrian hitching facility, bike racks, bike wash facility, and access to the proposed trails network. The layout and design of these facilities will complement the cultural landscape of this longtime cattle ranch and include rustic, Florida ranch style buildings, fencing and other landscape features. As part of the design of the park facilities, the extent of open pastures will be determined. It may be possible to convert the existing large pole barn in this area into a horse stable for use by a concessionaire. The parking area for day-use visitors at the ranch should accommodate forty cars and twenty horse trailers.

Recommended overnight use areas have been located in close proximity to the ranch headquarters and connected to the activity of the hub by trails, so guests can easily reach the ranch headquarters by foot, horse or bike.

**Standard Camping Area.** A camping area for up to sixty campsites with electric, water and sewage hook-ups is recommended. The proposed location is a previously disturbed pine flatwoods area, as shown on the Conceptual Land Use Plan. Centrally located bathhouses should also be provided. In addition to these standard RV campsites, a tent camping loop is proposed that would provide from eight to ten short walk-in sites.

This camping area is strategically located within a short distance of the ranch headquarters. Paved and natural surface connector trails are proposed to link the standard camping area to the ranch headquarters as well as the other day-use areas in an effort to encourage non-vehicular visitor movement within the park.

**Equestrian Camping Area.** There is large equestrian population near the park that generates a strong demand for trail riding and camping opportunities. An equestrian camping area is proposed approximately 1500 feet south of the ranch headquarters in an attractive, shaded area. Twenty campsites are recommended, initially. If demand dictates, additional equestrian campsites will be considered. The proposed layout of this camping area would be similar to the equestrian camping area at Kissimmee Prairie Preserve State Park where the campsites surround centrally located paddocks equipped with hayracks and running water. Each campsite should provide water and electric hook-ups. A bathhouse and manure shed are also proposed to service the equestrian camping area.

In addition, a stabilized day-use horse trailer parking area is recommended adjacent to this camping area to support organized rides between overnight and day-use visitors. From this camping area, equestrians can easily access the ranch headquarters and the trail network.

**Cabin Area.** A set of cabins and bunkhouses is also recommended to offer an additional type of overnight accommodation at the park while reinforcing the Florida ranch theme. A total of eight units are proposed, at least one of which would provide universal accessibility. The proposed location of the cabin development is across the channelized Gator Creek from the standard camping area. This location offers good shade and separation from the other use areas while staying in walking distance to the ranch headquarters area. A vehicular bridge and a shared-use trail bridge will need to be constructed to access this area. Four family style cabins and four bunkhouses that could support group rentals are proposed. These accommodations could also be reserved by individuals or groups traveling with horses. A small paddock and horse trailer parking area are recommended near the bunkhouses to support this use.

**Primitive Group Camp.** A primitive group camp is recommended for groups up to sixty people. The proposed location is within an attractive hammock area along a clearing in the southern half of the property. This area provides separation from other use areas and offers both well-shaded areas and a large field for group activities. Facilities will include a large shelter, restroom, tent pads, campfire circle and corral.

### **Support Facilities**

**Residence and Shop Area.** As part of the initial development of the park, two residences have been placed in a clearing along a service road north of the proposed standard camping area. A shop area is recommended nearby in an area that also is not visible from visitor use areas. Recommended facilities include a 4-bay shop building, 3-bay equipment shelter, and a flammable storage building. This area is ideal due to its central location among the recreational facilities proposed in this

plan.

Two additional residences are recommended in an area to be determined with all weather access to State Road 471.

**Volunteer Sites.** In an effort to support the park staff with resource management and visitor services, this plan recommends providing campsites for park volunteers within the proposed shop area and/or adjacent to the old hunting cabin.

### **Facilities Development**

Preliminary cost estimates for the following list of proposed facilities are provided in Addendum 7. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist the Division in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes.

Architectural theme and circulation are also important components for facilities development at this park. The design and layout of park development should reflect the cultural history of the property as a longtime cattle ranch. Therefore, rustic Florida ranch style buildings are recommended along with fences, open pastures, and other landscape features. All buildings and primary use areas will provide universal access. In addition, appropriate technology to conserve energy and water and reduce solid waste will be utilized.

The layout of the proposed use areas was designed, in part, to encourage visitor movement within the park by foot, bike and/or horse. Therefore, trails linking the primary use areas are recommended that are separated from the park roads. These paved and natural surface connector trails are envisioned to be an amenity to attract urban visitors, provide an alternative means of circulation and expand the universally accessible facilities of the park. In addition, the park roads and parking areas should be designed to separate camper and equestrian vehicles to enhance public safety.

In regards to stormwater management, priority is placed on water quality protection. Stormwater management design should protect and enhance the aesthetic values of the park. In addition, all electric and phone utilities should be placed underground and sewage disposal should be handled using the best available technology and designed to protect aesthetic values of the park. The following is a list of the facilities proposed in this management plan:

#### **Small Lakes Trailhead Area**

Medium picnic shelter  
Restroom

Interpretive signage (3)  
Parking (10 vehicles)



### **Large Lake Picnic Area**

Medium screened picnic shelters (2)  
Scattered picnic tables  
Fishing platforms (2 @ 100ft each)

### **Trails** (up to 30 miles)

Interpretive kiosks (5)  
Interpretive signs (20)  
Primitive campsites (5)

### **Ranch Headquarters**

Recreation hall  
Park store  
Office/gift shop  
Horse barn  
Large screened picnic shelters (2)  
Medium picnic shelters (2)  
Playground

### **Standard Camping Area**

Campsites with water and electricity (60 campsites)

### **Equestrian Camping Area**

Campsites with water and electricity (20 initially, expandable in future)  
Paddocks

### **Cabin Area**

Cabins w/furniture (4 standard, 4 bunkhouse)  
Small paddock area

### **Primitive Group Camp**

Large shelter  
Designated tent area  
Campfire circle

### **Support Facilities**

Ranger Station  
Park Road (4 miles)  
Shop Building (4-bay)  
Equipment Shelter (3-bay)

Restroom  
Parking (30 vehicles)

Paved trail (2.2 miles)  
Trail bridges (5)

Large restroom  
Equestrian hitching facility  
Bike racks  
Bike wash facility  
Standard vehicle parking (40 vehicles)  
Horse trailer parking (20 vehicles and overflow area)

Tent campsites (8-10)  
Bathhouses (2)

Bathhouse  
Manure shed

Horse trailer parking (10 vehicles)  
Cabin office/storage building

Restroom  
Corral

Flammable Storage Building  
Residences (2)  
Volunteer Campsites (4)

## Existing Use and Optimum Carrying Capacity

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site and the unit's classification is selected (see Table 1).

**Table 1--Existing Use and Carrying Capacity**

<b>Activity/Facility</b>	<b>Existing Capacity</b>		<b>Proposed Additional Capacity</b>		<b>Estimated Optimum Capacity</b>	
	<b>One Time</b>	<b>Daily</b>	<b>One Time</b>	<b>Daily</b>	<b>One Time</b>	<b>Daily</b>
	<b>Trails</b>	50	100	250	500	300
<b>Lake Day-Use Areas</b>						
Small Lake	18	36	18	36	36	72
Large Lake			120	240	120	240
<b>Ranch Headquarters</b>						
Picnic Area			116	232	116	232
Recreation Hall			60	120	60	120
<b>Fishing</b>	30	60	50	100	80	160
<b>Canoe/Kayaking</b>			10	20	10	20
<b>Camping Areas</b>						
Standard			480	480	480	480
Tent Loop			40	40	40	40
Equestrian			120	120	120	120
Group Camp			60	60	60	60
Primitive Campsites			18	18	18	18
<b>Cabins</b>			48	48	48	48
<b>TOTAL</b>	<b>98</b>	<b>196</b>	<b>1,390</b>	<b>2,014</b>	<b>1,488</b>	<b>2,210</b>

The optimum carrying capacity for this park is a preliminary estimate of the number of users the unit could accommodate after the current conceptual development program has been implemented. When developed, the proposed new facilities would approximately increase the unit's carrying capacity as shown in Table 1.

### Optimum Boundary

As additional needs are identified through park use, development, research, and as

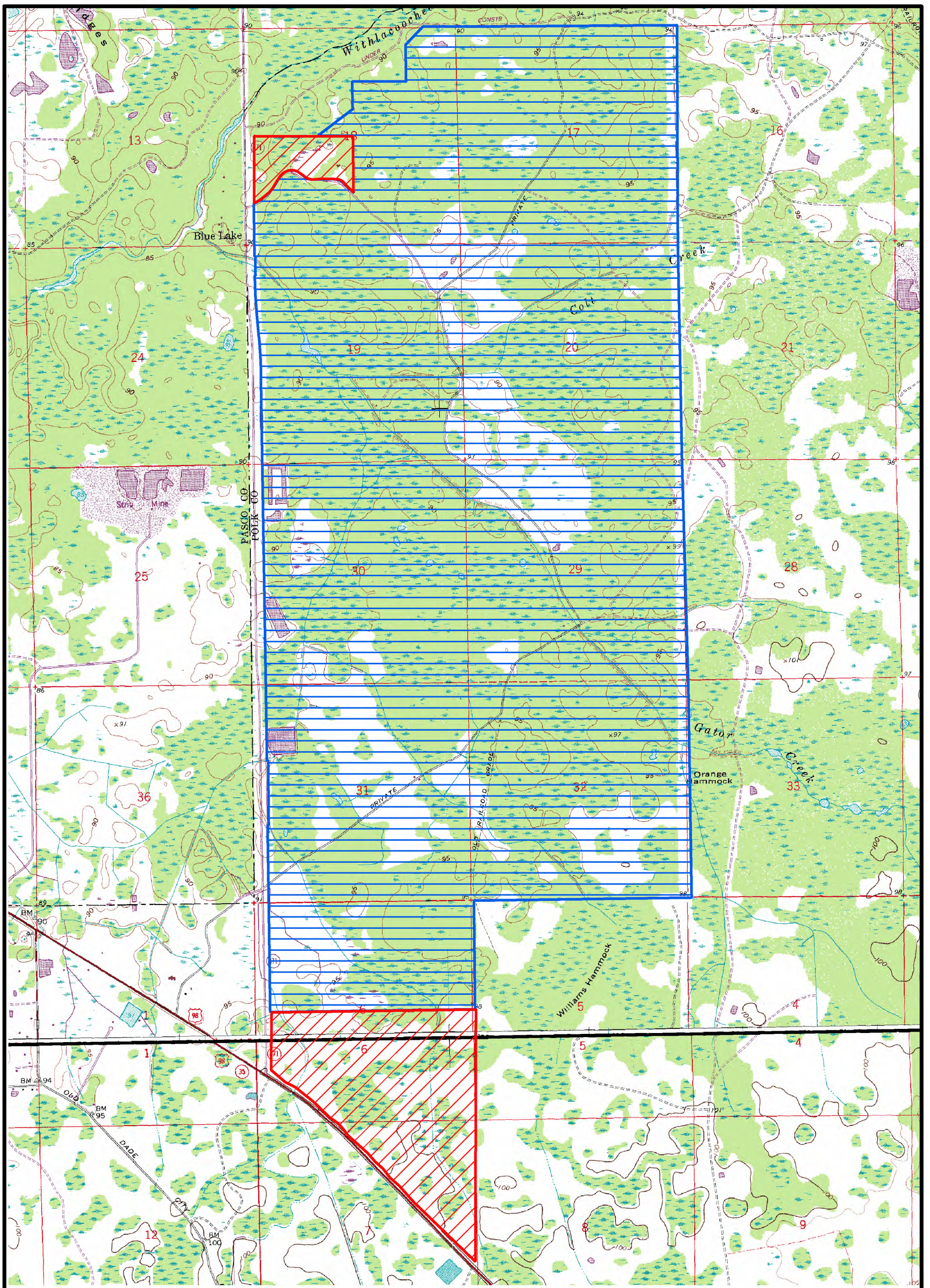
adjacent land uses change on private properties, modification of the unit's optimum boundary may occur for the enhancement of natural and cultural resources, recreational values and management efficiency.

Identification of lands on the optimum boundary map is solely for planning purposes and not for regulatory purposes. A property's identification on the optimum boundary map is not for use by any party or other government body to reduce or restrict the lawful right of private landowners. Identification on the map does not empower or require any government entity to impose additional or more restrictive environmental land use or zoning regulations. Identification is not to be used as the basis for permit denial or the imposition of permit conditions.

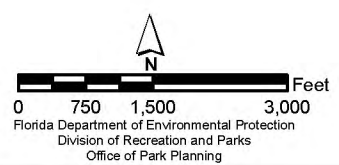
The optimum boundary map reflects lands identified for direct management by the Division as part of the park. These parcels may include public as well as privately owned lands that improve the continuity of existing park lands, provide additional natural and cultural resource protection, and/or allow for future expansion of recreational activities. At this time, no lands are considered surplus to the needs of the park.

The optimum boundary map identifies two properties adjacent to the boundary of the state park. One property is located at the northwest corner of the park along State Road 471. This 60-acre parcel is surrounded by conservation lands and would protect one of the park's service entrances from future development. The second property contains more than 400 acres between the park's southern boundary and U.S. Highway 98. It, too, is adjacent to the Green Swamp Wilderness Preserve. Acquisition of this property would prevent potential development along the park's southern boundary.





COLT CREEK  
STATE PARK



- LEGEND
- Park Boundary
  - Optimum Boundary

OPTIMUM BOUNDARY MAP







**Addendum 1 – Acquisition History and Advisory Group List with Staff Report**



## Colt Creek State Park Acquisition History

---

### **Purpose of Acquisition**

The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) and the South West Florida Water Management District (District) have acquired Colt Creek State Park to conserve and protect unique natural and cultural values of the property for the citizens of the state.

### **Sequence of Acquisition**

On May 31, 2006, the Trustees and the District purchased a 5,067-acre property that constitutes the present area of Colt Creek State Park. The Trustees and the District, which maintain undivided 50 percent interest in this property, purchased the property from C. M. Overstreet and Mark F. Overstreet & Carol R. Overstreet for \$53,203,290. Of this total purchase price, the Trustees and the District each paid \$ 24,369,500 and Polk County contributed \$5,000,000, allocated equally toward the Trustees' and the District's purchases. The Trustees' purchase was funded under the Florida Forever program.

### **Management Leases**

On August 1, 2006, the Trustees and the District together leased Colt Creek State Park to the Florida Department of Environmental Protection, Division of Recreation and Park ("Division"), under Lease No. 4532. The lease is for a period of fifty (50) years, which will expire on July 31, 2056.

According to Lease No. 4532, the Division manages Colt Creek State Park only for the development, conservation and protection of natural and cultural resources of the park and to use the property for resource-based public outdoor recreation compatible with the conservation and protection of the resources.

### **Title Interest**

The Trustees and the District hold title to Colt Creek State Park.

### **Special Conditions on Use**

Colt Creek State Park is designated single-use to provide resource-based public outdoor recreation and other park related uses. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park.

## Colt Creek State Park Acquisition History

---

### Outstanding Reservations

Following is a listing of outstanding rights, reservations and encumbrances that apply to Colt Creek State Park.

**Instrument:** .....Warranty Deed  
**Instrument Holder:** .....C.M. Overstreet and Mark F. Overstreet &  
Carol R. Overstreet  
**Beginning Date:**.....May 31, 2006  
**Ending Date:**.....Perpetuity  
**Outstanding Rights, Uses, Etc.:** .....The warranty deed reserves to the instrument holders a perpetual, non-exclusive, easement for ingress and egress upon, over, and across the 25-foot wide lime rock that is currently being used by the instrument holders to access their property.

