YULEE SUGAR MILL RUINS HISTORIC STATE PARK UNIT MANAGEMENT PLAN

APPROVED

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

OCTOBER 27, 2008

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INTRODUCTION

Yulee Sugar Mill Ruins Historic State Park is located in Citrus County in the town of Homosassa (see Vicinity Map). In addition, other significant land and water resources existing near the park are reflected on the Vicinity Map. Access to the park is from County Road 490 (West Yulee Road), which transects the site (see Reference Map).

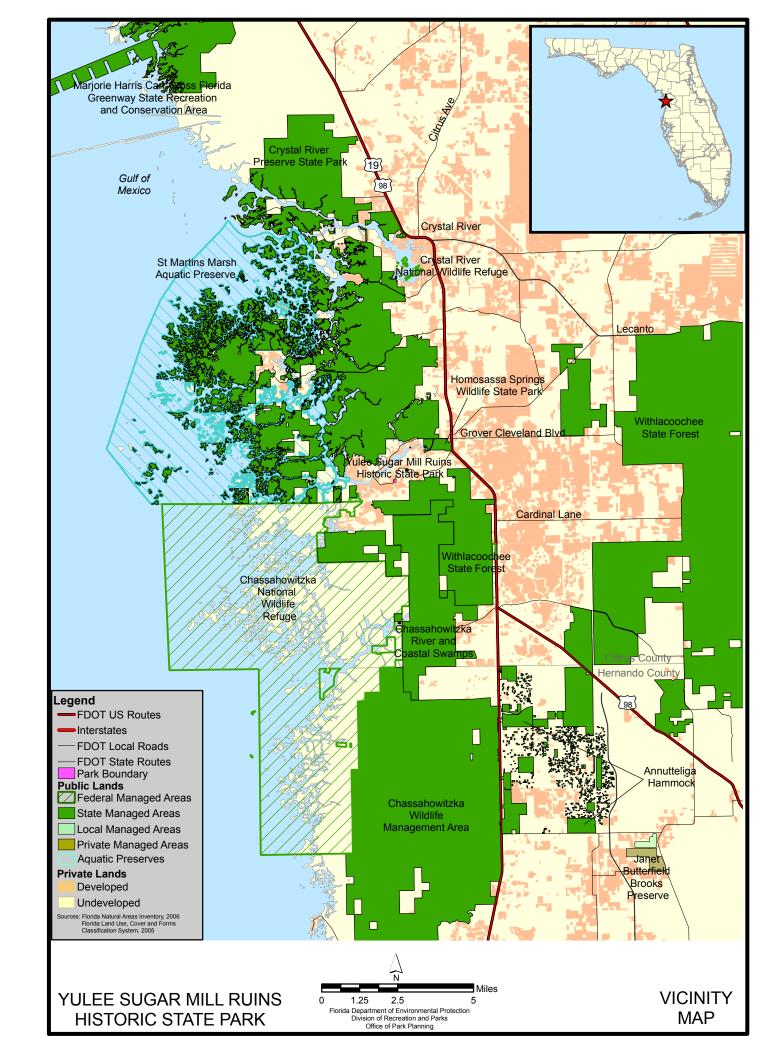
At Yulee Sugar Mill Ruins Historic State Park, public outdoor recreation and conservation is the designated single use of the property. There are no legislative or executive directives that constrain the use of this property. The park was acquired on June 24, 1953 using a donation from the Citrus County Federation of Women's Clubs through the Board of County Commissioners of Citrus County (see Addendum 1). The park is currently comprised of 4.6 acres and is jointly administered with Crystal River Preserve State Park and Crystal River Archaeological State Park.

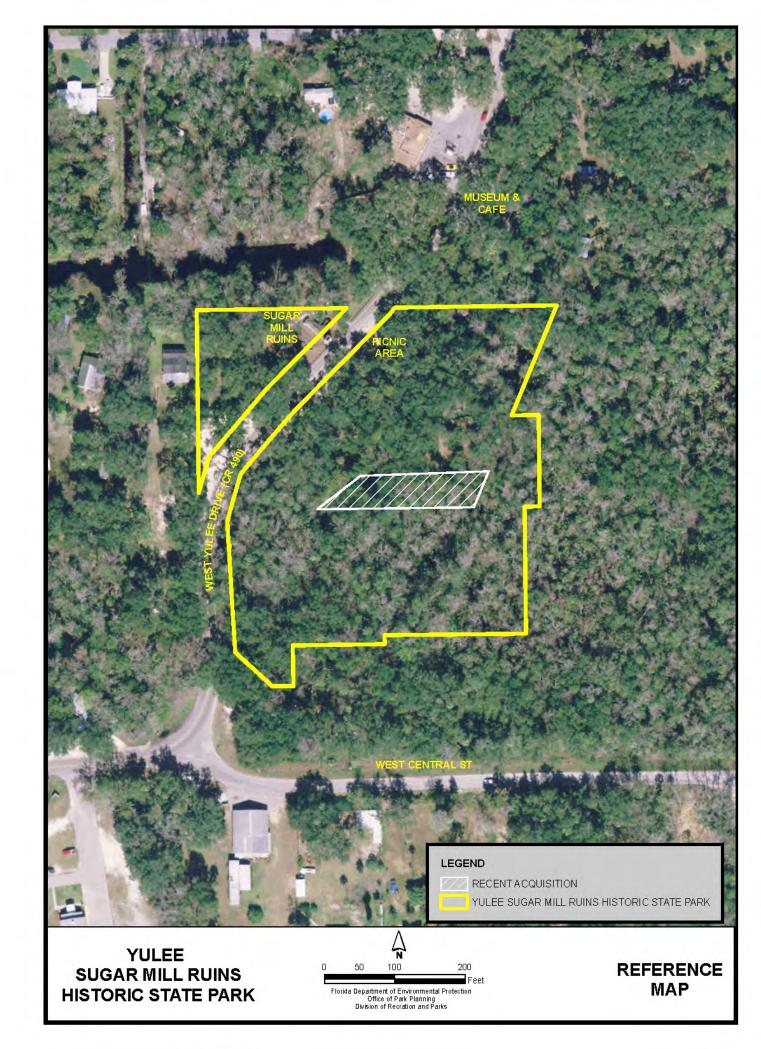
The park is significant for its historic connection to David Levy Yulee, citrus industry pioneer, railroad magnate, sugar plantation owner and early Florida politician. Mr. Yulee represented Florida as a member of the Territorial Legislative Council, the U.S. House of Representatives and U.S. Senate. The park contains sugar mill ruins from the 5,100-acre Yulee plantation, Margarita that operated from 1851 to 1864 and served as a supplier of sugar products for southern troops during the Civil War

PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of Yulee Sugar Mill Ruins 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 12, 2000 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 and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

The plan consists of two interrelated components. Each component corresponds to a particular aspect of the administration of the park. The resource management component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management problems and needs are identified, and specific management objectives are established for each resource type. This component





provides guidance on the application of such measures as prescribed burning, exotic species removal and restoration of natural conditions.

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's 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 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.

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

MANAGEMENT PROGRAM OVERVIEW

Management Authority and Responsibility

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

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state

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

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

Yulee Sugar Mill Ruins Historic State Park is classified as a special feature site in the Division's unit classification system. In the management of special feature sites, primary emphasis is on protection and maintenance of the special feature for long-term public enjoyment, and thus in the case of conflicts, resource considerations must prevail over user considerations. Suitable buffer areas are provided and areas with an appropriate outdoor setting maintained. Uses permitted are almost exclusively of a passive nature, with other uses provided if fully compatible. Development is geared toward protection and maintenance, access, safety and convenience of the user and interpretation. Program emphasis is directed toward the interpretation of the special feature for general public enjoyment.

Park Goals and Objectives

Since the 2001 approved plan, significant work has been accomplished and progress made towards meeting the Division's management objectives for the park. The following is a summary of activity since the last plan update related to resource management, protection, maintenance and visitor services.

- Completed masonry stabilization repair project with grant funds from the National Park Service.
- ➤ Initial meeting held with County engineers, essential adjacent parcels identified for acquisition and wetlands delineated to explore feasibility of relocating County Road 490 within park boundary.
- Exotic plant removal in maintenance phase with property nearly exotic free.
- ➤ Completed three-dimensional laser scan of mill ruins.
- ➤ Recommendations for improving site interpretation completed by students from University of South Florida.

