



Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

October 5, 2017

Steven Cutshaw
Division of Recreation and Parks
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 525
Tallahassee, Florida 32399-3000

RE: Dade Battlefield Historic State Park - Lease No. 3615

Dear Mr. Cutshaw:

The Division of State Lands, Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the Dade Battlefield Historic State Park management plan. The next management plan update is due October 5, 2027.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Ray Spaulding", is written over the typed name.

Raymond V. Spaulding
Office of Environmental Services
Division of State Lands
Department of Environmental Protection

Dade Battlefield Historic State Park

Approved Unit Management Plan

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Division of Recreation and Parks
October 2017**



TABLE OF CONTENTS

INTRODUCTION	1
PURPOSE AND SIGNIFICANCE OF THE PARK	1
Park Significance	1
PURPOSE AND SCOPE OF THE PLAN	2
MANAGEMENT PROGRAM OVERVIEW	8
Management Authority and Responsibility	8
Park Management Goals	8
Management Coordination	9
Public Participation	9
Other Designations	9

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION	11
RESOURCE DESCRIPTION AND ASSESSMENT	12
Natural Resources	12
Topography	12
Geology	15
Soils	15
Minerals	15
Hydrology	15
Natural Communities (FNAI)	16
Imperiled Species	24
Exotic and Nuisance Species	27
Cultural Resources	30
Condition Assessment	30
Level of Significance	30
Prehistoric and Historic Archaeological Sites	31
Historic Structures	33
Collections	35
RESOURCE MANAGEMENT PROGRAM	39
Management Goals, Objectives and Actions	39
Natural Resource Management	40
Hydrological Management	40
Natural Communities Management	40
Imperiled Species Management	45
Exotic Species Management	46
Cultural Resource Management	48
Special Management Considerations	49
Timber Management Analysis	49
Arthropod Control Plan	50
Resource Management Schedule	50
Land Management Review	50

LAND USE COMPONENT

INTRODUCTION	51
EXTERNAL CONDITIONS	51
Existing Use of Adjacent Lands	53
Planned Use of Adjacent Lands	53
PROPERTY ANALYSIS	54
Recreation Resource Elements	54
Land Area	54
Water Area	54
Natural Scenery	55
Significant Habitat	55
Archaeological and Historic Features	55
Assessment of Use	55
Past Uses	55
Future Land Use and Zoning	55
Current Recreation Use and Visitor Programs	56
Protected Zones	56
Existing Facilities	57
Recreation Facilities	57
Support Facilities	57
CONCEPTUAL LAND USE PLAN	58
Potential Uses	58
Public Access and Recreational Opportunities	58
Proposed Facilities	61
Capital Facilities and Infrastructure	61
Facilities Development	65
Recreational Carrying Capacity	66
Optimum Boundary	66

IMPLEMENTATION COMPONENT

MANAGEMENT PROGRESS	71
Park Administration and Operations	71
Resource Management	72
Natural Resources	72
Cultural Resources	72
Recreation and Visitor Services	72
Park Facilities	72
MANAGEMENT PLAN IMPLEMENTATION	73

TABLES

TABLE 1 – Dade Battlefield Historic State Park Management Zones.....	12
TABLE 2 – Imperiled Species Inventory	26
TABLE 3 – Inventory of FLEPPC Category I and II Exotic Plant Species.....	28
TABLE 4 – Cultural Sites Listed in the Florida Master Site File	36
TABLE 5 – Prescribed Fire Management.....	41
TABLE 6 – Nearby Recreational Opportunities	52
TABLE 7 – Recreational Carrying Capacity	66
TABLE 8 – Implementation Schedule and Cost Estimates.....	75

MAPS

Vicinity Map	3
Reference Map	5
Management Zones Map.....	13
Soils Map	17
Natural Communities Map.....	21
Base Map	59
Conceptual Land Use Plan.....	63
Optimum Boundary Map.....	69

LIST OF ADDENDA

ADDENDUM 1

Acquisition History	A 1 - 1
---------------------------	---------

ADDENDUM 2

Advisory Group Members and Report	A 2 - 1
---	---------

ADDENDUM 3

References Cited	A 3 - 1
------------------------	---------

ADDENDUM 4

Soil Descriptions	A 4 - 1
-------------------------	---------

ADDENDUM 5

Plant and Animal List	A 5 - 1
-----------------------------	---------

ADDENDUM 6

Imperiled Species Ranking Definitions	A 6 - 1
---	---------

ADDENDUM 7

Cultural Information	A 7 - 1
----------------------------	---------

ADDENDUM 8

Arthropod Control Plan	A 8 - 1
------------------------------	---------

INTRODUCTION

Dade Battlefield Historic State Park is located in Sumter County (see Vicinity Map). Access to the park is from Interstate 75, exit 314 east on State Road 48 and then south on County Road 603 to Battlefield Drive (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Dade Battlefield Historic State Park was initially acquired on September 29, 1921. Currently, the park comprises 80.66 acres. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) hold fee simple title to the park and on January 23, 1968, the Trustees leased (Lease Number 3615) the property to DRP under a 99-year lease. The current lease will expire on January 22, 2067.

Dade Battlefield Historic State Park is designated single-use to provide public outdoor recreation and other park-related uses. There are no legislative or executive directives that constrain the use of this property (see Addendum 1).

Purpose and Significance of the Park

The purpose of Dade Battlefield Historic State Park is to commemorate and interpret the site of the battle that sparked the Second Seminole War, as well as preserve the natural communities of the park in a manner that replicates the scenery experienced during the historic battle.

Park Significance

- Registered as a National Historic Landmark in 1973, the park protects the site of Dade's Battle of 1835 where over 100 United States troops were massacred by Seminole warriors, an act that violated a peace treaty between the two sides and sparked the Second Seminole War.
- The park offers interpretive opportunities as a part of the annual reenactment of Dade's Battle, and the park's military trail allows visitors to interpret a section of the historic Fort King Military Road that was traversed by Francis Langhorne Dade and his troops before they were attacked.
- In addition to an estimated 250-year-old live oak that more than likely existed during the days of Dade's Battle, the park protects the mesic flatwoods natural community and restores the native longleaf pine ecosystem to its original state.
- The park provides critical habitat to imperiled species that include the gopher tortoise (*Gopherus Polyphemus*), swallow-tail kite (*Elanoides forticatus*), southeastern American kestrel (*Falco sparverius paulus*), and Sherman's fox squirrel (*Sciurus niger shermani*).
- Along with historical interpretation, the park offers recreation activities such as biking, hiking, picnicking, wildlife viewing, and geocaching. The park also provides large group facilities that are ideal for weddings, retreats, and family reunions.

Dade Battlefield Historic State Park is classified as a special feature site in the DRP's unit classification system. In the management of a special feature site, a special feature is a discrete and well-defined object or condition that attracts public interest and provides recreational enjoyment through visitation, observation and study. A state special feature site is an area which contains such a feature, and which is set aside for controlled public enjoyment. Special feature sites for the most part are either historical or archaeological by type, but they may also have a geological, botanical, zoological, or other basis. State special feature sites must be of unusual or exceptional character, or have statewide or broad regional significance.

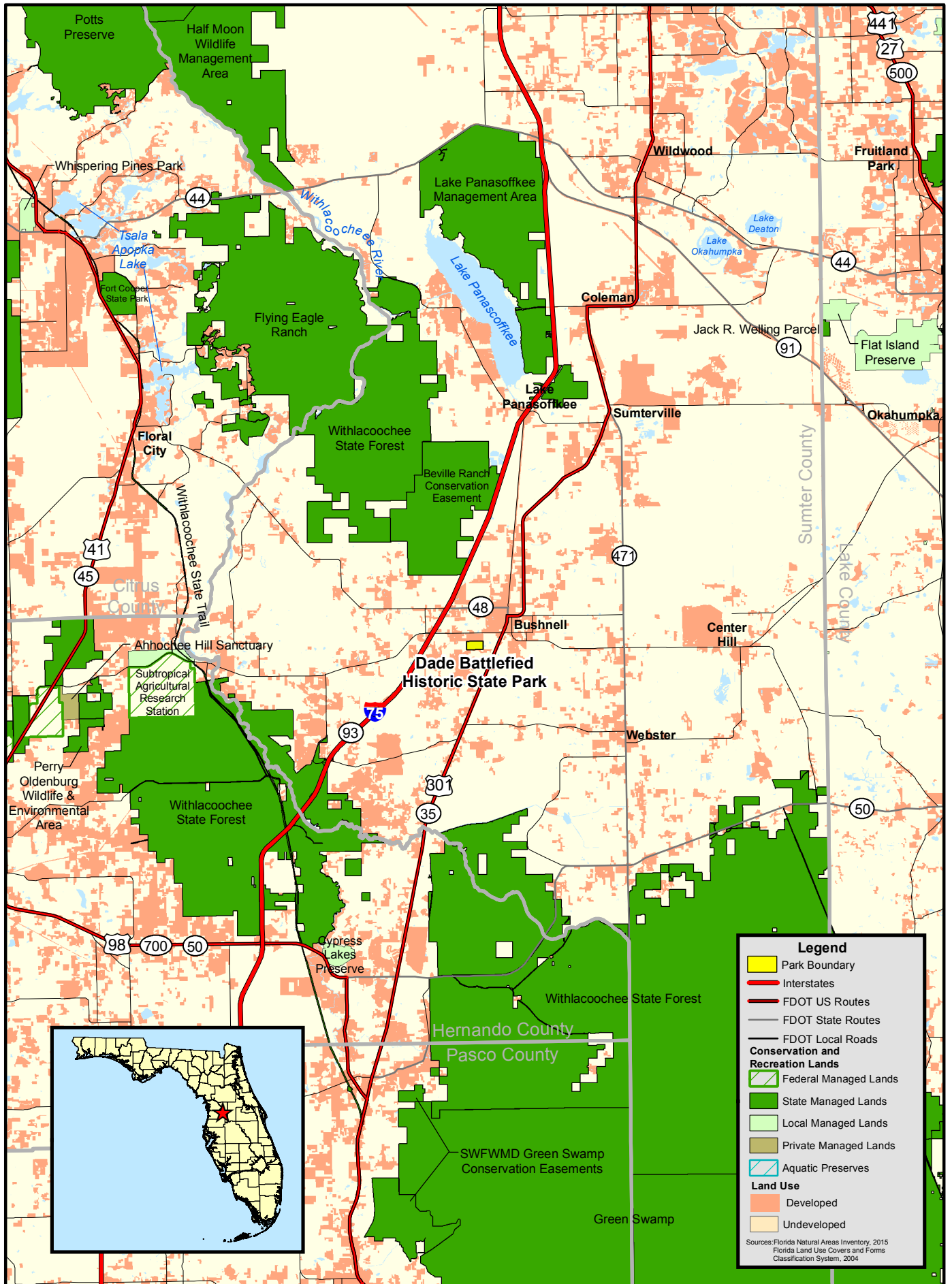
Management of special feature sites places primary emphasis on protection and maintenance of the special feature for long-term public enjoyment. Permitted uses are almost exclusively passive in nature and program emphasis is on interpretation of the special feature. Development at special feature sites is focused on protection and maintenance of the site, public access, safety and the convenience of the user.

Purpose and Scope of the Plan

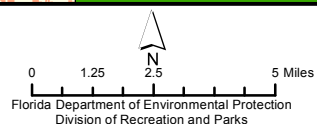
This plan serves as the basic statement of policy and direction for the management of Dade Battlefield Historic State Park as a unit of Florida's state park system. It identifies the goals, objectives, actions and criteria or standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives and provide balanced public utilization. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2004 approved plan.

The plan consists of three interrelated components: the Resource Management Component, the Land Use Component and the Implementation Component. The Resource Management Component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management needs and issues are identified, and measurable management objectives are established for each of the park's management goals and resource types. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, imperiled species management, cultural resource management and restoration of natural conditions.

The Land Use Component is the recreational resource allocation plan for the park. Based on considerations such as access, population, adjacent land uses, the natural and cultural resources of the park, current public uses and existing development. Measurable objectives are set to achieve the desired allocation of the physical space of the park. These objectives identify use areas and propose the types of facilities and programs as well as the volume of public use to be provided.



DADE BATTLEFIELD HISTORIC STATE PARK



VICINITY MAP

The Implementation Component consolidates the measurable objectives and actions for each of the park's management goals. An implementation schedule and cost estimates are included for each objective and action. Included in this table are (1) measures that will be used to evaluate the DRP's implementation progress, (2) timeframes for completing actions and objectives and (3) estimated costs to complete each action and objective.

All development and resource alteration proposed 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.

In the development of this plan, the potential of the park to accommodate secondary management purposes was analyzed. These secondary purposes were considered within the context of the DRP's statutory responsibilities and 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 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.

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.

DRP may provide the services and facilities outlined in this plan either with its own funds and staff or through an outsourcing contract. Private contractors may provide assistance with natural resource management and restoration activities or a concessionaire may provide services to park visitors in order to enhance the visitor experience. For example, a concessionaire could be authorized to sell merchandise and food and to rent recreational equipment for use in the park. A concessionaire may also be authorized to provide specialized services, such as interpretive tours, or overnight accommodations when the required capital investment exceeds that which DRP can elect to incur. Decisions regarding outsourcing, contracting with the private sector, the use of concessionaires, etc. are made on a case-by-case basis in accordance with the policies set forth in DRP's Operations Manual (OM).

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 (DRP) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

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

Many operating procedures are standardized system-wide and are set by internal direction. These procedures are outlined in the OM that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, public use regulations, resource management, law enforcement, protection, safety and maintenance.

Park Management Goals

The following park goals express DRP's long-term intent in managing the state park:

- Provide administrative support for all park functions.
- Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.
- Restore and maintain the natural communities/habitats of the park.
- Maintain, improve or restore imperiled species populations and habitats in the park.
- Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.
- Protect, preserve and maintain the cultural resources of the park.
- Provide public access and recreational opportunities in the park.
- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

Management Coordination

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

The Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS), assists DRP staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FWC) assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within the park. In addition, the FWC aids DRP with wildlife management programs, including imperiled species management. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites.

Public Participation

DRP provided an opportunity for public input by conducting a public workshop and an Advisory Group meeting to present the draft management plan to the public. These meetings were held on March 8, 2017 and March 9, 2017, respectively. Meeting notices were published in the Florida Administrative Register (Vol. 43, Issue 40) included on the Department Internet Calendar, posted in clear view at the park, and promoted locally. The purpose of the Advisory Group meeting is to provide the Advisory Group members an opportunity to discuss the draft management plan (see Addendum 2).

Other Designations

Dade Battlefield Historic State Park is not within an Area of Critical State Concern as defined in Section 380.05, Florida Statutes, and it is not presently under study for such designation. The park is a component of the Florida Greenways and Trails System, administered by the Department's Office of Greenways and Trails.

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

RESOURCE MANAGEMENT COMPONENT

Introduction

The Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) in accordance with Chapter 258, Florida Statutes, 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. Management measures expressed in this plan are consistent with DEP's overall mission in ecosystem management. Cited references are contained in Addendum 3.

DRP's philosophy of resource management is natural systems management. Primary emphasis is placed on restoring and maintaining, to the degree possible, the natural processes that shaped the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management for imperiled species is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

DRP's management goal for cultural resources is to preserve sites and objects that represent Florida's cultural periods, significant historic events or persons. This goal often entails 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 can be affected by conditions and events that occur beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program that assesses resource conditions, evaluates management activities and refines management actions, and reviews local comprehensive plans and development permit applications for park/ecosystem impacts.

The entire park is divided into management zones that delineate areas on the ground that are used to reference management activities (see Management Zones Map). The shape and size of each zone may be based on natural community type, burn zone, and the location of existing roads and natural fire breaks. It is important to note that all burn zones are management zones; however, not all management zones include fire-dependent natural communities. Table 1 lists the management zones with the acres of each zone.

Table 1. Dade Battlefield Historic State Park Management Zones		
Management Zone	Acreage	Acres Managed with Prescribed Fire
DB-1A	5.85	5.85
DB-1B	7.54	6.81
DB-1C	4.65	4.23
DB-1D	2.22	2.03
DB-2A	4.19	4.19
DB-2B	13.20	12.18
DB-2C	3.17	3.10
DB-2D	2.75	2.35
DB-2E	0.55	0.02
DB-2F	2.2	1.96
DB-2G	3.14	3.14
DB-3	5.89	4.97
DB-4	10.36	1.42
DB-5	1.27	0
DB-6	5.48	0
DB-7	8.01	0.04

Resource Description and Assessment

Natural Resources

Topography

Dade Battlefield Historic SP is mostly flat, with elevations ranging from 61 to 70 feet above mean sea level (msl). The lowest natural elevation is approximately 68 feet msl. The natural topography in the park has not been altered except at two small sites. A 0.6-acre wet depression on the northern boundary, possibly a sinkhole originally, was dug for fill to construct fence lines, roads, and other facilities, and remains the lowest elevation on the property (around 61 feet msl). This pit was then used as a dump and to burn vegetative debris for many years. It currently has willow (*Salix caroliniana*) and swamp rosemallow (*Hibiscus grandiflorus*) growing in it, along with several invasive exotic plants. A smaller pit on the southwest border also was excavated for fill, but today it is visible only as a slight depression in the ground.



DADE BATTLEFIELD HISTORIC STATE PARK

MANAGEMENT ZONES MAP

Geology

The park lies within the Central physiographic zone of Florida, in the Central Highlands Province and Sumter Upland. The substrate in Sumter County is composed of a limestone core overlain by clayey sediments and Pleistocene sands. Dissolution of limestone has been limited by the clayey sediments, resulting in a relatively high elevation. Surface and near surface sediments consist of quartz sand, clay, peat, limestone, and dolomite. These sediments range in age from the Middle Eocene, 40-45 million years ago, to Holocene, 10,000 years ago to present.

No outstanding geologic formations are seen at Dade Battlefield Historic State Park. Years ago, the Florida Crushed Stone Company drilled for limestone approximately 1,500 feet from the park's south side and determined that the rock was not of a high enough quality to be used commercially. Crushed limestone is the major mineral commodity produced in Sumter County.

Soils

Two types of soils comprise almost all of Dade Battlefield Historic State Park, Kanapaha fine sand and Sparr fine sand, bouldery subsurface. The two soil types are very similar, typically occurring on nearly level to gently sloping, poorly drained areas. The subsoils can be sandy throughout, or sandy to a depth of 20 inches with loam or clay below. Except in the two places excavated for fill mentioned above, the soils in the unit have not been disturbed.

Two additional soil types -- Eau Gallie fine sand and Placid fine sand -- have been identified at the extreme southwest corner of the park (see Soils Map). Addendum 4 contains detailed soils descriptions for all four soil types.

Minerals

Dade Battlefield Historic State Park has no known minerals of commercial value. In addition, as stated previously, the underlying limestone is not of commercial quality.

Hydrology

The unit lies within the Jumper Creek Canal Watershed. Water is drawn from two aquifer systems, the Floridan aquifer, serving as the main source of regional water, and from the shallow aquifer. The Floridan aquifer is composed of limestones and dolomites from the Tertiary Period. General movement of water is from east to west. The shallow aquifer can be found where sands overlie the limestones and dolomites of the Floridan aquifer. Recharge of the shallow aquifer is almost entirely from local rainfall.

Surface drainage today is through a series of drainage ditches that convey water from the north and east, through the park to exit on the south boundary. A ditch carries water, primarily storm water, south from Bushnell into Center Pond, then to

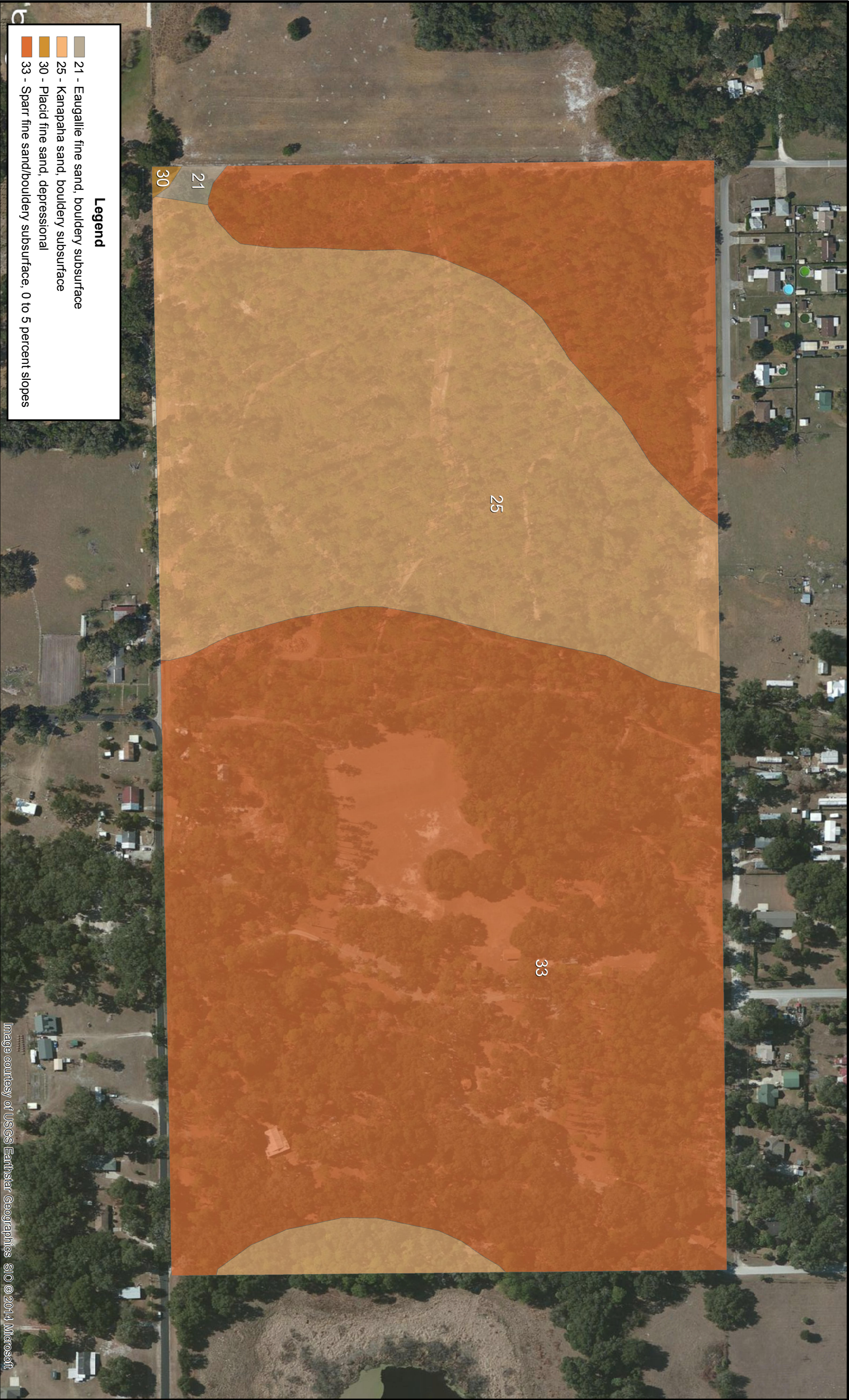
Webb's Pond adjacent to the park. From the latter pond, two ditches transport water through the park. The larger ditch, more like a small canal, is elaborately constructed, lined with stone and is crossed by four bridges. The other, smaller ditch enters at the southeast corner and parallels the south boundary for a short distance before rejoining the larger ditch at the point where it leaves the park. From there, drainage proceeds southwesterly through a series of ponds, ditches, and swampy areas to Gum Slough, and finally to the Withlacoochee River. The park drains quite well. Water rarely stands and has never persisted long enough to cause problems.

The larger ditch, or canal, through the park serves as a source of intermittent water. It was originally a natural drainage way or slough. Webb's pond outside the east boundary of the park, sometimes known as "Death Pond" in reference to the battle, was reported to have originally fed the canal by means of a permanent spring, providing it with flowing water year round. It had a healthy fish population until the mid-1950s when explosions from the mining of limestone nearby reportedly stopped the spring and thereby stopped the constant flow of water through the park. The canal water levels now vary in response to rainfall. Fish are sometimes seen, usually during periods of heavy rain, when surface runoff fills the canal or water backs up from Gum Slough. When the canal is full, the water is crystal clear, but no water quality studies have been done.

