

PAYNES CREEK HISTORIC STATE PARK

UNIT MANAGEMENT PLAN

APPROVED

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks

October 15, 2004



Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
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Colleen Castille
Secretary

December 7, 2004

Ms. BryAnne White
Office of Park Planning
Division of Recreation and Parks
3900 Commonwealth Blvd.; M.S. 525
Tallahassee, Florida 32399

Re: Paynes Creek Historic State Park Lease #2809

Ms. White:

On **October 15, 2004**, the Acquisition and Restoration Council recommended approval of the **Paynes Creek Historic State Park** management plan.

On **December 7, 2004**, the Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, approved the management plan for the **Paynes Creek Historic State Park**. Pursuant to Section 253.034, Florida Statutes, and Chapter 18-2, Florida Administrative Code this plan's ten-year update will be due on **December 7, 2014**.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

Paula L. Allen
Office of Environmental Services
Division of State Lands
Department of Environmental Protection

"More Protection, Less Process"

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INTRODUCTION

Paynes Creek Historic State Park is located in Hardee County (see Vicinity Map) about three miles southeast of Bowling Green on State Road 664-A. Access to the park is from U.S. Highway 17 and State Road 664-A. The vicinity map also reflects significant land and water resources existing near the park.

Acquisition of park lands began on September 19, 1974, using Land Acquisition Trust Funds. Currently the park contains approximately 396.20 acres. For this plan, park acreage is based on the composition of natural communities, in addition to ruderal and developed areas.

Paynes Creek Historic State Park was acquired primarily to preserve the site of several important events relating to the Third Seminole War. It additionally provides facilities for several passive resource-based outdoor recreational activities. At Paynes Creek Historic State Park, public outdoor recreation and conservation is the designated single use of the property (see Addendum 1). There are no legislative or executive directives that constrain the use of this property.

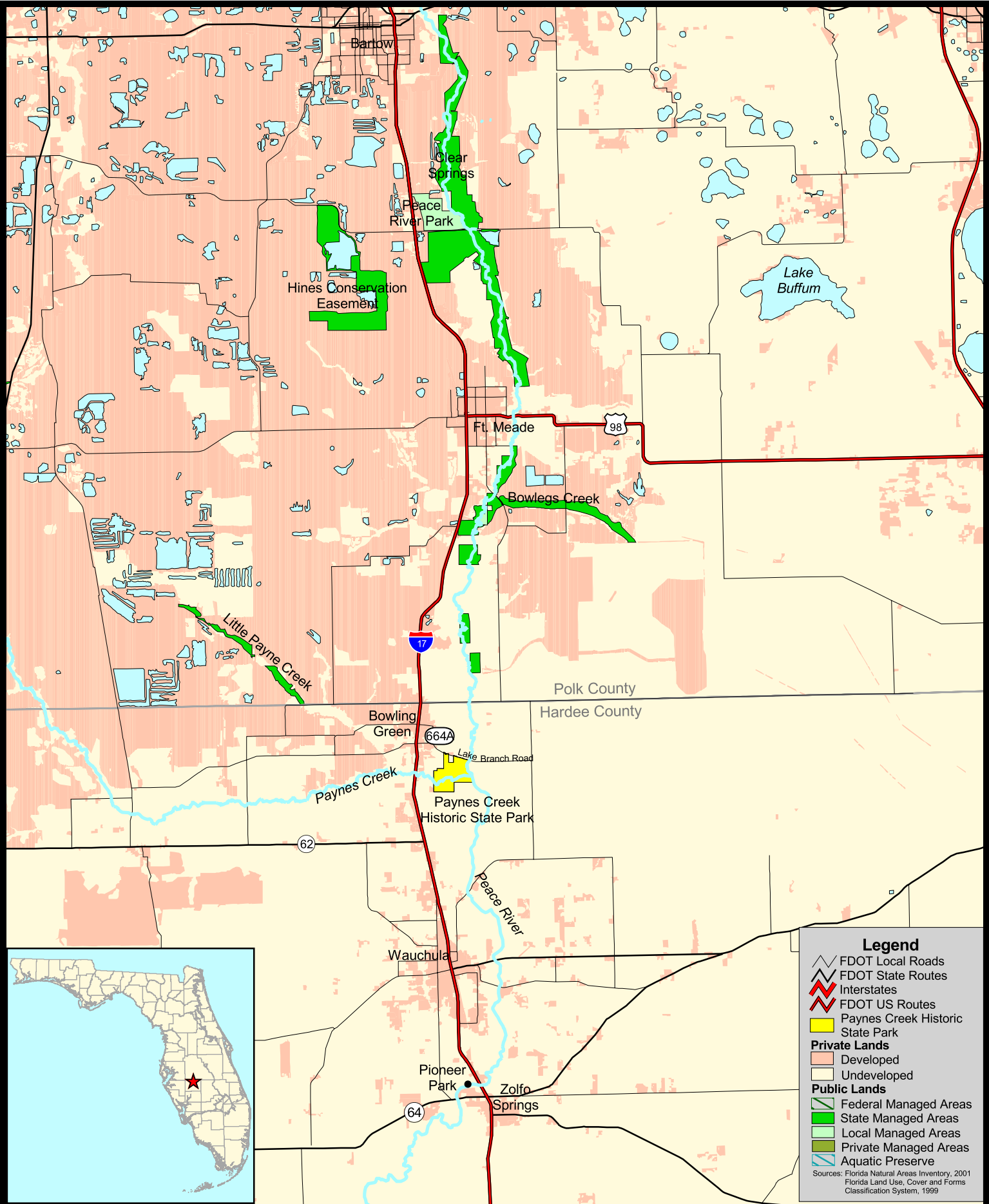
PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of Paynes Creek Historic 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. With approval, this management plan will replace the May 6, 1998 approved plan. 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.

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.

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 no secondary purposes could be accommodated in a manner that



Legend

- FDOT Local Roads
- FDOT State Routes
- Interstates
- FDOT US Routes
- Paynes Creek Historic State Park

Private Lands

- Developed
- Undeveloped

Public Lands

- Federal Managed Areas
- State Managed Areas
- Local Managed Areas
- Private Managed Areas
- Aquatic Preserve

Sources: Florida Natural Areas Inventory, 2001
Florida Land Use, Cover and Forms Classification System, 1999

**Paynes Creek
Historic State Park**



Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

**Vicinity
Map**

would not interfere with the primary purpose of resource-based outdoor recreation and conservation. 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 not be appropriate as a means of generating revenues for land management. Instead, techniques such as entrance fees, concessions, and similar measures will be employed on a case-by-case basis as a means of supplementing park management funding.

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 DRP 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 Operations Procedures Manual (OPM) and cover 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 Paynes Creek Historic 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. At the beginning of the process to update this management plan, the Division reviewed the goals and objectives of the previous plan to determine if they remain meaningful and practical and should be included in the updated plan. This process ensures that the goals and objectives for the park remain relevant over time.

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 and Cultural Resources

1. Manage resources in a way that will facilitate interpretation of the two historic features, the trading post and the frontier fort, as accurately and realistically as possible.
 - A. Maintain the surrounding natural communities in a manner that reduces and avoids adverse impact to the park's archaeological resources, and makes the historic sites accessible to the public.
2. Restoration and maintenance of historic, fire-dependent natural communities.
 - A. Use fire at the appropriate intervals.
3. Eradicate invasive exotic plants such as cogongrass, Japanese climbing fern, and bamboo.
 - A. Systematically, monitor and eradicate new invasions of Japanese climbing fern, cogongrass, and other exotic plants.
 - B. Continue to work towards eradication of Bamboo from natural habitats.
4. Provide adequate protection for listed species.
 - A. Maintain habitat suitable for the species listed in Addendum 5.
5. Provide adequate protection for relics, fossils, and artifacts located within the park boundaries.
 - A. Monitor visitor activity and educate those visitors found in possession of shovels, seines, and/or metal detectors of the impact on the resource and rules governing such activity in an effort to obtain voluntary compliance.
 - B. Monitor flood zones adjacent to Peace River and Paynes Creek to determine if any artifacts have been impacted by flood events.

Park Administration/Operations

6. Continue to develop and enhance volunteer participation.
 - A. Actively recruit volunteers from the community as well as the transient sector.
 - B. Continue enhancements to the Paynes Creek Preservation Alliance, Inc. (the park's

- citizen support organization).
7. Enhance funding
 - A. Identify appropriate potential grantors, foundations, and government agencies that could fund projects in the unit management plan.
 - B. Develop sufficient information to complete applications for projects.
 - C. Maintain a calendar of grant cycles, and then coordinate with district management to make appropriate applications.

Recreation Goals

8. Continue to provide quality resource-based, outdoor recreational and interpretive programs and facilities at the State Park.
 - A. Review and design best use of park facilities to facilitate and appropriately manage visitor use of the park.
 - B. Continue to provide recreational opportunities such as picnicking, hiking, fishing, canoeing, and interpretive programs.
 - C. Maintain the trail system of the park, including routine maintenance of trail markers and interpretive materials.
 - D. Educate visitors to the historic significance of Fort Chokonikla and the Kennedy-Darling store through interpretive exhibits, programs and tours.
9. Seek funding to expand recreational and interpretive opportunities through the improvement of programs and the development of new areas and facilities, as outlined in this management plan.
 - A. Develop a Statement of Interpretation and an Interpretive Master Plan to guide interpretive programming at the park.
 - B. Improve and expand on and offsite interpretive programming. Actively work with local schools to encourage an understanding and appreciation of local and regional history among area youth.
 - C. Evaluate and upgrade museum exhibits to reflect recent research and provide a unified design that is intellectually and physically accessible to visitors of all ages and abilities.
 - D. Provide interpretive signage at Fort Chokonikla and the trading post site.
 - E. Seek funds for additional historical and archaeological research on the park's sites and events associated with the Third Seminole War to build a foundation for additional interpretive programming and media.
 - F. Construct an improved canoe launch on Paynes Creek to capitalize on the park's location along the Peace River Canoe Trail.
 - G. Construct a 30-site standard state park camping area.
 - H. Expand and improve the group campsite.
 - I. Establish a primitive canoe campsite.
 - J. Construct an overlook on one of the oxbow lakes.

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 DRP 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 DRP

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 Coastal Systems aids staff in planning and construction activities seaward of the Coastal Construction Line. The Bureau of Beaches and Coastal Systems aids 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.

In addition, Hardee County's Outdoor Classroom program has utilized Paynes Creek Historic State Park since 1987 to take students on environmental education field trips.

Public Participation

The Division provided an opportunity for public input by conducting a public workshop and an advisory group meeting. A public workshop was held on May 4, 2004. The purpose of this meeting was to present this draft management plan to the public. A DEP Advisory Group meeting was held on May 5, 2004. The purpose of this meeting was to provide the Advisory Group members the opportunity to discuss this draft management plan.

Other Designations

Paynes Creek Historic State Park is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes. Currently 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 I waters by DEP. This unit is not within or 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

Paynes Creek Historic State Park is located in the Polk Uplands that covers the northern half of Hardee County. Elevation in the park is generally between 100 and 130 feet. Land surrounding the park is generally of lower elevation. The park is located on an inconspicuous, but persistent, outfacing scarp that separates the Polk Upland from the Desoto Plain. The toe of the scarp is quite irregular, and its origin is not clear. Most likely, it is an erosional marring scarp made by the shoreline of the Gulf of Mexico at Wicomico sea level. Elevations within the park range from about 50 feet above sea level along the Peace River to 84 feet above sea level to a point 3,000 feet west of the Peace River.

The park is characterized by flat bottomland along the Peace River and Paynes Creek to scrub at higher elevations. Some alterations of the park's terrain have occurred. On the south side of Paynes Creek, approximately 100 acres are best classified as improved pasture. About 150 years ago, scrub acreage at the highest elevation in the park was cleared; and Fort Chokonikla was constructed. In later years, this area was destined to be sub-divided for housing. Some scars of roads are still evident in this area.

The north end of the park abuts State Road 664A; the east boundary is the Peace River; the

south boundary borders on improved pasture; and the west boundary borders a garden and orange grove.

Geology

The park is located along the Polk Upland central physiographic zone within the Bone Valley Physiographic Division. The siliclastic composition of the Bone Valley formation has contributed to the topographic character of most of the Polk Upland. The effects associated with karst topography, e.g. solution hole development, are not as intense as in other physiographic zones in peninsula Florida; and consequently there is much more ramification of surface streams here (White, 1970).

Soils

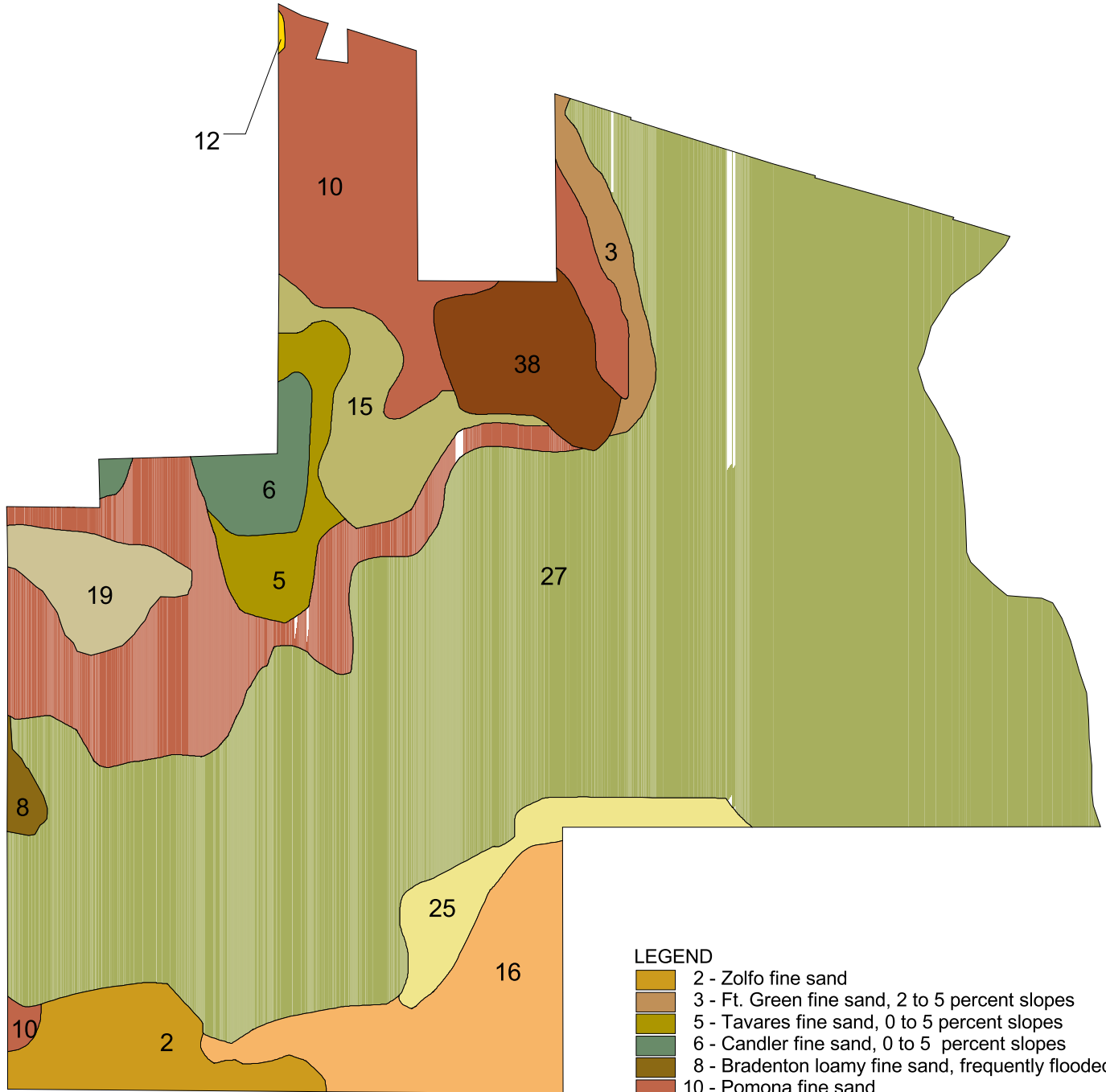
According to the 1984 soil survey of Hardee County's report prepared by the U. S. Department of Agriculture, Soil Conservation Service, soils in the park are categorized into three general soil map units consisting of 13-detailed soil map units (see Soils Map). Complete descriptions of soil types found in the park are contained in Addendum 3.

An accurate assessment of the soil conditions in the park is difficult. Most alterations to original soil characteristics can be traced to past agricultural practices. Some of the higher elevations in the sandhill areas were plowed for crop production. In addition, a substantial portion of other pinelands was converted to improved pasture. These areas were fertilized periodically, modifying soil chemistry. Additional plowing in higher elevations undoubtedly resulted in some soil loss due to erosion.

The only non-ruderal part of the park presently susceptible to erosion is the region along the banks of the Peace River and Paynes Creek. To reduce erosion due to boat and foot traffic, step-downs are provided in select areas. As soon as park staff notices any new trails or paths leading from established trails, they are immediately blocked off with dead limbs and branches.

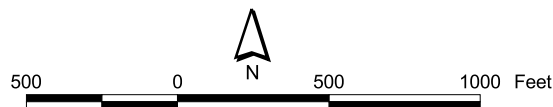
Minerals

Mineralogy of the sand fraction (2 to 0.05 millimeters) is siliceous; quartz is dominant in all soils. Small amounts of heavy minerals, mostly ilmenite, occur in most horizons; the greatest concentration of them is in the very fine sand fraction. Crystalline mineral components of the clay fraction (less than 0.002 millimeters) are reported in table 20 for selected horizons of specific pedons. The clay mineralogical suite is composed of montmorillonite, A 14 angstrom intergrade mineral, kaolinite, and quartz. Montmorillonite occurs in the Bradenton, Cassia, Felda, Ft. Green, Pomona, and Zolfo soils. Except for Bradenton soils, the 14-angstrom intergrade mineral occurs in some horizons of all soils. Kaolinite and quartz occurs in all park soils. Montmorillonite, the least stable of the mineral components in the present environment, appears to have been inherited in the Bradenton, Felda, Ft. Green, and Pomona soils, which have relatively large amounts that increase with depth. In soils that contain appreciable amounts of montmorillonitic clay, a considerable change in volume could result from shrinking of the soil when it is dry and swelling when it is wet. Horizons in Bradenton, Felda, and Pomona soils that contain large amounts of montmorillonite contain little or no 14-angstrom intergrade and commonly contain very low amounts of kaolinite. The general tendency of 14-angstrom intergrade to decrease with depth, accompanied by the general, although not consistent, tendency of kaolinite to increase with depth, suggest that the 14-angstrom intergrade is the most stable species in this weathering environment. Soils dominated by kaolinite and quartz have a lower cation-exchange capacity and retain fewer plant nutrients than soils dominated by 14-angstrom intergrade minerals and montmorillonite. Phosphate is one of the largest industries located around Paynes Creek Historic State Park.