- In partnership with Gulf Archaeology Research Institute, acquired DHR grant funding to create a Heritage Education Program, *Sugar Mills of Florida*, featuring Yulee Sugar Mill Ruins.
- Enhanced volunteer involvement with the park by including Yulee within the purview of the citizen support organization Crystal River State Parks, Inc.
- ➤ Platted right-of-ways within park boundary abandoned by Citrus County and .22 acre outparcel acquired.
- ➤ Worked with Citrus County to install cross walks and pedestrian crossing signs on County Road 490.

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. Preserve, protect and maintain cultural resources within the park.
 - **A.** Continue efforts to maintain or improve the condition of the cultural resources in the park, using data from the University of South Florida laser scanning study to improve results.
 - **B.** Finish the joint project with the National Park Service to stabilize and conserve the masonry features of the sugar mill ruins.
 - **C.** Continue to seek effective means of preserving ferrous metal components of the mill.
 - **D.** Develop a plan for stabilizing components of the mill ruins that have not yet received treatment.
 - **E.** Pursue ways of mitigating the harmful effects of County Road 490 on the mill ruins.
 - **F.** Improve and update the park's plan for managing its cultural resources in the context of their surroundings, and outline appropriate methodologies for

- accomplishing the plan.
- **2.** Continue to support the identification and additional documentation of cultural resources in the park.
 - **A.** Document the condition of resources that remain relatively unknown, especially the subsurface components such as foundations.
- **3.** Maintain the park's invasive exotic plant removal program.
 - **A.** Continue to increase exotic plant removal activities at the park.
 - **B.** Increase monitoring efforts at the site.

Recreational Goals

- 1. Continue to provide quality resource based outdoor recreational and interpretive programs and facilities at the state park.
 - **A.** Continue to provide opportunities to learn about the historic significance of the site through static interpretive displays and ranger-guided talks.
 - **B.** Continue to participate in the Florida Heritage Education Curriculum, "Sugar Mills in Florida."
 - **C.** Maintain picnic and support facilities for the convenience of visitors to the site.
- **2.** Seek funding to expand recreational and interpretive opportunities through the improvement of programs and the development of new use areas and facilities, as outlined in this management plan.
 - **A.** In coordination with Citrus County, relocate a portion of West Yulee Drive to improve visitor safety, park operations and facilities and protect the ruins.
 - **B.** Modernize interpretive displays to reflect current knowledge of the site and improve their appeal and access to a broader audience.
 - **C.** Upgrade the restroom and provide walkways connecting existing facilities consistent with requirements for universal accessibility.

Park Administration/Operations

- 1. Pursue funding, education, training and partnership opportunities to support the management needs of the park.
 - **A.** Provide staff and volunteers with ongoing training opportunities in visitor services, resource management, operations, general maintenance and interpretation.
 - **B.** Recruit and maintain a cadre of volunteers to assist with management and interpretation of the park.
 - C. Pursue funding alternatives to the legislative budget appropriation process.
 - **D.** Actively educate the public and local governments about the resources, management activities, needs, problems and recreational opportunities of the park.
- 2. Provide convenient, safe and well-maintained public facilities.
 - **A.** Conduct regular inspections of use areas and facilities and correct deficiencies when necessary.

- **B.** Work with Citrus County to improve the safety of pedestrians crossing from the picnic and parking areas to the sugar mill ruins.
- **C.** Discuss options with Citrus County for relocating West Yulee Drive away from the mill ruins.
- 3. Support land use planning policies, regulations and acquisition initiatives that serve to enhance management and protection of park resources.
 - **A.** Monitor proposed land use changes in the vicinity that may impact resource integrity or the visitor experience.
 - **B.** Pursue acquisition of areas deemed important to be managed as part of the park.

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 State, Division of Historical Resources (DHR), Gulf Archeology Research Institute, Florida Public Archeological Network, University of South Florida and University of West Florida assist staff to assure protection of archaeological and historical sites.

Public Participation

The Division provided an opportunity for public input by conducting a public meeting on September 4, 2008. The purpose of the meeting was to present the draft management plan to the public.

Other Designations

Yulee Sugar Mill Ruins Historic State Park is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes and it is not under study for such designation. It is a component of the Florida Greenways and Trails System. The park has been listed on the National Register of Historic Places since 1970.

No permanent water bodies or surface waters are located within the park boundaries. This unit is not adjacent to an aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (section 258.35, Florida Statutes).

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION

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

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

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

The remains of the historic Yulee Sugar Mill constitute the dominant feature of this small 4.6-acre park. The mill first went into production around 1851 and ceased operation in the mid-1860s during the Civil War. The original cane grinding equipment, boiler, chimney and three of five kettles remain. A picnic area is located on the opposite side of County Road 490 from the mill ruins. The non-developed part of the park consists of hydric hammock, a natural community that is widespread in coastal areas in this part of the state.

RESOURCE DESCRIPTION AND ASSESSMENT

Natural Resources

Topography

Yulee Sugar Mill Ruins Historic State Park is located in the Chassahowitzka Coastal Strip physiographic region, also known as the Gulf Coastal Lowlands (Brooks 1982). This region encompasses most of the area between the Brooksville Ridge and the Gulf of Mexico. The region is generally level, although relict dunes of higher elevation occasionally provide some topographic relief. Elevations at the Yulee Mill site are 5 feet or less above sea level. There are no abrupt changes in topography within the park.

<u>Geology</u>

Deposits underlying the park, from youngest to oldest, are as follows: Plio-Pleistocene Surficial (Hallandale soil), Ocala Limestone Group - Crystal River Formation, and Avon Park Limestone. The Ocala Limestone, deposited during the Eocene, consists of white to cream coquina in the upper part and gray, fossiliferous, fine crystalline-to-granular limestone below. Traces of brown dolomite and green clay are present. The Avon Park Limestone, also developed during the Eocene, is a fossiliferous deposit, tan to cream in color and crystalline to chalky in texture. It is interbedded with dark brown, coarse crystalline dolomite and contains some chert, gypsum and glauconite.

Soils

According to the Soil Survey of Citrus County (Pilny et al. 1988), Hallandale-Rock Outcrop complex and Citronelle fine sand are the only two soil types found in this small park (see Soils Map). The Hallandale complex consists of a nearly level, poorly drained mineral soil with rock outcrops. A high water table within 10 inches of the surface is characteristic in most years. Citronelle fine sand is a nearly level, somewhat poorly drained soil. It also has a high water table which remains within two to three feet of the surface for up to four months a year. A complete description of these soils is found in Addendum 3. Despite the land use history of the area, the soils appear little disturbed except where a county road passes through the park and where an elevated drainfield services the rest room facilities. No significant soil erosion currently occurs in the park. Management activities will follow generally accepted best management practices to prevent soil erosion and conserve soil and water resources on the site.

Minerals

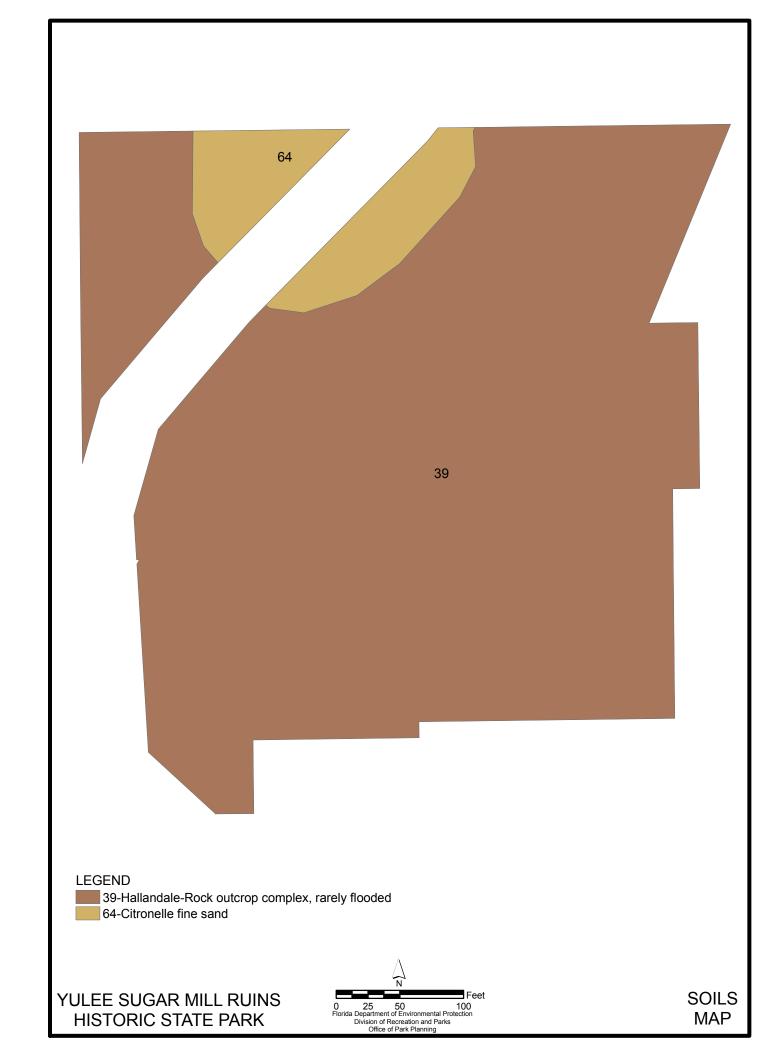
No commercially viable mineral deposits are known to occur at this park.

