# **BALD POINT STATE PARK**

**UNIT MANAGEMENT PLAN** 

**APPROVED** 

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

APRIL 21, 2006



# Department of Environmental Protection

Jeb Bush Governor Marjory Stoneman Douglas Building 3900 Commonwealth Boulevard, MS 140 Tallahassee, Florida 32399-3000 Phone: (850) 245-2784 Fax: (850) 245-2786

Colleen Castille Secretary

May 31, 2006

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

Re: Bald Point State Park

Lease # 4244

Dear Ms. White:

On April 21, 2006, the Acquisition and Restoration Council recommended approval of the Bald Point State Park management plan. Therefore, the Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, approved the management plan for the Bald Point State Park. Pursuant to Sections 253.034 and 259.032, Florida Statutes, and Chapter 18-2, Florida Administrative Code this plan's ten-year update will be due on April 21, 2016.

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

Sincerely,

aula L. Allen

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

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#### **INTRODUCTION**

Bald Point State Park is located in Franklin County at the eastern end of St. James Island, which is separated from the mainland by the Crooked River, the Ochlockonee River and Bay (see Vicinity Map). Access to the park is from U.S. Highway 98 via County Road 370 (see Reference Map). The park includes several significant natural features including expansive estuarine marsh systems associated with Ochlockonee and Apalachee Bays, an array of flatwoods lakes, freshwater basin marsh communities and maritime hammock, and provides habitat for several rare species including Florida black bear, loggerhead sea turtles, American bald eagle, wading birds, Godfrey's blazing star and large-leaved jointweed. Additionally, Bald Point is a favored stop-over site for migrating neo-tropicals and raptors. The diversity of habitat types, bay shoreline, interior creeks and freshwater lakes provide exceptional opportunities for resource-based recreation, such as fishing, canoeing/kayaking, birding, hiking, camping and simply relaxing on the beach. Bald Point State Park is an important component of a regional network of federal, state and private conservation lands that includes the St. Marks National Wildlife Refuge, Apalachicola National Forest, Tate's Hell State Forest, Ochlockonee River State Park, Phipps Preserve and Mashes Sands County Park.

At Bald Point State Park, public outdoor recreation and conservation is the designated single use of the property. There are no legislative or executive directives that constrain the use of this property.

The park is part of the Dickerson Bay/Bald Point CARL project that includes uplands around Dickerson, Levy and Ochlockonee Bays. Initial acquisition began in 1999 with funds from the CARL/P2000 acquisition program (see Addendum 1) and was focused along the Apalachee Bay shoreline. The park was expanded significantly in 2003 when 3,485 acres were purchased from the St. Joe Company. As of January 2006, the park contains 4,859.32 acres. The park is administered jointly with Ochlockonee River State Park.

Progress has been made in the areas of resource management, visitor services and park operations since approval of the February, 2001 plan. Park staff maintains several monitoring programs, including monthly shorebird surveys, daily sea turtle monitoring (May to October), quarterly monitoring of gopher tortoise burrows, and annual monitoring of listed plant species. The park has worked with adjacent homeowners to remove exotics plants. Plant and bird lists have been expanded. Efforts have been initiated to install low water crossings to improve hydrology and gather water quality data. A preliminary study of the restoration needs of nearly three hundred acres south of Tucker Lake has been completed. A total of 893 acres have been treated with prescribed fire. New cultural sites have been identified and added to the Florida Master Site File. Interpretive programs have been developed and tours provided upon request. A new park manager has been assigned to oversee Ochlockonee River and Bald Point State Park and personnel assigned to the park now includes three FTE and three OPS positions. Volunteer involvement has increased and is responsible for much of the progress that has been made during the last planning cycle.

Improvements have been made at three locations along the shoreline to provide beach access. Parking, dune boardwalks, and restrooms are provided in these areas. The fishing dock at Bald Point has been improved and a boardwalk constructed to provide access to the adjacent marsh. The existing network of unimproved roads was opened for hiking and biking. A self-service fee station was constructed to collect the park entrance fee and a shop area built to meet the housing, maintenance and storage needs of the park.



![](_page_8_Figure_0.jpeg)

## PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of Bald Point State Park as a unit of Florida's state park system. It identifies the objectives, criteria and standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the February 13, 2001, approved plan. All development and resource alteration encompassed in this plan is subject to the granting of appropriate permits; easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

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

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

In the development of this plan, the potential of the park to accommodate secondary management purposes ("multiple uses") was analyzed. These secondary purposes were considered within the context of the Division's statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, and visitation and visitor experiences. For this park, it was determined that timber removal operations, for the purpose of natural community restoration, could be accommodated in a manner that would be compatible and not interfere with the primary purpose of resource-based outdoor recreation and conservation. Partial timber removal to re-establish more natural overstory density and reduce understory fuel loads prior to burning is a compatible secondary management purpose addressed in the Resource Management Component of the plan. Uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park.

The potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that multiple-use management activities would not be appropriate as a means of generating revenues for land management. Instead, techniques such as entrance fees, concessions and similar measures will be employed on a case-by-case basis as a means of supplementing park management funding.

The use of private land managers to facilitate restoration and management of this unit was also

analyzed. Decisions regarding this type of management (such as outsourcing, contracting with the private sector, use of volunteers, etc.) will be made on a case-by-case basis as necessity dictates.

## MANAGEMENT PROGRAM OVERVIEW

#### **Management Authority and Responsibility**

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

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

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

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

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

### Park Goals and Objectives

The following park goals and objectives express the Division's long-term intent in managing the state park. At the beginning of the process to update this management plan, the Division

reviewed the goals and objectives of the previous plan to determine if they remain meaningful and practical and should be included in the updated plan. This process ensures that the goals and objectives for the park remain relevant over time.

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

### Natural and Cultural Resources

- 1. Establish and maintain an effective prescribed fire program.
  - **A.** Develop a detailed prescribed fire plan outlining burn zone prescriptions, smoke screening, recommended firing plans, appropriate fire return intervals, mop-up and contingency planning, fire line construction/maintenance, and long term management objectives.
  - **B.** Continue routine application of prescribed fire in established burn zones according to recommended fire return intervals identified in the park burn plan.
  - C. Expand burning in the western portion (Tucker Lake Parcel) of the property.
  - **D.** Update the park's prescribed fire plan annually in coordination with the larger District 1 prescribed fire plan. Protocol for annual burn plan update is outlined in the park burn plan.
  - **E.** Coordinate with the DEP Northwest Regulatory Office to permit the construction of low water crossings necessary for burning.
  - F. Improve vehicular access along fire lines where appropriate.
  - **G.** Maintain fire lines and other necessary resource management roads through frequent bush hog mowing.
  - **H.** Coordinate with the Florida Department of Agriculture and Consumer Services (DOACS) Division of Forestry (DOF) to consider aerial ignition of appropriate blocks.
- 2. Protect, restore and maintain natural hydrological regimes.
  - **A.** Request assistance from the DEP to conduct base-line water quality analysis of the park's larger lakes.
  - **B.** Coordinate with the Division's Office of Park Planning to designate significant wetland natural communities as protected areas.
  - **C.** Develop a basic GIS supported plan to identify alterations to hydrology and identify feasible restoration measures.
- 3. Design and implement restoration of highly altered communities or areas.
  - **A.** Coordinate with the DOF to consider initial flatwoods restoration measures that include the thinning of pine plantations in advance of burning.
  - **B.** Continue to remove any invasive exotic plants whenever discovered. Seek assistance with exotic species removal from the district biological section.
  - **C.** Coordinate with the DOF to consider options for the removal of off-site, planted sand pines.
- 4. Protect, restore, and maintain native plant diversity, and natural abundance.
  - A. Contact the appropriate departments of the various State Universities in Florida to

convey the need for continued inventory and mapping of the park's flora.

- **B.** GPS map the colonies or major occurrences of large-leaved jointweed and Godfrey's blazing star.
- 5. Protect, restore, and maintain native animal diversity, and natural relative abundance.
  - **A.** Advise the staff of the DOACS Bureau of Entomology, Nematology, and Plant Pathology of the need to compile a list of macro-invertebrates for the park. Note that a research/collection permit is required.
  - **B.** Conduct gopher tortoise burrow surveys and GPS mapping in coordination with prescribed burning.
  - **C.** Coordinate with the US Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission to monitor bald eagle nests.
  - **D.** Coordinate black bear monitoring efforts with the FFWC.
  - **E.** Coordinate with the district biological section to collect seasonal sea turtle nesting data.
  - **F.** Use traffic calming design elements in the construction of the park road to minimize impacts to wildlife.
  - **G.** Use GPS/GIS technology, and photo points, as necessary, to effectively monitor listed species.
- 6. Protect and monitor cultural resources.
  - A. Conduct ground disturbing activity in accordance with DHR policy.
  - **B.** Minimize impacts to significant sites caused by ground disturbing activity associated with erosion, looting and vandalism, natural resource management activity, park improvements, and other forms of encroachment.
  - C. Routinely monitor and document the condition of archaeological sites in the park.
  - **D.** Survey recorded sites and unsurveyed areas as necessary to guide site management and future park development.
  - **E.** Enhance interpretation of cultural resources in order to protect archaeological sites and increase public knowledge of local history and prehistory.

## **Recreation**

- 1. Seek funding to expand recreational and interpretive opportunities through the development of programs, and new use areas and facilities, as outlined in this management plan.
  - **A.** Develop a central entrance point and park drive that provides interior access to existing and proposed public use areas.
  - **B.** Expand opportunities for interpretation of the natural and cultural resources of the park through static displays/signage, brochures and field guides, and improved programming.
  - **C.** Develop an interconnected network of trails for hiking, off-road biking and horseback riding that links existing and proposed use areas and facilities and provides clear directional signage.
  - **D.** Develop day use facilities to enhance access to interior lakes.
  - **E.** Expand access to the shoreline and water that allows opportunities for swimming, fishing, canoeing/kayaking and general beach use activities.
  - F. Provide opportunities for overnight stays at the park.

## Administration/Operations

- 1. Continue to provide quality administrative and operational services.
  - **A.** To manage newly added park acreage, secure staff or equivalent resources to conduct educational and interpretive programs, manage volunteers, promote the park, operate the entrance station, and maintain park facilities.

- **B.** Conduct regular inspections of use areas and facilities and correct deficiencies to provide a safe, clean and well-maintained environment for visitors and staff.
- **C.** Maintain vehicles, tractors, fire suppression equipment and other land management equipment in good/working condition.
- **D.** Provide staff with appropriate training opportunities in visitor services, resource management, park operations, general maintenance, and interpretation.
- **E.** Maintain partnerships with federal, state, and local agencies and non-governmental organizations.
- **F.** Conduct community outreach activities to enhance public awareness and support of the park.
- G. Recruit and maintain volunteer support to assist staff with park operations.

#### **Management Coordination**

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

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

#### **Public Participation**

The Division provided an opportunity for public input by conducting a public workshop and an advisory group meeting. A public workshop was held on December 13, 2005 and an Advisory Group meeting was be held on December 14, 2005. The purpose of these meetings was to present the draft management plan to the public and to provide the Advisory Group members the opportunity to discuss the draft management plan.

#### **Other Designations**

Bald Point State Park is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes, nor is it under study for such designation. The park is a component of the Florida Greenways and Trails System.

This unit is adjacent to the Alligator Harbor Aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (section 258.35, Florida Statutes). None of the waters within the park have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302 Florida Administrative Code. Surface waters in this unit are Class III waters (Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife) as designated by DEP. Adjacent waters of Ochlockonee Bay and Alligator Harbor are designated Class II (Shellfish Propagation or Harvesting). Approximately one mile of shoreline stretching north from Lighthouse Point has been designated as a critical erosion area by the DEP, Bureau of Beaches and Wetland Resources.

### **RESOURCE MANAGEMENT COMPONENT**

## **INTRODUCTION**

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

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

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

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

### **RESOURCE DESCRIPTION AND ASSESSMENT**

#### **Natural Resources**

### **Topography**

Bald Point State Park is located on the eastern portion of The St. James Island Peninsula that forms the southern shoreline of the Ochlockonee Bay. This area lies within the Apalachicola Coastal Lowlands, a sub-unit of the much broader Gulf Coastal Lowlands. The topography of the lowlands is generally flat. This is generally the case for most of the park's uplands, which consist of various pine flatwoods communities. A few areas of the park do have noticeable topographical relief. Ancient secondary dunes, anchored by xeric oaks, occur along Bald Point Road from the Sun Rise day use area to the northern stretch of maritime hammock. Additionally, high rolling hills occur in the sand pine, longleaf pine and turkey oak scrub located southwest of County Road 370. The deep sandy hills in this portion of the park are relict dunes.

### Geology

The underlying geology of Franklin County can be summarized as a series of formations and overlying sediments. The Miocene Period St. Marks Formation is composed of tan to white, molluskan moldic, very fine-grained, uncrystallized to completely recrystallized limestone. In eastern and central Franklin County, the top of the formation is located at approximately 300 to 450 feet below mean sea level. The formation dips to the south and southwest. The St. Marks limestone overlies the Suwannee Limestone and underlies the Bruce Creek Limestone (Monroe).

Early to middle Miocene Period Bruce Creek Limestone is composed of tan to gray, sandy, fossiliferous limestone. In Franklin County, the top of the formation ranges from 25 feet below mean sea level in the extreme eastern portion of the county to almost 350 feet below mean sea level in the extreme western portion of the county. The Bruce Creek Limestone underlies the Intracoastal Formation.

The middle Miocene to late Pliocene Period Intracoastal Formation overlies the limestone of the Bruce Creek Formation. The Intracoastal Formation is composed of very sandy, phosphatic, poorly cemented and crumbly, fossiliferous, coarse grained limestone. Fossils include foraminifera, mollusks, shark teeth, ostracods, sponge spicules and echinoids. The Intracoastal Formation is overlain by the Alum Bluff Group sediments.

Late Pliocene Period Alum Bluff sediments consist of two general lithologies. These include unconsolidated to poorly indurated, slightly phosphatic, sandy, shelly limestone in a calcite or clay matrix (Monroe). Mollusks are the most common type of fossil. The Alum Bluff Group sediments are overlain by undifferentiated surficial sediments.

Pleistocene and Holocene sediments consist of alluvium and marine terrace deposits. They are predominantly unconsolidated quartz sand, sandy clay, and clayey sand, all of which are unfossiliferous (Monroe).

## **Soils**

Sixteen soil types occur on the park. Poorly drained Leon sand and Scranton fine sand encompasses vast areas of the park and support a mosaic of mesic and wet flatwoods. Water is either at or very near the surface during wet periods. Ortega fine sand, Kershaw sand, Resota fine sand and Mandarin fine sand are abundant as well, and support scrubby flatwoods and scrub communities. The various freshwater wetlands occur primarily on Rutlege sands and Pickney-Pamlico complex, depressional. The park's expansive and scenic tidal marshes mostly occur on Dirego and Byvi soils. The secondary dune ridges along portions of Bald Point Road occur on Corolla sand and Newhan-Corolla complex, rolling. Addendum 3 contains detailed descriptions of these and other soil units.

A land management change from intensive silviculture to natural systems management will reduce impacts to soil resources associated with the use of logging equipment. Although this plan considers the use of selective timber removal as a management measure, these activities are non-reoccurring and are rather intended to initiate restoration. Additionally, planting of sea oats and placement of sand fencing has reduced levels of erosion in beach dune areas along Bald Point Road.

### **Minerals**

There are no minerals of commercial value at Bald Point. Furthermore, there are no commercially mined mineral commodities in Franklin County (Monroe). Unconsolidated sand is mined, in some locations throughout the county, from scattered shallow pits for local use.

## <u>Hydrology</u>

Two aquifers underlie Franklin County, the surficial aquifer and the deeper, extensive Floridan Aquifer. Surficial aquifers are at or near land surface and are generally composed of loose sediments, such as sand or gravel. The surficial aquifer system contains the water table, and water is generally unconfined (Lane).

In eastern Franklin County the surficial aquifer, system is composed of unconsolidated quartz

- LEGEND 3 - Beaches 4 - Dirego and Bayvi soils, tidal 8 - Ridgewood sand, 0 to 5 percent slopes 10 - Corolla sand, 0 to 5 percent slopes 11 - Dorovan-Pamlico complex, depressional 13 - Hurricane sand 15 - Ortega fine sand, o 0 to 5 percent slopes 18 - Kershaw sand, 5 to 12 percent slopes 22 - Leon sand 24 - Mandarin fine sand 26 - Duckston sand, occasionally flooded 29 - Resota fine sand, 0 to 5 percent slopes 30 - Rutlege loamy fine sand, depressional
  - 31 Rutlege fine sand
    - 33 Scanton fine sand
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# BALD POINT STATE PARK

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# SOILS MAP

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sand. This aquifer is very discontinuous because of clay and sandy clay lithologies that are commonly interbedded with the quartz sand (Monroe).

The Floridan aquifer system is composed of the Bruce Creek Limestone and the St. Marks Formation. Other deeper limestone formations are also considered part of the Floridan aquifer system, but in Franklin County, they frequently contain salty water and are too deep to be used economically. The top of the Bruce Creek Limestone represents the top of the Floridan aquifer system in this area. The Floridan aquifer system is the principal aquifer and source of ground water in the county.

Natural water bodies and wetlands occur throughout the park. They include basin marsh, depression marsh, marsh lakes, flatwoods lakes and estuarine tidal marsh. At roughly 175 acres, Tucker Lake is the largest water body, as well as one of the park's most prominent natural features. A well-defined, navigable channel has been dredged to connect the tidal waters of Chaires Creek with Tucker Lake. The dredged channel follows a low, otherwise poorly defined, natural drainage. This and a second poorly defined natural drainage located just northwest of Tucker Lake once provided infrequent connection to the brackish waters of Chaires Creek, most likely only occurring during major storm surge events. Anecdotal evidence gathered from long time local residents indicates that this was primarily a freshwater, saw grass rimmed lake that supported an excellent natural bass and bluegill fishery. The enhanced channel now brings regular tidal flush to the lake. Organic sedimentation is obvious, particularly in the northern shallows near the Chaires Creek connection. Other portions of the lake, particularly along the southwestern shoreline have a firm sandy bottom similar to the park's other well-defined flatwoods lakes. Today the lake is characteristic of an estuarine area. The majority of the shoreline is rimmed with dense black needlerush, and marine species such as redfish, speckled sea trout and blue crabs are common.

A second channel was dredged to link a chain of small ponds with a westerly arm of Chaires Creek. The smaller of the two wooden bridges crosses this channel, which was dug out, from a once poorly defined drain through mesic flatwoods. Although altered by regular tidal influence, these ponds as well as Tucker Lake have a natural estuarine appearance. No active management measures are proposed for these areas, other than to maintain the bridges for resource management access.

Little Tucker Lake, located just west of its larger namesake, is distinctly different from the park's other flatwoods lakes. In contrast to the other shallow sandy bottom ponds, the shoreline of Little Tucker drops off sharply. Park staff has measured the lake's depth at nearly 60 feet. Unlike the low marshy shoreline of many of the other local ponds, Little Tucker Lake is surrounded by immediate uplands of saw palmetto/slash pine flatwoods.

The park's diverse estuarine wetlands include six well-delineated salt creeks along the shoreline of the Ochlockonee Bay. The largest of these, by far, is Chaires Creek with approximately 7 miles of twisted branches. The Chaires Creek system is flanked by an expansive estuarine tidal marsh dominated by black needlerush. This and other tidal marsh communities provide essential habitat for marine organisms. They especially play a key role as nurseries for many species of pelagic and deep-water fish that spend their early life stages in the protective sanctuary of the marsh environment. Additionally, the park preserves and protects a string of low marsh islands along the shoreline of Alligator Harbor. These areas provide excellent foraging habitat for wading birds, and provide a unique recreational experience for paddlers.

A number of ditches were constructed on the property long prior to State acquisition. It is presumed that these ditches were installed to manage lake levels, improve drainage for silviculture, and possibly in the interest of mosquito control. All of the lakes near the eastern residential area have been connected via ditches or culverts. Sand Pond is connected to Double Pond via an 8 foot wide, 500 ft long ditch. During wet periods, the flow of water in this ditch is quite rapid. Double Pond is connected to the unnamed marsh pond to the south via a large drainage culvert. A ditch carries water from this unnamed wetland into Mullet Pond to the east. A 2,300-foot long outlet ditch drains Mullet Pond into the Apalachee Bay. This ditch was cut through the large basin marsh north of Mullet Pond, and flows underneath Bald Point Road. The outfall of this ditch has cut an outlet channel across the open beach approximately 20 - 30 ft in width.

Ditching has also occurred within a large freshwater basin marsh located in the western portion of the park. This interior wetland has an outflow ditch that carries water a short distance east into a much longer ditch. This longer ditch begins in the depression marsh just north of Little Tucker Lake, and flows north for nearly 4,000 feet before draining into Little Bridge Pond. Little Bridge Pond has connection to the western arm of Chaires Creek. This long ditch appears to follow a poorly delineated natural drainage. There are a few much smaller ditches that feed into this larger ditch, apparently intended to improve mesic and wet flatwoods sites for silviculture. The wetland vegetation within this extensive ditch system is dominated by freshwater plants such as fragrant pond lily, St. John's wort, saw grass, spikerush and lance-leaved duck potato.

Surface and near surface hydrology in mesic and wet flatwoods ultimately flows into the vast freshwater wetlands or tidal marshes. Higher permeability and lower seasonal high water tables in the scrub and scrubby flatwoods usually preclude standing water at ground surface.

### <u>Natural Communities</u>

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

The park contains 13 distinct natural communities (see Natural Communities Map) in addition to ruderal and developed areas. Park specific assessments of the existing natural communities are provided in the narrative below. A list of plants and animals occurring in the unit is contained in Addendum 4.

**Beach dune.** The beach dune community at Bald Point consists of a thin strip of gently sloping dunes and swales along the eastern shoreline of the park. Portions of the beach dune are closely associated with and often grade into scrubby flatwoods and xeric hammock. Larger, well-established dunes support scrubby flatwoods vegetation including slash pine, sand live oak and myrtle oak. Typical plants found within the park's dune systems include southern sea rocket, frolichea, saltbush, pennywort, narrow-leaved golden aster, gallardia, camphorweed, seaside goldenrod, saltwort, sea oats, beach grass, gopher apple and beach morning glory.

This area experiences relatively low energy wave action. Consequently, the primary dune profile

![](_page_19_Figure_0.jpeg)

is generally lower and less dramatic than beach dune communities on high-energy coastlines. Some portions of the beach dune community have been impacted by unregulated foot traffic. Stabilization measures such as replanting and deployment of sand fencing are currently being tested.