LEGEND

- 2 - Zolfo fine sand
- 3 - Ft. Green fine sand, 2 to 5 percent slopes
- 5 - Tavares fine sand, 0 to 5 percent slopes
- 6 - Candler fine sand, 0 to 5 percent slopes
- 8 - Bradenton loamy fine sand, frequently flooded
- 10 - Pomona fine sand
- 12 - Felda fine sand, frequently flooded
- 15 - Immokalee fine sand
- 16 - Myakka fine sand
- 19 - Ona fine sand
- 25 - Wabasso fine sand
- 27 - Bradenton-Fleda-Chobee assoc., frequently flooded
- 38 - St. Lucie fine sand



**PAYNES CREEK
HISTORIC STATE PARK**

Prepared by:
Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

SOILS MAP

Mining of phosphate is as close as three miles from the park and much of the land surrounding the park is owned by the phosphate companies.

Hydrology

Paynes Creek Historic State Park is situated along the Peace River, southeast of Bowling Green city limits. The main body of water is the Peace River. Paynes Creek is a tributary stream feeding into the Peace River. Two oxbow lakes are located in the floodplain near the juncture where Paynes Creek meets the Peace River. The oxbow lakes cover approximately 2 acres and are influenced mostly by rainfall and their depth varies accordingly. There is a small seepage stream originating just west of the city's water treatment plant, and it flows past the treatment plant through the park. This stream has no name and is not shown on any maps. The stream receives not only secondary-treated effluent including that from recreational vehicle (RV) parks, but also receives storm water runoff from the groves, gardens and pastures, including debris, silt and various organic and inorganic pollutants. The Peace River originates at the south end of the Green Swamp and flows southwest to Punta Gorda into the Gulf of Mexico. The river goes through or past numerous small towns and receives storm water runoff and effluent from wastewater treatment plants along the way.

Paynes Creek originates near the town of Fort Green and flows east through the park and empties into the Peace River. It is fed by many smaller feeder streams and seepage streams along its path. In past years, the quality of the water has been degraded substantially, largely because of phosphate mining and its associated activities, including spills, which have occurred upstream. This includes Little Paynes Creek. Paynes Creek receives runoff during heavy rainfall from groves, gardens, pastures and phosphate mines as well, including debris, silt and various organic and inorganic pollutants.

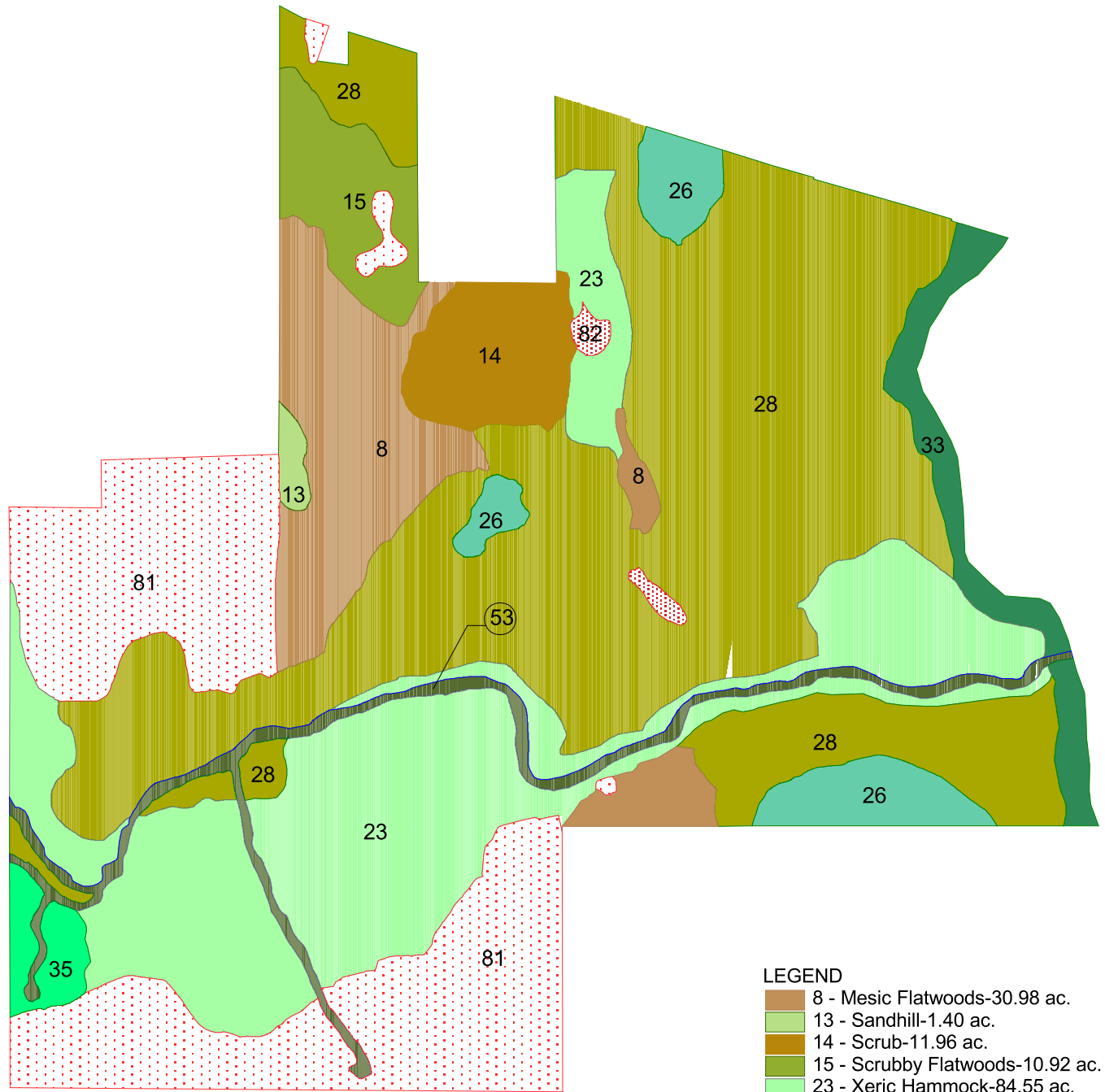
Natural Communities

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI) FNAI Descriptions. 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 10 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.

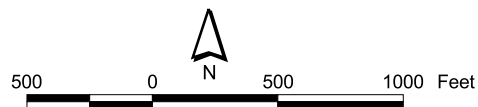
Mesic flatwoods. Thirty acres of this community were converted to improved pasture in the mid- 1970s, prior to state acquisition. Sections or patches of longleaf pine, live oak and pasture grasses are all that remain today. This requires prescribed burning and replanting of longleaf pine trees in order to get the land back to its natural state. Positive results are already showing up in parts of this community (e.g. Burn Zone 15) after a 1991 late winter fire.

Sandhill. Soil types indicate that sandhill may have once been more extensive on the south and west side of the park. Exclusion of fire, and topographical changes, has resulted in



LEGEND

- 8 - Mesic Flatwoods-30.98 ac.
- 13 - Sandhill-1.40 ac.
- 14 - Scrub-11.96 ac.
- 15 - Scrubby Flatwoods-10.92 ac.
- 23 - Xeric Hammock-84.55 ac.
- 26 - Baygall-12.53 ac.
- 28 - Bottomland Forest-149.61 ac.
- 33 - Floodplain Swamp-10.45 ac.
- 35 - Hydric Hammock-4.34 ac.
- 53 - Blackwater Stream-9.94 ac.
- 81 - Ruderal-68.77 ac.
- 82 - Developed-1.38 ac.



**PAYNES CREEK
HISTORIC STATE PARK**

Prepared by:
Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

**NATURAL COMMUNITIES
MAP**

succession to an upland mixed forest. The areas that remain classifiable as sandhill were almost entirely cleared at one time and converted to improved pasture, gardens and orange groves. Virtually all the longleaf pines were timbered and only relict examples of typical sandhill species remain today.

Natural reforestation is very slow due to the thick sod dominated by exotic grasses. For restoration efforts to be successful, replanting with native species of longleaf pine will have to be accompanied by measures to control the exotic grasses.

Scrub. The soil type that supports this community in the park is St. Lucie fine sand. Typical plants include sand pine and scrub oaks. Most of the scrub acreage in the park, being the highest ground in the park, was chosen as the site of Fort Chokonikla. This scrub is burned on a regular basis.

Scrubby flatwoods. Largely the original pine canopy has disappeared. The localized patches found south of the fort site are typical of the community. However, in the absence of fire, elements of the understory have grown to approach tree size. Scrub oak, turkey oak, and stagerbush now dominate this community.

Xeric hammock. The community occurs in nearly continuous tracts on high ground above the creek banks and other lowland systems. Here, the canopy is fairly open and dominated by live oaks, while the understory is moderately thick with sabal palm, saw palmetto and wax myrtle. A large part of the park has suffered disturbance prior to acquisition, for example, clearing of the understory by livestock and damage by off road vehicles. As documented in the last resource management audit, cogon grass has invaded this community.

Baygall. Baygalls most often lie along seepage gradients at the base of gently sloping terrain and along the edges of palustrine floodplains where the water table is high. As a result, the underlying acidic peat substrate remains saturated throughout most of the year. The baygall community in this park is most prevalent in the north central part of the park and near the southeastern border.

Bottomland forest. It occurs on the drier side of the floodplain forest natural community that borders the Peace River and Paynes Creek. The bottomland forest is characterized by a dense, shrubby understory.

Floodplain swamp. This community is one of the most adversely impacted by human activity in the park. Some exotic plants such as air potato have been found growing along the northeastern boundary of the park.

Hydric hammock. This community is found in the lower seepage areas of the park. Cabbage palm is a prominent component and needle palm is present. The park's hydric hammock appears to be in excellent condition.

Blackwater stream. Paynes Creek is a blackwater stream community. Although a small stream, the quality of its water is important to the health of the palustrine communities occupying its floodplain. The water quality is negatively impacted by the relatively poor quality of the water from the seepage stream (discussed below) which flows into the creek. Additionally, the potential problems with water quality are caused by phosphate mining and processing in the region that contains some of the world's richest phosphate deposits.

Seepage stream. As pointed out in the hydrology section, the seepage stream has no name and is not shown on any maps. With the receipt of secondary-treated effluent and storm water runoff from the groves, gardens and pastures, including debris, silt and various organic and inorganic pollutants, it is in poor condition.

Ruderal. The ruderal areas consist of two large units, one in the northwest portion and one in the southwest portion of the park totaling about 68 acres. Both are old pastureland with pasture grass, tree and weed cover. The southwestern area has a cover of large oak trees interspersed with cleared zones of pasture grass. Natural succession is occurring and the area will be managed. The northwestern portion has been identified for the site of the proposed camping area.

Developed. The developed areas consist of paved parking lots, picnic pavilions and a visitor center totaling approximately 1.5 acres.

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 6 contains a list of the designated species and their designated status for this park. Management measures will be addressed later in this plan.

Biological surveys are incomplete at the time of this writing. No in-depth survey has been conducted at Paynes Creek as of this date.

Special Natural Features

Paynes Creek Historic State Park has only one special natural feature – several oxbow features located on the southeast side of the park near the confluence of Paynes Creek and the Peace River. These oxbow features suggest former locations of the river and the creek bed. Water levels fluctuate from rainfall or flooding. The natural community in the oxbows most closely resembles floodplain swamps. Bald cypress is the most conspicuous tree species. Cabbage palms, water locust and buttonbush are common understory species.

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.

Park property includes, but does not entirely encompass, the Paynes Creek Massacre – Fort Chokonikla National Register of Historic Places Site (8HA23). According to the Florida Master Site Files and NRHP Nomination Form, 8HA23 is comprised of several historic sites and features, including the Kennedy-Darling Store site (8HA23A), the Fort Chokonikla site,

the military blockhouse and bridge site, the Payne-Whidden memorial monument and purported grave sites, and remnants of several mid-19th century roads.

The fort site is in good condition. This site is located in a scrubby flatwoods community that is kept accessible by park staff. Visitors access the site via a short hiking trail that begins at the Visitor's Center. The fort site is managed by prescribed burning. Gopher tortoises live and burrow here. Several logs have been arranged in a square to represent the footprint of one of the blockhouses of the fort. A simple, wooden stands on the site. A few small, metal interpretive signs along the trail and at the fort site relate the historical events and the natural environment. There is no evidence of significant erosion, looting, recent test pits or other disturbances at this site.

The store site is in good condition. This site is located on a high, flat bluff on the south side of Paynes Creek. It is observable from a wooden overlook at the end of a dirt trail, on the opposite side of the creek. While a sign at the start of the trail directs visitors to the store site, there is no interpretive sign about the store at the overlook itself. The majority of visitors probably never actually visit the site, as it accessible only by unmarked firebreaks and mowed corridors. The cleared area at the store site is maintained through regular mowing, and the nearby, surrounding vegetation is managed by prescribed burning. Four corner posts were erected at some point in the past to represent the outline of the store, although no structural evidence was recovered during past excavations. There is no evidence of significant erosion, looting, recent test pits or other disturbances at this site.

The memorial site is in fair to poor condition. The memorial site is located at the end of a wide, dirt trail in a large clearing that is mowed on a regular basis. The monument consists of an inscribed granite plaque set into a concrete foundation. The concrete base appears to be stable, although its coat of white paint is peeling off, especially at ground level. The engraved letters have been blackened, probably for clearer legibility as weathering has substantially deteriorated the surface. A low, white picket fence surrounds the monument, as if demarcating a gravesite. Local lore that the two men murdered at the trading post are buried here has never been confirmed.

A description of the broader historical context has already been written by Michael G. Schene. Therefore, only a brief summary will be presented here. Archaeological research was conducted in the late 1970's (Miller & Schene, 1979) and early 1980's (Baker, 1983).

Early in 1849, a trading post was established by Thomas Kennedy and John Darling on the south bank of what has since become known as Paynes Creek. The site, near the edge of the Seminole Reservation, was established with the permission of government authorities. Billy Bowlegs was, with the exception of the aged Sam Jones, the highest-ranking individual of the Florida Seminoles at that time and was the leader of the Seminoles who remained in Florida.

In July of 1849, the Trading Post was attacked and burned down by four Seminoles. There is no evidence to indicate that their actions were condoned by the Seminole tribe and, in fact, they were later tracked down and captured by Billy Bowleg's men.

The attack and subsequent rumors, however, spread panic among the white settlers of central and south Florida. In order to restore tranquility to the frontier, General David Twiggs proposed that 20 forts be constructed at ten-mile intervals across the peninsula of Florida. Each fort would be manned by two companies of troops. This plan called for the mobilization

of over 4,000 troops or approximately one-half of the US Army.

One of the proposed forts (Fort Chokonikla) was constructed approximately one-half mile north of the burned trading post in October and November of 1849. By December of that year, over 200 troops were garrisoned at the fort. As other Seminole War soldiers had learned before them, illness was the Army's greatest enemy in Florida. One hundred and forty-nine soldiers were hospitalized, primarily because of fever, during November and December.

The most significant historical event to occur at the fort was a meeting between Billy Bowlegs and other Seminole leaders, and General Twiggs on January 21, 1850. At this meeting, Twiggs urged Bowlegs to emigrate with the remainder of the Seminoles to the reservation west of the Mississippi River. Although Bowlegs apparently agreed with Twigg's proposal, very few of the Seminoles left Florida because of this meeting. Bowlegs was not among the few.

In July of 1850, because of sickness among the troops, Fort Chokonikla was evacuated and never reoccupied.

Included in the park and district office files is a historical summary in the form of a signed deposition by Nancy and William McCollough who were present during the attack on the trading post. The deposition was presented to the Hillsborough County Court less than a month after the attack.

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.

A timber management analysis was not conducted for this park. The total acreage for the unit is below the 1,000-acre threshold established by Florida Statutes.

Additional Considerations

There are no special management considerations at this time.

Management Needs and Problems

The natural and cultural resources of Paynes Creek Historic State Park have been the object of intense, often deleterious human activity during the past century. Past land, use practices have severely impacted some areas, even though population growth has been very slow in Hardee County. Several resource problems exist in the park.

Some of the upland areas of Paynes Creek Historic State Park have been the most altered. The

park contains about 150 acres of uplands. Management concerns include artificial changes in topography, erosion, scenic impediments, alteration of natural communities, proliferation of exotics, and disturbances of archaeological sites. The archaeological sites need to be protected from vandalism, unauthorized digging or collecting, erosion or other forms of encroachment in accordance with Florida Statutes.

Upland topography has been modified by constructing two roads for a sub-division. Large areas of sandhill and upland pine communities were cleared and converted to improved pasture and gardens.

The natural communities in which clearing occurred were badly damaged. The thickness of sod in the pastures has hindered recolonization by native species. Small areas where flatwoods were cleared for pasture have partially recovered. In these locations, however, the dominance of longleaf pine in the mesic flatwoods has been substantially reduced. Timbering also greatly modified wetlands such as domes and oxbow lakes. Selective cutting of cypress probably changed the dominant components of these communities.

Exclusion of fire has changed some of the fire-adapted upland communities. In some of the former sandhill sites, succession to xeric hammock or mixed upland forest is so far advanced that restoration is extremely difficult. Elsewhere mesic flatwoods have experienced the spread of less fire-tolerant hardwoods.

