LAKE JACKSON MOUNDS ARCHAEOLOGICAL STATE PARK

UNIT MANAGEMENT PLAN

APPROVED

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks

February 6, 2004

Department of Environmental Protection

Jeb Bush
Governor

Marjorie Stoneman Douglas Building
3900 Commonwealth Boulevard, MS 140
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

February 6, 2004

Ms. BryAnne White
Government Operations Consultant II
Office of Park Planning
Division of Recreation and Parks

Re: Lake Jackson Mounds Archaeological State Park

Lease Number: 2530

Dear Ms. White:

On February 6, 2004, the Acquisition and Restoration Council recommended approval of the Land Management Plan for Lake Jackson Mounds Archaeological State Park. Therefore, the Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund approves this plan. Pursuant to Section 253.034 and 259.032, Florida Statutes, and Chapter 18-2, Florida Administrative Code the plan's 10-year update will be due in February 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.

Sincerely,

Delmas T. Barber

Delmas T. Barber, OMC Manager
Office of Environmental Services
Division of State Lands

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INTRODUCTION

Lake Jackson Mounds Archaeological State Park is located in Leon County (see Vicinity Map) about 1.5 miles north of the intersection of Interstate Highway 10 and Monroe Street. Access to the park is from the junction of Interstate Highway 10 and Monroe Street. Travel north of the junction approximately 1.5 miles, turn east on Crowder Road, and turn right onto Indian Mound Road, that ends in the park. The vicinity map also reflects significant land and water resources existing near the park.

Currently the park contains 204.94 acres. For purposes of this plan, park acreage has been calculated based on the composition of natural communities, in addition to the ruderal and developed areas.

At Lake Jackson Mounds, public outdoor recreation and conservation is the designated single use of the property. The park was acquired on May 26, 1966 using LATF funds. There are no legislative or executive directives that constrain the use of this property (see Addendum 1).

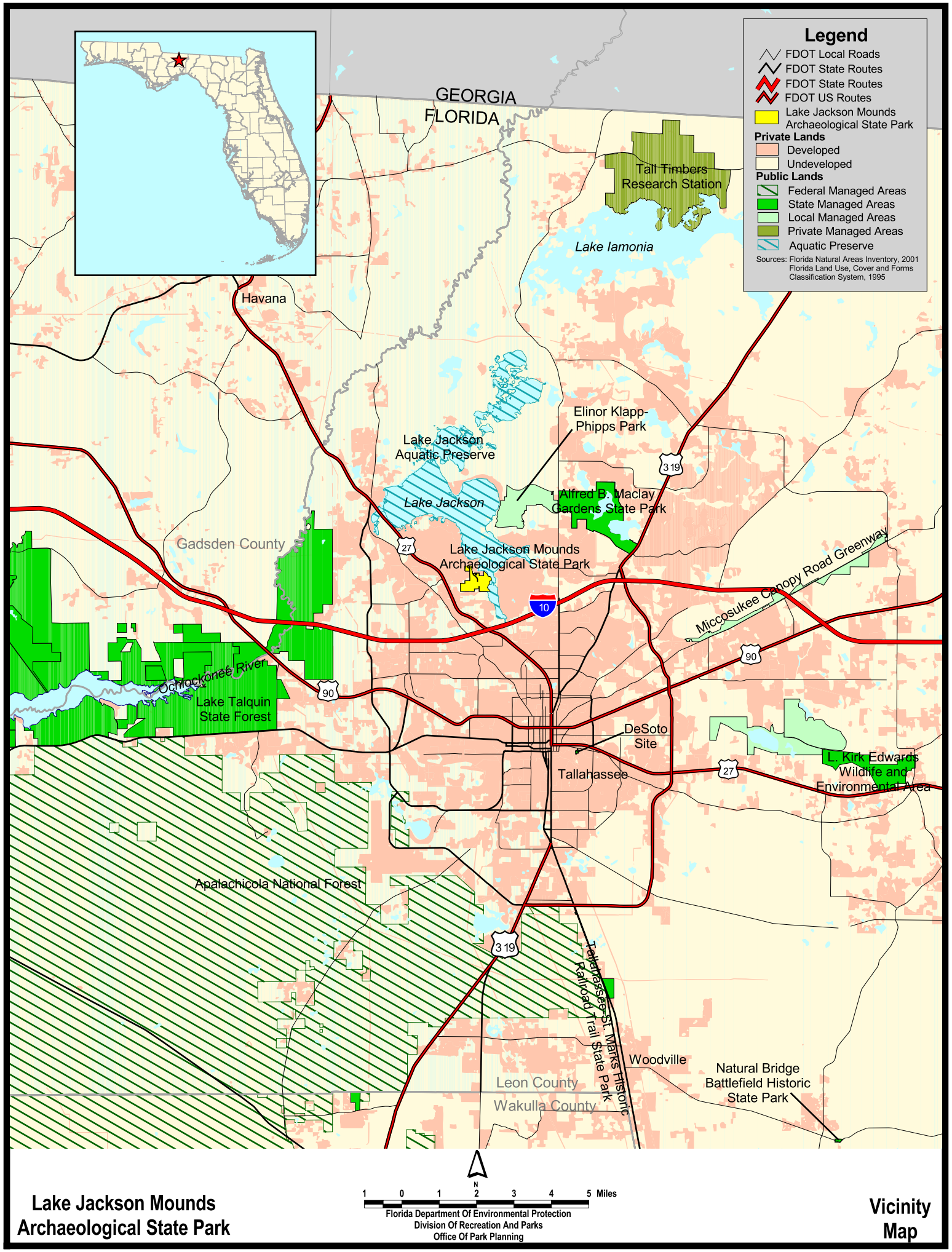
PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of Lake Jackson Archaeological 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 February 17, 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, 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 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



Lake Jackson Mounds Archaeological State Park

Vicinity Map

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 and should be discouraged.

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

Many operating procedures are standard system wide and are set by policy. These procedures are outlined in the Division **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 Lake Jackson Mounds Archaeological State Park, preservation and restoration of cultural resources is all important. Cultural resource considerations are given priority over user considerations and development is restricted to the minimum necessary for ensuring its protection and maintenance, limited access, user safety and convenience, and appropriate interpretation. Permitted uses are primarily of a passive nature, related to education and interpretation of this significant archaeological site.

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. Continue to implement management practices where primary emphasis is placed on protection and restoration of the park's cultural and natural resources.
- **A.** Coordinate with BNCR to establish basic management measures that can be implemented by park staff to control erosion in significant cultural or natural sites.
- **B.** Coordinate with District and BNCR staff to identify and consider options for stabilizing the Butler Mill Trail.
- **C.** Routinely inspect the mounds and associated archaeological resources to guard against vandalism and unlawful removal of artifacts.
- **D.** Continue efforts to remove invasive exotic plants from the park property.
- **E.** Work with Division of Historical Resources and others to plan and fund extensive archaeological research on the park's prehistoric cultural resources.
- **F.** Preserve mound slopes and other earthen features.
- **G.** Coordinate with District and BNCR staff to consider the feasibility of restoring the site's natural hydrology.
- **H.** Seek funding and develop a cultural landscape study to guide future resource management decisions and to inform interpretive programming for the site.
- **I.** Seek funding and/or volunteer assistance in order to develop a complete list of park biota.
- J. Fill out site files for the Butler Plantation features for inclusion in the FMSF.

Recreational Goals

2. Continue to provide quality resource based outdoor recreational and interpretive programs and facilities at the state park.
- **A.** Continue to provide opportunities for picnicking, hiking, nature study, and historical interpretation.
- **B.** Maintain the Butler's Mill Trail, including routine maintenance of trail markers and interpretive materials.

3. 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.** Develop a Statement for Interpretation and a cultural landscape study to guide interpretive programming and future park development, respectively.
- **B.** Provide interpretive signage at significant natural and cultural features.
- **C.** Coordinate greenway planning efforts with the City of Tallahassee.

Park Administration/Operations

4. Continue to provide quality administrative and operational services.

- **A.** Provide necessary administrative support in order to ensure a high quality visitor experience.
- **B.** Continue to ensure that essential maintenance measures are implemented in order to provide attractive, clean, and serviceable facilities for park visitors.
- **C.** Provide staff with appropriate training opportunities in visitor services, resource management, park operations and interpretation.
- **D.** Maintain park signage and support facilities in good repair.

Management Coordination

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

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

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 August 11, 2003 and a DEP Advisory Group meeting was held on August 12, 2003. The purpose of these meetings was to present the plan to the public and to provide the Advisory Group members the opportunity to discuss this draft management plan. Addendum 1 contains a list of advisory group members and the advisory group meeting staff report.

Other Designations

Lake Jackson Mounds Archaeological 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 III waters by DEP. This unit is adjacent to the Lake Jackson 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

The topography is characterized by erosional remnant hills that are on the average 120 feet high. The highest hills have elevations of about 260 ft. and are relatively flat topped. The loamy soils that developed on the hills support a lush natural vegetation of mixed pine and hardwood forest. Three large lake basins are within the Tallahassee Hills. The southern terminus of this physiographic division is abruptly separated from the adjoining lowlands by a distinct escarpment. The western edge is bounded by the Ochlockonee River Valley Lowlands. Eastward these highlands pass into Jefferson County.

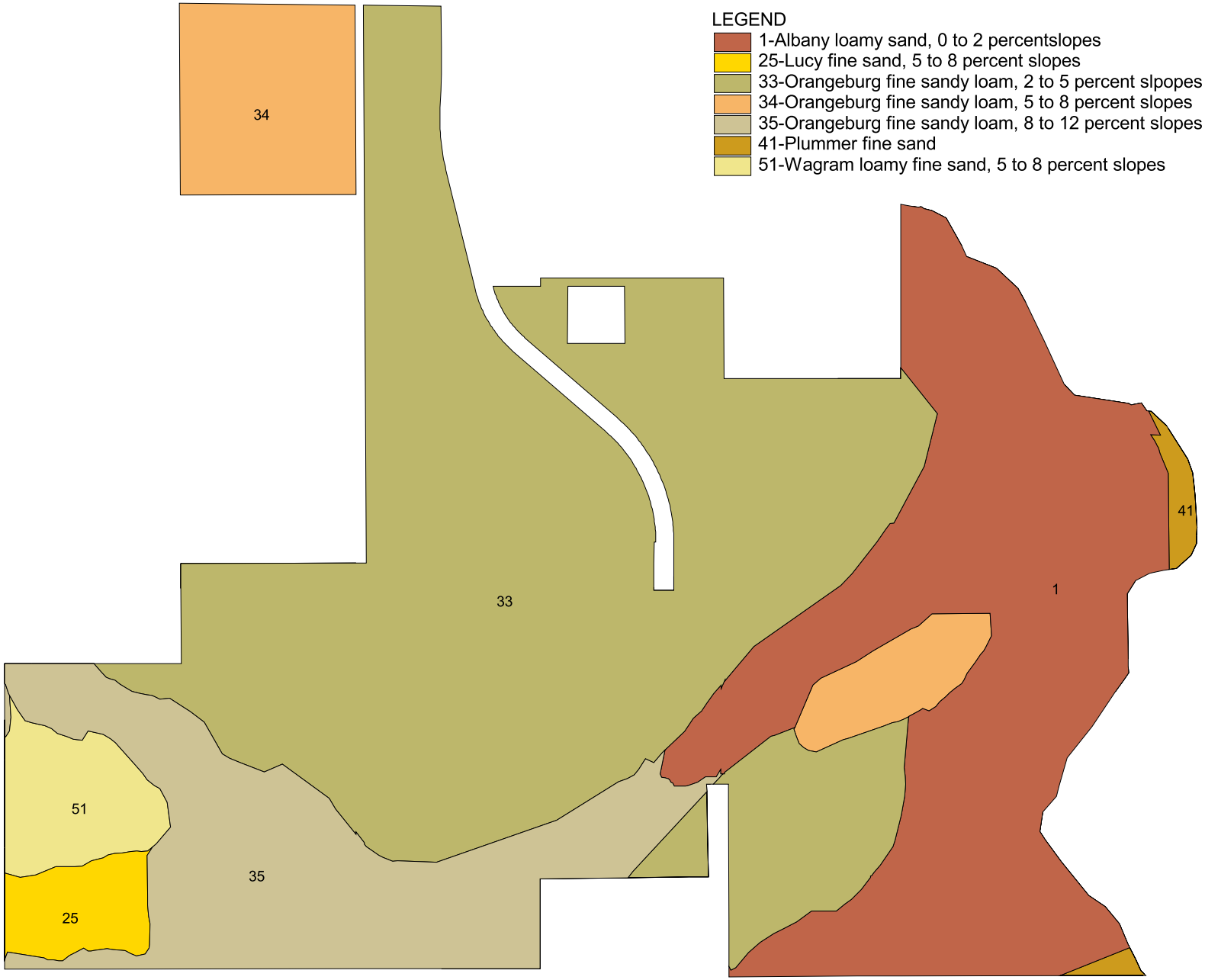
Geology

All of Leon County is underlain by the Suwannee Limestone. The Suwannee Formation is covered in the northern part of the county by sand and clay of the Miccosukee and Hawthorne Formations, in the southeastern part by the sand of the St. Marks Formation, and in the southwestern part by sand of the Jackson Bluff Formation. Several sinkholes in the southern part of the county expose the Suwannee Limestone.