Hydrology

No permanent surface water features exist in the park, but during periods of frequent rainfall, water commonly pools at lower elevations in the hydric hammock. Rock outcrops in the park are associated with the Floridan aquifer, which at times may discharge water in the form of seepage. Water may also percolate into the aquifer at outcrop locations. A small canal borders the north edge of the park, but only along the small fragment of property that lies west of County Road 490. This canal has likely changed drainage patterns at the park. Surface drainage east of the county road is generally toward the hydric hammock that occupies much of the east portion of the park.

Natural Communities

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors, such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that area 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 one distinct natural community (see Natural Communities Map) in addition to ruderal and developed areas. The Natural Communities Map is a graphic representation of the existing vegetative conditions in the park at the time this management plan was developed. 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.

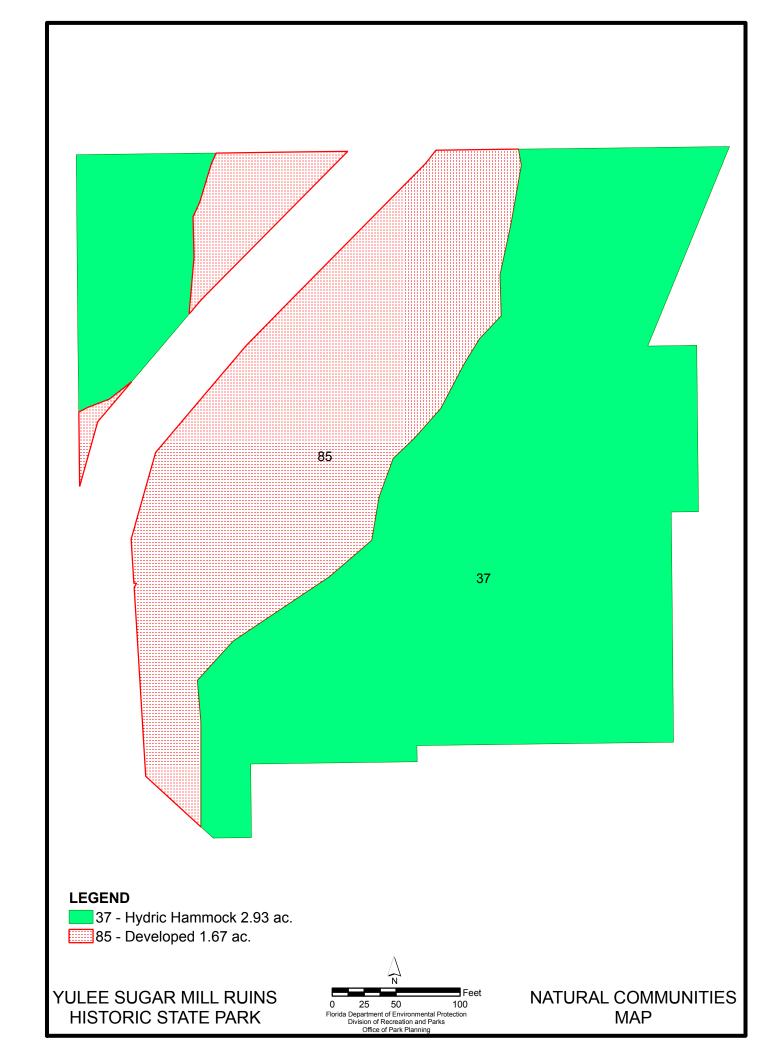
Hydric hammock. Hydric hammock covers almost two thirds of the park. Dominant vegetation in the hammock includes cabbage palm, southern red cedar and live oak, with numerous other hardwood species present as well. This community has both the aspect and the composition of relatively undisturbed hydric hammock, some of which still exists in the Homosassa area. The hammock at Yulee Sugar Mill, however, is not likely an example of a pristine forest, but rather a woodland that has substantially recovered from past disturbances, most of which probably occurred during the period of mill operation. Several wood burning furnaces were features of the mill operations in the mid-1800s, and some of the fuel for the furnaces undoubtedly came from the adjacent hammock.

Developed. The developed portion of the park contains the sugar mill ruins, which include the standing, limestone masonry remains of the sugar mill complex as well as a representative, yet incomplete, portion of the associated machinery and objects involved in the sugar making process. The remainder of the developed area consists of a parking lot, picnic area and restrooms.

Designated Species

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

Presently the park has records for only two designated species, coontie (*Zamia pumila*) and green-fly orchid (*Epidendrum conopseum*). Both of these species are listed as commercially exploited.



Special Natural Features

No special natural features occur at this park.

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 describe an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action to reestablish physical stability.

The Florida Master Site File (FMSF) lists one site for the park. This site, recorded as 8Ci124, is commonly referred to as the Yulee Sugar Mill Ruins, although it is also known as the Homosassa mill. It achieved listing on the National Register of Historic Places in August 1970. The Yulee Sugar Mill is the sole recorded remnant of David L. Yulee's Margarita plantation, which was active from approximately 1851 through 1864.

The ruins of the Yulee mill complex present an incomplete and somewhat confusing picture of the ante-bellum industrial process of making sugar from sugar cane. To date, what little is known about the mill's relationship to its surroundings or about the extent of its operations is the product of research by Gulf Archaeology Research Institute (GARI) in 1997. Due to project limitations, GARI did not conduct an in-depth study of the extent of the plantation or its related features (Denson et al. 1997). In comparison to mill ruins on the East Coast of Florida, such as those at Bulow Plantation Historic State Park, the Yulee mill remains are so limited geographically as to be obviously incomplete. Suffice to say, the existing mill ruins likely represent a minor portion of what was once a considerably larger industrial complex.

The sugar mill resource consists of the standing limestone masonry remains of the sugar mill complex and a representative, but incomplete, portion of the associated machinery and objects involved in the sugar making process. Masonry remains include the boiler housing, supports for the evaporating pan array of the mill, partially reconstructed walls of the water well structure, the below ground foundation of the kettle train (housing for multiple kettles), and a virtually complete limestone masonry chimney stack that served the boiler furnace and kettle train furnaces. Of the remnant mill machinery, the most visible elements are the rollers of a single path crusher, the

main and gear reduction flywheels, and the associated metal supporting frames. The boiler, enclosed within masonry, is only partly visible. Except for the boiler and evaporative pans, most of the metal elements depend in some way upon large (modern) timbers for support. Other remains at Yulee include two structures excavated into the native bedrock, the steam well and the cooling vat. In addition, a rubble pile extends generally westward from the kettle train. This may have been a simple drain field for syrup impurities (Denson et al. 1997).

All the visible remnants of the Yulee Sugar Mill are located only a few feet from County Road 490, which slices through the northwest quarter of the park. Some authorities believe that road traffic vibration is affecting all the masonry structures in the park (Griffin 1952; DRP 1980; Denson et al. 1997). The extent of the purported damage is currently unknown. Furthermore, since the road runs so close to the masonry structures, in fact less than six feet from the chimney stack, the likelihood of a vehicular accident eventually damaging some of the structures is considerable.