**Maritime hammock.** A thin strip of maritime hammock remains intact, near the northeastern shoreline of the park. The hammock occurs along well-drained sands that were derived from old, secondary dune systems. The low profile canopy is comprised mostly of old growth live oaks and sand live oaks. Understory vegetation is sparse, and consists primarily of scattered saw palmetto. Prior to State acquisition, the hammock was impacted by vehicle use. Most of the old jeep trails are still obvious; however, all of the disturbed areas show improvement since 1999.

A very small area of well-developed canopy lies nestled between marsh and flatwoods in the southern tip of the park. The area consists of tightly spaced live oaks that form a thick canopy, along with a few sand hickories. Conditions within the hammock are mesic, largely attributed to shading and humus buildup in the soil that helps retain ground moisture. Other vegetation consists mostly of saw palmetto, beautyberry, gallberry and bluecurls.

A few thin strips of oak/hickory hammock occur along County Road 370 (Alligator Point Road), particularly near the turn off for Bald Point Road. A large shell midden occurs here, and has likely had an influence on the overstory vegetation. A similar area of maritime hammock occurs along the western edge of recorded archaeological site FR 04, near the Sun and Sands residential area. A closed canopy of live oak, pignut hickory, wild olive and bay trees occurs immediately adjacent to the houses. This area of maritime hammock is currently included in with the adjacent scrub map unit. It should eventually be GPS surveyed and delineated on the natural community map as a separate map unit.

The maritime hammock communities are a favored gathering point for Neotropical migratory birds. This imperiled community is considered essential habitat and should be protected.

**Mesic flatwoods.** Several variations of mesic flatwoods are recognized by The Florida Natural Areas Inventory. The slash pine-saw palmetto-gallberry plant association is typical of the mesic flatwoods found at Bald Point. This natural community encompasses a large portion of the park. All of the mesic flatwoods on the Tucker Lake Parcel (western 2/3 of the park) have been converted to slash pine plantation. Understory fuel loading is high in these areas, consisting mostly of woody shrubs such as gallberry, lyonia, wax myrtle and titi. An aggressive prescribed fire program is a necessary and practical approach to fuels management and natural community restoration in these plantation sites.

The mesic flatwoods on the Mullet Pond Parcel (original 1,400 acre tract/eastern 1/3 of the park) have not been converted to plantation. Some selective timber removal appears to have taken place in some areas over the last 15-20 years. However, the current overstory of slash and pond pine has a natural density and multi-age/size variation. In addition, most of the mesic flatwoods in this portion of the park were roller chopped and burned by the prior owner in effort to enhance the vista in preparation for development. This has made routine prescribed burning a manageable task for these areas.

Typical flatwoods understory components such as wiregrass, lyonia, gallberry, dwarf huckleberry, blueberry, St. John's-wort, blazing star and yellow-eyed grass are common. A continued focus on prescribed burning will help promote these species, as well as manage

understory fuel loads. All of the mesic flatwoods burn zones at this park should be burned every 2-3 years, with the majority of burns occurring in the spring and summer months. Any greater fire return interval allows heavy, understory, live fuel loads to build up, resulting in very hot/intense burns.

Long-term management objectives for all wet flatwoods areas include restoration towards a more natural, open pineland. Overstory pine density will be reduced through selective thinning, while routine prescribed burning will help re-establish more natural understory species proportions towards an increase in herbaceous plants.

**Scrub.** Large areas southwest of Alligator Point Road are delineated as scrub. These welldrained, xeric uplands consist of rolling hills comprised of deep sandy soils. The overstory in most areas is entirely sand pine. Understory vegetation in these purely sand pine areas is very sparse. In many cases, the forest floor is nearly covered with deer moss lichen. Sand pine appears to be the natural dominant pine in this portion of the park.

Pockets of longleaf pine also occur throughout the area identified as scrub. These pockets are usually smaller than an acre. A few longleaf pines can be found scattered across some of the ridge tops. A few widely scattered clumps of wiregrass generally accompany the longleaf pines. In one such example, a few isolated longleaf were aged along with the larger sand pines surrounding them. The longleaf pines were approximately 30 years older than any of the adjacent sand pine. The extent to which lack of fire has influenced either species of pine in this area of the park is unclear. However, it appears that longleaf may have been more prevalent in the past. Prescribed burning of large blocks of sand pine scrub is extremely difficult, however, under low drought conditions and appropriate prescribed weather conditions, fire could be safely applied to small longleaf pockets. This would improve habitat conditions for the older longleaf. However, given the limited staff and financial resources of the park, this is a much lower priority than the routine maintenance burning of flatwoods burn zones on the Mullet Pond parcel.

Other prevalent trees found throughout the scrub include turkey oak, rusty lyonia and sand live oak. Low understory plants include saw palmetto, dune rosemary, conradina, gopher apple and red basil.

**Scrubby flatwoods.** At Bald Point, scrubby flatwoods occur on slightly elevated areas with moderate to well-drained soils. These areas are closely associated with and often grade, quite abruptly, into mesic flatwoods. All of the scrubby flatwoods on the Tucker Lake parcel have been converted to slash or mixed slash and sand pine plantation. Additionally, a few longleaf pines have been found in a small number of scrubby flatwoods plantation sites. Restoration measures for the scrubby flatwoods plantation areas will focus on prescribed fire with the main objectives of reducing sand pines and understory live fuel loads. Thinning of slash pines should be a secondary objective. Historically these areas did not support such a high density of pines. Long-term management objectives for these areas should be to re-establish a more natural, widely spaced, mixed overstory of slash and longleaf pine. Intact scrubby flatwoods areas on the Mullet Pond parcel should be used as a model to help guide restoration efforts on the Tucker Lake parcel. Understory vegetation in plantation sites includes sand live oak, turkey oak, Chapman oak, bluejack oak, myrtle oak, rusty lyonia, jointweed, gopher apple, wiregrass, black senna, blazing star, and lichens.

The scrubby flatwoods areas on the Mullet Pond parcel have not been converted to plantation. Some selective harvesting of overstory pines has occurred in a few areas, but was minimal and appears to have occurred a decade ago. No longleaf pines have been found in any of the flatwoods communities on the Mullet Pond parcel. All of the scrubby flatwoods communities in this portion of the park are therefore characterized by a widely scattered overstory of slash pines. Much younger sand pines have gained a foothold in a few areas. One of the objectives of prescribed fire for scrubby flatwoods burn zones should be control of sand pine.

Understory vegetation in these eastern scrubby flatwoods sites generally consists of scattered xeric shrubs such as sand live oak and rusty lyonia. Low herbaceous plants include scattered wiregrass, broomsedge, cottonweed, black senna, various jointweeds and blazing star. Two jointweeds (sandhill wireweed and October flower) bloom in the relative sandy openings by the hundreds and often thousands. Along with the bright pink flower stalks of blazing star, these dense colonies of flowering plants create a spectacle of colors in the late summer and early fall.

Because of the lower understory fuel continuity in most areas, a slightly higher fire return interval of 3-6 years appears to be natural for this community. This fire return interval reflects a wide range. The appropriate fire frequency will vary from site to site based on conditions within specific scrubby flatwoods burn zones. In particular, scrubby flatwoods that have been converted to pine plantations may require frequent fire (2-3 year fire return interval) during initial restoration.

Long-term management objectives for all wet flatwoods areas include restoration towards a more natural, open pineland. Overstory pine density will be reduced through selective thinning, while routine prescribed burning will help re-establish more natural understory species proportions. Once restoration measures have been well initiated, the natural condition of portions of scrubby flatwoods, with very low site indices, may be revealed to be sparse low oak scrub.

**Basin marsh.** Large, irregularly shaped basin marshes occur throughout the park. These freshwater communities are comprised primarily of sawgrass and sand cord grass along the periphery, while various species of hydrophytic plants occupy the interior portions. Typical plants include lance-leaved arrowhead, fragrant pond lily, pickerelweed, bladderwort and sedges.

Several areas within the marshes appear to hold water year round. These open water areas classified as marsh lakes provide habitat for many animals including wading birds, ducks, alligators, turtles, water snakes, frogs and fish.

Most of these large wetlands have been impacted by the draining effects of ditching. Long-term management objectives include the restoration of historical water levels within these altered wetlands, to the extent feasible.

**Baygall.** In some areas, heavily wooded, linear wetlands extend out from lakes or marshes. These areas are dominated by hydrophytic hardwoods such as sweet bay, red bay, titi and red maple. In most cases, these areas hold deep standing water during the rainy season. Woody shrubs such large sweet gallberry, fetterbush, and wax myrtle make access into these areas difficult. Baygall wetlands at the park are generally fringed by large slash pines.

**Depression marsh.** Numerous depressions occur throughout the park, from less than 1 acre to several acres in size. The periphery of these smaller freshwater marshes usually have some combination of sand cord grass, sawgrass, myrtle-leaved holly, redroot, yellow-eyed grass, and St. John's wort. The interior of most of the depression marshes hold water throughout much of the year. Fragrant pond lily and lance-leaved arrowhead commonly occur here.

Depression marshes that have a seasonal dry period are important breeding grounds for a variety

of frogs and salamanders. Initial surveys for federally listed flatwoods salamanders were conducted during an extended drought period. Surveys conducted during normal rainfall years may yield results that are more positive.

Wet flatwoods. Wet flatwoods communities occur in relatively low areas at the park that tend to be inundated during periods of frequent rainfall. Some areas are vast, contiguous expanses, while others occur as smaller, wet pinelands in conjunction with mesic flatwoods. A large portion of this natural community has been converted to slash pine plantation. In these wet flatwoods plantation sites, understory live fuel loads consisting chiefly of gallberry, fetterbush, and in some areas titi and wax myrtle, are heavy. Some herbaceous plants such as wiregrass, yellow-eyed grass, deer tongue and marsh pinks are found here, although in many cases lie buried under the thick shrub layer. The frequent application of prescribed fire is important to initiating restoration measures for these areas.

Areas of flatwoods at the eastern end of the park have not been subjected to rowed planting, although most have been selectively thinned. This is most evident in the large stretch of wet flatwoods located north of Sand Pond, where large stumps explain the general absence of overstory slash pines. Understory plants in this portion of the park include beardgrass, wiregrass, yellow-eyed grass, deer tongue, sea lavender, Godfrey's blazing star, blue-eyed grass, sundews, redroot, bluestem and various sedges. Gallberry, fetterbush (*Lyonia lucida*) and wax myrtle are also common. This and other large wet flatwoods expanses are occasionally dotted with very small, linear ridges. These subtle ridges are generally distinguished by the presence of low sand live oak and rusty lyonia.

Long-term management objectives for all wet flatwoods areas include restoration towards a more natural, open pineland. Overstory pine density will be reduced through selective thinning, while routine prescribed burning will help re-establish more natural understory species proportions towards an increase in herbaceous plants.

**Flatwoods lake.** Flatwoods lakes at the park include Tucker Lake, Little Tucker Lake, Sand Pond, Mullet Pond, Jenny Pond and Double Pond. At roughly 175 acres, Tucker Lake is the largest water body, as well as one of the park's most prominent natural features. A well-defined, navigable channel has been dredged to connect the tidal waters of Chaires Creek with Tucker Lake. The dredged channel follows a low, otherwise poorly defined, natural drainage. This and a second poorly defined natural drainage located just northwest of Tucker Lake once provided infrequent connection to the brackish waters of Chaires Creek, most likely only occurring during major storm surge events. Anecdotal evidence gathered from long time local residents indicates that this was primarily a freshwater, saw grass rimmed lake that supported an excellent natural bass and bluegill fishery. The enhanced channel now brings regular tidal flush to the lake. Organic sedimentation is obvious, particularly in the northern shallows near the Chaires Creek connection. Other portions of the lake, particularly along the southwestern shoreline have a firm sandy bottom similar to the park's other well-defined flatwoods lakes. Today the lake is characteristic of an estuarine tidal area. The majority of the shoreline is rimmed with dense black needlerush, and marine species such as redfish, speckled sea trout and blue crabs are common.

Sand Pond is located in the eastern portion of the park and is surrounded by mesic and wet flatwoods. This is a shallow sand bottom pond fringed by sawgrass, sand cordgrass and rushes. Based on initial field observations, this lake appears to support a diverse assemblage of amphibians and fish, such as leopard frog, bronze frog, cricket frog, bullfrog, pig frog, green tree frog, pinewoods tree frog, squirrel tree frog, largemouth bass, bluegill, red breasted sunfish and mosquito fish.

Mullet Pond is located in the east central portion of the park. Several residents are located along the southern shoreline. A man-made outlet at the north side of the lake connects through the adjacent basin marsh, and into the Gulf of Mexico. Despite this continuity to the Gulf of Mexico, the lake appears to maintain freshwater characteristics. For instance, sawgrass, lance-leaved arrowhead and other low salt tolerant species are numerous along the shoreline.

Double Pond receives overflow from Sand pond via a 500 ft. long ditch. This lake is partially divided in two by a thin strip of emergent aquatic vegetation. The lake is surrounded by mesic flatwoods and marsh communities. Vegetation in and around double pond is similar to the other mentioned lakes.

As mentioned in the section entitled "Hydrology," all of the flatwoods lakes have been influenced by man-made channels or ditches. All of the named lakes in the eastern portion of the park have been connected via ditches and culverts that ultimately drain these wetlands into the Apalachee Bay.

**Marsh lake.** Several areas of open water within basin marsh communities are delineated as marsh lakes. The marsh lakes are smaller in comparison to the surrounding marsh community. Dominant vegetation within the marsh lakes includes fragrant pond lily and bladderwort. Additionally, these shallow, open water areas provide exceptional habitat for a variety of wading birds.

**Estuarine tidal marsh.** The vast estuarine tidal marsh community at Bald Point affords park visitors unique and beautiful vistas.

Those portions of the marsh subject to greater marine influence are dominated by salt tolerant plants such as black needlerush. Interior portions of the marsh contain a higher proportion of sand cordgrass. Sawgrass is found in far interior regions, rarely affected by tidal flow, where salinity is very low and the marsh begins to grade into the adjacent flatwoods communities.

The park's diverse estuarine wetlands include six well-delineated salt creeks along the shoreline of the Ochlockonee Bay. The largest of these, by far, is Chaires Creek with approximately seven miles of twisted branches. The Chaires Creek system is flanked by an expansive estuarine tidal marsh dominated by black needlerush. This and other tidal marsh communities provide essential habitat for marine organisms. They especially play a key role as nurseries for many species of pelagic and deep-water fish.

Tidal fluctuation is an important ecological factor in the marsh, cycling nutrients and allowing marine and estuarine fauna access to the marsh. This exchange helps make the park's tidal marshes biologically productive natural areas.

**Marine unconsolidated substrate.** The narrow beach and immediate shoreline comprise the marine unconsolidated substrate at the park. This community has experienced some degree of erosion over the years. This is evident by barnacle encrusted slash pine stumps lying partially submerged just off the beach.

The beach and intertidal zone at Bald Point provide nesting, resting and foraging habitat for a variety of resident and migratory shorebirds. A small number of loggerhead sea turtles nests along the beach in most years from spring to late summer. Green sea turtles have also been observed nesting at Bald Point, although the occurrence of this species is much more infrequent.

**Ruderal and developed.** Small ruderal areas include former dove fields and feed plots established by the prior hunting lease. Other small areas have had varied impacts from prior land use, however these areas will be managed in conjunction with the surrounding natural communities, and are therefore not delineated on the natural communities map. Likewise, the vast pine plantations will be managed as natural areas as well. The borrow pit located in the eastern central portion of the park has been restored by park staff.

Currently, developed areas at the park are limited to the small Bald Point, and Sunset Beach day use areas, the park shop compound, one staff residence, and the system of resource management roads.

#### **Designated Species**

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

Currently, 54 designated species of plants and animals have been recognized at Bald Point. Four bald eagle nests occur on, within (private out-parcel), or very near the park. One of these nests, located near the Ochlockonee Bay between Bald Point and the mouth of Chaires Creek, has been occupied by a nesting pair every year since State acquisition of the property. Each year, park staff has reported fledglings in this nest. Park staff has also reported an increase in immature eagles at the park during the fall and winter months, indicating that perhaps the young birds are returning seasonally. Additionally, a number of active osprey nests occur along the various wetland communities throughout the park.

In addition to bald eagles, wide varieties of migratory raptors frequent the park seasonally. Peregrine falcons arrive at the park every year in the fall as the first cold fronts pass through. The falcons prey on the neo-tropical migratory songbirds that pass through the park on annual migration. In addition to the Peregrines, kestrels and merlins are also observed each year. Other raptors, commonly observed at the park, include northern harriers, red-tailed hawks, redshouldered hawks, broad wing hawks and coopers hawks.

At least one black bear frequents the park. This animal has been photographed by a number of residents within the Mullet Pond residential area. Bear scat is also commonly found on the many resource management roads that span the park's interior indicating the possible presence of other bears.

American alligators are common within the flatwoods lakes and larger basin marsh wetlands. The largest alligator observed on the park by staff was located in Sand Pond. Alligators have also been observed in Jenny Pond, Double Pond, Western Mullet Pond, the large basin marshes near the shop, Chaires Creek and the Ochlockonee Bay.

A handful of gopher tortoises occur on the park. Suitable habitat for these animals is generally limited to the scrubby flatwoods areas. Lower seasonal water tables and slightly higher drier soils provide suitable areas for burrows. Currently, a small number of active burrows have been discovered.

Federally protected sea turtles utilize the park's beach for nesting during the spring and summer

months. In most years, only loggerheads are observed, however, green sea turtle nests have also been recorded along the beach from Bald Point to Lighthouse Point.

Four listed plant species are known to occur on the park. Godfrey's blazing star *Liatris provincialis* is similar to other common species of blazing star with the characteristic long pink flower stalks. The Godfrey's blazing star has been documented in certain scrubby flatwoods areas of the park. Large-leaved jointweed *Polygonella macrophylla* has been documented during a recent floral survey of the park. This showy fall blooming jointweed occurs on the high relict dunes near Bald Point Road. Two other listed plants found at the park are spoon-leaf sundew and bent-leaf goldenaster.

## **Special Natural Features**

The extensive salt marsh communities offer some of the most impressive natural vistas in the southeastern coastal plain. They also provide visitors with excellent wildlife viewing opportunities. These biologically rich and aesthetically beautiful estuarine systems are considered special natural features.

Extensive estuarine mollusk reefs occur within 400 feet of the shore. The reefs are considered a special natural feature. These living reefs are typically expansive concentrations of sessile mollusks occurring in intertidal and subtidal zones. They are comprised almost entirely of American oysters. The mollusk reefs are biologically productive areas that support a variety of other sessile and benthic invertebrates including sponges, anemones, mussels, clams and marine worms.

### **Cultural Resources**

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

The cultural resources at Bald Point State Park that have been identified and brought under management thus far are prehistoric and historic archaeological sites. As of October 2005, the park partially or entirely encompassed sixteen recorded archaeological sites (8FR4, 36, 38, 39, 40, 41, 42, 51, 826, 893, 894, 904, 905, 940, 941 and 942) and one isolated archaeological find. Nine of these sites were recorded before the park was established in 1999, the majority exposed by road and fire line construction around the perimeter of the privately owned point in the 1950s and 60s; the remainder were identified by state personnel during routine park operations and limited surveys precipitated by ground disturbing activity. Additional archaeological sites in the park have been observed but not recorded with the Florida Master Site File. Two more documented prehistoric archaeological sites (8FR5 and the Mystery Site) lie just outside park boundaries.

Archaeologists from the Division of Historic Resources (DHR) have conducted limited surface inspections and subsurface testing of known sites, proposed construction locations, and some high probability areas. Further testing is needed to identify the site boundaries, components,

integrity and significance of almost all recorded sites. Large portions of the park have yet to be surveyed for cultural resources, and it is unknown what type and with what frequency archaeological sites occur in these areas. Archaeological work to date has demonstrated, however, that the larger area contains highly significant sites, that park uplands possess the greatest potential for containing sites, that intact archaeological resources exist despite past disturbances, and that survey work is critical to recovering archaeological data essential for good resource management and park planning.

**Prehistoric Cultural Resources.** Bald Point State Park, which is located in the Florida Gulf Coast archaeological area, contains 11-recorded prehistoric sites, 4-recorded multi-component sites with prehistoric elements, and one documented prehistoric isolated find. These prehistoric archaeological resources include low and high density, small and large, intact and disturbed, and NRHP eligible and ineligible artifact scatters and shell middens. The majority of these sites are Weeden Island period, followed by Swift Creek and Deptford, and then Fort Walton and Norwood period. Larger scale site and aerial surveys are needed to better characterize individual sites, establish the relationship of these sites to each other and to the significant Tucker and Yent Mound sites, and answer contemporary research questions.

Archaeological evidence attests to Bald Point's rich prehistory, demonstrating thousands of years of continuous human occupation and the presence of a significant Hopewellian ceremonial site. The area has attracted amateur and professional archaeologists, as well as looters, for over a century. In the first half of the 20<sup>th</sup> century, Clarence Moore, Gordon Willey and William Sears excavated the Tucker and Yent Mound sites, which contained shell middens and burial mounds characteristic of Woodland and particularly Deptford period sites and which became the site type for the Yent complex. In the mid-20<sup>th</sup> century, Florida State University archaeologists Hale Smith and David Phelps continued to investigate the Tucker/Yent complex as well as record sites in recently disturbed areas, further illuminating site distribution and settlement patterns and providing cursory condition assessments. Archaeological surveys at the turn of the 20<sup>th</sup> century demonstrate that despite previous site disturbance caused by road and fire line construction, shell mining, residential development, silviculture, military training, looting and erosion, archaeological sites at Bald Point State Park still possess the potential to answer questions about prehistoric chronology, demography and cultural evolution.

**Historic Cultural Resources.** Historical activity in Bald Point is presently less well represented archaeologically. The park contains one recorded historic site, and four recorded multi-component sites with historic elements. Four of the five sites contain material evidence of the early – mid 20<sup>th</sup> century economic activities of turpentining, cattle ranching, and fishing. These types of sites have the potential to contribute to our understanding of traditional local industries, social relations and African-American heritage. As with the park's prehistoric resources, further assessment is needed to better characterize the known sites and locate the additional sites that likely exist though out the park.

#### **RESOURCE MANAGEMENT PROGRAM**

### **Special Management Considerations**

#### **Timber Management Analysis**

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan

was considered in context of the Division's statutory responsibilities, and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of early successional communities such as sand pine scrub and coastal strand.

The majority of the upland communities were converted to pine plantation sites by the previous landowner. All of the mesic and wet flatwoods plantations were planted with slash pine, which was probably the most prevalent naturally occurring species of pine before timber management. Nearly all of the mesic and wet plantation sites consist of young pine stands. Typical flatwoods understory plants such as gallberry, saw palmetto, fetterbush, wiregrass, and other herbaceous plants are abundant, however heavy fuel loading is a problem. Management measures for the mesic and wet flatwoods sites will focus on reducing understory fuel loads, and re-establishing a more natural density and size/age distribution among the remaining overstory pines. Currently the density of planted slash pines is believed to be much higher than what once occurred naturally. In effort to initiate restoration measures in these areas, some level of stand thinning prior to the application of prescribed fire shall be considered. Addendum 6 contains the timber management assessment for the park.