Soils

Soils at Lake Jackson Mounds are mainly Orangeburg fine sandy loams, ranging from 2- 12 percent slopes. The western portion of the property contains an area with plummer fine sands (see Soil Map).

The threat of erosion due to visitor impact at this park poses the greatest challenge to the conservation of soil resources. A plan to safeguard against this impact should be developed in



300 0 N 300 600 Feet

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

LAKE JACKSON MOUNDS ARCHAEOLOGICAL STATE PARK

SOILS MAP

anticipation of increased visitation and implemented as necessary to protect the soil resource. A description of the soils within Lake Jackson Mounds is contained in Addendum 3.

Minerals

There appears to be no known deposits of commercially valuable minerals within Lake Jackson Mounds.

Hydrology

The Floridan Aquifer is the primary source of all underground water in Leon County. The shallow aquifers that overlie the Floridan Aquifer, including the surficial sands and the upper region of the Hawthorne Formation, are secondary sources. Within the park, most of the water resources consist of runoff from precipitation, with a few seepage streams originating from steepheads in the western part of the property. These seepage streams have been diverted in the past and evidence of earthen dams, channeling berms, are still present.

Vegetative damage leads to erosion and subsequent siltation of the stream or stormwater impacts to groundwater through sinkholes. Water resources can be protected at this site through development and implementation of plans, which anticipate and safeguard against visitor impacts.

Just off the eastern boundary of the property is Lake Jackson itself. The Native American name for the lake was "Okeeheepkee" meaning, "disappearing water." Drainage events are caused by a combination of low rainfall, evaporation, and drainage through the sinks in the lake bottom.

Lake Jackson has drained at least seven times in recorded history. One early documentation appears in an 1870 book entitled *A Winter In Florida*, by Ledyard Bill, in which a rapid overnight drainage of Lake Jackson in the winter of 1837 is mentioned. Later, Charles Norton's (A Handbook of Florida), published in 1891, and describes another early event. Norton wrote, "Shortly after the Charleston earthquake of 1886, it (Lake Jackson) distinguished itself by disappearing completely through an unsuspected subterranean passage. Large numbers of fish perished, and for a time, pestilence was dreaded by neighboring residents. After a few days, the lake began to fill up again."

Similar disappearances of portions of the lake occurred after periods of low rainfall in May and June of 1907 and 1909. In January, March, and July of 1932, the Tallahassee Democrat reported the disappearance of the lake water and the death of thousands of stranded fish. After each drainage event, the lake was replenished by rainfall. Subsequent draining occurred in 1957 and 1982 following periods of low rainfall. More recently, in mid September 1999, Lake Jackson drained into Porter Hole Sink over a period of several weeks, again stranding fish and turtles. The event attracted many spectators, some of who scooped up fish trapped in small pools left by the receding water. After the lake had completely drained, geologists were able to descend into the sink for a first hand look at the karst features.

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 four 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.

The natural communities within Lake Jackson are difficult to place into FNAI descriptions. This is mainly due to the human disturbance that has occurred there at least since humans having dwelt in or around the property. The forests have been cut over as recently as a few decades ago. Generally, the property is in various stages of secondary succession, ranging from ruderal to bottomland hardwoods in good condition. Much of the western portion of the property is mixed forest. The mix of vegetation is probably due to historical disturbance and elevation. The southeastern portion of the property is newly acquired and mainly ruderal.

Slope forest. The park contains some beautiful examples of slope forest along the steep slopes surrounding the seepage streams. Natural components such as American Beech, swamp chestnut oak, white oak, large southern magnolias, hickories, red buckeye, violets, Christmas ferns, chain ferns, and Trilliums all occur here. A site visit in mid February of 2002 revealed thousands of Trilliums covering the shady slopes.

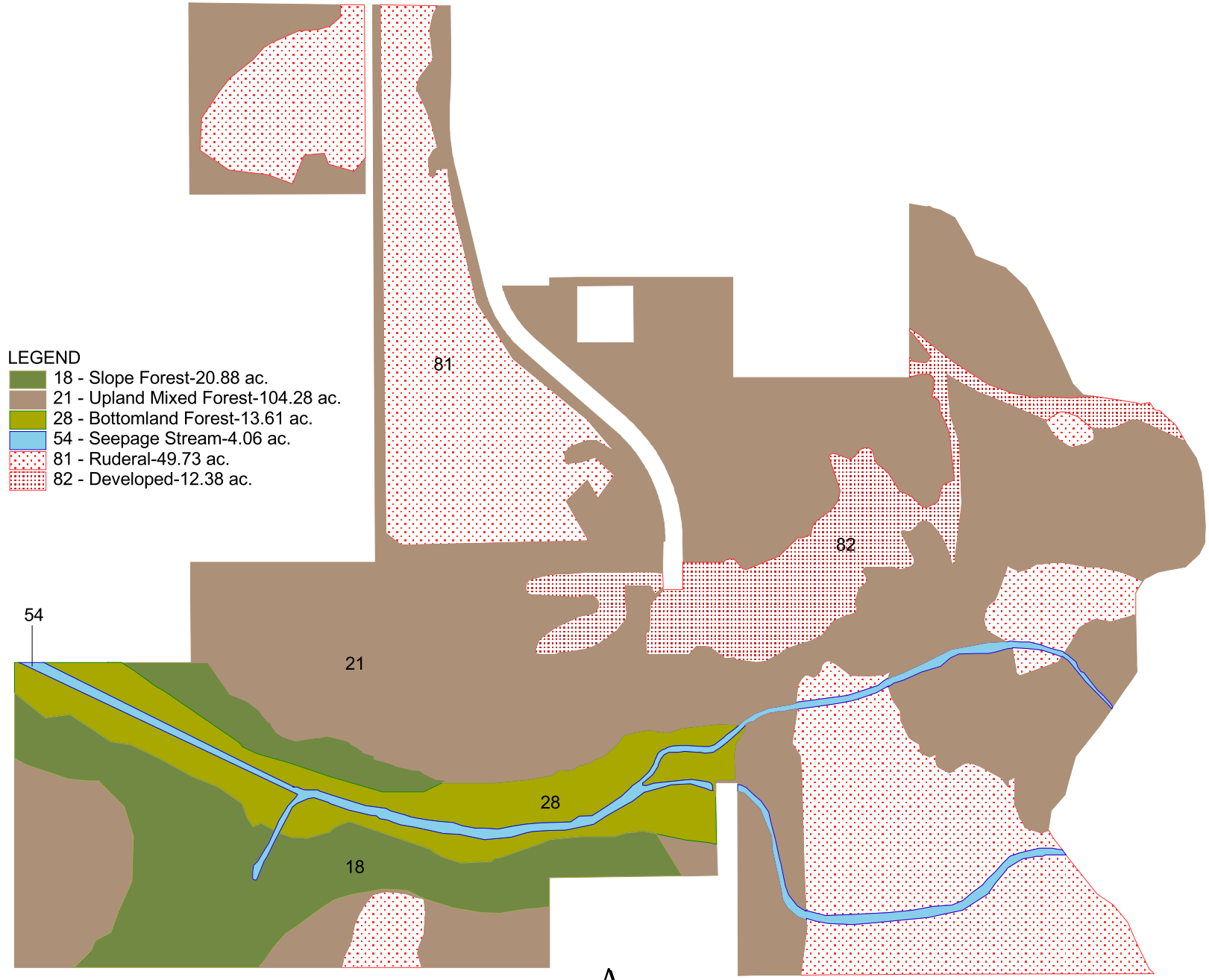
Several steepheads, of various sizes occur within the slope forest, and provide a reminder that the park's upland topography is continually being shaped by erosion. The steepheads are the headwaters of the seepage streams that flow through the bottomland forest at the base of the slope forests. Miocene clays and soft limestone have been exposed at the bottom of the steepheads, and are covered with a profusion of chain ferns. Oakleaf hydrangea is also found here. One of the park's largest magnolia trees is found clinging to the sides of the steephead adjacent to the Butler Mill Trail. Its labyrinth of large twisted roots can be seen clinging to the sides of the steephead, from the nature trail.

The best example of slope forest occurs on the high slopes above the central seepage stream in the western portion of the park. Several large beech trees can be found here, including a large 25-inch diameter giant whose upper limbs were toppled years ago in a storm. Young beech and magnolia dominate portions of this western slope forest.

Upland mixed forest. The upland mixed forest community is the largest on the site. The Native American mounds, which give the property its name, are included within this community type. This is mainly due to the length of time the vegetation on the mounds has been left to succeed. Special consideration should be given to any management activity on the mounds proper. Any tree removal should be done in a fashion to minimize disturbance to the mounds or other cultural resource, i.e. herbicide and/or burning would cause significant blowdown that would uproot the dead trees causing severe damage to the mounds as well as the cultural deposits therein.

The upland mixed forest at the park is an early successional forest of various hardwoods and loblolly pines. Natural components of this community such as magnolia, beech, American hornbeam, and mockernut hickory are numerous, but are mostly represented by relatively young trees. Several very large live oaks occur throughout this natural community, probably left from the Butler plantation days. At this point, this community is still very much dominated by early successional species such as loblolly pine, laurel oak, sweetgum, and sparkleberry. The species proportions vary in different portions of this upland forest, with some areas appearing more natural than others do.

Bottomland forest. Bottomland forest is a relatively small portion of the property. This



LAKE JACKSON MOUNDS
ARCHAEOLOGICAL STATE PARK

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

NATURAL COMMUNITIES
MAP

community type lies along the margins of the seepage streams running through the western portion of the park. Canopy trees include swamp chestnut oak, laurel oak, red maple, box elder, sweetgum, and blackgum. This low, flat strip of bottomland is subject to seasonal flooding, and contains dark, organic rich soils. This area is considered good habitat for various frogs and salamanders. This community appears to be in relatively good condition.

Seepage stream. Seepage streams run through the heart of the western portion of the property. Originating from several steepheads, these streams flow generally west to east. The water in these streams is clear and cool. The bottoms of the streams are coarse sand. These streams in particular are small and shallow but occasionally swell and flood a few meters outside their banks, usually from storm events. Public use of the areas near the steepheads and stream crossings are cause for concern, as these areas are very sensitive to erosion.

In many places, the streams have cut deep into the bottom clay sediments, resulting in a steep V shaped streambed. In these places, the gurgling water often rushes through, reminiscent of a babbling brook. These clear water streams are home to mosquito fish, cricket frogs, leopard frogs, spring peepers, salamanders, and cottonmouth.

Ruderal and Developed. Much of the area, especially the newly acquired eastern portion of the property is ruderal or developed. Homesteads, abandoned trailer park sites, and some recent agricultural use are characteristic of the newly acquired property.

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.