Uplands are also subject to invasion by exotics. The species currently causing the greatest concern is the air potato, a vine that is rapidly spreading along the main entrance to the park. Bamboo is a problem in some places. Recently tropical soda apple has appeared in the vicinity. Herbaceous exotics infest various portions of the uplands. Bahia and pangola (*Digitaria pentzii*) flourish in former pastures. Effective control measures for these exotics have not yet been discovered or tried in the park.

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.

Management objectives at Paynes Creek Historic State Park are:

1. to continue to preserve cultural resources and make them available to the public while protecting them from vandalism and other threats;
2. to work with Bureau of Mine Reclamation and other regulatory arms of the Department of Environmental Protection to influence the activities of the phosphate and agricultural industries as well as the city of Bowling Green;
3. continue to conduct prescribed burns,
4. remove air potato, bamboo, cogon grass, and tropical soda apple, while restoring ruderal areas; and control armadillos, hogs and the presence of escaped domestic pets (dogs and cats).

Management Measures for Natural Resources

Hydrology

There are three water sources running through the park. One is the Peace River, which is the east boundary; one is Paynes Creek which runs from west to east through the park along State Road 664A and which carries the effluent from the Bowling Green Treatment Plant. There are two small oxbow Lakes located at the end of the parking area and near the corner of Paynes Creek and the Peace River.

Generally, water levels will be highest in the summer months and lowest during the months of April, September, October and November.

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.

Although the burn plan is somewhat generic in nature, emphasis should be placed on restoring the pine flatwoods. The burn plan incorporates the seasonal timing as well as frequency of prescribed burns. Frequent late spring and early summer burns are effective in controlling hardwood encroachment in fire-adapted communities. Burns conducted during this period cause the release of nutrients from burned vegetation. After allowing for these factors, the timing of most prescribed burns should correspond with the natural fire season, which occurs between April and July. Unfortunately, regulations sometimes prevent burning during very dry periods of the year -- when, in the pre-Columbian era, much of the burning would have occurred. Some variation within the natural fire season is also important. Instead of burning during the same month each year, they should be scheduled for different months within the natural fire season. However, it is important to burn frequently even if that means burning "out of season."

Although many communities are adapted to spring and summer fire, a spring or summer fire should not be introduced into a community that has a high fuel buildup. When a community has not been burned for a number of years, consideration should be given to an initial fall or winter fuel-reduction burn, before using a growing-season burn. After a fuel-reduction burn, a natural fire regime can again prevail.

Because State Road 664A borders the park on the north side, as well as the residents on the north and east, smoke management is a part of the burn plan.

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.

Prescribed fire used to maintain plant communities at this park would facilitate the conservation of designated species within the burnable habitats.

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. Therefore, the policy of the Division is to remove exotic species from native natural communities.

Exotic plants. The major concern is the elimination of air potato. Bamboo is a secondary problem. A systematic program exists, whereby these exotics are treated. Species are either mechanically removed or chemically treated. The herbicide Roundup is the principal treatment for the bamboo and air potato. Recently tropical soda apple has encroached into the park, particularly from the banks of the Peace River and nearby pastures where hairy indigo is also found. Cogon grass has been found in previously disturbed areas and must be closely monitored and eliminated to prevent infestation.

Exotic animals. The presence of armadillos, hogs, and domestic cats and dogs is a threat to the native vertebrate and invertebrate fauna in the park. Agency approved pesticides such as Amdro are used for fire ant control in public areas but only on a limited basis.

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.

No problem species directly affect the park at this time.

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. Approval from Department of State, Division of Historical Resources (DHR) must be obtained before taking any actions, such as development or site improvements that could affect or disturb the cultural resources on state lands (see [DHR Cultural Management Statement](#)).

Actions that require permits or approval from DHR include development, site excavations or surveys, disturbances of sites or structures, disturbances of the substrate, and any other actions that may affect the integrity of the cultural resources. These actions could damage evidence that would someday be useful to researchers attempting to interpret the past.

Preventing vandalism, damage to sites and removal of artifacts are accomplished through patrol by the park staff. All the historic sites were cleared after identification and are being maintained to enhance the park visitor's view and appreciation of the sites.

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.

Paynes Creek Historic State Park has had very little research conducted to date. Many research programs are needed in the park in order to identify and define these natural resources, such as, water quality in the Peace River and Paynes Creek, plant communities, bird and animal identification and recording of these species.

Cultural Resources

As pointed out earlier, two different archeological research projects have been conducted at the park; however, additional cultural resource research needs to be conducted to complete the documentation of the site. Historical and archaeological research is needed to increase our understanding of the events, landscape and structures of the Third Seminole War as well as other historical periods and prehistoric occupation. The goal of such research is to enhance interpretative programming and provide needed information to manage the cultural resources.

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 6. Cost estimates for conducting priority management activities are based on the most cost effective methods and recommendations currently available (see Addendum 6.)

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 of this park has not been conducted.

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, 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 the park's interaction with other facilities.

Paynes Creek Historic State Park is located within Hardee County, about one half mile southeast of Bowling Green in the central part of the state. The populations of Hardee County and the adjacent Polk County have grown 20% since 1990, and are projected to grow an additional 15% by 2010 (BEER, University of Florida, 2002). As of 2000, 20% of residents in these counties were in the 0-14 age group, 39% in the 15-44 age group, 22% in the 45-64 age group, and 18% were aged 65 and over, which reflects the state average for these groupings (BEER, University of Florida, 2002). Nearly 1.9 million people reside within 50 miles of the park, which includes the cities of Tampa, St. Petersburg, Bradenton, Lakeland, Bartow, Plant City, Wauchula, Zolfo Springs, and Sebring (Census, 2000).

Paynes Creek Historic State Park recorded 24,638 visitors in fiscal year 2002-2003. Visitation has yet to recover from the substantial drop following the events of September 11th. By DRP estimates, these visitors contributed \$848,561 in direct economic impact and the equivalent of 17 jobs to the local economy (Florida Department of Environmental Protection, 2003).

Existing Use of Adjacent Lands

Paynes Creek Historic State Park's northern boundary fronts Lake Branch Road. The Peace

River forms the eastern boundary. Surrounding land uses are primarily agricultural, with citrus farming, pasturelands, and phosphate mining. Single family residential development also occurs in low densities around the park.

Resource-based recreation opportunities are limited in Hardee County. One of the main attractions is the Peace River Canoe Trail, which is officially designated as part of Florida's Statewide System of Greenways and Trails. There are numerous public and private access points along the river as well as the opportunity to camp along its shores. The other main attraction is Pioneer Park; a county park located 10 miles south of Paynes Creek in Zolfo Springs. Pioneer Park showcases Cracker architecture and provides a bit of history at the Cracker Trail Museum. Pioneer Park is also home to a boat ramp and the only public campground in Hardee County. However, there are numerous private RV campgrounds available off of U.S. 17. In addition, 1,261 acres of reclaimed mining land in northwest Hardee County will be developed into a new county park in the near future. This park will offer fishing, hiking, and picnicking.

The next closest public lands available for outdoor recreation are in adjacent counties. About 30 miles to the northeast in Polk County is Lake Wales Ridge State Forest which offers hiking, horse trails, canoeing, fishing, hunting, picnicking, primitive camping, and youth/group camping. Also in Polk County are Allen David Broussard Catfish Creek Preserve State Park and Lake Kissimmee State Park. There are a few more State Parks in other neighboring counties. About 25 miles to the east in Highlands County lies Highlands Hammock State Park, which offers camping, hiking, horse trails, bike trails, birding, and picnicking. In Hillsborough County, Alafia River State Park is within a 35 miles drive from Bowling Green. And in Manatee County, the South Fork property of Beker is about 25 miles away but has not yet been developed.

Planned Use of Adjacent Lands

The Future Land Use Map for Hardee County identifies three different land designations for the properties surrounding Paynes Creek Historic State Park. The area to the park's south, east, and northeast is designated as "Agriculture" (Hardee County, 2002). The area to the northwest is designated as "Residential Mixed Use" (Hardee County, 2002). And, the land to the west of the park is designated as "Recreation" (Hardee County, 2002). Hardee County approved a policy in their 2002 Comprehensive Plan to designate Paynes Creek State Park as a natural reservation area and pledged to amend the county's land development regulations to "establish criteria for its protection from incompatible surrounding land uses, such as setback or buffering requirements for new development, and criteria for adjacent land uses or land use activities which shall be prohibited." (Hardee County, 2002) Therefore, no significant changes of adjacent land uses are anticipated. Some additional residential development will probably occur in the area. The density of future development will probably remain low and therefore not have significant negative impacts on the park.

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

Paynes Creek Historic State Park contains 396.20 acres on the slope of the Peace River Valley. The northwest portion of the park consists of mesic flatwoods, scrub, scrubby flatwoods, and some sandhill. As the land slopes downward to the river and creek, hammock and floodplain swamp communities becomes dominant.

The unit is located at the site of an important trading post that was attacked by native Americans and of a subsequently established frontier military fort; it is the state's most significant cultural site, interpreting the Third Seminole War. A visitor center serves as the focal point for interpretive activities. This facility is located between the ranger station and the picnic area, within easy walking distance of the historic fort site and trading post. The visitor center contains exhibits interpreting the Seminoles, Fort Chokonikla, the trading post, and events that occurred here.

Water Area

The Peace River, which forms the unit's eastern boundary, is a popular canoe trail stretching between Fort Meade and Arcadia. Paynes Creek traverses the property flowing east into the Peace River. An unimproved canoe launch into the Paynes Creek is located in the picnic area. A group of oxbow lakes occur along the course of Paynes Creek. These features are quite small and are often dry.

Natural Scenery

The Peace River provides some of the most beautiful scenery in Central Florida. Visitors have the opportunity to observe majestic waterfowl, as well as alligators and other wildlife species, along the pristine shores.

Significant Wildlife Habitat

Although the park is not notable for its wildlife, deer are seen occasionally and birds and other small animals are common.

Natural Features

Paynes Creek Historic State Park has only one special natural feature, the oxbow lakes. The largest lake is located on the southeast side of the park near where Paynes Creek feeds into the Peace River. It is about 75 feet wide and 300 feet in length.

Archaeological and Historical Features

Paynes Creek Historic State Park owes its prominence to certain events which led to the third and final Seminole War. There were three historic features at this site: a trading post, a frontier fort, and a blockhouse which guarded a bridge over the Peace River. The Kennedy-Darling Store was a strategically located Indian trading post established by the Federal Government. An attack on the store by Native Americans was an important event leading to the war. A stone monument was established on the south side of Paynes Creek at the approximate burial site of Captain Payne and Dempsey Whiddon. Fort Chokonikla was a

frontier military fort established in response to problems with the Seminoles in 1849. No fighting occurred at the fort, although a number of men died from disease.

Although some scattered aboriginal materials have been recovered from the property, no known archaeological sites are present. Additional information regarding the park's cultural resources is contained in the resource management component.

Assessment of Use

All legal boundaries, significant natural features, structures, facilities, roads, trails and easements 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

A considerable amount of the park had been cleared and converted to improved pasture prior to acquisition by the state. Part of the park's uplands was used for citrus farming and/or row crops in the past. The property was purchased in 1974 and park development began in 1981.

Recreational Uses

The visitor center serves as the introductory and educational focal point of the historic site. Interpretive cultural trails provide access to the site's historic features. Opportunities for picnicking, hiking, fishing, canoeing, and group camping are also available.

Protected Zones

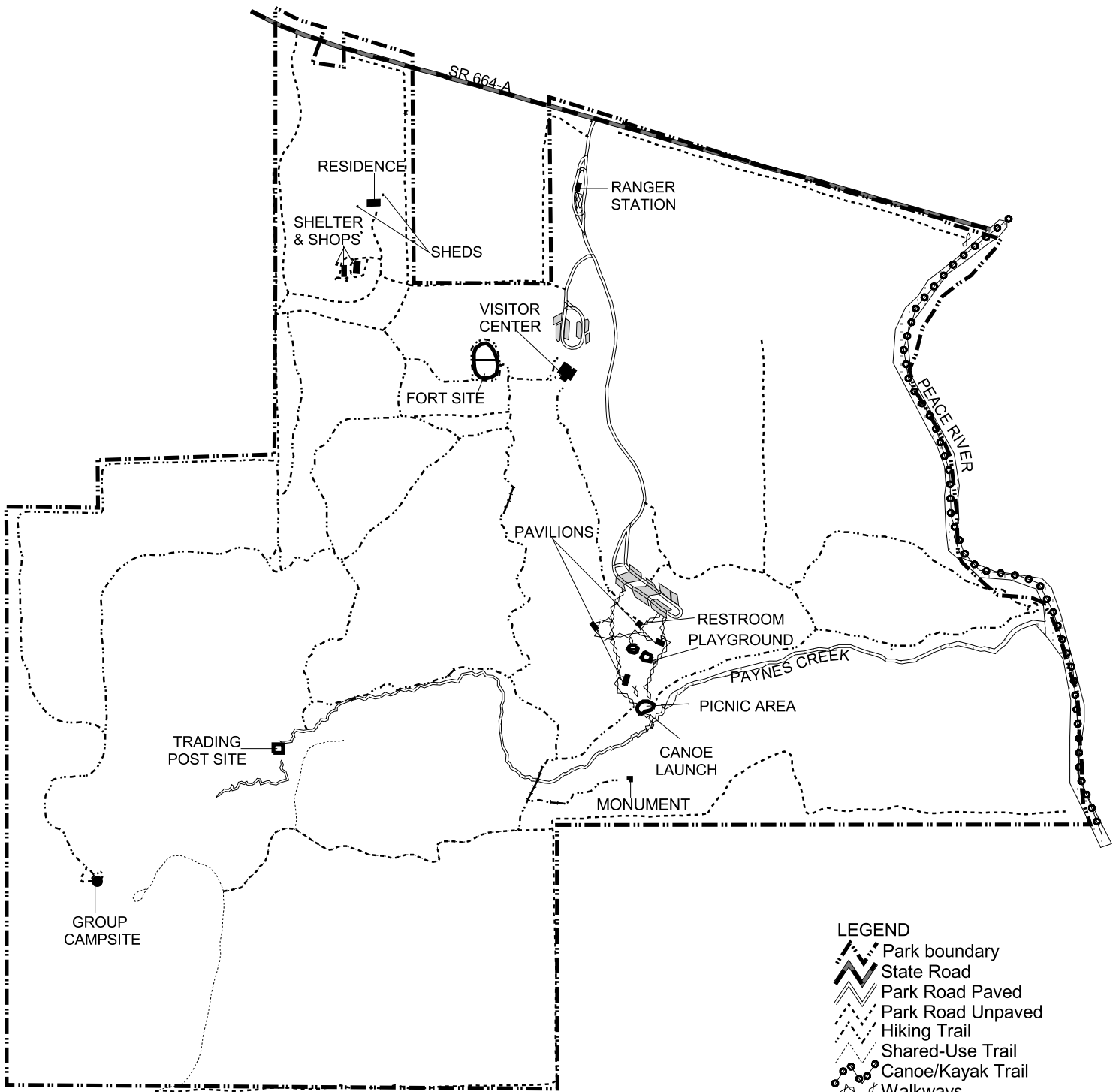
A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance 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 Paynes Creek Historic State Park, the bottomland forest, blackwater stream, baygall, floodplain swamp, hydric hammock, seepage stream, and sandhill communities have been designated as protected zones as delineated on the Natural Communities Map. In addition, the protected zone includes the sites of the fort, the trading post, monument, and the oxbow lakes.

Existing Facilities

Recreation Facilities. The visitor center is the interpretive focal point of the park. Exhibits and an audiovisual presentation chronicle the historic events that led to the third and final Seminole War. The visitor center has an adjacent paved parking area which accommodates about 30 vehicles. The picnic area contains three medium-sized picnic shelters, an unimproved canoe launch, a restroom building, and paved parking for about 60 vehicles. An interpretive cultural trail of about one and a half miles provides access to the park's historic features. A suspension bridge was constructed across Paynes Creek, connecting the trail system to the monument on the south side of the creek. A small group campsite has also been established on the north bank of Paynes Creek near the southwest corner of the park property.

Support Facilities. Support facilities include a ranger station, a shop building, a ranger residence, a flammable storage building, two pump houses, and a new equipment shelter.



- LEGEND**
- Park boundary
 - State Road
 - Park Road Paved
 - Park Road Unpaved
 - Hiking Trail
 - Shared-Use Trail
 - Canoe/Kayak Trail
 - Walkways
 - Structures
 - Special Use Areas
 - Parking Lots
 - Camp.shp
 - Marine Structures
 - Water Bodies



**PAYNES CREEK
HISTORIC STATE PAEK**

Prepared by:
Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

BASE MAP

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, and all facilities are designed and constructed using best management practices to avoid impacts and to mitigate 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.