Natural Communities

This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes the desired future condition of each natural community and identifies the actions that will be required to bring the community to its desired future condition. Specific management objectives and actions for natural community management, exotic species management, imperiled species management and restoration are discussed in the Resource Management Program section of this component.

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that areas that are similar with respect to those factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, however, 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. Some physical influences, such as fire frequency, may vary from FNAI's descriptions for certain natural communities in this plan.



21 - Eaugallie fine sand, bouldery subsurface

25 - Kanapaha sand, bouldery subsurface

30 - Placid fine sand, depressional

33 - Sparr fine sand/bouldery subsurface, 0 to 5 percent slopes

Legend

DADE BATTLEFIELD HISTORIC STATE PARK

SOILS MAP

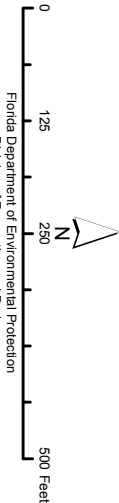


Image courtesy of USGS Earthstar Geographics SIO © 2014 Microsoft

When a natural community within a park reaches the desired future condition, it is considered to be in a “maintenance condition.” Required actions for sustaining a community’s maintenance condition may include maintaining optimal fire return intervals for fire dependent communities; ongoing management and control of nonnative plant and animal species; maintaining natural hydrological functions, including historic water flows and water quality; preserving a community’s biodiversity and vegetative structure, protecting viable populations of plant and animal species, including those that are imperiled or endemic; and preserving intact ecotones linking natural communities across the landscape.

The park contains one distinct natural community, mesic flatwoods, as well as ruderal and developed areas (see Natural Communities Map). There are a few depression areas within the mesic flatwoods where the plant species composition changes to more wetland species, but the changes were not significant enough in 2012 to warrant mapping the areas as separate communities. A list of known plants and animals occurring in the park is contained in Addendum 5. Voucher specimens for plant identification are collected and maintained with the University of South Florida’s Herbarium or with the FPS District’s Herbarium, or sometimes both.

Mesic Flatwoods

Desired future condition: Within mesic flatwoods, depending on the region of the state, dominant pines will usually be longleaf pine (*Pinus palustris*) or south Florida slash pine (*Pinus elliottii*). Native herbaceous groundcover should be at least 50% of the area and less than three feet in height, and have wiregrass (*Aristida stricta*) and a diversity of grasses and forbs. Saw palmetto (*Serenoa repens*) will comprise no more than 50% of total shrub species cover, and also will be less than three feet in height. Other shrub species may include gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), runner oak (*Quercus elliottii*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), and dwarf huckleberry (*Gaylussacia dumosa*). The combined cover of oak canopy and oak understory should be around 15%. Shrubs will generally be knee-high or less, and there are few if any large trunks of saw palmetto along the ground. Invasive plant species cover will be 5% or less of the total area (a distribution and cover class values of 1 or less; see notes with Table 3); invasive plant species considered for this criteria include priority species (FLEPPC Category I and II species), exotics that detract from the desired future condition, and current Early Detection/Rapid Removal species for the region. The Optimal Fire Return Interval for this community is two to four years.

Description and assessment: The longleaf pine mesic flatwoods located in the western portion of the park is the only significant and relatively intact natural community. Its overall condition could be classified as Fair to Good. The pines standing today are second-growth trees, with relatively few longleaf. The understory still has significant oak encroachment. Overall, the cover of invasive non-native plants is around 2%. There is an increasing diversity in the native herbaceous understory, reflecting the community’s positive response where prescription fires have been applied. Pine-hyacinth (*Clematis baldwinii*) and Florida false sunflower (*Phoebanthus grandiflorus*) are two Florida endemic species found in

this community at DBHSP. Swallow-tailed kites (*Elanoides forficatus*) started nesting in the southern part of this community in 2011. Although the number of nests increased for the next two years, owls have since taken over the nests. This community is small, about 50 acres. It is representative of the type of terrain in which Dade's historic battle was fought. There is a circular nature trail a little over a half-mile long that meanders through the flatwoods. The flatwoods were once the site of logging and turpentine collecting activities. Pine trees may have been cut for timber at the turn of the century, as milled logs for a local courthouse addition were found to contain musket balls. The most recent logging occurred around 1927. Some of the older pines (60 – 90 years old) have “catface” scars from turpentine collecting work; catfaced pines may be particularly susceptible to engraver beetle (*Ips* spp.) infestations during drought conditions. Approximately five acres near the picnic area have been planted with loblolly pines (*Pinus taeda*), which are not a species naturally found here.

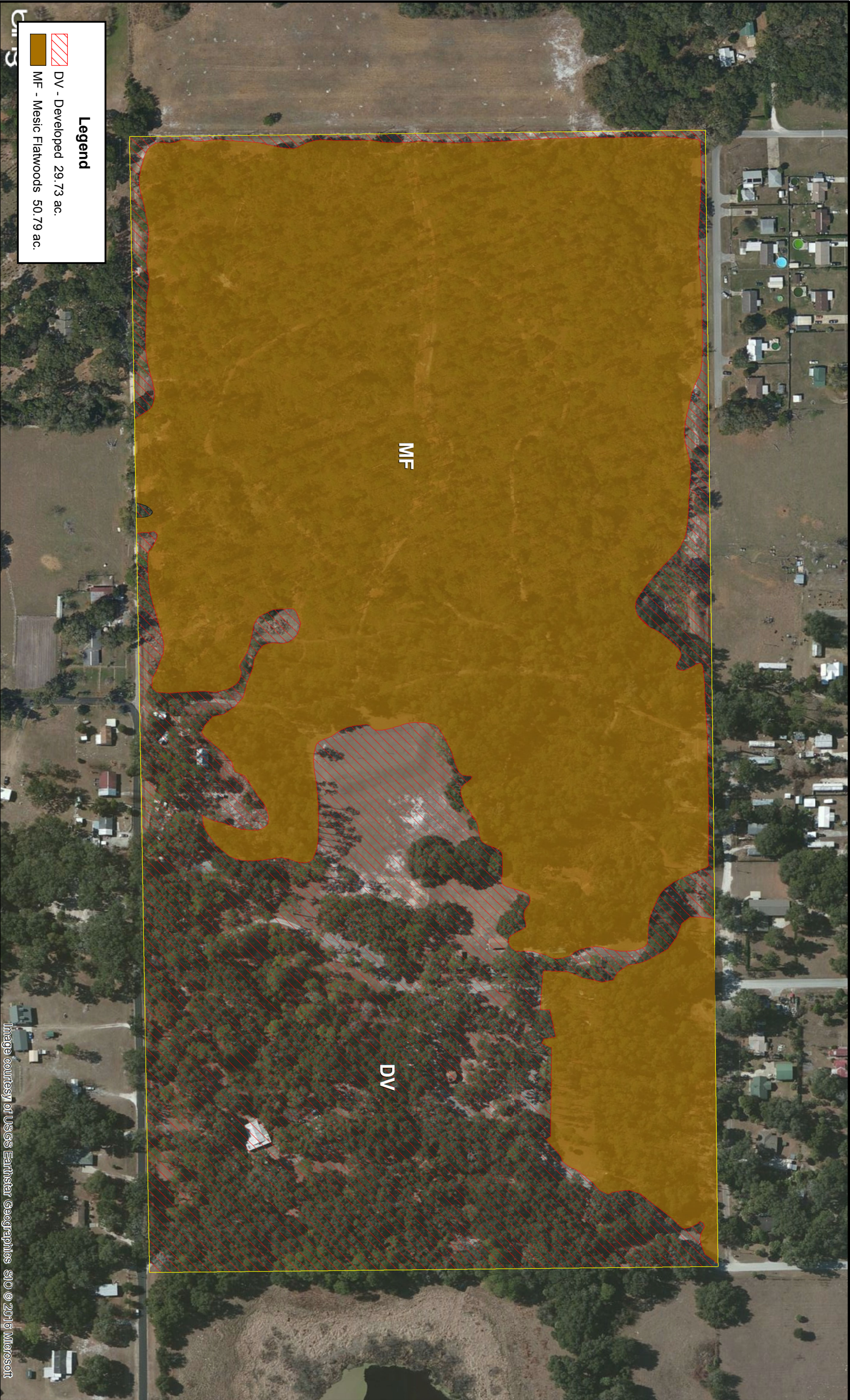
In the 1970s, the mesic flatwoods were succeeding towards a hammock community and showed a great deal of oak encroachment. In that decade, a prescribed burning program was initiated. For the most part, the recommendations for prescribed fire intervals for mesic flatwoods were followed. In 2000 and 2001 the frequency of prescribed burns was reduced somewhat in a few of the management zones, due to beetle infestations and fear that the already drought-stressed pines would not survive yet one more assault. By 2008, however, the prescription burns had returned to desired intervals in all zones.

General management measures: Continue prescribed fire activities. Continue to thin the oaks and other hardwoods encroaching in the community. Reduce the cover of invasive plants through control and removal techniques. Remove the loblolly pines installed around the picnic areas and replace them with longleaf pines. Augment the spread of wiregrass within the community zone by occasionally hand-carrying seed from the wiregrass now found at the edges of the community to the center, particularly using seed from specimens that were in early growing-season fires.

Altered Landcover Types

Developed

Desired future condition: Areas considered “Developed” by earlier alterations do not necessarily have to remain so altered, especially if native plants from the original community begin to appear. In this park’s case, the original communities were probably mesic flatwoods or small patches of oak/mesic hammock. Where native plants and animals begin to appear, they will be encouraged to continue naturalizing. A desired condition for most of zone DB-7 would be to allow it to revert to mesic flatwoods to the extent that it will without removing the large oaks and without major replanting efforts.



Legend

-  DV - Developed 29.73 ac.
-  MF - Mesic Flatwoods 50.79 ac.

DADE BATTLEFIELD HISTORIC STATE PARK

NATURAL COMMUNITIES MAP

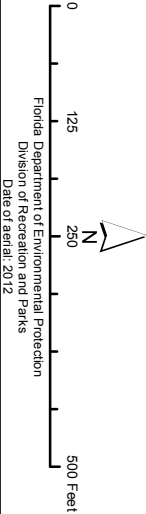


Image courtesy of USGS Earthstar Geographics SIO © 2016 Microsoft

Description and assessment: Developed areas at Dade Battlefield Historic State Park include 14 structures (such as picnic shelters, workshop, residence, museum) and associated access disturbances (such as roads, parking lots, septic field), and altogether cover an area of 27.18 acres. Overall, the cover of invasive non-native plants is around 5%.

An earthen berm, five feet high and 150 feet long, was created in 1987 on the outfield of what had once been a baseball field, so that visitors can sit on the slope and have a better view of the park's popular staged battle reenactment. The berm and surrounding area is managed as a lawn and covers roughly 1.4 acres of the developed community.

The battle site and a portion of the Fort King Military Road are situated near the eastern boundary of the park (most of Management Zone DB-7). As noted earlier, during the time of the actual battle, the community types in this area would have been primarily mesic flatwoods with patches of hardwood hammock. The vegetation has since been greatly disturbed, and currently consists of a mowed-lawn aspect with several large live oak trees. There are a few patches of low and infrequent mixed understory vegetation, and a row of loblolly pines and a row of eastern red cedar (*Juniperus virginiana*) planted before 1998. Until recent years, exotic lawn grasses had been seeded or planted in selected locations in this management zone. With our present park manager, this area has been allowed to begin reverting to its natural state.

In the visitor areas, various plants that were deliberately planted are not native to this part of Florida. Autumn fern (*Dryopteris erythrosora*) is native to Japan and eastern Asia and is to be removed completely and bagged so that the spores are contained. Eastern purple coneflower (*Echinacea purpurea*), oakleaf hydrangea (*Hydrangea quercifolia*), Stoke's aster (*Stokesia laevis*) and Simpson's stopper (*Myrcianthes fragrans*), are native to Florida, but not native to this region; all have range edges that are well over 120 miles from the park. While inappropriate to the area, these may be left, hopefully with some education available to visitors about their being out of place. No other plantings or re-plantings of these species are to be made at the park.

General management measures: Continue allowing the original battlefield site to revert to the vegetation that occurred at the time of the battle. Also, if a few saw palmettos to not begin to emerge on their own in this area, management might consider seeding or planting a few. Continue to allow the developed areas within the park to have more native plants. Continue to work towards having all deliberate landscaping contain only the native plant species known to occur naturally at the park. Continue to minimize weed-whacking activities, and to maintain the current practice of adjusting mowing schedules and heights to encourage repopulation of native plants. Continue to actively maintain the invasive plant species cover at 5% or less. Other management measures include evaluating storm water management and developing guidelines that are compatible with prescribed fire management in adjacent natural areas.

Imperiled Species

Imperiled species are those that are (1) tracked by FNAI as critically imperiled (G1, S1) or imperiled (G2, S2); or (2) listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened or of special concern. The presence of imperiled species, especially those that are endemic to a particular system, can be a good indicator that the community is maintaining important components of its elemental, natural state.

There are gopher tortoises (*Gopherus polyphemus*) in the park. A survey by a district biologist following prescribed burns in the summer of 1994 revealed 13 burrows, two of which appeared to be inactive. Gopher tortoise densities at that time were found to range between .03 and .1 individuals per acres. The park was encompassed by a hog wire fence in 1988 and presumably no migration of tortoises could occur across the park boundary at that time. Since conservation biologists have proposed that a gopher tortoise population of 40-50 individuals living in a favorable environment has a 90 percent probability of surviving for 200 years, the outlook was not good for such a small population at DBHSP. However, the district biologist thought the remaining natural habitat in the park might be adequate in size to sustain a viable population if other factors, such as forage, substrate quality and fencing structures, were supportive. Reduction in hardwoods and an increase in wiregrass cover were recommended. In 2008, an assessment was completed on 31 acres of the park using FWC assessment protocols of that time, primarily in management zones 1A through 1D, the southern half of 2G, and the northern half of 3. In the 14-year interim between studies, the gopher tortoise population and density had increased. The 2008 population densities ranged from 1.8 to 2.89 tortoises per acre. Generally, the population density for the park is good.

In 2012, swallowed-tailed kites (*Elanoides forficatus*) were reported nesting at the park. This bird is listed by FNAI as imperiled (S2) in the state. Some resource management activities were modified to protect the nest, such as reducing the fuels as needed to decrease the intensity of fire around nest trees, but unfortunately for the kites, owls have since taken over the nests.

There are reported sightings of southeastern American kestrels (*Falco sparverius paulus*). One report states that a pair was nesting in a snag near the residence in 2010; the other states that a pair was seen in on a snag in management zone 1A during a burn preparation workday in 2012. There has since been a nesting box installed at the park; a pair was seen nesting in the box about a year ago. This kestrel is a non-migratory subspecies of kestrel found in open pine savannahs, sandhills, prairies, and pastures in Florida and the southeastern United States. It is listed as threatened in Florida due to a decline in nesting and foraging habitat (FFWCC 2012). Kestrels nest primarily in large dead trees, in cavities previously excavated or hollowed out by woodpeckers, and their breeding season is generally March through June. Management for this species includes fuel management near snags with nests, especially for burns implemented during breeding season, and maintaining a few snags on the property, particularly along the more open areas.

The southern hognose snake (*Heterodon simus*) is repeatedly reported at this park. This snake is ranked as S2 by FNAI, and its populations across the southern states has rapidly declined to only a few known locations (Wilson 2004). This nonvenomous snake is small and lives underground (fossorial habit), and is most often encountered crossing roads that pass through sandy habitats. The southern hognose occurs in sandhills, scrub, high pine and turkey oak woodlands, hardwood hammocks, and dry river floodplains. Very little information is available for managing this declining species, but at minimum the general rules for protecting all snakes certainly apply.

Between 1996 and 1998, there were several reports of eastern indigo snakes (*Drymarchon couperi*). The Park Manager in 1998, Barbara Roberts, reported seeing two sunning in different parts of the park on the same day in April; other sightings that year include one in May, one in September, and one in November. No formal surveys for this snake have been conducted in the park. A review of vertebrate sightings reported to the District for 2001 through 2012 found no other recorded sightings. This snake is federally listed as threatened. They are habitat generalists and all-natural community types are used at the park. Protection of gopher tortoises and their burrows is important for indigos. The biggest threat to this wide-ranging species is on the roadways in and around the park, since road mortality is a leading cause of decline. Park visitors should also be educated, so they do not deliberately kill indigo or other snake species protected at the park. Alone, the park is too small to sustain a viable long-term population of indigo snakes (USFWS suggests a minimum of 2,500 acres), so connectivity to natural habitats and other protected conservation lands is important for the species to persist at the park.

A rare plant species reported on the last park plan was yellow anisetree or star anise (*Illicium parviflorum*), but it has never been collected nor have any observations been formally recorded. In 2016, the state-endangered little ladiestresses or little pearl-twist (*Spiranthes tuberosa*) was noted by park staff and the identification confirmed by botanist P.M.Brown. This is a widely spread, but low population, orchid that inhabits dry, open sandy areas. It is reported to frequent cemeteries (Brown 2005).

Table 2 contains a list of all known imperiled species within the park and identifies their status as defined by various entities. It also identifies the types of management actions that are currently being taken by DRP staff or others, and identifies the current level of monitoring effort. The codes used under the column headings for management actions and monitoring level are defined following the table. Explanations for federal and state status as well as FNAI global and state rank are provided in Addendum 6.

Table 2. Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
PLANTS						
Small ladies'-tresses <i>Spiranthes brevilabris</i>	LE				1,2,6	Tier 1,2
REPTILES						
Gopher tortoise <i>Gopherus polyphemus</i>	LT	N		S3	1,2,6,7,8,10,13	Tier1,2,3
Eastern indigo snake <i>Drymarchon couperi</i>	LT	FT		S3	1,2,10,13	Tier 1
Southern hognose snake <i>Heterodon simus</i>	N	N		S2	1,2,10,13	Tier 1, 2
BIRDS						
Swallow-tailed kite <i>Elanoides forficatus</i>	N	N		S2	1,2,10,13	Tier 1
White ibis <i>Eudocimus albus</i>	SSC	N		S4	1,2,10,13	Tier 1
Southeastern American kestrel <i>Falco sparverius paulus</i>	ST	N		S3	1,2,10,13	Tier 1 ,2
MAMMALS						
Sherman's fox squirrel <i>Sciurus niger shermani</i>	SSC	N		S3	1, 10,13	Tier 1

Management Actions:

- 1 Prescribed Fire
- 2 Exotic Plant Removal
- 3 Population Translocation/Augmentation/Restocking
- 4 Hydrological Maintenance/Restoration
- 5 Nest Boxes/Artificial Cavities
- 6 Hardwood Removal
- 7 Mechanical Treatment
- 8 Predator Control
- 9 Erosion Control
- 10 Protection from visitor impacts (establish buffers)/law enforcement
- 11 Decoys (shorebirds)
- 12 Vegetation planting
- 13 Outreach and Education
- 14 Other

Monitoring Level:

- Tier 1. Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e., not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations.
- Tier 2. Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.
- Tier 3. Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.
- Tier 4. Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.
- Tier 5. Other: May include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular species.

Detailed management goals, objectives and actions for imperiled species in this park are discussed in the Resource Management Program section of this component and the Implementation Component of this plan.

Exotic and Nuisance Species

Exotic species are plants or animals not native to Florida. *Invasive* exotic species can out-compete, displace or destroy native species and their habitats, often because they have been released from the natural controls of their native range, such as diseases or predatory insects. If left unchecked, invasive exotic plants and animals alter the character, productivity and conservation values of the natural areas they invade.

Current exotic plant management actions have been arduous and successful since new management was put in place, about three years ago. Surveys for plant exotics were completed and the findings recorded with DRP's Natural Resources Tracking System (NRTS) in 2016. At that time, 80.47 acres were surveyed and the average coverage across the park was roughly 4%. The most commonly seen invasive exotic plants in the park are skunkvine (*Paederia foetida*), air-potato (*Dioscorea bulbifera*), cogongrass (*Imperata cylindrica*), and lead tree (*Leucanea leucocephala*). Skunkvine is found in nearly all management zones. Other invasive plants not yet specified in the survey include small scattered patches of Marianna maiden fern (*Macrothelypteris torresiana*), and Chinese box orange (*Severinia buxifolia*). There are no areas in the park that have treatment access issues. The predominant introduction sites are along the stormwater entrenchments. All treatment work to date has been done in-house, by staff and volunteers.

Treatment at the earliest hint of invasion is always the most efficient approach and is more likely to result in eradication of the problem. With the development of better Early Detection and Rapid Response (EDRR) programs on the federal and state levels, invasive exotic species can begin to be identified before they are the management problems that make them FLEPPC Category I and II species. The USDA Animal and Plant Health Inspection Service (APHIS) and the University of Florida's Institute of Food and Agricultural Sciences (IFAS) have become increasingly active in using predictive Weed Risk Assessment tools and provide websites with updates on exotic species newly being considered as threats. Also, DBHSP is in Florida's Nature Coast Cooperative Invasive Species Management Area (CISMA); by working with this group, staff can obtain information on invasive

species currently threatening their local area. Overall invasive species management should follow a general 1:15 rule, where one hour is spent addressing new potential invaders for every 15 hours spent on work to control Category I and II plants.

Table 3 contains a list of the Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive, exotic plant species found within the park (FLEPPC, 2011 **). The table also identifies relative distribution for each species and the management zones in which they are known to occur. An explanation of the codes is provided following the table. For an inventory of all exotic species found within the park, see Addendum 5.

Table 3. Inventory of FLEPPC Category I and II Exotic Plant Species			
Common and Scientific Name	FLEPPC Category	Distribution	Management Zone
PLANTS			
Coral ardisia <i>Ardisia crenata</i>	I	2	DB-3
Camphor tree <i>Cinnamomum camphora</i>	I	1	DB-3, DB-7
Air potato <i>Dioscorea bulbifera</i>	I	2	DB-2D
		1	DB-3, DB-6
		2	DB-1C, DB-3
Cogongrass <i>Imperata cylindrica</i>	I	3	DB-2B
		3	DB-2B, DB-2G
Lantana camara <i>Lantana camara</i>	I	4	DB-2A, DB-2C
Lead tree <i>Leucaena leucocephala</i>	II	2	DB-2B, DB-1B
Peruvian primrosewillow <i>Ludwigia peruviana</i>	I	1	DB-3, DB-7
Japanese climbing fern <i>Lygodium japonicum</i>	I	2	DB-2E
Chinaberry tree <i>Melia azedarach</i>	II	4	DB-1C
Sword fern <i>Nephrolepis cordifolia</i>	I	1	DB-5, DB-7
Skunkvine <i>Paederia foetida</i>	I	2, 6	DB-7

Table 3. Inventory of FLEPPC Category I and II Exotic Plant Species			
Common and Scientific Name	FLEPPC Category	Distribution	Management Zone
		1	DB-2D, DB-5, DB-7
		2	DB-1C, DB-7, DB-6, DB-2B, DB-3
Chinese tallow tree <i>Sapium sebiferum</i>	I	4	DB-2B
Caesar's weed <i>Urena lobata</i>	I	2	DB-1B

Distribution Categories:

- 0 No current infestation: All known sites have been treated and no plants are currently evident.
- 1 Single plant or clump: One individual plant or one small clump of a single species.
- 2 Scattered plants or clumps: Multiple individual plants or small clumps of a single species scattered within the gross area infested.
- 3 Scattered dense patches: Dense patches of a single species scattered within the gross area infested.
- 4 Dominant cover: Multiple plants or clumps of a single species that occupy a majority of the gross area infested.
- 5 Dense monoculture: Generally, a dense stand of a single dominant species that not only occupies more than a majority of the gross area infested, but also covers/excludes other plants.
- 6 Linearly scattered: Plants or clumps of a single species generally scattered along a linear feature, such as a road, trail, property line, ditch, ridge, slough, etc. within the gross area infested.

**Note that FLEPPC re-evaluates Category I & II species every two years. Thus, this table may be out of date by 2015, and the park may already have populations of the new Category I & II species but not have them on the 2011 list.

Exotic animal species include non-native wildlife species, free-ranging domesticated pets or livestock, and feral animals. Because of the negative impacts to natural systems attributed to exotic animals, DRP actively removes exotic animals from state parks, with priority being given to those species causing the greatest ecological damage. DBHSP is currently known to have brown haplo (*Haplosternum littorale*), black-bellied whistling ducks (*Dendrocygna autumnalis*), greenhouse frog (*Eleutherodactylus planirostris*), Cuban treefrog (*Osteopilus septentrionalis*), brown anole (*Norops sagrei*), and an occasional wild pig (*Sus scrofa*).