Eleven designated and/or rare species are found at Lake Jackson. Bobcats have been seen on the park; however, they are no longer listed by the FWCC. Alligators inhabit the adjacent lake, and seem to be abundant. Wading birds can be found along the lakeshore in good numbers. During the spring and fall migrations, listed birds such as falcons, hawks, and neotropical migrants may be encountered. Trilliums are abundant in the slope forest in the early spring. As a comprehensive plant list is developed, more listed plants may be identified.

Special Natural Features

Notable topographic features such as the park's steepheads and associated ravines, are uncommon in the State of Florida, and are regarded as special natural features. The ravines at Lake Jackson Mounds were formed, and continue to be shaped, by the natural erosion process of seepage streams as they slowly cut into the clay-based hillsides. Erosion within the steephead ravines has been accelerated due to adjacent land clearing for former agriculture, and manipulation of the seepage streams for flood control and to support a gristmill.

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.

According to the Florida Master Site Files, Lake Jackson Mounds Archaeological State Park contains two recorded prehistoric sites. The park also contains known but unrecorded 19th century historic features, and possesses a high probability of containing additional, undiscovered archaeological sites. Refuse heaps from unidentified periods exist throughout the park, and a former mobile home park site is located on about 15 acres at the end of Doris Drive.

Lake Jackson Mounds (8LE1) is a ceremonial mound complex that consists of the remnants of seven earthen mounds and an associated plaza that dates to the Mississippian period, circa AD 1100 – 1500. Park boundaries encompass the entire mound complex except for the footprint of Mound 1. The Temple Mound (Mound 2), a smaller nearby mound (Mound 4), two associated borrow pits, and the plaza area form the park's present-day interpretive area. Mounds 1, 3, 6, and possibly 7 were so heavily damaged during landscape alterations in the 1960s and 1970s that they are no longer recognizable; their approximate locations are depicted on several maps. Mound 5 is partially intact, as private landowners demolished the eastern half of the mound in the 1970s. The plaza area was also dramatically altered between 1950 – 1970 by the construction and later filling of a series of ponds, and the rerouting of Butler's Creek.

The unnamed prehistoric site 8LE1412 is a habitation site with uncertain boundaries located on the recently acquired former mobile home park. No other information about the site is on file.

The unrecorded resources associated with Colonel Robert Butler's plantation (circa 1825-1870) consist of surviving portions of a dike and dam used to channel and impound water for the operation of mill machinery. These features are located in the northwest forty acres of the park. Portions of the dike's earthen walls have been incorporated into the Butler Mill Trail.

The park maintains no collections of cultural materials, artifacts, or other objects. Materials collected in the park are forwarded to the Division of Historical Resources for curation, pursuant to Chapter 267, F.S.

Archaeological investigation of the Lake Jackson mounds has spanned from 1940 to the present, prompted by an interest in better understanding and protecting this significant Mississippian-period site. This site's researchers have included some of Florida's most prominent archaeologists, and have represented federal and state agencies such as the National Park Service, Florida Park Service, Florida State University, and Florida Department of State. Previous archaeological investigations of 8LE1 have consisted of unit excavations, auger and shovel testing, stratigraphic profiling, and monitoring of ground-disturbing activity associated with park development projects. Data analyses of the various survey results have demonstrated that Lake Jackson Mounds was an important part of the interconnected Southeastern Ceremonial Complex, and has provided information on site occupation, political and social structure, health, technology, burial practices, settlement patterns, and exchange networks.

Testing of the mounds and surrounding area has proved the site is rich with archaeological deposits, and highlighted our still limited understanding of the mound complex's history and nature. Archaeological investigations have focused primarily on the area surrounding the mounds. Limited testing has been conducted on five of the seven mounds (Mounds 1, 2, 4, 5, and 6), however, and salvage excavations were conducted on Mound 3 by Calvin Jones in the mid-1970's prior to it's destruction by local landowners. Mound 3 proved to be a burial

mound from which 24 burials, elaborate grave goods, faunal material, and structural data were recovered. Limited testing at other mounds demonstrated that several mounds had been constructed on top of earlier occupation areas (Mounds 3, 4, 5, and 6), that some mounds were older than other mounds, and that the mounds appeared to have been constructed over time in multiple construction episodes. Furthermore, testing on top of Mound 4 recovered possible structural remains, and at Mound 2 determined that an orange-brown clay cap still exists on the mound's slopes.

The area immediately around Mounds 2 and 4, to the north of them, and between them in the northern portions, contains cultural material to a depth of 18-20 inches, high artifact concentrations, numerous features, and structural evidence. The area to the south of Mounds 2 and 4, and in the southern portions between them repeatedly yield few artifacts, features, or other evidence of occupation areas, as might be expected of plaza areas typically kept clean of debris. Additionally, posthole monitoring prior to park development projects has recovered artifacts from the areas near the gate on Doris Drive, the gate on the southernmost road in the former trailer park, and between the shop and mobile home. Auger testing prior to the erection of a perimeter fence recovered evidence of one to two farmstead sites on the hill southwest of Mound 5.

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.

The total acreage for the unit is below the 1,000-acre threshold established pursuant to Florida Statutes. During the development of this plan, an analysis was made regarding the feasibility of timber management activities for this park. It was then determined that the primary management objectives of the unit could be met without conducting timber management activities for this management plan cycle. Timber management will be reevaluated during the next update of this management plan.

Additional Considerations

There are no additional considerations at this unit.

Management Needs and Problems

1. Protect the mounds and steephead ravines from accelerated/unnatural erosion.
2. Identify, evaluate, and implement options for stabilizing erosion along the Butler Mill Trail.
3. Protect the mounds and associated archaeological resources from vandalism and unlawful removal.
4. Remove Category I and II invasive exotic plants.

Management of the cultural resources at Lake Jackson Mounds is dominated by the essential fact that all the resources, mounds and dam, are constructed of earth, and all are engaged in the natural process of eroding away to become part of the topsoil. Erosion threats come from

the actions of water and wind; however, the effects of those processes are complicated by the activities of visitors, animals, and the life characteristics of plants. Mound stability, and damage from erosion or slumping, should be monitored and repaired on a routine basis. Under prevailing circumstances, management of cultural resources is a protective or conservation activity, attempting to retain as great a measure of physical integrity as possible.

The resources of the park are generally in fair condition. Two major exceptions to this evaluation are the plaza area and the sluice or dike that comprises a part of the Butler resources. The plaza is in poor condition and is a cultural resource at Lake Jackson worthy of careful consideration for restoration. The plaza area was described by Willey in 1949, and his general treatment of it as a typical flat plain-like feature was confirmed by Griffin in 1950. At some time during the 1950s or 1960s, ponds were dug in the site, including a pond in the plaza. When the pond was filled during the 1970s, Butler's Creek, a stream that Griffin had mapped as flowing along the south side of the temple mound, was diverted to flow through the center of the former pond area into a drainage ditch along the then-park boundary. (Ranger Robert Morley, personal communications, 1986-1991) It is likely that the plaza surrendered all its historic integrity during the pond building process. Even today, though the stream presents a pleasant feature for the park visitor, its presence essentially destroys the idea of a large open space where people could mass for ceremonial occasions.

Most extant mounds are in fair condition; however, those, like Mound 5, which were most recently in private hands, are suffering some degradation due to earth moving excavations performed in the past, and any exposed slopes should be planted in adequate ground cover until decisions about recontouring or further investigation can be made.

The condition of the dike or sluice wall varies from fair to poor, in which case it is characterized as poor. Portions of this wall serve as foundation for the park nature trail, the Butler Mill Trail. Foot traffic and occasional bicycle or vehicle use, as well as repair work of uneven quality, have accelerated erosive processes, and the feature is in some danger of disappearing in a few places. The mill dam, which is located along the trail, is subject to occasional vandalism but remains in fair condition. The generalized fair evaluation of the remaining resources will suffice to describe their condition until archaeological evaluations of the levels of integrity of the remains of various altered mounds can be made.

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.

1. Coordinate with the Bureau of Natural and Cultural Resources (BNCR) to establish basic management measures that can be implemented by park staff to control erosion in significant cultural or natural sites.
2. Coordinate with BNCR to identify and consider options for stabilizing the Butler Mill Trail.
3. Routinely inspect the mounds and associated archaeological resources to guard against vandalism and unlawful removal of artifacts.
4. Continue efforts to remove invasive exotic plants from the park property.
5. Work with Division of Historical Resources and others to plan and fund extensive archaeological research on the park's prehistoric cultural resources.
6. Preserve mound slopes and other earthen features.
7. Consider the feasibility of restoring the sites natural hydrology. Any hydrological

restoration planning will be coordinated with Lake Jackson Aquatic Preserve staff.

8. Seek funding and develop a cultural landscape study to guide future resource management decisions and to inform interpretive programming for the site.
9. Seek funding and/or volunteer assistance in order to develop a complete plant list.

Management Measures for Natural Resources

Hydrology

The hydrological features of the property are mainly steepheads, seepage streams, and lakefront. Care should be taken when management actions are implemented so as not to disrupt the current hydrological features. The development of soil erosion management measures will help provide for erosion control.

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.

Lake Jackson Mounds Archaeological State Park does not contain any well-delineated fire maintained natural communities. However, Rx fire may be considered in certain areas as a management tool to augment exotic plant control/treatment, to reduce woody and fine fuel loading, and to enhance general aesthetics.

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.

All native plants and animals are protected on state park lands. Some species, however, require special attention. Many plants and animals in Florida occur in such small numbers that there is concern for their ability to continue to survive within the state. As population growth continues in Florida, the number of these species is likely to increase.

The park’s stretch of undeveloped lakefront provides essential habitat for alligators and various wading birds. This portion of lakeshore should be periodically surveyed to assess current wildlife use. As residential development spreads along this general portion of Lake Jackson, consideration should be given to delineating the park’s lakefront as a protected area.

Inactive gopher tortoise burrows were identified at the park during the last scheduled unit plan revision, 5 years ago. Any burrows, whether active or inactive, should be located and GPS surveyed by park and/or district staff. If any active burrows are discovered, measures should be discussed with the district biologist to manage for these species of special concern.

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

The secondary growth forest and lakefront at the park have experienced dense infestation by exotic plants. The majority of the park's upland mixed hardwoods and bottomland forests have been heavily infested by coral ardesia and nandina, two shade loving species that produce an abundance of seed. In 2001, the park secured funding and initiated a major contractual exotic removal project that targeted ardesia and nandina. If progress with exotic removal is to be successful, additional funding will be necessary. Park staff should work with the district biologist to seek additional funding from the DEP Bureau of Invasive Plant Management (BIPM).

Great strides have been made over the last two years in the removal of Chinese tallow along the lakeshore. Park staff should continue to expand the successful working relationship with the BIPM, in effort to use inmate labor for tallow removal.

Other exotic plants found at the park include sesbania, wandering Jew, mimosa, and taro.

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.

Problem species that might be encountered include alligators and venomous snakes. Educational and regulatory signage will interpret potential threats to park visitors, and serve to help protect these species from harassment.

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.

1. Manage earthen features, including mound slopes and borrow areas, according to established Division procedures that discourage woody vegetation and encourage watchful maintenance; keep all access stairs and viewing platforms in good repair, manage nature trail use and maintenance to lessen adverse impacts.
2. Ascertain the physical limits of features within the site.
3. Restore the stream to its pre-1950s course. Investigate restoration of drainage ditch flow to its previous course(s) in order to restore the site's cultural integrity and hydrology.
4. Map resources from the Butler period through the end of the 19th century. Submit records of the Butler Plantation features to the FMSF. Preserve the resources and seek funding for possible further preservation or restoration planning.
5. Close former public roads, including Doris Drive, and limit points of entry along roads, firebreaks, power lines, and the gas line easement in order to protect cultural resources throughout the park
6. Conduct ongoing investigations and compile information about site topography, vegetation heights, and annual cycles of plant varieties known to have been cultivated by natives in order to restore a cultural landscape.

Research Needs

Natural Resources

Any research or other activity that involves the collection of plant or animal species on park lands 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.