## Management Prospectus

---

**Qualifications for state designation.** The Green Swamp Florida Forever project has the size and wildlife resources to qualify as a wildlife management area.

**Manager.** The Fish and Wildlife Conservation Commission (FWC) is recommended as the manager for most of the project area. The Division of Recreation and Parks, Department of Environmental Protection will manage the area adjacent to Lake Louisa State Park, with Sections 3,4, and 5, T24S, R26E being the southern extent of its management.

**Conditions affecting intensity of management.** The primary management tools in the area to be managed by FWC involve prescribed introduction of fire and control of human access. Some pine forests will require restoration. The portion of the project adjacent to Lake Louisa, to be managed by DRP, is a high-need management area with emphasis on public recreational use and development and major resource restoration. The majority of the properties in this area is or was citrus groves. The portion of the project known as the Overstreet Ranch to be managed by DRP is within the Department of Transportation's Hillsborough Watershed mitigation/restoration area. The southwest portion has been identified for potential mitigation.

**Timetable for implementing management and provisions for security and protection of infrastructure.** Within the first year after acquisition, FWC's management activities will concentrate on site security, natural and cultural resource protection and the development of a plan for long-term public use and resource management that is consistent with the goals and objectives stated for this project. Long-term management will include restoration of natural pine forests. Growing-season fire will be important in this restoration. FWC will emphasize the provision of oldgrowth forest, but for game species will also provide areas of successional vegetation in pine areas adjacent to wetlands. FWC also plans to provide high-quality habitat and protection for listed wildlife species. FWC will keep public facilities to a minimum, hiking and horseback trail in upland areas, and perhaps interpretive centers and wildlife observation towers in selected areas.

**Revenue-generating potential.** FWC expects no significant revenue from this project initially, but will continue to offer hunting opportunities. For the area next to Lake Louisa State Park, the Division of Recreation and Parks also expects no significant revenue to be generated initially. After acquisition, it will probably be several years before any significant public use facilities are developed in the Lake Louisa area, and the amount of any revenue generated will depend on the nature and extent of public use and facilities.



# Management Prospectus

---

## Colt Creek State Park Advisory Group List

---

The Honorable Bob English, Chairman  
Polk County Board of County  
Commissioners  
Post Office Box 9005-BC01  
Bartow, Florida 33831-9005

**Also represented by:**  
Gaye Sharp, Natural Areas Manager  
4177 Ben Durrance Road  
Bartow, Florida 33830

The Honorable Randy Mask,  
Commissioner  
Sumter County Board of County  
Commissioners  
209 North Florida Street  
Bushnell, Florida 33513

Scott Spaulding, Park Manager  
Colt Creek State Park  
16000 State Road 471  
Lakeland, Florida 33809

Ken Ford, Chair  
Polk Soil and Water  
Conservation District  
3890 State Road 60 East  
Bartow, Florida 33830

Greg Holder, Regional Director  
Florida Fish and Wildlife Conservation  
Commission  
3900 Drane Field Road  
Lakeland, Florida 33811

Gary Zipprer, Manager  
Lakeland District  
Florida Division of Forestry  
5745 South Florida Avenue  
Lakeland, Florida 33813

**Represented by:**  
Dave Butcher  
851 Highway 630 East  
Frostproof, Florida 33843  
(863) 635-7801

Will Miller, Land Use and Protection  
Manager  
Southwest Florida Water Management  
District  
2379 Broad Street  
Brooksville, Florida 34604

Mark Jackson, Executive Director  
Central Florida's Polk County Visitors &  
Convention Bureau  
600 N. Broadway, Suite 300  
Bartow, Florida 33830

Al Greulich, Chair  
Sierra Club, Polk Group  
Post Office Box 1336  
Auburndale, Florida 33823

**Represented by:**  
Frances Howell-Coleman  
203 Lake Pansy Drive Northwest  
Winter Haven, Florida 33881

Charles Geanangel  
Lake Region Audubon Society  
92 Lake Otis Road  
Winter Haven, Florida 33884

Byrum Cooper  
North American Butterfly Association  
558 Sunshine Boulevard  
Haines City, Florida 33844

## Colt Creek State Park Advisory Group List

---

Janice Scroggie Anderson, Chair  
Florida Trail Association  
Heartland Chapter  
10803 Country Haven Road  
Lakeland, Florida 33809

Bill Blommel  
Flatlanders Equestrian Club  
7940 Chase Road  
Lakeland, Florida 33810

Raymond Wells, President  
Ridge Riders Mountain Bike Association  
5551 Russo Road  
Bartow, Florida 33830

Roy Gulledge  
17238 State Road 471  
Lakeland, Florida 33809

Senator Paula Dockery  
P.O. Drawer 2395  
Lakeland, Florida 33806-2395

## Colt Creek State Park Advisory Group Staff Report

---

The Advisory Group meeting to review the proposed land management plan for Colt Creek State Park was held at the Regional Office of the Florida Fish and Wildlife Conservation Commission in Lakeland, Florida on September 5, 2007 at 9am. Gary Zipprer (Florida Division of Forestry) was represented by Dave Butcher. Al Greulich (Sierra Club) was represented by Frances Howell-Coleman. Ken Ford (Polk Soil and Water Conservation District) and Mark Jackson (Central Florida's Polk County Visitors and Convention Bureau) did not attend. All other appointed Advisory Group members were present. Also in attendance were Senator Paula Dockery, Gaye Sharp, Linda Cooper, Jack Phethean, and Jack Breed. Attending staff from the Division of Recreation and Parks included Larry Fooks, Clif Maxwell, Jason DePue, Scott Spaulding, David Berra, Lew Scruggs, and Brian Burket.

Mr. Burket began the meeting by explaining the purpose of the Advisory Group and reviewing the meeting agenda. He provided a brief overview of the Division's planning process and summarized public comments received during the previous evening's public workshop. He then asked each member of the advisory group to express his or her comments on the plan.

### Summary of Advisory Group Comments

---

**Dave Butcher (Florida Division of Forestry)** said the management plan looks fine. He recommended only discing the perimeter firebreaks and mowing the interior firebreaks. He offered to help the park with timber management and prescribed burns.

**Raymond Wells (Ridge Riders Mountain Bike Association)** stated that the park property is not ideal for off-road bike riding due to the flat terrain; however, the biking community is still very interested in creating trails here. He suggested that bike trails could be shared with hikers and that both user groups could work together to create and maintain trails at the park. He commented that the 5,067-acre park could support more than thirty miles of trail. He requested that the proposed trailhead areas also provide bike facilities such as a bike wash station, bike racks, restroom, water source, and adequate trail signage. And, he expressed interest in promoting biking events at the park.

**Byrum Cooper (North American Butterfly Association)** provided an update on the number of butterfly species observed at the park, 74, and discussed the growing popularity of non-consumptive butterfly recreation nationwide. He stated that internet postings are already starting to draw these specialized visitors to Colt Creek State Park. He recommended that the park construct an interpretive kiosk to highlight butterflies that can be found at the park as well as provide a butterfly checklist. He mentioned that he discovered a huge, old cypress tree during a butterfly survey and suggested a boardwalk be constructed to allow visitors to see it. He expressed his appreciation for how quickly the park was opened to the public following acquisition. He requested



## Colt Creek State Park Advisory Group Staff Report

---

that the park add recycling bins for plastic bottles. He recommended the removal of unnecessary fencing throughout the park. He commented that the land use plan for the park appears good and appropriate. He stated that the plan is very ambitious given the size of the staff and budget. He pointed out that some of the smaller pastures needed mowing and recommended that cattle be restricted to pastures in the future to help protect the wetland areas. He recommended that hydrologic restoration should be the number one priority of resource management at the park. He recommended pursuing exotic species control soon so the problem does not worsen. He requested that horses not be allowed at all of the primitive campsites, especially the northern campsite identified on the Conceptual Land Use Plan. He asked that Addendum 1 reflect Polk County's involvement in the park's acquisition and requested an explanation of the Management Prospectus. He offered to send a list and photos of butterfly plants found in the park to District biologist, Jason DePue. He recommended that Addendum 7 list the resource management costs in priority order. He then expressed his delight that the park has a volunteer coordinator.

**Will Miller (Southwest Florida Water Management District)** commented that it is a good plan. He requested the plan mention that the trails to the north of the park boundary within Green Swamp East are on land that is hunted at certain times of the year. He pointed out that there needs to be some means of accounting for trail users moving between the park and adjacent conservation lands. He suggested that SWFWMD and Division staff meet to discuss further.

**Greg Holder (Florida Fish and Wildlife Conservation Commission)** stated that he is impressed with the quality of the plan. In regards to pasture management, he asked if supplemental feeding of cattle or fertilizing of hay fields would be allowed. Scott Spaulding replied that the park would follow best management practices and allow some supplemental feeding, and fertilization would be limited to the minimal necessary to keep hay production viable. Mr. Holder expressed his support for the potential reintroduction of Red-Cockaded Woodpecker. He commented that the statewide gopher tortoise management plan written by FWC should provide guidance for protecting this species. He requested that the designated species list in Addendum 5 be updated. He remarked that hydrologic restoration should be priority number one.

**Frances Howell-Coleman (Sierra Club, Polk Group)** thought the plan was excellent. She stated her support for the optimum boundary and encouraged the Division to pursue acquisition of the lands identified. She pointed out that the use of cattle on the property seems to conflict with the management objective to control exotics. Jason DePue responded that the cattle lease will require the operator to control exotic species. Ms. Coleman asked what percentage of pasture is to be restored long-term. Mr. DePue replied that pasture restoration will take place in small increments over time, and more than half of the pasture has been identified for future restoration. Ms. Coleman recommended that a recycling program be written into the future concessionaire

## Colt Creek State Park Advisory Group Staff Report

---

contract and that recycling bins should be placed adjacent to trash cans to maximize their use. She suggested that boardwalks, picnic tables, etc. be constructed out of recycled plastic materials. She expressed her support for the potential reintroduction of the Red-Cockaded Woodpecker.

**Charles Geanangel (Lake Region Audubon Society)** commented that the plan looked great. He recommended prioritizing the management goals and objectives and making hydrologic restoration priority number one. He requested that the proposed primitive campsite at the north end of the park be relocated to a nearby field due to the environmental uniqueness and sensitivity of the area identified on the Conceptual Land Use Plan. He recommended that park staff seek advice from others that manage pastures in similar situations. He commented that the number of Bobwhite quail on the property is low and suggested consideration be given to restoring their population. He also suggested that the advisory group meet yearly.

**Roy Gulledge (adjacent landowner)** stated the plan is good and ambitious. He commented that the ranch theme and maintaining the cultural landscape of the property will draw many visitors to the park. He recommended that the facilities of the ranch headquarters be able to support group events and interpretive programs.

**Chairman Bob English (Polk County Board of County Commissioners)** thanked Senator Dockery, DEP, and SWFWMD for their leadership in creating this new state park which will benefit the citizens of Polk County for generations. He requested that the user fees be “family friendly”. He suggested using pervious pavement whenever possible. He also expressed interest in hosting running races within the park.

**Janice Scroggie Anderson (Florida Trail Association, Heartland Chapter)** thought the plan is well written and addresses the concerns and desires expressed at the previous public workshop. She commented that the Florida Trail Association has good working relationships with land managers and is interested in partnering with bike groups to create new trails at Colt Creek State Park. She stressed, however, that the proposed connector trail to the Florida National Scenic Trail needs to be designated single use for hikers only. She requested that drinking water sources be identified on trail maps. She suggested that the trail network provide destinations and overlooks to enhance the trail experience. She recommended that the proposed primitive campsites be spaced apart by about six to eight miles.

**Bill Blommel (Flatlanders Equestrian Club)** expressed his satisfaction with the management plan. In response to a comment made at the previous evening’s public workshop, he stated that the proposed location of the equestrian camping area is fine. He said horses should be placed in trailers when lightning storms approach; therefore, the presence of tall pine trees in the camping area should not be of major concern. He then suggested that a few weather shelters may be needed along the trail system due to

## Colt Creek State Park Advisory Group Staff Report

---

the prevalence of lightning in the area. And, he discussed the huge impact the equestrian community has on the Florida economy and commented that the park has lots of potential to attract this user group.

**Commissioner Randy Mask (Sumter County Board of County Commissioners)** expressed his support for the park and appreciation for those who contributed to developing the management plan.

**Scott Spaulding (Colt Creek State Park)** thanked the advisory group for their comments and their support of the state park.

### Summary of Additional Comments

---

**Senator Paula Dockery (Florida Legislature)** stated that she was impressed by the knowledge of the advisory group. She expressed her appreciation for the outstanding volunteerism at the park. She commented that one of her goals is to provide positive experiences to people who are not yet comfortable in the outdoors in an effort to develop good stewards of natural lands in Florida. She voiced her strong support for the construction of cabins at the park and mentioned that she would fight for future funding for the park. She then thanked the advisory group for their interest and support.

**Gaye Sharp (Polk County)** requested that Polk County be kept in the loop on Gator Creek restoration planning. She asked about the status of the FDOT mitigation project at the southwest corner of the park. She stated that Senator Dockery should be commended for her state park vision for the property. She commented that the County Manager is very supportive of the management plan and its potential to support ecotourism in the area. She thanked the Division for listening to the public and incorporating their suggestions.

**Jack Phethean (South Creek Equestrian Club)** asked that consideration be given to allow the running of fox hunting dogs on the property on a limited basis. He stated that this use is compatible with other state park uses and suggested that the Division check their references with SWFWMD and FWC. He also commented that other states have allowed this activity in their state parks.

### Staff Recommendations

---

The staff recommends approval of the proposed management plan for Colt Creek State Park as presented with the minor corrections and suggestions shared by the advisory group.

The Division operates under the rules contained in Chapter 62D-2, Florida

## Colt Creek State Park Advisory Group Staff Report

---

Administrative Code, which states that dogs and other pets must be confined, leashed, or otherwise under the physical control of a person at all times. These rules are in place to enhance the recreational experience and safety of other visitors and to protect the park's resources. Consequently, running of fox hunting dogs at Colt Creek State Park would be inconsistent with these rules.



## Colt Creek State Park Advisory Group Staff Report

---

## **Addendum 2 – References Cited**



## Colt Creek State Park References Cited

---

- Bureau of Economic and Business Research (BEBR), University of Florida. 2005. Florida Statistical Abstract 2006. Gainesville, Florida.
- Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. Closing the gaps in Florida's wildlife habitat conservation system. Office of Environmental Services, Fish and Wildlife Conservation Commission (formerly, the Florida Game and Fresh Water Fish Commission, Tallahassee. 231 pp.
- Florida Natural Areas Inventory and the Florida Department of Natural Resources (FNAI). 1990. Guide to the natural communities of Florida. Tallahassee, FL. 111 pp.
- Ford, R. D, et. al. 1990. Soil Survey of Polk County, Florida. USDA, Soil Conservation Service.
- Pasco County. 2005. Pasco County Comprehensive Plan 2005. Pasco County, Florida.
- Polk County. 2005. Polk County Comprehensive Plan 2005. Polk County, Florida.
- Ryder, P. D. 1985. Hydrology of the Floridan Aquifer System in West-Central Florida. U.S. Geological Survey Professional Paper # 1403-F, 63 pp.
- SWFWMD (Southwest Florida Water Management District). 2001. Withlacoochee River Watershed Plan.
- Sumter County. 2005. Sumter County Comprehensive Plan 2005. Sumter County, Florida.
- U. S. Department of Commerce, Bureau of the Census. 2000. U. S. Census 2000.