Potential Uses and Proposed Facilities

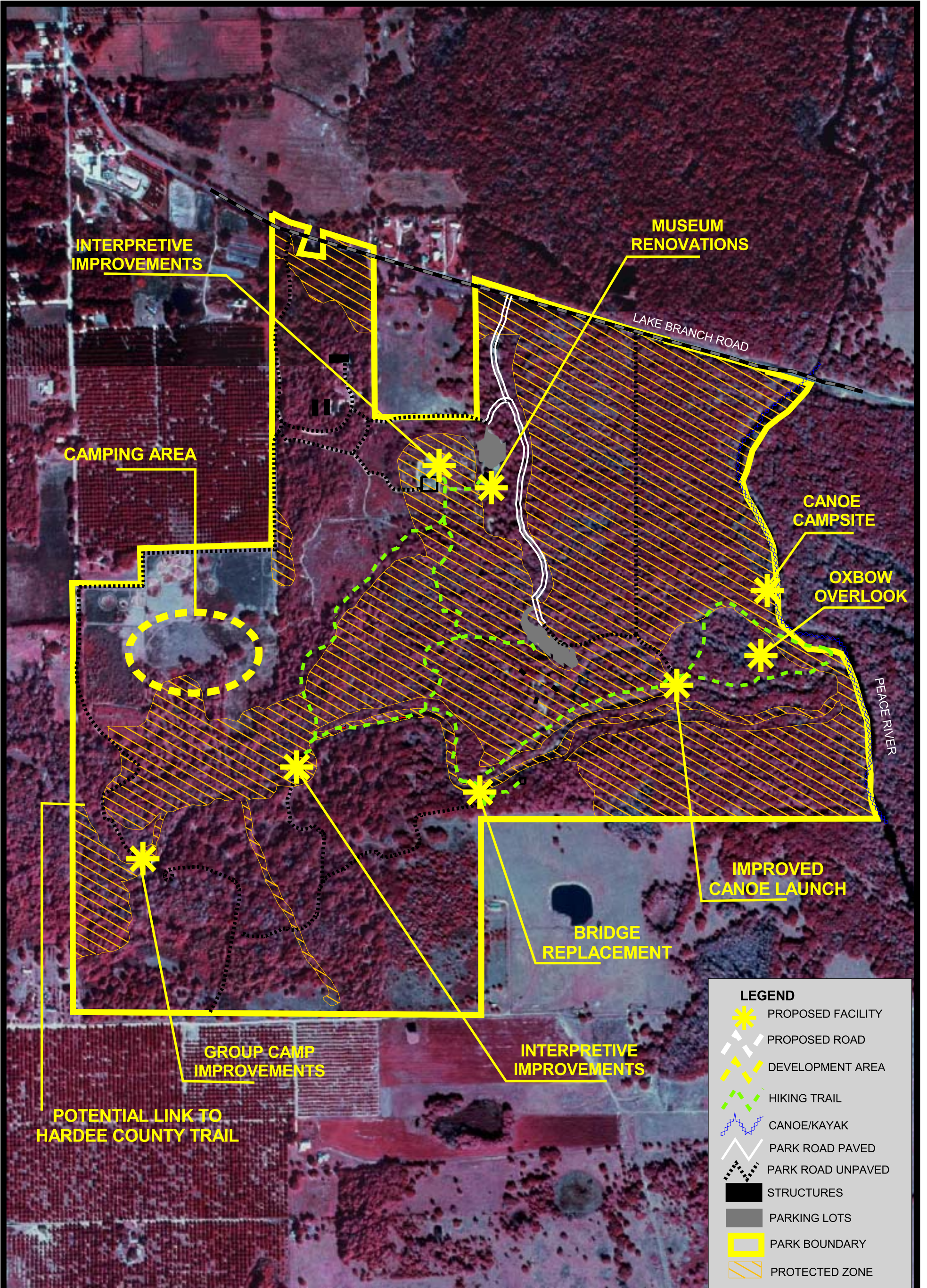
At Paynes Creek Historic State Park, the primary emphasis is placed on protection of the cultural resources, while allowing the public an opportunity to experience these historic features. The current public use of this park is appropriate and should continue. In addition, the following park development is recommended:

Recreation Facilities

Interpretive Plan. To establish a systematic, comprehensive approach to interpretation at the park, a statement for interpretation and interpretive plan are needed. These documents would identify appropriate interpretive themes, programming content, media, and interpretive facility needs. In addition, an interpretive plan can help improve and expand on and offsite interpretive programming. The park should actively work with local schools to encourage an understanding and appreciation of local and regional history among area youth.

Museum Exhibit Renovations. The park should seek consultation for renovating the museum exhibits to improve their appearance, accuracy, and ADA compliance. Areas in need of improvement include the museum lighting, the print size of the exhibit text, bilingual text, and the audiovisual presentation.

Interpretive Improvements at Fort and Trading Post Sites. Further archaeological and historical research is necessary to guide and expand interpretive development at the fort site and the site of the historic trading post. In particular, additional information is desired about the exact location, layout, and appearance of these two structures. Currently, the interpretive signage located at these sites is inadequate. New interpretive displays should



LEGEND	
	PROPOSED FACILITY
	PROPOSED ROAD
	DEVELOPMENT AREA
	HIKING TRAIL
	CANOE/KAYAK
	PARK ROAD PAVED
	PARK ROAD UNPAVED
	STRUCTURES
	PARKING LOTS
	PARK BOUNDARY
	PROTECTED ZONE



**PAYNES CREEK
HISTORIC STATE PARK**

PREPARED BY: FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RECREATION AND PARKS
OFFICE OF PARK PLANNING

**CONCEPTUAL
LAND USE PLAN**

be constructed at these sites, as these are major focal points for the park. Since nothing remains of the actual structures, the displays should include an artist's rendition of how these structures appeared. Moreover, if future research reveals sufficient evidence, a reconstruction of the fort and trading post may be possible. Any potential reconstruction project should take the cultural landscape under consideration while being sensitive to the existing natural resources. The Division will actively coordinate work on this project with the Department of State, Division of Historic Resources.

New Canoe Launch Area. The existing unimproved canoe launch is inadequate and unsafe for launching canoes and especially difficult for launching kayaks. Moreover, the park is strategically located along the Peace River Canoe Trail, an officially designated part of Florida's Statewide System of Greenways and Trails. Trail information already identifies Paynes Creek Historic State Park as an access point as well as a point of interest. Therefore, it is recommended that a new canoe/kayak launching facility be constructed. An appropriate location has been identified about 500 feet downstream from the picnic area on Paynes Creek. This proposed launch site could be accessed from an existing unpaved service road which connects the main park road to the launch site. Paddlers would be able to drive their cars down the service road to the creek where they would unload their canoe/kayak and then return their vehicle to the picnic area parking lot. The design of the canoe launch should be ADA compliant.

Camping Area. Due to the lack of public campgrounds in Hardee County, a standard State Park camping area is recommended for Paynes Creek Historic State Park. An appropriate area has been located in the western portion of the park, north of Paynes Creek in an area identified as "ruderal" on the natural communities map. Thirty sites are recommended for this camping area and the campsites should be located along the edge of the bottomland forest to provide shade for a more enjoyable experience. The camping area will benefit from additional reclamation and vegetative screening prior to the establishment of the camping area.

To access the proposed camping area, a paved road will need to be extended from the existing park road. The most appropriate route for the access road will require the acquisition of additional land to the north of the current park boundary. This acquisition will allow the camping area road to be routed to avoid sensitive natural and cultural resources while protecting the quality of visitor experience at the fort site.

Group Campsite. The existing group campsite is rather small thus limiting the number of campers the site can accommodate. The group camp area should be expanded and enhanced to better accommodate larger gatherings. Additional recommended facilities include a picnic shelter, barbecue pit, and road stabilization.

Canoe Campsite. A canoe campsite is recommended along the Peace River, just north of the junction with Paynes Creek. Park staff will determine an exact location after monitoring the area during the wet summer season. Recommended facilities include a portable toilet and potentially a raised sleeping platform.

Suspension Bridge Replacement. The existing suspension bridge crossing Paynes Creek is beginning to show signs of wear and will eventually need to be replaced. It is recommended that the new bridge be designed in 19th century style and should be constructed large enough to support park service vehicles, such as the bridge at Fort Foster

Historic Site in Hillsborough River State Park.

Oxbow Lake Overlook. A wooden boardwalk or overlook is recommended at one of the oxbow features. Interpretive signs should be placed to explain the value and significance of this special feature. Currently, a hiking trail goes around the oxbows and there are man-made paths leading down to these oxbow “lakes”. The boardwalk could be an extension of the existing trail. The cypress trees are quite large in these swamps and the scenic view is astounding.

Potential Greenway Linkage. The Division of Recreation and Parks supports trail connections to local greenways, however, it is the responsibility of the local governments to determine the routes of these proposed trails leading to the state parks. If and when Hardee County identifies a possible connection to Paynes Creek Historic State Park, the Division will support their ideas upon considering the sensitivity of the natural and cultural resources of the property, the interpretive function of the historic site, and concerns related to park operations. The Division will decide the most appropriate route for the trail within the state park and what additional facilities to provide. Successful implementation of this trail linkage will require Division coordination with the Hardee County Planning Department.

Support Facilities

None.

Facilities Development

Preliminary cost estimates for the following list of proposed facilities are provided in Addendum 6. 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.

Recreation Facilities

Interpretive Master Plan
Museum Renovations
Interpretive Displays (3)
Group Camp Improvements
Canoe Launch
Standard Camping Area (30 sites)
Canoe Campsite
Boardwalk Overlook

Support Facilities

Park Road Extensions to Proposed
Camping Area (3500 feet)
Bridge Replacement

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).

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.

Table 1
Existing Use And Optimum Carrying Capacity

Activity/Facility	Existing Capacity		Proposed Additional Capacity		Estimated Optimum Capacity	
	One Time	Daily	One Time	Daily	One Time	Daily
Museum	180	540			180	540
Trails	20	80			20	80
Picnicking	240	480			240	480
Camping						
Standard			120	120	120	120
Group	12	12	18	18	30	30
Canoe			6	6	6	6
TOTAL	452	1,112	144	144	596	1,256

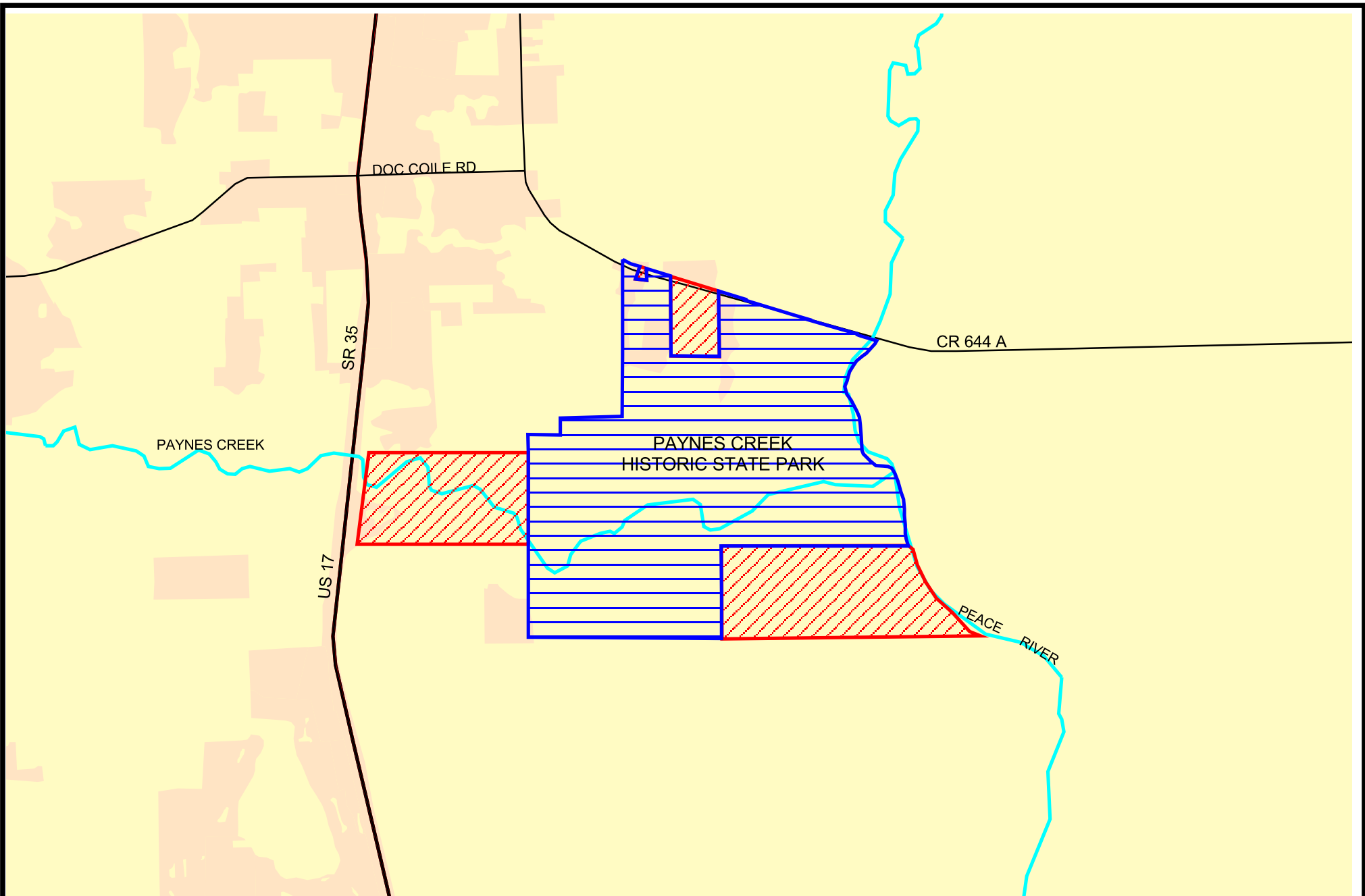
Optimum Boundary

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. At this time, no lands are considered surplus to the needs of the park.

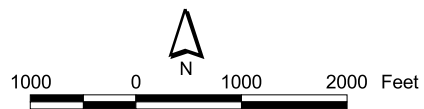
Identification of lands on the optimum boundary map is solely for planning purposes and not for regulatory purposes. A property's identification on the optimum boundary map is not for use by any party or other government body to reduce or restrict the lawful right of private landowners. Identification 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.

Undeveloped lands around the park have been identified as desirable for acquisition. Additional lands on the north, south, and west sides of the current boundary are recommended for acquisition. The acquisition of these lands will add desirable natural and cultural resources, and will enhance the park's boundaries for management purposes. The



PAYNES CREEK
HISTORIC STATE PARK



Prepared by:
Florida Department of Environmental Protection
Division of Recreation and Parks
Office of Park Planning

LEGEND

- Park Boundary
- Optimum Boundary

OPTIMUM BOUNDARY MAP

larger northern parcel will provide the necessary land to route a road to the proposed camping area. Land identified to the southeast of the current boundary contains the remnants of the military blockhouse and bridge across the Peace River.

Addendum 1—Acquisition History

Paynes Creek Historic State Park

Acquisition History

Purpose of Acquisition

The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) has acquired Paynes Creek Historic State Park to manage the property in such a way as to protect and restore the natural and cultural values of the property and provide the greatest benefit to the citizens of the state.

Sequence of Acquisition

On September 16, 1974, the Trustees purchased a 9.04-acre property, constituting the initial area of Paynes Creek Historic State Park, from Margaret C. Williams for \$18,000. The purchase was funded under the Outdoor Recreation Bond. Since this initial purchase, the Trustees have acquired several individual parcels through purchases under LATF, P2000/A and I program, and a donation and added them to Paynes Creek Historic State Park.

Title Interest

The Trustees hold fee simple title to Paynes Creek Historic State Park.

Lease Agreement

On April 16, 1975, the Trustees conveyed management authority of Paynes Creek Historic State Park to the Division of Recreation and Parks (Division) under Lease No. 2809. Lease No. 2809 is for a period of ninety-nine (99) years, which will expire on April 15, 2074.

According to Lease No. 2809, the Division manages Paynes Creek Historic State Park to develop, improve, operate and maintain the property for public outdoor recreational, park, historic, conservation and related purposes.

Special Conditions on Use

Paynes Creek Historic 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.

Outstanding Reservations

There are no outstanding reservations and encumbrances, which apply to Paynes Creek Historic State Park.

Paynes Creek Historic State Park

List of Advisory Group Members

The Honorable William R. Lambert, Jr.,
Chair
Hardee Board of County Commissioners
412 West Orange Street
Room 103
Wauchula, Florida 33873

Jackson Mosley, Park Manager
Paynes Creek Historic State Park
888 Lake Branch Road
Bowling Green, Florida 33834

Robert Baker, Park Manager
Florida State Park Service
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Estero, Florida 33928

Charles Matheny, Chair
Hardee Soil and Water Conservation District
4202 Sweetwater Road
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Ed Flowers, Manager
Myakka River District
Division of Forestry
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Bradenton, Florida 34203

Mr. Mike Wisenbaker
Division of Historical Resources
500 South Bronough Street,
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Tallahassee, Florida 32399-0250

Jeff McGrady
Southwest Region
Florida Fish and Wildlife Conservation
Commission
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Lakeland, Florida 33811-1299
represented by:
Kevin Main
1630 Virginia Avenue
Lake Placid, Florida 33852

Mr. Kayton Nedza
Hardee County Schools
Outdoor Classroom
P.O. Box 1678
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Robert E. Taylor, Jr., Chair
Sierra Club - Polk Group
P.O. Box 688
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Lake Hamilton, Florida 33851-0688

Renee Riddle, President
Paynes Creek Preservation Alliance
888 Lake Branch Road
Bowling Green, Florida 33834

User Groups
Ken Williams, Chair
Heartland Chapter
Florida Trail Association
1042 Success Avenue
Lakeland, Florida 33803

Julie Ellis
Peace River Canoes, Inc.
2110 Eagle Drive
Wauchula, Florida 33873

Jack Gibson, Chairman
Bowling Green Area Historical Commission
523 East Banana Street
Bowling Green, Florida 33834

Lloyd M. Larramore
3825 Edison Avenue
Bowling Green, Florida 33834

Paynes Creek Historic State Park

Advisory Group Staff Report

The Advisory Group meeting to review the proposed land management plan for Paynes Creek Historic State Park was held in the park's Visitor Center on May 5, 2004. Kevin Main represented Jeff McGrady. The Honorable William Lambert, Kayton Nedza, and Mike Wisenbaker were not able to attend but provided comments. Julie Ellis did not attend. All other appointed Advisory Group members were present. Attending staff were Bob Baker, Jackson Mosley, Phil Klein, Renee Riddle, Robert Wilhelm, Andrea Bishop, and Brian Burket.

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

Summary Of Advisory Group Comments

Ken Williams of the Florida Trail Association recalled that organized group hikes at Paynes Creek Historic State Park have been well attended by visitors outside the local area and remarked that these hikers have generally been impressed with their visit. Mr. Williams, however, is concerned with the lack of park attendance among the local community. He recommends that the park attempt to better attract local citizens through increased exposure. **Bob Baker** described the traditional uses of the park, visitation trends, and park staff efforts to promote the park within the local community. **Charles Matheny** suggested publishing a biweekly report in the local paper to generate local interest in the state park. Then, **Mr. Williams** advised the park service staff to avoid locating trails and campsites in areas that have the tendency to get wet as it might discourage visitors to return to the park in the future.