Large areas of scrubby flatwoods were also converted to pine plantation by the former landowner. Most of these areas were also planted with slash pine. However, it appears that longleaf was present, to some degree, in the overstory that naturally occurred prior to timber management. Based on observations of other scrubby flatwoods sites on the St. James Island, it appears that the natural overstory should be some mixture of slash and longleaf. Some level of slash pine thinning should be considered in these scrubby flatwoods plantation sites in order to open up sizable pockets for the reintroduction of longleaf. Additionally, some of the scrubby flatwoods sites have been planted in Choctawhatchee sand pine. These sites contain a large seed source for an aggressive colonizer that can alter natural overstory species proportions. The sand pine plantations should be removed by either fire or mechanical means.

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

Access into some portions of the park for the purpose of resource management, is a problem. The poorly drained soils of areas mapped as wet and mesic flatwoods are easily rutted and impacted by heavy equipment. If fire lines must traverse portions of these areas, then management measures should consider the construction of armored low water crossings, where appropriate.

An effective prescribed fire program at this large park will require inter-agency support from the Florida Division of Forestry. In particular, park, District and DOF staff need to discuss the feasibility of contracting aerial ignition. DOF assistance with holding support during larger ground ignition burns is also recommended.

There is a significant need at this park to maintain the various resource management roads and fire lines. The narrow roads are quickly overgrown by adjacent flatwoods vegetation that requires frequent bush hog mowing.

Certain scrubby flatwoods sites were converted to sand pine plantation. The sand pine plantations are a significant seed source for an aggressive colonizer that could alter the natural composition of overstory pines in the park's flatwoods. The sand pine plantations need to be removed.

No base-line water quality data occurs for any of the park's high quality freshwater lakes. Park

and district staffs need to request base-line analysis through the DEP. Ideally; this work needs to be conducted prior to any major land development within the immediate area surrounding the park.

The park has never been comprehensively surveyed for cultural resources, resulting in holes in our understanding of the history, prehistory and cultural resources of the park. The current distribution of recorded archaeological sites closely shadows past ground disturbances in more trafficked areas, and limited CARL forays into nearby, less developed areas of the park. Archaeological site occurrence is virtually unknown for unsurveyed areas, including most of the new addition, although suspected given the park's proximity to the Tucker/Yent sites, and the strong correlation between recorded cultural sites and certain ecological communities and soil types. The park needs an archaeological survey of areas with high site potential.

The park possesses limited information about the boundaries, components, integrity and significance of its recorded sites. It is not always clear how far adjacent sites extend on to park property, how large any site is, whether sites are intact or disturbed or redeposited, and what exactly is present at each site. This incomplete data can and occasionally does pose a challenge to site management and park planning. This data should be collected as necessary to perform adequate site management.

Future natural resource management activity has the potential to adversely impact archaeological sites. The recent land acquisition, with its remnant and overgrown pine plantations, requires extensive natural restoration work that may include prescribed burning and tree removal. The use of fire and heavy machinery, and the construction of fire lines, has the potential to disturb unrecorded, possibly significant above and below ground cultural resources. Intra-agency, multidisciplinary coordination and DHR compliance review of ground-disturbing activity is necessary.

Erosion poses a threat to disturbed and exposed sites, and sites located near the water or in heavy use areas. At the park, this includes sites exposed by fire lines or road construction, and located near the Gulf, bay or creeks. Looting and vandalism also present potential threats, evidenced by the heavy looting of the Yent Mound site.

Routine site monitoring which results in permanently retained documentation of changing site conditions over time is needed. The park has Florida Master Site File records that document site disturbances observed at the time the site was initially recorded, (for many, 40 to 50 years ago), upon which most site condition ratings are based versus recently identified threats and changing site conditions. Some mechanism is needed to integrate recent observations into permanent records and future plans.

Planned future park development will entail ground-disturbing activity in areas not yet surveyed for cultural resources, including areas possessing a high potential for containing archaeological sites. Intra-agency coordination and early DHR compliance review of future park improvement projects can help ensure that sensitive cultural resources are protected while parks are improved for public benefit.

Interpretation of the park's cultural resources can increase public knowledge of regional history and preservation issues. Continuation of the park's short and long-term cultural resource interpretive goals is needed.

## **Management Objectives**

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

- 1. Continue routine application of prescribed fire in established burn zones in the eastern portion of the park according to established fire return intervals identified in the Bald Point State Park Burn Plan.
- 2. Update the park's prescribed fire plan annually in coordination with the District 1 prescribed fire plan. Protocol for annual burn plan update is outlined in the park burn plan.
- 3. Identify potential low water crossing sites and delineate using GPS/GIS technology.
- 4. Improve vehicular access along fire lines where appropriate.
- 5. Maintain fire lines and other necessary resource management roads through frequent bush hog mowing.
- 6. Develop a plan for the removal of sand pine plantations. If mechanical means is determined to be the method of choice, develop a detailed scope of work for the project.
- 7. Request assistance from the DEP to conduct base-line water quality analysis in select lakes at the park.
- 8. Develop a basic restoration plan for surface hydrology as recommended under Management Measures for Natural Resources.
- **9.** Coordinate with the DOF to develop a plan that addresses required measures for aerial ignition of appropriate blocks, particularly on the Tucker Lake parcel.
- **10.** Conduct surveys to identify and prioritize restoration zones on the western two thirds of the property (Tucker Lake parcel) based on natural recovery potential.
- 11. Continue to remove any invasive exotic plants whenever discovered.
- **12.** Monitor listed species through surveys, use of GPS/GIS technology, and photo points as necessary.
- 13. Protect sensitive areas using signage and designated access points.
- 14. Contact the appropriate departments of the Florida State Universities to request a survey of the park's vertebrate species.
- **15.** Coordinate with the USFWS and the FFWCC to monitor active bald eagle nests and black bears.
- **16.** Conduct ground disturbing activity in accordance with division policy.
- 17. Minimize impacts to significant sites caused by ground disturbing activity associated with erosion, looting and vandalism, natural resource management activity, park improvements, and other forms of encroachment.
- **18.** Routinely monitor and document the condition of archaeological sites in the park.
- **19.** Survey recorded sites and unsurveyed areas as necessary to guide site management and future park development.
- **20.** Enhance interpretation of cultural resources in order to protect archaeological sites and increase public knowledge of local history and prehistory.

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

### <u>Hydrology</u>

Despite being influenced by connective ditches and in some cases channelization, the parks wetlands are natural in appearance and provide high quality habitat for aquatic species. Any

conceptual restoration of ditches must include detailed analysis of how any proposed restoration measures would change the current structure and function of the effected water bodies, particularly how restoration might impact current and/or proposed development within and adjacent to the park. A basic mapping survey of all major alterations to surface hydrology should precede any restoration plans. Elevations of wetlands and any adjacent/nearby development should be determined prior to implementing any intended restoration measure that would increase retention of surface water. A basic plan (largely GIS based) should be developed that delineates where water retention structures, such as ditch blocks, could feasibly be placed without posing a flooding threat to nearby development.

Most of the park's lakes and ponds have had only minimal disturbance, and remain high quality wetlands that support a rich freshwater fauna. With major residential development planned or imminent on lands adjacent to the park, base line water quality data for the park's major lakes is needed. Perhaps two or three of these water bodies should be selected and sampled as indicator lakes. This information will help establish a reference for water quality for the park's wetland resources. Park staff should request basic water quality testing/analysis (and biological integrity surveys) through the DEP Northwest Regulatory office, Water Resources Section.

Many of the slash pine plantation sites on the western two thirds of the property occur in poorly drained wet and mesic flatwoods. These hydric soils are easily disturbed by heavy equipment. Rutting can intercept and channelize water that would otherwise sheet flow through these areas. As specific restoration zones are identified and prioritized, management measures will be developed. If measures include selective timber removal, all work should be accomplished during dry periods to avoid impacts to soils and surface hydrology.

Black needle rush and other estuarine emergent aquatic vegetation serves to anchor soft organic sediments. Tidal marsh vegetation provides a highly effective, natural buffer against storms, helping to prevent shoreline erosion. Management measures that protect and enhance the estuarine systems should be encouraged.

#### **Prescribed Burning**

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

Evaluation of the existing fire type communities is a continual process updated annually in the park burn plan. The park plan is a component of the District 1 burn plan. Specific burn zone descriptions, management objectives and recommendations, smoke screening, GIS generated burn zone maps, burn zone prescriptions and burn zone histories can be referenced from the district plan. As prescribed burning continues at the park, community proportions may be adjusted.

Based on previous land use, the park property is divided into two areas regarding prescribed fire. Roughly, the eastern 1/3 of the park has flatwoods communities that have not been converted to pine plantations. Although some selective timber removal has occurred in a few areas, the pinelands in this portion of the park have a more natural overstory density, size/age distribution and overall appearance. Additionally, understory live fuel loads are generally lower. In contrast, all of the flatwoods areas in the western 2/3 of the park have been converted to pine plantations. For management purposes, these areas are classified as mesic and wet flatwoods plantation sites or scrubby flatwoods plantation sites. Understory live fuel loads are tremendously high in many of the mesic and wet flatwoods plantations. Access into these areas is impossible, and presents a serious safety hazard. Management measures for these blocks should consider aerial ignition and possibly mechanical fuels reduction if specific soil types are conducive to the use of heavy equipment. It should be noted that many of these sites occur in very low, poorly drained areas with sensitive soils.

Many of the scrubby flatwoods plantation sites can be effectively secured and burned via ground ignition. All initial fuel reduction burns in flatwoods plantation sites should be conducted in the winter.

Prescribed fire regimes on the eastern 1/3 of the park should include growing season burns to maximize top kill of aggressive understory hardwoods while encouraging wiregrass and other natural herbaceous components. Fires in basin marsh, during drought conditions, should be avoided to reduce the possibility of muck fire.

#### **Designated Species Protection**

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

Staff should continue to protect and monitor the active bald eagle nest during the nesting season. Aerial surveys of recorded eagle nests in Franklin and Wakulla Counties are conducted by the USFWS each fall. Surveys are generally conducted by staff from the St. Marks National Wildlife Refuge. Park staff should request survey information pertaining to the State Park. Any change in nesting status should be reported to the FFWCC.

Evidence of use of the park by black bears, including sightings, scat, and tracks, is currently being recorded by park staff. This information should be recorded via wildlife observation forms. District biological staff should be copied; however, these records should be maintained at the park. Park and District staff will work with the FFWCC to develop a program for monitoring bear usage and movements in the park.

Any black bear activity in or near recreation sites or residential areas should be closely monitored by park staff. The proposed development of overnight camping and cabin facilities, and future development for additional day use activities in the park have a potential to involve these animals in problem activities, such as raiding refuse containers, campsites and cabins. The Division will manage the park facilities and visitors to avoid teaching the bear population bad habits that can bring them into these conflicts. For example, bear-proof refuse containers will be installed at all park facilities where bear access problems may occur and other trash containers emptied daily. Division staff will consult with staff of the FFWCC in this effort, and park visitors will be educated through the registration procedure for overnight guests, and through interpretive materials and programs for the park's day user population, to help avoid negative effects from human uses of the park on the bear population. If bears begin to frequent neighboring residential areas, park staff should communicate, to neighbors, appropriate measures to avoid attracting bears. Points such as the accumulation of household garbage in outside areas, leaving pet food bowls on patios, storing animal feed in sheds, and low hanging bird feeders should be interpreted as potential bear attractants.

Continued use of the park by bears in the future will depend on maintaining a habitat corridor through adjacent private lands that connect to existing conservation lands to the west. The Division will collaborate in any future initiatives involving the St. Joe Company, DOF, FFWCC, USFS and Franklin County that address this issue.

Alligators occur within the park's various wetland natural communities. Appropriate interpretive signage may be necessary if trails or other recreational sites bring park visitors into or near alligator habitats. If a situation occurs in which alligators are being fed, clear and concise signage will be needed in order to communicate the problems associated with feeding. Signage should interpret the increased danger to park visitors caused when alligators lose there natural fear of man. Likewise, the fact that most fed alligators must be destroyed should also be communicated to the public.

Seasonal shorebird nesting habitat shall be monitored and appropriate measures shall be taken to ensure the protection and maintenance of the nesting habitat for these species. Management activities will include installation of appropriate signs to prohibit access, and use of other measures such as posts, high visibility string, tape, or line to prevent access to bird nesting areas before and throughout seasonal nesting activities, in accordance with the Division's Resource Management Procedures Numbers 3 and 13.

Shorebird species tend to congregate in certain locations and use them for resting. Resting areas shall be monitored to determine levels of disturbance. If major disturbances are occurring, similar actions may be taken to limit the disturbances. In addition to the above actions, park visitors will be informed about sensitive bird habitats through interpretative handouts and programs.

Finally, in order to operate an effective shorebird protection program, it is essential to control both feral and domestic cats and dogs in accordance with Division Resource Management Procedures Number 1 and DEP Program Directive 930. Local pet ordinances shall be enforced and educational programs with nearby neighbors should be implemented.

Seasonal monitoring will be conducted for nesting sea turtles following Department procedures. Surveys for gopher tortoise burrows should be undertaken in conjunction with prescribed fires.

Park and District staff should review the recently compiled floral inventory of the park, and identify those areas of the park where Godfrey's blazing star has been documented. These areas should be monitored, at least yearly. Efforts to maintain relatively open understory habitat conditions in these areas should be a management priority.

### **Exotic Species Control**

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

A few scattered Mimosa trees have been discovered and removed from the park. Park lands immediately adjacent to the Mullet Pond residential area should be periodically monitored for exotic plants. Any assistance with plant identification, removal techniques, use of herbicide, equipment or additional staff support should be requested from the District biological section.

Coyotes are opportunistic scavengers that have been known to decimate sea turtle nests in pursuit of eggs. This could pose a serious problem if local animals on the St. James Island acquire this learned behavior. The beach should be routinely monitored during the nesting season. Any signs of nest depredation by coyotes should be reported to the District biological section so that USDA contracted trappers can be notified and directed to remove the non-indigenous predators.

#### **Problem Species**

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

At times, dog flies and deer flies can be a nuisance at the park. These biting flies are thickest near the beach and estuarine tidal marsh. Venomous snakes such as pygmy rattlesnakes and cottonmouth are common and can be encountered by hikers. Information on the park's venomous snakes could be interpreted through the park brochure. Other problem species, which may be encountered at Bald Point, are alligators, stingrays and jellyfish.

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

The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. Approval from Department of State, Division of Historical Resources (DHR) must be obtained before taking any actions, such as development or site improvements that could affect or disturb the cultural resources on state lands (see DHR Cultural Management Statement).

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

**Archaeological Site Management.** The park should manage archaeological sites in situ, meaning that artifacts, features, stratigraphy and landscape elements should be preserved and protected in place. The primary goal of archaeological site management is to preserve stable site integrity and provenience in a stable condition. This can best be accomplished through a program of routine monitoring and cyclical maintenance, coupled with protective measures and site stabilization as needed.

Park staff should monitor all of the park's archaeological sites on a regular basis in order to evaluate and document the condition of the site, identify actual and potential threats, adjust management activity, or develop treatment plans. Ideally, Bald Point State Park will develop a written cultural resource management plan that specifies in detail what routine maintenance and monitoring tasks are needed and how frequently they should be performed. All cultural resource management plans and actions should be documented and retained in permanent files.

Site monitoring shall consist of regular site visits, accompanied by written narrative and photographic documentation of the condition of the site. The frequency of monitoring visits will depend on the significance of the site, and the number and type of threats and potential extent of

their effect. Ideally, Bald Point State Park will compile a detailed, up-to-date description and recurrent condition assessments of each cultural resource for use as a baseline when evaluating the rapidity and seriousness of site deterioration. Plans shall be developed as needed to protect, stabilize and interpret archaeological sites. Manage earthen structures according to BNCR's guidelines *Managing Earthen Structures*.

Vandalism should be discouraged using interpretive signage that includes warnings against collecting artifacts in both terrestrial and aquatic environments. This signage should be placed at access points or areas of high visitor concentration rather than at sites themselves. Informal collections of archeological material shall be transferred to the Bureau of Archaeological Research, DHR.

**Cultural Resource Assessments.** Because state parks are charged with the protection of archaeological sites, archaeological surveys are conducted primarily to assess actual or potential damage to a site. These surveys, often triggered by DHR Compliance Review, tend to involve limited testing in limited areas in order to determine the presence, integrity and identity of a site, although can be more intensive data recovery projects if site disturbance is unavoidable. In coordination with DHR Compliance Review, the park shall determine what scope of archaeological survey is needed to avoid and mitigate adverse impacts to archaeological sites prior to natural resource management, park improvement, and other activities that involve ground-disturbing activity. In particular, planned activity has the potential to impact several recorded sites, as well as unrecorded sites in areas not yet surveyed.

Archaeological surveys can further augment park planning and management activity, and increase our understanding of Bald Point's history and the significance of its sites, by recording sites in unsurveyed areas and further investigating recorded sites. Surveys driven by research and significance questions should be founded on compelling, well-developed project designs that are permitted by DHR, and coordinated with and approved by the Bureau of Natural and Cultural Resources and park and district staff.

**Natural Resource Management.** Archaeological and historical site locations often strongly correlate with particular ecological communities and soil types, and this has proven true at Bald Point. These archaeologically sensitive natural areas, however, have been disrupted by pine plantation and land clearing activity prior to the establishment of the park, precipitating the need for substantial natural resource restoration work and on-going maintenance. In this instance, cultural and natural resource management overlap and can be conducted in concert. Natural resource management activities with the potential to adversely impact archaeological sites, including the use of heavy equipment, mechanical tree removal, fire line construction, and prescribed burning, shall be preceded by DHR compliance review and needed archaeological assessments.

**Park Planning and Development.** Archaeological and historical site locations also often correlate with areas that still to this day are suitable and preferred habitation and use areas. Because of the likelihood that development in certain areas will encounter recorded and unrecorded cultural resources, consideration of a project's potential adverse impacts must be considered during a project's planning phase prior to ground disturbing area. Archaeological analysis to date, particularly recently conducted CARL surveys, has identified archaeologically sensitive areas based on ecological factors and proximity to other recorded sites, and generated a number of recommendations to guide future activity. The park and project planners shall coordinate with DHR and BNCR to develop plans that minimize impacts to cultural resources
while providing the facilities necessary to provide public access, and maintain operational efficiency and public safety.

## **Research Needs**

### Natural Resources

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

- 1. Staff should contact the appropriate departments of the Florida State Universities to request a vertebrate survey of the park.
- 2. Advise the staff of the Bureau of Entomology, Nematology and Plant Pathology (DACS) of the need to compile a list of macro-invertebrates for the park. Note that a research/collection permit is required.
- **3.** Staff should contact the DEP Northwest Regulatory office Wetland Resources section to request water quality analysis of the park's larger flatwoods lakes.
- 4. Additional research regarding the extent of original longleaf pine habitat, prior to silvicultural management, would be helpful in developing restoration measures for the western two thirds of the property.
- 5. A basic GIS supported plan needs to be developed to identify alterations to hydrology and identify feasible restoration measures.

### **Cultural Resources**

Bald Point has a rich history that archeological and historical research will continue to illuminate. Archaeological investigations of the area over the past century have provided important base-line information on the area's prehistory and archaeological resources. Park staff and CARL archaeologists have been integral to site recording and survey in the park. As recommended a by DHR Compliance Review, future archaeological work is needed before significant ground disturbing activities and to locate unrecorded sites, particularly in the new addition.

Any field activity designed to recover archaeological data and material on park property requires a 1A-32 permit issued by the Bureau of Archeological Research, Division of Historic Resources, as well as approval by the Bureau of Natural and Cultural Resources, Division of Recreation and Parks.

Park staff should continue to receive and record verbal histories of the property from reputable long time local area residents. Graduate level archaeological and historical research might be elicited from local and other state universities.

#### **Resource Management Schedule**

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

### Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine

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

Bald Point State Park has not been subject to a land management review.

# LAND USE COMPONENT

## **INTRODUCTION**

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

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

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

### **POPULATION AND VISITOR USE**

The park is situated at the western edge of the Big Bend coastline of the Florida panhandle in one of the least densely populated coastal regions of the state. Referred to as "the forgotten coast," the rural/agricultural land use pattern of this area is slowly changing and becoming increasingly popular for residential development. However, pine plantations are still the dominant land use in the area and approximately forty percent of St. James Island is in public ownership. The combined population of Wakulla, Franklin and Leon Counties is over 290,000, which is an increase of 35 percent since 1990 (BEBR, 2004). While Leon County accounts for the vast majority of this population, Wakulla County's growth rate has significantly outpaced its northern neighbor. As of 2000, nearly 350,000 people resided within 50 miles of the park, which includes the region's largest incorporated area of Tallahassee. The communities of Sopchoppy, Panacea, Alligator Point, St. Teresa, Lanark Village and Carrabelle are located nearby. Population projections estimate that over 370,000 people will live in this three county region by 2020. Anticipated future land use changes (discussed below) will serve to bring more people into the vicinity of the park, which in turn is expected to lead to increased visitation.

It was estimated that roughly 38,000 people visited the park in fiscal year 2004/05. As expected, more people are discovering the park over time and new or improved facilities have served to draw more visitors. Visitation peaks in the spring and fall with winter months experiencing the lowest number of visits. Peak visitation coincides with the best times to see migratory birds.

### **EXTERNAL CONDITIONS**

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various

planning issues such as location, regional demographics, adjacent land uses and park interaction with other facilities.

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

Single-family residences are scattered along the east and southern boundary of the park. Two small subdivisions, Sun and Sand and Southern Dunes, abut the park. Several privately owned outparcels are located in the east-central part of the park, one of which supports a residence. Pine plantations occur on St. Joe Development Company land between the western boundary and U.S. Highway 98. County Road 370 cuts through a portion of the park and runs along the west, south and east boundaries. These land use patterns present some challenges to recreational development, resource management and park operations and may affect the siting and design of park facilities.

Alligator Point, located just to the southwest, contains several hundred homes and limited commercial development, including a marina. A KOA campground closed recently and is to be replaced by a residential development. The community has faced problems securing a reliable potable water supply and now faces mandatory water restrictions.

Limited commercial development occurs at the U.S. Highway 98 bridge on the north side of Ochlocknee Bay. Additional residential development is scattered along the coastline toward Ochlocknee Point and Mashes Sands County Park. The town of Panacea is located just to the north in Wakulla County.