## Colt Creek State Park References Cited

---



## **Addendum 3 – Soils Descriptions**



## Colt Creek State Park Soil Descriptions

---

**Chobee** – Within this series, Chobee fine sandy loam/depressional and Chobee fine sandy loam/frequently flooded are found at this unit. Slopes range from 0 to 2 percent. This series consists of very deep, very poorly drained, slowly to very slowly permeable soils in depressions, flats, and occasionally on river flood plains in the lower Coastal Plain. They formed in thick beds of loamy marine sediments. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: pickerelweed, lilies, sawgrass, and scattered swamp maples in treeless areas. Some areas have a growth of ash, gum, maple, and cypress.

**Eaugallie** – Within this series, Eaugallie fine sand is found at this unit. Slopes range from 0 to 2 percent. This series consists of deep or very deep, poorly or very poorly drained, slowly permeable soils in flats, sloughs and depressional areas. They formed in sandy and loamy marine sediments in Peninsula Florida. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about 55 inches. Poorly or very poorly drained; moderate to slow permeability. Indicative native vegetation: longleaf pine, South Florida slash pine, and sawpalmetto. The understory vegetation includes inkberry, southern bayberry, and pineland threeawn.

**Felda** – Within this series, Felda fine sand, Felda fine sand/frequently flooded, and Felda fine sand/depressional are found at this unit. Slopes range from 0 to 1 percent. This series consists of very deep, poorly drained and very poorly drained, moderately permeable soils in drainageways, sloughs and depressions, and on flood plains and low flats. They formed in stratified, unconsolidated marine sands and clays. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: cypress, waxmyrtle, pond pine, slash pine, cabbage palm, pineland threeawn, and various grasses, vines, and shrubs.

**Floridana** – Within this series, Floridana mucky fine sand/depressional is found at this unit. Slopes range from 0 to 1 percent. This series consists of very deep, very poorly drained, slowly to very slowly permeable soils on low broad flats, flood plains, and in depressional areas. They formed in thick beds of sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 74 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: sand cordgrass, cabbage palmetto, myrtle, and pineland threeawn. In depressional areas, most of the soil has a sparse to dense cover of cypress. In flood plains, the vegetation is mostly sweetgum, blackgum, red maple, and cypress.

**Holopaw** – Within this series, Holopaw fin sand/depressional is found at this unit. Slopes range from 0 to 2 percent. This series consists of deep and very deep, poorly and very poorly drained soils formed in sandy marine sediments. These soils are rapidly

## Colt Creek State Park Soil Descriptions

---

permeable in the A and E horizons and moderately or moderately slowly permeable in the B horizon. These soils are on low lying flats, in poorly defined drainages or depressional areas. A water table is within 12 inches of the soil surface for 2 to 6 months during most years. Precipitation is about 50 to 60 inches annually and mean annual air temperature is about 70 to 74 degrees F. Indicative native vegetation: scattered slash and pond pine, cabbage and sawpalmettos, scattered cypress, myrtle, sand cordgrass, and pineland threeawn.

**Malabar** – Within this series, Malabar fine sand is found at this unit. Slopes range from 0 to 2 percent. This series consists of very deep, poorly to very poorly drained soils in sloughs, shallow depressions, and along flood plains. They formed in sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 73 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: scattered slash pine, cypress wax myrtle, cabbage palm, pineland threeawn, and maidencane. In depressions, the vegetation is dominantly St. Johnswort or maidencane.

**Oldsmar** – Within this series, Oldsmar fine sand is found at this unit. Slopes range from 0 to 2 percent. This series consists of very deep, poorly drained and very poorly drained soils in flats and depressions of Peninsular Florida. They formed in sandy marine sediments overlying loamy materials. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about 55 inches.

Indicative native vegetation: cabbage palmetto, sawpalmetto, live oak, slash pine, with an undergrowth of laurel, wax myrtle, and pineland threeawn. In depressions the trees are cypress, blackgum, pond pine, loblolly bay, red maple, and sweetbay. Other plants included maidencane, blue maidencane, chalky bluestem, sand cordgrass, and bluejoint panicum.

**Paisley** – Within this series, Paisley fine sand and Paisley find sand/stony subsurface are found at this unit. Slopes are less than 1 percent. This series consists of deep, poorly drained, slowly permeable soils that formed in clayey marine sediments influenced by underlying calcareous materials. These soils are on nearly level, low broad Coastal Plains. Near the type location, mean annual precipitation is about 59 inches and mean annual temperature is about 72 degrees F. Indicative native vegetation: slash pine, longleaf, and loblolly pine, swamp white oak, swamp maple, and sweetgum with an understory of wax myrtle, cabbage palmetto, bluestem, and native grasses.

**Pomona** – Within this series, Pomona fine sand is found at this unit. Slopes are 0 to 2 percent. This series consists of very deep, poorly and very poorly drained, moderate to moderately slowly permeable soils on broad low ridges on the Lower Coastal Plain. They formed in sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about

## Colt Creek State Park Soil Descriptions

---

55 inches.

Indicative native vegetation: slash pine, longleaf pine, and south Florida slash pine with an understory of sawpalmetto, waxmyrtle, gallberry, creeping bluestem, chalky bluestem, indiagrass, and pineland threeawn

**Samsula** - Within this series, Samsula muck is found at this unit. Slopes are less than 2 percent. This series consists of very deep, very poorly drained, rapidly permeable soils that formed in moderately thick beds of hydrophytic plant remains and are underlain by sandy marine sediments. These soils are in swamps, poorly defined drainageways and flood plains. Rainfall is about 50 to 60 inches annually; mean annual air temperature is about 70 to 74 degrees F. Indicative native vegetation: loblolly bay with scattered cypress, maple, gum, and pine trees with a ground cover of greenbriers, ferns, and other aquatic plants.

**Udorthents/excavated** - This soil consists of poorly-drained heterogeneous mixtures of material that has been excavated from adjacent stream beds or other areas and deposited in irregular piles near artificial ponds or as embankments along resulting canalized stream.

**Wabasso** - Within this series, Wabasso fins sand is found at this unit. Slopes range from 0 to 2 percent. This series consists of deep or very deep, very poorly and poorly drained, very slowly and slowly permeable soils on flatwoods, flood plains, and depressions in Peninsula Florida. They formed in sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 72 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: longleaf pine, slash pine, cabbage palm, live oak, with an understory of sawpalmetto, laurel oak, waxmyrtle, chalky bluestem, and pineland threeawn.

**Winder** - Within this series, Winder fine sand/depressional is found at this unit. Slopes range from 0 to 2 percent. This series consists of very deep, poorly drained, slowly to very slowly permeable soils on broad, low flats and depressional areas. They formed in loamy marine sediments on the Lower Coastal Plain. Near the type location, the mean annual temperature is about 73 degrees F., and the mean annual precipitation is about 55 inches. Indicative native vegetation: cordgrass, maidencane, cabbage palmetto, saw palmetto, and pineland threeawn.



## Colt Creek State Park Soil Descriptions

---

**Addendum 4 – Plants And Animals List**



Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
<b>LICHENS</b>		
Christmas lichen	<i>Cryptothecia rubrocincta</i>	
<b>BRYOPHYTES</b>		
Cushion moss	<i>Leucobryum</i> sp.	
<b>PTERIDOPHYTES</b>		
Giant leather fern	<i>Acrostichum danaeifolium</i>	
Japanese climbing fern *	<i>Lygodium japonicum</i>	
Royal fern	<i>Osmunda regalis</i>	28, 31
Cinnamon fern	<i>Osmunda cinnamomea</i>	
Golden polypody	<i>Phlebodium aureum</i>	
Resurrection fern	<i>Pleopeltis polypodioides</i>	
Bracken fern	<i>Pteridium aquilinum</i>	
<b>GYMNOSPERMS</b>		
Red cedar	<i>Juniperus silicicola</i>	
Slash pine	<i>Pinus elliottii</i>	
Longleaf pine	<i>Pinus palustris</i>	
Pond-cypress	<i>Taxodium ascendens</i>	
Bald-cypress	<i>Taxodium distichum</i>	
<b>ANGIOSPERMS</b>		
<b>MONOCOTS</b>		
Bluestem	<i>Andropogon</i> sp.	
Jack-in-the-pulpit	<i>Arisaema triphyllum</i>	
Wire grass	<i>Aristida beyrichiana</i>	
Giant sedge	<i>Carex gigantean</i>	
False hop sedge	<i>Carex lupuliformis</i>	55
Slender woodoats	<i>Chasmanthium laxum</i>	9
Woodoats	<i>Chasmanthium</i> sp.	
Jamaica swamp sawgrass	<i>Cladium jamaicense</i>	
Dayflower	<i>Commelina diffusa</i>	
Seven-sisters	<i>Crinum americanum</i>	
Fragrant flatsedge	<i>Cyperus odoratus</i>	

\* Non-native Species

## Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Durban crowfootgrass *	<i>Dactyloctenium aegyptium</i>	
Witchgrass	<i>Dichanthelium</i> sp.	
Barnyard grass	<i>Echinochloa</i> sp.	
Common waterhyacinth *	<i>Eichhornia crassipes</i>	
Spikerush	<i>Eleocharis</i> sp.	
Lovegrass	<i>Eragrostis</i> sp.	
Pipewort	<i>Eriocaulon</i> sp.	
Longhorn false reinorchid	<i>Habenaria quinqueseta</i>	
Common yellow stargrass	<i>Hypoxis curtissii</i>	
Yellow stargrass	<i>Hypoxis</i> sp.	
Cogongrass *	<i>Imperata cylindrical</i>	
Prairie iris	<i>Iris hexagona</i>	
Virginia iris	<i>Iris virginica</i>	
Soft rush	<i>Juncus effusus</i>	
Carolina redroot	<i>Lachnanthes caroliniana</i>	
Bogbutton	<i>Lachnocaulon</i> sp.	
Duckweed	<i>Lemna</i> sp.	
Catesby's lily	<i>Lilium catesbaei</i>	8
Frog's-bit	<i>Limnobium spongia</i>	
Stilt grass	<i>Microstegium</i> sp.	
Woodsgrass	<i>Oplismenus hirtellus</i>	
Torpedo grass*	<i>Panicum repens</i>	
Maidencane	<i>Panicum hemitomom</i>	
Vaseygrass *	<i>Paspalum uroillei</i>	
Bahiagrass *	<i>Paspalum notatum</i> var. <i>saurae</i>	
Pickerelweed	<i>Pontederia cordata</i>	
Starrush whitetop	<i>Rhynchospora colorata</i>	
Bluestem palmetto	<i>Sabal minor</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Duck potato	<i>Sagittaria</i> sp.	
Saw palmetto	<i>Serenoa repens</i>	
Foxtail	<i>Setaria</i> sp.	
Narrowleaf blue-eyed grass	<i>Sisyrinchium angustifolium</i>	
Annual blue-eyed grass	<i>Sisyrinchium rosulatum</i>	
Saw greenbrier	<i>Smilax bona-nox</i>	
Laurel greenbrier	<i>Smilax laurifolia</i>	
Greenbrier	<i>Smilax</i> sp.	
Lopsided Indiangrass	<i>Sorghastrum secundum</i>	
Johnsongrass*	<i>Sorghum halepense</i>	
Sand cordgrass	<i>Spartina bakeri</i>	
Smutgrass *	<i>Sporobolus indicus</i>	

\* Non-native Species



## Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
St. Augustinegrass*	<i>Stenotaphrum secundatum</i>	
Yellow hatpins	<i>Syngonanthus flavoidulus</i>	
Alligator flag	<i>Thalia geniculata</i>	
Spanish moss	<i>Tillandsia usneoides</i>	
Leatherleaf airplant	<i>Tillandsia variabilis</i>	
Ohio spiderwort	<i>Tradescantia ohioensis</i>	
Fakahatcheegrass	<i>Tripsacum dactyloides</i>	
Southern cattail	<i>Typha domingensis</i>	
Carolina yelloweyed grass	<i>Xyris caroliniana</i>	
Fringed yelloweyed grass	<i>Xyris fimbriata</i>	
Yelloweyed grass	<i>Xyris</i> sp.	
Teosinte*	<i>Zea mays</i> ssp. <i>mexicana</i>	
Atamasco lily	<i>Zephyranthes atamasco</i>	

### DICOTS

Red maple	<i>Acer rubrum</i>
Oppositeleaf spotflower	<i>Acmella oppositifolia</i> var. <i>repens</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>
Pepper vine	<i>Ampelopsis arborea</i>
Indian plantain	<i>Arnoglossum</i> sp.
Swamp milkweed	<i>Asclepias incarnata</i>
Bigflower pawpaw	<i>Asimina obovata</i>
Silverling	<i>Baccharis glomeruliflora</i>
Groundsel bush	<i>Baccharis halimifolia</i>
Lemon bacopa	<i>Bacopa caroliniana</i>
Herb-of-grace	<i>Bacopa monnieri</i>
Rattan vine	<i>Berchemia scandens</i>
Common beggarticks	<i>Bidens alba</i>
False nettle	<i>Boehmeria cylindrica</i>
Paper mulberry*	<i>Broussonetia papyrifera</i>
American bluehearts	<i>Buchnera americana</i>
American beautyberry	<i>Callicarpa americana</i>
Trumpet vine	<i>Campsis radicans</i>
American hornbeam	<i>Carpinus caroliniana</i>
Pignut hickory	<i>Carya glabra</i>
Sugarberry	<i>Celtis laevigata</i>
Spadeleaf	<i>Centella asiatica</i>
Spurred butterfly pea	<i>Centrosema virginianum</i>
Buttonbush	<i>Cephalanthus occidentalis</i>
Partridge pea	<i>Chamaecrista fasciculata</i>

\* Non-native Species

Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Sandmat	<i>Chamaesyce</i> sp.	
Pineland daisy	<i>Chaptalia tomentosa</i>	
White fringetree	<i>Chionanthus virginicus</i>	
Yellow thistle	<i>Cirsium horridulum</i>	84
Nuttall's thistle	<i>Cirsium nuttallii</i>	84
Thistle	<i>Cirsium</i> sp.	
Citrus*	<i>Citrus</i> sp.	
Pine hyacinth	<i>Clematis baldwinii</i>	
Tread-softly	<i>Cnidioscolus stimulosus</i>	
Canadian horseweed	<i>Conyza canadensis</i> var. <i>canadensis</i>	
Leavenworth's tickseed	<i>Coreopsis leavenworthii</i>	
Tickseed	<i>Coreopsis</i> sp.	
Swamp dogwood	<i>Cornus foemina</i>	
Rattlebox	<i>Crotalaria</i> sp.	
Showy rattlebox *	<i>Crotalaria spectabilis</i>	
Leafless swallowwort	<i>Cynanchum scoparium</i>	
Whitetassles	<i>Dalea carnea</i> var. <i>carnea</i>	
Western tansymustard	<i>Descurainia pinnata</i>	
Ticktrefoil	<i>Desmodium</i> sp.	
Poor joe	<i>Diodia teres</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Common persimmon	<i>Diospyros virginiana</i>	
Pink sundew	<i>Drosera capillaris</i>	
Sundew	<i>Drosera</i> sp.	
Elephantsfoot	<i>Elephantopus</i> sp.	
Southern fleabane	<i>Erechtites hieracifolia</i>	
Button eryngo	<i>Eryngium yuccifolium</i>	
Coralbean	<i>Erythrina herbacea</i>	
Dogfennel	<i>Eupatorium capillifolium</i>	
Thoroughwort	<i>Eupatorium</i> sp.	
Flattop goldenrod	<i>Euthamia graminifolia</i> var. <i>hirtipes</i>	
Carolina ash	<i>Fraxinus caroliniana</i>	
Milkpea	<i>Galactia</i> sp.	
Bedstraw	<i>Galium</i> sp.	
Southern beeblossom	<i>Gaura angustifolia</i>	
Dwarf huckleberry	<i>Gaylussacia dumosa</i>	
Yellow jessamine	<i>Gelsemium sempervirens</i>	
Loblolly bay	<i>Gordonia lasianthus</i>	
Southeastern sneezeweed	<i>Helenium pinnatifidum</i>	8, 43
Camphorweed	<i>Heterotheca subaxillaris</i>	
Hawkweed	<i>Hieracium gronovii</i>	