1. Continuing Inventory of Plant and Animal Species.
   - **A.** A comprehensive list of plant and animal species would provide a great source of interpretive information for the public as well as help make more knowledgeable management decisions.
2. Continuing research on management of natural areas while preventing any damage to cultural resources.
   - **A.** Due to the special nature of the Lake Jackson mounds, great care should be taken in the management practices in areas that have fragile archaeological features and deposits.

Cultural Resources

Research in the following areas will enable management and staff of Lake Jackson Mounds Archaeological State Park to implement and improve measures for cultural resource management and to interpret the resources to visitors:

1. Research about specific characteristics of plant varieties cultivated by Native Americans around Lake Jackson in the period AD 1100 - 1500.
2. Research to enable survey / mapping of land alterations or features attributable to the Butler family.
3. Research about site historic hydrology, including flood related hydrology during the period 1100 - 1500 AD.
4. Research about the temple mound and ramp, including subsurface investigation, sufficient to enable restoration of the feature(s).
5. Research to enable continuing summarization of work at or observations of the site, 1539 - present.

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 10-year update of its management plan.

Lake Jackson Mounds 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, 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.

Lake Jackson Mounds Archaeological State Park is located within Leon County, about two miles north of Tallahassee in the panhandle of Florida. The populations of Leon County and adjacent Gadsden, Jefferson, and Wakulla Counties have grown 24 percent since 1990, and are projected to grow an additional 15 percent by 2010 (BEBR, University of Florida, 2000). As of 2000, 18 percent of residents in these counties were in the 0-14 age group, 51 percent in the 15-44 age group, 21 percent in the 45-64 age group, and 9 percent were aged 65 and over, which reflects a younger community than the state average for these groupings (BEBR, University of Florida, 2000). Nearly 361,000 Floridians reside within 50 miles of the park, which includes the cities of Tallahassee, Quincy, Perry, Madison, and Monticello (Census, 2000).

Lake Jackson Mounds Archaeological State Park recorded 57,823 visitors in 2001/2002. Visitation has remained relatively stable over the last five years. By Division estimates, these visitors contributed $1,660,533 in direct economic impact and the equivalent of 33.2 jobs to the local economy (Florida Department of Environmental Protection, 2002).

Existing Use of Adjacent Lands

Lake Jackson Mounds Archaeological State Park is located two miles north of Tallahassee, off U.S. Highway 27, on the southwestern shore of Lake Jackson in western Leon County. Land surrounding the site is predominately medium density residential development. In an effort to protect future degradation and pollution of Lake Jackson, Leon County created a “Lake Protection” land use designation which includes the park and other less intensely

developed areas (Leon County, 2002). This designation allows residential uses of one dwelling unit per two acres. A clustering option is available. Industrial, office and commercial uses are prohibited in the Lake Protection area within the city limits. In the unincorporated county, minor office and minor commercial uses may be approved if development retains its resultant stormwater on site.

A county maintained boat ramp is located at the end of Crowder Road, adjacent to the archaeological site. Across Lake Jackson is Elinor Klapp-Phipps Park, which is owned by the Northwest Florida Water Management District and maintained and managed by the City of Tallahassee. This 668-acre park is crisscrossed with miles of trails for hiking, bicycling, walking, horseback riding, and nature study. Other sites of archaeological and historical significance in the vicinity of Lake Jackson Mounds include the DeSoto Site, Letchworth Mounds, San Marcos de Apalachee State Park, Natural Bridge Battlefield State Park, Tallahassee-St. Marks Historic Railroad Trail State Park, Maclay Gardens State Park, Edward Ball Wakulla Springs State Park, and Mission San Luis de Apalachee.

Planned Use of Adjacent Lands

As Leon County continues to grow, the land surrounding the park will continue to be developed with residential homes. Past development practices of mound leveling and pond digging have inflicted harm to the archaeological resources in the area. Increasing residential development threatens the remaining pieces of the archaeological site that are not in state ownership as well as the natural resources of the park including water quality and wildlife habitat. In addition, significant visual impacts on the character of the park could result if adjacent land continues to be converted to residential and commercial uses.

Leon County and the Northwest Florida Water Management District have obtained 26.2 acres directly south of Lake Jackson Mounds Archaeological State Park and borders Lake Jackson to its east. This area, known as Okeeheepkee Prairie, will be used to protect the lakefront marsh resources, construct a naturalistic stormwater treatment marsh, and provide recreational opportunities through the development of a public park. Park plans include a walking trail around the storm water pond, a boardwalk to the lake, and a picnic area. Because of this park's proximity to the State Park, there is potential to link these parks with a trail.

PROPERTY ANALYSIS

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

Recreation Resource Elements

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

Land Area

The park lies in a broad, flat plain at the foot of the bluffs of the lake basin. The park contains a variety of landscapes that support an array of recreation activities.

Water Area

Meginnis Arm, an offshoot of Lake Jackson lies directly east of the park. Butler's Mill Creek flows east through the park to Meginnis Arm.

Shoreline

The eastern boundary provides 0.7 miles of shoreline along Lake Jackson. The shoreline is densely vegetated with no access points so this resource is currently not available for recreation activities. The nearest access point to Lake Jackson is the county maintained boat ramp on Crowder Road.

Natural Scenery

The scenery from atop the mounds is exceptional from both a historical and natural resource viewpoint. The Butler Mill Trail travels through lush hardwood hammock with several steepheads and ravines that provide additional opportunities for nature observation and photography.

Archaeological and Historical Features

The most significant features of the park are the earthen mounds that were occupied between A.D. 1050 or 1100 and 1500. The mounds are arranged on both sides of Butler's Mill Creek. The mounds range in size from 3 to 36 feet high. Evidence of homesites, village areas, and burial grounds have been found at the site. The archaeological site is one of the 10 largest Mississippian mound centers in the lower Southeast. The historic significance of the mounds is the main focus of the recreation/education activities at the park. However, the park is also home to a historic plantation which existed circa A.D. 1825 through 1870. Evidence of that time period includes a gristmill site.

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

Past uses of Lake Jackson Mounds revolved around the various Native American cultures that occupied the site. Native Americans known as the Mississippian culture and a tribe known as the Apalachee used the site for hunting, fishing, and farmsteading. In the 1800's the area was used as a plantation. In more recent history, part of the property was used as a single-family residence and a mobile-home park development.

Recreational Uses

The current recreational uses of the site include picnicking, hiking, wildlife observation, and historical interpretation. The main focus of the site is the archaeological resources, which allow visitors to learn about an ancient Native American civilization. In addition, Butler's Mill Trail provides a scenic walk through a mixed hardwood ravine along an earthen dike and gristmill dam built in the 1800's.

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 Lake Jackson Mounds Archaeological State Park, the known cultural areas have been designated as protected zones as well as the slope forest, bottomland forest, and seepage

INDIAN MOUND ROAD

RESIDENCE

POLE BARN

RESIDENCE

SHED

SHOP

RESTROOM

INTERPRETIVE PAVILON

PICNIC AREA

INDIAN MOUNDS

OBSERVATION DECK & STAIRWAY

EQUIPMENT SHELTER

RESIDENCE

BUTTER MILL TRAIL

DORIS DRIVE

LEGEND
- County Road
- Park Road Paved
- Park Road Unpaved
- Park boundary
- HikingTrails
- Waterbodies
- Special use areas
- Structures
- Parking lots

N

300 0 300 600 Feet

LAKE JACKSON MOUNDS ARCHAEOLOGICAL STATE PARK

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

BASE MAP

stream as delineated on the Natural Communities Map.

Existing Facilities

Recreation facilities. Currently, the list of park facilities includes an education pavilion, nine picnic tables, and the Butler's Mill Trail.

Support facilities. Support facilities include a restroom, a shop/equipment center, three residences, four utility buildlings, and a parking lot with 45 spaces.

CONCEPTUAL LAND USE PLAN

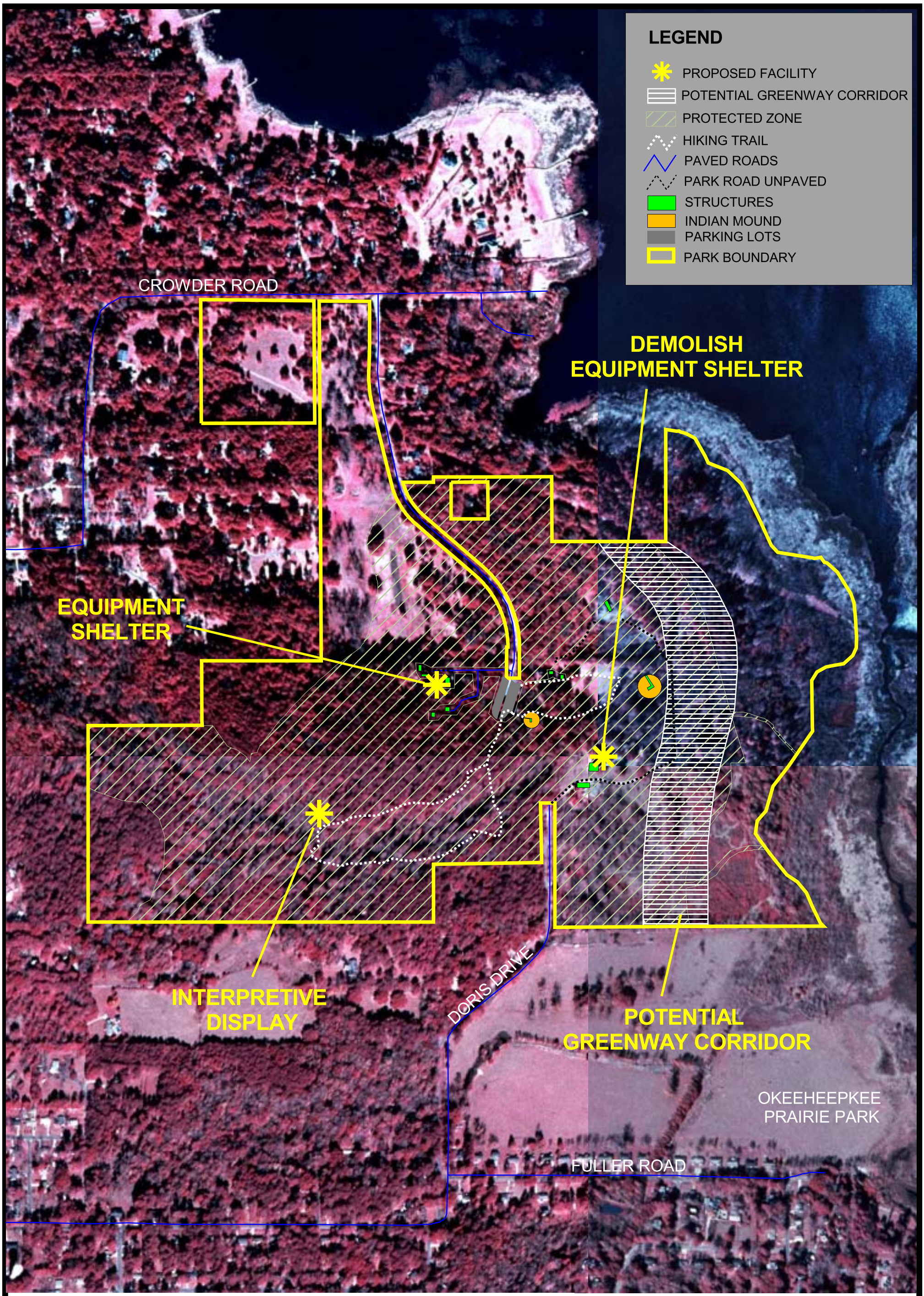
The following narrative represents the current conceptual land use proposal for this park. As new information is provided regarding the environment of the park, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions (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 an archaeological state park, the primary emphasis is placed on protection and interpretation of the site's archaeological resources. Park personnel need to establish a Statement for Interpretation to guide the future development of the interpretive program. A Statement for Interpretation will provide a framework for addressing interpretive programming by identifying interpretive themes, theme statements, objectives, priorities and management concerns to guide the focus of interpretation at Lake Jackson Mounds Archaeological State Park.