All of Bald Point State Park, and a significant portion of surrounding area, lies within the Coastal High Hazard Area (CHHA), which is defined as the evacuation zone for a Category 1 Hurricane. In addition, the northeastern tip of the peninsula lies within the jurisdiction of the Coastal Barrier Resources Act (COBRA), a designation that limits federal support for development or post-storm redevelopment. The location within an area vulnerable to storm impacts limits the density and types of land uses around the park per policies of the Franklin County Comprehensive Plan.

Area waters are popular with boaters and water access is provided at unimproved public boat ramps on Ochlocknee Bay and Alligator Harbor. Conditions at some of these facilities limit the size of boat that can practically be launched.

Bald Point State Park is part of a regional network of conservation lands that provide a variety of resource-based recreation opportunities. Significant locations nearby include the St. Marks National Wildlife Refuge, Apalachicola National Forest, Tate's Hell State Forest, Ochlocknee River State Park, Mashes Sands County Park and the Jeff Lewis Wilderness Preserve (Dog Island). Nearly every outdoor recreational user is represented on these lands with opportunities for hiking, bike riding, horseback riding, swimming, fishing, hunting, boating, camping, picnicking and nature observation.

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

Franklin County has recently completed several processes aimed at planning for the long-term growth and development of the area. The County recently updated its comprehensive plan and participated in a visioning process focused on St. Joe Land Development Co. holdings on St. James Island. Future land use designations on adjacent lands include Residential (1 density unit/acre), Agricultural (1-density unit/40 acres) and Commercial (0.5 maximum floor-to-area ratio) (Franklin County, 2005). Residential lands include the remaining outparcels and lots along the bay shoreline. Commercial parcels are located off County Road 370 and near

Lighthouse Point. Agricultural lands stretch west from the park boundary to U.S. Highway 98.

A St. James Island overlay plan was created for St. Joe lands as part of the visioning process (St. Joe Land Development Co., 2004). The overlay creates a conceptual vision for private lands of St. James Island and identifies areas for future residential and commercial development. Of note are commercial areas proposed for Granite Point, which would include a marina, and Metcalf Point (adjacent to the U.S. Highway 98 bridge) and a low impact residential area adjacent to the park and Alligator Harbor south of County Road 370. It is clear from the overlay plan that these lands will eventually be converted from pine plantation to uses that are more intensive. St. Joe has also expressed interest in making a greenway/trail connection to the park. Development (use of prescribed fire), park operations (access issues, boundary encroachments) and the visitor experience (traffic, noise and light pollution). Proposed land use changes should be monitored for potential incompatibility with the park.

An 11.7-mile bike trail from Mashes Sand to U.S. Highway 319 (Buckhorn) along County Road 372 has been funded in DOT's work program. Design funds became available in 2004 and 2005, with construction following in 2006 and 2008. This trail is a component of a larger coastal trail planning effort that includes the old G, F and A Railroad line that stretches from Tallahassee to Carrabelle.

## **PROPERTY ANALYSIS**

Effective planning requires a thorough understanding of a park's resources and the uses that have shaped it over time. This section describes legal encumbrances or conditions, historic uses, existing uses, and resource characteristics that present opportunities and constraints to recreational development.

#### **Recreation Resource Elements**

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

### Land Area

The park contains thirteen distinct natural communities. Mesic flatwoods dominate the landscape, followed in scale by scrubby flatwoods, estuarine tidal marsh and wet flatwoods. Many of the natural communities of the park are characteristically wet and may have standing water either seasonally or year round. Nearly 30 percent of the park is comprised of wetlands. While the wet nature of the landscape presents challenges to facility development, it affords many opportunities for wildlife observation and aesthetic enjoyment.

### Water Area

The park landscape is dotted with numerous flatwoods lakes. These water bodies are quite scenic and provide hiking, picnicking, fishing, canoeing/kayaking and wildlife observation opportunities. However, surrounding wet flatwoods and basin swamps limits the suitability of many lakes for public access other than by foot during dry periods. Tucker Lake is by far the park's largest flatwoods lake at approximately 175 acres and is connected to Ochlocknee Bay via Chaires Creek. This system is shallow, tidally influenced and ideally suited for canoeing and kayaking. The west side of Tucker Lake is most suited for providing public access. Franklin County has passed two ordinances that regulate use of personal watercraft and

airboats in waters of the county. These ordinances will be enforced within park waters.

### <u>Shoreline</u>

The park protects over five miles of shoreline on Ochlocknee Bay, Apalachee Bay and Alligator Harbor. The largest concentration of beach dune community is located along the northeastern shoreline of the park. This area also contains a fine example of maritime hammock between Bald Point Road and the beach dune community. The rest of the shoreline on Apalachee Bay is relatively narrow but quite suitable for fishing, birding, picnicking and beachcombing activities. Approximately one mile of shoreline extending north from Lighthouse Point has been designated as critically eroding by the DEP Bureau of Beaches and Coastal Systems. The shore along Ochlocknee Bay and Alligator Harbor is quite shallow and ringed by wetland vegetation that limits opportunities for recreational access. The shallow nature of the coastal waters, poor visibility and presence of oyster bars makes this area unsuitable for near-shore motorized vessel uses and less than ideal for swimming.

The Florida Department of Health (DOH) has two beach water sampling stations near the park that measure bacterial levels. One is located at Mashes Sands County Park and another near Alligator Point. Data collected since August 2000 reveals that health advisories are frequently issued due to elevated bacterial levels. The DOH is investigating bacterial sources and is expected to have results of the study in fall 2005. Canoes and kayaks can easily ply the bay waters and the park is a designated stop on the Florida Circumnavigational Saltwater Paddling Trail, a project of the DEP Office of Greenways and Trails.

### Natural Scenery

The location of the park at a peninsular tip provides panoramic views over the tidal marsh, the dark waters of Ochlocknee and Apalachee Bay. As the maritime hammock grades into the beach dune community, isolated oaks and pines provide an interesting contrast to the white sand and open water. Tidal marshes concentrated in the northern third of the park offer unobstructed views over a flat terrain of needlerush and sawgrass. Towards the interior, abundant small lakes and marsh communities scattered among the flatwoods provide excellent scenic vistas, opportunities for solitude and wildlife viewing opportunities. Past land use practices have degraded the scenic quality of the extensive flatwoods communities at the park. Aesthetics will improve as restoration progresses and these areas will eventually become more appealing for recreational use.

### <u>Significant Wildlife Habitat</u>

Significant wildlife habitat exists throughout the park. Biologically productive wetlands, ample roosting spots and sources of freshwater support a healthy wildlife population. These habitat elements draw neo-tropical migrating bird species on their journey southward during the fall migration period. From early September through October, varieties of raptors pass through the area, including Cooper's hawks, kestrels, merlins, northern harriers and peregrine falcons. The park's maritime hammock and stands of pine trees provide important roosting habitat for these migrants and serve as popular birding locations. The remaining tall pines make prime nesting spots as evidenced by their periodic use as nesting locations for bald eagles. These conditions are ideal for birding and the park is a designated stop on the Great Florida Birding Trail. The estuarine tidal marsh serves as a spawning, nursery and feeding ground for a diverse array of marine and estuarine species, from the tiniest of invertebrates to a variety of shorebirds. Bay waters are popular with anglers looking for trout, redfish and other game species. In turn, the marsh attracts abundant birdlife, including ducks, wading birds, songbirds and raptors--the latter often visible searching for prey. Wildlife has access to a constant supply of essential freshwater in the numerous lakes and marshes on the central and

southern interior of the property. Finally, the foredune area along the shoreline provides habitat for nesting sea turtles and resting and foraging shorebirds. All these elements combine to produce a setting conducive to excellent wildlife watching opportunities.

# Natural Features

The waters of Ochlocknee and Apalachee Bay are considered outstanding natural features. The position of Bald Point State Park at the mouth of the Ochlocknee River creates estuarine conditions that support extensive oyster reefs, tidal marshes and a very abundant, diverse natural system popular for fishing and boating. The park's tidal creeks and flatwoods lakes also make a significant contribution to the diversity of the park. Of particular note is the Chaires Creek/Tucker Lake system that allows exploration of the park interior by water.

# Archaeological and Historical Features

Humans settled the Ochlocknee Bay area thousands of years before Europeans, as evidenced by an abundance of archaeological sites along its shores. Shell middens and ceremonial mounds dot the shoreline of the Bay. In the late 19<sup>th</sup> and early 20<sup>th</sup> century, seine yards were established on these coastal waters, one of which was located near Bald Point. Numerous archaeological sites have been located at the park and it is suspected that many more exist but have to be documented. The presence of significant cultural resources requires care in the siting and development of park facilities. These cultural components of the Bald Point State Park landscape should be featured in interpretative programming at the park.

### Assessment of Use

The Base Map reflects legal boundaries, significant natural features, structures, facilities, roads and trails existing in the park. Specific uses made of the unit are briefly described in the following sections.

# Past Uses

Park lands have been shaped in varying degrees by turpentine operations, logging, wildfire, hunting, fishing, military exercises and preparation for residential development. In the early 1900s, pitch was harvested from pines to make turpentine. Many "cat-faced" pines are still visible at the park. Inland and nearshore waters have supported commercial fishing for mullet and blue crab. In the 1920s and 30s Sunday Reel was a popular spot for using seine nets to catch black mullet. During World War II, soldiers from Camp Gordon Johnson near Carrabelle practiced beach assaults here. Sometime between 1953 and 1969, a canal was dredged to provide a permanent connection between Chaires Creek and Tucker Lake. Prior to the canal being constructed the lake would only have received input from the creek system at extreme high tide events. More recently, the land was managed intensively for pulpwood production. Large areas were cleared prior to state ownership and many acres of densely planted pines remain at the park. Management as a pine plantation has degraded the visual quality of the landscape, which will be remedied over time as restoration progresses. The land was traditionally hunted for deer, turkey and dove, with small areas cleared to encourage game production. A network of unimproved and stabilized roads was constructed in the past that serve as a basis for a system of park roads, trails and fire breaks. A wildfire in April 2004 burned over 200 acres with heavy fuel loads south of Tucker Lake that was subsequently cleared in a salvage cut.

# Land Administration Issues

The Alligator Point Water Resources District currently maintains a lease on a portion of park land south of County Road 370 for the purposes of potable water production (see Base and Reference Maps). Five wells are located on this property. Use of three of the five wells has









BASE MAP

been discontinued due to water quality degradation and the District has expressed interest in expanding into other areas of the park.

### **Comprehensive Plan and Zoning Designations**

Existing future land use designations for the park include Rural Residential, Residential, Commercial and Agricultural (Franklin County, 2005). Park lands are zoned Single Family Residential, Rural Residential, Commercial Business and Forestry Agriculture. Recreation related future land use and zoning designations are available in the Franklin County land development regulations. Compatibility with existing designations will be reviewed with Franklin County to ensure the ability to continue providing a range of resource-based recreation opportunities at the park.

### **Current Recreation Activities and Visitor Programs**

Park visitors currently participate in a variety of recreation activities at the park. The park's bay shoreline is a primary draw for visitors and supports a variety of recreation activities. Shoreline fishing is very popular, as are picnicking, swimming and sunbathing on the beach. Park and adjacent waters attract motorized boats, canoes and kayaks. Wildlife observation, particularly birding, is a popular activity of visitors. Park trails are used by hikers and to lesser extent bicyclists. Existing patterns of use are not having significant impacts to park resources. Designated, controlled access points along the shoreline protect the beach dune community. Access into the interior is provided on existing unimproved roads and pathways. Use will continue to be monitored and management measures implemented when necessary to mitigate impacts.

The current suite of recreation opportunities is not fulfilling the recreation potential of the park, particularly given the expanded land base now available. Recreation opportunities could be enhanced and diversified by providing additional shoreline access, facilitating access to inland water bodies, allowing camping and improving the park's trail system.

Interpretation explains and promotes the Florida Park Service (FPS) mission. It also instills in visitors an appreciation for Florida's unique natural and cultural heritage and fosters an understanding of resource management practices. It helps visitors understand and appreciate these special resources and how they are affected by and influence the surrounding area and region. Most importantly, interpretation inspires visitors to continue the learning process and to put their interests into action through volunteering and supporting the park.

Currently, park interpretive programs are provided upon request and include staff and volunteer interpretive talks and tours. Programs have been developed and delivered on a variety of topics such as birds, natural communities and sea turtles. Brochures on park birds and natural communities have been developed and static displays provided at the marsh boardwalk and Bald Point.

There remain opportunities to enhance interpretive programming at the park. It is recommended that a Statement for Interpretation be developed that identify the significant resources and important management concerns to be interpreted at the park. A Statement for Interpretation establishes basic interpretive priorities that will guide the long-range programming efforts at the park, so that programs, exhibits and publications can be effective in meeting the Florida Park Service's mission. The Statement is designed to assist in providing high quality, appropriate programming. It should be consulted in the planning stages of any new program, exhibit or publication.

Volunteers will continue to play an important role in programming to supplement available staff resources. While resource intensive facilities, such as a visitor or education center, are not recommended for the park at this time, opportunities to collaborate with existing educational institutions such as the Florida State University Marine Lab and Franklin County schools should be explored to expand interpretation and provide hands-on field based learning. In addition, a combination of interpretive signage at select locations with the development of interpretive handouts is also recommended to enhance interpretation.

#### **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 Bald Point State Park the beach dune, maritime hammock, scrub, basin marsh, basin swamp, baygall, depression marsh and estuarine tidal marsh have been designated as protected zones. Known cultural sites are also included in the protected zone coverage. In addition, appropriate exclusion zones based on federal management guidelines will be maintained around eagle nests adjacent to or within the park boundaries. Wherever possible, facilities requiring extensive land alteration or resulting in intensive resource use have been proposed within the footprint of existing developed or ruderal areas or within the parks' disturbed flatwoods communities.

### **Existing Facilities**

Recreational facilities are provided at three areas situated along County Road 370 (Bald Point Road) and the bay shoreline. The North Point Beach Access includes paved parking, portable toilet, vehicle turnaround and loading zone, fishing pier, canoe/kayak launch, picnic shelters and tables, and universally accessible marsh overlook are located at the northernmost end of the road. Paved parking, universally accessible walkways, restroom, picnic shelters and beach boardwalk are also provided approximately 2,200 feet to the south at the Maritime Beach Access. A self-service fee station is located just inside the stone entrance gate. Sunrise Beach Access is further south and provides stabilized parking, portable toilet, picnic shelters and a beach boardwalk. Over 18 miles of trails are available for hiking and biking.

The park shop and maintenance area is located south of Sunrise Beach and west of County Road 370. A ranger residence, pole barns, office/storage buildings and volunteer host sites have been constructed in this area.

Parking along the bay shoreline is limited in light of the beach's popularity as a primary destination for visitors. Restroom facilities are inadequate and water lacking at public access areas. Shop facilities do not include sufficient administrative space, housing for staff and a means to store equipment securely and protect it from the salt air.

The following is a comprehensive listing of recreation and support facilities at the park:

#### North Point Beach Access

Paved parking (21 standard, 1 oversize space) Paved cul-de-sac and loading zone Marsh boardwalk and overlook

#### **Maritime Beach Access**

Paved parking (32 standard, 4 oversized spaces) Restroom Small picnic shelters (2) Fishing pier Canoe/kayak launch Interpretive sign

Universally accessible walkway Small picnic shelters (2) Beach boardwalk

Self-service fee collection station

#### Sunrise Beach Access

Stabilized parking (up to 40 vehicles) Small picnic shelter

Shop and Maintenance Area

Staff residence Pole barns (2)

#### **CONCEPTUAL LAND USE PLAN**

Beach boardwalk

Storage buildings (4) Volunteer host sites (2)

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

### **Site Planning and Design Process**

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

Bald Point State Park contains listed species, important habitats and cultural sites that should be given careful attention during the site design and construction process. The following



discussion identifies several resource issues that may affect park development. Biological and/or archaeological surveys may be necessary prior to construction of facilities and proposed locations and project designs may be reevaluated based on information collected.

The park contains a narrow strip of maritime hammock along the beach shoreline that is important habitat for Neotropical migrants. Proposed parking, access and support facilities will be designed to minimize impacts to this community.

A number of cultural sites are located at the park, some of which occur near proposed development. Consultation with the DHR and the Division's Bureau of Natural and Cultural Resources will help mitigate impacts in these areas. The Division will be conducting an archaeological survey of the proposed corridor for the park drive prior to initiating construction to address management concerns related to known cultural resources in the vicinity.

The park's scrubby flatwoods are home to listed plant species, particularly Godfrey's blazing star and Gophers tortoises are known to occur near the Sunrise Beach Access. Appropriate biological staff should be consulted to identify the locations of listed species in these areas during the design phase of a project.

Water supply is a critical issue in the Alligator Point area. Water restrictions are in effect and are likely to continue until a regional supply is developed. Park development will consider a variety of water conserving measures in the design and development of facilities to minimize the contribution visitors make to the local demand for water. Options that will be considered include composting systems, water reuse, water conserving and waterless fixtures, shared facilities and phasing of development. The park will consider developing its own water supply system if local sources are not available.

Parking is limited along the beach shoreline due to the presence of wetlands and other sensitive resources. Bicycle and pedestrian facilities will be incorporated into the design of parking areas, roads and public use areas to increase safety and encourage non-vehicular travel within the park. Clear signage will be provided to warn visitors about the limited space for operating and turning large recreational vehicles. Proposed parking areas should allow for a number of oversized spaces to accommodate the occasional RV.

Black bears have been documented at the park. As discussed in the Resource Management Component, measures will be adopted to avoid human-bear encounters through education and waste management practices.

To address concerns about potential road impacts to wildlife, the Division will incorporate traffic-calming elements into the design of the park drive, wherever feasible. This may include but not be limited to establishing limited sight lines, incorporating curves into the road layout, constructing speed humps and providing wildlife crossing signs.

Hydrological impacts from the proposed construction of a park road are a concern at the park. The proposed road corridor was selected in large part to avoid the wettest areas to minimize disrupting hydrology. The final road design will avoid wetland impacts where possible. Best management practices will be used in the design and construction of the road to minimize additional hydrological impacts.

### **Proposed Land Use and Facilities**

Bald Point State Park has the potential to be a premier regional resource-based recreation

destination. The park is popular with birding enthusiasts, fisher people, paddlers and sunbathers. Existing recreational activities are considered appropriate and should be maintained at the park. However, expansion of the park boundary during the last planning cycle provides opportunities to enhance these activities and provide new ones. The conceptual land use plan proposes a central park access and circulation system, facilitates the use of inland waters for paddling, fishing and picnicking, improves the trail system, accommodates equestrian users and recommends facilities to accommodate a variety of options for extended stays at the park. The proposed facilities will allow opportunities to enjoy the park while protecting the integrity of sensitive resources and habitats and allowing the recovery of areas degraded from past land use practices.

#### **Proposed Recreation Areas and Facilities**

**North Point Beach Access.** The portable restroom is recommended to be replaced with a more permanent facility. The limited amount of suitable uplands and adjacent maritime hammock constrain options for constructing a restroom in this area. The facility should be sited adjacent to the existing road corridor within ruderal or developed areas and may require the removal of existing parking spaces. If a portion of the parking area is sacrificed to accommodate a restroom, additional parking spaces should be provided to maintain existing capacity. The existing beach access route is also recommended for improvement to provide a stable, universally accessible surface that extends closer to the shoreline. Finally, the radius of the existing cul-de-sac turnaround is insufficient for larger vehicles and is proposed to be widened slightly to avoid vehicles leaving the pavement and getting stuck in the soft sand.

Maritime Beach Access. The alignment of the proposed park road (see Proposed Support Areas and Facilities) provides an opportunity to improve vehicular circulation and address future parking needs in this area. Existing circulation patterns are confusing and pose a potential public safety hazard. When constructed, the new park road will connect to this area near the existing parking lot. The existing road corridor extending south from this point towards the park gate is recommended to be used for future parking. The existing gate would be closed to vehicular traffic and primary access to the park shifted to the south off County Road 370. The existing parking area should be redesigned so that there is separation from through traffic headed to the North Point Beach Access and capacity expanded to provide 90 spaces. The project design should consider the most efficient use of the road corridor to minimize walking distances to the existing beach access point and provide parking and sufficient turning radius for large vehicles. Signage will be provided that directs larger recreational vehicles to park in this area to avoid congestion to the north. It may be necessary in the future to develop an additional beach access to spread use along the shoreline from the redeveloped/expanded parking area. Picnicking facilities are also recommended to be expanded by providing at least one additional shelter that would be connected to the existing universally accessible walkways.

**Sunrise Beach Access.** It is recommended that all parking be moved to the west side of County Road 370 at the Sunrise Beach Use Area. Visitors currently look for parking on the bay side first and are forced to back up into oncoming traffic when the few spaces in this area are occupied. An appropriate number of handicap spaces should be provided as near the beach access as is possible. It is recommended that the parking capacity of this area not exceed 45 vehicles. The installation of parking stops should be considered to provide the most efficient use and management of the existing limerock parking area. The Division will work with Franklin County to provide pedestrian crossing signs and pavement markings at this location to improve safety. The existing beach access route is also recommended to be upgraded to provide a stable, universally accessible surface that extends to the shoreline. An honor box fee collection station is proposed to collect fees for use of this area. If future use patterns determine that a permanent

restroom is warranted at this location, then such facility should be sited on the west side of the road near the parking area.

**Camping and Cabins.** A family campground and cabins are proposed along a tidal branch of Chaires Creek that will provide scenic vistas over open water and adjacent tidal marshes. Two alternative locations have been identified both of which are formerly scrubby and mesic flatwoods communities that are now comprised of planted pines. Additional site analysis is needed to determine the best location, which will occur during the project planning and design phase. A 30-site family camping area and six cabins are recommended with a central canoe/kayak launch and fishing platform that will provide access to Chaires Creek. The latter facility will require an elevated boardwalk through shoreline marsh to access open water. The layout of facilities should provide as much separation between campsites and cabins as is feasible, take advantage of the available vista and strive to maintain a trail connection north to Sunday Real for day visitors and the proposed primitive campsite on Chaires Creek.

A primitive group camp is proposed on the north-northwest side of Little Tucker Lake. Facilities will include a restroom with outside showers, campfire circle, covered shelter and a fishing platform to facilitate camper access to the lake.

Two backcountry primitive campsites are proposed with access to Chaires Creek. Both locations allow for landing canoes/kayaks and are proposed to be included on the Florida Circumnavigational Saltwater Paddling Trail. Proposed locations are also accessible from the land and at least one site is recommended to be made available for primitive equestrian camping. No facilities other than fire rings and possibly a hand pump for watering horses are proposed for either location. Campers will be encouraged to follow Leave No Trace Principles to minimize their impacts to the environment and other users.