The Division of Recreation and Parks (Division) conducted a resource management audit of the Yulee Sugar Mill Ruins in 1997, at which time each cultural resource received a field assessment of condition based on the three-part evaluative scale described above (Warzeski 1998). An audit report followed in 1998. Many of the report's conclusions referenced a 1997 study by GARI designed to develop treatment recommendations for masonry elements of the Yulee site (Denson et al. 1997). Since that time, the Division has addressed many of the GARI concerns, and additional work is planned. As work progresses, the Division will adjust the condition assessments of the affected elements.

During its period of management prior to 2006, the Division undertook extensive reconstruction of several elements of the mill site (Division 1980; Denson et al. 1997). Among the elements reconstructed were the above grade portion of the wall enclosing the water well and the masonry wall surrounding the modern timbers that support the massive metal components of the mill. While the masonry surrounding and supporting the boiler appeared to be in good condition at the time of the 1997 audit, it was evident that previous attempts to reconstruct, reface and tuck-point portions of the boiler assembly had used unsuitable Portland-type cement. This type of cement tended to weather out in large chunks, thereby accelerating deterioration of the limestone blocks (Denson et al. 1997). For that reason, the audit team considered the condition of the masonry elements to be only fair.

In January 2006, the Historic Preservation Training Center of the National Park Service (NPS) and the Division signed a Cooperative Agreement assigning each agency tasks for the stabilization and conservation of the masonry features of the Yulee Sugar Mill Ruins. Actual reconstruction work, designed to remedy some of the problems associated with previous efforts, began that spring. All work complies with the

Secretary of Interior's Standards for the Treatment of Historic Properties. While the project is not yet completed, the original cane grinding equipment is now set on rebuilt foundations. Division personnel, under the guidance of NPS staff, have selectively removed failed mortars and inappropriate Portland cement repairs throughout the mill ruins. Some of the original stonework has been rebuilt, and almost all of the mortar of the original stonework has been replaced with soft quicklime mortar as stipulated by NPS standards.

According to the 1997 Division audit, growing vegetation at the site threatened most of the masonry elements to varying degrees (Warzeski 1998). Where plant matter was easily removable from mortar joints, the degree of endangerment was slight. Endangerment from established trees was profound, however. Tree roots were undermining walls and foundations, and falling branches or toppled trees could easily have demolished portions of the National Register resource. To resolve these issues, staff in 2006 completed virtually all the tree trimming and tree removal tasks recommended in the audit and in the Cooperative Agreement between the Division and the NPS.

The array holding the evaporating kettles (kettle train) is in poor condition. The aboveground portion largely does not exist or has fallen into the flue and furnaces that were excavated from the limestone bedrock below the kettles. Tree roots have compromised the integrity of portions of the kettle train foundation in the past, but that situation should now be resolved due to efforts of the Division/NPS restoration team. Other below-grade portions of the kettle train are considered quite stable.

Most of the metal elements of the sugar mill resource, its gear wheels and crusher rollers, are in good condition, although parts are missing. These metal elements, as well as the reconstructed wall surrounding the supporting timbers, continue to be endangered, however, due to degradation of the timbers and the possibility of collapse. At least two major components of the steam engine powering the rollers are missing, the centrifugal governor and the drive shaft (Denson et al. 1997). The 10-ton boiler has shifted, causing slumping of the supporting structure. Furthermore, one portion of the boiler tube has corroded through and may be bending due to the lack of a supporting timber (Denson et al. 1997). Past assessments of the boiler have determined it to be in poor condition. However, the current Division/NPS restoration project is addressing the issue of the deteriorating boiler support pylons and yoke, so future condition assessments will likely range from fair to good. The evaporating pans are in poor condition.

The park's cultural resources survey, which included extensive, systematic subsurface sampling performed by Gulf Archaeology Research Institute, yielded no diagnostic aboriginal materials (Denson et al. 1997). University of South Florida graduate students are currently using laser scanning to obtain archival measurements for a stratigraphic

profile of the Yulee site.

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. Timber management will be reevaluated during the next revision of this management plan.

Additional Considerations

The actual boundaries of the park could be delineated more clearly. Once the boundaries are located in the field, they should be fenced or clearly marked to prevent encroachment of private structures onto state lands, or vice versa. The Division acquired the tiny out parcel located in the middle of the park in 2000.

Management Needs and Problems

- ➤ The cultural resources at this National Register site are subject to natural and human influences, some of which are beyond the influence of Division management. Consequently, despite recent restoration efforts that have led to an upgraded condition assessment of fair to good for the mill as a whole, some of the mill elements remain below that standard.
- Documentation of the condition of subsurface components of the mill resource is still incomplete.
- The park's detailed plan for managing cultural resources in the context of their surroundings may periodically need improving and updating. Staff and volunteers occasionally need additional training or refresher courses in the physical management of the site's cultural resources. Periodic reorganization of the park's cultural resource files in accordance with current BNCR standards is needed.
- ➤ County Road 490 cuts through the park, passing within a few feet of the mill ruins. Complicating any evaluation of the condition of site 8Ci124 is the close proximity of this road. The possibility of a vehicular accident damaging any of the structures, especially the chimney stack, is very real.

- ➤ The park's interpretive displays do not reflect current knowledge of the site.
- Exotic plants occur in the park.
- Skunk vine (*Paederia foetida*) occurs in several locations, typically along the borders of the hydric hammock. This invasive vine has already spread over several thousand square feet and is beginning to climb nearby trees. Another exotic, Mexican petunia (*Ruellia brittoniana*), has also invaded the edges of the hydric hammock.
- Several other, less invasive exotic plants should be incorporated into the park's exotic plant removal program. These plants exist as scattered individuals. One possible exception may be sour orange (*Citrus aurantium*), which occurs in the park only infrequently. The Division needs to establish the validity of citrus as a cultural feature at Yulee Sugar Mill and weigh allowing its continued presence against the potential for causing adverse impacts to the park's hydric hammock.
- Several private properties adjacent to the park may harbor invasive exotic plants capable of becoming established in the park over time.

Management Objectives

The resources administered by the Division are divided into two principal categories: natural resources and cultural resources. The Division 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.

- ➤ Preserve, protect and maintain cultural resources within the park.
- ➤ Continue efforts to maintain or improve the condition of the cultural resources in the park, using data from the University of South Florida laser scanning study to improve results.
- Finish the joint project with the National Park Service to stabilize and conserve the masonry features of the sugar mill ruins.
- Continue to seek effective means of preserving ferrous metal components of the mill.
- Develop a plan for stabilizing components of the mill ruins that have not yet received treatment.
- Pursue ways of mitigating the harmful effects of County Road 490 on the mill ruins.
- ➤ Improve and update the park's plan for managing its cultural resources in the context of their surroundings, and outline appropriate methodologies for accomplishing the plan.
- ➤ Continue to support the identification and additional documentation of cultural resources in the park.
- ➤ Document the condition of resources that remain relatively unknown, especially the subsurface components such as foundations.

- Improve the interpretation of cultural resources at the park, especially through the modernization of interpretive displays to reflect current knowledge of the site.
- ➤ Maintain the park's invasive exotic plant removal program.
- Continue to increase exotic plant removal activities at the park.
- Increase monitoring efforts at the site.
- ➤ Investigate whether sour orange is a valid cultural feature at Yulee Sugar Mill.

Management Measures for Cultural Resources

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

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

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should prepare for locating and evaluating historic resources, both archaeological sites and historic structures. The park, in coordination with its partners, will develop plans for stabilizing components of the resource that have not yet received attention, including degraded wooden supports and metal components. Management should contract with appropriate professional personnel to develop a phased plan for stabilizing the ferrous metal components of the mill ruins. Management and appropriate personnel from BNCR should determine the feasibility of taking immediate temporary measures to prevent continued deterioration of the ferrous metal components of the mill.

The park will endeavor to establish the condition of portions of the resource that are still relatively unknown, specifically subsurface components. Management should contract with an architect or engineer having historic preservation experience to produce a structural evaluation of the physical remains of the sugar mill, with special attention to foundations or connections to bedrock.

Park staff and the NPS will continue their joint efforts to stabilize and conserve the

masonry components of the mill ruins.