Bob Taylor said the management plan was well written but thought the cultural resource section should be expanded to better describe of the history of the site. Mr. Taylor suggested that a canoe campsite along the Peace River could provide a raised sleeping platform like those located at the Okefenokee National Wildlife Refuge. He requested the addition of resting benches along the trails and offered the assistance of the Sierra Club with this project. Then, he presented the park with a wood duck nesting house in memory of Richard Coleman.

Ed Flowers recommended that the park staff reevaluate their timber management. Although there is not much opportunity for timbering, he reminded the staff that selective cutting of trees could help improve the health of some the natural communities within the park. **Mr. Matheny** added that timber can be easily and cheaply converted into pressure treated lumber within the county for future construction projects.

Kevin Main provided a few suggestions for rewording text in the Resource Management Component of the management plan. Mr. Main also inquired if climbing fern has been seen in the park. **Mr. Baker** replied that it is not yet in the park, but it is in the neighborhood.

Charles Matheny thought the management plan was well done. Mr. Matheny is a strong advocate of prescribed fires and shared his disappointment with a prescribed burn conducted at Highlands Hammock.

Longtime area resident, **Jack Gibson**, mentioned that the oxbow lakes were fishable in the past and said that Paynes Creek can get as low as 2 to 4 inches. Mr. Gibson expressed his

Paynes Creek Historic State Park

Advisory Group Staff Report

concern about the continuing spread of invasive exotic plants in and around the park. He believes that the area identified as optimum boundary north of the park boundary was used as a dump site in the early 1900's. He then asked how the acquisition process works. **Robert Wilhem** described how optimum boundary lands are identified, prioritized, and acquired.

Renee Riddle expressed her concern for creating a group camping area south of Paynes Creek. Ms. Riddle believes the area identified is too wet and instead recommends expanding the existing group camp. She also suggests improving directional signage and adding advertisement along Highway 17 to attract more visitors to the park. She also favors efforts to improve interpretation at the park, including rebuilding the fort and trading post. **Brian Burket** explained the need for an interpretive plan to help guide future interpretive improvements and shared the Secretary of Interior's standards and guidelines for reconstructing historic structures.

Marshall Larramore, an adjacent landowner, requested further explanation of the camping area plans. **Mr. Baker and Mr. Burket** described how the site was selected, what facilities would be constructed, and the challenge of routing an access road to the area. Mr. Larramore talked about the popularity of the Mary Jane swimming hole before the land was developed as a state park. He also commented that his neighboring property contains old roadbeds that someone from our Cultural Resource Department might want to take a look at.

Summary of Comments Supplied in Advance

Mike Wisenbaker of the Division of Historical Resources provided the following comments:

Cautioned the park staff to research the historical significance of exotic plants before going forward with eradication plans.

Offered assistance to improve park visitation.

Pleased to learn about plans for interpretive improvements. He recommends more archaeological and archival research for the site.

Commissioner Bill Lambert of the Hardee Board of County Commissioners provided the following comments:

The management plan should reflect the county plans for a recreational corridor along the Paynes Creek linking the proposed Hardee Lakes County Park and Paynes Creek Historic State Park.

Discussed the improved condition of the Peace River and the challenge to maintain its health and flow.

Supports the plans for a camping area.

Kayton Nedza of the Hardee County Outdoor Classroom provided the following comments: The Outdoor Classroom program has utilized the state park since 1987 and is thankful for its existence and support received from park staff.

Requests that the proposed canoe launch be ADA compliant.

Suggests relocating the proposed canoe campsite near the junction of the Paynes Creek and Peace River.

Paynes Creek Historic State Park

Advisory Group Staff Report

Recommends routing all access roads along park boundary lines, where possible.

In favor of reconstructing the fort and trading post.

Would like to see additional interpretation about the Indian tribes and early settlers that may have used this area.

Recommends more pamphlets to describe fossils that can be found at the park, the flora and fauna, and other local natural areas.

Staff Recommendations

Staff recommends approval of the proposed management plan for Paynes Creek Historic State Park as presented with the following changes:

Interpretive Improvements at Fort and Trading Post Sites. Further archaeological and historical research is necessary to guide and expand interpretive development at the fort site and the site of the historic trading post. In particular, additional information is desired about the exact location, layout, and appearance of these two structures. Currently, the interpretive signage located at these sites is inadequate. New interpretive displays should be constructed at these sites, as these are major focal points for the park. Since nothing remains of the actual structures, the displays should include an artist's rendition of how these structures appeared. Moreover, if future research reveals sufficient evidence, a reconstruction of the fort and trading post may be possible. Any potential reconstruction project should take the cultural landscape under consideration while being sensitive to the existing natural resources. The Division will actively coordinate work on this project with the Department of State, Division of Historic Resources.

Potential Greenway Linkage. The Division of Recreation and Parks supports trail connections to local greenways, however, it is the responsibility of the local governments to determine the routes of these proposed trails leading to the state parks. If and when Hardee County identifies a possible connection to Paynes Creek Historic State Park, the Division will support their ideas upon considering the sensitivity of the natural and cultural resources of the property, the interpretive function of the historic site, and concerns related to park operations. The Division will decide the most appropriate route for the trail within the state park and what additional facilities to provide. Successful implementation of this trail linkage will require Division coordination with the Hardee County Planning Department.

Group Camp and Canoe Campsite. Due to concerns over the area proposed for a new group camp and the request to locate a canoe campsite near the junction of the Paynes Creek and Peace River, the Conceptual Land Use Plans have been revised:

- **Group Camp.** The existing group camp area should be expanded and enhanced to better accommodate larger gatherings. Additional recommended facilities include a picnic shelter, barbecue pit, and road stabilization.
- **Canoe Campsite.** A canoe campsite is recommended along the Peace River, just north of the junction with Paynes Creek. Park staff will determine an exact location after monitoring the area during the wet summer season. Recommended facilities include a portable toilet and potentially a raised sleeping platform.

The following two ideas were raised after the public meetings by Division staff:

Paynes Creek Historic State Park

Advisory Group Staff Report

Suspension Bridge Replacement. The existing suspension bridge crossing Paynes Creek is beginning to show signs of wear and will eventually need to be replaced. It is recommended that the new bridge be designed in 19th century style and should be constructed large enough to support park service vehicles, such as the bridge at Fort Foster Historic Site in Hillsborough River State Park.

Oxbow Lake Overlook. A wooden boardwalk or overlook is recommended at one of the oxbow features. Interpretive signs should be placed to explain the value and significance of this special feature. Currently, a hiking trail goes around the oxbows and there are man-made paths leading down to these oxbow “lakes”. The boardwalk could be an extension of the existing trail. The cypress trees are quite large in these swamps and the scenic view is astounding.

Addendum 2—Reference Cited

Paynes Creek Historic State Park
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Addendum 3—Soil Descriptions

Paynes Creek Historic State Park
Soils Descriptions

2 - Zolfo fine sand - This is somewhat poorly drained, nearly level soil on broad ridges and knolls on uplands. Individual areas are irregular in shape and range from 10 to 100 acres in size. Slopes are less than 2%. Typically, the surface layer is dark grayish brown fine sand about 7 inches thick. The subsurface layer is fine sand about 56 inches thick. It is grayish brown in the upper 21 inches, very pale brown in the middle 17 inches, and light brownish gray in the lower 18 inches. The subsoil is dark brown fine sand to a depth of 68 inches and black fine sand to a depth of 80 inches or more.

3 - Ft. Green fine sand, 2 to 5 percent slopes - This is a gently sloping, poorly drained soil on side slopes adjacent to flood plains and depressions. The individual areas are mostly long and narrow and generally are parallel to the flood plains or are adjacent to the depressions. The individual areas range from 5 to 20 acres in size. Typically, the surface layer is very dark gray fine sand about 6 inches thick. The subsurface layer in the upper park is grayish brown fine sand 11 inches thick and in the lower park is light brownish gray fine sand 14 inches thick. The subsoil is light gray to a depth of 80 inches. The upper 11 inches is cobbly, sandy clay loam, the middle 10 inches is sandy clay loam, and the lower 28 inches is fine sandy loam.

5 - Tavares fine sand, 0 to 5 percent slopes - This is a moderately well drained soil on low ridges and knolls throughout the county. Individual areas are irregular in shape and range from 5 to 40 acres in size. Slopes are smooth to concave. Typically, the surface layer is very dark grayish brown fine sand about 5 inches thick. The underlying material to a depth of 80 inches is fine sand. The upper 19 inches is light yellowish brown, the next 26 inches is very pale brown, the next 19 inches is white, and the lower 11 inches is very pale brown.

6 - Candler fine sand, 0 to 5 percent slopes - This is a nearly level to gently sloping, excessively drained soil in small to very large areas on uplands. Slopes are smooth to concave, typically, the surface layer is very dark grayish brown fine sand about 7 inches thick. The subsurface layer is fine sand to a depth of about 48 inches. The upper 28 inches is yellowish brown, and the lower 13 inches is yellow. At a depth below 48 inches there is yellow fine sand that has lamellae of yellowish brown loamy fine sand about 1/16 to 1/8 inch thick and 1 to 4 inches long, and at a depth below 66 inches there are white mottles.

8 - Bradenton loamy fine sand, frequently flooded - This is a poorly drained, nearly level soil along streams and rivers and on low-lying ridges and hammocks in flood plains. Individual areas are long and narrow, generally are adjacent to streams, and range from 5 to 20 acres in size. Slopes are smooth to concave and range from 0 to 1 percent. Typically, the surface layer is very dark gray loamy fine sand about 4 inches thick. The subsurface layer is fine sand to a depth of about 15 inches. The upper 7 inches is gray, and the lower 8 inches is grayish brown. The subsoil is light gray sandy clay loam about 21 inches thick. The substratum is light brownish gray sandy loam to a depth of 66 inches and light gray loamy sand to a depth of 80 inches.

10 - Pomona fine sand - This is a nearly level, poorly drained soil in large areas on low ridges in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. Individual areas are broad and oblong and range from 15 to 200 acres in size. Typically, the surface layer is black fine sand about 3 inches thick. The subsurface layer is fine sand about 24 inches thick. The upper 7 inches is gray, and the lower 17 inches is light gray. The subsoil extends to a depth of 80 inches. The upper 8 inches is dark reddish brown fine sand coated with organic matter, the middle 22 inches is brown fine sand, and the lower 23 inches is gray fine sandy loam.

Paynes Creek Historic State Park
Soils Descriptions

12 – Felda fine sand, frequently flooded - This is a nearly level, poorly drained soil along the small streams and creeks throughout the county. The areas are mainly long and narrow and generally are adjacent to the streams. Individual areas range from 5 to 25 acres. Slopes are smooth to concave and range from 0 to 1 percent. Typically, the surface layer is black fine sand about 5 inches thick. The subsurface layer is fine sand to a depth of about 26 inches. The upper 5 inches is grayish brown, and the lower 16 inches is light gray. The subsoil is sandy loam about 22 inches thick. The upper 10 inches is gray, and the lower 12 inches is grayish brown. The substratum is light gray fine sand to a depth of 80 inches.

15 - Immokalee fine sand - This is poorly drained, nearly level soil on broad low ridges and low knolls in the flatwoods. Individual areas are irregular in shape and range from 10 to 60 acres in size. Slopes are smooth to concave and range from 0 to 2 percent. Typically, the surface layer is very dark gray fine sand to a depth of about 44 inches. The subsoil is fine sand to a depth of 80 inches. The upper 4 inches is black, and the lower 32 inches is dark reddish brown.

16 - Myakka fine sand - This is a nearly level, poorly drained soil in broad areas in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. Typically, the surface layer is very dark grayish brown fine sand about 6 inches thick. The subsurface layer is light gray fine sand to a depth of 21 inches. The subsoil is fine sand about 25 inches thick. The upper 4 inches is very dark gray, the next 5 inches is dark reddish brown, the next 10 inches is dark brown, and the lower 6 inches is brown. The substratum is pale brown and light brownish gray fine sand to a depth of 80 inches.

19 – Ona fine sand - This is a poorly drained, nearly level soil in the flatwoods. Individual areas are irregular in shape and range from 3 to 100 acres in size. Slopes are smooth to concave and range from 0 to 2 percent. Typically, the surface layer is black fine sand about 9 inches thick. The subsoil is dark reddish brown loamy fine sand to a depth of 16 inches. The substratum is fine sand to a depth of 80 inches or more. The upper 8 inches is brown, the next 18 inches is pale brown, the next 18 inches is light gray, and the lower 20 inches is brown.

25 - Wabasso fine sand - This is a nearly level, poorly drained soil in broad areas in the flatwoods. Individual areas are irregular in shape and range from 10 to 60 acres in size. Slopes are less than 2 percent. Typically, the surface layer is black fine sand about 20 inches thick. The upper 14 inches is gray, and the lower 6 inches is light brownish gray. The subsoil extends to a depth of 70 inches. It is very dark grayish brown fine sand coated with organic material to a depth of about 32 inches and light brownish gray sandy loam to a depth of 52 inches. Below that is a gray sandy loam to a depth of 64 inches and light olive gray sandy loam to a depth of 70 inches. The substratum is olive gray loamy sand to a depth of 80 inches or more.

27 - Bradenton-Felda-Chobee Association, frequently flooded - This association consists of poorly drained Bradenton and Felda soils and very poorly drained Chobee soils. The Bradenton soils make up about 35 percent of the association, Felda soils make up 25 percent, Chobee soils make up 20 percent, and minor soils make up 20 percent. The soils are in regular and repeating patterns along streams and rivers throughout the county. Most areas are long and narrow and are adjacent to the Peace River. Felda and Bradenton soils are in the higher places, the Chobee soils are in the lower places. The individual areas of each soil range from 5 to 120 acres. Slopes are 0 - 2 percent. The soils are subject to frequent flooding.

Bradenton soils have a surface layer of dark gray loamy fine sand about 6 inches thick. The

Paynes Creek Historic State Park
Soils Descriptions

subsurface layer is grayish brown fine sand about 10 inches thick. The subsoil is light brownish gray sandy clay loam about 13 inches thick. The substratum is gray and sandy clay loam to a depth of 80 inches.

Felda soils have a surface layer of black fine sand about 5 inches thick. The subsurface layer is fine sand about 21 inches thick. In the upper 5 inches it is grayish brown, and in the lower 15 inches it is light gray. The subsoil is sandy loam about 22 inches thick. In the upper 10 inches it is gray, and the lower 12 inches it is grayish brown. The substratum is light gray fine sand to a depth of 80 inches.

Chobee soils have a surface layer of black fine sandy loam about 8 inches thick. The subsoil is sandy clay loam about 47 inches thick. It is black in the upper 10 inches and very dark gray in the lower 37 inches. The substratum is gray loamy fine sand to a depth of 80 inches.

The minor soils that were included in mapping are Holopaw, Manatee, and Pompano soils and small areas of organic soils. In 25 percent of the mapped areas or less, the minor soils make up either less than 20 percent or more than 20 percent of the acreage. The soils making up this association are mainly in dense vegetation consisting of water oak, cypress, sweetgum, hickory, cutgrass, maidencane, sawgrass, swamp primrose, buttonbush, smartweed, sedges, and other water tolerant plants.

38 - St. Lucie fine sand - This is an excessively drained, nearly level soil on ridgetops, knolls, and dunes in areas of sand hills. Individual areas range from 5 to 20 acres in size. Slopes are smooth to concave and range from 0 to 2 percent. Typically, the surface layer is dark gray fine sand about 4 inches thick. The underlying material is white fine sand to a depth of 80 inches.

Addendum 4—Plant And Animal List

Paynes Creek Historic State Park

Plants

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

Saw fern;		
Toothed mid-sorus fern	<i>Blechnum serrulatum</i>	
Japanese climbing fern *	<i>Lygodium japonicum</i>	
Mariana maiden fern *	<i>Macrothelypteris torresiana</i>	
Cinnamon fern	<i>Osmunda cinnamomea</i>	26, 28
Royal fern	<i>Osmunda regalis var. spectabilis</i>	26, 28
Golden polypody;		
Serpent fern	<i>Phlebodium aureum</i>	
Resurrection fern	<i>Pleopeltis polypodioides var. michauxiana</i>	
Bracken fern	<i>Pteridium aquilinum</i>	
Water spangles	<i>Salvinia minima</i>	
Downy shield fern;		
Down maiden fern *	<i>Thelypteris dentata</i>	
Widespread maiden fern	<i>Thelypteris kunthii</i>	
Eastern marsh fern	<i>Thelypteris palustris var. pubescens</i>	
Shoestring fern	<i>Vittaria lineata</i>	
Netted chain fern	<i>Woodwardia areolata</i>	
Virginia chain fern	<i>Woodwardia virginica</i>	

GYMNOSPERMS AND CYCADS

Slash pine	<i>Pinus elliottii</i>
Longleaf pine	<i>Pinus palustris</i>
Bald cypress	<i>Taxodium distichum</i>

MONOCOTS

Bushy bluestem	<i>Andropogon glomeratus var. pumilus</i>
Broomsedge	<i>Andropogon virginicus</i>
Little chalky bluestem	<i>Andropogon virginicus var. glaucus</i>
Corkscrew three awn	<i>Aristida gyrans</i>
Bottlebrush threeawn	<i>Aristida spiciformis</i>
Wire grass;	
Pineland threeawn	<i>Aristida stricta var. beyrichiana</i>
Bamboo *	<i>Bambusa sp.</i>
Roseling	<i>Callisia graminea</i>
Golden canna	<i>Canna flaccida</i>
Hop sedge	<i>Carex lupulina</i>
Southern sandspur	<i>Cenchrus echinatus</i>
Spike chasmanthium	<i>Chasmanthium laxum</i>
Baby dewflower;	
Dayflower	<i>Commelina diffusa</i>
Erect dayflower	<i>Commelina erecta</i>
String-lily;	
Swamp-lily; Seven-sisters	<i>Crinum americanum</i>
Baldwin's flat sedge	<i>Cyperus croceus</i>