In some cases, native wildlife also may pose management problems or be nuisances within state parks. A nuisance animal is an individual native animal whose presence or activities create special management problems. Examples of animal species from which nuisance cases may arise include venomous snakes, or those raccoons, squirrels, and alligators that have been fed by people and are now seeking public areas. Nuisance animals are dealt with on a case-by-case basis in accordance with DRP's Nuisance and Exotic Animal Removal Standard.

Exotic pests and pathogens also pose a threat to natural communities. Laurel wilt is a fatal disease of trees in the Laurel family, which includes redbay, swamp bay, and avocado. This disease is an example of an exotic pathogen (a *Raffaelea* species of fungus) introduced into trees by an exotic pest, the redbay ambrosia beetle (*Xyleborus glabratus*).

At present, there are no known successful management techniques for minimizing the spread and impact of this disease in Florida. However, this may not be a significant issue for DBHSP, since it currently has only a few redbays (*Persea borbonia*).

Detailed management goals, objectives and actions for management of invasive exotic plants and, exotic and nuisance animals, and exotic pests and pathogens are discussed in the Resource Management Program section of this component.

Cultural Resources

This section addresses the cultural resources present in the park that may include archaeological sites, historic buildings and structures, cultural landscapes and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 7 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historical sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization and preservation). For the purposes of this plan, significant archaeological site, significant structure and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure or historic landscape refer to all resources that will become 50 years old during the term of this plan.

Condition Assessment

Evaluating the condition of cultural resources is accomplished using a three-part evaluation scale, expressed as good, fair and poor. These terms describe the present condition, rather than comparing what exists to the ideal condition. 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 assessment is usually a cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Level of Significance

Applying the criteria for listing in the National Register of Historic Places involves the use of contexts as well as an evaluation of integrity of the site. A cultural resource's significance derives from its historical, architectural, ethnographic or

archaeological context. Evaluation of cultural resources will result in a designation of NRL (National Register or National Landmark Listed or located in an NR district), NR (National Register eligible), NE (not evaluated) or NS (not significant) as indicated in the table at the end of this section.

There are no criteria for use in determining the significance of collections or archival material. Usually, significance of a collection is based on what or whom it may represent. For instance, a collection of furniture from a single family and a particular era in connection with a significant historic site would be considered highly significant. In the same way, a high-quality collection of artifacts from a significant archaeological site would be of important significance. A large herbarium collected from a specific park over many decades is valuable to resource management efforts; specimen collection has already begun with the DPS District 4 Herbarium (Herbarioria FLSP) and the University of South Florida's herbarium. Archival records are most significant as a research source. Any records depicting critical events in the park's history, including construction and resource management efforts, would all be significant.

The following includes a summary of the FMSF inventory, with comments about the evaluation of significance.

Prehistoric and Historic Archaeological Sites

Desired future condition: All significant archaeological sites within the park that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: There is one significant archaeological site, Dade Battlefield, listed in the National Register of Historic Places in 1972 as "Dade Battlefield Historic Memorial." It is listed in the FMSF as SM12 and has been designated a National Historic Landmark. The registered battlefield is a rectangle of approximately seven acres along the eastern side of the current park boundaries. The battlefield marks the event sometimes called the "Dade Massacre," an attack by Seminole tribesmen on Brevet Major Francis Dade and his men as they traveled this portion of the Fort King Military Road. There is no survey record which establishes exactly where the Fort King Road segment existed in the park.

It is uncertain where, the Seminole who fell in battle are buried. The army soldiers were buried on site by Gaines' command 54 days after the battle and remained here until 1842, when they were disinterred and reburied in St. Augustine. They were placed in the garden of St. Francis Barracks, at the beginning of what is now a small national cemetery there. There is a high probability that there are human remains in the Park, but detailed information and maps are lacking. An archaeological and archival investigation might answer this question. This area should probably be treated as a burial ground and further assessment and management planning should follow Florida Statute Chapter 872.

The area was known to be used by the Seminole, at least between the years 1825 to 1855. Artifact categories are scattered, low-density, and may include worked bone, lithics, clothing and accessories, and plant remains. An isolated find of a projectile point was turned in to DHR. The point was found between the playground area and picnic pavilion. Mention of the projectile point has been subsumed under site SM12; however, the location from which it was recovered was not in the battlefield area nor does it relate to the battle. A separate FMSF Archaeological Short Form will need to be submitted and the relevant objectives and action steps defined.

Condition Assessment: The archaeological component of the battlefield is technically under the ground surface; we do not have an evaluation for its condition. On the surface, the area only barely reflects the natural conditions at the time of the battle. In the natural resource component of the last plan, the habitat in a large area of the park was to be managed to look like “the landscape that would have been present at the time of the battle,” but this area did not include the actual battlefield itself. The battlefield would naturally support several oaks such as the ones that are there, but would also have a significant diversity of native vegetation appropriate to mesic flatwoods, which it now does not have. It has had non-native grasses and shrubbery introduced and it has been mowed to resemble a lawn. For a time, the battlefield was used as a campground for re-enactment events, where it was subject to potential ground disturbances such as tent stakes, heavy traffic, fire pits, and horse picketing. There are also signs of some disturbance from ground-altering animals, such as pocket gophers; this may not be an issue as this species has historically been found in this natural community and may even have been present at the time of the battle. An assessment needs to be done to determine the level of impact from all disturbances on the under-surface, or archaeological component, of the battlefield.

Level of Significance: Dade Battlefield Historic Memorial (8SM12) was registered on the National Register of Historic Places (NRHP) in 1971 and as a National Historic Landmark in 1973. While the Florida Master Site File form and the NRHP nomination form refer to the site as both a battlefield and a memorial park, it is clearly the actual site of the battle that is considered the significant cultural resource. Its recognized significance is tied to the significance of the event itself, what today would qualify as Criteria A of the NRHP. On December 28, 1835, Seminole warriors under the leadership of several chiefs, attacked and killed all but three members of Major Francis Dade’s command, who were marching from Fort Brooke in the Tampa Bay region to reinforce Fort King in present-day Ocala. This event marked a turning point in the mounting tension between the United States and the Seminole tribes in Florida, shifting the so-called peace treaty process to war, a seven-year conflict later referred to as the Second Seminole War. This event also marked Seminole resistance to the United States’ policy of removing Native Americans west of the Mississippi River by negotiation, manipulation and force, to open up new territory to settlement, development and resource exploitation.

By 2016, two archeological studies at the park were implemented. The first effort, in 1964, was limited to excavations at the Battlefield Site. This study yielded

remnant artifacts of the battle, but very little about the presence of human remains or surviving nature and condition of the battlefield as an archaeological site. The second study, in 2013, included the entire eastern half of the park. This was a thorough study by the University of South Florida (USF) and the Alliance for Integrated Spatial Technologies (AIST). This work included an archeological and historic investigation, first using computer modeling to predict probable sites, and then using the modeling to determine on-the-ground finds and to record relevant GPS data. This work was done by USF AIST staff and students (AIST 2103).

General management measures: The primary treatments for significant archaeological sites are preservation and stabilization. Preservation includes protection from damage from resource management, natural causes, construction or human damage including looting. Stabilization techniques include the use of protective vegetation, use of filter cloth or other methods to prevent erosion, removal of large trees or burial of the site. Specific objectives and actions for this site are set out in the cultural management section later in this plan.

Historic Structures

Desired future condition: All significant historic structures and landscapes that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: Dade Battlefield Historic State Park contains remnants of a battlefield memorial park established by an act of the Florida legislature in 1921. The memorial park consists of numerous individual historic structures, including monuments, markers, statuary bases, bridges, and one building that together form a resource group or set or related resources. Surviving features of the associated landscape, including open spaces, vegetation, paths and roads, are listed in Table 4. The memorial park is potentially NRHP eligible under criteria A, as a significant example of an early 20th century war memorial.

There may be an additional cultural period or historical era in the park related to when the park was used in World War II as part of a complex of buildings that served as a motor pool and communications station, according to one hand-drawn map. A full survey and evaluation should be done of these items. The Park staff maintains a current list of the World War II items.

The AIST study in 2013 added the historic road and historic canal. FMSF should be consulted as to whether these items should be added to the park's FMSF records. The AIST modeling also revealed that the western half of the park was rated at Medium Sensitive, which means there is still some probability of other sites there. Since their on-the-ground work did not include this portion of the park, a survey and evaluation should be done in this area.

There is a large live oak (*Quercus virginicus*) located west of the museum, in management zone DB-4, it is estimated by state foresters to be roughly 250 years

old, which means it probably existed at the time of the Dade battle. This tree is also a nominee on record with Florida State Champion Trees for Sumter County. Also, per the AIST study, there are some cat-faced trees scattered throughout the park, indicative of turpentine naval stores activity.

Several items, such as old De Soto Trail exhibits and kiosks recorded on the park's Property list, are now gone. Park management has since removed these items from the Property list

Condition Assessment: The general condition of the historical structures is fair to good. There is general destabilization by environmental conditions that needs to be addressed. Several structures need roofs repaired or replaced, mortar and stone are crumbling on some elements.

Level of Significance: Dade Battlefield Historic State Park contains the unrecorded remnants of a battlefield memorial park established by an act of the Florida legislature in 1921. The memorial park consists of numerous individual historic structures, including monuments, markers, statuary bases, bridges, and one building that together form a resource group or set or related resources. Surviving features of the associated landscape, including open spaces, vegetation, paths and roads, have not been identified yet. The memorial park is potentially NRHP eligible under criteria A, as a significant example of an early 20th century war memorial. Like many war memorials, Dade Battlefield was established thanks to many years of advocacy by local citizens and state representatives who strove to get it recognized as both a national park and state historic site as early as 1897. Judge James C. B. Koonce, Judge Fred C. Cubberly, Representative H. J. Drane, and Representative Stephen Sparkman were instrumental in securing state appropriations and establishing a governing commission for the park. Many of the original stone structures in the park were either hand built by Judge Koonce himself, or funded through private donations.

While there appears to be remnants of a surviving landscape associated with the 1921 memorial, none of the historic landscape associated with the 1835 Second Seminole War battlefield survives. Both have been subjected to dramatic change over the years. An 1882 newspaper article reported that the battlefield was now under cultivation, resulting in the discovery of ammunition and other battle-related artifacts. The pine barrens reported in contemporary accounts of the battle no longer exist, likely removed during subsequent agricultural and timbering activity in the area; the pond that figured prominently in these accounts does still exist, but is located just east of the park boundary. The memorial park landscape has been altered by park staff over the years as historic site management philosophy shifts and evolves –some structures have been dismantled and removed, plantings have been added, and the site left to fluctuate between natural vegetation and manicured area. The landscapes' compromised integrity affects their NRHP eligibility.

General management measures: Several cultural elements need management actions, these include resurfacing the footbridge, assessment of the abandoned

gateposts, and complete assessment and repair of the bandstand. A complete list of collections was submitted to BNCR a couple of years ago. Each pavilion requires an assessment for roof, roof supports, and flooring conditions.

Collections

Desired future condition: All historic, natural history and archaeological objects within the park that represent Florida's cultural periods, significant historic events or persons, or natural history specimens are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: Acquisition of collection objects is controlled by the park's Scope of Collections statement, completed in 1994. In general, the deciding factors for acquisition and retention of items for collection are that: 1) they must be artifacts or reproductions of items used by the military or the Seminoles that would be historically correct for the 1835 era, and 2) the proper storage is available for the item. Displays and other interpretive uses are defined in the Scope, and generally require approval from the District Manager. The reproduction breastwork is noted in the Scope, where it states construction is to be of longleaf pine logs (Note that while the park is still working to remove the loblolly pines planted in management zone 3, these pine logs may be used instead).

The park maintains a limited collection of museum and interpretive objects housed in the interpretive center or museum. These objects and explanations center on the Native American and settlers' histories relevant to the area. The collection also consists of art depicting the battle, items belonging to the soldiers from the battle, and other military artifacts.

The museum display includes collection items on loan from other agencies. The Museum of Florida History (Florida Department of State, Division of Cultural Affairs) and the Smithsonian Institution.

There is an informal collection of objects called "Barbara's Box" in the Park Manager's office. It contains a miscellany of old items that may or may not have historical or archaeological significance.

The park's complete list of collection items has been entered in the DHR PastPerfect database.

Condition Assessment: The items on loan from other museums receive a condition assessment and report from the loaning institution every two years, and these items are in good-to-excellent condition as of the latest report. All other items are overdue for a full condition and significance assessment. For the most part, the museum/visitor center building maintains good conditions for protection of the objects and displays within, although it could use an evaluation and plan to improve the lighting and the viewing arrangements. In 1992, phase I of a museum assessment program was carried out by the American Association of Museums.

Grant funding should be sought for a phase II assessment that would be aimed at evaluating the museum collections.

Level of Significance: The levels of significance are not defined for the majority of the park collections.

General management measures: A number of items are currently listed incorrectly with the state as Property. These items need to be recorded with PastPerfect, and deaccessioned from Property. All items require assessment for significance and condition. The park also needs to develop a housekeeping manual, which would include a system for keeping records of maintenance and for monitoring climate and pest control, and also set up staff training related to significance and management of the collections. Compliance with display standards and protocols also needs to be assessed. Grant funding should be sought for a phase II assessment that would be aimed at evaluating the museum collections. Detailed management goals, objectives and actions for the management of cultural resources in this park are discussed in the Cultural Resource Management Program section of this component.

Table 4 contains the name, reference number, culture or period, and brief description of all the cultural sites within the park that are listed in the Florida Master Site File. The table also summarizes each site's level of significance, existing condition and recommended management treatment. An explanation of the codes is provided following the table.

Table 4. Cultural Sites Listed in the Florida Master Site File						
FMSF # and Site Name	Culture / Period	Description	Significance	Condition	Treatment	Management Zone
SM12; Dade Battlefield Historic Memorial	Second Seminole War	Archaeological Site	NRL	F	RS/RH	DB-7
SM660, District -Dade Battlefield Memorial Park	1920s – 1930s	Resource group	NE	F	RS/RH	DB-2C, 2D,3,4, 5,6,7
SM663, Bench, "Allapata-Yama"	1920 - 1930s	Historic Structure	NE	F	P	DB-6
SM664, Memorial Breastwork Foundation	1920 - 1930s	Historic Structure	NS	G	P	DB-7

Table 4. Cultural Sites Listed in the Florida Master Site File						
FMSF # and Site Name	Culture / Period	Description	Significance	Condition	Treatment	Management Zone
SM656, Footbridge	1920s – 1930s	Historic Bridge	NE	P	RS/ RH	DB-7
SM657, Backloop Bridge	1920s – 1930s	Historic Bridge	NE	G	RS/ RH	DB-6
SM658, Battlefield Bridge	1920s – 1930s	Historic Bridge	NE	F	RS/ RH	DB-7
SM659, Auld Brig O'Doon Bridge	1920s – 1930s	Historic Bridge	NE	G	RS/ RH	DB-7
SM665, Lt. Mudge monument	1920 - 1930s	Historic Structure	NE	G	P	DB-7
SM666, Captain Fraser Monument	1920 - 1930s	Historic Structure	NE	G	P	DB-7
SM667, Major Dade monument	1920 - 1930s	Historic Structure	NE	G	P	DB-7
SM668, Rear entrance gateposts	1920 - 1930s	Historic Structure	NE	G	P	DB-7
SM669, Standpipe	1920 - 1930s	Historic Structure	NE	G	P	DB-6
SM682, Bench, Double-sided	1920 – 1930s	Historic Structure	NE	F	P	
SM683, Front Entrance Gateposts	1920 – 1930s	Historic Structure	NE	F	P	DB-3
SM684, Garden Entrance Gateposts	1920 – 1930s	Historic Structure	NE	F	P	
SM670, Bandstand	Possible 1920-30s	Historic Structure	NE	F	RH	DB-6
SM661, Stone-lined Canal	Possible 1920-30s	Historic Structure	NE	F	RH	DB-4, 5,6, 7

Table 4. Cultural Sites Listed in the Florida Master Site File						
FMSF # and Site Name	Culture / Period	Description	Significance	Condition	Treatment	Management Zone
SM671, Stone water fountain	Possible 1920-30s	Historic Structure	NE	G	P	DB-6
SM672, 1921 battlefield marker	Possible 1920-30s	Historic Structure	NE	G	P	DB-7
SM673, Museum/ Visitor center	Before 1941 per aerials; addition or complete rebuild 1957	Historic Structure	NE	G	RH	DB-6
SM674, 1947 stone water fountain	1947. WWII era	Historic Structure	NE	F	RH	DB-4
SM662, WWII Radio Transmission Training Camp	1940s. WWII era	Historic Structure	NE	G	P	DB-7
SM675, Park residence (BL018012)	1957	Historic Structure	NE	F	RH	DB-4
SM676, Shop/garage (BL018013)	1959	Historic Structure	NE	G	RH	DB-4
SM677, Lodge/ meeting room (BL018010)	1955	Historic Structure	NE	G	RH	DB-6
SM678, BBQ and Picnic Shelter (BL018011)	1955	Historic Structure	NE	F	RH	
SM679, Pavilion, Chief Jumper (BL018009)	1962	Historic Structure	NE	F	RH	
SM680, Pavilion, Cpt. Garner (BL018016)	1964	Historic Structure	NE	F	RH	

Table 4. Cultural Sites Listed in the Florida Master Site File						
FMSF # and Site Name	Culture / Period	Description	Significance	Condition	Treatment	Management Zone
SM681, Pavilion, Chief Alligator (BL018017)	1964	Historic Structure	NE	F	RH	

Significance:

NRL National Register listed
 NR National Register eligible
 NE not evaluated
 NS not significant

Condition:

G Good
 F Fair
 P Poor
 NA Not accessible
 NE Not evaluated

Recommended Treatment:

RS Restoration
 RH Rehabilitation
 ST Stabilization
 P Preservation
 R Removal
 N/A Not applicable

Resource Management Program

Management Goals, Objectives and Actions

Measurable objectives and actions have been identified for each of DRP's management goals for Dade Battlefield Historic State Park. Please refer to the Implementation Schedule and Cost Estimates in the Implementation Component of this plan for a consolidated spreadsheet of the recommended actions, measures of progress, target year for completion and estimated costs to fulfill the management goals and objectives of this park.

While DRP utilizes the ten-year management plan to serve as the basic statement of policy and future direction for each park, a number of annual work plans provide more specific guidance for DRP staff to accomplish many of the resource management goals and objectives of the park. Where such detailed planning is appropriate to the character and scale of the park's natural resources, annual work plans are developed for prescribed fire management, exotic plant management and imperiled species management. Annual or longer-term work plans are developed for natural community restoration and hydrological restoration. The work plans provide

DRP with crucial flexibility in its efforts to generate and implement adaptive resource management practices in the state park system.

The work plans are reviewed and updated annually. Through this process, DRP's resource management strategies are systematically evaluated to determine their effectiveness. The process and the information collected is used to refine techniques, methodologies and strategies, and ensures that each park's prescribed management actions are monitored and reported as required by Sections 253.034 and 259.037, Florida Statutes.

The goals, objectives and actions identified in this management plan will serve as the basis for developing annual work plans for the park. The ten-year management plan is based on conditions that exist at the time the plan is developed, and the annual work provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

Natural Resource Management

Hydrological Management

Goal: Protect water quality and quantity in the park.

No changes to existing storm water conveyance structures or arrangement are foreseen, but the park will continue to monitor for erosion and other issues that may affect water quality and quantity.

Natural Communities Management

Goal: Restore and maintain the natural communities / habitats of the park.

As discussed above, DRP practices natural systems management. In most cases, this entails returning fire to its natural role in fire-dependent natural communities. Other methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements.

The battle interpretation at the park does affect the natural communities' management. One way is through fixed interpretive facilities that include a museum, signs and monuments along a trail, and a replica of a triangular breastwork made of the trunks of pine trees. Another way is through an annual reenactment carried out on two consecutive days during a weekend in early January. This mode of interpretation most directly affects the park's natural community management, partly because the portion of the park that remains as a mesic flatwoods community forms a backdrop for the reenacted battle, and partly because an artificial berm and lawn have been created to provide for the battle audience. The mesic flatwoods community is to be managed to create a facsimile of

the scene, as it would have appeared in the 1830s; this is also true of the area presumed to be the actual battlefield.

Following are the natural community management objectives and actions recommended for the state park.

Prescribed Fire Management

Prescribed fire is used to mimic natural lightning-set fires, which are one of the primary natural forces that shaped Florida's ecosystem. Prescribed burning increases the abundance and health of many wildlife species. A large number of Florida's imperiled species of plants and animals are dependent on periodic fire for their continued existence. Fire-dependent natural communities gradually accumulate flammable vegetation; therefore, prescribed fire reduces wildfire hazards by reducing these wild land fuels.

All prescribed burns in the Florida state park system are conducted with authorization from the FDACS, Florida Forest Service (FFS). Wildfire suppression activities in the park are coordinated with the FFS.

Objective A: Within 10 years, have 52.3 acres of the park maintained within the optimum fire return intervals.

Table 5 contains a list of all fire-dependent natural communities found within the park, their associated acreage and optimal fire return interval, and the annual average target for acres to be burned.

Table 5. Prescribed Fire Management		
Natural Community	Acres	Optimal Fire Return Interval (Years)
Mesic Flatwoods	52.3	2-4
Annual Target Acreage*	13.075 – 26.15	
*Annual Target Acreage Range is based on the fire return interval assigned to each burn zone. Each burn zone may include multiple natural communities.		

The park is partitioned into management zones, including those designated as burn zones (see Management Zones Table and Map). Prescribed fire is planned for each burn zone on the appropriate interval. The park's burn plan is updated annually because fire management is a dynamic process. To provide adaptive responses to changing conditions, fire management requires careful planning based on annual and very specific burn objectives. Each annual burn plan is developed to support and implement the broader objectives and actions outlined in this ten-year management plan.

Of the 16 designated Management Zones in the park, 14 have some area of mesic flatwoods community, which benefits from fire management. The largest of these

areas is slightly over 12 acres; the smallest is around .02 acres. The annual targeted burn area for the park is 13.075 acres each year, to complete the total burn acreage of 52.3 acres within the four-year maximum fire interval range for mesic flatwoods. If all 52.3 acres are burned one year, and the park waits at least another two years, then the annual targeted burn acreage runs closer to 26.15 acres. The fire-dependent species at DBHSP are currently all plants; wiregrass and longleaf pine, in particular, flourish best in a community that is burned in 2- to 4-year intervals.

There is currently a good network of firebreaks or firelines in place that allows staff to work with one or many zones on any given burn. Perimeter and internal firebreaks should be maintained and established according to agency policy. They should provide for adequate park protection and safe prescribed fire application. The complexity of the burn unit, including the structure and height of the fuel within the zone and the receptiveness of fuels adjacent to the zone, should be taken into account when preparing the firebreaks. Fire lines twice as wide as the fuel heights adjacent to the fire line is a general guideline for fire line preparation (for example, for ten-foot fuel heights adjacent to line, there should be a 20-foot-wide firebreak). Mechanical treatment of fuels adjacent to the firebreak may be needed to burn the zone safely. Perimeter lines need to be wide enough for defense and to allow a type 6 fire engine to move safely down the line. When widening the firebreaks, the vegetation along the boundary/fence line should be removed first to allow the perimeter break to function as such (the presence of wetlands, large native trees or protected plant species that pose no line defense threat may be an exception). Any additional widening can then be made on the zone side of the firebreak.

In order to track fire management activities, DRP maintains a statewide Natural Resource Tracking System database. The database allows staff to track various aspects of each park's fire management program including individual burn zone histories and fire return intervals, staff training/ experience, backlog, if burn objectives have been met, etc. The database is also used for annual burn planning which allows DRP to document fire management goals and objectives on an annual basis. Each quarter the database is updated and reports are produced that track progress towards meeting annual burn objectives.

Natural Communities Restoration

In some cases, the reintroduction and maintenance of natural processes is not enough to reach the natural community desired future conditions in the park, and active restoration programs are required. Restoration of altered natural communities to healthy, fully functioning natural landscapes often requires substantial efforts that may include mechanical treatment of vegetation or soils and reintroduction or augmentation of native plants and animals. For the purposes of this management plan, restoration is defined as the process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure and physical characters.