**Picnicking and Water Access.** A day use area is proposed for the southwest side of Tucker Lake. The site is located within former scrubby flatwoods, that have been planted with pines and includes a stand of tall pines along the shoreline that provides a scenic spot for picnicking. The site will also serve as a primary trailhead for access to the park's trail system. A mix of picnic shelters, and scattered tables and grills are recommended, with one large pavilion that would support group use. A small boat launch is proposed suitable for canoes/kayaks and small boats. It is recommended that vessels be restricted to motors of 10 hp or less or electric trolling motors. A fishing pier is also recommended to enhance access to the lake. A restroom and main parking area for up to 50 vehicles is proposed to serve visitors in this area. It is also recommended that an equestrian trailhead be established in the vicinity that can accommodate up to 15 horse trailer rigs.

A small day use area is proposed within the adjacent mesic flatwoods on the east side of Sand Pond. The existing stabilized road and cul-de-sac should be improved to facilitate access and parking provided for up to 25 vehicles. Recommended amenities include a mix of small and medium picnic shelters, scattered tables and grills, a fishing pier and a small restroom.

**Trails.** A 20-mile plus, interconnected system of trails for hiking, bicycling and horseback riding are recommended for the park. Where conditions permit, it is proposed that trails be designated shared-use. Some trail sections may be restricted to certain user groups to protect sensitive resources and visitor safety, avoid user conflicts and to address operational issues. The existing network of pathways, firebreaks and unimproved roads serve as the foundation for the trail network. To access significant features, enhance the trail experience or improve connectivity,

new trail sections may need to be developed. Foot bridges and boardwalks may also be needed in areas that are prone to flooding. A system of loop trails should be incorporated into the trail system and primary use areas connected to facilitate trail access and encourage non-vehicular use. Trail information and directional signage will be provided at all access points and a clear system of trail marking implemented for ease of navigation and public safety.

A hiking trail is recommended that would link the family campground and cabins to the beaches of Bald Point. While the trail may be seasonal in nature due to the extensive presence of wet and mesic flatwoods, some boardwalk crossings of the wettest areas area recommended encouraging use and reducing vehicular traffic to the beach.

The majority of trails are proposed for the main body of the park, north of County Road 370. However, nearly five miles of hiking trail are recommended for the Sand Ridge Parcel. A trailhead parking area is recommended on the south side of County Road 370, across from the proposed road leading to Tucker Lake. A small parking area for up to 10 vehicles with trail orientation signage is recommended at this location. A boardwalk and wildlife overlook is also recommended as a featured destination on the trail that will provide enhanced views of the tidal marsh islands along the shoreline and the waters of Alligator Harbor.

The park's shoreline and tidal creeks are ideally suited for a system of blueways that provide miles of paddling opportunities for canoes and kayaks. As previously mentioned, the park is a designated stop on the Florida Circumnavigation Saltwater Paddling Trail. Visitors will be encouraged to explore the park shoreline, Tucker Lake, Chaires Creek and its branches through informational materials and the development of additional canoe/kayak access points.

The Division supports the development of bicycle and pedestrian facilities along U.S. 98 and County Road 370 that would facilitate bicycle and pedestrian access to the park from the existing and proposed residential areas of Alligator Point. A paved bike trail that would connect future St. Joe residential communities planned to the west with the park is recommended either along the County Road 370 right of way or just within the park boundary. This facility will encourage bicycle and pedestrian access to the park as adjacent lands are developed. Decisions regarding the final routing of the trail will be made in coordination with St. Joe development plans and other trail planning initiatives in the area.

**Interpretive Facilities.** Interpretive kiosks are recommended at all primary use areas to familiarize visitors with park wildlife, history, enhance visitor understanding of resource management activities and recreation opportunities and encourage responsible use. Potential interpretive themes include Neotropical migrants, prehistoric use of the land, local fishing industry, land management and restoration, sea turtles and their habitat and park wildlife.

#### **Proposed Support Areas and Facilities**

The park entrance is recommended on County Road 370 with an entrance station sited a short distance within the park. A paved park road, approximately 3.8 miles long, is proposed utilizing existing unimproved jeep trails and logging roads where available that will provide access to the proposed day use areas on Tucker Lake and Sand Pond, the family campground and cabins and the beaches of Bald Point. Paved shoulders are recommended to encourage bicycle and pedestrian use. The existing service bridge at Chaires Creek will need to be replaced. Approximately 3,000 feet at the northern end of the proposed road contains no existing roadbed to follow and will pass through mesic and scrubby flatwoods and cross a narrow section of tidal marsh.

The proposed routing of the park drive was established after thorough deliberation and consideration of many other alternative alignments and access options. The proposed routing was the preferred alternative since it avoids hydrological impacts as much as is possible, addresses park operational needs, minimizes traffic impacts to adjacent roads and provides an entry to the park that will best enhance the visitor experience. The proposed entrance and road corridor have been delineated based on preliminary field inspections. The final locations may be adjusted as information that is more detailed is gathered on site conditions through the planning and design process.

The proposed land use plan necessitates additional shop and residence facilities in a more central location to meet park operational needs. A four-bay shop is recommended to protect equipment from the salt air, enhance security and provide additional workspace and storage. A second ranger residence is proposed to provide security for proposed facilities on the Tucker Lake Parcel. The new shop and residence area will be linked to the park drive and sited in proximity to the entrance station or the camping and cabin area. A final site location will be determined in consultation with the Office of Park Planning as other components of the park land use plan are implemented.

#### **Facilities Development**

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

parking (90 spaces)

Expand turnaround		
Reconfigure and expand parking		
Improved beach access route Honor box fee collection station		
Playground Amphitheatre		
Overlook/fishing platform Restroom with outside showers Stabilized access road		

### **Primitive Back Country Campsites**

Designated tent sites with fire rings (4-6 sites/location)

#### **Picnicking and Water Access**

#### Tucker Lake

Picnic shelters (includes one large pavilion) Scattered tables and grills Boat launch Boardwalk and fishing platform

#### Sand Pond

Picnic shelters & scattered tables and grills Boardwalk and fishing platform

### <u>Trails</u>

Organize/expand existing network (20+ miles) Sand Ridge Trailhead (stabilized parking for up to 10 vehicles)

#### **Interpretive Facilities**

Kiosks (4)

#### **Support Facilities**

Entrance stationRanger residence4-bay shopPaved park road

### **Existing Use and Recreational Carrying Capacity**

Recreational 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. Capacity is determined by identifying the land and water requirements for each recreation activity at the park, and then applying these requirements to the property's land and water base. This analysis identifies a range within which the recreational carrying capacity most appropriate to the specific activity, the activity site and the park's classification is selected.

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

#### **Optimum Boundary**

As additional needs are identified through park use, development, research, and as adjacent land uses change on private properties, modification of the unit's optimum boundary may occur for the enhancement of natural and cultural resources, recreational values and management efficiency. Identification of lands on the optimum boundary map is solely for planning purposes and not for regulatory purposes. A property's identification on the optimum boundary map is not for use by any party or other government body to reduce or restrict the lawful right of private landowners. Identification on the map does not empower or

Restroom Paved access road & parking (50 spaces) Stabilized equestrian trailer rig parking (15-vehicle capacity)

Restroom Paved access road & parking (25 spaces)

Alligator Harbor boardwalk overlook Trail directional signage Paved bike trail (pending further study)

Table 1Existing Use and Recreational Carrying Capacity						
	Existing Capacity		Proposed Additional Capacity		Estimated Recreational Capacity	
Activity/Facility	One Time	Daily	One Time	Daily	One Time	Daily
Trails	185	740	23	92	208	832
Picnicking	0	0	260	520	260	520
Beach Use	456	912	0	0	456	912
Camping						
Family Camping	0	0	240	240	240	240
Group Camping	0	0	30	30	30	30
Primitive Camping	0	0	48	48	48	48
Cabins	0	0	36	36	36	36
Boating						
Big Chaires Creek	85	170	0	0	85	170
Tucker Lake	50	100	0	0	50	100
TOTAL	776	1,922	637	966	1,413	2,888

require any government entity to impose additional or more restrictive environmental land use or zoning regulations. Identification is not to be used as the basis for permit denial or the imposition of permit conditions.

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

The park optimum boundary includes areas identified within the Dickerson Bay/Bald Point Florida Forever project. This includes lands between the western boundary and U.S. Highway 98, several undeveloped parcels along the beach shoreline and the central interior. An undeveloped parcel along County Road 370 and adjacent to the Sun-N-Sand development has been included to avoid additional residential development along the southern boundary.



Addendum 1—Acquisition History and Advisory Group Report

#### **Purpose and Sequence of Acquisition**

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

On August 30, 1999, the Trustees purchased a 1,349-acre real estate, located in Franklin County, which later became Bald Point State Park. The Trustees purchased the property from the Trust for Public Land for \$8,350,000. This purchase was funded under CARL Preservation 2000 Program.

Since the initial purchase, the Trustees have acquired several parcels in Franklin County, mainly under P2000/Additions and Inholdings, Florida Forever/ Additions and Inholdings, and Florida Forever/ the Nature Conservancy Charitable Trust programs, and added them to Bald Point State Park.

#### Lease Agreement

On September 2, 1999, the Trustees leased Bald Point State Park to the Division of Recreation and Parks (Division) under Lease No. 4244. This lease is for a period of fifty (50) years, commencing on August 30, 1999, and ending on August 29, 2049, unless sooner terminated pursuant to the provision of the lease.

According to Lease No. 4244, the Division manages Bald Point State Park to develop, conserve and protect the natural and cultural resources and to use the property for resource-based public outdoor recreation that is compatible with conservation and protection of the property.

### **Title Interest**

The Trustees hold fee simple title to Bald Point State Park.

### **Special Conditions on Use**

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

#### **Outstanding Reservations**

Following is a listing of outstanding rights, reservations and encumbrances that apply to Bald Point State Park

### A 1 - 1

Instrument:	Lease
Instrument Holder:	St. Joe Paper Company
Beginning Date:	October 1, 1966
Ending Date:	September 30, 2016
Outstanding Rights, Uses, Etc.:	The instrument holder leased subject property to Alligator Point Water Resources District of Franklin County to construct, install and maintain water wells and all structures and equipment necessary to produce potable water and to transmit the same to the nearest state highway right of way. The lease has been amended several times to include additional lands.
Instrument:	Warranty Deed
Instrument Holder:	St. Joe Timberland Company of Delaware, LLC
Beginning Date:	December 2, 2002
Ending Date:	No specific ending date is given
Outstanding Rights, Uses, Etc.:	The Warranty Deed is subject is to one nonexclusive perpetual easement for ingress and egress and one reservation on nonexclusive easement for ingress and egress.

The Honorable Cheryl Sanders Franklin County Commission 33 Market Street, Suite 203 Apalachicola, Florida 32320

Clifford Butler, Chair Franklin County Soil and Water Conservation District P.O. Box 488 Apalachicola, Florida 32320

Ace Haddock, Forestry Supervisor II Tate's Hell State Forest Florida Division of Forestry 290 Airport Road Carrabelle, Florida 32322

John Himes, Regional Biologist Florida Fish and Wildlife Conservation Commission - Northwest Region Nongame Program 3911 Highway 2321 Panama City, Florida 32409-1658

(Represented by: Brian Branciforte)

Kevin Patton, Park Manager Ochlockonee River State Park P.O. Box 5 Sopchoppy, Florida 32358

Kim Wren, Preserve Manager Alligator Harbor Aquatic Preserve 350 Carroll Street Eastpoint, Florida 32328

Jim Lyle, Public Lands Issue Chair Sierra Club, Big Bend Group 3764 Millers Bridge Road Tallahassee, Florida 32312

Eric Draper, President Apalachee Audubon Society 2507 Calloway Road, Suite 103 Tallahassee, Florida 32303

(Represented by: Julie Wraithmell)

Dan Tonsmeire, Executive Director Apalachicola Bay and River Keepers 23 Avenue D Apalachicola, Florida 32320

Georgia Ackerman Wilderness Way 4901 Woodville Highway Tallahassee, FL 32305

John Harvey, Bicycling Advocate 1418 N. Adams Street Tallahassee, Florida 32303

Richard Graham, Chair Apalachee Chapter Florida Trail Association 2228 Shirley Ann Court Tallahassee, Florida 32308

Suzanne Lane-Zdanovskiy, Vice President Southern Trail Riders Association 630 Kittrell Road Quincy, Florida 32351

Jack Dozier 40 Lakeview Drive Alligator Point, Florida 32346

Billy Buzzett, Vice President of Strategic Planning The St. Joe Company 100 Beckrich Road, Suite 200 Panama City Beach, Florida 32407

(Represented by: Brian Underwood 301 East First Street Port St. Joe, Florida 32456)

Carol Schneier 1792 King Arthurs Ct. Marietta, Georgia 30062 The Advisory Group appointed to review the proposed land management plan for Bald Point State Park was held at Mission by the Sea on December 14, 2005. Judy Wraithmell represented Eric Draper, Brian Branciforte represented John Himes and Brian Underwood represented Billy Buzzett. Clifford Butler, Dan Tonsmeire and Georgia Ackerman did not attend. All other appointed Advisory Group members were present. Attending staff were Danny Jones, Eric Kiefer, John McKenzie, Don Younker, Michael Kinnison, Kevin Patton and Bonnie Allen.

# **Summary Of Advisory Group Comments**

The following is a summary of the main points and recommendations made by each of the attending advisory group members. Staff recommendations are provided at the end of this report.

Carol Schneier. Ms. Schneier expressed support for the plan in the following areas:

- Development in the sand pine ridge parcel is limited to trails
- Paddling trail on Big Chaires Creek
- Sunrise Beach Use Area improvements
- Large areas of the park are "protected"
- Paved bicycle trail along northwest side of park
- Cabins not proposed
- Costs estimated for resource management

Ms. Schneier expressed concern about several aspects of the plan and provided the following recommendations:

- Locations of camping areas will encourage driving, and are susceptible to flooding and excessive biting insects. Group camp road will require an elevated bridge that will make traffic visible from the marsh boardwalk. Locate the campgrounds closer to the beach to discourage auto use. Purchase private lot on the beach to develop as a campground.
- Park road system will be expensive to develop and maintain, will disrupt hydrology and increase noise pollution. Provide access via spur roads from Bald Point Road to minimize road construction and maintenance costs and noise pollution in the park. Keep park roads unpaved, with low water crossings to minimize impacts to hydrology. Conduct detailed hydrological study. Plant buffer vegetation around roads to reduce noise.
- Water and sewer inadequately planned. Use county water supply to ensure safe potable water. Locate development in higher areas near dunes on soils less prone to flooding and better suited for septic tanks.
- Park development will fragment ecosystems and drive wildlife west of Big Chaires Creek.
   Locate proposed residence to limerock "T" road across from Sunrise Beach
- Extend bike trail around the park perimeter
- Use interpretive displays to educate the public and encourage responsible visitor use. Restrict trail usage to minimal impact activities and develop an interpretive nature trail. Construct wildlife viewing towers with interpretive displays.

### **Commissioner Sanders**

- Advisory Group should represent all user group interests, including those activities that are not permitted on park lands (for example, off highway vehicles).
- Conduct a traffic study to assess impacts on local roads from park visitors
- Consider alternative access to the park, such as through St. Joe lands on the western boundary of the park

- Creation of the park has been a coordinated effort of the county, state and St. Joe. All
  parties need to continue coordinating their activities as the park develops.
- Minimize impacts to neighbors as much as possible

# Jim Lyle

- Clarify effects of ditches on park water bodies and plans for restoration
- Plan does a good job of emphasizing the use of prescribed fire
- Need to clarify long-term restoration objectives for natural communities, particularly areas with longleaf pine
- Include discussion of existing road conditions and plans for eliminating roads that are not needed for fire management
- Reduce fragmentation by locating camping in southeastern portion of park, as near shoreline as possible
- Group administrative facilities with existing ones

## Brian Underwood. No comments

## **Richard Graham**

- Hikers prefer single-use, loop trails
- Relocate proposed camping areas to improve hiking experience at north end of park

## **Brian Branciforte**

- Plan does a good job of emphasizing the use of prescribed fire
- Glad to hear exotic plants are not significant problem
- Consider relocating camping areas, using existing road corridors for proposed park roads and reducing length of proposed roads to minimize habitat fragmentation
- Development of new roads and trails should facilitate resource management by serving as boundaries of established burn zones
- Sea turtle and shorebird monitoring important
- Complete biological surveys before initiating park development to avoid sensitive resources
- Park provides important habitat for Neo-tropical migrants
- Protect existing maritime hammock
- Discuss potential effects of road construction on hydrology
- What effect will local water restrictions have on park development plans?
- Clarify long-term plans for restoration. Emphasize restoration over development.
- Be proactive on controlling unauthorized access particularly in remote areas of park

# Kim Wren

- Plan is consistent with protection of the adjacent Alligator Harbor Aquatic Preserve
- Interested in receiving results of water quality data once collected
- Provide more detail on objectives of restoration
- Aquatic preserve staff encourages ongoing management coordination with the park

# Ace Haddock

- Consider restoration of Tucker Lake
- Are future sales planned for areas with planted pines?
- DOF willing to share experience with flatwoods restoration gained at Tate's Hell State Forest
- Clarify proposed timing of prescribed burns. Recommend growing season burn in areas that have received initial mechanical treatment
- Supports planned bike trail on County Road 370

# Judy Wraithmell

- Supports park efforts to reduce fuel loads and use prescribed fire
- Park an important stopover point for birds migrating across the Gulf to Central America.
- Plan contains a very comprehensive bird list
- Maritime hammock provides important habitat for many birds and needs to be protected
- Park is popular for bird watching and proposed development threatens wildlife watching opportunities
- Recommends de-emphasizing beach use and encouraging access away from shoreline hammock areas
- Supports central access and closure of gate
- Consider providing access by electric tram
- Park does not need 60 campsites
- Increase interpretation with focus on birds
- Diamondback terrapins may be at park
- High bacterial levels in near shore waters is another reason to diversify use
- Water lease should not be expanded
- Park should set an example for sustainable use in the design of park facilities

# Suzanne Lane-Zdanovskiy

- Excited that equestrians included in park plans
- Sensitive to impacts of horses on resources and committed to working with park to allow responsible equestrian access
- 10-mile trail minimum needed to attract equestrians. Equestrian users prefer loop trails and support multi-use.
- Consider size of horse trailers when designing trailhead
- Would like to see horse trails developed as soon as possible
- Club members available to provide assistance in trail planning and maintenance

# John Harvey

- Bald Point has potential role in development of a regional coastal trail system with other conservation lands.
- Work with St. Joe to connect park with other conservation lands to the west
- Support concept of moving proposed park entrance toward U.S. Highway 98
- Shift proposed locations of camping areas further south and keep northern part of park more natural
- Do not limit trail layout to existing road layout. Create a coordinated loop and stacked system.
- Park is not going to be an off-road biking destination. Park roads, shoulders and paved trails will be major attraction for bicyclists.

- Consider maintaining pedestrian or biker access at existing gate
- Tucker Lake seems like a good spot for primary trailhead
- Connect overlook on Alligator Harbor with loop trail

## Jack Dozier

- Traffic a major concern of park neighbors and all of Alligator Point
- Locate park entrance closer to U.S. Highway 98
- Water supply a major concern for area residents. Impacts of park water use on local supply need to be considered.
- Reconsider position of not allowing expansion of well field beyond existing leased area
- Important for community to receive advance notice when conducting burns
- Consider impacts of spring burning on ground nesting species (quail and turkey)
- Protect remaining coastal hammock from development impacts. Do not site proposed restroom at north end within hammock.
- Use as little boundary fencing as possible

# **Kevin Patton**

- Committed to making Bald Point best managed park in system.
- Resource restoration primary interest
- Will work with community to increase support and involvement

## Dan Tonsmeire (comments submitted in writing)

- Coordinate monitoring and promote restoration of hydrology and water quality of surface and ground waters of the area with other land managing and regulatory agencies, FSU and St. Joe.
- Coordinate monitoring of listed and other important non-game species, including but not limited to migrating bird populations, amphibians and Florida Black Bears, with other land managing agencies and St. Joe.
- The goal to acquire the optimum boundary property between the park and Highway 98 should be aggressively pursued to reduce and minimize conflict with park management objectives.
- Accurate and up-to-date hydrologic information should be added to the plan and consideration of hydrologic restoration included as a principle management effort.
- The plan calls for protection of listed species, but lacks sufficient direction for monitoring several important species such as migrating birds, black bears and amphibians.

# **Summary Of Public Comments**

The following is a summary of the main points and recommendations made by interested citizens attending the meeting. Staff recommendations designed to address the most significant of these issues is provided at the end of this report.

### Lee Brown

- Mr. Dozier's comments reflect residents concerns.
- Confident in new management.
- Supports shifting entrance location as near to U.S. 98 as possible
- Supports proposed internal road system to take traffic off local roads
- Sunrise Beach area best for camping

Ann Murzek. What types of interpretive facilities are planned for the park?

## John Susco

Important for park to provide camping opportunities since area campgrounds have closedSunset Beach not ideal for beach use due to submerged hazards

- •Shoreline areas in need of dune restoration
- •Improving bike access is critical.

# Ken Osbourne

- Critical of representation of advisory group
- Division not empathetic to concerns of area residents, particularly the issue of water supply
- Current plans do not consider access needs of those with restricted mobility. Provide electric golf carts for visitors with limited access.

## **Staff Recommendations**

Staff recommends approval of the proposed management plan for Bald Point State Park as presented with the following changes. See revised Conceptual Land Use Plan for locations of proposed facilities and use areas.

**Park Roads.** An internal system of park roads is considered important to minimize traffic impacts on local roads and for the efficient circulation and management of visitors. Hydrological impacts will be evaluated and addressed during the planning and design phase of road construction. Additional survey needs, biological and archaeological, will also be implemented at this time. Roads to primary use areas will be paved to reduce maintenance needs but designed with best management practices for handling stormwater and protecting water quality. The Division will meet all local land development regulations, including traffic studies if required, as part of the Franklin County permit review and development approval process.

Existing unimproved roads currently support multiple functions. They provide service access to conduct resource management activities and serve as important fire breaks for established burn zones. They also serve a recreation function as part of the park's trail system. Once maintenance conditions are established for burning, and the park's system of trails finalized, the road network will be evaluated and those sections considered non-essential considered for restoration. Improvements, such as low water crossings, will be utilized where appropriate to improve sheet flow.

The proposed park entrance off County Road 370 is recommended to be relocated back towards U.S. Highway 98 to reduce traffic impacts on residential areas. It is recommended that the trailhead providing access to the Sand Pine Ridge parcel be located across from the entrance location, if possible. An alternative alignment of the park road is recommended that will

minimize hydrological impacts, require less paving and avoid an adjacent residential area. The proposed route runs north of Tucker Lake and follows a higher, dryer corridor through the park that will be significantly shorter than the route originally proposed south of Tucker Lake. The revised route will require less engineering to maintain sheet flow and gives greater feasibility to wetland restoration south and east of Tucker Lake.