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Sheathed flat sedge	<i>Cyperus haspan</i>	
Many-spike flat sedge	<i>Cyperus polystachyos</i>	
Pine-barren flat sedge	<i>Cyperus retrorsus</i>	
Tropical flat sedge	<i>Cyperus surinamensis</i>	
Witch grass	<i>Dichantheium ensifolium</i>	
Hemlock witch grass	<i>Dichantheium portoricense</i>	
Pangola grass *	<i>Digitaria pentzii</i>	
Air yam;		
Air potato *	<i>Dioscorea bulbifera</i>	
Barnyard grass *	<i>Echinochloa muricata</i>	
Common water-hyacinth *	<i>Eichhornia crassipes</i>	
Baldwin's spikerush;		
Roadgrass	<i>Eleocharis baldwinii</i>	
Viviparous spikerush	<i>Eleocharis vivipara</i>	
Tampa butterfly orchid	<i>Encyclia tampensis</i>	28, 33, 35
Pinewoods finger grass	<i>Eustachys petraea</i>	
Southern umbrella sedge	<i>Fuirena scirpoidea</i>	
Tooth-petal false rein orchid	<i>Habenaria floribunda</i>	
Water-spider false rein orchid	<i>Habenaria repens</i>	
Fringed yellowstar-grass	<i>Hypoxis juncea</i>	
Cogon grass *	<i>Imperata cylindrica</i>	
Prairie iris;		
Blue flag	<i>Iris hexagona</i>	
Soft rush;		
Lamp rush	<i>Juncus effusus subsp. solutus</i>	
Bog rush	<i>Juncus elliotii</i>	
Grass-leaf rush;		
Shore rush	<i>Juncus marginatus</i>	
Big-head rush	<i>Juncus megacephalus</i>	
Needle-pod rush	<i>Juncus scirpoides</i>	
White-head bog-buttons	<i>Lachnocaulon anceps</i>	
Lesser duckweed	<i>Lemna aequinoctialis</i>	
Golden club;		
Neverwet	<i>Orontium aquaticum</i>	
Beaked panicum	<i>Panicum anceps</i>	
Guinea grass *	<i>Panicum maximum</i>	
Switch grass	<i>Panicum virgatum</i>	
Bahia grass *	<i>Paspalum notatum var. sauriae</i>	
Vaseygrass *	<i>Paspalum urvillei</i>	
Green arum;		
Green arrow-arum	<i>Peltandra virginica</i>	
Water-lettuce *	<i>Pistia stratiotes</i>	
Pickerelweed	<i>Pontederia cordata</i>	
Wild coco;		
Giant orchid	<i>Pteroglossaspis ecristata</i>	8, 15
Red natal grass *	<i>Rhynchelytrum repens</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
White-tops; Star-rush	<i>Rhynchospora colorata</i>	
Fasciculate beak sedge	<i>Rhynchospora fascicularis</i>	
Sandy-field beak sedge	<i>Rhynchospora megalocarpa</i>	
Southern beak sedge	<i>Rhynchospora microcarpa</i>	
Plumed beak sedge	<i>Rhynchospora plumosa</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Giant arrowhead	<i>Sagittaria lancifolia</i>	
Tall nutgrass; Whip nutrush	<i>Scleria triglomerata</i>	
Saw palmetto	<i>Serenoa repens</i>	
Narrow-leaf blue eyed-grass	<i>Sisyrinchium angustifolium</i>	
Ear-leaf greenbrier; Ear-leaf catbrier	<i>Smilax auriculata</i>	
Saw greenbrier; Saw catbrier	<i>Smilax bona-nox</i>	
Wild sarsaparilla	<i>Smilax glauca</i>	
Bamboo vine; Laurel-leaf greenbrier	<i>Smilax laurifolia</i>	
Sarsaparilla vine; Wooly greenbrier	<i>Smilax pumila</i>	
Coral greenbrier; Red-berry greenbrier	<i>Smilax walteri</i>	
Green-vein ladies-tresses	<i>Spiranthes praecox</i>	
St. Augustine grass *	<i>Stenotaphrum secundatum</i>	
Bantam-buttons; Yellow hatpins	<i>Syngonanthus flavidulus</i>	
Medusahead air plant	<i>Tillandsia balbisiana</i>	33, 35
Bartram's air plant	<i>Tillandsia bartramii</i>	
Common air plant; Giant air plant	<i>Tillandsia fasciculata</i>	38, 33, 35
Small ball-moss	<i>Tillandsia recurvata</i>	
Frass-leaved air plant	<i>Tillandsia setacea</i>	
Spanish-moss	<i>Tillandsia usneoides</i>	
Eastern gama grass	<i>Tripsacum dactyloides</i>	
Common cattail; Broad-leaf cattail	<i>Typha latifolia</i>	
Paragrass *	<i>Urochloa mutica</i>	
Short-leaf yelloweyed-grass	<i>Xyris brevifolia</i>	
Carolina yelloweyed-grass	<i>Xyris caroliniana</i>	
Elliott's yelloweyed-grass	<i>Xyris elliotii</i>	
Tall yelloweyed-grass	<i>Xyris platylepis</i>	
Adam's needle	<i>Yucca filamentosa</i>	
Atamasco-lily; Rain-lily	<i>Zephyranthes atamasca</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
DICOTS		
Southern red maple	<i>Acer rubrum</i>	
Shyleaf	<i>Aeschynomene americana</i>	
Hammock thoroughwort	<i>Ageratina jucunda</i>	
Alligator-weed *	<i>Alternanthera philoxeroides</i>	
False moneywort *	<i>Alysicarpus ovalifolius</i>	
Spiny amaranth; Pigweed *	<i>Amaranthus spinosus</i>	
Common ragweed	<i>Ambrosia artemisiifolia</i>	
False indigo-bush; Bastard indigo	<i>Amorpha fruticosa</i>	
Pepper vine	<i>Ampelopsis arborea</i>	
Florida Indian-plantain	<i>Arnoglossum floridanum</i>	
Feay's milkweed	<i>Asclepias feayi</i>	
Aquatic milkweed	<i>Asclepias perennis</i>	
Velvet-leaf milkweed; Tuba milkweed	<i>Asclepias tomentosa</i>	
Butterfly-weed	<i>Asclepias tuberosa</i>	
Green antelope-horn	<i>Asclepias viridis</i>	
Big-flower pawpaw	<i>Asimina obovata</i>	
Netted pawpaw; Banana pawpaw	<i>Asimina reticulata</i>	
Silverling; Groundsel tree	<i>Baccharis glomeruliflora</i>	
Groundsel tree; Saltbush; Sea-myrtle	<i>Baccharis halimifolia</i>	
Yellow buttons	<i>Balduina angustifolia</i>	
Tarflower	<i>Bejaria racemosa</i>	
Florida greeneyes; Florida dandelion	<i>Berlandiera subacaulis</i>	
Beggar-ticks	<i>Bidens alba var. radiata</i>	
Small-fruit beggar-ticks	<i>Bidens mitis</i>	
Small-spike false nettle; Bog hemp	<i>Boehmeria cylindrica</i>	
American blueheart	<i>Buchnera americana</i>	
American beautyberry	<i>Callicarpa americana</i>	
Hedge false bindweed	<i>Calystegia sepium subsp. limnophila</i>	
Florida bellflower	<i>Campanula floridana</i>	
Trumpet-vine; Trumpet-creeper	<i>Campsis radicans</i>	
Deer-tongue; Florida paintbrush	<i>Carphephorus corymbosus</i>	
Vanilla plant; Vanilla-leaf	<i>Carphephorus odoratissimus</i>	
Hairy chaffhead	<i>Carphephorus paniculatus</i>	
Water hickory	<i>Carya aquatica</i>	
Coinwort; Spadeleaf	<i>Centella asiatica</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Spurred butterfly pea	<i>Centrosema virginianum</i>	
Buttonbush	<i>Cephalanthus occidentalis</i>	
Partridge pea;		
Sleeping plant	<i>Chamaecrista fasciculata</i>	
Wild sensitive plant;		
Partridge pea	<i>Chamaecrista nictitans var. aspera</i>	
Florida alicia;		
Chapman's pea	<i>Chapmannia floridana</i>	
Mexican-tea *	<i>Chenopodium ambrosioides</i>	
White fringe tree;		
Old man's-beard	<i>Chionanthus virginicus</i>	
Coastalplain goldenaster	<i>Chrysopsis scabrella</i>	
Spotted water hemlock	<i>Cicuta maculata</i>	
Purple thistle;		
Yellow thistle	<i>Cirsium horridulum</i>	
Nuttall's thistle	<i>Cirsium nuttallii</i>	
Net-leaf leatherflower	<i>Clematis reticulata</i>	
Tread-softly;		
Finger-rot	<i>Cnidioscolus stimulosus</i>	
Blue mistflower	<i>Conoclinium coelestinum</i>	
Coastal plain tickseed	<i>Coreopsis gladiata</i>	
Leavenworth's tickseed;		
Coreopsis	<i>Coreopsis leavenworthii</i>	
Swamp dogwood;		
Stiff cornel	<i>Cornus foemina</i>	
Parsley hawthorn	<i>Crataegus marshallii</i>	
Rabbit-bells	<i>Crotalaria rotundifolia</i>	
Showy rattlebox *	<i>Crotalaria spectabilis</i>	
Tropical croton	<i>Croton glandulosus</i>	
Pineland croton	<i>Croton linearis</i>	
Columbian waxweed *	<i>Cuphea carthagenensis</i>	
Whitetassels	<i>Dalea carnea</i>	
Zarabacoa comun;		
Tick-trefoil	<i>Desmodium incanum</i>	
Panicked tick-trefoil	<i>Desmodium paniculatum</i>	
Dixie tick-trefoil *	<i>Desmodium tortuosum</i>	
Three-flower tick-trefoil *	<i>Desmodium triflorum</i>	
Carolina pony-foot;		
False pennywort	<i>Dichondra carolinensis</i>	
Rough buttonweed;		
Poor Joe	<i>Diodia teres</i>	
Persimmon	<i>Diospyros virginiana</i>	
Pine-barren white-topped aster	<i>Doellingeria reticulata</i>	
Pink sundew	<i>Drosera capillaris</i>	
West Indian chickweed	<i>Drymaria cordata</i>	
Twinflower;		

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Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Oblong-leaf snakeherb	<i>Dyschoriste oblongifolia</i>	
False daisy	<i>Eclipta prostrata</i>	
Florida elephant's-foot	<i>Elephantopus elatus</i>	
Fireweed;		
American burn; Pilewort	<i>Erechtites hieraciifolius</i>	
Southern fleabane;		
Oakleaf fleabane	<i>Erigeron quercifolius</i>	
Daisy fleabane;		
Prairie fleabane	<i>Erigeron strigosus</i>	
Early white-top fleabane	<i>Erigeron vernus</i>	
Blue button snakeroot	<i>Eryngium baldwinii</i>	
Dogfennel	<i>Eupatorium capillifolium</i>	
Mohr's thoroughwort	<i>Eupatorium mohrii</i>	
Round-leaf thoroughwort	<i>Eupatorium rotundifolium</i>	
Late-flowering thoroughwort	<i>Eupatorium serotinum</i>	
Flat-topped goldenrod	<i>Euthamia caroliniana</i>	
Pop ash;		
Water ash	<i>Fraxinus caroliniana</i>	
Cottonweed;		
Plains snake-cotton	<i>Froelichia floridana</i>	
Elliott's milk pea	<i>Galactia elliotii</i>	
Eastern milk pea;		
Florida milk pea	<i>Galactia regularis</i>	
Downy milk pea	<i>Galactia volubilis</i>	
Coastal bedstraw	<i>Galium hispidulum</i>	
Stiff marsh bedstraw	<i>Galium tinctorium</i>	
Garberia	<i>Garberia heterophylla</i>	14
Southern gaura;		
Southern beeblossom	<i>Gaura angustifolia</i>	
Dwarf huckleberry	<i>Gaylussacia dumosa</i>	
Yellow jessamine;		
Carolina jessamine	<i>Gelsemium sempervirens</i>	
Water locust	<i>Gleditsia aquatica</i>	
Globe amaranth;		
Arrasa con todo *	<i>Gomphrena serrata</i>	
Loblolly bay	<i>Gordonia lasianthus</i>	
Rough hedge-hyssop	<i>Gratiola hispida</i>	
Branched hedge-hyssop	<i>Gratiola ramosa</i>	
Round-fruit hedge-hyssop	<i>Gratiola virginiana</i>	
Spanish daisy;		
Bitterweed; Yellowdicks	<i>Helenium amarum</i>	
Florida scrub frostweed	<i>Helianthemum nashii</i>	
Camphorweed	<i>Heterotheca subaxillaris</i>	
Hawkweed;		
Queendevil	<i>Hieracium gronovii</i>	
Innocence;		

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Round-leaf bluet	<i>Houstonia procumbens</i>	
Many-flower marsh pennywort	<i>Hydrocotyle umbellata</i>	
Round-pod St. John's-wort	<i>Hypericum cistifolium</i>	
St. Andrew's-cross	<i>Hypericum hypericoides</i>	
Dwarf St. John's-wort	<i>Hypericum mutilum</i>	
Atlantic St. John's-wort	<i>Hypericum reductum</i>	
Four-petal St. John's-wort	<i>Hypericum tetrapetalum</i>	
Musky mint	<i>Hyptis alata</i>	
Tropical bush mint *	<i>Hyptis mutabilis</i>	
John Charles' bitter mint *	<i>Hyptis verticillata</i>	
Carolina holly; Sand holly	<i>Ilex ambigua</i>	
Possum haw; Deciduous holly	<i>Ilex decidua</i>	
Gallberry; Inkberry	<i>Ilex glabra</i>	
Scrub holly;	<i>Ilex opaca var. arenicola</i>	14
Carolina indigo	<i>Indigofera caroliniana</i>	
Rough hairy indigo *	<i>Indigofera hirsuta</i>	
Anil indigo *	<i>Indigofera suffruticosa</i>	
Moonflower	<i>Ipomoea alba</i>	
Wild potato vine;	<i>Ipomoea pandurata</i>	
Virginia sweetspire	<i>Itea virginica</i>	
Virginia dwarf dandelion	<i>Krigia virginica</i>	
Woodland lettuce; Blue lettuce	<i>Lactuca floridana</i>	
Shrub verbena; Hedgeflower *	<i>Lantana camara</i>	
Hairy pinweed	<i>Lechea mucronata</i>	
Piedmont pinweed	<i>Lechea torreyi</i>	
Poorman's pepper	<i>Lepidium virginicum</i>	
Curtiss' hairy bush clover	<i>Lespedeza hirta</i>	
Shortleaf blazing star	<i>Liatris tenuifolia</i>	
Gopher-apple	<i>Licania michauxii</i>	
Blue toadflax	<i>Linaria canadensis</i>	
Sweetgum	<i>Liquidambar styraciflua</i>	
Bay lobelia	<i>Lobelia feayana</i>	
Coral honeysuckle	<i>Lonicera sempervirens</i>	
Piedmont primrose-willow	<i>Ludwigia arcuata</i>	
River primrose-willow	<i>Ludwigia leptocarpa</i>	
Seaside primrose-willow	<i>Ludwigia maritima</i>	
Mexican primrose-willow	<i>Ludwigia octovalvis</i>	
Peruvian primrose-willow	<i>Ludwigia peruviana</i>	
Creeping primrose-willow	<i>Ludwigia repens</i>	
Shrubby primrose-willow	<i>Ludwigia suffruticosa</i>	
Taper-leaf water-hoarhound	<i>Lycopus rubellus</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Roserush	<i>Lygodesmia aphylla</i>	
Rusty lyonia;		
Rusty staggerbush	<i>Lyonia ferruginea</i>	
Coastal plain staggerbush	<i>Lyonia fruticosa</i>	
Maleberry	<i>Lyonia ligustrina</i> var. <i>foliosiflora</i>	
Fetterbush;		
Shinyleaf	<i>Lyonia lucida</i>	
Wing-angle loosestrife	<i>Lythrum alatum</i>	
Axil-flower	<i>Mecardonia acuminata</i>	
Chinaberry *	<i>Melia azedarach</i>	
Creeping cucumber	<i>Melothria pendula</i>	
Climbing hempvine	<i>Mikania scandens</i>	
Bashful sensitive briar	<i>Mimosa quadrivalvis</i> var. <i>floridana</i>	
Red mulberry	<i>Morus rubra</i>	
Wax myrtle;		
Southern bayberry	<i>Myrica cerifera</i>	
Spatter-dock	<i>Nuphar advena</i>	
Cut-leaved evening-primrose	<i>Oenothera laciniata</i>	
Yellow wood sorrel;		
Lady's sorrel	<i>Oxalis corniculata</i>	
Virginia creeper;		
Woodbine	<i>Parthenocissus quinquefolia</i>	
Purple passionflower;		
Maypop	<i>Passiflora incarnata</i>	
Many-flower beardtongue	<i>Penstemon multiflorus</i>	
Red bay	<i>Persea borbonia</i>	
Swamp bay	<i>Persea palustris</i>	
Florida false sunflower	<i>Phoebanthus grandiflorus</i>	
Red chokeberry	<i>Photinia pyrifolia</i>	
Frog-fruit;		
Carpetweed	<i>Phyla nodiflora</i>	
Cypress-head ground-cherry	<i>Physalis arenicola</i>	
American pokeweed;		
Pokeberry	<i>Phytolacca americana</i>	
Wild pennyroyal	<i>Piloblephis rigida</i>	
Carolina stripeseed;		
Piriqueta	<i>Piriqueta cistoides</i> subsp. <i>caroliniana</i>	
Grass-leaved goldenaster	<i>Pityopsis graminifolia</i>	
Rosy camphorweed	<i>Pluchea rosea</i>	
Large-flowered polygala	<i>Polygala grandiflora</i>	
Dwarf milkwort	<i>Polygala nana</i>	
Big yellow milkwort	<i>Polygala rugelii</i>	
Coastal plain milkwort	<i>Polygala setacea</i>	
Hairy smartweed	<i>Polygonum hirsutum</i>	
Dotted smartweed;		
Water smartweed	<i>Polygonum punctatum</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Rustweed; Juniper-leaf	<i>Polypremum procumbens</i>	
Wild cherry; Black cherry	<i>Prunus serotina</i>	
Coastal blackroot; Rabbit-tobacco	<i>Pterocaulon pycnostachyum</i>	
Hairlike mock bishop's-weed	<i>Ptilimnium capillaceum</i>	
Chapman's oak	<i>Quercus chapmanii</i>	
Sand live oak;		
Running oak	<i>Quercus elliotii</i>	
Scrub live oak	<i>Quercus geminata</i>	
Turkey oak	<i>Quercus laevis</i>	
Laurel oak;		
Diamond oak	<i>Quercus laurifolia</i>	
Dwarf live oak	<i>Quercus minima</i>	
Myrtle oak	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Virginia live oak	<i>Quercus virginiana</i>	
Pale meadow beauty	<i>Rhexia mariana</i>	
Nuttall's meadow beauty	<i>Rhexia nuttallii</i>	
Swamp-honeysuckle	<i>Rhododendron viscosum</i>	
Winged sumac;		
Shining sumac	<i>Rhus copallinum</i>	
Tropical Mexican-clover *	<i>Richardia brasiliensis</i>	
Highbush blackberry	<i>Rubus argutus</i>	
Sand blackberry	<i>Rubus cuneifolius</i>	
Southern dewberry	<i>Rubus trivialis</i>	
Carolina wild petunia	<i>Ruellia caroliniensis</i>	
Hastate-leaved dock	<i>Rumex hastatulus</i>	
Swamp dock	<i>Rumex verticillatus</i>	
Short-leaf marsh pink	<i>Sabatia brevifolia</i>	
Lance-leaf rose-gentian	<i>Sabatia difformis</i>	
Carolina willow;		
Coastal plain willow	<i>Salix caroliniana</i>	
Lyre-leaf sage	<i>Salvia lyrata</i>	
Elderberry;		
American elder	<i>Sambucus nigra subsp. canadensis</i>	
Pineland pimpernel	<i>Samolus valerandi subsp. parviflorus</i>	
Sweet broom;		
Licorice-weed	<i>Scoparia dulcis</i>	
Rough skullcap;		
Helmetflower	<i>Scutellaria integrifolia</i>	
White-topped aster	<i>Sericocarpus tortifolius</i>	
Danglepod;		
Bequilla *	<i>Sesbania herbacea</i>	
Broomweed;		