There are no areas at DBHSP requiring large-scale restoration plans or activities.

Natural Communities Improvement

Improvements are similar to restoration but on a smaller, less intense scale. This typically includes small-scale vegetative management activities or minor habitat manipulation. Following are the natural community improvement actions recommended at the park.

Objective A: Conduct natural community improvement activities on 57 acres of mesic flatwoods community.

- Action 1 Reduce hardwood presence to less than 15% cover on 37 acres (management zones 1A, 1B, 2A, 2B, 2C, and 2G) of mesic flatwoods community using a combination of prescribed fire and manual/mechanical removal.
- Action 2 Increase wiregrass presence to more than 35% cover on 37 acres (management zones 1A, 1B, 2A, 2B, 2C, and 2G), by hand-scattering viable seed from plants already in the mesic flatwoods community.

At DBHSP, a few projects go beyond management activities routinely done as standard operating procedures (such as routine mowing, the reintroduction of fire as a natural process, and spot treatments of exotic plants). These include continued hardwood removal, the low-intensity scattering of wiregrass seed in the mesic flatwoods, and the removal of the northern slash pines still standing in the developed areas of the park.

Much progress has been made in the reduction of hardwood intrusion during the past ten years. Most large oak trees have been felled and many of the smaller trees have been cleared away. Clearance of the remaining smaller trees may be accomplished through annual or semi-annual workdays with staff and volunteers. Currently, hardwood species make up nearly 35% of the cover in the mesic flatwoods community. The level of reduction of hardwood cover can be re-assessed when surveys are done before writing a burn plan for prescribed fire. Objective C has a higher priority for management planning purposes than other identified restoration projects.

Years of fire suppression and of shading by hardwoods had nearly eliminated wiregrass from the mesic flatwoods, where it should be a dominant understory cover. As hardwoods are being removed and as prescribed fire continues to be applied in appropriate intervals, the wiregrass population is increasing along the edges of the community zones. Staff or volunteers could assist this process in the central areas by collecting seeds from wiregrass along the edges of the zones and hand scattering in the central areas. The best time to collect wiregrass seed is when wiregrass puts out fruit after an early growing-season fire, since the seeds are significantly more viable. This objective has a low priority, as it is possible that the seeds will eventually find their way into the rest of the community zones over time if the other proper management techniques are applied.

Objective B: Conduct natural community improvement activities on 23 acres of developed community.

- | | |
|----------|---|
| Action 1 | Remove all introduced loblolly pine from the park, especially those trees planted in zone 3. |
| Action 2 | Reduce/remove any encroaching hardwoods from mesic flatwoods areas. |
| Action 3 | Increase the number of longleaf pines in the developed area of the park. |
| Action 4 | Remove non-native plants from areas planted to adorn visitor areas. |
| Action 5 | Develop and implement a plan to allow native flora to repopulate in zone DB-7, in order to reduce non-native ground cover to less than 15%. |

In the five acres of mesic flatwoods that have been replanted with loblolly pines, four trees are selectively removed each year to be made into a log breastwork during the reenactment. Longleaf pine seedlings should be planted periodically, to replace trees needed for the breastwork and to stagger tree ages and sizes. If possible, some of the seedlings could be produced locally from cones collected in the park. At least 24 new longleaf pine trees should be planted over time.

The status of the management objectives can be measured by annually recording the number of northern pines removed and the number remaining, and the number of longleaf pines planted and the current count of surviving longleaf in the developed area.

There is a relatively diverse representation of natives struggling to grow in DB-7, in spite of non-native plant seeding that was done in the past and the current practice of frequent mowing and weed-whacking. Native repopulation will happen mostly by re-structuring mowing schedules and heights to allow native mesic flatwoods plants to go to seed and by ceasing all weed-whacking activity. For example, to allow the stiff sunflower (*Helianthus radulata*) to go to seed there should be no mowing in the fall until after mid- to late November. Areas around trees have native hollies, blueberries, pawpaws, petunias, among many others, and control in these areas should be limited to invasive exotic species removal or handpulling of those few natives that are overly aggressive, such as muscadine grape (*Vitis rotundifolia*). These areas should not be mowed or "weed-whacked." Mowing in the entire zone should only be done to the extent that it will simulate the benefits of prescribed fire. In addition, saw palmetto should be re-introduced into the area as small islands. This could be done by putting in seeds or small plants from elsewhere in the park. The soils in this zone support mesic flatwoods and mesic hardwood hammock community types, so there is no reason at this time to do anything with the existing oaks. As the native vegetation re-establishes itself in the zone, it would be beneficial to consider the feasibility of implementing fire in the zone.

Imperiled Species Management

Goal: Maintain, improve or restore imperiled species populations and habitats in the park.

DRP strives to maintain and restore viable populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

In the preparation of this management plan, DRP staff consulted with staff of the FFWCC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FFWCC, FDACS and FNAI as part of their ongoing research and monitoring programs will be reviewed by park staff periodically to inform management of decisions that may have an impact on imperiled species at the park.

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet DRP's mission. Long-term monitoring is also essential to ensure the effectiveness of resource management programs. Inventory and monitoring efforts must be prioritized so that the data collected provides information that can be used to improve or confirm the effectiveness of management actions on conservation priorities. Monitoring intensity must at least be at a level that provides the minimum data needed to make informed decisions to meet conservation goals. Not all imperiled species require intensive monitoring efforts on a regular interval. Priority must be given to those species that can provide valuable data to guide adaptive management practices. Those species selected for specific management action and those that will provide management guidance through regular monitoring are addressed in the objectives below.

Objective A: Update baseline imperiled species occurrence inventory for plants and animals

Ongoing species inventories are essential as indicators for natural community management success. The likelihood of endemic and other rare species finding their way to the park increases as the health of the community improves. General awareness from volunteers and staff can help with survey or inventory updates. A formal survey for new species should be conducted during plan review years. Using FNAI and FFWCC information, as well as the Atlas of Florida Vascular Plants data, a list of potential species for the area can be developed and help guide surveys. The priority for this objective is assumed to be Low, since most imperiled species likely to appear will have essentially the same management requirements as are already specified in the plan, including those for gopher tortoises.

Objective B: Monitor and document 2 selected imperiled animal species in the park (gopher tortoises and southeastern American kestrel) and provide population summary.

- Action 1 By 2018, complete a survey for the kestrel and report on findings.
- Action 2 By 2020, perform repeat park-wide post-burn surveys on gopher tortoises and southeaster American kestrels, and report on population status.

Management to maintain and improve gopher tortoise populations is essentially the same as that required to preserve healthy mesic flatwoods, so there are no defined management goals for the gopher tortoise at this time. However, gopher tortoises have been selected for detailed survey and monitoring at tier 2 and above. These surveys follow FWC's protocol for assessing gopher tortoise population densities (FWC 2007, Gopher Tortoise Management Plan; FWC 2009 and 2012, Gopher Tortoise Permitting Guidelines). Since the existing studies show the population densities to be healthy, a repeat survey should be done sometime in the next ten years.

A specific survey and report needs to be done for the southeastern American kestrel, as the sightings reported have not been fully documented. Nesting and other activities need to be reported. Fire and other management activities should be redirected as appropriate to protect any nests found.

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the park and conduct needed maintenance and preventive control.

DRP actively removes invasive exotic species from state parks, with priority being given to those causing the most ecological damage. Removal techniques may include mechanical treatment, herbicides or biocontrol agents.

Objective A: Annually treat all infested areas and known species in the park.

- Action 1 Annually survey all management zones for status of exotic plant species infestations.
- Action 2 Develop a plan for exotic removal.
- Action 3 Implement annual treatment goals for exotic and invasive exotic plant species in the park.

Given the size of this park, the already relatively low densities of invasive plants, and the lack of access issues, this park can readily treat all its gross acres every year. The average number of infested acres of invasive exotic plants to be treated annually during this ten-year plan period will depend on the infestation densities and distributions assessed during annual surveys. The park is small enough that surveys can be performed and the NRTS updated annually. A treatment plan will

be defined each year and include a treatment calendar to ensure that the target species are treated when the control work will be most effective; for example, cogongrass is most successfully controlled if treated during the early fall, while it is increasing storage in its root system, and again in the springs, to minimize seed production. The priority for this objective is high and essentially on an equal level with prescription fire objectives.

Treatment techniques and schedules will follow the current Best Management Practices as published by FWC and IFAS. Park staff is expected to stay current with: the FLEPPC invasive species lists and plant identification; the BMPs for control techniques for the different species (these are usually available through IFAS or through EPPC); and the proper training and supervision of volunteers and others on the identification and treatment of invasive plant species. At the time of writing this plan, all of the known exotic invasive plants at the park can be controlled manually and by using herbicides that do not require special license for applicators. Proper protective personal equipment (PPE) required by the product label is to be worn every time herbicide product is being handled. Material Safety Data Sheets are to be kept up to date, readable, and within easy reach of all herbicide handling activities.

Objective B: Implement control measures on Early Detection /Rapid Response species in addition to those on the FL EPPC Category I and Category II lists.

- Action 1 Set up email, or other tools as needed, to receive FWC, APHIS, IFAS and CISMA alerts for newly identified invasive species for their region.
- Action 2 Ensure staff is trained to identify and treat the newly identified species.
- Action 3 Include newly identified invasive species in survey and treatment work.

As part of its exotic invasive plant control efforts, the Park will participate in local Early Detection/Rapid Response (EDRR) efforts. EDRR efforts tend to result in eradication of the threat, rather than just provide control of spread. To meet this objective, park staff and volunteers will work with the local CISMA (which is the Nature Coast CISMA) and the Weed Risk Assessment programs being conducted by APHIS and IFAS, to learn what to watch for and for identification information. DBHSP may also be contacted by these groups for assistance in researching the presence of new exotic invasive species. Treatment techniques and schedules will follow the current Best Management Practices as published by FWC and IFAS.

Objective C: Implement control measures on exotic and nuisance animal species in the park, as needed.

- Action 1 Ensure staff is trained to identify exotic and nuisance animal species.
- Action 2 Develop plans for control.

At this time, there are no known exotic animals causing enough ecological damage to require a control plan. There are a few exotic animal species in the park, such as greenhouse frogs, brown anoles, brown haplo, black-bellied whistling ducks, and the very occasional wild pig/feral hog. But management for these species is likely to be limited to removal of individuals as feasible during daily activities. Staff should stay alert to new information about the impact of these and other ubiquitous exotic animal species, and consider different removal tactics if better management practices are discovered. Other exotic and nuisance animal species in the park, such as the occasional occurrence of free ranging domesticated pets or livestock and feral animals will be addressed on an as-needed basis. When possible, park staff should also address problems caused by exotic pests and pathogens.

Cultural Resource Management

Cultural resources are individually unique, and collectively, very challenging for the public land manager whose goal is to preserve and protect them in perpetuity. DRP is implementing the following goals, objectives and actions, as funding becomes available, to preserve the cultural resources found in Dade Battlefield Historic State Park.

Goal: Protect, preserve and maintain the cultural resources of the park.

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. All activities related to land clearing, ground disturbing activities, major repairs or additions to historic structures listed or eligible for listing in the National Register of Historic Places must be submitted to the FDOS, Division of Historical Resources (DHR) for review and comment prior to undertaking the proposed project. Recommendations may include, but are not limited to concurrence with the project as submitted, pretesting of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effect. In addition, any demolition or substantial alteration to any historic structure or resource must be submitted to DHR for consultation and DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that DRP consider the reuse of historic buildings in the park in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. This comparison must be accomplished with the assistance of DHR.

The primary goal of cultural resource management at this park is to manage resources in a way that will let managers and visitors interpret the historic event, the battle, as accurately and realistically as possible. In addition, collections are to be preserved in good condition in perpetuity, protected from physical threats and interpreted to the public in an effective manner

Objective A: Determine if the Scope of Collections Statement needs to be updated to include protocol for historic periods not currently included.

- Action 1 Review the Archaeological Site Modeling publication (AIST 2013) with DHR and determine if a new (or additional) Scope of Collections Statement is needed.
- Action 2 Develop new Scopes as appropriate.

Objective B: Determine if the historic road and historic canal data from AIST should be added to FMSF; complete FMSF reports if needed.

- Action 1 Contact DHR, discuss these sites and determine the need to record with FMSF.
- Action 2 If DHR recommends that they be reported to FMSF, complete and submit the necessary forms.

Objective C: Evaluate and, if indicated, implement an archaeological and historical survey on the western half of the park.

- Action 1 Contact DHR and USF about the Medium Sensitive findings for this area.
- Action 2 If these agencies support this study, then plan the methods and scheduling of a survey, and implement the plan.

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 DRP'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 those communities specifically managed as early successional.

A timber management analysis was not conducted for this park since its total acreage is below the 1,000-acre threshold established by statute. Also, the primary management objectives of the unit can be met without conducting timber management activities for this management plan cycle.

Arthropod Control Plan

All DRP lands are designated as “environmentally sensitive and biologically highly productive” in accordance with Ch. 388 and Ch. 388.4111 Florida Statutes. If a local mosquito control district proposes a treatment plan, DRP works with the local mosquito control district to achieve consensus. By policy of DEP since 1987, aerial spray of adulticide is not allowed, but larvicides and ground adulticides (truck spraying in public use areas) is typically allowed. DRP does not authorize new physical alterations of marshes through ditching or water control structures. Mosquito control plans temporarily may be set aside under declared threats to public or animal health, or during a Governor's Emergency Proclamation.

Dade Battlefield Historic State Park does have an Arthropod Control Plan in place for *Aedes*, *Culex*, *Anopheles*, and *Psorophora* mosquitos.

Resource Management Schedule

The Implementation Component of this management plan contains a priority schedule for conducting all management activities. It is based on what is needed to meet the purposes for which these lands were acquired, and to enhance the resource values.

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 are being managed for the purposes for which they were acquired and in accordance with their approved land management plans. DRP usually considers recommendations of the land management review team and updates this plan accordingly. Dade Battlefield Historic State Park has not completed 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 Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP). These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation and management. Additional input is received through public workshops, and through environmental and recreational-user groups. With this approach, the DRP 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 expressed in general terms.

External Conditions

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

Dade Battlefield Historic State Park is located within Sumter County about one mile southwest of Bushnell, 25 miles southwest of the Villages, and 57 miles west of Orlando in the central part of the state. Approximately 788,000 people live within 30 miles of the park (U.S. Census 2010). According to the U.S. Census Data (2015), approximately 10% of residents in Sumter County identify as black, Hispanic or Latino, or another minority group. Over half (54%) of residents in Sumter County can be described as youth or seniors (U.S. Census 2010). 49% of the population is of working age (16 to 65) (U.S. Census Bureau 2010). Sumter County's per capita personal income at \$37,558 is below the statewide average of \$42,737 (U.S. Bureau of Economic Analysis 2014).

The table below identifies significant resource-based recreation opportunities within 15 miles of Dade Battlefield Historic State Park.

Table 6. Resource-Based Recreational Opportunities Near Dade Battlefield Historic State Park									
Name	Biking	Boating/ Paddling	Camping	Equestrian Uses	Fishing	Hiking	Hunting	Picnicking	Wildlife Viewing
Fort Cooper State Park (FDEP)	✓	✓			✓	✓		✓	✓
General James A. Van Fleet State Trail (FDEP)	✓					✓		✓	✓
Withlacoochee State Forest (FFS)	✓	✓	✓	✓	✓	✓	✓		✓
Green Swamp Wildlife Management Area (FWC/SWFWMD)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Richloam Wildlife Management Area (FWC/FFS)	✓		✓	✓	✓	✓	✓		✓
Perry Oldenburg Wildlife and Environmental Area (FWC)						✓			✓
Chinsegut Wildlife and Environmental Area (FWC)						✓			✓
Flying Eagle Preserve (FWC/SWFWMD)	✓		✓	✓	✓	✓	✓		✓
Lake Panasoffkee	✓		✓	✓	✓	✓	✓	✓	✓

The park is located in the Central Vacation Region, which includes Hardee, Highlands, Lake, Marion, Orange, Osceola, Polk, Seminole, and Sumter counties (Visit Florida 2014). According to the 2014 Florida Visitor Survey, approximately 36.1% of domestic visitors to Florida visited this region. Roughly 90% of visitors to the region traveled to the Central Region for leisure purposes. The top activities for domestic visitors were theme/amusement/water parks and shopping. Summer was

the most popular travel season, but visitation was generally spread throughout the year. More than half of visitors traveled by non-air (52%), reporting an average of 4.6 nights and spending an average of \$187 per person per day (Visit Florida 2014).

Florida's Statewide Comprehensive Outdoor Recreation Plan (SCORP) indicates that participation rates in this region for freshwater beach activities, freshwater fishing, freshwater boat-ramp use, wildlife viewing, hiking, camping, off-highway vehicle riding, horseback riding, and hunting are higher than the state average with demand for additional facilities increasing through 2020 (FDEP 2013).

Existing Use of Adjacent Lands

Dade Battlefield Historic State Park falls between Interstate 75 to the west and U.S. 301 to the east. The park is in an unincorporated area of Sumter County, and the main downtown area for the City of Bushnell is within a mile and a half of the park. Residential units are on the north and south boundaries of the park, while vacant land borders the park to the east and west.

Planned Use of Adjacent Lands

In 2015, Sumter County was absorbed as a partner of the East Central Florida Regional Planning Council of which Volusia, Seminole, Osceola, Orange, Lake, and Brevard County are also members. The region, with Sumter County, had a population exceeding 3.2 million in 2010 (Census 2010). Sumter County had a population growth rate of 75% from 2000 to 2010, with a population of 93,420 (Census 2010). Medium projections anticipate Sumter's population to increase 51% from 2010 to 2020 (BEBR 2014). In 2040, Sumter County is expected to exceed 232,000 residents (BEBR 2014).

The City of Bushnell is intent on retaining their small community charm. Adjacent parcels are zoned for rural residential densities that range from low to medium density. Parcels to the east and west are zoned for agricultural uses. In 2012, the city received a \$4 million grant from the Florida Department of Transportation for citywide beautification. The money was directed toward creating bicycle and walking trails as well as a downtown park area.

There is a planned widening of C.R. 470 from Interstate 75 to the Lake County line, 10 miles north of the park property. There are no other capital improvement plans that would affect the immediate vicinity of the park.

Florida Greenways and Trails System

The Florida Greenways and Trails System (FGTS) is made up of existing, planned and conceptual non-motorized trails and ecological greenways that form a connected, integrated statewide network. The FGTS serves as a green infrastructure plan for Florida, tying together the greenways and trails plans and planning activities of communities, agencies and non-profit organizations throughout Florida. Trails include paddling, hiking, biking, multi-use and equestrian

trails. The Office of Greenways and Trails maintains a priority trails map and gap analysis for the FGTS to focus attention and resources on closing key gaps in the system.

In some cases, existing or planned priority trails run through or are adjacent to state parks, or they may be in close proximity and can be connected by a spur trail. State parks can often serve as trailheads, points-of-interest, and offer amenities such as camping, showers and laundry, providing valuable services for trail users while increasing state park visitation.

To date, a segment gap exists in Sumter County for the Coast-to-Coast Connector. A proposed segment of the connector would run through Dade Battlefield Historic State Park to join the existing trail in Hernando County.

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.

Recreational Resource Elements

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

Land Area

Dade Battlefield Historic State Park is approximately 80 acres, and of that acreage, about one-third of the land area is developed for recreational purposes. The developed areas of the park support recreational activities that include historical interpretation, picnicking, and events such as the annual reenactment of Dade's Battle.

Water Area

A canal runs through the southeastern portion of the park. Historically, this canal was fed with flowing water year-round by Webb's pond. Now, the canal has varying water levels in response to rainfall. The canal's contribution to the recreational opportunities of the park is in the form of the historic bridges built in the 1920s that enhance the park's interpretive mystique.

Natural Scenery

Dade Battlefield Historic State Park is home to unique vistas which provide a glimpse into the past. Visitors experience the area as it was when the battle took place and the tall longleaf pines create a beautiful backdrop for wildlife viewing and leisurely strolls.

Significant Habitat

The half-mile trail through the pine flatwoods provide visitors with ample wildlife viewing and birding opportunities. Common sightings include gopher tortoises, hawks, woodpeckers, and rarer are sightings of deer, foxes, or wild turkeys.

Natural Features

The approximately 50 acres of mesic flatwoods provides interpretive recreation opportunities in the form of hiking trails. These trails are demonstrative of terrain experienced during Dade's Battle and provide a unique opportunity for historic immersion captured at this park.

Archaeological and Historical Features

Dade Battlefield, which is listed as a National Historic Landmark, is the primary draw of visitors to this state park. The park hosts many interpretive exhibits and events for visitors to learn about the battle in a variety of mediums including exhibits, reenactments, and videos.

Assessment of Use

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

Past Uses

Prior to management by the DRP, the site was designated as "Dade Memorial Park" and was managed as a community park to memorialize the fallen soldiers. Over the years, the park has been a popular location for local gatherings and picnics.

Future Land Use and Zoning

The DRP works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park uses and facilities necessary for the provision of resource-based recreation.

Dade Battlefield Historic State Park is in the public/institution/education zoning district as designated by the Sumter County land development code. Although the park falls outside of the incorporated area for the City of Bushnell, the park is within the urban development boundary. This suggests that the park and the parcels around it could one day be incorporated into the City of Bushnell. Currently, the parcels surrounding the park have a future land use designation of rural residential, allowing one or two dwelling units per acre depending on municipal sewage connection.

Current Recreational Use and Visitor Programs

Resource-based outdoor recreation in Florida continually increases in popularity. The growth of Florida's resident and tourist populations brings increasing pressure for access that is more widespread and for denser levels of public use in the natural areas available to the public. Consequently, one of the greatest challenges for public land management today is the balancing of reasonable levels of public access with the need to preserve and enhance the natural and cultural resources of the protected landscapes.

Recreational uses currently available at Dade Battlefield Historic State Park include bicycling and hiking, birding, wildlife viewing, tours, and interpretive exhibits relating to the history of the battle and the region. The park also has picturesque facilities to host family reunions, weddings, meetings, and retreats.

The park hosts many events throughout the year, however the two biggest events are the annual reenactment of the Dade Battle which occurs in late December or early January, and World War Two Day which takes place on the first Saturday of August.

Interpretive programming at the park includes a twelve-minute video, exhibits, and artifact collections relating to battle history. Exhibits include mannequins demonstrating clothing worn by the soldiers and the Seminoles. In addition to the visitor center, the trail along Fort King Military Road features interpretive signs and monuments to Dade and his soldiers.

Dade Battlefield Historic State Park recorded 32,280 visitors in FY 2015/2016. By DRP estimates, the FY 2015/2016 visitors contributed \$2,774,976 million in direct economic impact, the equivalent of adding 48 jobs to the local economy (FDEP 2016).

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 Dade Battlefield Historic State Park all wetlands and floodplains, as well as mesic flatwoods and known imperiled species habitat, have been designated as protected zones. The park's current protected zone is delineated on the Conceptual Land Use Plan.

Existing Facilities

Recreation Facilities

The majority of the facilities are located in the eastern area of the park. The picnic area of the park contains six picnic pavilions, a playground, and restrooms. The area around the visitor center in the southeast area of the park hosts the recreation hall, gazebo, a channeled creek, a 250-year old oak, flagpoles and the Fort King Military Trail in addition to the visitor center. North of the Fort King Military Trail, near the entrance station are three monuments. The western area of the park houses the Pine Flatwoods Trail.

Recreation Facilities

Visitor Center Area

Visitor Center
Recreation Hall
Gazebo
Flagpoles (2)
Monuments (3)
Parking Lot

Picnic Area

Picnic Pavilions (6)
Playground
Restrooms
Parking Lot

Trail Area

Pine Flatwoods Trail
Exterior Trail
Fort King Military Trail

Support Facilities

Support facilities are located in the southern area of the park. Existing support facilities include storage and shop facilities, ranger residence, volunteer camping sites, and a pole shelter. An entrance station is located at the entrance to the park and the visitor center houses administrative offices.