\* Non-native Species

## Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Marshpennywort	<i>Hydrocotyle</i> sp.	
Skyflower	<i>Hydrolea corymbosa</i>	
Roundpod St. John's-wort	<i>Hypericum cistifolium</i>	
St. Peter's-wort	<i>Hypericum crux-andreae</i>	
St. Andrew's cross	<i>Hypericum hypericoides</i>	
Atlantic St. John's-wort	<i>Hypericum reductum</i>	
Fourpetal St. John's-wort	<i>Hypericum tetrapetalum</i>	
Clustered bushmint	<i>Hyptis alata</i>	
Dahoon holly	<i>Ilex cassine</i> var. <i>cassine</i>	
Gallberry	<i>Ilex glabra</i>	
Yaupon	<i>Ilex vomitoria</i>	
Morning glory	<i>Ipomoea</i> sp.	
Virginia willow	<i>Itea virginica</i>	
Pineland waterwillow	<i>Justicia angusta</i>	
Lantana *	<i>Lantana camara</i>	
Grassleaf gayfeather	<i>Liatris graminifolia</i>	
Gayfeather	<i>Liatris</i> sp.	
Gopher apple	<i>Licania michauxii</i>	
Sweetgum	<i>Liquidambar styraciflua</i>	
Peruvian primrosewillow*	<i>Ludwigia peruviana</i>	
Primrosewillow	<i>Ludwigia</i> sp.	
Savannah primrosewillow	<i>Ludwigia virgata</i>	
Rose-rush	<i>Lygodesmia aphylla</i>	
Fetterbush	<i>Lyonia lucida</i>	
Piedmont staggerbush	<i>Lyonia mariana</i>	
Loosestrife	<i>Lythrum alatum</i> var. <i>lanceolatum</i>	
Wild bushbean*	<i>Macroptilium lathyroides</i>	
Sweetbay	<i>Magnolia virginiana</i>	
Snow squarestem	<i>Melanthera nivea</i>	
Creeping cucumber	<i>Melothria pendula</i>	
Climbing hempvine	<i>Mikania scandens</i>	
Miterwort	<i>Mitreola petiolata</i>	
Red mullberry	<i>Morus rubra</i>	
Wax myrtle	<i>Myrica cerifera</i>	
Swamp tupelo	<i>Nyssa sylvatica</i> var. <i>biflora</i>	
Eveningprimrose	<i>Oenothera</i> sp.	
Spatter-dock, Cowlily	<i>Nuphar luteum</i>	
Butterweed	<i>Packera glabella</i>	
Skunkvine*	<i>Paederia foetida</i>	
Virigina creeper	<i>Parthenocissus quinquefolia</i>	
Purple passionflower	<i>Passiflora incarnata</i>	

\* Non-native Species

Colt Creek State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Yellow passionflower	<i>Passiflora lutea</i>	
Swamp bay	<i>Persea palustris</i>	
Oak mistletoe	<i>Phoradendron leucarpum</i>	
Red chokeberry	<i>Photinia pyrifolia</i>	
Turkey tanglefoot fogfruit	<i>Phyla nodiflora</i>	
Fogfruit	<i>Phyla sp.</i>	
Leafflower	<i>Phyllanthus sp.</i>	
False dragonhead	<i>Physostegia sp.</i>	
American pokeweed	<i>Phytolacca americana</i>	
Pitted stripeeed	<i>Piriqueta cistoides ssp. caroliniana</i>	
Narrowleaf silkgrass	<i>Pityopsis graminifolia</i>	
Rosy camphorweed	<i>Pluchea rosea</i>	
Camphorweed	<i>Pluchea sp.</i>	
Drumheads	<i>Polygala cruciata</i>	
Showy milkwort	<i>Polygala grandiflora</i>	
Orange milkwort	<i>Polygala lutea</i>	
Yellow milkwort	<i>Polygala rugelii</i>	
Milkwort	<i>Polygala sp.</i>	
Swamp smartweed	<i>Polygonum hydropiperoides</i>	
Knotweed	<i>Polygonum sp.</i>	
Rustweed	<i>Polypremum procumbens</i>	
Wild coffee	<i>Psychotria nervosa</i>	
Shortleaf wild coffee	<i>Psychotria sulzneri</i>	
Blackroot	<i>Pterocaulon pycnostachyum</i>	
Mock bishopsweed	<i>Ptilimnium capillaceum</i>	
Dwarf live oak	<i>Quercus minima</i>	
Water oak	<i>Quercus nigra</i>	
Running oak	<i>Quercus ellioti</i>	
Virginia live oak	<i>Quercus virginiana</i>	
White indigoberry	<i>Randia aculeata</i>	
Maid marion	<i>Rhexia nashii</i>	
Meadowbeauty	<i>Rhexia sp.</i>	
Winged sumac	<i>Rhus copallinum</i>	
Carolina rose	<i>Rosa palustris</i>	37
Blackberry	<i>Rubus sp.</i>	
Black-eyed susan	<i>Rudbeckia hirta</i>	
Blackeyed susan	<i>Rudbeckia sp.</i>	
Bitter dock	<i>Rumex obtusifolius</i>	
Rose-pink	<i>Sabatia sp.</i>	
Coastalplain willow	<i>Salix caroliniana</i>	
White twinevine	<i>Sarcostemma clausum</i>	

\* Non-native Species

## Colt Creek State Park Plants

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for designated species)
Lizard's tail	<i>Saururus cernuus</i>	
Sweetbroom	<i>Scoparia dulcis</i>	
Sicklepod*	<i>Senna obtusifolia</i>	
Danglepod	<i>Sesbania herbacea</i>	
Youpon blackenna	<i>Seymeria cassioides</i>	
Tough bully	<i>Sideroxylon tenax</i>	
American black nightshade	<i>Solanum americanum</i>	
Soda apple	<i>Solanum capsoides</i>	
Tropical soda apple*	<i>Solanum viarum</i>	
Goldenrod	<i>Solidago sp.</i>	
False buttonweed	<i>Spermacoce sp.</i>	
Queensdelight	<i>Stillingia sylvatica</i>	15
Wood sage	<i>Teucrium canadense</i>	
Eastern poison ivy	<i>Toxicodendron radicans</i>	
Forked bluecurls	<i>Trichostema dichotomum</i>	
American elm	<i>Ulmus americana</i>	
Caesarweed*	<i>Urena lobata</i>	
Sparkleberry	<i>Vaccinium arboretum</i>	57
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Walter's viburnum	<i>Viburnum obovatum</i>	
Early blue violet	<i>Viola palmata</i>	
Common blue violet	<i>Viola sororia</i>	
Grape	<i>Vitis sp.</i>	
Tallow wood	<i>Ximenia americana</i>	

\* Non-native Species

## Colt Creek State Park Plants

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for designated species)
-------------	------------------------	---

---



## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>INVERTEBRATES</b>		
<b>Ants, Bees, and Wasps</b>		
Velvet ant	<i>Dasymutilla occidentalis</i>	81
<b>Arachnids</b>		
Lone star tick	<i>Amblyomma americanum</i>	MTC
Scorpion	<i>Centruroides</i> sp.	8
Eastern wood tick	<i>Dermacentor</i> sp.	MTC
Chigger/Redbug	<i>Futrombicula</i> sp.	MTC
Golden silk spider	<i>Nephila clavipes</i>	MTC
Green lynx spider	<i>Peucezia viridans</i>	8, 29
Jumping spider	<i>Phidippus</i> sp.	MTC
<b>Beetles</b>		
Predacious diving beetle	<i>Dytiscus</i> sp.	81
Whirligig beetle	<i>Gyrinus</i> sp.	81
Splendid dung beetle	<i>Phanaeus vindex</i>	81
Firefly	<i>Photinus</i> sp.	81
<b>Butterflies</b>		
Gulf fritillary	<i>Agraulis vanillae nigrior</i>	
White peacock	<i>Anartia jatrophae guantanamo</i>	
Least skipper	<i>Ancyloxypha numitor</i>	
Monk skipper	<i>Asbolis capucinus</i>	
Great southern white	<i>Ascia monuste</i>	
Hackberry emperor	<i>Asterocampa celtis alicia</i>	
Tawny emperor	<i>Asterocampa clyton</i>	
Sachem	<i>Atalopedes campestris</i>	
Great purple hairstreak	<i>Atlides halesus</i>	
Delaware skipper	<i>Atrytone logan</i>	
Pipevine swallowtail	<i>Battus philenor philenor</i>	
Polydamas swallowtail	<i>Battus polydamas lucayas</i>	
Little metal mark	<i>Calephelis virginiensis</i>	
Brazilian skipper	<i>Calpododes ethlius</i>	
Red-banded hairstreak	<i>Calycopis cecrops</i>	
Southern skipperling	<i>Copaeodes minimus</i>	
Southern dogface	<i>Colias cesonia</i>	
Orange sulphur	<i>Colias eurytheme</i>	
Southern skipperling	<i>Copaeodes minimus</i>	

\* Non-native Species

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Gemmed satyr	<i>Cyllopsis gemma</i>	
Queen butterfly	<i>Danaus gillippus berenice</i>	
Monarch	<i>Danaus plexippus</i>	
Silver-spotted skipper	<i>Epargyreus clarus</i>	
Horace's duskywing	<i>Erynnis horatius</i>	
Juvenal's duskywing	<i>Erynnis juvenalis</i>	
Zarucco duskywing	<i>Erynnis zarucco</i>	
Palmetto skipper	<i>Euphyes arpa</i>	
Berry's skipper	<i>Euphyes berryi</i>	
Palatka skipper	<i>Euphyes pilatka</i>	
Dun Skipper	<i>Euphyes vestris</i>	
Variiegated fritillary	<i>Euptoieta claudia</i>	
Barred sulphur	<i>Eurema daira</i>	
Barred yellow	<i>Eurema daira daira</i>	
Little yellow	<i>Eurema lisa</i>	
Sleepy orange	<i>Eurema nicippe</i>	
Zebra swallowtail	<i>Eurytides marcellus floridensis</i>	
Zebra heliconian	<i>Heliconius charitonius</i>	
Zebra longwing	<i>Heliconius charitonius tuckeri</i>	
Ceraunus blue	<i>Hemiargus ceraunus antibubastus</i>	
Carolina satyr	<i>Hermeuptychia hermes sosybius</i>	
Meske's skipper	<i>Hesperia meskei</i>	
Fiery skipper	<i>Hylephila phyleus</i>	
Common buckeye	<i>Junonia coenia</i>	
Cassius blue	<i>Leptotes cassius</i>	
Clouded Skipper	<i>Lerema accius</i>	
Eufala skipper	<i>Lerodea eufala</i>	
American snout butterfly	<i>Libytheana bachmannii</i>	
Viceroy	<i>Limenitis archippus</i>	
Little Wood Satyr	<i>Megisto cymela</i>	
Swarthy Skipper	<i>Nastra lherminier</i>	
Neamathla Skipper	<i>Nastra neamathla</i>	
Dainty sulfur	<i>Nathalis iole</i>	
Georgia satyr	<i>Neonympha areolata</i>	
Twin-spot skipper	<i>Oligoria maculata</i>	
Ocola skipper	<i>Panoquina ocola</i>	
Giant swallowtail	<i>Papilio cresphontes</i>	
Eastern tiger swallowtail	<i>Papilio glaucus australis</i>	
Palamedes swallowtail	<i>Papilio palamedes</i>	
Black swallowtail	<i>Papilio polyxenes asterius</i>	

\* Non-native Species

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Spice-bush swallowtail	<i>Papilio troilus ilioneus</i>	
White M hairstreak	<i>Parrhasius m-album m-album</i>	
Large orange sulfur	<i>Phoebis agarithe</i>	
Orange-barred sulphur	<i>Phoebis philea</i>	
Cloudless sulfur	<i>Phoebis sennae eubule</i>	
Phaon crescent	<i>Phyciodes phaon</i>	
Pearl crescent	<i>Phyciodes tharos tharos</i>	
Tawny-edged skipper	<i>Polites themistocles</i>	
Whirlabout	<i>Polites vibex</i>	
Question mark	<i>Polygonia interrogationis</i>	
Checkered white	<i>Pontia protodice</i>	
Byssus skipper	<i>Problema byssus</i>	
Palamedes swallowtail	<i>Pterourus palamedes</i>	
Common checkered skipper	<i>Pyrgus communis</i>	
Tropical checkered-skipper	<i>Pyrgus oileus</i>	
Banded hairstreak	<i>Satyrion calanus</i>	
Southern oak hairstreak	<i>Satyrium favonius</i>	
Appalachian brown	<i>Satyrodes appalachia</i>	
Gray hairstreak	<i>Strymon melinus melinus</i>	
Southern cloudywing	<i>Thorybes bathyllus</i>	
Confused cloudywing	<i>Thorybes confusis</i>	
Northern cloudywing	<i>Thorybes pylades</i>	
Dorantes longtail	<i>Urbanus dorantes</i>	
Long-tailed skipper	<i>Urbanus proteus</i>	
Red admiral	<i>Vanessa atalanta rubria</i>	
Painted lady	<i>Vanessa cardui</i>	
American lady	<i>Vanessa virginiensis</i>	
Northern broken-dash skipper	<i>Wallengrenia egeremet</i>	
Southern broken-dash skipper	<i>Wallengrenia otho</i>	
<b>Cicadas</b>		
Periodical cicada	<i>Magicicada sp.</i>	MTC
<b>Crustaceans</b>		
Grass shrimp	<i>Palaemonetes paludosus</i>	81
Crayfish	<i>Procambarus sp.</i>	29, 30, 81
<b>Dragonflies</b>		
Common green darner	<i>Anax junius</i>	29, 81
Roseate skimmer	<i>Orthemis ferruginea</i>	29,81