**Recreation Facilities.** The locations and number of camping facilities have been reevaluated and changes recommended. While moving camping areas closer to the beach is a desirable goal, it is not practical for a number of reasons. Potential locations in the southeastern area of the park are limited. There are not sufficient uplands within the park boundary east of Bald Point Road for camping. The stretch of shoreline extending from the Sunrise Beach Access southward is the most heavily eroded area of the park. The beach is narrow and submerged obstacles are present in the shallow near-shore waters that pose a public safety hazard. Encouraging additional use of this area by locating camping facilities in close proximity is not appropriate given its limitations as a recreational resource. In addition, locating camping areas near this beach access is no guarantee that visitors will not gravitate to the northern end of the park where the highest quality beach is located.

In response to concerns regarding the appeal of the park as a camping destination, it is recommended that the number of sites at the proposed family campground be reduced to 30. Six cabin units are now recommended as an alternative option for those seeking extended stays at the park. Cabins will diversify the type of overnight opportunities available and are likely to be popular throughout the year, at times when camping is less desirable due to environmental conditions. Two potential locations for the camping and cabin development area have been identified, both of which provide an opportunity for access to Chaires Creek and are close enough (approximately one mile) to beach access points to encourage bicycle and pedestrian access.

The proposed primitive group camp location is recommended to be moved to an area of scrubby flatwoods adjacent to Little Tucker Lake. This area is less prone to flooding, will not require significant road improvements to cross hydrological features and is a highly attractive location for primitive camping.

The proposed concept of a canoe/kayak launch on Chaires Creek has been removed from the plan in light of concerns about safety given the strong tidal currents in the creek. Access to the creek will be available from the existing canoe launch at Bald Point, from the planned Tucker Lake Use Area and within the family campground.

**Water Supply.** Bald Point State Park contributes significantly to meeting the daily water needs of residents of Alligator Point through an existing well field leased to the local water provider. The Division recognizes the importance of this lease and intends to honor its conditions into the future. However, the long-term solution to the area's water supply problem can best be met through a regional supply system as opposed to the uncertainties of drilling additional wells on park property outside the existing lease area. If local sources are not an option for meeting future park needs, then the park will investigate developing its own water supply system.

**Restoration.** There is a need to gain a better understanding about park hydrology before formulating specific proposals for restoration. Additional text will be provided in the plan that clearly identifies this need and that discusses, in general terms, the long-term objectives for upland and wetland restoration at the park.

A 1 - 10

Restoring Tucker Lake to conditions prior to human intervention is not recommended at this time. The lake is a productive, functioning estuarine system. Access to the lake via Chaires Creek for fishing and boating is popular with local residents and part of traditional use patterns that have developed over many years. Large areas of the lake bottom have accumulated significant amounts of muck that would likely have to be removed to reestablish a sand bottom. In essence, this would be a complex, large-scale operation requiring significant investment beyond merely backfilling the dredged channel or installing a water control structure. The Division believes there are other more pressing restoration needs facing the park that should be addressed before considering restoration of Tucker Lake.

Addendum 2—References Cited
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Addendum 3—Soils Descriptions

(3) Beaches: Beaches consist of narrow strips of nearly level land areas along the Gulf of Mexico and adjacent bays. They formed in deposits of mixed sand and shell fragments. Individual areas range from less than 100 to more than 300 feet in width. As much as half of the beach can be flooded daily by high tides, and all of the beach can be flooded by storm tides. The most extensive areas of this unit are on St. Vincent Island, St. George Island, and Dog Island.

Beaches typically consist of loose, fine sand ranging from gray to white or sand that contains various quantities of broken shells throughout. In most areas the shell fragments are the size of sand grains, but in some areas they are larger in some parts of the profile. Layers differ primarily in color or in shell content. Some profiles appear uniform throughout.

Included in mapping are small areas of Corolla, Duckston, and Hurricane soils. These soils are on the landward fringes of the map unit.

Beaches are covered daily with saltwater at high tides. They are susceptible to movement by the wind and tide. Many areas do not support vegetation, and the remaining areas are sparsely vegetated by salt-tolerant plants.

Beaches are not suitable for cultivation or for use as woodland. Beaches are used intensively for recreation. Homes and commercial buildings have been built on the fringes of beaches in many places. Beaches are not suitable for homesite development, however, because of the frequent tidal flooding.

No capability subclass or woodland ordination symbol is assigned.

**4) Dirego and Bayvi soils, tidal:** These very poorly drained, nearly level soils are in gulf coast tidal marshes and in estuarine marshes along the lower reaches of the Apalachicola River. Individual areas are generally elongated along the gulf cast and are irregularly shaped or elongated in other places. They range from 3 to several thousand acres in size. They are about 50 percent Dirego soil and 40 percent Bayvi soil. Slopes are less than 1 percent

Typically, the surface layer of the Dirego soil is very dark grayish brown muck about 35 inches thick. The upper part of the subsurface layer is very dark brown mucky sand about 12 inches thick. The lower part to a depth of 72 inches or more is very dark grayish brown sand.

Typically, the surface layer of the Bayvi soil is about 26 inches thick. The upper 8 inches is very dark gray sand. The subsurface layer to a depth of 80 inches or more is gray sand that has light gray streaks and mottles.

In most areas the natural vegetation consists of black needlerush, marshhay cordgrass, and smooth cordgrass.

These soils are unsuitable for homesite development, small commercial buildings, local roads and streets, and recreational uses because of the high salt content, the daily flooding, the wetness, the high sulfide content, and low strength.

(10) Corolla sand: This somewhat poorly drained, nearly level or gently sloping soil is on flats and small dunes and in swales on large dunes along the gulf coast beaches. Slopes range from 0

to 5 percent but are generally less than 3 percent. Individual areas are narrow and elongated and range from 5 to 100 acres in size.

Typically, the surface layer is light gray sand about 6 inches thick. The next layer is sand. The upper 18 inches is very pale brown, and the lower 8 inches is light gray. The next 2 inches is a buried surface layer of grayish brown sand. Below this to a depth of 80 inches or more is light gray sand.

Many areas are used for homesite development. In most areas the natural vegetation consists of slash pine, longleaf pine, and live oak and an understory of waxmyrtle and scattered saw palmetto. Many of the areas nearest to the gulf coast do not have trees and are sparsely vegetated with sea oats and other beach grasses and scattered shrubs.

This soil is generally unsuited to cultivated crops, pasture, and the production of timber because of the low level of fertility and the proximity to the coast.

(11) Dorovan-Pamlico complex, depressional: These very poorly drained, nearly level soils are in depressions and poorly defined drainageways. Slopes range from 0 to 2 percent. Individual areas of these soils are irregular in shape and range from 10 to 500 acres in size. They are about 55 percent Dorovan soil and 30 percent Pamlico soil.

Typically, the surface layer of the Dorovan soil is black muck about 68 inches thick. The subsurface layer to a depth of 80 inches or more is very dark gray muck.

Typically, the surface layer of the Pamlico soil is very dark brown muck about 7 inches thick. The subsurface layer is dark brown muck about 31 inches thick. Below this to a depth of 80 inches or more is dark grayish brown and grayish brown fine sand.

In most areas the natural vegetation consists of blackgum, cypress, sweetbay, swamp tupelo, black titi, and scattered slash pine.

These soils are unsuitable for crops, pasture and hay, and the production of pine trees. They also are unsuited to use as sites for homes, small commercial buildings, and local roads and streets. The ponded seasonal high water table, a lack of suitable drainage outlets, and low strength are limitations.

(13) Hurricane sand: This somewhat poorly drained, nearly level soil is on low coastal ridges and slight knolls in the flatwoods. Slopes range from 0 to 3 percent. Individual areas are elongated or irregularly shaped and range from 5 to 100 acres in size.

Typically, the surface layer is sand about 7 inches thick. The upper 3 inches is gray, and the lower 4 inches is brown. The subsurface layer, to a depth of about 55 inches, is sand. The upper 17 inches is brownish yellow, the next 10 inches is light yellowish brown, and the lower 21 inches is white. The subsoil, to a depth of about 76 inches, is sand. The upper 13 inches is brown, and the lower 8 inches is dark brown. Below this to a depth of 80 inches or more is pinkish gray sand.

The Hurricane soil has a seasonal high water table at a depth of 24 to 42 inches for 2 to 4 months

in most years. The water table can rise to a depth of 15 to 24 inches for brief periods after heavy rains. The available water capacity is low. Permeability is rapid or very rapid. The content of organic matter and natural fertility are low.

Most areas are used for the production of pine trees. The natural vegetation consists of slash pine, longleaf pine, and scattered oak and an understory of saw palmetto, gallberry, and wiregrass.

This soil is poorly suited to most cultivated crops because of droughtiness and the rapid leaching of plant nutrients.

(22) Leon sand: This poorly drained, nearly level soil is in broad areas in the flatwoods and on knolls or low ridges in titi bogs. Slopes range from 0 to 2 percent. Individual areas are irregular in shape and range from 5 to 200 acres in size.

Typically, the surface layer is dark gray sand about 8 inches thick. The subsurface layer is white sand about 14 inches thick. The subsoil is sand. The upper 18 inches is very dark brown, and the lower 32 inches is very dark brownish gray and dark brown. Below this to a depth of 80 inches or more is light brownish gray and dark grayish brown fine sand.

Included with this soil in mapping are small areas of Lynn Haven, Mandarin, Sapelo, and Scranton soils. The poorly drained Sapelo soils are in landscape positions similar to those of the Leon soil. The poorly drained Lynn Haven and Scranton soils are in the slightly lower areas in the flatwoods.

The Leon soil has a seasonal high water table at a depth of 6 to 12 inches for 1 to 4 months in most years. The water table recedes to a depth of more than 40 inches during dry periods. The available water capacity is very low in the surface and subsurface layers and low in the subsoil.

Most areas are wooded. The natural vegetation consists of longleaf pine, slash pine, saw palmetto, gallberry, waxmyrtle, wiregrass, running oak, black titi, and fetterbush lyonia.

This soil is poorly suited to cultivated crops because of the wetness and the low fertility. The number of adapted crops that can be grown is limited unless intensive management practices are applied. A water-control system removes excess water during wet periods and provides for surface irrigation during dry periods.

(24) Mandarin fine sand: This somewhat poorly drained, nearly level soil is on low coastal ridges and knolls in the flatwoods. Slopes range from 0 to 3 percent. Individual areas are narrow and elongated and range from 5 to 100 acres in size.

Typically, the surface layer is gray fine sand about 4 inches thick. Below this, to a depth of about 25 inches, is light gray fine sand. The subsoil is about 9 inches of fine sand. It is dark reddish brown that grades to dark brown. The next 27 inches is brown fine sand. Below this to a depth of 80 inches or more is white fine sand that has brown and yellow mottles.

Included with this soil in mapping are small areas of Corolla, Hurricane, Leon, Resota, and Ridgewood soils.

A 3 - 3

The Mandarin soil has a seasonal high water table at a depth of 18 to 36 inches for 3 to 6 months in most years. The available water capacity is very low in the surface and subsurface layers and moderate in the subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil.

Most areas are used for the production of pine trees or support natural vegetation. Some areas have been used for homesite development. The natural vegetation consists of sand pine, slash pine, longleaf pine, and turkey oak and an understory of wiregrass, pennyroyal, and scattered saw palmetto.

This soil is poorly suited to most cultivated crops because of droughtiness and the rapid leaching of plant nutrients.

This soil is moderately suited to pasture and hay. Additionally, this soil type is moderately suited to the production of pine trees.

This soil is only moderately suited to use as a site foe homes, small commercial buildings, and local roads and streets because of the seasonal wetness and occasional droughtiness.

(26) Duckston Sand: This poorly drained, nearly level soil is on level flats adjacent to coastal dunes and marshes and in low swales between dunes. Slopes range from 0 to 2 percent. Individual areas are elongated and range from 5 to 100 acres in size.

Typically, the surface layer is dark gray sand about 4 inches thick. The underlying material extends to a depth of 80 inches or more. In sequence downward, it is 5 inches of grayish brown sand, 19 inches of light brownish gray sand, 25 inches on white sand, and 27 inches or more of light gray sand.

Included with this soil in mapping are small areas of Bayvi, Corolla, Rutlege, and Scranton soils. The poorly drained Scranton soils are in landscape positions that are similar to those of the Duckston soil but are farther inland. The very poorly drained Bayvi soils are in the tidal marshes. The Rutlege soils are in the lower swales between dunes. The somewhat poorly drained Corolla soils are on small dune ridges. Also included are deep, sandy soils that have a weakly stained layer. These soils are in landscape positions similar to those of the Duckston soil.

On 80 percent of the acreage mapped as Duckston sand, occasionally flooded, Duckston and similar soils make up 78 to 100 percent of the mapped areas.

The Duckston soil has a high water table within a depth of 12 inches throughout most years. The water table may fluctuate slightly with the rising and falling tide. Flooding is likely during periods of heavy rainfall in combination with high tides or during strong coastal storms. The available water capacity is very low. Permeability is very rapid. The content of organic matter and natural fertility are low.

Most areas support natural vegetation and are managed for recreational uses or wildlife habitat. A few areas have been developed as homesites and building sites. The natural vegetation is that

of a maritime forest or a low coastal savannah. The maritime forest vegetation generally consists of cabbage palms, eastern redcedar, live oak, laural oak, slash pine, gallberry, waxmyrtle, scattered saw palmetto, fetterbush lyonia, and marshy cordgrass. The coastal savannah vegetation consists dominantly of marshhay cordgrass, seaoats, gulf muhly, sand cordgrass, and various other low grasses and widely scattered slash pine and shrubs.

This soil is generally not used for range. This soil is generally not used for commercial production of pine trees because of the proximity to the coast. Some areas, however, have been managed extensively for turpentine production. If the soil is used for the production of pine trees, the major management concerns are the wetness, salt spray, and low fertility. Using a logging system that leaves plant debris distributed over the site improves soil fertility. Bedding reduces the rate of seedling mortality caused by wetness.

This soil is generally unsuitable for cultivated crops and pasture. This soil is poorly suited to use as a site for homes, small commercial buildings, and local roads and streets. The major limitations are the wetness, the flooding during storm tides, and the very rapid permeability. The soil is generally unsuited to sanitary facilities because of the proximity to the coast and the potential for pollution of coastal waters. On sites for septic tank absorption fields, the depth to the high water table can be increased by constructing a mound of suitable fill material. Generally, only low-density development is recommended. ON building sites, adding fill material and installing a subsurface drainage system reduce the wetness. Mulching, applying fertilizer, and using an irrigation system help establish lawn grasses and other small-seeded plants.

If areas of this soil are developed for recreational uses, such as playgrounds, picnic areas, and paths or trails, stabilizing the sandy surface layer by adding suitable topsoil or some other material helps to prevent excessive erosion. For any kind of development, protecting the natural vegetation helps control erosion caused by coastal winds and storm tides.

The capability subclass is VIIw. No woodland ordination symbol is assigned.

(29) Resota Fine Sand: This moderately well drained, nearly level or gently sloping soil is on coastal ridges and remnant dunes. Slopes range from 0 to 5 percent. Individual areas are irregular in shape and range from 3 to 150 acres in size.

Typically, the surface layer is gray fine sand about 3 inches thick. The subsurface layer is white fine sand about 19 inches thick. The subsoil, to a depth of about 58 inches, is fine sand. It has organic stains at its upper boundary. The upper 22 inches is brownish yellow, and the lower 14 inches is yellow and has reddish yellow mottles. The substratum to a depth of 80 inches or more is very pale brown fine sand that has reddish yellow mottles.

Included with this soil in mapping are small areas of Corolla, Kureb, Mandarin, Ortega, and Ridgewood soils. The moderately well drained Ortega soils are in landscape positions similar to those of the Resota soil. The excessively drained Kureb soils are on high ridges and knolls. The somewhat poorly drained Ridgewood, Corolla, and Mandarin soils are in slight swales and on the lower ridge slopes.

On 90 percent of the acreage mapped as Resota fine sand, 0 to 5 percent slopes, Resota and

similar soils make up 76 to 100 percent of the mapped areas.

The Resota soil has a seasonal high water table at a depth of 40 to 60 inches for as long as 6 months in most years. The water table is below a depth of 60 inches during dry periods. The available water capacity is very low. Permeability is very rapid. The content of organic matter and natural fertility are low.

Most areas support natural vegetation. Some areas have been developed as homesites. The natural vegetation consists of sand pine, scrub oak, longleaf pine, and turkey oak and an understory of wiregrass, rosemary, and scattered saw palmetto.

This soil is poorly suited to most cultivated crops because of doughtiness and the rapid leaching of plant nutrients. If the soil is cultivated, soil blowing is a hazard. Applying fertilizer and using a well designed irrigation system can increase crop yields. Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help maintain fertility and tilth. Soil blowing can be controlled by maintaining a ground cover of close-growing plants, minimizing tillage, establishing windbreaks, and wind stripcropping. This soil is moderately suited to pasture and hay. It is limited by the restricted available water capacity. Applications of fertilizer and lime help deep-rooted plants, such as coastal bermudagrass and bahiagrass, to tolerate drought. Overgrazing results in deterioration of the plant cover and increases the extent of undesirable species. Proper stocking rates and pasture rotation help to keep the pasture in good condition.

This soil supports vegetation that is characteristic of the Sand Pine Scrub range site. Because of the doughtiness of the soil, forage production is low. The desirable plants on this site include creeping bluestem, purple bluestem, indiangrass, and beaked panicum.

The soil is moderately suited to the production of pine trees. It is limited mainly by the doughtiness, which increases the seedling mortality rate and retards growth. Potential productivity is medium for slash pine. Using special nursery stock that is larger than usual or that in containerized reduces the seedling mortality rate. Using a harvesting system that leaves plant debris distributed over the site helps to maintain the content of organic matter.

This soil is well suited to use as a site for homes, small commercial buildings, and local roads and streets. It is poorly suited to sewage lagoons and landfills because of seepage. In areas used for these purposes, sidewalls should be sealed. Areas for onsite waste disposal should be carefully selected to prevent the contamination of ground water. Homes should not be located adjacent to any body of water. Disposal fields should be established on the contour. Reducing the slope by cutting and filling minimizes erosion on homesites and in areas adjacent to roads. Mulching, applying fertilizer, and using an irrigation system help to establish lawn grasses and other small-seeded plants.

If areas of this soil are developed for recreational uses, such as playgrounds, picnic areas, and paths and trails, stabilizing the sandy surface layer by adding suitable topsoil or some other material help to prevent excessive erosion.

The capacity subclass is VIs. The woodland ordination symbol is 8S.

A 3 - 6

(30) Rutlege Loamy Fine Sand: This very poorly drained, nearly level soil is in depressions. Slopes are generally less than 2 percent. Individual areas are somewhat circular or oval or are elongated and range from 3 to 50 acres in size.

Typically the surface layer is about 11 inches thick. The upper 5 inches is black loamy fine sand, and the lower 6 inches is very dark gray fine sand. Below this to a depth of 80 inches or more is light gray sand.

Included with this soil in mapping are small areas of Lynn Haven, Pickney, and Scranton soils. The very poorly drained Pickney and Scranton soils are in landscape positions similar to those of the Rutlege soil. The poorly drained Lynn Haven soils are on slight knolls in depressions or near the edges of depressions. Also included are soils that are similar to the Rutlege soil but have a thin surface layer of muck. These soils are in landscaper positions similar to those of the Rutlege soil.

On 95 percent of the acreage mapped as Rutlege loamy fine sand, depressional, Rutlege and similar soils make up 78 to 100 percent of the mapped area.

The Rutlege soil has a seasonal high water table ponded on the surface or within a depth of 24 inches for 3 to 6 months in most years. The available water capacity is low. Permeability is rapid. The content of organic matter is high in the surface layer and low in the rest of the profile. Natural fertility is medium.

Most areas support natural vegetation, which consists of black titi, swamp cyrilla, and scattered slash pine and sweetbay.

This soil is not used for crops, the production of pine trees, pasture and hay, or homesite development because of the seasonal high water table and a lack of suitable drainage outlets. It is generally not used for range.

This soil is poorly suited to local roads and streets and is generally unsuited to use as a site for small commercial buildings because of the seasonal high water table. Adding suitable fill material to elevate roadbeds helps to overcome the wetness.

This soil is poorly suited to recreational uses, such as playgrounds, picnic areas, and paths or trails, because of the ponding and the lack of suitable drainage outlets.

The capacity subclass is VIIw. No woodland ordination symbol is assigned.

(31) Rutlege Fine Sand: This very poorly drained, nearly level soil is on broad, low-lying flats and on narrow flats adjacent to streams. Slopes range from 0 to 2 percent. Individual areas are elongated or irregularly shaped and range from 25 to 500 acres in size.

Typically, the surface layer is fine sand about 13 inches thick. The upper 6 inches is very dark brown, and the lower 7 inches is very dark gray. Below this to a depth of 80 inches or more is sand. The upper 21 inches is grayish brown, the next 24 inches is dark gray, and the lower 22 inches or more is gray.

A 3 - 7

Included with this soil in mapping are small areas of Lynn Haven, Pamlico, Pickney, and Scranton soils. The very poorly drained Scranton and Pickney soils are in landscape positions similar to those of the Rutlege soil. The very poorly drained Pamlico soils are in depressions. The poorly drained Lynn Haven soils are on slight knolls. Also included are soils that have a subsoil below a depth of 40 inches and soils that have an organic layer that is as much as 12 inches thick. These soils are very drained and are in landscape positions similar to those of the Rutlege soil.

On 95 percent of the acreage mapped as Rutlege fine sand, Rutlege and similar soils make up 91 to 100 percent of the mapped area.

The Rutlege soil has a seasonal high water table at or slightly above the surface for 3 to 6 months in most years. The water table is within a depth of 20 inches during the rest of most years. The available water capacity is low. Permeability is rapid. The content of organic matter is high in the surface layer and low in the rest of the profile. Natural fertility is medium.

Most areas support natural vegetation or are used for the production of pine trees. The natural vegetation consists of slash pine, black titi, swamp cyrilla, cypress, sweetbay, and blackgum and an understory of shrub-sized titi, St. Johnswort, and pitcherplant.

This soil is poorly suited to cultivate crops because of the wetness and low fertility. The number of adapted crops that can be grown is limited unless intensive management practices are applied. A water-control system removes excess water during wet periods. Incorporating crop residue, including that of soil-improving crops, into the soil increases the content of organic matter. Seedback preparation, including bedding of rows, increases the depth to the water table. Applications of fertilizer and lime can increase crop yields.

This soil is poorly suited to pasture and hay. Water-control measures reduce the wetness. Applications of fertilizer and the proper selection of adapted grasses and legumes increase yields. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help to keep the pasture in good condition.