The park will periodically update its plan for managing cultural resources in the context of their surroundings. Management will outline appropriate methodologies for executing the plan and will train staff and volunteers in the proper execution of the plan. A workable, written routine for physical management of the resource within the constraints of existing staff and volunteer levels will be a key part of the plan, with a site-specific manual for staff and volunteers an integral feature. Staff will periodically reorganize cultural resource files in accordance with guidelines established by the BNCR.

The Division will continue its attempts to resolve the County Road 490 issue. Studies to document the effects of road vibrations on the ruins and to consider alternate road alignments would be desirable. Division management should continue to cooperate with pertinent agencies and governing bodies in an effort to either reroute the road or implement measures to lessen impacts on the site.

The Division will commit to modernizing the park's interpretive displays so that they reflect current knowledge of the site and educate the public about the site-specific sugar making process.

Management Measures for Natural Resources

Hydrology

No specific hydrological management is necessary at this park; however, management will comply with best management practices to maintain or improve the existing water quality on site and will respond appropriately to prevent soil erosion or other impacts to water resources.

Prescribed Burning

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

Prescribed burning does not take place in this park since there is no fire maintained habitat.

Designated Species Protection

The welfare of designated species is an important concern of the Division. In many

cases, these species will benefit most from proper management of their natural communities. At times, however, additional management measures are needed because of the poor condition of some communities, or because of unusual circumstances that aggravate the particular problems of a species. To avoid duplication of efforts and conserve staff resources, the Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species. Specifically, data collected by the FWC and USFWS as part of their ongoing research and monitoring programs will be reviewed periodically to inform management of decisions that may have an impact on designated species at the park.

No management of designated species is necessary at this site.

Exotic Species Control

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

The park will continue its methodical treatment of invasive exotic plants. Particularly aggressive species such as skunk vine will be treated with herbicide several times yearly. Treatment of Mexican petunia and other exotics will occur as needed. Park and district staffs will continue to visit the site regularly to check for the possible introduction of additional exotic species. Staff will incorporate any new exotic plants discovered into the park's exotic removal program. District and park staffs will attempt to establish the validity of citrus as a cultural feature at Yulee sugar Mill.

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 are present at the park.

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.

Cultural Resources

GARI conducted a grant-supported archaeological survey of the park in 1997. Research conducted at the park recently by the National Park Service or the University of South Florida has included the development of masonry repair and stabilization techniques, documentation of prior stabilization efforts, and the use of laser scanning for archival measurement of stratigraphy. Management now has a reference base to consult when planning major projects.

Research the physical sprawl of the original Yulee/Homosassa mill operation to the extent that the "footprints" of all structures can be superimposed on an area map. This may be accomplished through sponsorship of a Masters level student intern from an accredited architecture, anthropology or history department.

Research the effects of road vibration on structural resources of the mill ruins. By recording vibrations over the course of a year, wet and dry months and high vehicular traffic season(s) will be included. Management will be able to plan for future stabilization or preservation of the ruins and take steps to mitigate harmful effects of road traffic vibrations. Accomplishing this research will require the cooperation of the Division of Recreation and Parks, the Florida Department of Transportation, and the University Of Florida School Of Architecture.

Interview descendants of the Yulee slave force and compile oral histories. This would be achieved through cooperation with sociology departments at community colleges or universities. Funded would be through community action or education grant sources.

Resource Management Schedule

The priority schedule and estimated costs for conducting management activities are contained in Addendum 6. In addition, these priority management activities are based on the most cost-effective methods and recommendations that are currently available.

Land Management Review

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

Yulee Sugar Mill Ruins Historic State Park has not been subject to a land management review.

LAND USE COMPONENT

INTRODUCTION

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

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

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

EXTERNAL CONDITIONS

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

Existing Use of Adjacent Lands

The surrounding land-uses are mostly low to medium density residential, with some commercial activities occurring along County Road 490 (West Yulee Drive), which bisects the park. Immediately north of the park is a printing museum and café. An old platted road right of way runs along the northern boundary east and west of County Road 490.

County Road 490 carries high volumes of traffic, separates parking and picnic facilities from the ruins and is aligned in close proximity to the mill chimney. The location of the highway severely limits the recreational opportunities of the site and

presents concerns for the structural integrity of the ruins and safety of the visiting public.

Planned Use of Adjacent Lands

Current Future Land Use and zoning designations of adjacent lands restrict residential densities to one unit per 20 acres, excepting existing platted subdivisions. Amendments are permitted to allow higher densities for larger parcels (>160 acres) provided they connect to central water and sewer and can meet wetland protection, open space and buffering requirements. According to Citrus County, no significant development proposals or highway improvements are planned adjacent to 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.

The importance of this historic site lies mainly in its association with David Levy Yulee. The sugar mill ruins were once part of a 5,100-acre sugar plantation owned by Yulee. Yulee was a key person in the Florida's history, and served as a member of the Territorial Legislative Council, the U.S. House of Representatives and the U.S. Senate after Florida's statehood and in the Confederate Congress during the Civil War. Because of this history, the interpretive potential of Yulee Sugar Mill Ruins Historic State Park is tremendous.

However, the park's recreation potential is constrained by its size, configuration and limited uplands. Park topography is relatively flat, with the southern and eastern half of the site low, wet and dominated by hydric hammock. The park's primary recreational resource is the sugar mill ruin. Unfortunately, West Yulee Drive cuts through the site, isolating the ruins from available parking and other amenities and limiting the unit's recreational potential. In 1985, Citrus County and the Board of Trustees entered into an agreement to coordinate the relocation of West Yulee Drive to the east and out of the park. The county was to purchase the necessary right-of-way, design, construct the road and abandon that portion of West Yulee bisecting the

park. The state was to provide funds for road construction. Project costs and local concerns blocked implementation of the plan and the agreement expired in 1996. As long as the road remains in its current location, the provision of additional recreational activities is not feasible.

Assessment of Use

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

Past Uses

Before acquisition by the state in 1953, the site was managed by the Citrus County Federation of Women's Clubs.

Future Land Use and Zoning

The park's Future Land Use (FLU) and zoning is Coastal and Lakes Commercial (CLC). The CLC district designates areas suitable for commercial development within coastal, lakes or river regions that are water-related, water dependent or necessary for the support of the immediate population. Outdoor recreation uses are permitted in the CLC district with varying levels of review and include playgrounds, fishing docks/piers, summer camps, hunting and fishing preserves and boat ramps. Other substantially similar uses may be allowed subject to interpretation of the land development code.

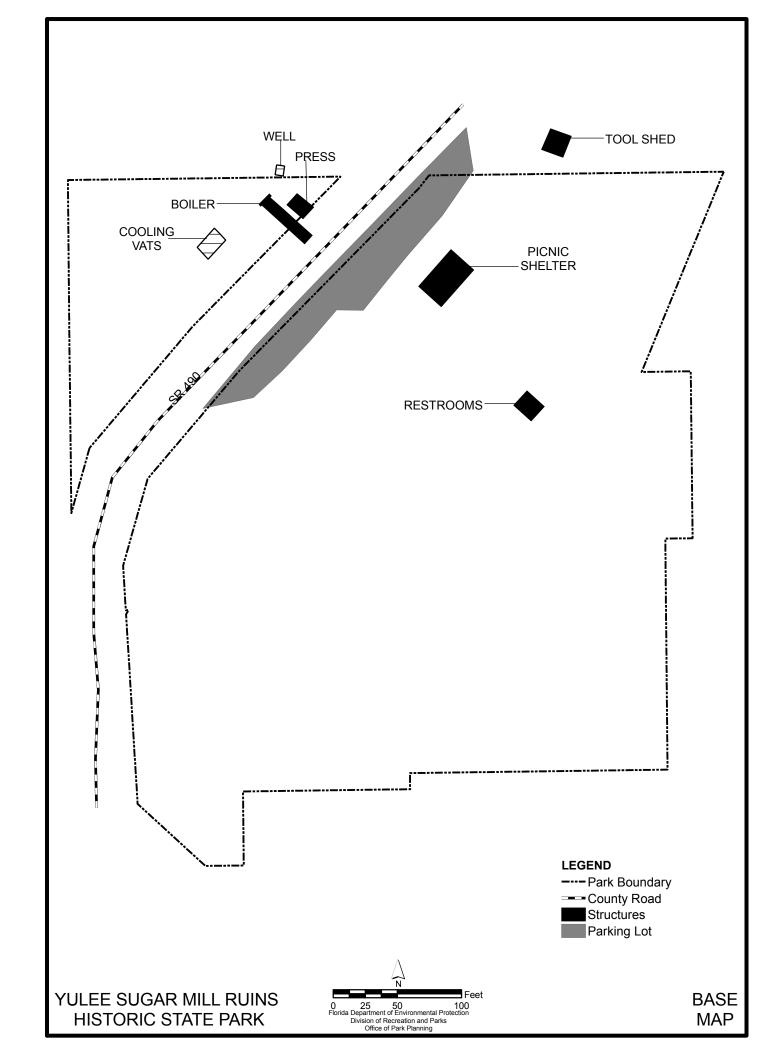
FLU and zoning designations not clearly related to state park uses generally reflect patterns of previous ownerships or a lack of specific zoning and future land use options dedicated to accommodate such uses. The Division works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park uses and facilities necessary for the provision of resource-based recreation opportunities.