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Common wireweed	<i>Sida acuta</i>	
Milk buckthorn; Florida bully	<i>Sideroxylon reclinatum</i>	
Tough bumelia; Tough bully	<i>Sideroxylon tenax</i>	
Black nightshade; Divine nightshade *	<i>Solanum chenopodioides</i>	
Tropical soda-apple *	<i>Solanum viarum</i>	
Pine-barren goldenrod	<i>Solidago fistulosa</i>	
Elliott goldenrod	<i>Solidago latissimifolia</i>	
Chapman's goldenrod	<i>Solidago odora</i> var. <i>chapmanii</i>	
Wand goldenrod	<i>Solidago stricta</i>	
Twist-leaf goldenrod	<i>Solidago tortifolia</i>	
Woodland false buttonweed	<i>Spermacoce assurgens</i>	
Bay Biscayne creeping oxeye *	<i>Sphagneticola trilobata</i>	
Queen's delight	<i>Stillingia sylvatica</i>	
Pineland scaly-pink	<i>Stipulicida setacea</i>	
Coastal plain dawnflower	<i>Stylisma patens</i>	
Hairy dawnflower	<i>Stylisma villosa</i>	
American snowbell; Storax	<i>Styrax americanus</i>	
Climbing aster	<i>Symphyotrichum carolinianum</i>	
Rice-button aster; Bushy aster	<i>Symphyotrichum dumosum</i>	
Annual saltmarsh aster; Slim aster	<i>Symphyotrichum subulatum</i>	
Scurf hoary pea	<i>Tephrosia chrysophylla</i>	
Wood sage; American germander	<i>Teucrium canadense</i>	
Eastern poison ivy	<i>Toxicodendron radicans</i>	
Noseburn	<i>Tragia smallii</i>	
Forked blue-curls; Bastard pennyroyal	<i>Trichostema dichotomum</i>	
Venus' looking-glass	<i>Triodanis perfoliata</i>	
American elm; Florida elm	<i>Ulmus americana</i>	
Caesarweed *	<i>Urena lobata</i>	
Horned bladderwort	<i>Utricularia cornuta</i>	
Zigzag bladderwort; Tiny bladderwort	<i>Utricularia subulata</i>	
Tree sparkleberry	<i>Vaccinium arboreum</i>	
Highbush blueberry	<i>Vaccinium corymbosum</i>	
Darrow's blueberry	<i>Vaccinium darrowii</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Deerberry; Gooseberry;	<i>Vaccinium stamineum</i>	

* Non-native Species

Paynes Creek Historic State Park

Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
White crownbeard; Frostweed	<i>Verbesina virginica</i>	
Giant ironweed	<i>Vernonia gigantea</i>	
Walter's viburnum	<i>Viburnum obovatum</i>	
Four-leaf vetch; Water vetch	<i>Vicia acutifolia</i>	
Florida vetch	<i>Vicia floridana</i>	
Long-leaf violet; Bog white violet	<i>Viola lanceolata</i>	
Swamp white violet	<i>Viola primulifolia</i>	
Thicket blue violet; Florida violet	<i>Viola sororia</i>	
Summer grape	<i>Vitis aestivalis</i>	
Southern fox grape	<i>Vitis rotundifolia</i>	
Calusa grape	<i>Vitis shuttleworthii</i>	
Tallowwood; Hog-plum	<i>Ximenia americana</i>	
Oriental hawk's-beard *	<i>Youngia japonica</i>	

Paynes Creek Historic State Park

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
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AMPHIBIANS

Oak toad	<i>Bufo quercicus</i>	13,14,15,23
Southern toad	<i>Bufo terrestris</i>	MTC
Pinewoods treefrog	<i>Hyla femoralis</i>	8,13,26
Barking treefrog	<i>Hyla gratiosa</i>	8,26,33
Squirrel treefrog	<i>Hyla squirella</i>	8,26,28
Florida chorus frog	<i>Pseudacris nigrita verrucosa</i>	28
Greenhouse frog*	<i>Eleutherodactylus planirostris</i>	8,26,28
Eastern narrowmouth toad	<i>Gastrophryne carolinensis</i>	8,13,26
Eastern spadefoot	<i>Scaphiopus holbrooki holbrooki</i>	8,26,28
Florida gopher frog	<i>Rana capito aesopus</i>	14,15
Pig frog	<i>Rana grylio</i>	53
Southern leopard frog	<i>Rana utricularia</i>	28,53

REPTILES

American alligator	<i>Alligator mississippiensis</i>	33,53
Common snapping turtle	<i>Chelydra serpentina</i>	33,53
Florida box turtle	<i>Terrapene carolina bauri</i>	8,26,28
Peninsula cooter	<i>Pseudemys floridana peninsularis</i>	53
Florida chicken turtle	<i>Deirochelys reticularia chrysea</i>	28,33,35
Striped mud turtle	<i>Kinosternon bauri</i>	33,53
Florida mud turtle	<i>Kinosternon subrubrum steindachneri</i>	33,53
Gopher tortoise	<i>Gopherus polyphemus</i>	13,14,15
Florida worm lizard	<i>Rhineura floridana</i>	8,23
Mediterranean gecko*	<i>Hemidactylus turcicus</i>	82
Green anole	<i>Anoles carolinensis</i>	8,15,26,28
Southern fence lizard	<i>Sceloporus undulatus undulatus</i>	8,13
Florida scrub lizard	<i>Sceloporus woodi</i>	14,15
Southeastern five-lined skink	<i>Eumeces inexpectatus</i>	8,13,26,28
Ground skink	<i>Scincella lateralis</i>	8,13,26
Brown water snake	<i>Nerodia taxispilota</i>	53
Banded water snake	<i>Nerodia fasciata fasciata</i>	53
Florida water snake	<i>Nerodia fasciata pictiventris</i>	33,53,54
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	8,26,28
Southern ringneck snake	<i>Diadophis punctatus punctatus</i>	8,28
Southern black racer	<i>Coluber constrictor priapus</i>	MTC
Eastern coachwhip	<i>Masticophis flagellum flagellum</i>	13,14,15,23
Rough green snake	<i>Ophedrys aestivus</i>	26,28,35
Eastern indigo snake	<i>Drymarchon corais couperi</i>	13,14,15,23
Corn snake	<i>Elaphe guttata guttata</i>	8,28,81,82
Yellow rat snake	<i>Elaphe obsoleta quadrivittata</i>	8,35,81
Eastern coral snake	<i>Micrurus fulvius fulvius</i>	8,23,28
Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>	33,35

BIRDS

* Non-native Species

Paynes Creek Historic State Park

Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Wood stork	<i>Mycteria americana</i>	33
Wood duck	<i>Aix sponsa</i>	28,OF
Black vulture	<i>Coragyps atratus</i>	OF
Turkey vulture	<i>Cathartes aura</i>	OF
Swallow-tailed kite	<i>Elanoides forficatus</i>	OF
Red-shouldered hawk	<i>Buteo lineatus</i>	8,14,26
Red-tailed hawk	<i>Buteo jamaicensis</i>	8,14,81
Southern bald eagle	<i>Haliaeetus leucocephalus</i>	OF
Osprey	<i>Pandion haliaetus</i>	OF
American kestrel	<i>Falco sparverius</i>	OF
Northern bobwhite	<i>Colinus virginianus</i>	8,14
Wild turkey	<i>Meleagris gallopavo</i>	8,23,81
Sandhill crane	<i>Grus canadensis</i>	OF
Mourning dove	<i>Zenaida macroura</i>	8,14,23
Common ground-dove	<i>Columbina passerina</i>	8
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	26,28
Eastern screech-owl	<i>Otus asio</i>	81
Great horned owl	<i>Bubo virginianus</i>	8,26,28
Barred owl	<i>Strix varia</i>	8,28
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	8,14,23
Whip-poor-will	<i>Caprimulgus vociferus</i>	8,14,23
Chimney swift	<i>Chaetura pelagica</i>	OF
Ruby-throated hummingbird	<i>Archilochus colubris</i>	OF
Downy woodpecker	<i>Picoides pubescens</i>	8,14,23,28
Pileated woodpecker	<i>Dryocopus pileatus</i>	8,26,35
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	8,15,23
Great crested flycatcher	<i>Myiarchus crinitus</i>	8,15,23
Eastern phoebe	<i>Sayornis phoebe</i>	8,14,15
Blue jay	<i>Cyanocitta cristata</i>	8,23,81
Tufted titmouse	<i>Parus bicolor</i>	OF
Brown creeper	<i>Certhia americana</i>	81
Carolina wren	<i>Thryothorus ludovicianus</i>	8,28
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	8,14,23
Gray catbird	<i>Dumetella carolinensis</i>	8,26
Northern mockingbird	<i>Mimus polyglottos</i>	8,15,81
Brown thrasher	<i>Toxostoma rufum</i>	8,14,15
Loggerhead shrike	<i>Lanius ludovicianus</i>	8,23
White-eyed vireo	<i>Vireo griseus</i>	8,26
Black and white warbler	<i>Mniotilta varia</i>	26,28
Northern parula	<i>Parula americana</i>	8,26,28
Yellow-throated warbler	<i>Dendroica dominica</i>	26,28
Pine warbler	<i>Dendroica pinus</i>	8,26
Palm warbler	<i>Dendroica palmarum</i>	8,26
Common yellowthroat	<i>Geothlypis trichas</i>	8,26,81
Northern cardinal	<i>Cardinalis cardinalis</i>	8,14,26,81
Eastern towhee	<i>Pipilo erythrophthalmus</i>	8,14,15

* Non-native Species

Paynes Creek Historic State Park

Animals

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for all species)
Red-winged blackbird	<i>Agelaius phoeniceus</i>	81
Common grackle	<i>Quiscalus quiscula</i>	81
Summer tanager	<i>Piranga rubra</i>	8,23
Painted bunting	<i>Passerina ciris</i>	8
MAMMALS		
Virginia opossum	<i>Didelphis virginiana</i>	8,14,23,28
Nine-banded armadillo *	<i>Dasyus novemcinctus</i>	8,14,26,28
Marsh rabbit	<i>Sylvilagus palustris</i>	26
Gray squirrel	<i>Sciurus carolinensis</i>	8, 26
Sherman's fox squirrel	<i>Sciurus niger</i>	8,28
Cotton mouse	<i>Peromyscus gossypinus gossypinus</i>	8,15,26,28
Florida black bear	<i>Ursus americanus floridanus</i>	MTC
Raccoon	<i>Procyon lotor</i>	MTC
River otter	<i>Lutra canadensis</i>	26,53
Red fox *	<i>Vulpes vulpes</i>	8,14,15,23,81
Gray fox	<i>Urocyon cinereoargenteus</i>	8,14,15,23
Bobcat	<i>Felis rufus</i>	8,14,15
Wild pig *	<i>Sus scrofa</i>	MTC
White-tailed deer	<i>Odocoileus virginianus</i>	MTC

* Non-native 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. Coastal Grasslands
10. Pine Rockland
11. Prairie Hammock
12. Rockland Hammock
13. Sandhill
14. Scrub
15. Scrubby Flatwoods
16. Shell Mound
17. Sinkhole
18. Slope Forest
19. Upland Glade
20. Upland Hardwood Forest
21. Upland Mixed Forest
22. Upland Pine Forest
23. Xeric Hammock

PALUSTRINE

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

LACUSTRINE

43. Clastic Upland Lake
44. Coastal Dune Lake
45. Coastal Rockland Lake
46. Flatwood/Prairie Lake
47. Marsh Lake

LACUSTRINE—Continued

48. River Floodplain Lake
49. Sandhill Upland Lake
50. Sinkhole Lake
51. Swamp Lake

RIVERINE

52. Alluvial Stream
53. Blackwater Stream
54. Seepage Stream
55. Spring-Run Stream

ESTUARINE

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

MARINE

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

SUBTERRANEAN

79. Aquatic Cave
80. Terrestrial Cave

MISCELLANEOUS

81. Ruderal
82. Developed

MTC Many Types Of Communities

OF Overflying

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.

Paynes Creek Historic State Park

Designated Species

Plants

Common Name/ <i>Scientific Name</i>	<u>Designated Species Status</u>		
	FDA	USFWS	FNAI
Butterfly orchid <i>Encyclia tampensis</i>	CE		
Garberia <i>Garberia heterophylla</i>	LT		
Cinnamon fern <i>Osmunda cinnamomea</i>	CE		
Royal fern <i>Osmunda regalis</i>	CE		
Wild coco; Giant orchid <i>Pteroglossaspis ecristata</i>	LT	MC	G2/S2
Medusahead air plant <i>Tillandsia balbisiana</i>	LT		
Wild pine; Air plant <i>Tillandsia fasciculata</i>	LE		

Paynes Creek Historic State Park

Designated Species

Animals

Common Name/ Scientific Name	Designated Species Status		
	FFWCC	USFWS	FNAI
AMPHIBIANS			
Florida gopher frog <i>Rana capito aesopus</i>	LS		G3/S3
REPTILES			
American alligator <i>Alligator mississippiensis</i>	LS	T(S/A)	G5/S4
Gopher tortoise <i>Gopherus polyphemus</i>	LS		G3/S3
Florida scrub lizard <i>Sceloporus woodi</i>			G3/S3
Eastern indigo snake <i>Drymarchon corais couperi</i>	LT	LT	G4T3/S3
BIRDS			
Wood stork <i>Mycteria americana</i>	LE	LE	G4/S2
Southern bald eagle <i>Haliaeetus leucocephalus</i>	LT	LT	G4/S3
Osprey <i>Pandion haliaetus</i>			G5/S3S4
MAMMALS			
Sherman's fox squirrel <i>Sciurus niger shermani</i>	LS		
Florida black bear <i>Ursus americanus</i>	LT		G5T2/S2

Addendum 6—Priority Schedule And Cost Estimates

Paynes Creek Historic 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.

Resource Management

- | | | |
|----|--|-----------|
| 1. | Phase I Museum Assessment. 0-2 years. | \$2,000. |
| 2. | Archeological Research Project: 0-3 years. | \$75,000. |

Visitor Services

- | | | |
|----|--|------------|
| 1. | Phase II Exhibit plan 0-2 years | \$6,000. |
| 2. | New exhibits for visitor center (following exhibit plan). 0-5 years. | \$111,000. |

TOTAL		\$194,000.
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* Categories of the uniform cost accounting system not reflected in this addendum, have no schedule or cost associated with them.

Paynes Creek Historic State Park
New Facility Construction/Facilities Maintenance

Item	Quantity	Unit	Unit Price	Multiplier	Amount
Recreation Facilities					
Bridge Replacement					
Bridge	1.000	LS	\$100,000.00	1.25	\$125,000.00
Camping					
New Standardized Campsite	30.000	ea.	\$4,500.00	1.25	\$168,750.00
Paved Road & Clearing	0.700	mile	\$320,000.00	1.25	\$280,000.00
Primitive Group Camp	1.000	ea.	\$150,000.00	1.25	\$187,500.00
Stabilized Tent Sites	1.000	ea.	\$500.00	1.25	\$625.00
Canoe Use Improvements					
Canoe Launch	1.000	ea.	\$20,000.00	1.25	\$25,000.00
Interpretive Improvements					
Interpretive Displays	3.000	ea.	\$1,000.00	1.25	\$3,750.00
Interpretive Master Plan	1.000	ea.	\$6,000.00	1.25	\$7,500.00
Oxbow Enhancement					
Boardwalk Platforms	50.000	SF	\$75.00	1.25	\$4,687.50
Repairs to ADA Trail					
6 Ft. Asphalt Path	3000.000	LF	\$10.00	1.25	\$37,500.00
Sub-Total					<u>\$840,312.50</u>
20 Percent Contingency Fee					<u>\$168,062.50</u>
Total					\$1,008,375.00

NOTE: These preliminary cost estimates, based on Divisions standards, do not include costs for site-specific elements not evident at the conceptual level of planning. Additional costs should be investigated before finalizing budget estimates. All items fall in the new facility construction category © of the uniform cost accounting system required by ch. 259.037 F.S.

Addendum 7—Additional Information
FNAI 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

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pine and/or longleaf pine with saw palmetto, gallberry and/or wiregrass or cutthroat grass understory.