This soil is generally not used for range. This soil is poorly suited to the production of pine trees. It is limited mainly be the seasonal wetness, which can increase the seedling mortality rate, restrict the use of equipment, and cause plant competition. Potential productivity is medium for slash pine. Site preparation, such as chopping, burning, and bedding, removes debris, minimizes plant competition, facilitates planting, and reduces the seedling mortality rate. Using special equipment, such as rubber-tired or crawler machinery, and harvesting during dry periods minimize soil compaction and root damage during thinning activities. Using a harvesting system that leaves plant debris distributed over the site helps maintain the content of organic matter. The trees respond will to applications of fertilizer.

This soil is poorly suited to use as a site for homes, small commercial buildings, and local roads and streets because of the wetness. On sites for septic tank absorption fields, mounding increases the depth to the seasonal high water table and thus helps to overcome the wetness. If adequate outlets are available, a drainage system can lower the water table. On sites for roads, installing a drainage system and adding suitable fill material help to overcome the wetness. Installing a drainage system and selecting adapted species can help to establish lawn grasses and landscaping plants.

If areas of this soil are developed for recreational uses, such as playgrounds, picnic areas, and paths or trails, stabilizing the sandy surface layer by adding suitable topsoil or some other material helps to prevent excessive erosion.

The capacity subclass is Vw. The woodland ordination symbol is 8W.

(33) Scranton Fine Sand: This poorly drained, nearly level soil is in broad areas n the flatwoods. Slopes range from 0 to 2 percent. Individual areas are irregular in shape and range from 5 to 200 acres in size.

Typically, the surface layer is very dark gray fine sand about 7 inches thick. The underlying material to a depth of 80 inches or more is fine sand. The upper 15 inches is light gray and has patches of dark gray and very dark gray. The next 24 inches is dark gray and has patches of gray and light brownish gray. The lower 34 inches or more is grayish brown and has patches of light gray.

Included with this soil in mapping are small areas of Duckston, Leon, Meadowbrook, Plummer Ridgewood, and Rutlege soils and areas of Scranton that are very poorly drained. The poorly drained Leon, Meadowbrook, and Plummer soils are in landscape positions similar to those of the Scranton soil. The somewhat poorly drained Ridgewood soils are on slight knolls. The poorly drained Duckston soils are in landscape positions similar to those of the Scranton soils, in areas adjacent to coastal waters. The very poorly drained Scranton soils are on the slightly lower savannahs and in the higher areas in swamps. The very poorly drained Rutlege soils are in broad, low-lying swamps and on narrow flood plains along small creeks. Also included are soils that are similar to the Scranton soil but have a stained subsoil below a depth of 50 inches. These soils are in landscape positions similar to those of the Scranton soil.

On 95 percent of the acreage mapped as Scranton fine sand, Scranton and similar soils make up 77 to 100 percent of the mapped areas.

The Scranton soil has a seasonal high water table at a depth of 6 to 18 inches for 3 to 6 months in most years. The available water capacity is low. Permeability is rapid. The content of organic matter is moderately low or moderate. Natural fertility is low.

Most areas are used for the production of pine trees. The natural vegetation consists of slash pine, widely scattered cypress, and black gum and an understory of saw palmetto, gallberry, waxmyrtle, black titi, swamp cyrilla, and fetterbush lyonia.

The soil is poorly suited to cultivate crops because of the wetness and the low fertility. The number of adapted crops that can be grown is limited unless intensive management practices are applied. A water-control system removes excess water during wet periods and provides for surface irrigation during dry periods. Row crops can be rotated with close-growing, soil-improving crops. Incorporating crop residue, including that of soil- improving crops, into the soil increases the content of organic matter. Seedbed preparation, including bedding of rows, helps to overcome the wetness. Applications of fertilizer and lime can increase crop yields.

This soil is moderately suited to pasture and hay. A surface water management system helps to overcome the wetness. Applications of fertilizer and the proper selection of adapted grasses and legumes increase restricted grazing during wet periods help to keep the pasture in good condition.

Typically, this soils supports vegetation that is characteristic of the North Florida Flatwoods range site. If good management practices are applied, this site has the potential to produce significant amounts of creeping bluestem, lopsided indiangrass, chalky bluestem, and curtis dropseed. If the range deteriorates because of poor management practices, the site is dominated by saw palmetto and wiregrass.

This soil is moderately suited to the production of pine trees. It is limited mainly by the seasonal wetness, which can restrict the use of equipment and cause plant competition. Potential productivity is medium or high for slash pine. Site preparation, such as chopping, burning, and bedding, removes debris, minimizes plant competition, facilitates planting, and reduces the seedling mortality rate. Using special equipment , such as rubber-tired or crawler machinery, and harvesting during dry periods minimize soil compaction and root damage during thinning activities. Using a harvesting system that leaves plant debris distributed over the site helps maintain the content of organic matter.

This soil is poorly suited to use as a site for homes, small commercial buildings, and local roads and streets because of the wetness. On sites for septic tank absorption fields, mounding increases the depth to the seasonal high water table. If adequate outlets are available, a drainage system can lower the water table. Adding suitable fill material to elevate roadbeds and building sites helps to overcome the wetness. Installing a drainage system and selecting adapted species can help establish lawn grasses and landscaping plants.

If areas of this soil are developed for recreational uses, such as playgrounds, picnic areas, and paths or trails, stabilizing the sandy surface by adding suitable topsoil or some other material helps to prevent excessive erosion.

The capability subclass is IVw. The woodland ordination symbol is 10W.

(36) Pickney-Pamlico Complex: These very poorly drained, nearly level soils are in depressions, freshwater swamps, and poorly defined drainage ways. Slopes are generally less than 1 percent. Individual areas are nearly round or are irregularly shaped and range from 10 to several thousand acres in size. They are about 45 percent Pickney soil and 40 percent Pamlico soil.

Typically, the surface layer of the Pickney soil is about 41 inches of black and very dark brown sand that has pockets of gray sand. Below this to a depth of 80 inches or more is grayish brown and light brownish gray sand.

Typically, the surface layer of the Pamlico soil is muck about 27 inches thick. The upper 5 inches is dark brown, and the lower 22 inches is very dark brown. The next layer is about 19 inches of black mucky sand. Below this to a depth of 80 inches or more is sand. The upper 8 inches is very dark grayish brown, and the lower 26 inches or more is grayish brown.

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Included with these soils in mapping are small areas of Dorovan, Lynn Haven, Maurepas, Rutlege, and Scranton soils. Also included are soils that are similar to the Pamlico soil but have a loamy substratum. The very poorly drained Dorovan and Maurepas soils are in landscape positions similar to those of the Pickney and Pamlico soils. The very poory drained Rutlege and Scranton soils are on slightly elevated flats. The poorly drained Lynn Haven and Scranton soils are on low ridges and flats.

On 95 percent of the acreage mapped as Pickney-Pamlico complex, depressional, Pickney, Pamlico, and similar soils make up 89 to 100 percent of the mapped areas.

The pickney and Pamlico soils have a seasonal high water table within a depth of 18 inches for as much as 5 months each year. The water table id generally within a depth of less than 6 inches for the rest of most years. The available water capacity ranges from very low to very high in the Pamlico soil and from very low to moderate in the Pickney soil. Permeability ranges from moderate to rapid in both soils. The content of organic matter is very high in the Pamlico soil and moderate in the pickney soil. Natural fertility of both soils is high.

Most areas support natural vegetation, which consists of sweetbay, swamp tupelo, black titi, swamp cyrilla, and scattered slash pine.

These soils are unsuitable for crops, the production of pine trees, and pasture and hay because of the seasonal high water table and low strength. They are generally not used for range.

These soils are unsuitable for homesite development, local roads and streets, and small commercial buildings because of the seasonal high water table and low strength.

These soils are unsuitable for recreational uses, such as playgrounds, picnic areas, and paths or trails, because of the seasonal high water table.

The capability subclass of the Pickney soil is VIw, and that of the Pamlico soil is VIIw. The woodland ordination symbol for both soils is 7W.

(40) Newhan - Corolla Complex: These excessively drained or somewhat poorly drained, gently undulating to steep soils are on coastal dunes and in swales. Slopes generally range from 5 to 15 percent but can range from 2 to 30 percent. Individual areas of these soils are elongated and range from 25 to 150 acres in size. They are about 60 percent Newhan soil and 25 percent Corolla soil. Newhan soils are on high dunes, and Corolla soils are on low dunes and in high swales between dunes.

Typically, the surface layer of the Newhan soil is gray sand about 1 inch thick. The underlying material extends to a depth of 80 inches or more. It is about 5 inches of light gray sand, 5 inches of white sand, 10 inches of mixed light gray and brownish gray sand, and 59 inches or more of light gray sand.

Typically, the surface layer of the Corolla soil is very dark gray and about 3 inches thick. Below this to a depth of 80 inches or more is light gray and light brownish gray sand.

Included with these soils in mapping are small areas of Duckston and Hurricane soils. The

somewhat poorly drained Hurricane soils are on the older, more stable side slopes and in swales. The poorly drained Duckston soils are in low swales and on level flats adjacent to coastal marshes and beaches. Also included are areas of beaches along the coastal fringe of the unit.

On 95 percent of the acreage mapped as Newhan - Corolla complex, rolling, Newhan, Corolla, and similar soils make up 96 to 100 percent of the mapped areas.

The Newhan soil does not have a seasonal high water table within a depth of 80 inches. The Corolla soil has a seasonal high water table at a depth of 18 to 36 inches for 2 to 6 months in most years. The water table in this soil is below a depth of 36 inches for the rest of most years. The available water capacity is very low in both soils. Permeability is very rapid. The content of organic matter and natural fertility are low.

Many areas have been used for homesites or commercial development or for recreation. Some areas support natural vegetation. In most areas natural vegetation is sparse. It consists of slash pine, scrub oak, Chapman oak, myrtle oak, waxmyrtle, saw palmetto, and seaoats and various woody shrubs, grasses and herbaceous plants.

These soils are generally unsuitable for cultivated crops, pasture, and the production of timber because of the slope, shifting sands, doughtiness, soil blowing, and salt spray.

These soils are poorly suited to use as a site for homes, small commercial buildings, and local roads and streets. They are generally unsuitable as sites for sanitary landfills and sewage lagoons because of the instability of the surface and the potential for pollution. The major limitations are soil blowing, the slope, the very rapid permeability, and shifting sands. On sites for septic absorption fields, slopes can be reduced by cutting and filling. Limiting development decreases the risk of pollution. Absorption fields should not be located near any body of water. Mulching, applying fertilizer, and using an irrigation system help to establish landscaping plants and lawn grasses.

If areas of these soils are developed for recreational uses, erosion control measures are needed. Access walkways reduce the mortality of dune vegetation caused by foot traffic. The less sloping areas can be stabilized by adding mulch, suitable topsoil, or pavement. For any kind of development, the natural vegetation should be protected because it is adapted to the soils and helps control erosion. Vegetative barriers also help to control soil blowing.

The capability subclass of the Newhan soil is VIIIs, and that of the Corolla soils is VIIs. No woodland ordination symbol is assigned.

Addendum 4--Plant And Animal List

# Common NameScientific NamePrimary Habitat Codes<br/>(for designated species)

#### Non-Vascular

Fungus	Collybia dryophlia		
Artist's fungus	Ganoderma applanatum		
Haymaker mushroom	Psathvrella foenisecii		
Ball lichen	Cladina evansii		
Reindeer moss	Cladina subtenuis		
Large reindeer moss	Cladonia leporine		
Prostrate deer moss	Cladonia prostrata		
Tree lichen	Parmelium sp.		
Old man's beard	Usnea ruhicunda		
Old man's beard	Usnea strigosa		
White moss	Leucohrvum alhidum		
Hair cap moss	Polytrichum niliferum		
Sphagnum moss	Sphagnum palustre		
opnagnam moss	sphagham parasire		
Vascular plants by family			
Acanthaceae			
Gulf Swampweed	Hygrophila lacustris		
Acaracaaa			
Red manle	Acar milmin		
Red maple	Acer rubrum		
Agavaceae			
Spanish bayonet	Yucca aloifolia		
Adam's needle	Yucca filamentosa		
Aizoaceae			
Shoreline seanurslane	Sesuvium portulacastrum		
Shorenne Scaparshane	Sesurrain portataeasti ant		
Alismataceae			
Grassy arrowhead	Sagittaria graminea		
Bulltongue arrowhead	Sagittaria lancifolia		
Amaranthacea			
Cottonweed	Froelichia floridana		
Anacardiaceae			
Winged sumac	Rhus copallina		
Poison oak	Toxicodendron pubescens		
Annonacoao			
Smallflower nawnaw	Asimina narviflora		
Smannower pawpaw	Δειπιπα μαι νιμοι α		
Apiaceae			
Spadeleaf	Centella asiatica		
* Non-native Species	A 4 1		
	A 4 - I		

Scientific Name	(for designated species)
Eryngium aquaticum Eryngium baldwinii Hydrocotyle bonariensis Hydrocotyle ranunculoides Hydrocotyle umbellate Hydrocotyle verticillata Ptilimnium capillaceum Spermolepis divaricata	
Ilex cassine var. cassine Ilex cassine var. myrtifolia Ilex coriacea Ilex glabra Ilex vomitoria	
Sabal palmetto Serenoa repens	
Asclepias humistrata Asclepias pedicellata Cynanchum angustifolium	
Ambrosia artemisiifolia Baccharis angustiflora Caccharis glomeruliflora Baccharis halimifolia Bidens alba Bidens laevis Bidens mitis Bigelowia nudata Borrichia frutescens Carphephorus odoratissimus Carphephorus paniculatus Chrysopsis linearifolia Cirsium horridulum Conyza Canadensis Coreopsis lanceolata Coreopsis tripteris Eclipta prostrata Elephantopus nudatus Erechtites hieracifolia	
	Scientific PrameEryngium aquaticum Eryngium baldwinii Hydrocotyle bonariensis Hydrocotyle umbellate Hydrocotyle umbellate Hydrocotyle verticillata Ptilimnium capillaceum Spermolepis divaricataIlex cassine var. cassine Ilex cassine var. myrtifolia Ilex coriacea Ilex glabra Ilex vomitoriaSabal palmetto Serenoa repensAsclepias humistrata Asclepias pedicellata Cynanchum angustifolia Bidens alba Bidens alba Bidens mitis Bigelowia nudata Borrichia frutescens Carphephorus odoratissimus Carphephorus odoratissimus Carphephorus paniculatus Chrysopsis linearifolia Cirsium horridulum Conyza Canadensis Coreopsis lanceolata Coreopsis lanceolata Coreopsis tripteris Eclipta prostrata Elephantopus nudatus Erechtites hieracifolia Erigeron quercifolius Erigeron strigosus

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Farly whiteton fleahane	Frigeron vernus	
Dogfennel	Funatorium canillifolium	
Insticeweed	Eupatorium Capitifotium	
Mohr's thoroughwort	Eupatorium mohrii	
Lateflowering thoroughwort	Eupatorium serotinum	
Slender goldenrod	Eupaionian scioliniana Futhamia caroliniana	
Flat_topped goldenrod	Euthamia carotintana Futhamia graminifolia	
Narrowleaf vellowtons	Elaveria linearis	
Firewheel	Gaillardia nulchella	
Narrowleaf numle everlasting	Gamochaeta falcate	
Sweet everlasting	Gnanhalium obtusifolium	
Scratch daisy	Hanlonannus divaricatus	
Bitterweed	Helenium amarum	
Narrowleaf sunflower	Helianthus anoustifolius	
Camphorweed	Heterotheca subaxillaris	
Coastal plain hawkweed	Hieracium megacenhalon	
Bigleaf sumpweed	Inclucium megacephaton Iva frutescens	
Seacoast marshelder	Iva ji mbricata	
Virginia dwarf dandelion	Krigia virginica	
Chapman's blazing star	Liatris chanmanii	
Fewflower blazing star	Liatris onupinanti Liatris pauciflora	
Godfrey's blazing star	Liatris provincialis	14 15
Dense blazing star	Liatris spicata	1,10
Shortleaf blazing star	Liatris tenuifolia	
Hempvine	Mikania scandens	
Pineland silkgrass	Pitvonsis aspera	
Bent-leaf goldenaster	Pitvopsis flexuosa	8
Narrow-leaf silkgrass	Pitvopsis graminifolia	-
Grassleaf goldenaster	Pitvopsis oligantha	
Camphorweed	Pluchea camphorata	
Stinking camphorweed	Pluchea foetida	
Sweetscent	Pluchea odorata	
Rosy camphorweed	Pluchea rosea	
Sweet everlasting	Pseudognaphalium obtusifolium	
Blackroot	Pterocaulon pvcnostachvum	
Caronina desert chickory	Pyrrhopappus carolinianus	
Whitetop aster	Sericocarpus tortiolius	
Wand goldenrod	Solidago stricta	
Common goldenrod	Solidago canadensis	
Anise scented goldenrod	Solidago odora	
Seaside goldenrod	Solidago sempervirens	
Spiny sowthistle	Sonchus asper	
Silver aster	Symphyotrichium concolor	
Ricebutton aster	Symphyotrichium dumosum	
Late purple aster	Symphyotrichium patens	
Perennial saltmarsh aster	Symphyotrichium tenuifolius	
Annual saltmarsh aster	Symphyotrichium subulatum	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
<b>Bataceae</b> Saltwort	Batis maritima	
<b>Brassicaceae</b> Mustard Coastal searocket Virginia pepperweed	Brassica juncea Cakile lanceolata Lepidium virginicum	
<b>Bromeliaceae</b> Spanish moss	Tillandsia usneoides	
<b>Cactaceae</b> Prickly pear	Opuntia humifusa	
<b>Campanulaceae</b> Glade lobelia White lobelia Venus looking glass Southern rockbell	Lobelia glandulosa Lobelia paludosa Triodanis perfoliata Wahlenbergia marginata	
<b>Caprifoliaceae</b> Elderberry	Sambucus canadensis	
<b>Caryophyllaceae</b> Thymeleaf sandwort Pinebarren stitchwort Squareflower Trailing pearlwort Pineland scalypink	Arenaria serpyllifolia Minuartia caroliniana Paronychia erecta Sagina decumbens Stipulicida setacea	
<b>Chenopodiaceae</b> Crested saltbush Lamb's quarters Annual glasswort Perennial glasswort Sea blite	Atriplex pentandra Chenopodium album Salicornia biglovii Salicornia perennis Suada linearis	
<b>Chlorophyta</b> Sea lettuce	Ulva lactuca	
<b>Chrysobalanaceae</b> Gopher apple	Licania michauxii	
<b>Cistaceae</b> Frostweed Georgia frostweed Pinweed	Helianthemum arenicola Helianthemum georgianum Lechea pulchella	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Dinaland ninwood	Lachaa sassiliflora	
Piadmont ninwood	Leched sessilijiord	
Coastal plain St. John's wort	Leched lorreyi Hypericum brachyphyllum	
Roundrod St. John's wort	Hypericum cistifolium	
St Peter's cross	Hypericum cisijoiium Hypericum crux-androag	
Florida sands St. John's-wort	Hypericum erile	
Sandweed	Hypericum exile Hypericum fasciculatum	
Pineweed	Hypericum gentianoides	
St Andrew's cross	Hypericum gennunomes Hypericum hypercoides	
Flatwoods St. John's-wort	Hypericum microsepalum	
Dwarf St John's-wort	Hypericum mutilum	
Myrtleleaf St. John's-wort	Hypericum muttutum Hypericum myrtifolium	
Atlantic St. John's-wort	Hypericum reductum	
Pineland St. John's-wort	Hypericum suffruticosum	
Four petal St. John's-wort	Hypericum tetrapetalum	
Stargrass	Hypoxis curtissii	
Commelinaceae		
Whitemouth Dayflower	Commelina erecta	
Virginia dayflower	Commelina virginica	
Spiderwort	Tradescantia hirsutiflora	
Bluejacket	Tradescantia ohiensis	
Convolvulaceae		
Hedge false bindweed	Calystegia sepium	
Compact dodder	Cuscuta compacta	
Dodder	Cuscuta pentagona	
Tievine	Ipomoea cordatotriloba	
Scarlet creeper	Ipomoea hederifolia	
Beach morning glory	Ipomoea imperati	
Railroad vine	Ipomoea pes-caprae	
Cypressvine	Ipomoea quamoclit	
Saltmarsh morning glory	Ipomoea sagittata	
Cornaceae		
Ogeechee tupelo	Nyssa ogeche	
Swamp tupelo	Nyssa sylvatica var. biflora	
Cupressacea	•	
Red cedar	Juniperus virginiana	
Cymodoceae	C · · · · · · · · · · · · · · · · · · ·	
Manatee grass	Syringodium filiforme	
Cyperaceae Wotowaraa	Dulla actulia hand act	
watergrass Conillary hoireadae	DUIDOSIYIIS DAYDAIA Bulhostylia cilictifalica	
Capinary nanseuge	<i>Duidosiyiis ciiiaiijoila</i>	

# A 4 - 5

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Sandyfield hairsedge	Rulhostylis stenonhylla	
Ware's Hairsedge	Bulbostylis stenophytta Bulbostylis warei	
Sedge	Carex festucacea	
Bristlystalked sedge	Carex Jesticacca Carex lentalea	
Jamaica swamp saworass	Cladium jamaicense	
Baldwin's flatsedge	Cyperus croceus	
Swamn flatsedge	Cyperus distinctus	
Yellow nutgrass	Cyperus esculentus	
Wirv flatsedge	Cyperus filiculmis	
Hasnan flatsedge	Cyperus haspan	
Eninhytic flatsedge	Cyperus lanceolatus	
Leconte's flatsedge	Cyperus lecontei	
Fragrant flatsedge	Cyperus odoratus	
Many-snike flatsedge	Cyperus polystachyos	
Low flatsedge	Cyperus porystaenyos Cyperus numilus	
Pineharren flatsedge	Cyperus pumuus Cyperus retrorsus	
Tropical flatsedge	Cyperus reirorsus	
Baldwin's snikerush	Eleocharis baldwinii	
Gulf Coast spikerush	Fleocharis cellulose	
Slim snikerush	Eleocharis elongata	
Vellow spikerush	Fleocharis flavescens	
Canada snikerush	Eleocharis geniculata	
Sand snikerush	Eleocharis montevidensis	
Dwarf spikerush	Eleocharis noncertaensis Eleocharis parvula	
Robbin's spikerush	Eleocharis robbinsii	
Three-angle spikerush	Eleocharis tricostata	
Snikerush	Eleocharis vivipara	
Carolina fimbry	Fimbristylis caroliniana	
Forked fimbry	Fimbristylis dichotoma	
Marsh fimbry	Fimbristylis spadicea	
Saltmarsh umbrella sedge	Fuirena hreviseta	
Southern umbrella sedge	Fuirena scirpoidea	
Baldwin's beak sedge	Rhvnchospora baldwinii	
Bunched beak sedge	Rhynchospora cephalantha	
Loosehead beaksedge	Rhynchospora chalarocephala	
White-top star rush	Rhynchospora colorata	
Savannah beak sedge	Rhynchospora debilis	
Fascicled beak sedge	Rhynchospora fascicularis	
Globe beak rush	Rhynchospora globularis	
Slender beak rush	Rhynchospora gracilenta	
Grav's Beaksedge	Rhynchospora gravi	
Narrowfruit horned beaksedge	Rhvnchospora inundata	
Sandyfield beaksedge	Rhynchospora megalocarpa	
Southern beaksedge	Rhvnchospora microcarpa	
Bunched beaksedge	Rhvnchospora microcenhala	
Coastal beaksedge	<i>Rhynchospora pleiantha</i>	
Fairy beaksedge	Rhynchospora pusilla	