Support Facilities

Support Area

Shop Building
Pole Shelter
Storage Building
Residence
Volunteer Camping Sites

Conceptual Land Use Plan

The following narrative represents the current conceptual land use proposal for this park. The conceptual land use plan is the long-term, optimal development plan for the park, based on current conditions and knowledge of the park's resources, landscape and social setting (see Conceptual Land Use Plan). The conceptual land use plan is modified or amended, as new information becomes available regarding the park's natural and cultural resources or trends in recreational uses, in order to adapt to changing conditions. Additionally, the acquisition of new parkland may provide opportunities for alternative or expanded land uses. The DRP develops a detailed development plan for the park and a site plan for specific facilities based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, the DRP assessed the potential impact of proposed uses or development on the park resources and applied that analysis to determine the future physical plan of the park as well as the scale and character of proposed development. Potential resource impacts are also identified and assessed as part of the site planning process once funding is available for facility development. At that stage, design elements (such as existing

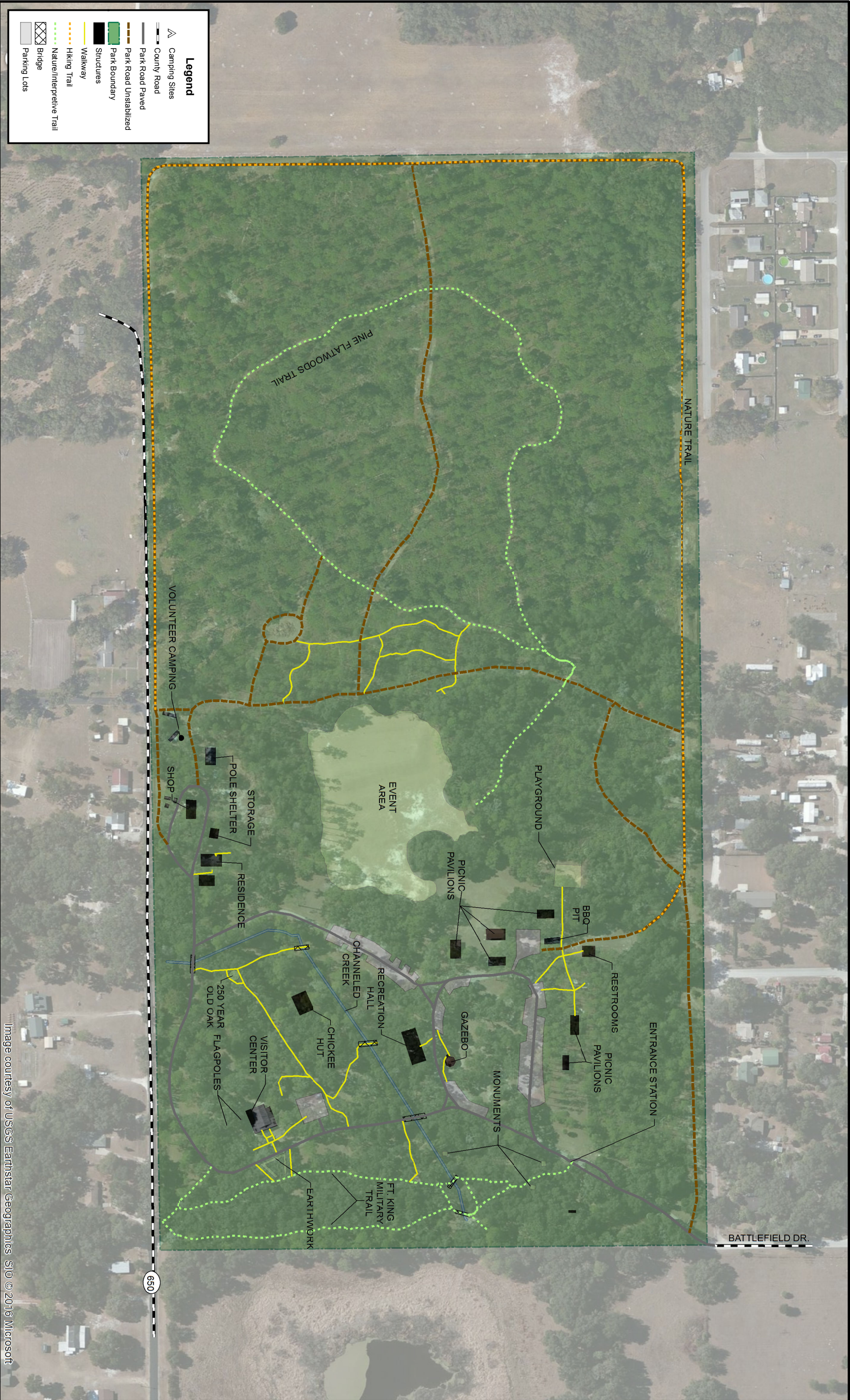
topography and vegetation, sewage disposal and storm water management) and design constraints (such as imperiled species or cultural site locations) are investigated in greater detail. Municipal sewer connections, advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Creation of impervious surfaces is minimized to the greatest extent feasible in order to limit the need for storm water management systems, and all facilities are designed and constructed using best management practices to limit and avoid resource impacts. Federal, state and local permit and regulatory requirements are addressed during facility development. 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, park staff monitors conditions to ensure that impacts remain within acceptable levels.

Potential Uses

Public Access and Recreational Opportunities

Goal: Provide public access and recreational opportunities in the park.

The existing recreational activities and programs of this state park are appropriate to the natural and cultural resources contained in the park and should be continued. New and improved activities and programs are also recommended and discussed below.



Legend

- Camping Sites
- County Road
- Park Road Paved
- Park Road Unstabilized
- Park Boundary
- Structures
- Walkway
- Hiking Trail
- Nature/Interpretive Trail
- Bridge
- Parking Lots

DADE BATTLEFIELD HISTORIC STATE PARK

BASE MAP

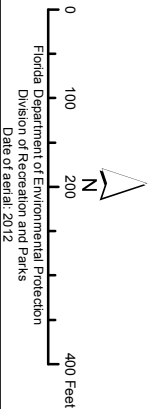


Image courtesy of USGS Earthstar Geographics SIO © 2016 Microsoft

Objective: Maintain the park's current recreational carrying capacity of 1,240 users per day.

Existing recreational activities at the park include a visitor center, a trail system, and picnic areas. These activities will continue at the park and are appropriate to maintain the current recreational carrying capacity of the park.

Objective: Expand the park's recreational carrying capacity by 0 users per day.

The current recreational opportunities at the park are sufficient and additional activities are not needed.

Objective: Continue to provide the current repertoire of 10 interpretive, educational and recreational programs on a regular basis.

The park offers a large variety of programming to fit the needs of visitors. The park hosts multiple outreach programs for the community to come together, nature days, held weekly during the summer, teach youths about different species and habitats through activities and crafts. Multiple programs offer insight into life in the 19th century through crafts and reenactments. The most notable park programming is the annual reenactment of Dade's Battle. The park also offers a large variety of annual events as well as other events and programs offered less frequently.

Objective: Develop 2 new interpretive, educational and recreational programs.

Interpretive signage should be implemented along existing and proposed trails within the state park. This signage will aid in clear trail markings to protect the natural communities, wildlife and for the safety of visitors. These signs should inform visitors about ongoing resource management activities and incorporate large preservation and cultural resource stewardship.

A first-person pioneer impression program would give an overview of the life on the Florida frontier of the 1830s. This program would provide discussion of both sides of the Second Seminole War conflict in general, as well as Dade's Battle of 1835 in detail.

Proposed Facilities

Capital Facilities and Infrastructure

Goal: Develop and maintain the capital facilities and infrastructure necessary to implement the recommendations of the management plan.

The existing facilities of this state park are appropriate to the natural and cultural resources contained in the park and should be maintained. New construction, as discussed further below, is recommended to improve the quality and safety of the

recreational opportunities, to improve the protection of park resources, and to streamline the efficiency of park operations. The following is a summary of improved and/or new facilities needed to implement the conceptual land use plan for Dade Battlefield Historic State Park.

Objective: Maintain all public and support facilities in the park.

All capital facilities, trails and roads within the park will be kept in proper condition through the daily or regular work of park staff and/or contracted help.

Objective: Improve/repair 3 existing facilities.

Major repair projects for park facilities may be accomplished within the ten-year term of this management plan, if funding is made available. These include the modification of existing park facilities to bring them into compliance with the Americans with Disabilities Act (a top priority for all facilities maintained by DRP). The following discussion of other recommended improvements and repairs are organized by use area within the park.

Visitor Center Area

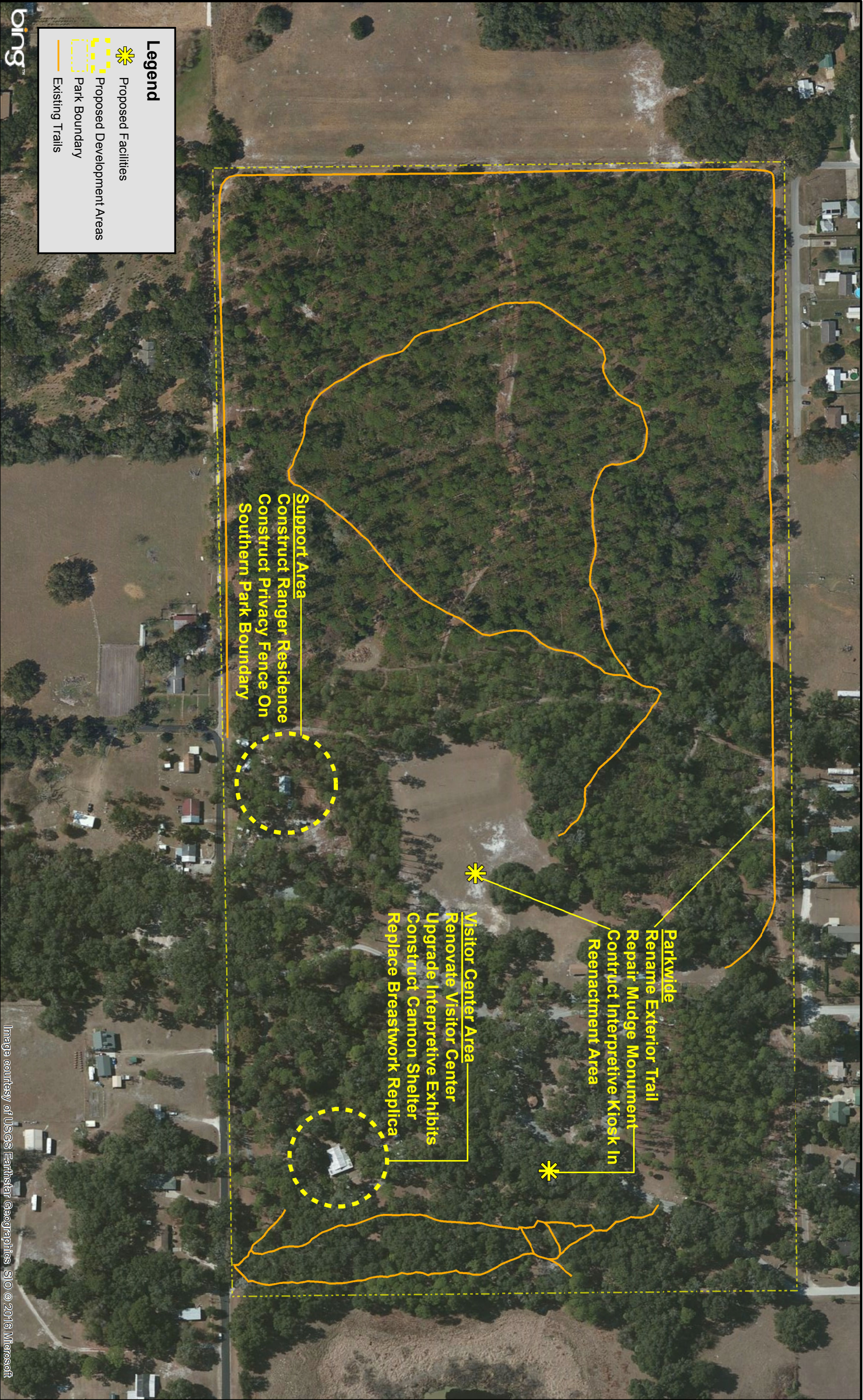
The current visitor center is in need of a complete renovation. Renovations include electric and foundation upgrades, roof redesign, and HVAC. The visitor center is a vital component to Dade Battlefield Historic State Park, as it is rich in historical and cultural value and provides ample educational opportunities. In addition to visitor center improvements, the interpretive exhibits housed within the visitor center need upgrading. Many of these exhibits are worn and the interpretive panels need to be updated. The Breastwork Replica at the park needs to be replaced.

The current breastwork has experienced significant deterioration from the elements and impacts of heavy use. This breastwork is important to the historical immersive experience at the park and hosts an excellent interpretive opportunity showing visitors styles of fortification from the 1800s.

The functioning cannon used during reenactments of Dade's Battle is currently stored in a locked section of a pavilion. In order to display the cannon in a more visible manor, a new interpretive shelter should be constructed near the visitor center to display the cannon.

Trail Area

Mudge Monument, located on the Fort King Military Trail, was damaged by a falling tree branch. The monument needs to be repaired and placed back on the foundation.



DADE BATTLEFIELD HISTORIC STATE PARK

CONCEPTUAL LAND USE MAP

Reenactment Area

An interpretive kiosk should be constructed in the reenactment area to provide visitors with more opportunities to explore the history of the battle and the area surrounding the battlefield.

Parkwide

Overall vehicular circulation from the park entrance to the primary park facilities should be improved. Circulation should complement the interpretive aspects of the park. Improvement options may require realignment of park entrance, the current park drive, and service roads as needed to maximize results.

Support Area

A new ranger residence should be constructed in the park. Currently, only one residence is available and there is consistent need for a second.

Facilities Development

Preliminary cost estimates for these recommended facilities and improvements are provided in the Ten-Year Implementation Schedule and Cost Estimates (Table 7) located in the Implementation Component of this plan. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist DRP in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes. New facilities and improvements to existing facilities recommended by the plan include:

Recreation Facilities

Visitor Center Area

Renovate Visitor Center
Upgrade Interpretive exhibits
Cannon Shelter
Breastwork Replica

Trail Area

Interpretive kiosk
Repair Mudge Monument

Reenactment Area

Interpretive kiosk

Parkwide

Circulation improvements

Support Facilities

Support Area

Ranger Residence

Recreational Carrying Capacity

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site and the unit's classification is selected (see Table 7).

The recreational carrying capacity for this park is a preliminary estimate of the number of users the unit could accommodate after the current conceptual development program has been implemented. When developed, the proposed new facilities would approximately increase the unit's carrying capacity as shown in Table 7.

Table 7. Recreational Carrying Capacity						
	Existing		Proposed		Estimated	
Activity/Facility	One Time	Daily	One Time	Daily	One Time	Daily
Trails						
Nature Trails	70	280			70	280
Museum/Visitor Center	160	640			160	640
Picnicking	160	320			160	320
TOTAL	390	1240	0	0	390	1240
*Existing capacity revised from approved plan according to DRP guidelines.						

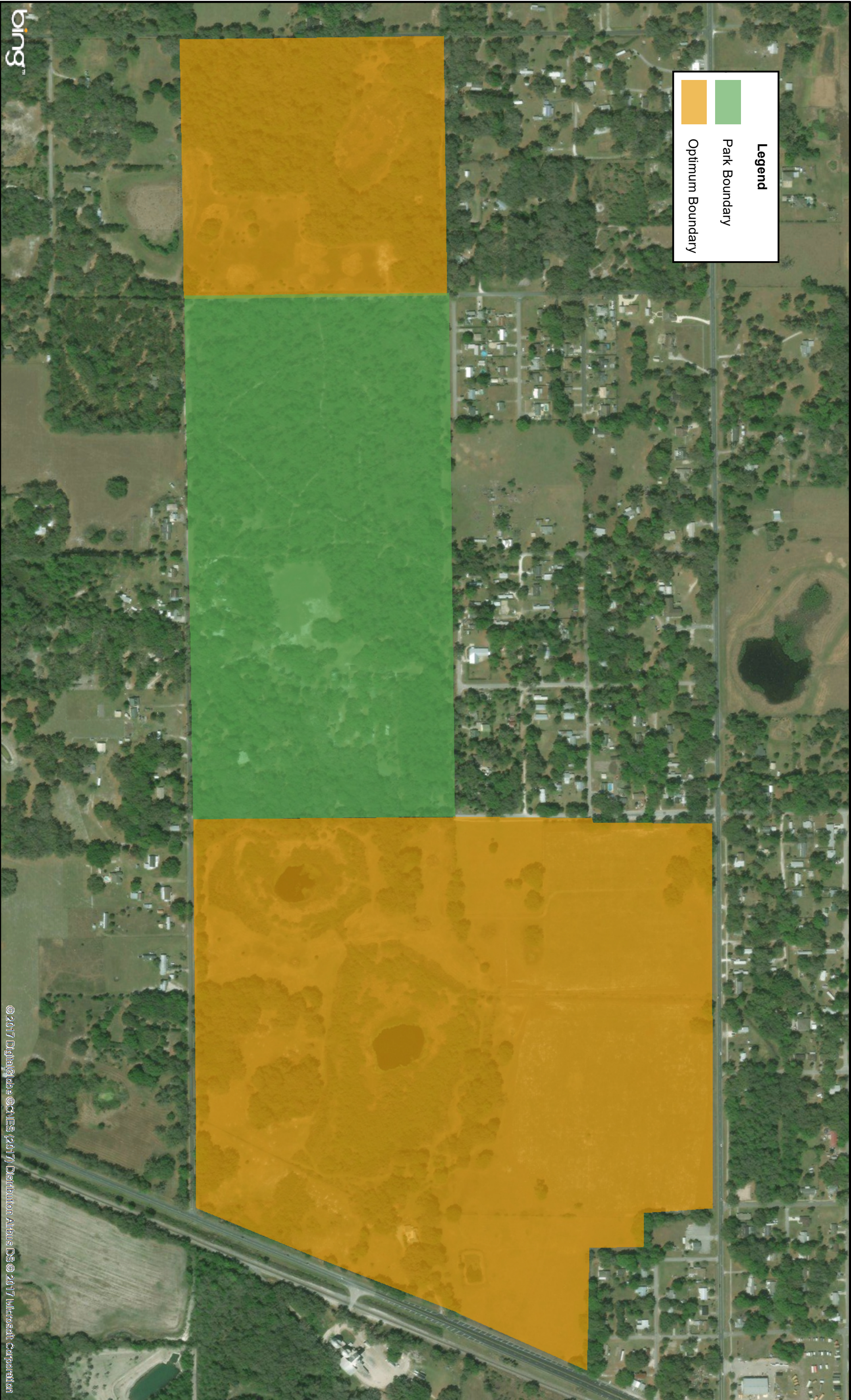
Optimum Boundary

The optimum boundary map reflects lands considered desirable for direct management by the DRP as part of the state park. These parcels may include public or privately-owned land that would improve the continuity of existing parklands, provide the most efficient boundary configuration, improve access to the park, provide additional natural and cultural resource protection or allow for future expansion of recreational activities. Parklands that are potentially surplus to the management needs of DRP are also identified. As additional needs are identified

through park use, development, and research, and as land use changes on adjacent property, modification of the park's optimum boundary may be necessary.

Identification of parcels on the optimum boundary map is intended solely for planning purposes. It is not to be used in connection with any regulatory purposes. Any party or governmental entity should not use a property's identification on the optimum boundary map to reduce or restrict the lawful rights of private landowners. Identification on the map does not empower or suggest that any government entity should impose additional or more restrictive environmental land use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

The current approved optimum boundary from the previous plan has been extended to include a parcel to the east and northeast of the park. These parcels were identified as an optimum boundary for the park because the space is unused and excellent for park lands. These parcels are also significant lands to Dade's Battle and may contain important cultural resources that should be protected. Obtaining these parcels could improve the interpretive and historical programming offered at the park as well as expand for new opportunities. Lastly, the park faces a parking shortage during large events, portions of these space would be ideal for overflow parking facilities.



DADE BATTLEFIELD HISTORIC STATE PARK

OPTIMUM BOUNDARY MAP

IMPLEMENTATION COMPONENT

The resource management and land use components of this management plan provide a thorough inventory of the park's natural, cultural and recreational resources. They outline the park's management needs and problems, and recommend both short and long-term objectives and actions to meet those needs. The implementation component addresses the administrative goal for the park and reports on the Division of Recreation and Parks (DRP) progress toward achieving resource management, operational and capital improvement goals and objectives since approval of the previous management plan for this park. This component also compiles the management goals, objectives and actions expressed in the separate parts of this management plan for easy review. Estimated costs for the ten-year period of this plan are provided for each action and objective, and the costs are summarized under standard categories of land management activities.

Management Progress

Since the approval of the last management plan for Dade Battlefield Historic State Park in 2004, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within three of the five general categories that encompass the mission of the park and the DRP.

Acquisition

- An attempt was made in FY14-15 to acquire the Webb/Kurich property east of the park. The state was outbid, and the property is now in the hands of a private developer. The developer has expressed an interest in negotiating a conservation easement for the portion of the property immediately east of the battlefield, which contains the pond that played a significant role in the battle.

Park Administration and Operations

- Volunteerism has increased at the park, helping to boost programming to heretofore unseen levels. Volunteers contributed 22,401.75 hours in FY 2015-2016, contributing toward more than 90 events and programs in the park.
- The CSO has taken advantage of social media, developing a solid presence on Facebook, whose Dade Battlefield Society page is updated frequently with text and photographs describing goings on and programs in the park.
- Several new events include what has become the CSO's second signature event of the year, World War II Commemorative Weekend. It includes living history displays, a USO Show for reenactors and honored World War II veteran guests, and a daily skirmish between Axis and Allied forces.
- The Frank Thomas Folk Music and Heritage Festival, now in its third year, has brought prominent Florida folk artists to Dade Battlefield each November, including headliner Frank Thomas, the "Dean of Florida Folk."
- Safety has been a focus of in-house training in recent years, with more than one dozen Hands-On Safety Trainings offered in each of the last two fiscal years. There were no staff injuries reported in FY 15-16.

Resource Management

Natural Resources

- The park met 100 percent of its exotic removal goals in FY 15-16, and all zones are in maintenance.
- The park met 100 percent of its burn goals in FY 15-16, and all burn zones are in maintenance.
- Significant progress has been made toward restoring the pine flatwoods to their appearance at the time of Dade's Battle of 1835.
- The battlefield is no longer mowed, and plant succession has begun returning it to a more natural state.

Cultural Resources

- The historic stone and concrete bridge on the south end of the park drive was restored and repaired following the recommendation in the last plan.
- The stone and concrete foot bridge on the battlefield trail was repaired.
- The park manager is in discussion with curators from the National Park Service on restoration of the historic Mudge Monument, which was knocked down by an oak limb and damaged.

Recreation and Visitor Services

- The number of events, interpretive programs and outreach programs offered by Dade Battlefield has increased exponentially since the last plan, making the park a hub of the community.
- In FY 15-16 alone, more than 90 events, interpretive programs, hands-on craft classes and outreach programs were offered.
- The Dade's Battle of 1835 Reenactment and Trade Fair, offered the first full weekend each January, remains the hallmark event of the year, drawing more than 2,000 visitors.
- World War II Commemorative Weekend, now offered in March, has become a much-anticipated signature event.
- Newly introduced events include the Frank Thomas Folk Music and Heritage Festival, offered each November; this event is growing in popularity.
- The park established a popular youth group, Dade Pioneers, which meets monthly to enjoy fun and educational hands-on activities related to life on the Florida frontier.
- The park has been offering two summer day Camps for area youth, Pioneer Day Camp and Nature Day Camp

Park Facilities

- Shuffle board courts and tennis courts were removed following the last plan's recommendation to remove non-resourced based recreation facilities from the park.
- New water lines into the park were installed following the last plan.
- Roofs have been replaced on the Basinger Pavilion, Jumper Pavilion and Park Residence.

Management Plan Implementation

This management plan is written for a timeframe of ten years, as required by Section 253.034 Florida Statutes. The Ten-Year Implementation Schedule and Cost Estimates (Table 9) summarizes the management goals, objectives and actions that are recommended for implementation over this period, and beyond. Measures are identified for assessing progress toward completing each objective and action. A time frame for completing each objective and action is provided. Preliminary cost estimates for each action are provided and the estimated total costs to complete each objective are computed. Finally, all costs are consolidated under the following five standard land management categories: Resource Management, Administration and Support, Capital Improvements, Recreation Visitor Services and Law Enforcement.