\* Non-native Species

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>Flies</b>		
Deer fly	<i>Chrysops</i> sp.	MTC
Love bug	<i>Plecia nearctica</i>	MTC
Horse fly	<i>Tabanus</i> sp.	MTC
<b>Grasshoppers</b>		
Walking stick	<i>Anisomorpha buprestoides</i>	MTC
Field cricket	<i>Gryllus pennsylvanicus</i>	MTC
Painted slantfaced grasshopper	<i>Mermiria picta</i>	8
Eastern lubber	<i>Romalea microptera</i>	MTC
Obscure birdwing grasshopper	<i>Schistocerca obscura</i>	81
<b>Mollusks</b>		
Ram's horn snail	<i>Planorbella</i> sp.	
Channeled apple snail*	<i>Pomacea canaliculata</i>	81
Freshwater mussel	<i>Villosa</i> sp.?	81
<b>Moths</b>		
Bella moth	<i>Utetheisa bella</i>	81
Hawk moth	?	81
<b>True Bugs</b>		
Ferocious water bug	<i>Abedus</i> sp.	81
Creeping water bug	<i>Pelocoris</i> sp.	81
Brown water scorpion	<i>Ranatra fusca</i>	81
<b>FISH</b>		
Brown bullhead	<i>Ameiurus nebulosus</i>	81
Bowfin	<i>Amia calva</i>	81
Swamp darter	<i>Etheostoma fusiforme</i>	81
Golden topminnow	<i>Fundulus chrysotus</i>	30, 81
Eastern mosquitofish	<i>Gambusia holbrooki</i>	29, 30, 81
Least killifish	<i>Heterandria formosa</i>	29, 30, 81
Florida flagfish	<i>Jordanella floridae</i>	30, 81
Longnose gar	<i>Lepisosteus osseus</i>	81
Florida gar	<i>Lepisosteus platyrhincus</i>	81
Bluegill	<i>Lepomis macrochirus</i>	81
Dollar sunfish	<i>Lepomis marginatus</i>	81
Redear sunfish	<i>Lepomis microlophus</i>	81

\* Non-native Species

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Florida largemouth bass	<i>Micropterus salmoides floridanus</i>	81
Sailfin molly	<i>Poecilia latipinna</i>	81
Armored catfish*	<i>Pterygoplichthys disjunctivus</i>	81
Mozambique tilapia*	<i>Tilapia mossambica</i>	81

### AMPHIBIANS

#### Frogs and Toads

Florida cricket frog	<i>Acris gryllus dorsalis</i>	29, 31,32,33,35,8
Southern toad	<i>Bufo terrestris</i>	8,9
Oak toad	<i>Bufo quercicus</i>	8,9
Greenhouse frog*	<i>Eleutherodactylus planirostris</i>	MTC
Eastern narrow-mouthed toad	<i>Gastrophryne carolinensis</i>	29, 31,32,33,35,8
Green treefrog	<i>Hyla cinerea</i>	29, 31,32,33,35,8
Pinewoods treefrog	<i>Hyla femoralis</i>	8,
Barking treefrog	<i>Hyla gratiosa</i>	8
Squirrel treefrog	<i>Hyla squirella</i>	29, 31,32,33,35,8
Bullfrog	<i>Rana catesbeiana</i>	29, 31,32,33,35,8
Southern leopard frog	<i>Rana sphenoccephala</i>	29, 31,32,33,35,8
Bronze frog	<i>Rana clamitans</i>	29, 31,32,33,35,8
Pig frog	<i>Rana grylio</i>	29, 31,32,33,35,8

### REPTILES

#### Crocodylians

American alligator	<i>Alligator mississippiensis</i>	29, 31,32,33,35,84
--------------------	-----------------------------------	--------------------

#### Lizards

Green anole	<i>Anolis carolinensis</i>	8,9,29
Brown anole*	<i>Anolis sagrei</i>	8,9,29
Southeastern five-lined skink	<i>Eumeces inexpectatus</i>	8,9
Ground skink	<i>Scincella lateralis</i>	8,9

#### Snake

Southern black racer	<i>Coluber constrictor priapus</i>	8
Florida water snake	<i>Nerodia fasciata pictiventris</i>	29, 31,32,33,35

#### Turtles

Florida softshell turtle	<i>Apalone ferox</i>	29, 31,32,33,35
Florida snapping turtle	<i>Chelydra serpentina osceola</i>	29, 31,32,33,35
Gopher tortoise	<i>Gopherus polyphemus</i>	8
Peninsula cooter	<i>Pseudemys floridana peninsularis</i>	29, 31,32,33,35
Florida redbelly	<i>Pseudemys nelsoni</i>	

\* Non-native Species

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>BIRDS</b>		
<b>Grebes</b>		
Pied-billed Grebe	<i>Podilymbus podiceps</i>	29,31,33,35,84
<b>Cormorants</b>		
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	29,31,33,35,84
<b>Cranes</b>		
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	MTC
<b>Darters</b>		
Anhinga	<i>Anhinga anhinga</i>	MTC
<b>Hérons and Bitterns</b>		
Great Egret	<i>Ardea alba</i>	MTC
Great Blue Heron	<i>Ardea herodias</i>	MTC
Cattle Egret	<i>Bubulcus ibis</i>	MTC
Green Heron	<i>Butorides virescens</i>	MTC
Little Blue Heron	<i>Egretta caerulea</i>	MTC
Tricolored Heron	<i>Egretta tricolor</i>	MTC
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	MTC
<b>Storks</b>		
Wood Stork	<i>Mycteria americana</i>	MTC
<b>Ibises and Spoonbills</b>		
White Ibis	<i>Eudocimus albus</i>	MTC
Glossy Ibis	<i>Plegadis falcinellus</i>	MTC
<b>Ducks and Geese</b>		
Wood Duck	<i>Aix sponsa</i>	29,31,33,35,84
Green-winged Teal	<i>Anas crecca</i>	
Mottled Duck	<i>Anas fulvigula</i>	29,31,33,35,84
Black-bellied Whistling Duck	<i>Dendrocygna autumnalis</i>	29,31,33,35,84
<b>Falcons</b>		
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	MTC
<b>Hawks, Eagles and Kites</b>		
Cooper's Hawk	<i>Accipiter cooperii</i>	MTC
Red-tailed Hawk	<i>Buteo jamaicensis</i>	MTC
Red-shouldered Hawk	<i>Buteo lineatus</i>	MTC
Swallow-tailed Kite	<i>Elanoides forficatus</i>	MTC
Bald Eagle	<i>Haliaeetus leucocephalus</i>	MTC
Mississippi Kite	<i>Ictinia mississippiensis</i>	MTC
Osprey	<i>Pandion haliaetus</i>	MTC
<b>Vultures</b>		
Turkey Vulture	<i>Cathartes aura</i>	MTC
Black Vulture	<i>Coragyps atratus</i>	MTC

\* Non-native Species



## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>Turkey and Quail</b>		
Northern Bobwhite	<i>Colinus virginianus</i>	8
Wild Turkey	<i>Meleagris gallopavo</i>	8
<b>Gallinules</b>		
Common Moorhen	<i>Gallinula chloropus</i>	29,31,33,35,84
Purple Gallinule	<i>Porphyryla martinica</i>	29,31,33,35,84
<b>Limpkin</b>		
Limpkin	<i>Aramus guarauna</i>	29,31,33,35,84
<b>Doves</b>		
Common Ground Dove	<i>Columbina passerina</i>	MTC
Mourning Dove	<i>Zenaida macroura</i>	MTC
<b>Cuckoos</b>		
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	MTC
<b>Owls</b>		
Barred Owl	<i>Strix varia</i>	MTC
<b>Goatsuckers</b>		
Chuck-will's-willow	<i>Caprimulgus carolinensis</i>	MTC
Common Nighthawk	<i>Chordeiles minor</i>	MTC
<b>Woodpeckers</b>		
Northern Flicker	<i>Colaptes auratus</i>	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	MTC
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	MTC
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	MTC
Downy Woodpecker	<i>Picoides pubescens</i>	MTC
Hairy Woodpecker	<i>Picoides villosus</i>	MTC
<b>Flycatchers</b>		
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	MTC
Eastern Kingbird	<i>Tyrannus tyrannus</i>	MTC
<b>Vireos</b>		
Yellow-throated Vireo	<i>Vireo flavifrons</i>	MTC
White-eyed Vireo	<i>Vireo griseus</i>	MTC
<b>Jays and Crows</b>		
American Crow	<i>Corvus brachyrhynchos</i>	MTC
Fish Crow	<i>Corvus ossifragus</i>	MTC
Blue Jay	<i>Cyanocitta cristata</i>	MTC
<b>Swallows</b>		
Barn Swallow	<i>Hirundo rustica</i>	MTC
<b>Titmice</b>		
Tufted Titmouse	<i>Baeolophus bicolor</i>	MTC
Carolina Chickadee	<i>Poecile carolinensis</i>	MTC

Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>Nuthatches</b>		
Brown-headed Nuthatch	<i>Sitta pusilla</i>	8
<b>Wrens</b>		
Carolina Wren	<i>Thryothorus ludovicianus</i>	MTC
House Wren	<i>Troglodytes aedon</i>	MTC
<b>Gnatcatchers and Kinglets</b>		
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	MTC
Ruby-crowned Kinglet	<i>Regulus calendula</i>	MTC
<b>Thrushes</b>		
Eastern Bluebird	<i>Sialia sialis</i>	84
<b>Plovers</b>		
Killdeer	<i>Charadrius vociferous</i>	84
<b>Woodcocks, Snipes, and Sandpipers</b>		
Solitary Sandpiper	<i>Tringa solitaria</i>	
<b>Warblers</b>		
Yellow-throated Warbler	<i>Dendroica dominica</i>	MTC
Palm Warbler	<i>Dendroica palmarum</i>	MTC
Pine Warbler	<i>Dendroica pinus</i>	MTC
Common Yellowthroat	<i>Geothlypis trichas</i>	MTC
Northern Parula	<i>Parula americana</i>	MTC
Northern Waterthrush	<i>Seiurus noveboracensis</i>	29,31,33,35,84
American Redstart	<i>Setophaga ruticilla</i>	MTC
<b>Tanagers</b>		
Summer Tanager	<i>Piranga rubra</i>	MTC
<b>Sparrows</b>		
Bachman's Sparrow	<i>Aimophila aestivalis</i>	8
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	8
<b>Meadowlarks, Blackbirds and Orioles</b>		
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	33,34,35
Bobolink	<i>Dolichonyx oryzivorus</i>	MTC
Brown-headed Cowbird	<i>Molothrus ater</i>	MTC
Boat-tailed Grackle	<i>Quiscalus major</i>	MTC
Common Grackle	<i>Quiscalus quiscula</i>	MTC
Eastern Meadowlark	<i>Sturnella magna</i>	84
<b>Cardinals, Grosbeaks, and Buntings</b>		
Northern Cardinal	<i>Cardinalis cardinalis</i>	MTC
<b>Hummingbirds</b>		
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	MTC

## Colt Creek State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
<b>Mockingbirds and Thrashers</b>		
Gray Catbird	<i>Dumetella carolinensis</i>	MTC
Northern Mockingbird	<i>Mimus polyglottos</i>	MTC
<b>MAMMALS</b>		
<b>Didelphids</b>		
Virginia opossum	<i>Didelphis virginiana</i>	MTC
<b>Insectivores</b>		
Northern short-tailed shrew	<i>Blarina brevicauda</i>	8
<b>Edentates</b>		
Nine-banded armadillo *	<i>Dasypus novemcinctus</i>	MTC
<b>Lagomorphs</b>		
Eastern cottontail	<i>Sylvilagus floridanus</i>	8
Marsh rabbit	<i>Sylvilagus palustris</i>	8
<b>Rodents</b>		
Gray squirrel	<i>Sciurus carolinensis</i>	8
Sherman's fox squirrel	<i>Sciurus niger shermani</i>	8
<b>Carnivores</b>		
Bobcat	<i>Felis rufus</i>	MTC
Raccoon	<i>Procyon lotor</i>	MTC
Coyote	<i>Canis latrans</i>	MTC
<b>Artiodactyls</b>		
White-tailed deer	<i>Odocoileus virginianus</i>	MTC
Wild pig *	<i>Sus scrofa</i>	MTC

## Colt Creek State Park Animals

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for all species)
-------------	------------------------	--

---

## Habitat Codes

---

### Terrestrial

1. Beach Dune
2. Bluff
3. Coastal Berm
4. Coastal Rock Barren
5. Coastal Strand
6. Dry Prairie
7. Maritime Hammock
8. Mesic Flatwoods
9. Mesic Hammock
10. Coastal Grasslands
11. Pine Rockland
12. Prairie Hammock
13. Rockland Hammock
14. Sandhill
15. Scrub
16. Scrubby Flatwoods
17. Shell Mound
18. Sinkhole
19. Slope Forest
20. Upland Glade
21. Upland Hardwood Forest
22. Upland Mixed Forest
23. Upland Pine Forest
24. Xeric Hammock

### Palustrine

25. Basin Marsh
26. Basin Swamp
27. Baygall
28. Bog
29. Bottomland Forest
30. Coastal Interdunal Swale
31. Depression Marsh
32. Dome
33. Floodplain Forest
34. Floodplain Marsh
35. Floodplain Swamp
36. Freshwater Tidal Swamp
37. Hydric Hammock
38. Marl Prairie
39. Seepage Slope
40. Slough
41. Strand Swamp
42. Swale
43. Wet Flatwoods
44. Wet Prairie

### Lacustrine

45. Clastic Upland Lake
46. Coastal Dune Lake
47. Coastal Rockland Lake
48. Flatwood/Prairie Lake
49. Marsh Lake
50. River Floodplain Lake
51. Sandhill Upland Lake
52. Sinkhole Lake
53. Swamp Lake

### Riverine

54. Alluvial Stream
55. Blackwater Stream
56. Seepage Stream
57. Spring-Run Stream

### Estuarine

58. Estuarine Algal Bed
59. Estuarine Composite Substrate
60. Estuarine Consolidated Substrate
61. Estuarine Coral Reef
62. Estuarine Grass Bed
63. Estuarine Mollusk Reef
64. Estuarine Octocoral Bed
65. Estuarine Sponge Bed
66. Estuarine Tidal Marsh
67. Estuarine Tidal Swamp
68. Estuarine Unconsolidated Substrate
69. Estuarine Worm Reef

### Marine

70. Marine Algal Bed
71. Marine Composite Substrate
72. Marine Consolidated Substrate
73. Marine Coral Reef
74. Marine Grass Bed
75. Marine Mollusk Reef
76. Marine Octocoral Bed
77. Marine Sponge Bed
78. Marine Tidal Marsh
79. Marine Tidal Swamp
80. Marine Unconsolidated Substrate
81. Marine Worm Reef

### Subterranean

82. Aquatic Cave
83. Terrestrial Cave

### Miscellaneous

84. Ruderal
85. Developed

MTC Many Types of Communities  
OF Over Flying

## Habitat Codes

---



**Addendum 5 – Designated Species List**



## **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)
- 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
- 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)

## **Rank Explanations For FNAI Global Rank, FNAI State Rank, Federal Status, And State Status**

---

### **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 that 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 that is likely to become an endangered species within the near 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 Fish and Wildlife Conservation Commission - FFWCC)**

LE = Listed as Endangered Species by the FFWCC. 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 FFWCC. 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 FFWCC. 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.