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.

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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.

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

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high mineral content (sodium, chloride).

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

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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., coralgal, 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.

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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.

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

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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 thyoides* 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*
maiden cane - *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 thyoides*
white oak - *Quercus alba*
willow - *Salix caroliniana*
yucca - *Yucca aloifolia*

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

A. GENERAL DISCUSSION

Archaeological and historic sites are defined collectively in 267.021(3), F.S., as "historic properties" or "historic resources." They have several essential characteristics that must be recognized in a management program.

First of all, they are a finite and non-renewable resource. Once destroyed, presently existing resources, including buildings, other structures, shipwreck remains, archaeological sites and other objects of antiquity, cannot be renewed or revived. Today, sites in the State of Florida are being destroyed by all kinds of land development, inappropriate land management practices, erosion, looting, and to a minor extent even by well-intentioned professional scientific research (e.g., archaeological excavation). Measures must be taken to ensure that some of these resources will be preserved for future study and appreciation.

Secondly, sites are unique because individually they represent the tangible remains of events that occurred at a specific time and place.

Thirdly, while sites uniquely reflect localized events, these events and the origin of particular sites are related to conditions and events in other times and places. Sites can be understood properly only in relation to their natural surroundings and the activities of inhabitants of other sites. Managers must be aware of this "systemic" character of historic and archaeological sites. Also, it should be recognized that archaeological sites are time capsules for more than cultural history; they preserve traces of past biotic communities, climate, and other elements of the environment that may be of interest to other scientific disciplines.

Finally, the significance of sites, particularly archaeological ones, derives not only from the individual artifacts within them, but equally from the spatial arrangement of those artifacts in both horizontal and vertical planes. When archaeologists excavate, they recover, not merely objects, but also a record of the positions of these objects in relation to one another and their containing matrix (e.g., soil strata). Much information is sacrificed if the so-called "context" of archaeological objects is destroyed or not recovered, and this is what archaeologists are most concerned about when a site is threatened with destruction or damage. The artifacts themselves can be recovered even after a site is heavily disturbed, but the context -- the vertical and horizontal relationships -- cannot. Historic structures also contain a wealth of cultural (socio-economic) data that can be lost if historically sensitive maintenance, restoration or rehabilitation procedures are not implemented, or if they are demolished or extensively altered without appropriate documentation. Lastly, it should not be forgotten that historic structures often have associated potentially significant historic archaeological features that must be considered in land management decisions.

B. STATUTORY AUTHORITY

Chapter 253, Florida Statutes ("State Lands") directs the preparation of "single-use" or "multiple-use" land management plans for all state-owned lands and state-owned sovereignty submerged lands. In this document, 253.034(4), F.S., specifically requires that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites, as well as other fragile resources..."

Chapter 267, Florida Statutes is the primary historic preservation authority of the state. The importance of protecting and interpreting archaeological and historic sites is recognized in 267.061(1)(a), F.S.:The rich and unique heritage of historic properties in this state, representing more than 10,000 years of human presence, is an important legacy to be valued and conserved for present and future generations. The destruction of these nonrenewable historic resources will engender a significant loss to the state's quality of life, economy, and cultural environment. It is therefore declared to be state policy to:

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1. Provide leadership in the preservation of the state's historic resources; [and]
2. Administer state-owned or state-controlled historic resources in a spirit of stewardship and trusteeship;...

Responsibilities of the Division of Historical Resources in the Department of State pursuant to 267.061(3), F.S., include the following:

1. Cooperate with federal and state agencies, local Governments, and private organizations and individuals to direct and conduct a comprehensive statewide survey of historic resources and to maintain an inventory of such responses.
2. Develop a comprehensive statewide historic preservation plan.
3. Identify and nominate eligible properties to the National Register of Historic Places and otherwise administer applications for listing properties in the National Register of Historic Places.
4. Cooperate with federal and state agencies, local governments, and organizations and individuals to ensure that historic resources are taken into consideration at all levels of planning and development.
5. Advise and assist, as appropriate, federal and state agencies and local governments in carrying out their historic preservation responsibilities and programs.
6. Carry out on behalf of the state the programs of the National Historic Preservation Act of 1966, as amended, and to establish, maintain, and administer a state historic preservation program meeting the requirements of an approved program and fulfilling the responsibilities of state historic preservation programs as provided in subsection 101(b) of that act.
7. Take such other actions necessary or appropriate to locate, acquire, protect, preserve, operate, interpret, and promote the location, acquisition, protection, preservation, operation, and interpretation of historic resources to foster an appreciation of Florida history and culture. Prior to the acquisition, preservation, interpretation, or operation of a historic property by a state agency, the Division shall be provided a reasonable opportunity to review and comment on the proposed undertaking and shall determine that there exists historic authenticity and a feasible means of providing for the preservation, interpretation and operation of such property.
8. Establish professional standards for the preservation, exclusive of acquisition, of historic resources in state ownership or control.
9. Establish guidelines for state agency responsibilities under subsection (2).

Responsibilities of other state agencies of the executive branch, pursuant to 267.061(2), F.S., include:

1. Each state agency of the executive branch having direct or indirect jurisdiction over a proposed state or state-assisted undertaking shall, in accordance with state policy and prior to the approval of expenditure of any state funds on the undertaking, consider the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places. Each such agency shall afford the division a reasonable opportunity to comment with regard to such an undertaking.
2. Each state agency of the executive branch shall initiate measures in consultation with the division to assure that where, as a result of state action or assistance carried out by such agency, a historic property is to be demolished or substantially altered in a way that adversely affects the character, form, integrity, or other qualities that contribute to [the] historical, architectural, or archaeological value of the property, timely steps are taken to determine that no feasible and prudent alternative to the proposed demolition or alteration exists, and, where no such alternative is determined to exist, to assure that timely steps are taken either to avoid or mitigate the adverse effects, or to undertake an appropriate archaeological salvage excavation or other recovery action to document the property as it existed prior to demolition or alteration.
3. In consultation with the division [of Historical Resources], each state agency of the executive branch shall establish a program to locate, inventory, and evaluate all historic properties under the agency's ownership or control that appear to qualify for the National Register. Each such agency shall exercise caution to assure that any such historic property is not inadvertently

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- transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.
4. Each state agency of the executive branch shall assume responsibility for the preservation of historic resources that are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for the purpose of carrying out agency responsibilities, the agency shall use, to the maximum extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with preservation of such properties, the mission of the agency, and the professional standards established pursuant to paragraph (3)(k), any preservation actions necessary to carry out the intent of this paragraph.
 5. Each state agency of the executive branch, in seeking to acquire additional space through new construction or lease, shall give preference to the acquisition or use of historic properties when such acquisition or use is determined to be feasible and prudent compared with available alternatives. The acquisition or use of historic properties is considered feasible and prudent if the cost of purchase or lease, the cost of rehabilitation, remodeling, or altering the building to meet compliance standards and the agency's needs, and the projected costs of maintaining the building and providing utilities and other services is less than or equal to the same costs for available alternatives. The agency shall request the division to assist in determining if the acquisition or use of a historic property is feasible and prudent. Within 60 days after making a determination that additional space is needed, the agency shall request the division to assist in identifying buildings within the appropriate geographic area that are historic properties suitable for acquisition or lease by the agency, whether or not such properties are in need of repair, alteration, or addition.
 6. Consistent with the agency's mission and authority, all state agencies of the executive branch shall carry out agency programs and projects, including those under which any state assistance is provided, in a manner which is generally sensitive to the preservation of historic properties and shall give consideration to programs and projects which will further the purposes of this section.

Section 267.12 authorizes the Division to establish procedures for the granting of research permits for archaeological and historic site survey or excavation on state-owned or controlled lands, while Section 267.13 establishes penalties for the conduct of such work without first obtaining written permission from the Division of Historical Resources. The Rules of the Department of State, Division of Historical Resources, for research permits for archaeological sites of significance are contained in Chapter 1A-32, F.A.C.

Another Florida Statute affecting land management decisions is Chapter 872, F.S. Section 872.02, F.S., pertains to marked grave sites, regardless of age. Many state-owned properties contain old family and other cemeteries with tombstones, crypts, etc. Section 872.05, F.S., pertains to unmarked human burial sites, including prehistoric and historic Indian burial sites. Unauthorized disturbance of both marked and unmarked human burial site is a felony.

C. MANAGEMENT POLICY

The choice of a management policy for archaeological and historic sites within state-owned or controlled land obviously depends upon a detailed evaluation of the characteristics and conditions of the individual sites and groups of sites within those tracts. This includes an interpretation of the significance (or potential significance) of these sites, in terms of social and political factors, as well as environmental factors. Furthermore, for historic structures architectural significance must be considered, as well as any associated historic landscapes.

Sites on privately owned lands are especially vulnerable to destruction, since often times the economic incentives for preservation are low compared to other uses of the land areas involved. Hence, sites in public ownership have a magnified importance, since they are the ones with the best chance of survival over the long run. This is particularly true of sites that are state-owned or controlled, where the basis of management is to provide for land uses that are minimally destructive of resource values.

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It should be noted that while many archaeological and historical sites are already recorded within state--owned or controlled--lands, the majority of the uplands areas and nearly all of the inundated areas have not been surveyed to locate and assess the significance of such resources. The known sites are, thus, only an incomplete sample of the actual resources - i.e., the number, density, distribution, age, character and condition of archaeological and historic sites - on these tracts. Unfortunately, the lack of specific knowledge of the actual resources prevents formulation of any sort of detailed management or use plan involving decisions about the relative historic value of individual sites. For this reason, a generalized policy of conservation is recommended until the resources have been better addressed.

The generalized management policy recommended by the Division of Historical Resources includes the following:

- 1.** State land managers shall coordinate all planned activities involving known archaeological or historic sites or potential site areas closely with the Division of Historical Resources in order to prevent any kind of disturbance to significant archaeological or historic sites that may exist on the tract. Under 267.061(1)(b), F.S., the Division of Historical Resources is vested with title to archaeological and historic resources abandoned on state lands and is responsible for administration and protection of such resources. The Division will cooperate with the land manager in the management of these resources. Furthermore, provisions of 267.061(2) and 267.13, F.S., combined with those in 267.061(3) and 253.034(4), F.S., require that other managing (or permitting) agencies coordinate their plans with the Division of Historical Resources at a sufficiently early stage to preclude inadvertent damage or destruction to known or potentially occurring, presently unknown archaeological and historic sites. The provisions pertaining to human burial sites must also be followed by state land managers when such remains are known or suspected to be present (see 872.02 and 872.05, F.S., and 1A-44, F.A.C.)
- 2.** Since the actual resources are so poorly known, the potential impact of the managing agency's activities on historic archaeological sites may not be immediately apparent. Special field survey for such sites may be required to identify the potential endangerment as a result of particular management or permitting activities. The Division may perform surveys, as its resources permit, to aid the planning of other state agencies in their management activities, but outside archaeological consultants may have to be retained by the managing agency. This would be especially necessary in the cases of activities contemplating ground disturbance over large areas and unexpected occurrences. It should be noted, however, that in most instances Division staff's knowledge of known and expected site distribution is such that actual field surveys may not be necessary, and the project may be reviewed by submitting a project location map (preferably a 7.5 minute U.S.G.S. Quadrangle map or portion thereof) and project descriptive data, including detailed construction plans. To avoid delays, Division staff should be contacted to discuss specific project documentation review needs.
- 3.** In the case of known significant sites, which may be affected by proposed project activities, the managing agency will generally be expected to alter proposed management or development plans, as necessary, or else make special provisions to minimize or mitigate damage to such sites.
- 4.** If in the course of management activities, or as a result of development or the permitting of dredge activities (see 403.918(2)(6)a, F.S.), it is determined that valuable historic or archaeological sites will be damaged or destroyed, the Division reserves the right, pursuant to 267.061(1)(b), F.S., to require salvage measures to mitigate the destructive impact of such activities to such sites. Such salvage measures would be accomplished before the Division would grant permission for destruction of the affected site areas. The funding needed to implement salvage measures would be the responsibility of the managing agency planning the site destructive activity. Mitigation of historic structures at a minimum involves the preparation of measured drawings and documentary photographs. Mitigation of archaeological resources involves the excavation, analysis and reporting of the project findings and must be planned to

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occur sufficiently in advance to avoid project construction delays. If these services are to be contracted by the state agency, the selected consultant will need to obtain an Archaeological Research Permit from the Division of Historical Resources, Bureau of Archaeological Research (see 267.12, F.S. and Rules 1A-32 and 1A-46 F.A.C.).

5. For the near future, excavation of non-endangered (i.e., sites not being lost to erosion or development) archaeological site is discouraged. There are many endangered sites in Florida (on both private and public lands) in need of excavation because of the threat of development or other factors. Those within state-owned or controlled lands should be left undisturbed for the present - with particular attention devoted to preventing site looting by "treasure hunters". On the other hand, the archaeological and historic survey of these tracts is encouraged in order to build an inventory of the resources present, and to assess their scientific research potential and historic or architectural significance.
6. The cooperation of land managers in reporting sites to the Division that their field personnel may discover is encouraged. The Division will help inform field personnel from other resource managing agencies about the characteristics and appearance of sites. The Division has initiated a cultural resource management training program to help accomplish this. Upon request the Division will also provide to other agencies archaeological and historical summaries of the known and potentially occurring resources so that information may be incorporated into management plans and public awareness programs (See Management Implementation).
7. Any discovery of instances of looting or unauthorized destruction of sites must be reported to the agent for the Board of Trustees of the Internal Improvement Trust Fund and the Division so that appropriate action may be initiated. When human burial sites are involved, the provisions of 872.02 and 872.05, F. S. and Rule 1A-44, F.A.C., as applicable, must also be followed. Any state agent with law enforcement authority observing individuals or groups clearly and incontrovertibly vandalizing, looting or destroying archaeological or historic sites within state-owned or controlled lands without demonstrable permission from the Division will make arrests and detain those individuals or groups under the provisions of 267.13, 901.15, and 901.21, F.S., and related statutory authority pertaining to such illegal activities on state-owned or controlled lands. County Sheriffs' officers are urged to assist in efforts to stop and/or prevent site looting and destruction.

In addition to the above management policy for archaeological and historic sites on state-owned land, special attention shall be given to those properties listed in the National Register of Historic Places and other significant buildings. The Division recommends that the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Revised 1990) be followed for such sites.

The following general standards apply to all treatments undertaken on historically significant properties.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of

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- missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
 8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
 9. New additions, exterior alterations, or related new construction shall not destroy materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
 10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (see Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings [Revised 1990]).

Divisions of Historical Resources staff are available for technical assistance for any of the above listed topics. It is encouraged that such assistance be sought as early as possible in the project planning.

D. MANAGEMENT IMPLEMENTATION

As noted earlier, 253.034(4), F.S., states that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites..." The following guidelines should help to fulfill that requirement.

1. All land managing agencies should contact the Division and send U.S.G.S. 7.5 minute quadrangle maps outlining the boundaries of their various properties.
2. The Division will in turn identify site locations on those maps and provide descriptions for known archaeological and historical sites to the managing agency.
3. Further, the Division may also identify on the maps areas of high archaeological and historic site location probability within the subject tract. These are only probability zones, and sites may be found outside of these areas. Therefore, actual ground inspections of project areas may still be necessary.
4. The Division will send archaeological field recording forms and historic structure field recording forms to representatives of the agency to facilitate the recording of information on such resources.
5. Land managers will update information on recorded sites and properties.
6. Land managers will supply the Division with new information as it becomes available on previously unrecorded sites that their staff locate. The following details the kind of information the Division wishes to obtain for any new sites or structures that the land managers may report:

A. Historic Sites

- (1) Type of structure (dwelling, church, factory, etc.).
- (2) Known or estimated age or construction date for each structure and addition.
- (3) Location of building (identify location on a map of the property, and building placement, i.e., detached, row, etc.).
- (4) General Characteristics: (include photographs if possible) overall shape of plan (rectangle, "L" "T" "H" "U", etc.); number of stories; number of vertical divisions of bays; construction materials (brick, frame, stone, etc.); wall finish (kind of bond, coursing, shingle, etc.); roof shape.
- (5) Specific features including location, number and appearance of:
 - (a) Important decorative elements;
 - (b) Interior features contributing to the character of the building;

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- (c) Number, type, and location of outbuildings, as well as date(s) of construction;
- (d) Notation if property has been moved;
- (e) Notation of known alterations to building.

B. Archaeological Sites

- (1) Site location (written narrative and mapped location).
 - (2) Cultural affiliation and period.
 - (3) Site type (midden, burial mound, artifact scatter, building rubble, etc.).
 - (4) Threats to site (deterioration, vandalism, etc.).
 - (5) Site size (acreage, square meters, etc.).
 - (6) Artifacts observed on ground surface (pottery, bone, glass, etc.).
 - (7) Description of surrounding environment.
7. No land disturbing activities should be undertaken in areas of known archaeological or historic sites or areas of high site probability without prior review by the Division early in the project planning.
 8. Ground disturbing activities may proceed elsewhere but land managers should stop disturbance in the immediate vicinity of artifact finds and notifies the Division if previously unknown archaeological or historic remains are uncovered. The provisions of Chapter 872, F.S., must be followed when human remains are encountered.
 9. Excavation and collection of archaeological and historic sites on state lands without a permit from the Division are a violation of state law and shall be reported to a law enforcement officer. The use of metal detectors to search for historic artifacts shall be prohibited on state lands except when authorized in a 1A-32, F.A.C., research permit from the Division.
 10. Interpretation and visitation which will increase public understanding and enjoyment of archaeological and historic sites without site destruction or vandalism is strongly encouraged.
 11. Development of interpretive programs including trails, signage, kiosks, and exhibits is encouraged and should be coordinated with the Division.
 12. Artifacts found or collected on state lands are by law the property of the Division. Land managers shall contact the Division whenever such material is found so that arrangements may be made for recording and conservation. This material, if taken to Tallahassee, can be returned for public display on a long term loan.

E. ADMINISTERING AGENCY

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

Compliance Review Section
Bureau of Historic Preservation
Division of Historical Resources
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Contact Person:

Susan M. Harp
Historic Preservation Planner
Telephone (850) 245-6333
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