Many of the actions identified in the plan can be implemented using existing staff and funding. However, a number of continuing activities and new activities with measurable quantity targets and projected completion dates are identified that cannot be completed during the life of this plan unless additional resources for these purposes are provided. The plan's recommended actions, time frames and cost estimates will guide the DRP's planning and budgeting activities over the period of this plan. It must be noted that these recommendations are based on the information that exists at the time the plan was prepared. A high degree of adaptability and flexibility must be built into this process to ensure that the DRP can adjust to changes in the availability of funds, improved understanding of the park's natural and cultural resources, and changes in statewide land management issues, priorities and policies.

Statewide priorities for all aspects of land management are evaluated each year as part of the process for developing the DRP's annual legislative budget requests. When preparing these annual requests, the DRP considers the needs and priorities of the entire state park system and the projected availability of funding from all sources during the upcoming fiscal year. In addition to annual legislative appropriations, the DRP pursues supplemental sources of funds and staff resources wherever possible, including grants, volunteers and partnerships with other entities. The DRP's ability to accomplish the specific actions identified in the plan will be determined largely by the availability of funds and staff for these purposes, which may vary from year to year. Consequently, the target schedules and estimated costs identified in Table 9 may need to be adjusted during the ten-year management planning cycle.

Table 8
Ten-Year Implementation Schedule and Cost Estimates
Page 75

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Measure				Planning Period	Estimated Manpower and Expense Cost* (10-years)
Goal I: Provide administrative support for all park functions.					
Objective A	Continue day-to-day administrative support at current levels.	Administrative support ongoing	C		\$94,364
Objective B	Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.	Administrative support expanded	C		\$94,364
Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)	
Objective A	Conduct/obtain an assessment of the park's hydrological needs.	Assessment conducted	ST or LT		\$0
Objective B	Restore natural hydrological conditions and function to approximately 0 acres of natural communities.	# Acres restored or with restoration underway	UFN		\$0
Goal III: Restore and maintain the natural communities/habitats of the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)	
Objective A	Within 10 years have 52 acres of the park maintained within optimal fire return interval.	# Acres within fire return interval target	LT		\$31,428
	Action 1 Develop/update annual burn plan.	Plan updated	C		\$16,000
	Action 2 Manage fire dependent communities for ecosystem function, structure and processes by burning between 13 - 26 acres annually, as identified by the annual burn plan.	Average # acres burned annually	C		\$15,428
Objective B	Conduct habitat/natural community restoration activities on 57 acres of mesic flatwoods community.	# Acres restored or with restoration underway	ST or LT		\$0
Objective C	Conduct habitat/natural community improvement activities on 23 acres of developed community.	# Acres improved or with improvements underway	ST or LT		\$6,412
	Action 1 Remove all introduced northern slash pine and loblolly pine from the park.	# of northern slash pines remaining			\$3,206
	Action 2 Reduce/remove any encroaching hardwood trees and shrubs from mesic flatwoods areas.	% of hardwood trees and shrubs removed			\$650
	Action 3 Increase the number of longleaf pines in the developed area of the park.	# of new longleaf pines			\$1,932
	Action4 Remove non-native landscape plants introduced to adorn visitor areas.	% non-native plant cover reduced			\$624
	Action 5 Allow natural community to repopulate on seven acres of developed community (in zone DB-7), reducing non-native ground cover to less than 20%. (No costs, because mostly requires changing mowing patterns)	% non-native plant cover reduced	ST		\$0

ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Goal IV: Maintain, improve or restore imperiled species populations and habitats in the park.				Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.	List updated	C			\$2,100
Objective B	Monitor and document two imperiled animal species in the park: gopher tortoise and southeastern American kestrel.	# Species monitored	C			\$1,923
Action 1	Complete first park-wide survey, both species, and report findings.	Survey completed				\$962
Action 2	Complete second park-wide survey 5 years later, and report findings.	Monitoring documented				\$962
Goal V: Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.				Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Annually treat all infestation areas of all known invasive exotic plant species in the park.	% cover of exotic plants	C			\$142,800
Action 1	Annually survey all management zones for exotic plant species infestations and record status in NRTS.	Management zone infestations recorded in IEPD; cover class changes	C			\$24,000
Action 2	Create annual treatment plan based on surveys.	Infested acres treated				\$16,000
Action 3	Implement annual treatment goals for exotic and invasive exotic plant species in the park.	Annual goals set for # of gross and infested acres to				\$102,800
Objective B	Implement eradication measures on Early Detection/Rapid Response exotic plant species in addition to those on the FLEPPC Category I and Category II lists.	No spread of new invasive species				\$1,750
Action 1	Annually update list and information of new exotic plant threats to the park and incorporate the search for these species into the annual surveys and goals.	Annual target species list updated	C			\$175
Objective C	Evaluate, and if indicated, implement an archaeological and historical survey on the western half of the park.					\$100
Action 1	Ensure staff is trained to identify exotic and nuisance animal species.	% staff trained				\$100
Action 2:	Develop plans for control, as needed.	Plan developed/updated, if needed				

* 2017 Dollars

ST = actions within 2 years

LT = actions within 10 years

C = long term or short term actions that are continuous or cyclical

UFN = currently unfunded need

Table 8
Ten-Year Implementation Schedule and Cost Estimates
Page 77

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Measure				Planning Period	Estimated Manpower and Expense Cost* (10-years)
Goal VI: Protect, preserve and maintain the cultural resources of the park.					
Objective A	Determine if the Scope of Collections Statement needs to be updated to include protocol	Documentation complete	LT	\$2,200	
Action 1	Review AIST 2013 with DHR and determine if a new (or additional) Scope of Collections Statement is	Assessments complete	LT, ST	\$900	
Action 2	Develop new Scopes as appropriate.	Need for human remains	C	\$1,300	
Objective B	Determine if the historic road and historic canal data from AIST should be added to FMSF; complete FMSF reports if needed.			\$275	
Action 1	Contact DHR, discuss these sites and determine the need to record with FMSF.	Need for documentation determined		\$200	
Action 2	If DR recommends that they be reported to FMSF, complete and submit the necessary forms.	Documentation complete		\$75	
Objective C	Evaluate and, if indicated, implement an archaeological and historical survey on the western	Documentation complete	LT	\$34,742	
Action 1	Contact DHR and USF about the Medium Sensitive findings for this area.	Steps determined	ST	\$3,742	
Action 2	If these agencies support this study, then plan the methods and scheduling of a survey, and impleme	Programs implemented	C	\$31,000	
Goal VII: Provide public access and recreational opportunities in the park.					
Measure			Planning Period	Estimated Manpower and Expense Cost* (10-years)	
Objective A	Maintain the park's current recreational carrying capacity of 1240 users per day.	# Recreation/visitor	C	\$754,913	
Objective B	Expand the park's recreational carrying capacity by 0 users per day.	# Recreation/visitor	ST or LT	\$754,913	
Objective C	Continue to provide the current repertoire of 10 interpretive, educational and recreational programs on a regular basis.	# Interpretive/education programs	C	\$50,000	
Objective D	Develop 2 new interpretive, educational and recreational programs.	# Interpretive/education programs	ST or LT	\$14,000	

* 2017 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Table 8
Ten-Year Implementation Schedule and Cost Estimates
Page 78

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Goal VIII: Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.				Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Maintain all public and support facilities in the park.	Facilities maintained	C			\$754,913
Objective B	Continue to implement the park's transition plan to ensure facilities are accessible in accordance with the American with Disabilities Act of 1990.	Plan implemented	ST or LT			\$15,680
Objective C	Improve and/or repair 3 existing facilities as identified in the Land Use Component.	# Facilities/Miles of Trail/Miles of Road	LT			\$925,755
Objective D	Construct 0 new facilities as identified in the Land Use Component.	# Facilities/Miles of Trail/Miles of Road	LT			\$0
Objective E	Expand maintenance activities as existing facilities are improved and new facilities are developed.	Facilities maintained	C			
Summary of Estimated Costs						
Management Categories						Total Estimated Manpower and Expense Cost* (10-years)
		Resource Management				\$245,347
		Administration and Support				\$94,364
		Capital Improvements				\$754,913
		Recreation Visitor Services				\$754,913
		Law Enforcement Activities				Note: Law enforcement activities in Florida State Parks are conducted by the FWC Division of Law Enforcement and by local law enforcement agencies.

* 2017 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Addendum 1—Acquisition History

Dade Battlefield Historic State Park Acquisition History

LAND ACQUISITION HISTORY REPORT					
Park Name	Dade Battlefield Historic State Park				
Date Updated	7/15/2016				
County	Sumter County, Florida				
Trustees Lease Number	Lease No. 3615 (original Lease No. 2324)				
Current Park Size	80.66 acres				
Purpose of Acquisition	The State of Florida acquired the Dade Battlefield Historic State Park to establish the Dade Memorial Park in Sumter County, Florida.				
Acquisition History					
Parcel Name or Parcel DM-ID	Date Acquired	Initial Seller	Initial Purchaser	Size in acres	Instrument Type
MDID4482	9/29/1921	R. F. Collins and his wife Florence E. Collins	The State of Florida	80.66	Indenture
Management Lease					
Parcel Name or Lease Number	Date Leased	Initial Lessor	Initial Lessee	Current Term	Expiration Date
Lease No. 3615 (Original Lease No. 2324)	1/23/1968	The Trustees of the Internal Improvement Fund of the State of Florida.	The Florida Board of Parks and Historic Memorials	99 years	1/22/2067
Outstanding Issue	Type of Instrument	Brief Description of the Outstanding Issue		Term of the Outstanding Issue	
There is no known deed-based outstanding issue such as restriction or reservation on use of Dade Battlefield Historic State Park.					

Addendum 2—Advisory Group Members and Report

**Dade Battlefield Historic State Park
Advisory Group Members**

Local Government Representatives

The Honorable Bill Spaude, Mayor
City of Bushnell

The Honorable Richard Baier
County Commissioner
Sumter County

Agency Representatives

Bill Gruber, Park Manager
Dade Battlefield Historic State Park
Division of Recreation and Parks

Matt Pollock, Regional Biologist
Florida Fish and Wildlife
Conservation Commission

Johanna Jones, Chair
Sumter County Soil and Water
Conservation District

Keith Mousel, Manager
Withlacoochee Forestry Center
Florida Forest Service

Mike Wisenbaker, Archaeologist
Florida Department of State
Division of Historical Resources

**Environmental and Conservation
Representative**

Bernie Bathauer
Hernando Audubon Society

Local Private Property Owner

Ronnie Hamilton, Local Resident
Adjacent Property Owner

**Recreational User Group
Representative**

James McAlister, Chair
Frank Thomas Folk Music
Heritage Festival

**Cultural Resource Organization
Representative**

Frank Laumer, President
Seminole Wars Foundation

**Tourism and Economic
Development Representative**

Doug Gilpin, Commissioner
Sumter County
Tourist Development Council

Citizen Support Organization

Paul Remis, President
Dade Battlefield Society

Dade Battlefield Historic State Park Advisory Group Meeting Summary

The advisory group meeting to review the proposed unit management plan (UMP) for Dade Battlefield Historic State Park was held in Dade Battlefield Historic State Park, in the Dade Lodge on Thursday, March 9, 2017 at 9:00 AM.

Richard Baier represented Garry Breeden for the Sumter County Board of County Commissioners and Doug Gilpin for the Sumter County Tourist Development Council. Johanna Jones represented the Sumter County Soil and Water Conservation District. Keith Mousel represented the Florida Forest Service. Sue Bathauer represented Bernie Bathauer for Hernando Audubon Society. James McAlister represented the Frank Thomas Folk Music and Heritage Festival. Paul Remis represented the Dade Battlefield Society. Dr. Michelle Sivilich represented Frank Laumer for the Seminole Wars Foundation. Mayor Bil Spaude (City of Bushnell), Ronnie Hamilton (Landowner), Matt Pollock (Florida Fish and Wildlife Conservation Commission), and Mike Wisenbaker (Division of Historic Resources) were not in attendance. All other appointed advisory group members were present. Marcia Taylor attended with Johanna Jones for the Sumter County Soil and Water Conservation District.

Attending Division of Recreation and Parks (DRP) staff members were Valinda Subic, Chris Becker, Bill Gruber, Tyler Maldonado, and Ashley Killough.

Miss Killough began the meeting by explaining the purpose of the advisory group and reviewing the meeting agenda. She provided a brief overview of the DRP's planning process. Miss Killough then asked each member of the advisory group to express his or her comments on the draft plan. After all comments were shared, Miss Killough described the next steps for drafting the plan and the meeting was adjourned.

Summary of Advisory Group Comments

Dr. Michelle Sivilich (Seminole Wars Foundation) requested on behalf of Frank Laumer to relocate the visitor center from the battle site if renovated. Dr. Sivilich on behalf of Frank Laumer inquired if financial assistance from the state is possible for the annual reenactment. As a member of the Gulf Archaeology Research Center, Dr. Sivilich had suggestions regarding cultural resource management including a new archaeology study, stating technology has improved dramatically and it would be useful for the property to be examined by battlefield specialists or using techniques developed by battlefield specialists such as a model called KOCOA used by the National Park Service for battlefield sites. Dr. Sivilich also mentioned several grants programs may be available for land acquisition including the American Battlefield Protection Program.

James McAlister (Frank Thomas Folk Music and Heritage Festival) inquired whether camping would be considered if more land is purchased and included into the park boundary. He feels camping will help protect the park from being closed by the state. He stated camping would be very helpful to house volunteers and performers, as well as eventgoers during the folk festival and other special events. He noted the campground would likely be very popular among scout groups and

Dade Battlefield Historic State Park Advisory Group Meeting Summary

would be a good location near I-75. He would like to see more interpretation of the WWII history in the visitor center. He noted the park has a great volunteer base as well. Lastly, he stated the park entrance is difficult to find and acquiring property to the east of the park would allow for an entrance on U.S. 301 making access much easier.

Sue Bathauer (Hernando Audubon Society) discussed that she was not familiar with the park until four years ago, but has since been attending special events and is impressed with the park's attendance. She noted the park does a good job managing exotic species and of protecting and reporting birds. She praised Park Ranger Kristin Wood and her wonderful interpretive programs. She feels the park is doing a good service. She agrees with renovating the visitor center, commenting it is rather bland.

Johanna Jones (Sumter County Soil and Water Conservation District) noted that the park is a fantastic resource. She is also a member of the Sumter County Historical Society and noted they have no relationship with the park. She expressed wishing to create better communication between the various historical organizations in the area and Sumter County.

Marcia Taylor (Sumter County Soil and Water Conservation District) is happy with management of the park and has no other comments.

Richard Baier (Sumter County Board of County Commissioners and Sumter County Tourist Development Council) agreed with possibly linking the multiple historical organizations. He discussed paving of the park road. He mentioned Sumter County might be able to resurface the road using grant funding and requested cost estimates. He also stated Sumter County has some limited infrastructure funds if tied to an increase in tourism. He proposed listing the park road as multi-modal for better access to grant funds.

Paul Remis (Dade Battlefield Society) started by providing personal backstory and his personal attachment to the park. Bob Baker, a former park manager introduced him to the topic. He noted there are still concerns in the community that the park will close. He discussed that many people wish the park was free but that the community does not fully understand that the entrance fees help keep the park operating and fund special events/interpretation. He also stated many board members of the CSO are not local and he is the first local president. His son has been reaching out to classmates to increase younger volunteers for the special events. He discussed the importance of expanding the park boundary and would like an entrance off of U.S. 301 if property to the east of the park is acquired. He would like to see a "Legacy Hall" (Webster Elementary has a good example) to commemorate local family gatherings such as weddings, anniversaries and birthday parties held at the park. He stated he wished the Citizen Support Organization (CSO) was able to buy equipment for the park to make maintenance and other park functions easier. Lastly, he praised Bill Gruber and is excited about the future of the park and any possible expansions.

Dade Battlefield Historic State Park Advisory Group Meeting Summary

Keith Mousel (Florida Forest Service, Withlacoochee Forestry Center) started by explaining that state agencies and the CSO cannot lobby for more resources at the park but citizens and other organizations can. He has no concerns on the plan and would like to see the mesic flatwoods continued on burning cycle (Bill noted all management zones are in maintenance condition). He noted that burning more frequently will keep neighbors acclimated to smoke on burn days. He stated that he follows Florida State Parks on social media but rarely sees anything about Dade Battlefield and thinks it would attract more people. He also noted that more people will bring more natural community degradation. Lastly, he suggested CISMA (Cooperative Invasive Species Management Area) work days and said the forestry office is here to help and feels the management is doing a good job.

Ronnie Hamilton (Landowner) supplied comments via phone that he was happy with management of the park and expressed interest in selling his property to be included in the park.

Summary of Written Comments

Frank Laumer (Seminole Wars Foundation) submitted comments via email regarding the location of the visitor center and possible relocation during renovations as it is located where the battle began. See attached for full comments.

Jason O'Donoghue (Division of Historical Resources) provided comments over email. These comments addressed typos and inaccuracies in the plan as well as additional guidance for the cultural resources section of the plan. See attached for full comments.

Staff Recommendations

The staff recommends approval of the proposed management plans for Dade Battlefield Historic State Park as presented, with the following significant changes:

- Additional properties to the west of the park were added to the optimum boundary.
- Language was added to support the addition of WWII history as well as other history of the park into the park's interpretive opportunities.
- The DRP is interested in modeling studies discussed in the advisory group meeting and will consider adding these studies as a cultural resources objective. Additionally, DRP will work the Division of Historical Resources in revising the cultural resource component of the plan.
- The DRP will consider relocating the visitor center as part of renovations and upgrades to a different portion of the park which is not indicated as the primary battle site.

**Dade Battlefield Historic State Park
Advisory Group Meeting Summary**

Notes on Composition of the Advisory Group

Florida Statutes Chapter 259.032 Paragraph 10(b) establishes a requirement that all state land management plans for properties greater than 160 acres will be reviewed by an advisory group:

“Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group. Members of this advisory group shall include, at a minimum, representatives of the lead land managing agency, co-managing entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official.”

Advisory groups that are composed in compliance with these requirements complete the review of State park management plans. Additional members may be appointed to the groups, such as a representative of the park's Citizen Support Organization (if one exists), representatives of the recreational activities that exist in or are planned for the park, or representatives of any agency with an ownership interest in the property. Special issues or conditions that require a broader representation for adequate review of the management plan may require the appointment of additional members. The Division's intent in making these appointments is to create a group that represents a balanced cross-section of the park's stakeholders. Decisions on appointments are made on a case-by-case basis by Division of Recreation and Parks staff.

Addendum 3—References Cited

Dade Battlefield Historic State Park References Cited

- Ashton, Ray E., Patricia S. Ashton. 2008. The Natural History and Management of the Gopher Tortoise, *Gopherus polyphemus* (Daudin). Krieger Publishing, Malabar, FL
- Collins, Lori D. Ph.D., et al. (AIST) 2013. Archaeological Resource Sensitivity Modeling in Florida State Parks, Districts 4 and 5 – The Southwest and Southeast Florida Regions. Alliance for Integrated Spatial Technologies (AIST), University of South Florida
- DeBary, E. October 26, 1997. "Collections of Stories; Second Seminole War," special to **Ocala Star Banner**.
- Ehrlich, Paul R., David S. Dobkin & Darryl Wheye. 1988. The Birder's Handbook: A Field Guide to the Natural History of North American Birds. Fireside (Simon & Schuster, Inc.), NY, NY
- Florida Department of Environmental Protection. 2016. *Florida State Park System Economic Impact Assessment for Fiscal Year 2015/2016*. Tallahassee, FL.
- Florida Department of Environmental Protection. 2013. *Outdoor Recreation in Florida 2013*. Tallahassee, Florida.
- Florida Fish & Wildlife Conservation Commission. 2012. Florida's Resident American Kestrels. <http://myfwc.com/research/wildlife/birds/southeastern-american-kestrel/fl-american-kestrel/>
- Florida Invasive Species Partnership. 2012. "How to..." www.floridainvasives.org.
- Florida Natural Areas Inventory (FNAI). 2010. Guide to the natural communities of Florida: 2010 edition. Florida Natural Areas Inventory, Tallahassee, FL.
- Fox, Alison M., Doria Gordon, et al. 2012. IFAS Assessment of Non-native Plants in Florida's Natural Areas: Status Assessment1. Publication #SS-AGR-225
- Montgomery, Jeff 1993 Letter to Wes Coleman, Archaeological and Historical Conservancy. (PDF file titled, "1965 UF -letter referencing project.")
- Olson, Christina. 2008. Gopher Tortoise Burrow Survey, Dade Battlefield Historic State Park- Burn Zones DB1 and DB3. District 4 Annual Research Report
- Sumter County. 2012. Unified Comprehensive Plan: Sumter County, Center Hill, and Webster. Sumter County, Florida.
- University of Florida, Bureau of Economic and Business Research (UFL BEBR). 2014. *Florida Statistical Abstract 2013*.
- University of Florida Institute for Food and Agricultural Services. 2011. Weed risk assessments. <http://plants.ifas.ufl.edu/assessment/index.html?q=assessment.html>

Dade Battlefield Historic State Park References Cited

- University of Florida, Florida Museum of Natural History. 2012. Division of Herpetology.
- University of Florida Map and Imagery Library. Aerial photographs of Sumter County. 1941 (Flight 2B); 1951 (Flight 2H); 1960 (Flight 4AA)
<http://ufdc.ufl.edu/UF00071785/00011/46?coord=28.65096662347144,-82.12798309326172>,
- U.S. Census Bureau. 2013. *State and County Quickfacts*.
<http://quickfacts.census.gov/qfd/index.html>, 2014.
- USDA APHIS. 2011. Weed Risk Assessments.
http://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/riskassessments.shtml
- U.S. Department of Commerce, Bureau of Economic Analysis. 2014. 2013 *Personal Income Summary/Per Capital Personal Income*. <http://www.bea.gov/itable/>.
- US Fish and Wildlife Service, Southeast Region. 1999. Eastern Indigo Snake, *Drymarchon couperi*, 5-Year Review: Summary and evaluation.
- Visit Florida! 2013. *2013 Florida Visitor Survey*. Tallahassee, Florida.
- Wilson, J.D, 2004. Southern Hognose Snake (*Heterodon simus*). Savannah River Ecology Laboratory Herpetology Program
- Yamataki, Howard, A.O.Jones, D. Leach. 1984. Soil Survey of Sumter County, Florida. Florida Soil Conservation Services, U.S. Department of Agriculture.

Addendum 4—Soil Description

Dade Battlefield Historic State Park Soils Descriptions

The descriptions in this Addendum are from the 1989 Soil Survey of Sumter County, a cooperative effort by the National Soil Conservation Service, the University of Florida Institute of Food and Agricultural Services, Florida Department of Transportation and Florida Department of Agriculture and Consumer Services and the Sumter County Recreation and Water Conservation and Control Authority.

21 - EauGallie fine sand, bouldery subsurface. –This soil is nearly level and drains poorly. It is on the broad flatwoods. The mapped areas are irregular in shape and range from 20 to 300 acres. Surface and subsurface boulders are approximately 60 to 250 feet apart, distributed randomly in small groups or individually. Although most boulders have been removed from cropland and improved pasture, the remaining subsurface boulders can damage equipment that penetrates the soil. The slopes are smooth and range from 0 to 2 percent.

Typically, the surfaced layer is dark gray fine sand about 8 inches thick. The subsurface layer, to a depth of about 25 inches, is light gray fine sand. The upper part of the subsoil, to a depth of about 36 inches, is very dark brown fine sand. The lower part, to a depth of about 57 inches, is brown fine sand. The substratum to a depth of 80 inches or more is gray sandy clay loam that has mottles in shades of yellow and red.

Included with this soil in mapping are small areas of Mabel, Myakka, Paisley, and Vero soils. The included soils make up about 20 percent of this map unit.

In most years, this soil has a high water table within 10 to 40 inches of the surface for more than 6 months and at a depth of less than 10 inches for 1 month to 4 months. The available water capacity is moderate. Permeability is rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, moderately slow in the lower part of the subsoil. Natural fertility is low.

Native vegetation is slash pine, longleaf pine, live oak, and water oak. The understory includes saw palmetto, gallberry, running oak, and pineland threeawn. Typically, this soil is characterized by the South Florida Flatwoods range site. This site can be identified by the scattered pine trees and an understory of saw palmetto and grasses.