The Resource Management Component identifies the need to develop a cultural landscape study that would guide future resource management decisions and inform interpretive programming for the site. This study should summarize the findings from archaeological surveys and historic research, providing detail on significant elements of the cultural landscape and offering recommendations for their management and interpretation. These recommendations should be used to guide the future planning and design for Lake Jackson Mounds Archaeological State Park. Specifically, the plan should address the restoration of the mound and plaza area, the restoration of the park's hydrology, the development of a comprehensive interpretive program, visitor circulation, mound access, and appropriate use of the property. Development of the cultural



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

LAKE JACKSON MOUNDS ARCHAEOLOGICAL STATE PARK

CONCEPTUAL LAND USE PLAN

landscape study should be coordinated by park staff with assistance from the District and Bureau of Natural and Cultural Resources.

Recreational uses should be compatible with resource preservation objectives. The current recreational activities of hiking, nature observation, picnicking and cultural site interpretation should continue at the archaeological site. The following is also recommended:

Recreation Facilities

Interpret Gristmill Site. An interpretive display should be placed at the site of the gristmill on the Butler's Mill Trail. The display should include information regarding the plantation era of the area.

Potential Greenway Connection. The City of Tallahassee is currently developing a bicycle and pedestrian masterplan that is considering opportunities for developing a greenway along the west side of Lake Jackson. As part of this initiative, there is interest to develop a paved, shared-use trail that connects neighborhoods north of the State Park to the proposed Okeeheepkee Prairie County Park and into central Tallahassee. The concept of a greenway connection through the park is supported by the Division of Recreation and Parks.

Due to the sensitivity of the natural and cultural resources of the property, the interpretive function of the archaeological site, and concerns related to park operations, the area east of the mounds has been tentatively identified as having the greatest potential for routing a trail. A cultural landscape study should address the greenway concept and make recommendations on its location. A final decision on including the park within the greenway corridor will be made by the Division upon consideration of the cultural landscape study findings. Successful implementation of this trail linkage will require Division coordination with the Tallahassee-Leon County Planning Department and the Leon County Public Works – Parks and Recreation Division.

Promote/Market Tallahassee Heritage Tour. There is an opportunity to capitalize on the close proximity of numerous prehistoric and historic sites under state management. Letchworth Mounds, Lake Jackson Mounds, DeSoto Site, San Marcos de Apalachee, Natural Bridge Battlefield, Tallahassee-St. Marks Historic Railroad Trail, Maclay Gardens, and Edward Ball Wakulla Springs State Parks as well as Mission San Luis de Apalachee collectively convey the long history of inhabitation of the Tallahassee area. Promoting these sites as stops along a Heritage Tour should increase visitation while providing a more thorough and accurate depiction of the history of the area. Publication of a brochure to be made available at each site is recommended to market the Heritage Tour. In preparation of this effort, each site should revisit their interpretation program to ensure they are adequately telling their portion of the story of Tallahassee's heritage.

Support Facilities

Replacement of Equipment Shelter. The old storage garage south of the plaza is in disrepair. This building should be demolished and replaced with a new 2/3 bay equipment shelter in the current maintenance area. The demolition of the old garage is contingent on the construction of the new pole barn.

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 Sign

Support Facilities

3 Bay Equipment Shelter
Demolish Old Equipment Shelter

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.

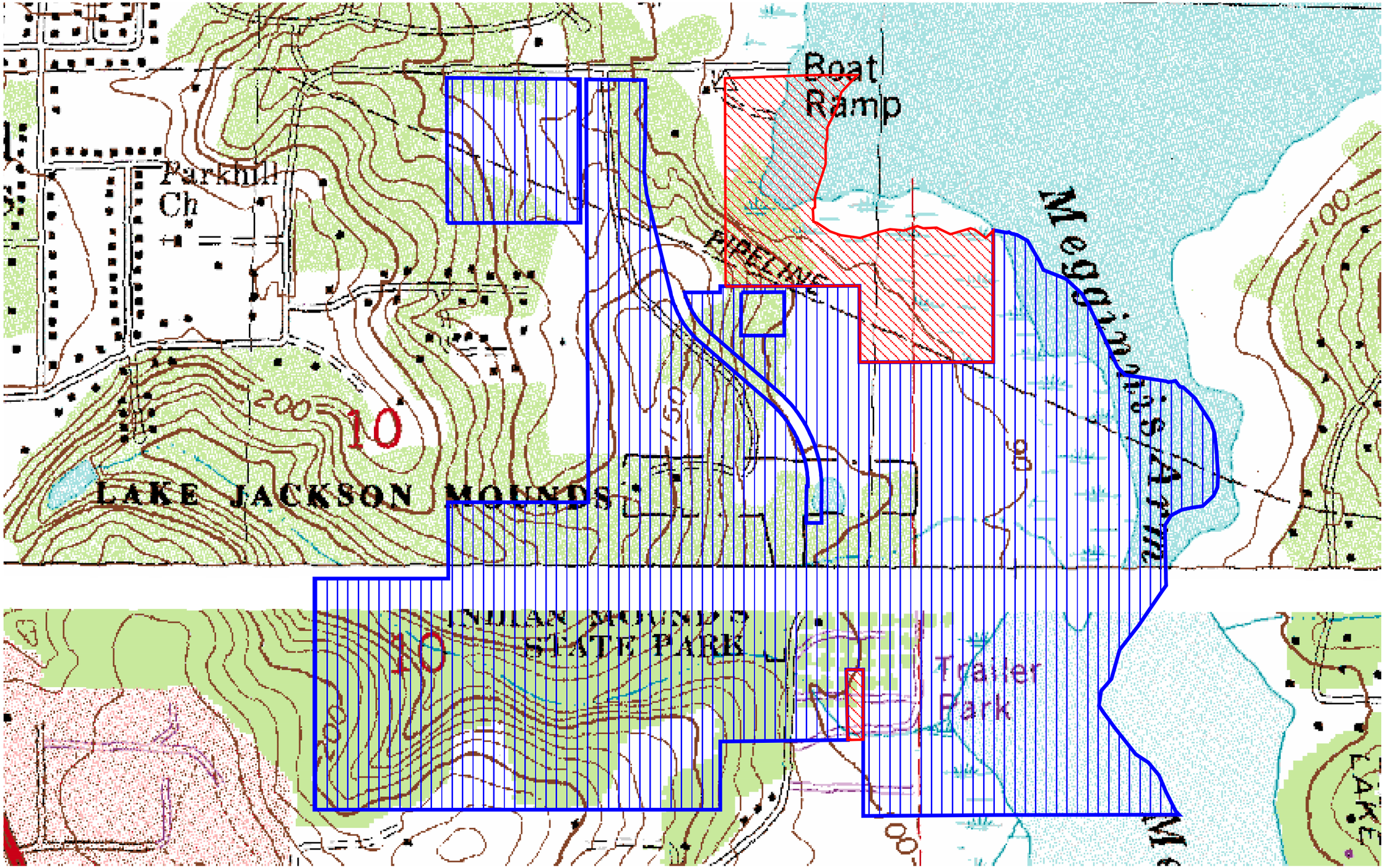
Table 1--Existing Use And Optimum Carrying Capacity

	Existing Capacity		Proposed Additional		Estimated Optimum	
Activity/Facility	One Time	Daily	One Time	Daily	One Time	Daily
Interpretive Programs	30	120			30	120
Trails						
Nature	30	120			30	120
Picnicking	36	72			36	72
TOTAL	**96**	**312**	**0**	**0**	**96**	**312**

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



200 0 N 200 400 Feet

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

LEGEND
Optimum Boundary
Park Boundary

LAKE JACKSON MOUNDS ARCHAEOLOGICAL STATE PARK

OPTIMUM BOUNDARY MAP

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.

Approximately 22 acres of land to the northeast of the current park has been identified as desirable for acquisition. Acquisition of this land will not only protect known cultural resources, it will also enhance the park's boundaries for management purposes and will allow for increased public recreational use of Lake Jackson. In addition, the end of Doris Drive which is bordered on both sides by park property has been identified for acquisition. Acquiring this land would provide greater security for the nearby ranger residence and will eliminate an area known to host illegal activities. At this time, no lands are considered surplus to the needs of the park.

Addendum 1—Acquisition History and Advisory Group Staff Report

Purpose and Sequence of Acquisition

The State of Florida has acquired Lake Jackson Mounds Archaeological State Park to develop, operate, and maintain the property for the outdoor recreation, park, conservation, historic, and related purposes.

On May 26, 1966, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) obtained title to the property known as Lake Jackson Mounds Archaeological State Park. The Trustees purchased the property using LATF funds. On August 2, 1966, the Trustees conveyed its management authority of the park to the Division of Recreation and Parks (DRP), under Lease No. 2530 for a period of ninety-nine (99) years. Since the establishment of Lake Jackson Mounds Archaeological State Park, the Trustees have acquired several additional parcels and added them to the park using LATF, P2000 A and I funds, and through a donation.

According to the Trustees lease, the Division manages Lake Jackson Mounds Archaeological State Park only for the development, conservation and protection of natural and cultural resources and for resource-based public outdoor recreation, which is compatible with the conservation and protection of the property.

Title Interest

The Trustees hold fee simple title to Lake Jackson Mounds Archaeological State Park.

Special Conditions On Use

Lake Jackson Mounds Archaeological 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, storm-water management projects, and linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in the park's unit management plan) are not consistent with this plan or the management purposes of the park.

Outstanding Reservations

There are no outstanding rights, uses or reservations that apply to the park.

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Leon County Board of County Commissioners
Leon County Courthouse
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Mr. Roy Kelly
1573 Crowder Road
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Joe Quetone, Executive Director
Florida Governor's Council on Indian Affairs
1341 Cross Creek Circle
Tallahassee, FL 32301

The Advisory Group meeting to review the proposed land management plan for Lake Jackson Mounds Archaeological State Park was held in the Marjorie Stoneman Douglas Building on August 12, 2003. Tom Nobles represented Wes Smith, Judith Dougherty represented the Honorable Dan Winchester, and George Fisher represented Tyler Macmillan. Joe Quetone, Karen Lamonte, and Roy Kelly did not attend. Nancy McGrath, President of the Friends of Lake Jackson, was also in attendance. All other appointed Advisory Group members were present. Attending staff were Ed Higgins, John McKenzie, Triel Lindstrom, John Scafidi, Tom Nobles, Michael Kinnison, 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

Terry Tenold expressed his support for the improvements to the Butler Mill Trail and the enhancement of interpretation at the park. He believes that additional interpretation may attract more Florida Trail Association members, but the park should be mindful of park's carrying capacity. He is in favor of the proposed shared-use trail, but thinks it is too short for bicyclists. He also suggested that adequate signage should eliminate user conflicts and inappropriate use along the trails. He then asked if the proposed trail would be paved. Brian Burket responded that the proposed shared-use loop trail would follow existing cleared corridors within the former mobile home park and would not be paved.

Daniel Stanley asked if the park had a prescribed burn plan. John McKenzie responded that the park does not have a burn plan since it is mostly composed of slope forest. Mr. Stanley stated that he noticed a high level of fuel load in some areas and that burning could improve the slope forest community. He then referred to the "Talking Tree Trail" as an example of how an interpretive trail can be designed. He also expressed caution towards user conflicts on shared-use trails.

Mike Wisenbaker was pleased that the plan included a proposal for more interpretation and the promotion of a heritage tour. He encouraged the park service to be sensitive to the park's cultural resources when planning trail routes. He also reminded the staff that they will need to record a site file form for the Butler Mill Trail with the Florida Master Site File.

George Fisher is pleased how the park serves as a buffer for Lake Jackson.

Kathy Archibald wondered if the property identified as optimum boundary contains significant cultural resources. Triel Lindstrom responded that the property is likely an extension of the village area. Ms. Archibald commented that restoring the natural flow of the stream through the park would not result in significant improvement for the park's natural resources. She questioned the cost efficiency of such an undertaking. John Scafidi replied that the primary reason to restore the natural hydrology of the park is to restore the cultural landscape of the plaza area to how it looked during Native American occupation between A.D. 1100 to 1500. Ms. Archibald remarked out that the cost estimate addendum does not seem to include all of what is proposed in the plan. She also requested more information regarding the duties of proposed additional staffing. She also pointed out that not all of the cited references in the plan are listed in the References Cited Addendum. She then stated that the park has potential to host large gatherings for cultural events and education programs.