Colt Creek State Park Designated Species (Plants)

Common Name/ <i>Scientific Name</i>	FDACS	<u>Designated Species Status</u>	
		USFWS	FNAI
Catesby's lily <i>Lilium catesbaei</i>	LT		
Royal fern <i>Osmunda regalis</i>	CE		
Queensdelight <i>Stillingia sylvatica</i>			S2
Atamasco lily <i>Zephyranthes atamasco</i>		T	

## Colt Creek State Park Designated Species (Plants)

<b>Common Name/ <i>Scientific Name</i></b>	<b>FDACS</b>	<b><u>Designated Species Status</u></b> <b>USFWS</b>	<b>FNAI</b>
--	--------------	---	-------------

---



## Colt Creek State Park Designated Species (Animals)

Common Name/ <i>Scientific Name</i>	Designated Species Status		
	FFWCC	USFWS	FNAI
<b>REPTILES</b>			
American alligator <i>Alligator mississippiensis</i>	LS	T(S/A)	G5, S4
Gopher tortoise <i>Gopherus polyphemus</i>	LS		G3, S3
<b>BIRDS</b>			
Cooper's hawk <i>Accipiter cooperii</i>			G5, S3
Bachman's sparrow <i>Aimophila aestivalis</i>			G3, S3
Limpkin <i>Aramus guarauna</i>	LS		G5, S3
Great egret <i>Ardea alba</i>			G5, S4
Little blue heron <i>Egretta caerulea</i>	LS		G5, S4
Tricolored heron <i>Egretta tricolor</i>	LS		G5, S4
Swallow-tailed kite <i>Elanoides forficatus</i>			G5, S2
White ibis <i>Eudocimus albus</i>	LS		G5, S4
Southeastern American Kestrel <i>Falco sparverius paulus</i>	LT		G5T4, S3
Florida sandhill crane <i>Grus canadensis pratensis</i>	LT		G5T2T3, S2S3
Southern bald eagle <i>Haliaeetus leucocephalus</i>	LT	LT	G4, S3
Wood Stork <i>Mycteria Americana</i>	LE	LE	G4, S2
Black-crowned night-heron <i>Nycticorax nycticorax</i>			G5, S3
Osprey <i>Pandion haliaetus</i>			G5, S3S4
Glossy ibis <i>Plegadis falcinellus</i>			G5, S3

## Colt Creek State Park Designated Species (Animals)

Common Name/ <i>Scientific Name</i>	<u>Designated Species Status</u>		
	FFWCC	USFWS	FNAI
MAMMALS			
Sherman's fox squirrel <i>Sciurus niger shermani</i>	LS		G5T3, S3

## **Addendum 6 – Timber Management Analysis**



## Colt Creek State Park Timber Management Analysis

---

The timber assessment require by Chapters 253 and 259, Florida Statutes, was conducted by Tim Worley, Butch Mallet, Jason DePue, Scott Spaulding, and Amy Copeland in October, 2006.

### TIMBER MANAGEMENT

Timber management is an effective tool used to restore and maintain healthy ecosystems. On managed lands around the state, unnatural fire regimes have resulted in overly dense overstory of pine and hardwood trees with an almost impenetrable understory of saw palmetto. This combination tends to shade out the fine fuels on the forest floor that carry frequent, low intensity fires. Timber thinning harvests are used to allow more sunlight to reach the forest floor or provide access for machinery to control unwanted vegetation.

Healthy ecosystems are characterized by a mixture of trees of varying ages. Stands with only old or young trees do not function as healthy flatwoods ecosystems. Old growth trees are necessary to provide cavity sites for RCW's, mast for fox squirrels, and nest trees for large raptors. As pine trees grow older, they become less vigorous and more likely to succumb to insects, disease, or other stresses. To insure a steady supply of pine trees old enough to fulfill the function of "old-growth" trees, some long-term management is required. Stands should contain a mixture of age classes.

### EXISTING TIMBER RESOURCES

Colt Creek State Park is a relatively large tract of land. Identifying individual stands and defining exact acres requiring a specific management practice is beyond the scope of this assessment. A more detailed Timber Stand Description would be required to properly plan long-term timber management activities. The following are general descriptions and management recommendations. A prime objective on this tract is to establish and maintain a healthy ground cover of grasses and forbs. Adequate sunlight must reach the ground to achieve this goal.

Pine Flatwoods - Several blocks of native longleaf and slash pine flatwoods were observed. Most of them had received been maintained with prescribed fire for rough woods grazing. Most of these stands were in good condition with BA of 60 sq. ft. per acre or more and moderate densities of saw palmetto. Some stands have strands of pine over 100 sq. ft. BA and others have a denser understory of palmettos.

Slash Pine Plantations - Several blocks on the south end of the property are older slash pine plantations. These stands have been thinned in the past, but have had fire excluded probably since their initial planting. As a result, hardwoods species are taking over and the ground cover is in poor shape.

### Current Recommendations -

Pine Flatwoods - Almost all of the native pine stands in and around the swamps and hammocks have been under active management. This is evident due to the even aged nature of these stands. Basal area for the most part ranges from 60 sq. ft. to 80 sq. ft. per acre. Maintain current basal area ranges through the use of timed thinning by fire. Basal Areas as low as 40 to 50 sq. ft. are used by some managers to promote healthier fine fuel production.

Create openings in the canopy to allow natural regeneration. These openings should be large enough to allow sufficient sunlight to reach the ground to promote pine seedling growth. The canopy voids also create much desired diversity in tree height, flowering plants, and animal habitat. Trees that are left should be healthy, vigorous, and well spaced.

Pine Plantations - These stands were thinned and then ignored. As a result, hardwoods are firmly established. The pines are nearing the point in time when they will begin to starting to die out. The loss of habitat can be reversed by heavily thinning by the use of fire. Enough of the pines should be left standing to produce needle cast to carry future prescribed fires. For effective control, the hardwoods may have to be treated with an herbicide once they have re-sprouted after being harvested.

Long Term Recommendations - The following recommendations are general guidelines to be used in areas where pine trees are or would have been a large part of the natural ecosystem. Conditions described might currently exist or show up on newly acquired lands, currently unknown stands, and in the distant future as natural regeneration matures.

BA < 10 - These areas have insufficient pine trees to regenerate themselves. Control the saw palmetto and gallberry through the use of roller drum choppers and fire. Plant longleaf pine as described under Artificial Regeneration section below.

10 to 30 BA - These stands may or may not have enough seed trees to regenerate themselves. Though for certain, any further loss of mature trees could preclude a healthy future. Stands with these marginally low basal areas should be included in a regeneration plan. See natural and artificial sections regeneration below.

40 to 70 BA - These stands have an adequate number of pine trees to utilize the growing space without over crowding. No harvests are necessary in these stands unless thinning is required to allow access for roller drum chopping of palmettos, palms, or other overgrown woody vegetation. If chopping is needed, follow spacing recommendations as described in the Natural Regeneration

## Colt Creek State Park Timber Management Analysis

---

section. In large stands with little regeneration, some group selection openings may be cut to promote seedling establishment.

80 BA & UP - Pine stands with this level of stocking may begin to shade out the ground cover. These stands should be thinned to 40 to 60 sq. ft. BA by the use of fire. If chopping for palmetto control is needed, follow spacing recommendations as described in the Natural Regeneration section. Group selection openings should be scattered throughout these stands to promote seedling establishment.

Salvage Sales - On occasion, small volumes of wood may need to be removed due to fire, windstorm, insect or other damage. The decision whether or not to harvest the affected timber will depend on the threat to the surrounding stands, risk of collateral ecological damage, and the volume of the trees involved. For example, small, isolated lightning-strike beetle kills are a natural part of a healthy ecosystem and normally would not be cut. However, if a drought caused the insect infestation to spread, the infected trees and a buffer zone might have to be removed.

### **REGENERATION**

#### **Natural**

10 to 30 BA - Control saw palmetto height and density. This can be accomplished by burning the stand in late winter or early spring to remove most of the fronds. Then roller drum chop the palmettos prior to the summer rainy season with a chopper heavy enough to sever their stems (probably a medium or heavy, single or tandem, but not offset). Some managers prefer to chop after the rainy season starts. Managers have indicated that well hydrated palmetto stems are easier to cut through. Personal experience should dictate the timing. A second burn in the summer after the chopping is complete would be beneficial if a fire will carry.

If for any reason an adequate number of young seedlings are not established by the second summer following the initial chopping, burn the stand again prior to end of the rainy season. This will allow some grasses to re-grow enough to protect the seeds and fragile seedlings from the hot sun. Care should be taken to not scorch the pine cones or needles at this time of the year.

Once 1,000 or more seedlings per acre are established and growing, withhold fire from the stand for at least two to three years. Timing of reintroduction of prescribed fire into regenerated stands will depend on seedling growth and fuel loads. Generally, 400 or more trees per acre should be at the proper stage of growth before the stand is burned. In mixed stands, the longleaf should be in the



## Colt Creek State Park Timber Management Analysis

---

“grass stage” and the slash pine should be at least head-high in light fuels. Where fuels are light and fire frequent enough, these stands can probably be returned to the normal rotation following the first post-establishment burn.

30 to 50 BA - Again control saw palmetto as above. These stands may require thinning alone or in combination with group selection cuts to allow the roller choppers to treat the palmettos without killing remnant pine trees. Spacing between leave trees or clusters of leave trees should be at least 20 to 30 feet to give room for the tractor and chopper to operate. Group selection openings should be at least two chains (132 feet) wide to allow adequate sunlight for sapling growth. Follow the fire regime as described above.

Another harvest method used involves all of the pine timber within an area except groups of 3 to 5 close spaced, mature trees. Spacing between clusters is widened to twice the height of the mature pines within each group. Overall this method maintains about the same number of trees, but it allows more intense roller-drum chopping. Increased chopping provides better palmetto reduction between clusters. The closer spacing of the trees discourages chopping within the cluster. This protects sensitive pine tree feeder roots from damage and lessens unintentional mortality. Scattered individual trees are often left standing between clusters primarily for aesthetic reasons.

> 50 BA - These stands need reforestation treatment only where saw palmetto must be controlled or additional age classes are desired (i.e. insufficient number of trees younger than ten years old). Where palmetto control is a priority, thin pines to 30 to 40 sq. ft. per acre (at least 20 to 30 feet between leave trees or clusters if chopping is required). Scatter group selection openings throughout the stand. Roller chop the stand, evaluate success and implement fire regime as above. If palmetto is not a problem, skip the chopping, and then evaluate success and burn as above.

### **Artificial**

Artificial regeneration techniques are only to be used when natural methods are exhausted and in areas outlined in the Colt Creek State Park Restoration Plan. Below is a list of possible methods that could be employed for natural community restoration.

Hand Planting - Hand planting of either bare-root slash pine or containerized (tubelings) longleaf seedlings is one option for reestablishment in areas where an inadequate number of seed trees exists. Bare-root trees are planted in the winter. Tubelings can be planted in winter or summer, thereby extending the planting season. However, containerized seedlings may not be readily available. Nurseries may require six months to one year notice to insure their availability.

## Colt Creek State Park Timber Management Analysis

---

Plant approximately 600 seedlings per acre at varying spacing, but averaging 6' X 12" overall. Due to the increased likelihood of survival and higher cost of containerized seedlings, as few as 400 tubelings per acre can be planted.

A word of caution about planting in established pastures. To ensure adequate survival and avoid the expense of replanting, some form of herbicidal control, scalping, or deep disking of heavy grasses may be necessary. Competition from grass for soil moisture during hot, dry weather can cause severe losses of young seedlings. Applying a contact herbicide such as Roundup either in 2' wide strips or in spots can control these grasses. The herbicide should be applied far enough in advance of planting time so the grasses have time to "brown up" and indicate where to plant the seedlings.

A combination scalper/planter or scalping followed by hand or machine planting is a preferred method of establishing seedlings. The scalper can be set to remove no more than two to three inches of grass and soil. Shallow scalping eliminates the grass competition without creating deep ruts in the fields. A drawback to this method is that the machinery used to do the scalping can not be turned sharply. This results in some form of row planting which might be objectionable to some managers. To avoid this effect, the scalping can be done in a slowly meandering or crisscross fashion. In either case, after the first thinning casual observers often do not realize that the trees were ever planted in rows.

If deep disking is used on heavy grass pasture, it should be accomplished during dry weather. The upturned earth should remain dry for about one month. Then the soil needs to be roller packed or have sufficient rainfall to settle and remove air pockets prior to planting. This method of grass control may be less expensive than herbicide treatments. However, the potential exists for poor survival due to inadequate grass control and improperly compacted soil. In addition, noxious weed seeds are often brought to the surface where they germinate and out-compete with the young pines or cause other problems. Therefore, this method is not recommended.

Machine Planting – Meander planting bare-root or containerized seedlings at an average spacing of 6' X 12' yields about 600 trees per acre. It is more difficult to vary the spacing and make the planting look random with machine planting. This is due primarily to the inability of tree planters to make sharp turns and still pack the soil around the seedlings roots. The desired effect can be obtained by gradually curving the planting rows and varying the distance between and within the rows.

## Colt Creek State Park Timber Management Analysis

---

Another way to create the random look is to locate the planting rows twice as far apart as normal (averaging approximately 24'). Then, plant a second set of rows at some angle approaching 90 degrees to the first set of rows spaced about the same distance apart.

Again competition for soil moisture during dry weather can cause heavy losses of seedlings and waste of planting costs. Where grass is thick, it is best to either herbicide strips as described above or use a combination planter/ scalper to plant the seedlings. The scalper should be set to no more than 2 to 3 inches deep and 18 to 24 inches wide. These settings will minimize soil disturbance and maintain continuity of fuels for future prescribed burns, but the seedlings will have a decent chance of survival.

### SUMMARY

In rapidly urbanizing states, public lands are often the only refuges for native plant and animal communities. Restoring and maintaining these ecosystems is an important function of land managers. Timber harvests can be carefully designed to protect water quality and create openings in the tree canopy allowing sunlight to reach the forest floor. These clearings and their ecotones are favorite spots used by wildlife for feeding, resting, mating, nesting and rearing of offspring. The added sunlight allows new pine seedlings to become established in their native ecosystems and grow to replace trees killed by lightning, insects or disease. In all restoration scenarios, the exact methods and final results will be guided by the best available ecological information to conserve biodiversity of the affected habitats. The ability to maintain a frequent burning schedule at Colt Creek State Park will be essential to thin and maintain pine stands and to keep a healthy ground cover.