This EauGallie soil has very severe limitation for cultivated crops because of wetness. Boulders at or near the surface are a continuing nuisance during tillage operations. Most tillage operations are not impractical if the boulders are removed. The adapted crops are limited unless very intensive conservation practices and water control measures should be used if this soil is cultivated. With adequate drainage, this soil is well suited to many vegetable crops. A water control system is needed to remove excess surface water in wet periods and to provide water for subsurface irrigation in dry periods. Row crops should be planted on the contour. Soil improving cover crops should be included in the rotation system three-fourths of the time. Conservation tillage helps to

Dade Battlefield Historic State Park Soils Descriptions

conserve moisture and controls plant damage from blowing soil. Seedbed preparation should include bedding of the rows. Fertilizer and lime should be applied according to the need of the crops.

This soil is well suited to pasture and hay crops. Pangolagrass, bahiagrass, and clover are well adapted to this soil and grow well if properly managed. A drainage system is needed to remove excess surface water during heavy rains. These grasses and legumes also require regular applications of fertilizer and lime. Grazing should be carefully controlled to maintain healthy plants for maximum yields. Boulders should be removed to help reduce equipment damage. If grazing is controlled, the site has the potential to produce significant amounts of creeping bluestem, lopsided indiangrass, chalky bluestem, and various panicums. As range deterioration occurs because of overgrazing, the site is dominated by saw palmetto and pineland threeawn (wiregrass). Some areas of this soil support dense stands of oak trees. This soil provides good shade and resting areas for cattle but provides insufficient grazing.

The potential is moderately high for the production of pine trees. Equipment use limitations, seedling mortality, and plant competition are concerns in management. Slash pine is the preferred tree to plant for commercial wood production.

Wetness is a severe limitation for urban and recreational uses. This wetness limitation can be reduced or overcome by installing a drainage system to lower the high water table during wet periods. Mounding may be needed in places for septic tank absorption fields. Seepage should be controlled before using this soil for sanitary facilities because of the possibility of pollution of water supplies. Random large boulders or groups of boulders may require use of a modified installation design or an alternate site in the map unit for many urban uses. The sandy texture is a severe limitation for recreational use and causes poor trafficability in unpaved areas. A suitable topsoil fill material should be used or some type of surface stabilization is needed to overcome this limitation.

This EauGallie soil is in capability subclass IVw and in woodland suitability group 10W.

25 - Kanapaha sand bouldery subsurface. This soil is nearly level and is poorly drained. It is low, broad flats and low knolls. The mapped areas are irregular in shape and range from 10 to 100 acres. Surface and subsurface boulders are approximately 60 to 250 feet apart. They occur randomly in small groups or individually. Although most boulders have been removed from the cropland and improved pasture, the remaining subsurface boulders can damage equipment that penetrates the soil. The slopes are smooth and range from 0 to 2 percent.

Typically, the surface layer is very dark gray sand about 6 inches thick. The upper part of the subsurface layer, to a depth of 33 inches, is grayish brown sand. The lower part, to a depth of about 45 inches, is light gray fine sand.

Dade Battlefield Historic State Park Soils Descriptions

The upper part of the subsoil, to a depth of 55 inches, is light gray sandy loam. The middle part, to a depth of 70 inches, is light brownish gray sandy clay loam. The lower part to a depth of about 80 inches is light brownish gray sandy loam.

Included with this soil in mapping are small areas of EauGallie, Pompano, and Sparr soils. The included soils make up about 15 percent of this map unit.

This soil has a high water table within 10 to 40 inches of the surface for 3 to 4 months and at a depth of less than 10 inches for 1 month to 3 months during most years. In drier periods, the water table recedes to a depth of more than 40 inches. The available water capacity is low. Permeability is rapid in the surface and subsurface layers and is moderately slow or slow in the subsoil. Natural fertility is low.

Native vegetation is sweetgum, live and water oaks, maple, magnolia, hickory, slash pine, longleaf pine, and loblolly pine. The understory includes hairy panicum, several varieties of bluestems and threeawns, and numerous forbs. Typically, this soil is characterized by the Oak Hammock range site. This community is readily identified by the dense canopy cover of dominantly live oak trees and relatively open understory. Desirable forage includes longleaf uniola, low panicum, low paspalum, switchgrass, and lopsided indiagrass.

This Kanapaha soil has severe limitations for cultivated crops because of wetness and the thick, sandy texture. Boulders at or near the surface are a continuing nuisance during tillage operations. Most tillage operations are not impractical if the boulders are removed. Many vegetable crops can be grown on this soil if very intensive conservation practices and water control measures are used. A water control system is needed to remove excess surface water in wet periods and to provide water for subsurface irrigation in dry periods. Row crops should be rotated with close growing, soil-improving cover crops. Soil-improving cover crops should be included in the rotation system three-fourths of the 125

time. Conservation tillage helps to conserve moisture and controls erosion. Seedbed preparation should include bedding of the rows. Fertilizer and lime should be applied according to the need of the crops.

The soil is well suited to pasture. Pangolagrass, improved bahiagrass, and white clover grow well if properly managed. A water control system is needed to remove excess surface water after heavy rains. Regular applications of fertilizer and lime should be applied according to the need of the crops. Grazing should be controlled to maintain plant vigor. Boulders should be removed to help prevent equipment damage.

This soil has moderately high potential for the production of pine trees. The main concerns in management are the use of equipment when the soil is wet and undesirable plant competition. Seedling mortality is high. Slash, loblolly, and longleaf pines are the most suitable trees to plant for commercial wood production.

Dade Battlefield Historic State Park Soils Descriptions

Wetness is a severe limitation for urban and recreational uses. This wetness limitation can be reduced or overcome by installing a drainage system to lower the high water table during wet periods. Mounding may be needed in places for septic tank absorption fields because of wetness and slow permeability. Random large boulders or groups of boulders may require use of a modified installation design or an alternate site in the map unit for many urban uses. The sandy texture is a severe limitation for recreational use and causes poor trafficability in unpaved areas. A suitable topsoil fill material should be used or some type of surface stabilization is needed to overcome this limitation.

This Kanapaha soil is in capability subclass IIw and in woodland suitability group 10W.

30 - Placid fine sand, depressional. This soil is nearly level and drains poorly. It is in depressional areas and in poorly defined drainageways that pond. The mapped areas are irregular in shape and range from 20 to 100 acres. The slopes are concave and range from 0 to 2 percent.

Typically, the surface layer is black fine sand about 10 inches thick underlain by very dark gray fine sand to a depth of about 16 inches. The underlying material, to a depth of about 28 inches, is grayish brown fine sand and to a depth of 80 inches or more is white fine sand.

Included with this soil in mapping are small areas of Basinger, Myakka, Ona, and Pompano soils. Also included are some areas of soils that have loamy layers at a depth of more than 60 inches. The included soils make up about 20 percent of this map unit.

This soil has water above the surface for 6 to 8 months. The available water capacity is moderate. Permeability is rapid throughout. Natural fertility is moderate.

Native vegetation is pickerelweed, maidencane, and various aquatic plants. Typically, this soil is characterized by the Freshwater Marshes and Ponds range site. This site can be identified by an open expanse of grasses, sedges, rushes, and other herbaceous plants.

In its natural state, this Placid soil is not suited to cultivated crops because of ponding. With adequate drainage, Placid soil is well suited to many high-value crops. A water control system is needed to remove excess water rapidly during heavy rains. If the soil is cultivated, conservation practices, such as good seedbed preparation, proper arrangement of rows, crop rotation, and regular applications of fertilizer, should be used. Cover crops should be included in the rotation system two-thirds of the time. Cover crops and the residue of other crops should be used to help maintain tilth and to control erosion.

In its natural state, this soil is not suited to pasture because of ponding. With adequate drainage, it is well suited to such plants and pangolagrass, bahiagrass, and clover. A drainage system is needed to remove excess surface water. These grasses and legumes grow well if they are properly fertilized and

Dade Battlefield Historic State Park Soils Descriptions

limed. Grazing should be controlled to maintain plant vigor and to obtain maximum yields. If grazing is controlled, this range site has the potential to produce more forage than any of the other range sites. Chalky bluestem and blue maidencane dominate the drier parts of the range site, and maidencane is the dominant plant in the wetter parts. Other desirable forage includes cutgrass, bluejoint panicum, sloughgrass, and low panicum. Periodic high water levels provide natural deferment from cattle grazing. Carpetgrass, an introduced plant, tends to dominate the drier parts of the range site if the soil is overgrazed. Some areas that support dense stands of hardwood or cypress trees are poorly suited to rangeland

This soil is not suited to pine trees because of ponding.

Ponding is a severe limitation for urban and recreational uses. This limitation can be overcome by installing a drainage system to lower the high water table during wet periods and by using a suitable fill material in the depressions. Seepage should be controlled before using this soil for sanitary facilities because of the possibility of pollution of water supplies. The sandy texture is a severe limitation for recreational use and causes poor trafficability in unpaved areas. A suitable topsoil fill material should be used of some other type of surface stabilization is needed to overcome this limitation.

This Placid soil is in capability subclass VIIw and in woodland suitability group 6W.

33 - Sparr fine sand, bouldery subsurface, 0 to 5 percent slopes. This soil is nearly level to gently sloping and somewhat poorly drained. It is on broad, low ridges and knolls. The slopes are convex. The mapped areas mostly are irregular in shape and range from 20 to 100 acres. Surface and subsurface boulders are approximately 60 to 250 feet apart. They occur randomly in small groups or individually. Although most boulders have been removed from cropland and other developed areas, the remaining subsurface boulders can damage equipment that penetrates the soil.

Typically, the surface layer is gray, grayish-brown fine sand about 8-9 inches thick. The subsurface layer, to a depth of 45-46 inches, is gray to very pale brown fine sand. The upper part of the subsoil, to a depth of 51-58 inches, is light yellowish brown fine sandy loam. The lower part to a depth of about 80 inches is light brownish to mottled light gray sandy clay loam. Mottles of brown, red, yellow, and gray can occur from a depth of about 20 to 80 inches.

Included with this soil in mapping are small areas of EauGallie, Millhopper, Adamsville and Mabel soils. Also included are areas of soils that drain somewhat poorly but are loamy within 40 inches of the surface layer, some areas of soils that have a weak stain above the loamy layer. Areas with boulders are generally adjacent to another map unit that has a boulder subsurface layer. The included soils make up about 25 percent of this map unit.

Dade Battlefield Historic State Park Soils Descriptions

The water table is at a depth of 20 to 40 inches for periods of 1 month to 4 months. The available water capacity is low to a depth of 60 inches; permeability is rapid in the sandy surface and subsurface layers and slow in the subsoil. Runoff is slow. Natural fertility is low.

Native vegetation includes water, live and scrub oaks. The understory includes pineland threeawn, and scattered saw palmetto. Typically, this Sparr soil is characterized by the upland hardwood hammock/oak hammock range site. This site is readily identified by the dense canopy of oaks, magnolias, and hickories.

The natural wetness is a severe limitation to use of this soil for cultivated crops, for septic tank absorption fields or for sanitary landfills or sewage lagoons. If the soil is used for sanitary landfills or sewage lagoons, the facilities should be sealed to help prevent seepage. Wetness is a moderate limitation to use for building site development, dwellings without basements, and commercial buildings. Cutbanks may cave.

This soil is well suited to pasture. Good pastures of grass or a mixture of grass and clover can be grown with proper management. This soil is well suited to pangolagrass, bahiagrass, and clover. To obtain high yields, regular applications of fertilizers and lime are needed and grazing should be controlled. Boulders should be removed to help prevent equipment damage. Cattle use these areas primarily for shade and resting areas because of the dense canopy and relatively open understory. Desirable forage includes longleaf uniola, low panicum, low paspalum, switchgrass and lopsided indiagrass.

Potential for the production of pine trees on this soil is moderately high. Slash, loblolly, and longleaf pines are the most suitable trees to plant for commercial wood production.

This Sparr soil is in capability subclass IIIw and in woodland suitability group 10W.

Addendum 5—Plant and Animal List

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
-------------	-----------------	--

MYCOTES

(a few unidentified species)

LICHENS

(a few unidentified species)

BRYOPHYTES

(a few unidentified species)

PTERIDOPHYTES

Autumn fern	<i>Dryopteris erythosora</i> * (planted)
Japanese climbing fern	<i>Lygodium japonicum</i> *
Marianna maiden fern.....	<i>Macrothelypteris torresiana</i> *
Tuberous sword fern.....	<i>Nephrolepis cordifolia</i> *
Royal fern	<i>Osmunda regalis</i> var. <i>spectabilis</i>
Golden polypody	<i>Phlebodium aureum</i>
Resurrection fern	<i>Pleopeltis polypodioides</i> var. <i>michauxiana</i>
Tailed bracken	<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>
Downy maiden fern	<i>Thelypteris dentata</i> *
Virginia chain fern.....	<i>Woodwardia virginica</i>

GYMNOSPERMS

Eastern redcedar.....	<i>Juniperus virginiana</i> (planted)
Slash pine	<i>Pinus elliottii</i>
Longleaf pine.....	<i>Pinus palustris</i>
Loblolly pine	<i>Pinus taeda</i> (planted)
Bald-cypress	<i>Taxodium distichum</i>
Coontie.....	<i>Zamia pumila</i>

ANGIOSPERMS

Monocots

Elliott's bluestem	<i>Andropogon gyrans</i>
Broomsedge bluestem	<i>Andropogon virginicus</i>
Corkscrew threeawn.....	<i>Aristida gyrans</i>
Arrowfeather threeawn	<i>Aristida purpurascens</i> var. <i>virgata</i>
Wiregrass.....	<i>Aristida stricta</i>
Common carpetgrass.....	<i>Axonopus fissifolius</i>
Watergrass.....	<i>Bulbostylis barbata</i>
Sandyfield hairsedge	<i>Bulbostylis stenophylla</i>
Beaked panicum	<i>Coleataenia anceps</i>
Baldwin's flatsedge.....	<i>Cyperus croceus</i>
Fragrant flatsedge.....	<i>Cyperus odoratus</i>
Pinebarren flatsedge.....	<i>Cyperus ovatus</i>
Fourangle flatsedge	<i>Cyperus tetragonus</i>
Needle-leaf witchgrass.....	<i>Dichanthelium aciculare</i>
Variable witchgrass	<i>Dichanthelium commutatum</i>

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Cypress witchgrass	<i>Dichanthelium ensifolium</i> var. <i>unciphyllum</i>	
Southern crabgrass	<i>Digitaria ciliaris</i>	
Air potato.....	<i>Dioscorea bulbifera</i> *	
Florida butterfly orchid.....	<i>Encyclia tampensis</i>	
Elliott lovegrass	<i>Eragrostis elliottii</i>	
Purple lovegrass	<i>Eragrostis spectabilis</i> (planted)	
Carolina fimbry	<i>Fimbristylis caroliniana</i>	
Hairy fimbry	<i>Fimbristylis puberula</i>	
Fringed yellow stargrass	<i>Hypoxis juncea</i>	
Cogongrass	<i>Imperata cylindrica</i> *	
Grassleaf rush	<i>Juncus marginatus</i>	
Fragrant spikesedge	<i>Kyllinga odorata</i>	
Whitehead bogbutton	<i>Lachnocaulon anceps</i>	
Small's bogbutton	<i>Lachnocaulon minus</i>	
Muhly grass.....	<i>Muhlenbergia capillaris</i> (planted)	
Nakedstem dewflower	<i>Murdannia nudiflora</i>	
Burmans' basketgrass; zacatillo	<i>Oplismenus burmannii</i>	
Woodsgrass.....	<i>Oplismenus hirtellus</i>	
Butterweed	<i>Packera glebella</i>	
Switchgrass.....	<i>Panicum virgatum</i>	
Virginia creeper; woodbine.....	<i>Parthenocissus quinquefolia</i>	
Florida paspalum	<i>Paspalum floridanum</i>	
Bahiagrass	<i>Paspalum notatum</i> var. <i>saurae</i>	
Thin paspalum	<i>Paspalum setaceum</i>	
Purple passionflower.....	<i>Passiflora incarnata</i>	
Red bay	<i>Persea borbonia</i>	
Dotted smartweed.....	<i>Persicaria punctata</i>	
Golden polypody	<i>Phlebodium aureum</i>	
Pickereelweed	<i>Pontederia cordata</i>	
Starrush whitetop	<i>Rhynchospora colorata</i>	
Fascicled beaksedge	<i>Rhynchospora fascicularis</i>	
Globe beaksedge	<i>Rhynchospora globularis</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Duck-potato	<i>Sagittaria latifolia</i>	
Little bluestem.....	<i>Schizachyrium scoparium</i>	
Fringed nutrush	<i>Scleria ciliata</i>	
Saw palmetto	<i>Serenoa repens</i>	
Yellow bristlegrass	<i>Setaria parviflora</i>	
Nash's blue-eyed grass	<i>Sisyrinchium nashii</i>	
Ear-leaf greenbrier.....	<i>Smilax auriculata</i>	
Saw greenbrier	<i>Smilax bona-nox</i>	
Cat greenbrier	<i>Smilax glauca</i>	
Laurel greenbrier	<i>Smilax laurifolia</i>	
Yellow indiagrass.....	<i>Sorghastrum nutans</i>	
Smutgrass	<i>Sporobolus indicus</i> *	
Gaping panicum.....	<i>Steinchisma hians</i>	

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
St. Augustinegrass	<i>Stenotaphrum secundatum</i>	
Bartram's airplant	<i>Tillandsia bartramii</i>	
Ballmoss	<i>Tillandsia recurvata</i>	
Spanish moss	<i>Tillandsia usneoides</i>	
Bluejacket	<i>Tradescantia ohiensis</i>	
Broadleaf cattail	<i>Typha latifolia</i>	
Carolina yellow-eyed grass	<i>Xyris caroliniana</i>	

Dicots

Slender copperleaf	<i>Acalypha gracilens</i>	
Red maple	<i>Acer rubrum</i>	
Hammock snakeroot	<i>Ageratina jucunda</i>	
Slender amaranth	<i>Amaranthus viridis</i>	
Common ragweed	<i>Ambrosia artemisiifolia</i>	
Pepper-vine	<i>Ampelopsis arborea</i>	
Coralberry	<i>Ardisia crenata</i> *	
Butterflyweed	<i>Asclepias tuberosa</i>	
Whorled milkweed	<i>Asclepias verticillata</i>	
Showy milkwort	<i>Asemeia violacea</i>	
Dwarf pawpaw	<i>Asimina pygmea</i>	
Netted pawpaw	<i>Asimina reticulata</i>	
Chinese box orange	<i>Atalantia buxifolia</i> *	
Groundsel tree; sea myrtle	<i>Baccharis halimifolia</i>	
Beggarticks	<i>Bidens alba</i>	
False-nettle	<i>Boehmeria cylindrica</i>	
American bluehearts	<i>Buchnera americana</i>	
American beautyberry	<i>Callicarpa americana</i>	
Trumpet creeper	<i>Campsis radicans</i>	
Florida paintbrush	<i>Carphephorus corymbosus</i>	
Hairy chaffhead	<i>Carphephorus paniculatus</i>	
Spadeleaf coinwort	<i>Centella asiatica</i>	
Spurred butterfly pea	<i>Centrosema virginianum</i>	
Eastern redbud	<i>Cercis canadensis</i>	
Partridge pea	<i>Chamaecrista fasciculata</i>	
Sensitive pea	<i>Chamaecrista nictitans</i> var. <i>aspera</i>	
Spotted sandmat	<i>Chamaescyce maculata</i>	
Camphortree	<i>Cinnamomum camphora</i> *	
Nuttall's thistle	<i>Cirsium nuttallii</i>	
Pine-hyacinth	<i>Clematis baldwinii</i> *	
Tread-softly	<i>Cnidioscolus stimulosus</i>	
Leavenworth's tickseed	<i>Coreopsis leavenworthii</i>	
Rabbitbells	<i>Crotalaria rotundifolia</i>	
Showy rattlebox	<i>Crotalaria spectabilis</i> *	
Vente conmigo	<i>Croton glandulosus</i> var. <i>septrionalis</i>	
Michaux's croton	<i>Croton michauxii</i>	
False heather; waxweed	<i>Cuphea</i> , exotic spp. *	

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Whitetassels	<i>Dalea carnea</i>	
Summer farewell.....	<i>Dalea pinnata</i>	
Zarabacoa comun	<i>Desmodium incanum</i>	
Panicked ticktrefoil.....	<i>Desmodium paniculatum</i>	
Threeflower ticktrefoil.....	<i>Desmodium triflorum</i>	
Carolina ponysfoot	<i>Dichondra carolinensis</i>	
Poor Joe.....	<i>Diodia teres</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Air potato.....	<i>Dioscorea bulbifera</i> *	
Persimmon	<i>Diospyros virginiana</i>	
Twinflower	<i>Dyschoriste oblongifolia</i>	
Tall elephantsfoot	<i>Elephantopus elatus</i>	
Florida tasselflower	<i>Emilia fosbergii</i> *	
Early whitetop fleabane	<i>Erigeron vernus</i>	
Baldwin's eryngo.....	<i>Eryngium baldwinii</i>	
Rattlesnake master	<i>Eryngium yuccifolium</i>	
White thoroughwort	<i>Eupatorium album</i>	
Dogfennel	<i>Eupatorium capillifolium</i>	
Mohr's thoroughwort	<i>Eupatorium mohrii</i>	
Falsehorehound; Boneset.....	<i>Eupatorium rotundifolium</i>	
Slender flattopped goldenrod	<i>Euthamia caroliniana</i>	
Eastern milkpea	<i>Galactia regularis</i>	
Coastal bedstraw	<i>Galium hispidulum</i>	
Hairy bedstraw	<i>Galium pilosum</i>	
Dwarf huckleberry.....	<i>Gaylussacia dumosa</i>	
Yellow jessamine	<i>Gelsemium sempervirens</i>	
Loblolly-bay	<i>Gordonia lasianthus</i>	
Rough hedge-hyssop	<i>Gratiola hispida</i>	
Narrowleaf sunflower.....	<i>Helianthus angustifolius</i>	
Stiff sunflower	<i>Helianthus radula</i>	
Hawkweed	<i>Hieracium gronovii</i>	
Round-leaf bluet	<i>Houstonia procumbens</i>	
Oakleaf hydrangea	<i>Hydrangea quercifolia</i> (planted)	
Manyflower marsh pennywort	<i>Hydrocotyle umbellata</i>	
Whorled pennywort	<i>Hydrocotyle verticillata</i>	
St. Peter's-wort	<i>Hypericum crux-andreae</i>	
Fourpetal St. John's-wort	<i>Hypericum tetrapetalum</i>	
Fringed yellow stargrass	<i>Hypoxis juncea</i>	
Musky mint	<i>Hyptis alata</i>	
Carolina holly	<i>Ilex ambigua</i>	
Dahoon holly	<i>Ilex cassine</i>	
Gallberry.....	<i>Ilex glabra</i>	
American holly.....	<i>Ilex opaca</i>	
Hairy indigo.....	<i>Indigofera hirsuta</i> *	
Tievine	<i>Ipomoea cordatotriloba</i>	
Virginia dwarf dandelion	<i>Krigia virginica</i>	