John Harvey is impressed with the Butler Mill Trail and is glad to see the park addressing the erosion problems. He believes there is potential to extend the Butler Mill Trail to the west and would like the Division of Recreation and Parks to consider a trail along the ravine's ridge that would turn north and head through the improved pasture. He announced that he is working with the City of Tallahassee and Leon County on the bike-pedestrian routes for their 25-year master plan, and he is looking for a route that would connect neighborhoods north of the park to neighborhoods south of the park. He supports

the idea of establishing a trail linkage with the Okeeheepkee Prairie Park but sees no advantages for creating a one-mile loop trail in the former mobile home park. It is not attractive and seems pointless since it does not connect to the main use areas of the park. He suggested that the city and county might be able to help the state acquire the optimum boundary property along Lake Jackson's shore in an effort to establish a greenway linkage to Crowder Road. He then reiterated the importance of establishing a greenway connection between neighborhoods north and south of the park and ultimately to downtown Tallahassee. Establishing a link is an important and appropriate use of public land. Mike Kinnison responded by stating that the Division supports greenway linkages but acknowledged there would be some resource protection and operational concerns for establishing a route through Lake Jackson Mounds Archaeological State Park. Furthermore, the Division would have to determine the most appropriate route through the state park. The management plan will be amended to reflect the Division's support of the proposed greenway.

Larry Thompson stated that the appreciation and protection of the cultural resources should come before expanding recreational opportunities. He presented a birding guide for the Lake Jackson area that was published by the Audubon Society, and he noted that it intentionally avoids promoting the state park to fellow birders due to its cultural sensitivity. But, he mentioned that it could be added in the next version if requested by the park. He recommended that information be posted at the Butler Mill Trailhead regarding the trail's length and condition. Providing birding checklists could draw birders to this unique habitat. Listing the birds in phylogenic order in the plan would be helpful for birders. Then, in response to a request made at the previous night's public meeting, he asked that parking be provided off Doris Drive if a second entrance is established from the south.

Mike Bristol likes the Heritage Tour idea and would like to work with whoever puts the proposed brochure together. The Tallahassee Area Convention and Visitors Bureau is developing a website to promote driving tours in the Tallahassee area.

Linda Jamison shared a comment from a local Native American friend that the park is such an extremely important site that only 1% of its potential has been tapped. She asked staff to be sensitive to gopher tortoise burrows when planning trails within the park. She commented that the park's priority should be to provide opportunities for passive rather than active pursuits. She also suggested that archaeologists should research and provide interpretation regarding the life of the common people that inhabited the area in addition to focusing on the leaders. She raised some concern for bike use within the park. She suggested a bike rack be placed at the end of Doris Drive if an alternative entrance is established. She also suggested that a birding list should come with a carbon copy to provide the staff with visitors' records of sightings. She recommended building a vegetative screen along the path of the greenway in areas where gaps appear. She asked if the greenway trail would use existing cleared corridors. Mr. Burket stated that using existing corridors would be preferred over cutting new trails as long as the route does not jeopardize the known cultural resources. Ms. Jamison offered to supply the park with interns from Florida State University to do environmental work, if requested. She concluded by stating that she believes environmental groups might support clearing some trees between the mounds and lake if they understand the purpose is to reestablish the cultural viewshed.

Judith Dougherty stated that the county is pleased to see all the public land surrounding and protecting Lake Jackson. She also supports the idea to develop a trail linkage with the proposed Okeeheepkee Prairie Park. She recommends making the trails within the park as accessible to elderly and disabled citizens as possible. She has some concerns that a greenway trail might adversely impact turtles. She agrees with the statements that the cultural resources should be the focus of the park. She also believes the park should avoid organizing large gatherings.

Summary of Public Comments

Nancy McGrath encouraged the park to maintain its traditional use when visitation increases. She is

concerned that new recreational activities might lead to the park becoming an entertainment center and a gathering place for the community. Everything at the park should reflect its historic and cultural significance. She reminded the advisory group that Lake Jackson is the only freshwater lake preserve in the nation and Megginnis Arm is a major nesting area for alligators, turtles, and many species of birds. She is concerned that the Interstate 10 widening project will result in sedimentation of Lake Jackson. She wants to work with DEP to protect the park and the lake. She believes the greenway idea has much potential but must be carefully planned so it will not interfere with the existing use of the state park and not draw too many people to the park. She also suggests that the viewshed from the plaza area could be restored by clearing the understory between the mounds and the lake rather than removing the tall trees.

Staff Recommendations

Staff recommends approval of the proposed management plan for Lake Jackson Mounds Archaeological State Park as presented with the following changes.

Potential Greenway Linkage. Remove the proposed shared-use trail idea from the Conceptual Land Use Plan and add the following language:

- The City of Tallahassee is currently developing a bicycle and pedestrian masterplan that is considering opportunities for developing a greenway along the west side of Lake Jackson. As part of this initiative, there is interest to develop a paved, shared-use trail that connects neighborhoods north of the State Park to the proposed Okeeheepkee Prairie County Park and into central Tallahassee. The concept of a greenway connection through the park is supported by the Division of Recreation and Parks.

  Due to the sensitivity of the natural and cultural resources of the property, the interpretive function of the archaeological site, and concerns related to park operations; the area east of the mounds has been tentatively identified as having the greatest potential for routing a trail. A cultural landscape study should address the greenway concept and make recommendations on its location. A final decision on including the park within the greenway corridor will be made by the Division upon consideration of the cultural landscape study findings. Successful implementation of this trail linkage will require Division coordination with the Tallahassee-Leon County Planning Department and the Northwest Florida Water Management District.

Addendum 2—References Cited

Bureau of Economic and Business Research (BEBR), University of Florida. 2001. Florida Statistical Abstract 2001. Gainesville, Florida.

Florida Department of Environmental Protection. 2002. Florida State Park System Economic Impact Assessment for Fiscal Year 2001/2002. Tallahassee, Florida.

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Leon County. 2002. Leon County Comprehensive Plan 2002. Leon County, Florida.

Payne, Claudine. History of the Lake Jackson Mound Group and the Surrounding Area (draft), 1990. transmitted as a personal communication

U.S.D.A. 1979 Soil Survey of Leon County, Florida. Soil Conservation Service in cooperation with the University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations, and Soil Science Department; Walton County Board of County Commissioners; and Florida Department of Agriculture and Consumer Services

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Addendum 3--Soil Descriptions

Orangeburg Series - Orangeburg series consists of well drained, moderately permeable, gently sloping to strongly sloping soils on rolling uplands and hillsides. The formed in loamy and clayey deposits. Slopes range from 2 to 12 percent. The water table is below a depth of 72 inches. These soils are fine-loamy, siliceous, thermic Typic Paleudults.

Orangeburg soils are closely associated with Blanton, Lucy, Norfolk, and Troup soils. Blanton soils have an A horizon more than 40 inches thick and are not as well drained as Orangeburg soils. Norfolk soils have a yellowish Bt horizon. Lucy and Troup soils have an A horizon more than 40 inches thick.

Typical profile of Orangeburg fine sandy loam in wooded area 3,000 feet northwest of Woods road at rear of Maclay Gardens where powerline crosses Maclay Road, NW1/4SE1/4 sec. 31, T. 2 N., R. 1 E.

A1 - 0-5 inches; brown (7.5YR 4/2) fine sandy loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; clear smooth boundary.

B1t - 5-10 inches; yellowish red (5YR 4/8) fine sandy loam; weak fine subangular blocky structure; friable; few dark brown (7.5YR 3/2) stains; many fine and medium roots; medium acid; clear smooth boundary.

B21t - 10-16 inches; yellowish red (5YR 5/6) sandy clay loam; moderate medium subangular structure; friable; many medium and few fine roots; few clay films on faces of peds; strongly acid; gradual smooth boundary.

B22t - 16-41 inches; red (2.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few medium roots; few clay films on faces of peds; strongly acid; gradual smooth boundary.

B23t - 4-80 inches; red (2.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few medium roots; patchy clay films on faces of peds; stronly acid.

Plummer Series - The Plummer series consists of poorly drained, moderately permeable, nearly level soils on broad low areas, in poorly defined drainageways, and in depressional areas. They formed in marine or fluvial sediments. Slopes range from 0-2 percent. The water table is at the surface or within a depth of 15 inches for 3-6 months in months or more. These soils are loamy, siliceous, thermic Grossarenic Paleaquults.

Plummer soils are closely associated with Leon, Pelham, and Rutledge soils. Leon soils are on slightly higher position, have spodic horizon, and are sandy to a depth of 80 inches or more. Pelham soils have an argillic horizon between depths of 20 and 40 inches. Rutlege soils have an umbric epipedon and are sandy throughout.

Typical pedon of Plummer fine sand in an idle area along Lake Jackson, 50 feet south of Longview Drive, and 300 feet from Lake Jackson, SE 1/4NE1/4 sec.4, T. 1N., R. 1 W.

A11 - 0-6 inches; very dark grayish brown (10YR 3/2) fine sand; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear wavy boundary.

A12 - 6-17 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; strongly acid clear wavy boundary.

A21g - 17-28 inches; gray (N 5/0) fine sand; single grained; loose; strongly acid; gradual wavy boundary.

A22g - 28-36 inches; gray (5Y 6/1) fine sand; few fine prominent strong brown (7.5 YR 5/8) mottles; single grained; loose strongly acid gradual wavy boundary.

A23g - 36-61 inches; light gray (10YR 7/1) fine sand; single grained; loose; few coarse slightly

cemented nodules; medium acid; gradual wavy boundary.

B2tg - 61-80 inches; light gray (10YR 7/1) fine sandy loam; common fine prominent yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; friable; sand grains bridged with clay, strongly acid.

Addendum 4--Plant And Animal List

Lake Jackson Mounds Archaeological State Park

Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for designated species)
Resurrection fern	*Polypodium polypodioides michauxianum*	
Bracken fern	*Pteridium aquilinum*	
Royal fern	*Osmunda regalis*	
Atlantic white-cedar	*Chamaecyparis thyoides*	
Southern red cedar	*Juniperus silicicola*	
Slash pine	*Pinus elliotii*	
Shortleaf pine	*Pinus echinata*	
Loblolly pine	*Pinus taeda*	
Bald cypress	*Taxodium distichum*	
Broomsedge	*Andropogon* sp.	
Sandspur	*Cenchrus sp.*	
Dayflower	*Commelina diffusa*	
Redroot	*Lachnanthese caroliniana*	
Beargrass	*Nolina atopocarpa*	
Maidencane	*Panicum hemitomon*	
Pickerelweed	*Pontedaria cordata*	
Bluestem	*Sabal minor*	
Cabbage palm	*Sabal palmetto*	
Duck potato	*Sagittaria latifolia*	
Saw palmetto	*Serenoa repens*	
Spanish-moss	*Tillandsia usneoides*	
Red buckeye	*Aesculus pavia*	
Mimosa*	*Albizia julibrissin*	
Dogfennel	*Anthemus cotula*	
Devil's Walkingstick	*Aralia spinosa*	
Coral ardisia*	*Ardisia crenata*	
Spanish needles; Beggar-ticks	*Bidens alba* var. *radiata*	
Gum bumelia	*Bumelia lanuginosa*	
American beautyberry	*Callicarpa americana*	
Pignut hickory	*Carya glabra*	
Pecan	*Carya illinoisensis*	
Mockernut hickory	*Carya tomentosa*	
Sickle-pod	*Cassia obtusifolia*	
Butterfly-pea	*Centrosema virginianum*	
Buttonbush	*Cephalanthos occidentalis*	
Eastern-redbud	*Cercis canadensis*	
Spurge; Sandmat	*Chamaesyce sp.*	
Fringetree	*Chionanthus virginicus*	
Bull thistle	*Cirsium vulgare*	
Tread softly	*Cnidoscolus stimulosus*	
Flowering dogwood	*Cornus florida*	
Persimmon	*Diospyros virginiana*	
Elephant's foot	*Elephantopos* sp.	
Daisy fleabane	*Erigeron* sp.	
Southeastern coral bean; Cherokee bean; Cardinal-spear	*Erythrina herbacea*	
American beech	*Fagus grandifolia*	
Yellowtops	*Flaveria spp.*	
Carolina cranesbill	*Geranium carolinianum*	
Bitterweed	*Helenium amarum*	
Camphorweed	*Heterotheca subaxillaris*	