**Addendum 7 – Priority Schedule and Cost Estimates**



## Colt Creek State Park Schedule and Cost Estimates

Estimates are developed for the funding and staff resources needed to implement the management plan based on goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division's legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers, and partnerships with agencies, local governments and the private sector for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

### RESOURCE MANAGEMENT

1. Survey for exotic species and develop and implement an exotic species removal program. 0-10 years. Estimated Cost: \$5,000/year recurring ..... **\$50,000.00**
2. Develop and implement a prescribed fire program. 0-10 years. Estimated Cost: \$25,000/year recurring. .... **\$250,000.00**
3. Monitor the effects of prescribed fire on listed plant and animal species. 0-10 years. Estimated Cost: \$5,000/year recurring. .... **\$50,000.00**
4. Develop a hydrological restoration plan. 0-10 years. Estimated Cost:..... **\$20,000.00**
5. Eliminate ditches by plugging or backfilling where feasible. 0-10 years. Estimated Cost..... **\$1,000,000.00**
6. Install additional culverts under existing and future roadways. 0-10 years. Estimated Cost: ..... **\$50,000.00**
7. Monitor and evaluate hydrological restoration efforts. 0-10 years. Estimated Cost: \$5,000/year recurring. .... **\$50,000.00**
8. Conduct plant and animal surveys. 0-10 years. Estimated Cost: \$5,000/year recurring. .... **\$50,000.00**
9. Monitor listed species populations. 0-10 years. Estimated Cost: \$5,000/year recurring ..... **\$50,000.00**
10. Develop a restoration plan for highly altered or severely impacted natural communities. 0-10 years. Estimated Cost: ..... **\$30,000.00**
11. Complete an archeological assessment of the park. 0-10 years. Estimated Cost: ..... **\$30,000.00**
12. Develop a plan to protect and preserve the recorded archeological sites 0-10 years. Estimated Cost: ..... **\$5,000.00**
13. Research and document the history of the park land and surrounding area. 0-10 years. Estimated Cost:..... **\$5,000.00**

### ADMINISTRATION

7 FTE's – 5 Park Service Specialists, Administrative Assistant, Assistant Park Manager.  
0-10 years. Estimated cost: \$211,000/year recurring ..... **\$2,110,000.00**

**Total Estimated Cost..... \$ 3,750,000.00**

## Colt Creek State Park Schedule and Cost Estimates

<b>Development Area or Facilities</b>	<b>Cost</b>
Lakes Trailhead Area.....	161,500.00
Large Lake Picnic Area.....	646,500.00
Ranch Headquarters .....	1,510,150.00
Trails .....	643,500.00
Cabins .....	1,660,500.00
Standard Camping Area .....	1,947,500.00
Equestrian Camping Area .....	425,000.00
Group Camp .....	200,000.00
Support Facilities.....	2,704,000.00
<b>Total w/contingency .....</b>	<b>\$11,902,380.00</b>



**Addendum 8 – Priority Schedule and Cost Estimates**



## Edward Ball Wakulla Springs State Park Priority Schedule And Cost Estimates

Estimates are developed for the funding and staff resources needed to implement the management plan based on goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division's legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers and partnerships with agencies, local governments and the private sector for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

Natural Resource Management	
Management Activity	Estimated Cost
Exotic plant controls. 95% for hydrilla control (recurring).....	\$90,000.00
Prescribed burn program. Equipment, fuel, personal protection equipment (recurring).....	\$5,000.00
Gyro-tract new firebreaks and perimeter boundary lines.....	\$25,000.00
Cherokee Sink additional restoration and erosion controls.....	\$25,000.00
Expansion and maintenance of upland pine community restoration project..	\$25,000.00
Monitor water quality of springs and river. Equipment, lab fees (recurring)...	\$ 1,000.00
Protection of designated species. Survey, fencing of perimeter boundaries...	\$125,000.00
Assist in the continued exploration and mapping of cave system (recurring)..	\$ 2,000.00
Compile written report of the Full River Survey.....	\$ 2,000.00
(1) Park Service Specialist position or funding equivalent (recurring).....	\$33,689.00
<b>Total Cost:</b> .....	<b>\$1,548,860.00</b>

Cultural Resource Management	
Management Activity	Estimated Cost
Cultural resource surveys.....	\$25,000.00
Cultural resource management plans.....	TBD
Inventory and digitize archival records .....	TBD
Develop collections management program .....	TBD
Correct maintenance problems at Lodge.....	TBD
Update electrical system at administration building.....	TBD
Renovate gift shop .....	TBD
Placement of fill in excavated pits of dump complex.....	TBD
<b>Total Cost:</b> .....	<b>TBD</b>

**Edward Ball Wakulla Springs State Park Priority Schedule And Cost Estimates**

---

<b>Capital Improvements</b>	
<b>Development Area or Facilities</b>	<b>Estimated Cost</b>
Waterfront and Lodge Complex.....	\$531,500.00
Picnic Area .....	\$290,000.00
Trails & Interpretation.....	\$102,000.00
Cherokee Sink Parcel .....	\$383,250.00
River Sink Parcel .....	\$30,000.00
Shop Area.....	\$17,000.00
<b>Total Cost with Contingency .....</b>	<b>\$1,624,500.00</b>

**Additional Information**

**ENAI Descriptions**

**DHR Cultural Management Statement**



---

## Descriptions Of Natural Communities Developed By FNAI

---

This summary presents the hierarchical classification and brief descriptions of 82 Natural Communities developed by Florida Natural Areas Inventory and identified as collectively constituting the original, natural biological associations of Florida.

A Natural Community is defined as a distinct and recurring assemblage of populations of plants, animals, fungi and microorganisms naturally associated with each other and their physical environment. For more complete descriptions, see Guide to the Natural Communities of Florida, available from Florida Department of Natural Resources.

The levels of the hierarchy are:

**Natural Community Category** - defined by hydrology and vegetation.

**Natural Community Groups** - defined by landform, substrate, and vegetation.

**Natural Community Type** - defined by landform and substrate; soil moisture condition; climate; fire; and characteristic vegetation.

---

### TERRESTRIAL COMMUNITIES

XERIC UPLANDS  
COASTAL UPLANDS  
MESIC UPLANDS  
ROCKLANDS  
MESIC FLATLANDS

### PALUSTRINE COMMUNITIES

WET FLATLANDS  
SEEPAGE WETLANDS  
FLOODPLAIN WETLANDS  
BASIN WETLANDS

### LACUSTRINE COMMUNITIES

### RIVERINE COMMUNITIES

### SUBTERRANEAN COMMUNITIES

### MARINE/ESTUARINE COMMUNITIES

### Definitions of Terms Used in Natural Community Descriptions

---

**TERRESTRIAL** - Upland habitats dominated by plants which are not adapted to anaerobic soil conditions imposed by saturation or inundation for more than 10% of the growing season.

**XERIC UPLANDS** - very dry, deep, well-drained hills of sand with xeric-adapted vegetation.

**Sandhill** - upland with deep sand substrate; xeric; temperate; frequent fire (2-5 years); longleaf pine and/or turkey oak with wiregrass understory.

**Scrub** - old dune with deep fine sand substrate; xeric; temperate or subtropical; occasional or rare fire (20 - 80 years); sand pine and/or scrub oaks and/or rosemary and lichens.

**Xeric Hammock** - upland with deep sand substrate; xeric-mesic; temperate or subtropical; rare or no fire; live oak and/or sand live oak and/or laurel oak and/or other oaks, sparkleberry, saw palmetto.

**COASTAL UPLANDS** - substrate and vegetation influenced primarily by such coastal (maritime) processes as erosion, deposition, salt spray, and storms.

**Beach Dune** - active coastal dune with sand substrate; xeric; temperate or subtropical; occasional or rare fire; sea oats and/or mixed salt-spray tolerant grasses and herbs.

**Coastal Berm** - old bar or storm debris with sand/shell substrate; xeric-mesic; subtropical or temperate; rare or no fire; buttonwood, mangroves, and/or mixed halophytic herbs and/or shrubs and trees.



## Descriptions Of Natural Communities Developed By FNAI

---

**Coastal Grassland** - coastal flatland with sand substrate; xeric-mesic; subtropical or temperate; occasional fire; grasses, herbs, and shrubs with or without slash pine and/or cabbage palm.

**Coastal Rock Barren** - flatland with exposed limestone substrate; xeric; subtropical; no fire; algae, mixed halophytic herbs and grasses, and/or cacti and stunted shrubs and trees.

**Coastal Strand** - stabilized coastal dune with sand substrate; xeric; subtropical or temperate; occasional or rare fire; dense saw palmetto and/or seagrape and/or mixed stunted shrubs, yucca, and cacti.

**Maritime Hammock** - stabilized coastal dune with sand substrate; xeric-mesic; subtropical or temperate; rare or no fire; mixed hardwoods and/or live oak.

**Shell Mound** - Indian midden with shell substrate; xeric-mesic; subtropical or temperate; rare or no fire; mixed hardwoods.

**MESIC UPLANDS** - dry to moist hills of sand with varying amounts of clay, silt or organic material; diverse mixture of broadleaved and needleleaved temperate woody species.

**Bluff** - steep slope with rock, sand, and/or clay substrate; hydric-xeric; temperate; sparse grasses, herbs and shrubs.

**Slope Forest** - steep slope on bluff or in sheltered ravine; sand/clay substrate; mesic-hydric; temperate; rare or no fire; magnolia, beech, spruce pine, Shumard oak, Florida maple, mixed hardwoods.

**Upland Glade** - upland with calcareous rock and/or clay substrate; hydric-xeric; temperate; sparse mixed grasses and herbs with occasional stunted trees and shrubs, e.g., eastern red cedar.

**Upland Hardwood Forest** - upland with sand/clay and/or calcareous substrate; mesic; temperate; rare or no fire; spruce pine, magnolia, beech, pignut hickory, white oak, and mixed hardwoods.

**Upland Mixed Forest** - upland with sand/clay substrate; mesic; temperate; rare or no fire; loblolly pine and/or shortleaf pine and/or laurel oak and/or magnolia and spruce pine and/or mixed hardwoods.

**Upland Pine Forest** - upland with sand/clay substrate; mesic-xeric; temperate; frequent or occasional fire; longleaf pine and/or loblolly pine and/or shortleaf pine, southern red oak, wiregrass.

**ROCKLANDS** - low, generally flat limestone outcrops with tropical vegetation; or limestone exposed through karst activities with tropical or temperate vegetation.

**Pine Rockland** - flatland with exposed limestone substrate; mesic-xeric; subtropical; frequent fire; south Florida slash pine, palms and/or hardwoods, and mixed grasses and herbs.

**Rockland Hammock** - flatland with limestone substrate; mesic; subtropical; rare or no fire; mixed tropical hardwoods, often with live oak.

**Sinkhole** - karst feature with steep limestone walls; mesic-hydric; subtropical or temperate; no fire; ferns, herbs, shrubs, and hardwoods.

**MESIC FLATLANDS** - flat, moderately well-drained sandy substrates with admixture of organic material, often with a hard pan.

**Dry Prairie** - flatland with sand substrate; mesic-xeric; subtropical or temperate; annual or frequent fire; wiregrass, saw palmetto, and mixed grasses and herbs.

**Mesic Flatwoods** - flatland with sand substrate; mesic; subtropical or temperate; frequent fire; slash pine and/or longleaf pine with saw palmetto, gallberry and/or wiregrass or cutthroat grass understory.

## Descriptions Of Natural Communities Developed By FNAI

---

**Prairie Hammock** - flatland with sand/organic soil over marl or limestone substrate; mesic; subtropical; occasional or rare fire; live oak and/or cabbage palm.

**Scrubby Flatwoods** - flatland with sand substrate; xeric-mesic; subtropical or temperate; occasional fire; longleaf pine or slash pine with scrub oaks and wiregrass understory.

**PALUSTRINE** - Wetlands dominated by plants adapted to anaerobic substrate conditions imposed by substrate saturation or inundation during 10% or more of the growing season. Includes non-tidal wetlands; tidal wetlands with ocean derived salinities less than 0.5 ppt and dominance by salt-intolerant species; small (less than 8 ha), shallow (less than 2 m deep at low water) water bodies without wave-formed or bedrock shoreline; and inland brackish or saline wetlands.

**WET FLATLANDS** - flat, poorly drained sand, marl or limestone substrates.

**Hydric Hammock** - lowland with sand/clay/organic soil, often over limestone; mesic-hydric; subtropical or temperate; rare or no fire; water oak, cabbage palm, red cedar, red maple, bays, hackberry, hornbeam, blackgum, needle palm, and mixed hardwoods.

**Marl Prairie** - flatland with marl over limestone substrate; seasonally inundated; tropical; frequent to no fire; sawgrass, spikerush, and/or mixed grasses, sometimes with dwarf cypress.

**Wet Flatwoods** - flatland with sand substrate; seasonally inundated; subtropical or temperate; frequent fire; vegetation characterized by slash pine or pond pine and/or cabbage palm with mixed grasses and herbs.

**Wet Prairie** - flatland with sand substrate; seasonally inundated; subtropical or temperate; annual or frequent fire; maidencane, beakrush, spikerush, wiregrass, pitcher plants, St. John's wort, mixed herbs.

**SEEPAGE WETLANDS** - sloped or flat sands or peat with high moisture levels maintained by downslope seepage; wetland and mesic woody and/or herbaceous vegetation.

**Baygall** - wetland with peat substrate at base of slope; maintained by downslope seepage, usually saturated and occasionally inundated; subtropical or temperate; rare or no fire; bays and/or dahoon holly and/or red maple and/or mixed hardwoods.

**Seepage Slope** - wetland on or at base of slope with organic/sand substrate; maintained by downslope seepage, usually saturated but rarely inundated; subtropical or temperate; frequent or occasional fire; sphagnum moss, mixed grasses and herbs or mixed hydrophytic shrubs.

**FLOODPLAIN WETLANDS** - flat, alluvial sand or peat substrates associated with flowing water courses and subjected to flooding but not permanent inundation; wetland or mesic woody and herbaceous vegetation.

**Bottomland Forest** - flatland with sand/clay/organic substrate; occasionally inundated; temperate; rare or no fire; water oak, red maple, beech, magnolia, tuliptree, sweetgum, bays, cabbage palm, and mixed hardwoods.

**Floodplain Forest** - floodplain with alluvial substrate of sand, silt, clay or organic soil; seasonally inundated; temperate; rare or no fire; diamondleaf oak, overcup oak, water oak, swamp chestnut oak, blue palmetto, cane, and mixed hardwoods.

**Floodplain Marsh** - floodplain with organic/sand/alluvial substrate; seasonally inundated; subtropical; frequent or occasional fire; maidencane, pickerelweed, sagittaria spp., buttonbush, and mixed emergents.

**Floodplain Swamp** - floodplain with organic/alluvial substrate; usually inundated; subtropical or temperate; rare or no fire; vegetation characterized by cypress, tupelo, black gum, and/or pop ash.

## Descriptions Of Natural Communities Developed By FNAI

---

**Freshwater Tidal Swamp** - river mouth wetland, organic soil with extensive root mat; inundated with freshwater in response to tidal cycles; rare or no fire; cypress, bays, cabbage palm, gums and/or cedars.

**Slough** - broad, shallow channel with peat over mineral substrate; seasonally inundated, flowing water; subtropical; occasional or rare fire; pop ash and/or pond apple or water lily.

**Strand Swamp** - broad, shallow channel with peat over mineral substrate; seasonally inundated, flowing water; subtropical; occasional or rare fire; cypress and/or willow.

**Swale** - broad, shallow channel with sand/peat substrate; seasonally inundated, flowing water; subtropical or temperate; frequent or occasional fire; sawgrass, maidencane, pickerelweed, and/or mixed emergents.

**BASIN WETLANDS** - shallow, closed basin with outlet usually only in time of high water; peat or sand substrate, usually inundated; wetland woody and/or herbaceous vegetation.

**Basin Marsh** - large basin with peat substrate; seasonally inundated; temperate or subtropical; frequent fire; sawgrass and/or cattail and/or buttonbush and/or mixed emergents.

**Basin Swamp** - large basin with peat substrate; seasonally inundated, still water; subtropical or temperate; occasional or rare fire; vegetation characterized by cypress, blackgum, bays and/or mixed hardwoods.

**Bog** - wetland on deep peat substrate; moisture held by sphagnum mosses, soil usually saturated, occasionally inundated; subtropical or temperate; rare fire; sphagnum moss and titi and/or bays and/or dahoon holly, and/or mixed hydrophytic shrubs.

**Coastal Interdunal Swale** - long narrow depression wetlands in sand/peat-sand substrate; seasonally inundated, fresh to brackish, still water; temperate; rare fire; graminoids and mixed wetland forbs.

**Depression Marsh** - small rounded depression in sand substrate with peat accumulating toward center; seasonally inundated, still water; subtropical or temperate; frequent or occasional fire; maidencane, fire flag, pickerelweed, and mixed emergents, may be in concentric bands.

**Dome Swamp** - rounded depression in sand/limestone substrate with peat accumulating toward center; seasonally inundated, still water; subtropical or temperate; occasional or rare fire; cypress, blackgum, or bays, often tallest in center.

**LACUSTRINE** - Non-flowing wetlands of natural depressions lacking persistent emergent vegetation except around the perimeter.

**Clastic Upland Lake** - generally irregular basin in clay uplands; predominantly with inflows, frequently without surface outflow; clay or organic substrate; colored, acidic, soft water with low mineral content (sodium, chloride, sulfate); oligo-mesotrophic to eutrophic.