Current Recreational Use and Visitor Programs

The recreational uses available at this time include visiting the historic sugar mill ruins and picnicking. A variety of ranger guided talks and tours are offered upon request. It was estimated that over 31,000 people visited the park in fiscal year 2006/07 and contributed \$1.37 million in total direct economic impact to the local community (FDEP, 2007).

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 Yulee Sugar Mill Ruins State Historic Site, the hydric hammock and sugar mill ruins have been designated as protected zones as delineated on the Conceptual Land Use Plan.

Existing Facilities

Interpretive trail
Picnic shelter
Restroom
Roadside parking (unpaved, 15 vehicle capacity)

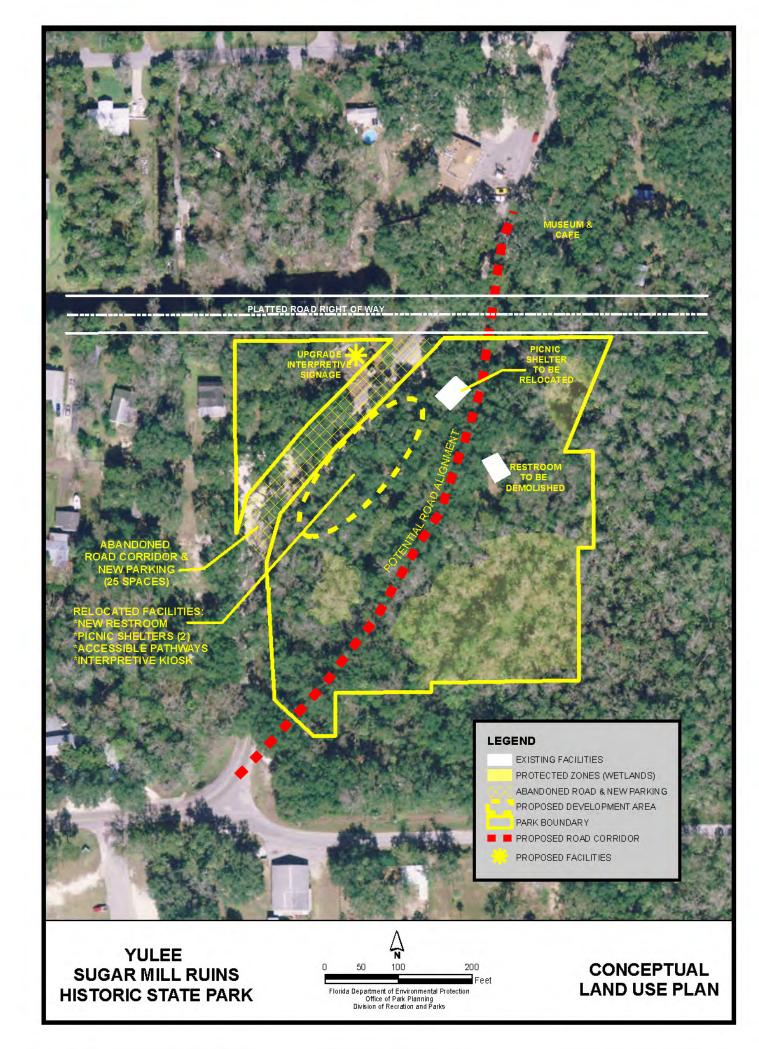
CONCEPTUAL LAND USE PLAN

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

As a special feature site, the primary emphasis at the park is placed on protection and maintenance of the historic ruins. The location of County Road 490 presents a



potential threat to the future preservation of the mill ruins. Vibrations and vehicle exhaust may be hastening the gradual deterioration of the remaining components of the mill. The potential also exists for direct vehicular impact to the ruins despite the presence of a guard rail. The road is a safety hazard for visitors as they cross from the parking and picnic area to see the ruins. It is in the long-term interest of the park and public safety to have the road shifted away from the ruins as far as is practicable.

Several options for rerouting the road have been identified over the years. Ideally, the road would be removed entirely from within the park. However, a more achievable objective is to shift the road east within the park boundary a distance sufficient to relocate parking, restroom and picnic facilities to the same side as the ruins. The old road corridor could then be vacated and incorporated into the park. Moving the road within the park boundary minimizes impacts to the neighboring community and project costs--issues that proved insurmountable to earlier attempts to address this problem in the past. This option is contingent on County support and may necessitate acquisition of adjacent parcels to provide sufficient land to meet roadway design standards. A relocated road would enhance the visitor experience, expand opportunities for additional picnic and interpretive facilities, improve public safety and increase the protection afforded to this historic site of national significance.

The Conceptual Land Use Plan has been developed with the assumption that the road will eventually be shifted within the park boundary. The following change in the number and layout of recreational and support facilities are proposed. Parking for 25 vehicles is proposed to be located in the vacated roadbed of County Road 490. The parking area should be designed to accommodate at least one bus. The existing picnic shelter should be relocated and a second large shelter constructed adjacent to the parking area. The existing restroom should be demolished and a new facility constructed in proximity to the picnic shelters. All facilities should be connected by universally accessible pathways. A multi-panel interpretive kiosk is also recommended in the picnic area to bolster interpretation of the site.

In the interim, it is recommended that the Division work with the county to implement additional pedestrian safety improvements at the mill crossing. In addition, if it is determined that relocating the road is untenable the following improvements are recommended to existing facilities at the park. The restroom should be upgraded, parking area paved and organized and pedestrian pathways provided to meet current standards for universal accessibility. Pervious materials should be considered for the parking area to avoid the need for stormwater facilities. It is also proposed that existing interpretive signage be upgraded to current professional standards.

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 and Support Facilities

New restroom Upgrade interpretive signage

Picnic shelters (1 large)

Interpretive kiosk

Pedestrian pathways New paved road (1,500 Feet)

New paved parking (25 spaces)

Existing Use and Recreational 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 recreational 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.

Table 1--Existing Use And Recreational Capacity

	Exis Capa	U	Proposed Additional Capacity		Estimated Recreational Capacity	
Activity/Facility	One Time	Daily	One Time	Daily	One Time	Daily
Picnicking/Historic Interpretation	50	200	25	100	75	300
TOTAL	50	200	25	100	75	300

Note: Proposed additional capacity is contingent on relocating West Yulee Drive.