*** Non-native Species**

Lake Jackson Mounds Archaeological State Park

Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for designated species)
Dahoon holly	*Ilex cassine*	
Tall gallberry	*Ilex coriacea*	
Gallberry	*Ilex glabra*	
American holly	*Ilex opaca*	
Yaupon holly	*Ilex vomitoria*	
Railroad vine; Bay-hops	*Ipomoea pes-caprae*	
Henbit	*Lamium amplexicaule*	
Gopher-apple	*Licania michauxii*	
Japanese privet*	*Ligustrum japonicum*	
Glossy privet*	*Ligustrum lucidum*	
Chinese privet*	*Ligustrum sinense*	
Toadflax	*Linaria canadensis*	
Sweetgum	*Liquidambar styraciflua*	
Tulip tree	*Liriodendron tulipifera*	
Southern Magnolia	*Magnolia grandiflora*	
Sweetbay	*Magnolia virginiana*	
Partridgeberry	*Mitchella repens*	
Red mulberry	*Morus rubra*	
Wax myrtle; Southern bayberry	*Myrica cerifera*	
Odorless wax-myrtle	*Myrica inodorata*	
Blackgum	*Nyssa biflora*	
Prickly-pear cactus	*Opuntia compressens*	
Yellow woodsorrel	*Oxalis corniculata*	
Violet woodsorrel	*Oxalis corymbosa*	
Virginia creeper; Woodbine	*Parthenocissus quinquefolia*	
Maypops, Passionflower	*Passiflora incarnata*	
Redbay	*Persea borbonia*	
Pokeweed	*Phytolacca americana*	
Sycamore	*Platanus occidentalis*	
Bachelor's button	*Polygala* sp.	
Wild plum	*Prunus americana*	
Turkey oak	*Quercus laevis*	
Water oak	*Quercus nigra*	
Live oak	*Quercus virginiana*	
Laurel oak	*Quercus hemisphaerica*	
Meadow beauty	*Rhexia* sp.	
Wild azalea	*Rhododendron canescens*	81, 82
Swamp honeysuckle	*Rhododendron viscosum*	
Winged sumac	*Rhus copallina*	
Lyre leaved sage	*Salvia lyrata*	
Greenbrier; Catbrier	*Smilax sp.*.	
Venus' looking glass	*Specularia perfoliata*	
Common chickweed	*Stellaria media*	
Blue curls	*Trichostema setaceum*	
Trillium	*Trillium maculatum*	
Lance-leaved trillium	*Trillium lancifolium*	18
Poison ivy	*Toxicodendron radicans*	
Woody mullein	*Verbascum thapsus*	
Ironweed	*Vernonia* sp.	
Violet	*Viola repens*	
Muscadine	*Vitis rotundifolia*	

*** Non-native Species**

Lake Jackson Mounds Archaeological State Park
Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for all species)
	ANNELIDA	
Earthworm	*Lumbricus terrestris*	throughout
	ARTHROPODS	
Black Widow Spider	*Latrodectus mactans*	21, 81,82
Crab-like Spiny Orb Weaver	*Gasteracantha cancriformis*	21,28,81,82
Golden-silk Spider	*Nephila clavipes*	18,21,28,81,82
Carolina Wolf Spider	*Lycosa carolinensis*	21,28,81,82
Daddy-long-legs	*Leiobunum sp.*	Throughout
Deer Tick	*Ixodes scapularis*	Throughout
Ebony Jewelwing Damselfly	*Calopteryx maculata*	54
Common Green-darter Dragonfly	*Anax junius*	Throughout
Regal Darner Dragonfly	*Coryphaeschna ingens*	Throughout
Palmetto Walkingstick	*Anismorpha buprestoides*	Throughout
Southeastern Lubber Grasshopper	*Romalea microptera*	Throughout
Broad-winged Katydid	*Microcentrum rhombifolium*	Throughout
House Cricket	*Acheta domestica*	Throughout
Field Cricket	*Gyrillus pennsylvanicus*	Throughout
Northern Mole Cricket	*Gryllotalpa hexadactyla*	Throughout
Carolina Mantid Praying Mantis	*Stagmommantis carolina*	Throughout
American Cockroach	*Periplaneta americana*	Throughout
German Cockroach	*Blattella germanica*	Throughout
Eastern Subterranean termite	*Reticulitermis flavipes*	Throughout
Two-spotted Lady Beetle	*Adalia bipunctata*	Throughout
Pyralis Firefly	*Photinus pyralis*	Throughout
Zebra Swallowtail Butterfly	*Eurytides marcellus*	Throughout
Black Swallowtail Butterfly	*Papilio polyxenes*	Throughout
Giant Swallowtail Butterfly	*Papilio cresphontes*	Throughout
Eastern Tiger Swallowtail	*Papilio glaucus*	Throughout
Palamedes Swallowtail Butterfly	*Papilio palamedes*	Throughout
Orange Sulphur Butterfly	*Colias eurytheme*	Throughout
Cloudless Sulphur Butterfly	*Phoebis sennae*	Throughout
Little Yellow Butterfly	*Eurema lisa*	Throughout
Gulf Fritillary Butterfly	*Agraulis vanillae*	Throughout
Common Buckeye Butterfly	*Junonia coenia*	Throughout
Viceroy Butterfly	*Limenitis archippus*	Throughout
Monarch Butterfly	*Danaus plexippus*	Throughout
Common Checkered Skipper	*Pyrgus communis*	Throughout
Deer Fly	*Chrysops sp.*	Throughout
Black Horse Fly	*Tabanus atratus*	Throughout
House Fly	*Musca domestica*	Throughout
Love Bug	*Plecia nearctica*	Throughout
Summer Mosquitoes	*Aedes sp.*	Throughout
House Mosquitoes	*Culex pipiens*	Throughout
Cow Killer "Velvet Ant"	*Dasymutilla occidentalis*	21
Red Fire Ant	*Solenopsis invicta*	21,81,82
Eastern Yellow Jacket	*Vespula maculifrons*	21
Honey Bee	*Apis mellifera*	Throughout

*** Non-native Species**

Lake Jackson Mounds Archaeological State Park

Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for all species)
American Bumble Bee	*Bombus pennsylvanicus*	Throughout
Oak Gallmaking Cynipids	*Amphibolips quercusracemaria*	21
	Andricus quercusfoliatus	21
	Andricus quercuspetiolicola	21
	Belonocnema quercussvirens	21
	Callirhytis cornigera	21
	Callirhytis quercusbatatoides	21
	Callirhytis quercusrugosa	21
	Callirhytis quercusventricosa	21
	Callirhytis seminator	21
	Dryocosmus nova	21
	Dryocosmus quercuslaurifoliae	21
	Dryocosmus quercusnotha	21
	Disholcaspis quercusglobulus	21
	Disholcaspis quercussuccinipes	21
	Disholcaspis quercusvirens	21
	Neuroterus nova	21
	Neuroterus quercusbatatus	21
	Xystoteras sp.	21
	FISH	
Mosquitofish	*Gambusia holbrooki*	54
Least Killifish	*Heterandria formosa*	54
	AMPHIBIANS	
Southern toad	*Bufo terrestris*	21
Squirrel treefrog	*Hyla squirella*	21
Green treefrog	*Hyla cinerea*	54
Slimy salamander	*Plethodon glutinosus*	54
Spring peeper	*Pseudacris crucifer*	18,54
Southern cricket frog	*Acris crepitans blanchardi*	54
Southern leopard frog	*Rana utricularia*	54
Eastern narrowmouth toad	*Gastrophryne carolinensis*	21
	REPTILES	
American alligator	*Alligator mississippiensis*	21
Gopher tortoise	*Gopherus polyphemus*	22
Alligator snapping turtle	*Macroclemys temminckii*	21
Common musk turtle	*Sternotherus odoratus*	21
Box turtle	*Terrapene carolina*	21
Green anole	*Anolis carolinensis carolinensis*	21
Six-lined racerunner	*Cnemidophorus sexlineatus sexlineatus*	21
Southeastern five-lined skink	*Eumeces inexpectatus*	
Eastern glass lizard	*Ophisaurus ventralis*	21
Eastern fence lizard	*Scleroporus undulatus*	21
Florida cottonmouth	*Agkistrodon piscivorus floridanus*	54, lakeshore
Eastern cottonmouth	*Agkistrodon piscivorus piscivorus*	54, lakeshore
Southern black racer	*Coluber constrictor priapus*	21
Eastern diamondback rattlesnake	*Crotalus adamanteus*	81, 21
Yellow rat snake	*Elaphe obsoleta quadrivittata*	21
Eastern coachwhip	*Masticophis flagellum flagellum*	81, 21

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for all species)
Dusky pigmy rattlesnake	*Sistrurus miliarius barbouri*	81, 21
	BIRDS	
Pied-billed grebe	*Podilymbus podiceps*	Lake Jackson
Horned Grebe	*Podiceps auritus*	Lake Jackson
American white pelican	*Pelecanus erythrorhynchos*	Lake Jackson
Double-crested cormorant	*Phalacrocorax auritus*	Lake Jackson
Anhinga	*Anhinga anhinga*	Lake Jackson
Great blue heron	*Ardea herodias*	Lake Jackson
Green heron	*Butorides virescens*	Lake Jackson
Cattle egret	*Bubulcus ibis*	Lake Jackson
Great egret	*Casmerodius albus*	Lake Jackson
Little blue heron	*Egretta caerulea*	Lake Jackson
Reddish egret	*Egretta rufescens*	Lake Jackson
Snowy egret	*Egretta thula*	Lake Jackson
Tricolored heron	*Egretta tricolor*	Lake Jackson
Yellow-crowned night heron	*Nycticorax violaceus*	Lake Jackson
Wood duck	*Aix sponsa*	Overflying
Northern pintail	*Anas acuta*	Overflying
American wigeon	*Anas americana*	Overflying
Northern shoveler	*Anas clypeata*	Overflying
Green-winged teal	*Anas crecca*	Overflying
Cinnamon teal	*Anas cyanoptera*	Overflying
Blue-winged teal	*Anas discors*	Overflying
Gadwall	*Anas strepera*	Overflying
Lesser scaup	*Aythya affinis*	Overflying
Redhead	*Aythya americana*	Overflying
Ring-necked duck	*Aythya collaris*	Overflying
Canvasback	*Aythya valisineria*	Overflying
Canada goose	*Branta canadensis*	Overflying
Bufflehead	*Bucephala albeola*	Overflying
Common goldeneye	*Bucephala clangula*	Overflying
Red-breasted merganser	*Mergus serrator*	Overflying
Ruddy duck	*Oxyura jamaicensis*	Overflying
Turkey vulture	*Cathartes aura*	All types
Black vulture	*Coragyps atratus*	All types
Cooper's hawk	*Accipiter cooperii*	Overflying
Sharp-shinned hawk	*Accipiter striatus*	21
Red-tailed hawk	*Buteo jamaicensis*	Overflying
Red-shouldered hawk	*Buteo lineatus*	Overflying
Broad-winged hawk	*Buteo platypterus*	Overflying
Northern harrier	*Circus cyaneus*	Overflying
Southern bald eagle	*Haliaeetus leucocephalus*	Overflying
Osprey	*Pandion haliaetus*	Overflying
Merlin	*Falco columbarius*	Overflying
American kestrel	*Falco sparverius*	Overflying
Northern bobwhite	*Colinus virginianus*	21
Wild turkey	*Meleagris galopavo*	21
Black-necked stilt	*Himantopus mexicanus*	Lakeshore
Piping plover	*Charadrius melodus*	Lakeshore
Semipalmated plover	*Charadrius semipalmatus*	Lakeshore