**Coastal Dune Lake** - basin or lagoon influenced by recent coastal processes; predominantly sand substrate with some organic matter; salinity variable among and within lakes, and subject to saltwater intrusion and storm surges; slightly acidic, hard water with high mineral content (sodium, chloride).

**Coastal Rockland Lake** - shallow basin influence by recent coastal processes; predominantly barren oolitic or Miami limestone substrate; salinity variable among and within lakes, and subject to saltwater intrusion, storm surges and evaporation (because of shallowness); slightly alkaline, hard water with high mineral content (sodium, chloride).

**Flatwoods/Prairie Lake** - generally shallow basin in flatlands with high water table; frequently with a

## Descriptions Of Natural Communities Developed By FNAI

---

broad littoral zone; still water or flow-through; sand or peat substrate; variable water chemistry, but characteristically colored to clear, acidic to slightly alkaline, soft to moderately hard water with moderate mineral content (sodium, chloride, sulfate); oligo-mesotrophic to eutrophic.

**Marsh lake** - generally shallow, open water area within wide expanses of freshwater marsh; still water or flow-through; peat, sand or clay substrate; occurs in most physiographic regions; variable water chemistry, but characteristically highly colored, acidic, soft water with moderate mineral content (sodium, chloride, sulfate); oligo-mesotrophic to eutrophic.

**River Floodplain Lake** - meander scar, backwater, or larger flow-through body within major river floodplains; sand, alluvial or organic substrate; colored, alkaline or slightly acidic, hard or moderately hard water with high mineral content (sulfate, sodium, chloride, calcium, magnesium); mesotrophic to eutrophic.

**Sandhill Upland Lake** - generally rounded solution depression in deep sandy uplands or sandy uplands shallowly underlain by limestone; predominantly without surface inflows/outflows; typically sand substrate with organic accumulations toward middle; clear, acidic moderately soft water with varying mineral content; ultra-oligotrophic to mesotrophic.

**Sinkhole Lake** - typically deep, funnel-shaped depression in limestone base; occurs in most physiographic regions; predominantly without surface inflows/outflows, but frequently with connection to the aquifer; clear, alkaline, hard water with high mineral content (calcium, bicarbonate, magnesium).

**Swamp Lake** - generally shallow, open water area within basin swamps; still water or flow-through; peat, sand or clay substrate; occurs in most physiographic regions; variable water chemistry, but characteristically highly colored, acidic, soft water with moderate mineral content (sodium, chloride, sulfate); oligo-mesotrophic to eutrophic.

**RIVERINE** - Natural, flowing waters from their source to the downstream limits of tidal influence and bounded by channel banks.

**Alluvial Stream** - lower perennial or intermittent/seasonal watercourse characterized by turbid water with suspended silt, clay, sand and small gravel; generally with a distinct, sediment-derived (alluvial) floodplain and a sandy, elevated natural levee just inland from the bank.

**Blackwater Stream** - perennial or intermittent/seasonal watercourse characterized by tea-colored water with a high content of particulate and dissolved organic matter derived from drainage through swamps and marshes; generally lacking an alluvial floodplain.

**Seepage Stream** - upper perennial or intermittent/seasonal watercourse characterized by clear to lightly colored water derived from shallow groundwater seepage.

**Spring-run Stream** - perennial watercourse with deep aquifer headwaters and characterized by clear water, circumneutral pH and, frequently, a solid limestone bottom.

**SUBTERRANEAN** - Twilight, middle and deep zones of natural chambers overlain by the earth's crust and characterized by climatic stability and assemblages of troglonec, troglophilic, and troglobitic organisms.

**Aquatic Cave** - cavernicolous area permanently or periodically submerged; often characterized by troglobitic crustaceans and salamanders; includes high energy systems which receive large quantities of organic detritus and low energy systems.

**Terrestrial Cave** - cavernicolous area lacking standing water; often characterized by bats, such as *Myotis* spp., and other terrestrial vertebrates and invertebrates; includes interstitial areas above standing

water such as fissures in the ceiling of caves.

**MARINE/ESTUARINE** (The distinction between the Marine and Estuarine Natural Communities is often subtle, and the natural communities types found under these two community categories have the same descriptions. For these reasons they have been grouped together.) - Subtidal, intertidal and supratidal zones of the sea, landward to the point at which seawater becomes significantly diluted with freshwater inflow from the land.

**Consolidated Substrate** - expansive subtidal, intertidal and supratidal area composed primarily of nonliving compacted or coherent and relatively hard, naturally formed mass of mineral matter (e.g., coquina limerock and relic reefs); octocorals, sponges, stony corals, nondrift macrophytic algae, blue-green mat-forming algae and seagrasses sparse, if present.

**Unconsolidated Substrate** - expansive subtidal, intertidal and supratidal area composed primarily of loose mineral matter (e.g., coralgall, gravel, marl, mud, sand and shell); octocorals, sponges, stony corals, nondrift macrophytic algae, blue-green mat-forming algae and seagrasses sparse, if present.

**Octocoral Bed** - expansive subtidal area occupied primarily by living sessile organisms of the Class Anthozoa, Subclass Octocorallia (e.g., soft corals, horny corals, sea fans, sea whips, and sea pens); sponges, stony corals, nondrift macrophytic algae and seagrasses sparse, if present.

**Sponge Bed** - expansive subtidal area occupied primarily by living sessile organisms of the Phylum Porifera (e.g., sheepswool sponge, Florida loggerhead sponge and branching candle sponge); octocorals, stony corals, nondrift macrophytic algae and seagrasses sparse, if present.

**Coral Reef** - expansive subtidal area with elevational gradient or relief and occupied primarily by living sessile organisms of the Class Hydrozoa (e.g., fire corals and hydrocorals) and Class Anthozoa, Subclass Scleractinia (e.g., stony corals and black corals); includes deepwater bank reefs, fringing barrier reefs, outer bank reefs and patch reefs, some of which may contain distinct zones of assorted macrophytes, octocorals, & sponges.

**Mollusk Reef** - substantial subtidal or intertidal area with relief from concentrations of sessile organisms of the Phylum Mollusca, Class Bivalvia (e.g., molluscs, oysters, & worm shells); octocorals, sponges, stony corals, macrophytic algae and seagrasses sparse, if present.

**Worm Reef** - substantial subtidal or intertidal area with relief from concentrations of sessile, tubicolous organisms of the Phylum Annelida, Class Polychaeta (e.g., chaetopterids and sabellarids); octocorals, sponges, stony corals, macrophytic algae and seagrasses sparse, if present.

**Algal Bed** - expansive subtidal, intertidal or supratidal area, occupied primarily by attached thallophytic or mat-forming prokaryotic algae (e.g., halimeda, blue-green algae); octocorals, sponges, stony corals and seagrasses sparse, if present.

**Grass Bed** - expansive subtidal or intertidal area, occupied primarily by rooted vascular macrophytes, (e.g., shoal grass, halophila, widgeon grass, manatee grass and turtle grass); may include various epiphytes and epifauna; octocorals, sponges, stony corals, and attached macrophytic algae sparse, if present.

**Composite Substrate** - expansive subtidal, intertidal, or supratidal area, occupied primarily by Natural Community elements from more than one Natural Community category (e.g., Grass Bed and Algal Bed species; Octocoral and Algal Bed species); includes both patchy and evenly distributed occurrences.

**Tidal Marsh** - expansive intertidal or supratidal area occupied primarily by rooted, emergent vascular macrophytes (e.g., cord grass, needlerush, saw grass, saltwort, saltgrass and glasswort); may include various epiphytes and epifauna.

## Descriptions Of Natural Communities Developed By FNAI

---

**Tidal Swamp** - expansive intertidal and supratidal area occupied primarily by woody vascular macrophytes (e.g., black mangrove, buttonwood, red mangrove, and white mangrove); may include various epiphytes and epifauna.

**DEFINITIONS OF TERMS Terrestrial and Palustrine Natural Communities**

**Physiography**

**Upland** - high area in region with significant topographic relief; generally undulating

**Lowland** - low area in region with or without significant topographic relief; generally flat to gently sloping

**Flatland** - generally level area in region without significant topographic relief; flat to gently sloping

**Basin** - large, relatively level lowland with slopes confined to the perimeter or isolated interior locations

**Depression** - small depression with sloping sides, deepest in center and progressively shallower towards the perimeter

**Floodplain** - lowland adjacent to a stream; topography influenced by recent fluvial processes

**Bottomland** - lowland not on active floodplain; sand/clay/organic substrate

**Hydrology**

**occasionally inundated** - surface water present only after heavy rains and/or during flood stages

**seasonally inundated** - surface water present during wet season and flood periods

**usually inundated** - surface water present except during droughts

**Climatic Affinity of the Flora**

**tropical** - community generally occurs in practically frost-free areas

**subtropical** - community generally occurs in areas that experience occasional frost, but where freezing temperatures are not frequent enough to cause true winter dormancy

**temperate** - community generally occurs in areas that freeze often enough that vegetation goes into winter dormancy

**Fire**

**annual fire** - burns about every 1-2 years

**frequent fire** - burns about every 3-7 years

**occasional fire** - burns about every 8-25 years

**rare fire** - burns about every 26-100 years

**no fire** - community develops only when site goes more than 100 years without burning

**LATIN NAMES OF PLANTS MENTIONED IN NATURAL COMMUNITY DESCRIPTIONS**

anise - *Illicium floridanum*  
bays:  
    swamp bay - *Persea palustris*  
    gordonia - *Gordonia lasianthus*  
    sweetbay - *Magnolia virginiana*  
beakrush - *Rhynchospora* spp.  
beech - *Fagus grandifolia*  
blackgum - *Nyssa biflora*  
blue palmetto - *Sabal minor*  
bluestem - *Andropogon* spp.  
buttonbush - *Cephalanthus occidentalis*  
cabbage palm - *Sabal palmetto*  
cacti - *Opuntia* and *Harrisia* spp.,  
    predominantly *stricta* and *pentagonus*  
cane - *Arundinaria gigantea* or *A. tecta*  
cattail - *Typha* spp.  
cedars:  
    red cedar - *Juniperus silicicola*  
    white cedar - *Chamaecyparis thyooides* or  
    *C. henryi*  
cladonia - *Cladonia* spp.  
cypress - *Taxodium distichum*  
dahoon holly - *Ilex cassine*  
diamondleaf oak - *Quercus laurifolia*  
fire flag - *Thalia geniculata*  
Florida maple - *Acer barbatum*  
gallberry - *Ilex glabra*  
gums:  
    tupelo - *Nyssa aquatica*  
    blackgum - *Nyssa biflora*  
    Ogeechee gum - *Nyssa ogeche*  
hackberry - *Celtis laevigata*  
hornbeam - *Carpinus caroliniana*  
laurel oak - *Quercus hemisphaerica*  
live oak - *Quercus virginiana*  
loblolly pine - *Pinus taeda*  
longleaf pine - *Pinus palustris*  
magnolia - *Magnolia grandiflora*  
maidencane - *Panicum hemitomon*  
needle palm - *Rhapidophyllum hystrix*  
overcup oak - *Quercus lyrata*  
pickerel weed - *Pontederia cordata* or *P. lanceolata*  
pignut hickory - *Carya glabra*  
pop ash - *Fraxinus caroliniana*  
pond apple - *Annona glabra*  
pond pine - *Pinus serotina*  
pyramid magnolia - *Magnolia pyramidata*  
railroad vine - *Ipomoea pes-caprae*  
red cedar - *Juniperus silicicola*  
red maple - *Acer rubrum*  
red oak - *Quercus falcata*  
rosemary - *Ceratiola ericoides*  
sagittaria - *Sagittaria lancifolia*  
sand pine - *Pinus clausa*  
saw palmetto - *Serenoa repens*  
sawgrass - *Cladium jamaicensis*  
scrub oaks - *Quercus geminata*, *Q. chapmanii*, *Q. myrtifolia*, *Q. inopina*  
sea oats - *Uniola paniculata*  
seagrape - *Coccoloba uvifera*  
shortleaf pine - *Pinus echinata*  
Shumard oak - *Quercus shumardii*  
slash pine - *Pinus elliotii*  
sphagnum moss - *Sphagnum* spp.  
spikerush - *Eleocharis* spp.  
spruce pine - *Pinus glabra*  
St. John's wort - *Hypericum* spp.  
swamp chestnut oak - *Quercus prinus*  
sweetgum - *Liquidambar styraciflua*  
titi - *Cyrilla racemiflora*, and *Cliftonia monophylla*  
tuliptree - *Liriodendron tulipifera*  
tupelo - *Nyssa aquatica*  
turkey oak - *Quercus laevis*  
water oak - *Quercus nigra*  
waterlily - *Nymphaea odorata*  
white cedar - *Chamaecyparis thyooides*  
white oak - *Quercus alba*  
willow - *Salix caroliniana*  
yucca - *Yucca aloifolia*





## **Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties (revised February 2007)**

---

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

### **A. General Discussion**

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, *'Historic property' or 'historic resource' means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state.'*

### **B. Agency Responsibilities**

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

### **C. Statutory Authority**

Statutory Authority and more in depth information can be found in the following:

**Chapter 253, F.S.** – State Lands

**Chapter 267, F.S.** – Historical Resources

**Chapter 872, F.S.** – Offenses Concerning Dead Bodies and Graves

Other helpful citations and references:

Chapter 1A-32, F.A.C. – Archaeological Research

Other helpful citations and references:

Chapter 1A-44, F.A.C. – Procedures for Reporting and Determining Jurisdiction Over Unmarked Human Burials

Chapter 1A-46, F.A.C. – Archaeological and Historical Report Standards and Guidelines

The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

**Management Procedures For Archaeological And Historical Sites And Properties  
On State-Owned Or Controlled Lands (Revised August, 1995)**

---

**D. Management Implementation**

**Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.**

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to: approval of the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

**E. Minimum Review Documentation Requirements**

In order to have a proposed project reviewed by the Division, the following information, at a minimum, must be submitted for comments and recommendations.

**Project Description** – A detailed description of the proposed project including all related activities. For land clearing or ground disturbing activities, the depth and extent of the disturbance, use of heavy equipment, location of lay down yard, etc. For historic structures, specific details regarding rehabilitation, demolition, etc.

**Project Location** – The exact location of the project indicated on a USGS Quadrangle map, is preferable. A management base map may be acceptable. Aerial photos indicating the exact project area as supplemental information are helpful.

**Photographs** – Photographs of the project area are always useful. Photographs of structures are required.

**Description of Project Area** – Note the acreage of the project, describe the present condition of project area, and any past land uses or disturbances.

**Description of Structures** – Describe the condition and setting of each building within project area if approximately fifty years of age or older.

**Recorded Archaeological Sites or Historic Structures** – Provide Florida Master Site File numbers for all recorded historic resources within or adjacent to the project area. This information should be in the current management plan; however, it can be obtained by contacting the Florida Master Site File at (850) 245-6440 or Suncom 205-6440.

**Management Procedures For Archaeological And Historical Sites And Properties  
On State-Owned Or Controlled Lands (Revised August, 1995)**

---

Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

**Susan M. Harp  
Historic Preservation Planner  
Division of Historical Resources  
Bureau of Historic Preservation  
Compliance and Review Section  
R. A. Gray Building  
500 South Bronough Street  
Tallahassee, FL 32399-0250**

**Phone:(850) 245-6333  
Suncom: 205-6333  
Fax: (850) 245-6438**