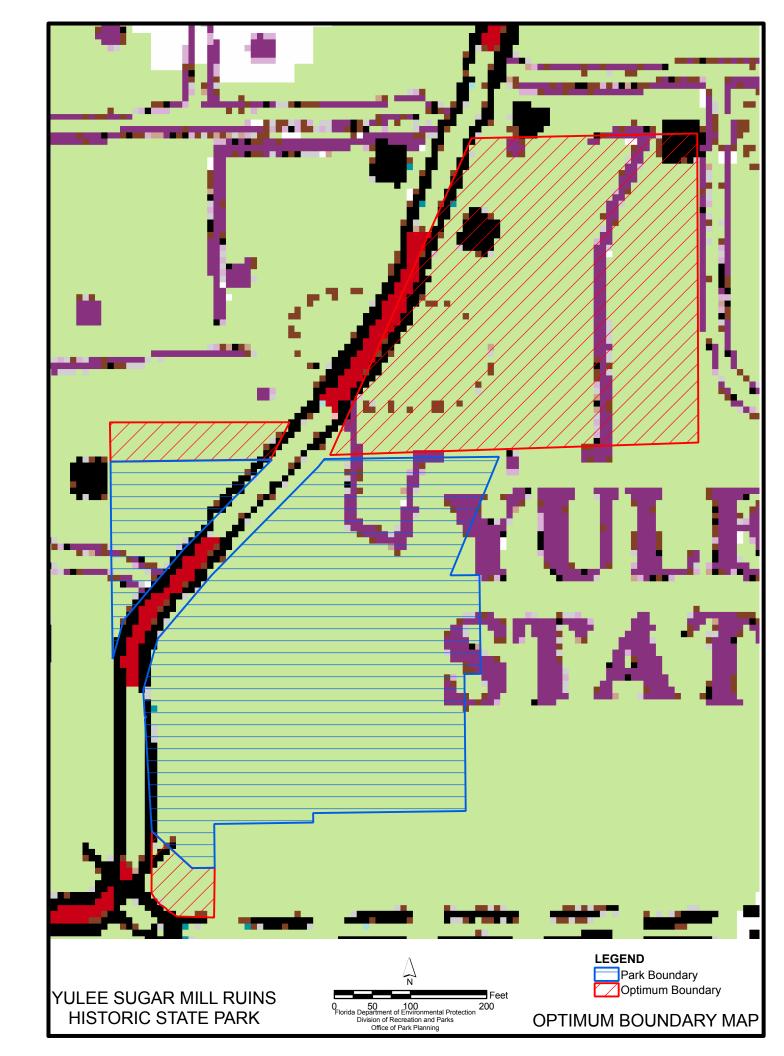
Optimum Boundary

As additional needs are identified through park use, development, research, and as adjacent land uses change on private properties, modification of the unit's optimum boundary may occur for the enhancement of natural and cultural resources, recreational values and management efficiency.

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

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

The optimum boundary comprises approximately 4.2 acres and includes an old platted road corridor running east and west of Yulee Drive, that contains a portion of the ruins. Proposed additions east of Yulee Drive afford more flexibility for road relocation and include an adjacent museum building that could significantly enhance the interpretive potential of the site.





Sequence of Acquisition

On October 3, 1955, Florida Board of Parks and Historic Memorials (FBPHM), predecessor in interest to the Florida Department of Environmental Protection's Division of Recreation and Parks (Division) acquired title to a 2.81-acre property through a donation from Citrus County. This acquisition became Yulee Sugar Mill Ruins Historic State Park. Since this acquisition, the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) have acquired additional parcels through a purchase under P2000 land acquisition program, and as the result of the abandonment of a portion of a road that was cutting through the park by Citrus County. With these additions, the park contains 4.60 acres.

Purpose of Acquisition

The Trustees acquired Yulee Sugar Mill Ruins Historic State Park to use the property exclusively for public park purposes.

Title Interest

The Trustees hold fee simple title Interest in Yulee Sugar Mill Ruins Historic State Park.

Lease Agreement

On September 28, 1967, FBPHM transferred its title interest in Yulee Sugar Mill Ruins Historic State Park to the Trustees. On January 31, 1968, the Trustees leased the property back to FBPHM (now the Division) under a 99-year lease, Lease No. 2324. In 1988, the Trustees assigned a new lease number, Lease No. 3647, to Yulee Sugar Mill Ruins Historic State Park without changing the terms and conditions of Lease No. 2324, which will expire on January 30, 2067.

The lease from the Trustees stipulates that all the property be utilized for public outdoor recreation and related purposes. The Division manages Yulee Sugar Mill Ruins Historic State Park to develop, conserve and protect the natural and cultural resources and to use the property for resource-based public outdoor recreation that is compatible with the conservation and protection of the property.

Special Conditions on Use

Yulee Sugar Mill Ruins Historic State Park is designated single-use to provide 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 park

management purposes.

Outstanding Reservations

There are no outstanding rights, reservations and encumbrances that apply to Yulee Sugar Mill Ruins Historic State Park.



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(39) Hallandale-Rock Outcrop complex, rarely flooded - This complex consists of nearly level, poorly drained, mineral soil and Rock outcrop. Hallandale soil is along the coast adjacent to freshwater and saltwater marshes and also on some offshore islands. This soil is underlain by bedrock at a depth of 20 inches or less. The mapped areas are long and narrow and range from 5 to abut 100 acres.

Hallandale soil makes up about 55 percent of the map unit. Rock outcrop makes up about 25 percent. The included soils make up about 20 percent.

Typically, Hallandale soil has a surface layer that is black fine sand about 2 inches thick. The subsurface layer, to a depth of 6 inches, is grayish brown fine sand. The subsoil, to a depth of 10 inches, is yellowish brown fine sand. Below the subsoil is hard limestone bedrock.

Rock outcrop is randomly scattered, and individual exposures are mostly less than 2 square feet. In some areas, Rock outcrop occurs as narrow bands less than 1 foot wide and up to 50 feet or more in length. In a few cultivated areas, machinery has broken off some of the exposed bedrock, and the surface layer is cobbly fine sand.

Included with these soils in mapping are Basinger, Citronelle, Lauderhill, and Redlevel soils.

In most years, the soils in this map unit have a high water table within 10 inches of the surface layer for up to 6 months. In some areas, the surface may be covered by shallow water for up to a month after very heavy rains. In drained areas, the water level fluctuates as the water level in the drainage ditches and solution holes in the limestone bedrock fluctuates. These soils are rarely flooded by severe coastal storms. Permeability is moderate to moderately slow. Runoff is slow. Natural fertility is low, and response to applied fertilizers is moderate. Soil reaction ranges from strongly acid to slightly acid in the surface layer and from medium acid to moderately alkaline in the lower layers.

(64) Citronelle fine sand - This soil is nearly level and somewhat poorly drained. It is on the flatwoods. Limestone bedrock is at a depth of 20 inches or less. The mapped areas are irregular in shape and range from 10 to 100 acres.

Typically, the surface layer is dark yellowish brown fine sand 2 inches thick. The subsoil to a depth of 9 inches is yellowish red fine sand underlain by limestone bedrock.

Included with this soil in mapping are areas of Boca, Broward, and Hallandale soils. Within the map unit are randomly scattered rock outcrops. Rock outcrops range from 2 square feet to about 10 square feet. In some areas, the bedrock has been broken off and the surface layer is cobbly fine sand. The included soils make up 25 percent of the map

unit.

The high water table is within 2 to 3 feet of the surface for periods of up to 4 months. In drained areas, the water level fluctuates with the water level in the drainage ditches. Permeability is moderate to moderately rapid. Runoff is slow. Reaction ranges from strongly acid to moderately alkaline. Natural fertility is low.



		Primary Habitat Codes
Common Name	Scientific Name	(for designated species)

PTERIDOPHYTES

Resurrection fern Pleopeltis polypodioides

Chinese ladder brake Pteris vittata *
Shield fern Thelypteris spp.

GYMNOSPERMS

Red cedar Juniperus virginiana

Coontie Zamia pumila 81, 82

ANGIOSPERMS

Monocots

Greendragon Arisaema dracontium

Green-fly orchid Epidendrum conopseum 35, 81, 82

Woodsgrass Oplismenus hirtellus Bahiagrass Paspalum notatum *

Dwarf palmetto
Cabbage palm
Sabal minor
Sabal palmetto
Saw palmetto
Serenoa repens
Earleaf greenbrier
Saw greenbrier
Smilax auriculata
Saw greenbrier
Smilax bona-nox
Laurel greenbrier
Smilax laurifolia

St. Augustinegrass Stenotaphrum secundatum

Ballmoss Tillandsia recurvata
Spanish moss Tillandsia usneoides
Adam's needle Yucca filamentosa

Dicots

Red maple Acer rubrum

Peppervine Ampelopsis arborea
Sea myrtle Baccharis halimifolia
Rattan vine Berchemia scandens

Beggarticks Bidens alba

American beautyberry Callicarpa americana
Trumpet creeper Campsis radicans
American hornbeam Carpinus caroliniana

Pignut hickory Carya glabra
Hackberry Celtis laevigata
Sour orange Citrus x aurantium *

Common Name

Scientific Name

Primary Habitat Codes (for designated species)