*** Non-native Species**

Lake Jackson Mounds Archaeological State Park

Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for all species)
Black-bellied plover	*Pluvialis squatarola*	Lakeshore
Dunlin	*Calidris alpina*	Lakeshore
Least sandpiper	*Calidris minutilla*	Lakeshore
Long-billed dowitcher	*Limnodromus scolopaceus*	Lakeshore
Common snipe	*Gallinago gallinago*	Lakeshore
Lesser yellowlegs	*Tringa flavipes*	Lakeshore
Greater yellowlegs	*Tringa melanoleuca*	Lakeshore
Black tern	*Chilidonias niger*	Lakeshore
Laughing gull	*Larus atricilla*	21
Ring-billed gull	*Larus delawarensis*	21
Bonaparte's gull	*Larus philadelphia*	21
Least tern	*Sterna antillarum*	Lakeshore
Forster's tern	*Sterna forsteri*	21
Common ground-dove	*Columbina passerina*	21
Mourning dove	*Zenaida macroura*	21
Yellow-billed cuckoo	*Coccyzus americanus*	Lakeshore
Great horned owl	*Bubo virginianus*	21
Eastern screech-owl	*Otus asio*	21
Barred owl	*Strix varia*	21
Chuck-will's-widow	*Caprimulgus carolinensis*	21
Common nighthawk	*Chordeiles minor*	Overflying
Northern flicker	*Colaptes auratus*	21
Pileated woodpecker	*Dryocopus pileatus*	21
Red-bellied woodpecker	*Melanerpes carolinus*	21
Red-headed woodpecker	*Melanerpes erythrocephalus*	21
Yellow-bellied sapsucker	*Sphyrapicus varius*	21
Downy woodpecker	*Picoides pubescens*	21
Great crested flycatcher	*Myiarchus crinitus*	21
Eastern phoebe	*Sayornis phoebe*	21
Eastern kingbird	*Tyrannus tyrannus*	21
Barn swallow	*Hirundo rustica*	Overflying
Purple martin	*Progne subis*	21
Northern rough-winged swallow	*Stelgidopteryx serripennis*	21
Tree swallow	*Tachycineta bicolor*	Overflying
American crow	*Corvus brachyrhynchos*	All types
Fish crow	*Corvus ossifragus*	All types
Blue Jay	*Cyanocitta cristata*	All types
Marsh wren	*Cistothorus palustris*	21
Sedge wren	*Cistothorus platensis*	21
Carolina wren	*Thryothorus ludovicianus*	21
House wren	*Troglodytes aedon*	21
Winter wren	*Troglodytes troglodytes*	21
Gray catbird	*Dumetella carolinensis*	All types
Northern mockingbird	*Mimus polyglottos*	All types
Brown thrasher	*Toxostoma rufum*	All types
Hermit thrush	*Catharus guttatus*	All types
Wood Thrush	*Hylocichla mustelina*	All types
Blue-gray gnatcatcher	*Polioptila caerulea*	All types
Eastern bluebird	*Sialia sialis*	All types
American robin	*Turdus migratorius*	All types
European starling	*Sturnus vulgaris*	All types

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for all species)
Yellow-throated vireo	*Vireo flavifrons*	21
White-eyed vireo	*Vireo griseus*	21
Red-eyed vireo	*Vireo olivaceus*	21
Solitary vireo	*Vireo solitarius*	21
Red-winged blackbird	*Agelaius phoeniceus*	Lakeshore
Northern cardinal	*Cardinalis cardinalis*	21
Yellow-rumped warbler	*Dendroica coronata*	21
Yellow-throated warbler	*Dendroica dominica*	21
Blackpoll warbler	*Dendroica striata*	21
Prairie warbler	*Dendroica discolor*	21
Palm warbler	*Dendroica palmarum*	21
Common yellowthroat	*Geothlypis trichas*	21
Northern oriole	*Icterus galbula*	21
Orchard oriole	*Icterus spurius*	21
Brown-headed cowbird	*Molothrus ater*	21
Black and white warbler	*Mniotilta varia*	21
Scarlet tanager	*Piranga olivacea*	21
Summer tanager	*Piranga rubra*	21
Boat-tailed grackle	*Quiscalus major*	Lake Jackson
Common grackle	*Quiscalus quiscula*	21
Rufous-sided towhee	*Pipilo erythrophthalmus*	21
Ovenbird	*Seiurus aurocapillus*	21
American redstart	*Setophaga ruticilla ruticilla*	21
Eastern meadowlark	*Sturnella magna*	81
Tennessee warbler	*Vermivora peregrina*	21
Orange-crowned warbler	*Vermivora celata*	21
House finch	*Carpodacus mexicanus*	21
American goldfinch	*Carduelis tristis*	21
	MAMMALS	
Virginia oppossum	*Didelphis virginiana*	21
Nine-banded armadillo*	*Dasypus novemcinctus*	21
Marsh rabbit	*Sylvilagus palustris*	lakeshore
Eastern cottontail	*Sylvilagus floridanus*	21
House mouse*	*Mus musculus*	21
Black rat*	*Rattus rattus*	21
Gray squirrel	*Sciurus carolinensis*	21
Hispid cotton rat	*Sigmodon hispidus*	21
Coyote*	*Canis latrans*	All types
Bobcat	*Felis rufus*	All types
River otter	*Lutra canadensis*	21
Raccoon	*Procyon lotor*	All types
Gray fox	*Urocyon cinereoargenteus*	All types
Gray fox	*Vulpes vulpes*	All types

*** Non-native Species**

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. Terrestral 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.

Lake Jackson Mounds Archaeological State Park

Designated Species

Plants

Common Name/ *Scientific Name*	**Designated Species Status** FDA	USFWS	FNAI
Lance-leaved trillium *Trillium lancifolium*	LE		G3,S2

Lake Jackson Mounds Archaeological State Park

Designated Species

Animals

Common Name/ *Scientific Name*	Designated Species Status FFWCC	USFWS	FNAI
	REPTILES		
American alligator *Alligator mississipiensis*	LS	T(S/A)	G5,S4
Gopher tortoise *Gopherus polyphemus*	LS		G3,S3
	BIRDS		
Great egret *Ardea albus*			G5,S4
Little blue heron *Egretta caerulea*	LS		G5,S4
Reddish egret *Egretta rufescens*	LS		G5,S2
Snowy egret *Egretta thula*	LS		G5,S4
Tricolored heron *Egretta tricolor*	LS		G5,S4
Merlin *Falco columbarius*			G4,SU
American kestrel *Falco sparverius*	LT		G5T3T4,S3

Addendum 6—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. Cultural Landscape Study. **Estimated cost:** $50,000
2. Restore natural communities through exotic removal. 10 years. **Estimated cost:** $250,000.
3. Materials and construction cost associated with stabilizing washed out portion of the Butler Mill Trail. 0-5 years. **Estimated cost:** $25,000.
4. Survey listed species, monitor biota and designate protected zones. 0-5 years. **Estimated cost**: $15,000.
5. Educational and interpretive programs including integration with other cultural resources of the GEOpark. 0-10 years. **Estimated cost:** $15,000.

Administration

6. Increase staffing. 2-5 years. **Estimated cost**: $ 35,000.

Lake Jackson Mounds Archaeological State Park

Priority Schedule And Cost Estimates

Item	Quantity	Unit	Unit Price	Multiplier	Amount
Interpretive Improvements					
Interpretive Signs	1.000	ea.	$5,000.00	1.00	$5,000.00
Shop/Maintenance Area					
3 Bay Equipment Shelter	1.000	ea.	$125,000.00	1.00	$125,000.00
Demolish Equipment Shelter	1.000	LS	$20,000.00	1.00	$20,000.00
				Sub-Total	$150,000.00
			20 Percent Contingency Fee		$30,000.00
				Total	**$180,000.00**

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.

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 - 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Rockland Hammock - flatland with limestone substrate; mesic; subtropical; rare or no

fire; mixed tropical hardwoods, often with live oak.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Seepage Slope - wetland on or at base of slope with organic/sand substrate; maintained

by downslope seepage, usually saturated but rarely inundated; subtropical or temperate; frequent or occasional fire; sphagnum moss, mixed grasses and herbs or mixed hydrophytic shrubs.

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

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

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

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

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

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

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

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

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

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

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

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

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

Coastal Interdunal Swale - long narrow depression wetlands in sand/peat-sand substrate; seasonally inundated, fresh to brackish, still water; temperate; rare fire;

graminoids and mixed wetland forbs.

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

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

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

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

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

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

Flatwoods/Prairie Lake - generally shallow basin in flatlands with high water table; frequently with a 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 trogloxenic, troglophilic, and troglobitic organisms.

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

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

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

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

Unconsolidated Substrate - expansive subtidal, intertidal and supratidal area composed primarily of loose mineral matter (e.g., 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 spares, 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 Zoantharia (e.g., stony corals and black corals); includes deepwater bank reefs, fringing barrier reefs, outer bank reefs and patch reefs, some of which may contain distinct zones of assorted macrophytes, octocorals, & sponges.

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

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

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

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

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

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

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

DEFINITIONS OF TERMS Terrestrial and Palustrine Natural Communities

Physiography

Upland - high area in region with significant topographic relief; generally undulating
Lowland - low area in region with or without significant topographic relief; generally flat to gently sloping
Flatland - generally level area in region without significant topographic relief; flat to gently sloping
Basin - large, relatively level lowland with slopes confined to the perimeter or isolated interior locations
Depression - small depression with sloping sides, deepest in center and progressively shallower towards the perimeter
Floodplain - lowland adjacent to a stream; topography influenced by recent fluvial processes
Bottomland - lowland not on active floodplain; sand/clay/organic substrate

Hydrology

occasionally inundated - surface water present only after heavy rains and/or during flood stages
seasonally inundated - surface water present during wet season and flood periods
usually inundated - surface water present except during droughts

Climatic Affinity of the Flora

tropical - community generally occurs in practically frost-free areas
subtropical - community generally occurs in areas that experience occasional frost, but where freezing temperatures are not frequent enough to cause true winter dormancy
temperate - community generally occurs in areas that freeze often enough that vegetation goes into winter dormancy

Fire

annual fire - burns about every 1-2 years
frequent fire - burns about every 3-7 years
occasional fire - burns about every 8-25 years
rare fire - burns about every 26-100 years
no fire - community develops only when site goes more than 100 years without burning

LATIN NAMES OF PLANTS MENTIONED IN NATURAL COMMUNITY DESCRIPTIONS

anise - *Illicium floridanum*
bays:
  swamp bay -*Persea palustris*
  gordonia -*Gordonia lasianthus*
  sweetbay -*Magnolia virgiana*
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*
maidencane - *Panicum hemitomon*
needle palm - *Rhapidophyllum hystrix*
overcup oak - *Quercus lyrata*
pickerel weed - *Pontederia cordata* or *P. lanceolata*
pignut hickory - *Carya glabra*
pop ash - *Fraxinus caroliniana*
pond apple - *Annona glabra*
pond pine - *Pinus serotina*
pyramid magnolia - *Magnolia pyramidata*
railroad vine - *Ipomoea pes-caprae*
red cedar - *Juniperus silicicola*
red maple - *Acer rubrum*
red oak - *Quercus falcata*
rosemary - *Ceratiola ericoides*
sagittaria - *Sagittaria lancifolia*
sand pine - *Pinus clausa*
saw palmetto - *Serenoa repens*
sawgrass - *Cladium jamaicensis*
scrub oaks - *Quercus geminata, Q. chapmanii, Q. myrtifolia,Q. inopina*
sea oats - *Uniola paniculata*
seagrape - *Coccoloba uvifera*
shortleaf pine - *Pinus echinata*
Shumard oak - *Quercus shumardii*
slash pine - *Pinus elliottii*
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 tulipfera*
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:

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 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.

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 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 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;
(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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