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Shrub verbena.....	<i>Lantana camara</i> *	
Thymeleaf pinweed	<i>Lechea minor</i>	
Virginia pepperweed.....	<i>Lepidium virginicum</i>	
White leadtree	<i>Leucaena leucocephala</i> *	
Slender gayfeather.....	<i>Liatris gracilis</i>	
Shortleaf gayfeather.....	<i>Liatris tenuifolia</i>	
Savannah false-pimpernel.....	<i>Lindernia grandiflora</i>	
Sweetgum.....	<i>Liquidambar styraciflua</i>	
Glade lobelia	<i>Lobelia glandulosa</i>	
White lobelia	<i>Lobelia paludosa</i>	
Coral honeysuckle	<i>Lonicera sempervirens</i> (planted)	
Seaside primrosewillow.....	<i>Ludwigia maritima</i>	
Peruvian primrosewillow	<i>Ludwigia peruviana</i> *	
Fetterbush	<i>Lyonia lucida</i>	
Southern magnolia.....	<i>Magnolia grandiflora</i>	
Chinaberrytree	<i>Melia azedarach</i> *	
Creeping cucumber	<i>Melothria pendula</i>	
Climbing hempvine.....	<i>Mikania scandens</i>	
Powderpuff.....	<i>Mimosa strigillosa</i> (planted)	
American partridgeberry	<i>Mitchella repens</i>	
Balsam pear	<i>Momordica charantia</i> *	
Spotted beebalm.....	<i>Monarda punctata</i> (planted)	
Red mulberry	<i>Morus rubra</i>	
Nakedstem dewflower	<i>Murdannia nudiflora</i> *	
Wax myrtle	<i>Myrica cerifera</i>	
Flat-top mille grains.....	<i>Oldenlandia corymbosa</i>	
Clustered mille grains	<i>Oldenlandia uniflora</i>	
Prickly pear	<i>Opuntia humifusa</i>	
Butterweed	<i>Packera glabella</i>	
Skunk-vine.....	<i>Paederia foetida</i> *	
Virginia creeper	<i>Parthenocissus quinquefolia</i>	
Purple passionflower.....	<i>Passiflora incarnata</i>	
Red bay	<i>Persea borbonia</i>	
Florida false sunflower	<i>Phoebanthus grandiflorus</i> \$	
Fog fruit.....	<i>Phyla nodiflora</i>	
Mascarene Island leafflower	<i>Phyllanthus tenellus</i> *	
Chamberbitter	<i>Phyllanthus urinaria</i> *	
Cypress-head ground-cherry	<i>Physalis arenicola</i>	
Pokeweed	<i>Phytolacca americana</i>	
Small butterwort.....	<i>Pinguicula pumila</i>	
Pitted stripeseed	<i>Piriqueta cistoides</i> subsp. caroliniana	
Narrowleaf goldenaster.....	<i>Pityopsis graminifolia</i>	
Virginia plantain.....	<i>Plantago virginica</i>	
Rosy camphorweed	<i>Pluchea baccharis</i>	
Candyroot	<i>Polygala nana</i>	
Dotted smartweed.....	<i>Polygonum punctatum</i>	

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Rustweed	<i>Polypremum procumbens</i>	
Pickerwed	<i>Pontederia cordata</i>	
Carolina laurel-cherry	<i>Prunus caroliniana</i>	
Black cherry	<i>Prunus serotina</i>	
Flatwoods plum	<i>Prunus umbellata</i> (planted)	
Blackroot	<i>Pterocaulon pycnostachyum</i>	
Sand live oak.....	<i>Quercus geminata</i>	
Bluejack oak.....	<i>Quercus incana</i>	
Laurel oak; diamond oak.....	<i>Quercus laurifolia</i>	
Sand post oak	<i>Quercus margarettae</i>	
Myrtle oak.....	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Running oak.....	<i>Quercus pumila</i>	
Live oak.....	<i>Quercus virginiana</i>	
Pale meadowbeauty	<i>Rhexia mariana</i>	
Winged sumac	<i>Rhus copallinum</i>	
Michaux's snoutbean	<i>Rhynchosia michauxii</i>	
Tropical Mexican-clover	<i>Richardia brasiliensis</i> *	
Sand blackberry.....	<i>Rubus cuneifolius</i>	
Blackeyed susan	<i>Rudbeckia hirta</i>	
Carolina wild petunia	<i>Ruellia caroliniensis</i>	
Heartwing dock.....	<i>Rumex hastatulus</i>	
Swamp dock.....	<i>Rumex verticillatus</i>	
Carolina willow	<i>Salix caroliniana</i>	
Tropical sage	<i>Salvia coccinea</i> (planted)	
Lyreleaf sage.....	<i>Salvia lyrata</i>	
Elderberry	<i>Sambucus nigra</i> subsp. <i>canadensis</i>	
Chinese tallowtree.....	<i>Sapium sebiferum</i> *	
Danglepod	<i>Sesbania herbacea</i>	
Starry rosinweed.....	<i>Silphium asteriscus</i> (syn. <i>S. integrifolium</i> ; planted)	
Black nightshade.....	<i>Solanum chenopodioides</i>	
Chapman's goldenrod	<i>Solidago odora</i> var. <i>chapmanii</i>	
Wand goldenrod.....	<i>Solidago stricta</i>	
Twistedleaf goldenrod.....	<i>Solidago tortifolia</i>	
Little ladies-tresses; little pearl-twist.....	<i>Spiranthes brevilabris</i>	MF, SH, SCF
Florida hedgenettle	<i>Stachys floridana</i>	
Queensdelight	<i>Stillingia sylvatica</i>	
Stokes aster	<i>Stokesia laevis</i> (planted)	
Rice button aster	<i>Symphotrichum dumosum</i>	
Spiked hoarypea	<i>Tephrosia spicata</i>	
Carolina basswood	<i>Tilia americana</i> var. <i>caroliniana</i>	
Eastern poison ivy.....	<i>Toxicodendron radicans</i>	
Forked bluecurls	<i>Trichostema dichotomum</i>	
White clover.....	<i>Trifolium repens</i> *	
American elm; Florida elm	<i>Ulmus americana</i>	
Caesarweed	<i>Urena lobata</i> *	

* Non-native Species

Dade Battlefield Historic State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Darrow's blueberry.....	<i>Vaccinium darrowii</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Sandaper vervain.....	<i>Verbena scabra</i>	
Tall ironweed.....	<i>Vernonia angustifolia</i>	
Dwarf Walter's viburnum.....	<i>Viburnum obovatum</i> , cultivar (planted)	
Long-leaf violet.....	<i>Viola lanceolata</i>	
Early blue violet.....	<i>Viola palmata</i>	
Frost grape	<i>Vitis aestivalis</i>	
Muscadine; fox grape	<i>Vitis rotundifolia</i>	
Southern rockbell.....	<i>Wahlenbergia marginata</i> *	
Oriental false hawk's-beard	<i>Youngia japonica</i>	
Coontie.....	<i>Zamia pumila</i> (planted)	
Hercules-club	<i>Zanthoxylum clava-herculis</i>	

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
-------------	-----------------	--

DRAGONFLIES

(several unidentified species)

GRASSHOPPERS, CRICKETS AND KATYDIDS

(several unidentified species)

TRUE BUGS, CICADAS, HOPPERS AND KIN

(several unidentified species)

ANTLIONS, LACEWINGS AND OWLFLIES

(a few unidentified species)

BEETLES

(several unidentified species)

FLIES

(several unidentified species)

BUTTERFLIES AND MOTHS

Gulf fritillary	<i>Agraulis vanillae</i>
White peacock	<i>Anartia jatrophae</i>
Pipevine swallowtail.....	<i>Battus philenor</i>
Imperial moth	<i>Eacles imperialis</i>
Zebra swallowtail	<i>Eurytides marcellus</i>
Ceraunus blue	<i>Hemiargus ceraunus</i>
Zebra (longwing) heliconian	<i>Heliconius charitonius</i>
Common buckeye	<i>Junonia coenia</i>
Giant swallowtail.....	<i>Papilio cresphontes</i>
Palamedes swallowtail	<i>Papilio palamedes</i>
Cloudless sulphur.....	<i>Phoebis sennae</i>
Long-tailed skipper.....	<i>Urbanus proteus</i>

ANTS, BEES AND WASPS

(several unidentified species)

SPIDERS

(several unidentified species)

TICKS AND MITES

(several unidentified species)

FISH

Mosquitofish	<i>Gambusia holbrooki</i>	DV
Brown haplo	<i>Haplosternum littorale</i> *	DV
Sailfin molly	<i>Poecilia latipinna</i>	DV

AMPHIBIANS

Florid cricket frog	<i>Acris gryllus dorsalis</i>	DV
Southern toad	<i>Anaxyrus terrestris</i>	DV, MFW

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Greenhouse frog	<i>Eleutherodactylus planirostris</i> *	DV, MFW
Green treefrog	<i>Hyla cinerea</i>	DV, MFW
Pine woods treefrog.....	<i>Hyla femoralis</i>	DV, MFW
Squirrel treefrog	<i>Hyla squirella</i>	DV, MFW
Pig frog.....	<i>Lithobates grylio</i>	DV
Southern leopard frog.....	<i>Lithobates sphenoccephalus</i>	DV, MFW
Cuban treefrog	<i>Osteopilus septentrionalis</i> *	DV, MFW
Little grass frog	<i>Pseudacris ocularis</i>	DV, MFW
Eastern spadefoot toad	<i>Scaphiopus holbrookii</i>	DV, MFW

REPTILES

Turtles and Tortoises

Florida softshell	<i>Apalone ferox</i>	DV, MFW
Florida chicken turtle	<i>Deirochelys reticularia chrysea</i> ..	DV, MFW
Gopher tortoise.....	<i>Gopherus polyphemus</i>	DV, MFW
Striped mud turtle.....	<i>Kinosternon baurii</i>	DV, MFW
Peninsula cooter	<i>Pseudemys concinna floridana</i> ...	DV
Florida box turtle	<i>Terrapene bauri</i>	DV, MFW
Red-eared slider	<i>Trachemys scripta elegans</i> *	DV, MFW

Lizards

Green anole	<i>Anolis carolinensis</i>	DV, MFW
Brown anole	<i>Norops sagrei</i> *	DV, MFW
Six-lined racerunner.....	<i>Aspidoscelis sexlineata</i>	DV, MFW
Southeastern five-lined skink	<i>Plestiodon inexpectatus</i>	DV, MFW
Eastern fence lizard.....	<i>Sceloporus undulatus</i>	DV, MFW

Snakes

Southern black racer	<i>Coluber constrictor priapus</i>	DV, MFW
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>	DV, MFW
Eastern indigo snake	<i>Drymarchon couperi</i>	DV, MFW
Mud snake	<i>Farancia abacura</i>	DV, MFW
Eastern hognose	<i>Heterodon platirhinos</i>	DV, MFW
Southern hognose.....	<i>Heterodon simus</i>	DV, MFW
Scarlet kingsnake.....	<i>Lampropeltis elapsoides</i>	DV, MFW
Eastern coral snake.....	<i>Micrurus fulvius</i>	DV, MFW
Eastern ratsnake.....	<i>Pantherophis alleghaniensis</i>	DV, MFW
Dusky pygmy rattlesnake.....	<i>Sistrurus miliarius barbouri</i>	DV, MFW
Central Florida crowned snake	<i>Tantilla relicta neilla</i>	DV, MFW
Common gartersnake	<i>Thamnophis s. sirtalis</i>	MFW

BIRDS

Ducks

Black-bellied whistling duck	<i>Dendrocygna autumnalis</i> *	DV, MFW
------------------------------	---------------------------------	---------

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
-------------	-----------------	--

Egrets and Herons

Great egret	<i>Ardea alba</i>	DV, MFW
Great blue heron.....	<i>Ardea Herodias</i>	DV, MFW
Cattle egret.....	<i>Bubulcus ibis</i> *	DV, MFW

Ibises, Storks, and Spoonbills

White ibis.....	<i>Eudocimus albus</i>	DV, MFW
Wood stork	<i>Mycteria americana</i>	DV, MFW

Vultures

Turkey vulture	<i>Cathartes aura</i>	DV, MFW
Black vulture	<i>Coragyps atratus</i>	DV, MFW

Hawks, Eagles, Osprey and Kites

Cooper's hawk	<i>Accipiter cooperii</i>	DV, MFW
Bald eagle	<i>Haliaeetus leucocephalus</i>	DV, MFW
Red-tailed hawk.....	<i>Buteo jamaicensis</i>	DV, MFW
Red-shouldered hawk	<i>Buteo lineatus</i>	DV, MFW
Swallow-tailed kite	<i>Elanoides forficatus</i>	DV, MFW
Osprey	<i>Pandion haliaetus</i>	DV, MFW

Falcons

Southeastern American kestrel	<i>Falco sparverius paulus</i>	DV, MFW
-------------------------------	--------------------------------------	---------

Plovers

Killdeer	<i>Charadrius vociferous</i>	DV, MFW
----------------	------------------------------------	---------

Goatsuckers

Chuck-Will's widow	<i>Caprimulgus carolinensis</i>	DV, MFW
Common nighthawk	<i>Chordeiles minor</i>	DV, MFW

Swifts

Chimney swift.....	<i>Chaetura pelagica</i>	DV, MFW
--------------------	--------------------------------	---------

Turkey and Quail

Northern bobwhite	<i>Colinus virginianus</i>	DV, MFW
Wild turkey	<i>Meleagris gallopavo</i>	DV, MFW

Cranes, Coots and Rails

Common gallinule (moorhen)	<i>Gallinula galeata</i>	DV, MFW
Sandhill crane.....	<i>Grus canadensis</i>	DV, MFW

Doves

Common ground-dove	<i>Columbina passerine</i>	DV, MFW
Mourning dove.....	<i>Zenaida macroura</i>	DV, MFW

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Cuckoos		
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	DV, MFW
Owls		
Great horned owl	<i>Bubo virginianus</i>	DV, MFW
Eastern screech owl	<i>Megascops asio</i>	DV, MFW
Barred owl	<i>Strix varia</i>	DV, MFW
Woodpeckers		
Northern flicker	<i>Colaptes auratus</i>	DV, MFW
Pileated woodpecker	<i>Dryocopus pileatus</i>	DV, MFW
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	DV, MFW
Redheaded woodpecker	<i>Melanerpes erythrocephalus</i>	DV, MFW
Downy woodpecker	<i>Picoides pubescens</i>	DV, MFW
Southern hairy woodpecker	<i>Picoides villosus</i>	DV, MFW
Flycatchers and Kingbirds		
Great-crested flycatcher	<i>Myiarchus crinitus</i>	DV, MFW
Eastern phoebe	<i>Sayornis phoebe</i>	DV, MFW
Shrikes		
Loggerhead shrike	<i>Lanius ludovicianus</i>	DV, MFW
Vireos		
Yellow-throated vireo	<i>Vireo flavifrons</i>	DV, MFW
White-eyed vireo	<i>Vireo griseus</i>	DV, MFW
Red-eyed vireo	<i>Vireo olivaceus</i>	DV, MFW
Blue-headed vireo	<i>Vireo solitarius</i>	DV, MFW
Jays and crows		
Fish crow	<i>Corvus brachyrhynchos</i>	DV, MFW
American crow	<i>Corvus ossifragus</i>	DV, MFW
Blue jay	<i>Cyanocitta cristata</i>	DV, MFW
Swallows and Martins		
Purple martin	<i>Progne subis</i>	DV, MFW
Tree swallow	<i>Tachycineta bicolor</i>	DV, MFW
Wrens		
Carolina wren	<i>Thryothorus ludovicianus</i>	DV, MFW
Chickadees and Titmice		
Tufted titmouse	<i>Baeolophus bicolor</i>	DV, MFW
Carolina chickadee	<i>Poecile carolinensis</i>	DV, MFW

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Kinglets		
Ruby-crowned kinglet	<i>Regulus calendula</i>	DV, MFW
Gnatcatchers		
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	DV, MFW
Thrushes		
Hermit Thrush	<i>Catharus guttatus</i>	DV, MFW
Eastern bluebird	<i>Sialia sialis</i>	DV, MFW
American robin	<i>Turdus migratorius</i>	DV, MFW
Thrashers		
Gray catbird	<i>Dumetella carolinensis</i>	DV, MFW
Brown thrasher.....	<i>Toxostoma rufum</i>	DV, MFW
Northern mockingbird.....	<i>Mimus polyglottos</i>	DV, MFW
Waxwings		
Cedar waxwing	<i>Bombycilla cedrorum</i>	DV, MFW
Warblers		
Yellow-throated warbler	<i>Dendroica dominica</i>	DV, MFW
Palm warbler	<i>Dendroica palmarum</i>	DV, MFW
Common yellowthroat.....	<i>Geothlypis trichas</i>	DV, MFW
Worm-eating warbler.....	<i>Helmitheros vermivorum</i>	DV, MFW
Black and white warbler.....	<i>Mniotilta varia</i>	DV, MFW
Black-throated blue warbler	<i>Setophaga caerulescens</i>	DV, MFW
Yellow-rumped warbler	<i>Setophaga coronata</i>	DV, MFW
Prairie warbler	<i>Setophaga discolor</i>	DV, MFW
Pine warbler	<i>Setophaga pinus</i>	DV, MFW
American redstart	<i>Setophaga ruticilla</i>	DV, MFW
Northern parula	<i>Parula Americana</i>	DV, MFW
Meadowlarks, Blackbirds and Orioles		
Red-winged blackbird	<i>Agelaius phoeniceus</i>	DV, MFW
Brown-headed cowbird	<i>Molothrus ater</i>	DV, MFW
Common grackle.....	<i>Quiscalus quiscula</i>	DV, MFW
Sparrows		
House sparrow.....	<i>Passer domesticus</i>	DV, MFW
Eastern towhee (aka rufous-sided)	<i>Pipilo erythrophthalmus</i>	DV, MFW
Cardinals, Tanagers, Grosbeaks, and Buntings		
Northern cardinal	<i>Cardinalis cardinalis</i>	DV, MFW
Indigo bunting	<i>Passerina cyanea</i>	DV, MFW
Summer tanager.....	<i>Piranga rubra</i>	DV, MFW

* Non-native Species

Dade Battlefield Historic State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
-------------	-----------------	--

MAMMALS

Virginia opossum	<i>Didelphis virginiana</i>	DV, MFW
Southeastern bat	<i>Myotis austroriparius</i>	DV, MFW
Evening bat	<i>Nycticeius humeralis</i>	DV, MFW
Eastern pipistrelle (tricolored)	<i>Perimyotis subflavus</i>	DV, MFW
Eastern cottontail rabbit.....	<i>Sylvilagus floridanus</i>	DV, MFW
Eastern harvest mouse	<i>Reithrodontomys humulis</i>	DV, MFW
Cotton mouse.....	<i>Peromyscus gossypinus</i>	DV, MFW
Hispid cotton rat	<i>Sigmodon hispidus</i>	DV, MFW
Eastern gray squirrel	<i>Sciurus carolinensis</i>	DV, MFW
Sherman's fox squirrel.....	<i>Sciurus niger shermani</i>	DV, MFW
Southern flying squirrel	<i>Glaucomys volans</i>	DV, MFW
Southeastern pocket gopher.....	<i>Geomys pinetis</i>	DV, MFW
Southern short-tailed shrew	<i>Blarina carolinensis</i>	DV, MFW
Eastern mole	<i>Scalopus aquaticus</i>	DV, MFW
River otter	<i>Lontra canadensis</i>	DV, MFW
Nine-banded armadillo.....	<i>Dasypus novemcinctus</i>	DV, MFW
Bobcat.....	<i>Lynx rufus</i>	DV, MFW
Red fox.....	<i>Vulpes vulpes</i>	DV, MFW
Gray fox	<i>Urocyon cinereoargenteus</i>	DV, MFW
Raccoon.....	<i>Procyon lotor</i>	DV, MFW
White-tailed deer	<i>Odocoileus virginianus</i>	DV, MFW
Wild pig	<i>Sus scrofa</i>	DV, MFW

* Non-native Species

Addendum 6—Imperiled Species Ranking Definitions

Imperiled Species Ranking Definitions

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 fabricated 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 or 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.

Imperiled Species Ranking Definitions

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

LEGAL STATUS

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.

Imperiled Species Ranking Definitions

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)

ST..... 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 therefore is destined or very likely to become an endangered species within the near future.

SSC..... 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 that, in the near 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.

Addendum 7—Cultural Information

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

A. General Discussion

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

B. Agency Responsibilities

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

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

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

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

C. Statutory Authority

Statutory Authority and more in depth information can be found at:
<http://www.flheritage.com/preservation/compliance/guidelines.cfm>

D. Management Implementation

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

**Management Procedures for Archaeological and Historical Sites and Properties on
State-Owned or Controlled Properties (revised March 2013)**

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

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

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

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:

http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

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

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

Phone: (850) 245-6425
Toll Free: (800) 847-7278
Fax: (850) 245-6435

Eligibility Criteria for National Register of Historic Places

The criteria to be used for evaluating eligibility for listing in the National Register of Historic Places are as follows:

- 1)** Districts, sites, buildings, structures, and objects may be considered to have significance in American history, architecture, archaeology, engineering, and/or culture if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
 - a)** are associated with events that have made a significant contribution to the broad patterns of our history; and/or
 - b)** are associated with the lives of persons significant in our past; and/or
 - c)** embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
 - d)** have yielded, or may be likely to yield, information important in prehistory or history.

- 2)** Ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years shall not be considered eligible for the *National Register*. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:
 - a)** a religious property deriving its primary significance from architectural or artistic distinction or historical importance; or
 - b)** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
 - c)** a birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
 - d)** a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, distinctive design features, or association with historic events; or a reconstructed building, when it is accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and no other building or structure with the same association has survived; or a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
 - e)** a property achieving significance within the past 50 years, if it is of exceptional importance.

Preservation Treatments as Defined by Secretary of Interior's Standards and Guidelines

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.

Stabilization is defined as the act or process of applying measures designed to reestablish a weather resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Addendum 8—Arthropod Control Plan

Dade Battlefield Historic State Park Arthropod Control Plan



CHARLES H. BRONSON
COMMISSIONER

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

Chapters 388.4111, F.S. and 5E-13.042(4)(b), F.A.C.
Telephone: (850) 922-7011

For use in documenting an Arthropod control plan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein.

Name of Designated Land:
Dade Battlefield Historic State Park

Is Control Work Necessary: ☒ Yes ☐ No

Location:
Sumter County-Bushnell

Land Management Agency:
Division of Recreation and Parks, Florida Department of Environmental Protection (DEP)

Are Arthropod Surveillance Activities Necessary? ☒ Yes ☐ No
If "Yes", please explain:
To comply with Florida Administrative Code 5E-13.

Which Surveillance Techniques Are Proposed?
Please Check All That Apply:

☒ Landing Rate Counts	☒ Light Traps	☐ Sentinel Chickens
☒ Citizen Complaints	☒ Larval Dips	☐ Other

If "Other", please explain:

Dade Battlefield Historic State Park Arthropod Control Plan

Arthropod Species for Which Control is Proposed:
Aedes, Culex, Anopheles, Psorophora

Proposed Larval Control:

Proposed larval monitoring procedure: Inspections, dipping

Are post treatment counts being obtained: ☒ Yes ☐ No

Biological Control of Larvae:

Might predacious fish be stocked: ☒ Yes ☐ No

Other biological controls that might be used:

With regard to predacious fish control methods, predacious fish may eat tadpoles as well as mosquito larvae.

We request that both agencies agree to their placement in a particular body of water before they are released.

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:)

☒ Bti

☐ Bs

☒ Methoprene

☐ Non-Petroleum Surface Film

☐ Other, please specify:

Please specify the following for each larvacide:

Chemical or Common name: Altosid XR, Teknar G

☒ Ground ☐ Aerial

Rate of application: 64 oz per acre, 20 lbs per acre, 20 lbs per acre

Method of application: Sprayer mounted on a truck or ATV, granule spreader mounted on ATV.

Dade Battlefield Historic State Park Arthropod Control Plan

Proposed Adult Mosquito Control:

Aerial adulticiding ☐ Yes ☐ No

Ground adulticiding ☒ Yes ☐ No

Please specify the following for each adulticide:

Chemical or common name: Kontrol 4-4 (Permethrin)

Rate of application: 6 oz per min.

Method of application: Truck or ATV mounted ULV sprayer.

Proposed Modifications for Public Health Emergency Control: Arthropod control agency may request special exception to this plan during a threat to public or animal health declared by State Health Officer or Commissioner of Agriculture.

Proposed Notification Procedure for Control Activities:

Public Works Director, Board of County Commissioners, Park Manager at Dade Battlefield Historic State Park

Records:

Are records being kept in accordance with Chapter 388, F.S.:

☒ Yes ☐ No

Records Location: Sumter County Public Works

How long are records maintained:

3 Years

Dade Battlefield Historic State Park Arthropod Control Plan

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?
none

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:
none

Include proposed operational schedules for water fluctuations:
none

List any periodic restrictions, as applicable, for example peak fish spawning times.
none

Proposed Modification of Aquatic Vegetation: none

Land Manager Comments:

The use of non-petroleum surface film is currently not approved on DEP environmentally sensitive and biologically productive public lands. Consideration of its use on such lands in the future is pending the results of current research.

Arthropod Control Agency Comments:

Ground adulticiding would be performed upon request by the park manager at Dade Battlefield Historic State Park.

Valerie Subie 2/20/09
Signature of Lands Manager or Representative Date

Donald W. Wilk Jr. 3-5-09
Signature of Mosquito Control Director / Manager Date