Virginsbower Clematis virginiana
Carolina coralbead Cocculus carolinus
Roughleaf dogwood Cornus asperifolia
Swamp dogwood Cornus foemina

Gulf coast swallowwort
Common persimmon
Elephant's-foot
American strawberrybush
Green ash
Yellow jessamine

Cynanchum angustifolium
Diospyros virginiana
Elephantopus carolinianus
Euonymus americanus
Fraxinus pennsylvanica
Gelsemium sempervirens

Yaupon Ilex vomitoria

Sweetbay Magnolia virginiana

Milkvine *Matelea* sp. Chinaberrytree Melia azedarach * Climbing hempvine Mikania scandens Morus rubra Red mulberry Wax myrtle Myrica cerifera Lantana camara * Lantana Ligustrum sinense * Chinese privet Liquidambar styraciflua Sweetgum Coral honeysuckle Lonicera sempervirens Skunkvine Paederia foetida * Red bay Persea borbonia

Virginia creeper Parthenocissus quinquefolia

Black cherry Prunus serotina Wild coffee Psychotria nervosa Wafer ash Ptelea trifoliata Laurel oak Quercus laurifolia Shumard's oak Quercus shumardii Live oak Quercus virginiana Rhus copallinum Winged sumac Ruellia carolinensis Carolina wild petunia Britton's wild petunia Ruellia tweediana * Smallflower mock buckthorn Sageretia minutiflora

Lyreleaf sage Salvia lyrata

Elderberry Sambucus nigra subsp. canadensis

Canadian blacksnakeroot Sanicula canadensis
Bully Sideroxylon sp.
Hairy leafcup Smallanthus uvedalia

Carolina basswood Tilia americana var. caroliniana

Eastern poison ivy Toxicodendron radicans

^{*} Non-native Species

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
American elm	Ulmus americana	
Winged elm	Ulmus alata	
Walter's viburnum	Viburnum obovatum	
Muscadine	Vitus rotundifolia	

		Primary Habitat Codes
Common Name	Scientific Name	(for designated species)

Common Name	Scientific Name	Primary Habitat Codes (for all species)
	REPTILES	
Lizards		
Green anole	Anolis carolinensis	35, 81, 82
Ground skink	Scincella lateralis	81, 82
	BIRDS	
Vultures		
Turkey Vulture	Cathartes aura	OF
Hawks, Eagles and Kites		
Red-shouldered Hawk	Buteo lineatus	35, 81
Woodpeckers		
Pileated Woodpecker	Dryocopus pileatus	35
Red-bellied Woodpecker	Melanerpes carolinus	35, 81
Downy Woodpecker	Picoides pubescens	35
Vireos		
Red-eyed Vireo	Vireo olivaceus	35
Jays and Crows		
American Crow	Corvus brachyrhynchos	35, 81, 82
Blue Jay	Cyanocitta cristata	35, 81, 82
Titmice		
Tufted Titmouse	Baeolophus bicolor	35, 81
Carolina Chickadee	Poecile carolinensis	35, 81, 82
Wrens		
Carolina Wren	Thryothorus ludovicianus	35, 81
Gnatcatchers and Kinglets		
Blue-gray Gnatcatcher	Polioptila caerulea	35, 81
Ruby-crowned Kinglet	Regulus calendula	35, 81
Thrushes		
American Robin	Turdus migratorius	35, 81, 82
Thrashers		

^{*} Non-native Species

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Gray Catbird	Dumetella carolinensis	81
Northern Mockingbird	Mimus polyglottos	81, 82
Warblers		
Yellow-rumped Warbler	Dendroica coronata	35, 82
Northern Parula	Parula americana	35
Cardinals, Grosbeaks and Bu	ıntings	
Northern Cardinal	Cardinalis cardinalis	35, 81, 82
	MAMMALS	
Edentates		
Nine-banded armadillo	Dasypus novemcinctus *	81, 82
Rodents		
Gray squirrel	Sciurus carolinensis	35, 81, 82
Carnivores		
Raccoon	Procyon lotor	35, 81, 82

Lacustrine--Continued **Terrestrial** Beach Dune Flatwood/Prairie Lake 45 1 Bluff 2 47 Marsh Lake River Floodplain Lake Coastal Berm 48 3 Coastal Rock Barren Sandhill Upland Lake 4 49 Sinkhole Lake 5 Coastal Strand 50 Swamp Lake 6 Dry Prairie 51 7 Maritime Hammock 8 Mesic Flatwoods **Riverine** Coastal Grasslands Alluvial Stream 52 9 Pine Rockland Blackwater Stream 10 53 Prairie Hammock Seepage Stream 11 54 12 **Rockland Hammock** 55 Spring-Run Stream Sandhill 13 Scrub **Estuarine** 14 Scrubby Flatwoods 56 Estuarine Composite Substrate 15 Shell Mound 16 57 **Estuarine Consolidated Substrate** Sinkhole **Estuarine Coral Reef** 58 17 18 Slope Forest Estuarine Grass Bed 59 Upland Glade Estuarine Mollusk Reef 19 60 20 **Upland Hardwood Forest** 61 Estuarine Octocoral Bed **Upland Mixed Forest** Estuarine Sponge Bed 21 62 **Upland Pine Forest** 63 Estuarine Tidal Marsh 22 Xeric Hammock **Estuarine Tidal Swamp** 23 64 Estuarine Unconsolidated Substrate 65 **Palustrine** 66 **Estuarine Worm Reef** Basin Marsh 24 **Basin Swamp Marine** 25 26 Baygall 67 Marine Algal Bed Marine Composite Substrate 27 Bog 68 28 **Bottomland Forest** Marine Consolidated Substrate 69 **Depression Marsh** Marine Coral Reef 29 70 Dome Marine Grass Bed 30 71 Floodplain Forest Marine Mollusk Reef 31 72 32 Floodplain Marsh 73 Marine Octocoral Bed Floodplain Swamp Marine Sponge Bed 33 74 Freshwater Tidal Swamp Marine Tidal Marsh 75 34 Hydric Hammock Marine Tidal Swamp 76 35 Marl Prairie Marine Unconsolidated Substrate 36 77 37 Seepage Slope 78 Marine Worm Reef 38 Slough Strand Swamp **Subterranean** 39 Aquatic Cave Swale 40 79 Wet Flatwoods Terrestral Cave 41 80 42 Wet Prairie Miscellaneous Ruderal Developed **Lacustrine** 82 Clastic Upland Lake 43 Coastal Dune Lake MTC Many Types Coastal Rockland Lake Of Communities

OF Overflying



The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an <u>element</u> 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 <u>element occurrence</u> (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)

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 C	=	Proposed for listing as Threatened Species. 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) T(S/A)	=	Endangered due to similarity of appearance. Threatened due to similarity of appearance.
		<u>STATE</u>
<u>Animals</u>		(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
LS	=	destined or very likely to become an endangered species within the foreseeable future. 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.
<u>Plants</u>		(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.

Yulee Sugar Mill Ruins Historic State Park Designated Species (Plants)

Common Name/	Designated Species Status		
Scientific Name	FDACS	USFWS	FNAI
Greenfly orchid			
Epidendrum conopseum	CE		
Coontie			
Zamia pumila	CE		

Yulee Sugar Mill Ruins Historic State Park Designated Species (Animals)

Common Name/	Designated Species Status		
Scientific Name	FFWCC	USFWS	FNAI



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. Finish stabilizing components of the mill ruins. Include the use of temporary measures where necessary. 0-10 years. Estimated Cost: \$50,000.
- **2.** Establish condition of the below ground resources with a structural evaluation of the physical remains of the sugar mill. 0-10 years. Estimated Cost: \$30,000.
- 3. Continue the exotic plant removal program. 0-10 years. Estimated Cost: \$20,000.
- **4.** Develop a plan for managing the site's cultural resources and outline methodologies for accomplishing the plan. 0-10 years. Estimated Cost: \$22,000.

Total	
Cost:	\$716,500.00

Capital Improvements Development Area or Facilities	Estimated Cost
Recreation and Support Facilities Interpretation	\$402,500.00
Total Cost with Contingency	

Visitor Services/Recreation

Improve public awareness and encourage stewardship and protection of the natural and cultural resources through interpretation of the site and enforcement of rules and regulations. 0-10 years. Estimated Cost: \$15,000.