\* Non-native Species

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Wright's beaksedge	Rhvnchospora wrightiana	
American bulrush	Scirpus americanus	
Woolgrass	Scirpus cyperinus	
Threesquare bulrush	Scirpus pungens	
Softstem bulrush	Scirpus validus	
Fringed nutrush	Scleria ciliate	
Cyrillaceae		
Black titi	Cliftonia monophylla	
Swamp cyrilla, white titi	Cyrilla racemiflora	
Droseraceae		
Dwarf sundew	Drosera brevifolia	
Pink sundew	Drosera capillaries	
Spoonleaf sundew	Drosera intermedia	41
Dryopteridaceae		
Sensitive fern	Onoclea sensibilis	
Ebenaceae		
Common persimmon	Diospyros virginiana	
Empetraceae		
Florida rosemary	Ceratiola ericoides	
Equistaceae		
Scouring rush	Equisetum hyemale	
Ericaceae		
Dwarf huckleberry	Gaylussacia dumosa	
Blue huckleberry	Gaylussacia frondosa	
Rusty staggerbush, rusty lyonia	Lyonia ferruginea	
Staggerbush	Lyonia fruiticosa	
Fetterbush	Lyonia lucida	
Sparkleberry	Vaccinium arboreum	
Blueberry	Vaccinium darrowii	
Mayberry	Vaccinium elliotii	
Shiny blueberry	Vaccinium myrsinites	
Deerberry	Vaccinium stamineum	
Eriocaulaceae		
Hat pin	Eriocaulon decangulare	
Ravenel's pipewort	Eriocaulon ravenellii	
Euphorbiaceae		
Dixie sandmat	Chamaesyce bombensis	
Hyssopleaf sandmat	Chamaesyce hyssopifolia	
* Non-native Species	A 4 - 7	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Tread softly	Cnidoscolus stimulosus	
Woolly croton	Croton capitatus	
Vente conmigo	Croton glandulosus	
Michaux's croton	Croton michauxii	
Minemaan 5 ereten	er oton monutati	
Fabaceae		
Sticky jointvetch	Aeschynomene viscidula	
Mimosa*	Albizia julibrissan	
False indigo	Amorpha fruiticosa	
Climbing butterfly pea	Centrosema virginianum	
Partridge pea	Chamaecrista fasiculata	
Sensitive pea	Chamaecrista nicitans	
Atlantic pidgeonwings	Clitoria mariana	
Lanceleaf rattlebox	Crotalaria lanceolata	
Smooth rattlebox	Crotalaria pallida	
Rabbitbells	Crotalaria rotundifolia	
Showy rattlebox*	Crotalaria spectabilis	
Feay's prairieclover	Dalea feayi	
Comun Zarzabacoa	Desmodium incanum	
Stiff ticktrefoil	Desmodium obtusum	
Coralbean	Erythrina herbacea	
Soft milkpea	Galactia mollis	
Downey milkpea	Galactia volubilis	
Narrowleaf bushclover	Lespedeza angustifolia	
Shrubby bushclover	Lespedeza bicolor	
Hairy bushclover	Lespedeza hirta	
Creeping bushclover	Lespedeza repens	
Tall bushclover	Lespedeza stuevi	
Tropical puff	Neptunia pubescens	
Maryland wild sensitive plant	Senna marilandica	
Coffeeweed	Senna obtusifolia	
Danglepod	Sesbania macrocarpa	
Rattlebox*	Sesbania punicea	
Bladderpod	Sesbania vesicaria	
Trailing fuzzybean	Strophostyles helvola	
Fourleaf vetch	Vicia acutifolia	
Common vetch	Vicia sativa	
Fagaceae		
Chapman oak	Quercus chapmanii	
Sand live oak	Quercus geminate	
Bluejack oak	Quercus incana	
Turkey oak	Quercus laevis	
Laurel oak	$ar{Q}$ uercus laurifolia	
Overcup oak	Quercus lyrata	
Dwarf-live oak	$\overline{Q}$ uercus minima	
Myrtle oak	Quercus myrtifolia	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Water oak Running oak Live oak	Quercus nigra Quercus pumila Quercus virginiana	
Gentianaceae Slender marsh pink Largeflower marsh pink Rose-of-plymouth	Sabatia campanulata Sabatia grandiflora Sabatia stellaris	
<b>Geraniaceae</b> Carolina cranesbill	Geranium carolinianum	
<b>Haemodoraceae</b> Redroot	Lachnanthes caroliniana	
Haloragaceae Parrot feather* Loose watermilfoil Mermaidweed	Myriophyllum aquaticum Myriophyllum laxum Proserpinaca pectinata	
<b>Hydrocharitaceae</b> Turtlegrass	Thalassia testudinum	
<b>Hypoxidaceae</b> Fringed yellow stargrass	Hypoxis juncea	
<b>Iridaceae</b> Narrowleaf blue-eyed grass Nash's blue-eyed grass Annual blue-eyed grass Jeweled blue-eyed grass	Sisyrinchium angustifolium Sisyrinchium nashii Sisyrinchium rosulatum Sisyrinchium xerophyllum	
<b>Juglandaceae</b> Pignut hickory	Carya glabra	
Juncaceae Tapertip rush Toad rush Leathery rush Forked rush Soft rush Shore rush Bighead rush Annual rush Needle rush Needlepod rush Path rush	Juncus acuminatus Juncus bufonius Juncus coriaceus Juncus dichotomus Juncus effuses Juncus marginatus Juncus megacephalus Juncus pelocarpus Juncus roemarianus Juncus scirpoides Juncus tenuis	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Redpod rush	Juncus trigonocarpus	
Lamiaceae		
Scarlet calamint	Calamintha coccinea	
False rosemary	Conradina canescens	
Spotted beebalm	Monarda punctata	
Lyreleaf sage	Salvia lyrata	
Helmut skullcap	Scutellaria integrifolia	
Forked bluecurls	Trichostema dichotomum	
Lauraceae		
Redbay	Persea borbonia	
Swamp bay	Persea palustris	
Lentibulariaceae		
Blueflower butterwort	Pinguicula caerulea	41
Small butterwort	Pinguicula pumila	
Carolina clover	Trifolium carolinianum	
Low hop clover	Trifolium dubium	
Crimson clover	Trifolium incarnatum	
Horned bladderwort	Utricularia cornuta	
Floating bladderwort	Utricularia inflata	
Purple bladderwort	Utricularia purpurea	
Little floating bladderwort	Utricularia radiata	
Zigzag bladderwort	Utricularia subulata	
<b>Liliaceae</b> False garlic	Nothoscordum bivalve	
Logoniacono		
Rustweed	Polypremum procumbens	
Lycopodiaceae	I vegnodialla alongeuroidas	
i oxtali ciuoliloss	Lycopolitenia atopecaronaes	
Lythraceae Toothcups	Rotala ramosior	
Magnoliaceae		
Southern magnolia	Magnolia grandiflora	
Sweetbay	Magnolia virginiana	
Malvaceae	V , 1 , 1 · · · ·	
Saltmarsh mallow	Kosteletzkya virginica	
Melastomataceae	Dhawin a hawin	
west Indian meadow beauty	Knexia cubensis	
* Non-native Species	A 4 - 10	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Pale meadow beauty Maid marian Handsome harry	Rhexia mariana Rhexia nashii Rhexia virginica	
Myricaceae Southern bayberry Evergreen bayberry Oderless bayberry	Myrica cerifera Myrica heterophylla Myrica inodora	
<b>Nymphaeaceae</b> Spatterdock American white waterlily, fragrant	Nuphar advena Nymphaea odorata	
<b>Oleaceae</b> Wild olive	Osmanthus americanus	
Onagraceae Southern Beeblossom Winged primrose willow Seedbox Wingleaf primrose willow Anglestem primrose willow Seaside primrose willow Mexican primrose willow Globefruit primrose willow Savannah primrose willow Narrowleaf evening primrose Seabeach evening primrose Cutleaf evening primrose	Gaura angustifolia Ludwigia alata Ludwigia alternifolia Ludwigia decurrens Ludwigia leptocarpa Ludwigia maritima Ludwigia octovalvis Ludwigia sphaerocarpa Ludwigia virgata Oenothera fruticosa Oenothera humifusa Oenothera laciniata	
<b>Ophioglossaceae</b> Bulbous Adder's-tongue	Ophioglossum crotalophoroides	
<b>Orchidaceae</b> Greenvein ladiestresses	Spiranthes praecox	
<b>Orobanchaceae</b> Flaxleaf false foxglove Threadleaf false foxglove	Agalinis linifolia Agalinis setacea	
<b>Osmundaceae</b> Cinnamon fern Royal fern	Osmunda cinnamomea Osmunda regalis var. spectabilis	
<b>Oxalidaceae</b> Lady's wood sorrel	Oxalis corniculata	
* Non-native Species	A 4 - 11	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Phytolaccacaaa		
American nokeweed	Phytolacca Americana	
American pokeweed	1 пующеси Атенсини	
Pinaceae		
Sand pine	Pinus clausa	
Slash pine	Pinus elliotii	
Longleaf pine	Pinus palustris	
Pond pine	Pinus serotina	
Plantaginaceae		
Virginia plantain	Plantago virginica	
Plumbaginaceae		
Carolina sea lavender	Limonium carolinianum	
Poaceae		
Blue maidencane	Amphicarpum muhlenbergianum	
Big bluestem	Andropogon gerardii	
Bushy bluestem	Andropogon glomeratus	
Hairy bluestem	Andropogon longiberbis	
Broomsedge	Andropogon virginicus	
Big threeawn	Aristida condensata	
Longleaf threeawn	Aristida palustris	
Tall threeawn	Aristida patula	
Arrowfeather threeawn	Aristida purpurescens	
Bottlebrush threeawn	Aristida spiciformis	
Wiregrass	Aristida stricta	
Southern sandbur	Cenchrus echinatus	
Coastal sandbur	Cenchrus incertus	
Sand dune sandbur	Cenchrus tribuloides	
Downey danthonia	Danthonia sericea	
Velvet panicum	Dicanthelium scoparium	
Needleleaf witchgrass	Dichanthelium aciculare	
Cypress witchgrass	Dichanthelium dichotomum	
Southern crabgrass*	Digitaria ciliaris	
Saltgrass	Distichlis spicata	
Coast cockspur	Echinochloa walteri	
Indian goosegrass	Eleusine indica	
Virginia wildrye*	Elymus virginicus	
Pan-american balsamscale	Elyonurus tripsacoides	
Red lovegrass	Eragrostis secundiflora	
Saltmarsh fingergrass	Eustachys glauca	
Pinewoods fingergrass	Eustachys petraea	
Italian ryegrass*	Lolium perenne	
Italian ryegrass*	Lolium temulentum	
Muhly hairawn	Muhlenbergia capillaries	
Bitter panicgrass	Panicum amarum	

Common Name	P Scientific Name (f	rimary Habitat Codes for designated species)
Beaked nanicorass	Panicum ancens	
Fall panicorass	Panicum dichotomiflorum	
Redton nanicum	Panicum rigidulum	
Switchgrass	Panicum virgatum	
Knotgrass	Paspalum distichum	
Field paspalum	Pasnalum leave	
Farly paspalum	Paspalum praecor	
Vasevorass	Pasnalum urvillei	
Rose natalorass	Rhynchelytrum renens	
Narrow nlumegrass	Saccarum baldwinii	
Sugarcane nlumegrass	Saccarum giganteum	
American cunscale	Sacciolenis striata	
Little bluestem grass	Schizachvrium scoparium	
Giant bristlegrass	Setaria magna	
Vellow bristlegrass	Setaria parviflora	
Green bristlegrass	Setaria viridis	
Saltmarsh cordgrass	Sparting alterniflorg	
Sand cordgrass	Spartina bakeri	
Saltmeadow cordgrass	Sparting patens	
Gulf cordgrass	Spartina spartinae	
Smutorass	Sparaholus indicus	
Seashore dronseed	Sporobolus virginicus	
Fastern gamma grass	Trinsacum dactuloides	
Sea oats	Uniola paniculata	
Polvgalaceae		
Orange milkwort	Polvgala lutea	
Candyroot	Polygala nana	
Polygonaceae		
Tall jointweed	Polygonella gracilis	
Largeleaf jointweed	Polygonella macrophylla	1
Sandhill wireweed	Polygonella robusta	
October flower	Polygonella polygama	
Dense flower knotweed	Polygonum densiflorum	
Mild waterpepper	Polygonum hydropiperoides	
Dotted smartweed	Polygonum punctatum	
Bog smartweed	Polygonum setaceum	
Jumpseed	Polygonum virginianum	
Sourdock	Rumex hastatulus	
Swamp dock	Rumex verticillatus	
Polypodiaceae		
Bracken fern	Pteridium aquilinum var. pseudocau	udatum
Virginia chain fern	Woodwardia virginica	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Dantadaniaaaaa		
Pickerelweed	Pontederia cordata	
Portulacaceae		
Little hogweed	Portulaca oleracea	
Pink pursiane	Portulaca pilosa	
Rosaceae		
Common serviceberry	Amelanchier arborea	
Red chokeberry	Aronia arbutifolia	
Chickasaw plum	Prunus angustifolia	
Hog plum	Prunus umbellata	
Swamp rose	Rosa palustris	
Highbush blackberry	Rubus argutus	
Sand blackberry	Rubus cuneifolius	
Dewberry	Rubus trivialis	
Pubiacaaa		
Poor ioe	Diodia teres	
Virginia buttonweed	Diodia virginiana	
Coastal bedstraw	Galium hispidulum	
Hairy bedstraw	Galium nilosum	
Stiff marsh bedstraw	Galium tinctorium	
Innocence	Houstonia procumbens	
Flattop mille graines*	Oldenlandia corvmbosa	
Clustered mille graine	Oldenlandia uniflora	
Tropical Mexican clover	Richardia brasiliensis	
Diamondflowers	Stenaria nigricans	
Widgeon grass	Ruppia maritima	
Salicaceae		
Carolina willow	Salix caroliniana	
Black willow	Salix nigra	
	Satur Higi u	
Sapotaceae		
Bully gum	Bumelia lanuginosa	
Scrophulariaceae		
Smooth yellow false foxglove	Aureolaria flava	
Lemon bacopa	Bacopa caroliniana	
Herb-of-grace	Bacopa monnieri	
American bluehearts	Buchnera americana	
Rough hedgehyssop	Gratiola hispida	
Shaggy hedgehyssop	Gratiola pilosa	
Branched hedgehyssop	Gratiola ramose	
Black senna	Seymeria cassioides	
Piedmont black senna	Seymeria pectinata	
* Non-native Species	A 4 - 14	

		Primary Habitat Codes
Common Name	Scientific Name	(for designated species)
Smilacaceae		
Earleaf greenbrier	Smilax auriculata	
Saw greenbrier	Smilax bona-nox	
Cat greenbrier	Smilax glauca	
Bamboo vine	Smilax laurifolia	
Bullbrier	Smilax rotundifolia	
Coral greenbrier	Smilax walteri	
Solanaceae		
Christmasberry	Lycium carolinianum	
Coastal groundcherry	Physalis angustifolia	
Walter's groundcherry	Physalis walteri	
Thelynteridaceae		
Hairy maiden fern	Thelipteris hispidula	
Marsh fern	Thelipteris palustris	
	incupier is partients	
Turneracea		
Pitted stripeseed	Piriqueta cistoides subsp. Ca	roliniana
Typhaceae		
Southern cattail	Typha domingensis	
Broadleaf cattail	Typha latifolia	
Urticacea		
False nettle	Boehmeria cylindrical	
Verbenaceae		
Lantana, shrub verbena*	Lantana camara	
American beautyberry	Callicarpa Americana	
Capeweed, frog's fruit	Phyla nodiflora	
Veronicaceae		
Appalachicola toad-flax	Linaria floridana	
- <b>r r m</b>		
Viloaceae		
White bog violet	Viola lanceolata	
Vitaceae		
Virginia creeper, woodbine	Parthenocissus quinquefolia	
Pepper vine	Ampelopsis arborea	
Summer grape	Vitis aestivalis	
Catbird grape	Vitis palmata	
Muscadine grape	Vitis rotundifolia	
Frost grape	Vitis vulpine	

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Xvridaceae		
Vellow-eved grass	Xvris amhioua	
Shortleaf vellow-eved grass	Xvris brevifolia	
Carolina vellow-eved grass	Xvris caroliniana	
Bog vellow-eved grass	Xvris difformis	
Drummiond's vellow-eved grass	Xvris drummondii	
Elliot's vellow-eved grass	Xvris elliotii	
Fringed vellow-eved grass	Xvris fimbriata	
Yellow-eved grass	Xvris flabelliformis	
Yellow-eyed grass	Xyris jupicai	
Tall yellow-eyed grass	Xyris platylepis	
Small's yellow-eyed grass	Xyris smalliana	
Pineland yellow-eyed grass	<i>Xyris stricta</i>	

# **Bald Point State Park—Animals**

Common Name	Pr Scientific Name	imary Habitat Codes (for all species)
	FISH	
Sea catfish	Arius felis	63
Gafftopsail catfish	Bagre marinus	63
Southern stingray	Dasyatis americana	63
Sand perch	Diplectrum formosum	63
Mojarra	Eucinostomus spp.	63
Gulf killifish	Fundulus grandis	63
Mosquitofish	Gambusia holbrooki	24,29,46,47,63
Spot	Leiostomus xanthurus	63
Bluegill	Lepomis macrochirus	24,29,46,47
Largemouth bass	Micropterus salmoides	24,29,46,47
Striped mullet	Mugil cephalus	63
White mullet	Mugil curema	63
Southern flounder	Paralichthys lethostigma	63
Red drum	Sciaenops ocellatus	63
	AMPHIBIANS	
Salamanders		
Eastern tiger salamander	Ambystoma tigrinum tigrinum	24,26,29
Two-toed amphiuma	Amphiuma means means	24,26,29
Southern dusky salamander	Desmognathus auriculatus	24,26,29
Central newt	Notopthalmus viredescens louisianen	sis 24,26,29
Frogs and Toads		
Florida cricket frog	Acris gryllus dorsalis	24,29,46
Oak toad	Bufo quercicus	8,14,15
Southern toad	Bufo terrestris	8,14,15
Eastern narrowmouth toad	Gastrophryne carolinensis	shady, wet areas
Green treefrog	Hyla cinerea	8,41
Pinewoods treefrog	Hyla femoralis	8,41
Squirrel treefrog	Hyla squirella	8,41
Southern chorus frog	Pseudacris nigrita	8,41
Little grass frog	Pseudocris ocularis	8,41
Bullfrog	Rana catesbeiana	24,29,46,47
Pig frog	Rana grylio	24,29,46,47
Southern leopard frog	Rana sphenocephala	24,29,46,47
Eastern spadefoot toad	Scaphiopus holbrooki holbrooki	24,29
	REPTILES	
<b>Crocodilians</b> American alligator	Alligator mississinniensis	24 29 46
		<u>4</u> 7,27,70
<b>Turtles</b> Florida softshell turtle	Anglone feror	A6 A7
	ipuione jeron	40,47
· Non-native species	A 4 - 17	

# **Bald Point State Park—Animals**

Common Name	P Scientific Name	rimary Habitat Codes (for all species)
I accomband and tuntle	Connetter connetter	77
Loggernead sea turtle	Caretta caretta	
Green sea turtle	Chelonia myaas	//
Gopner tortoise	Gopnerus polypnemus	8, 14, 15
Striped mud turtle	Kinosternon baurii	24,29
Suwannee cooter	Pseudemys concinna suwanniensis	46
Florida redbelly turtle	Pseudemys nelsoni	46
Common musk turtle	Sternotherus odoratus	24,29
Florida box turtle	Terrapene carolina	26,41
Lizards		
Green anole	Anolis carolinensis	MTC
Six-lined racerunner	Cnemidophorus sexlineatus sexlinea	<i>tus</i> 14,15
Mole skink	Eumeces egregius	7,8
Southeastern five-lined skink	Eumeces inexpectatus	7,8
Broadhead skink	Eumeces laticeps	7,8
Eastern glass lizard	Ophisaurus ventralis	8,15
Southern fence lizard	Sceloporus undulatus undulatus	14,15
Snakes		
Florida cottonmouth	Agkistrodon piscivorus conanti	MTC
Southern black racer	Coluber constrictor priapus	MTC
Eastern diamondback rattlesnake	Crotalus adamanteus	8,14,15
Eastern indigo snake	Drymarchon corais couperi	8,14,15
Corn snake	Elaphe guttata guttata	8,15
Yellow rat snake	Elaphe obsoleta quadrivittata	MTC
Eastern hognose snake	Heterodon platirhinos	14,15
Southern hognose snake	Heterodon simus	8,14,15
Eastern kingsnake	Lampropeltis getula getula	8,15
Scarlet kingsnake	Lampropeltis triangulum elapsiodes	8
Eastern coachwhip	Masticophis flagellum flagellum	8,14,15
Eastern coral snake	Micrurus fulvius fulvius	7,8
Gulf salt marsh snake	Nerodia clarkii clarkii	63
Southern water snake	Nerodia fasciata	24,29,46,47
Florida water snake	Nerodia fasciata pictiventris	24,29,46,47
Brown water snake	Nerodia taxispilota	46.47
Rough green snake	Opheodrys aestivus	8.41
Dusky pigmy rattlesnake	Sistrurus miliarius barbouri	MTC
Eastern garter snake	Thamnophis sirtalis sirtalis	MTC

#### BIRDS

Loons			
Common Loon	Gavia immer	OF	
Red-throated Loon	Gavia stellata	OF	
Pacific Loon	Gavia pacifica	OF	
Common Name	Scientific Name	Primary Habitat Codes (for all species)	
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Grebes			
Pied-billed Grebe	Podilymbus podiceps	wetlands	
Horned Grebe	Podiceps auritus	wetlands	
Cormorants			
Double-crested Cormorant	Phalocrocorax auritus	wetlands, bay	
Darters			
Anhinga	Anhinga anhinga	wetlands	
Herons and Bitterns			
Great Egret	Ardea alba	wetlands	
Great Blue Heron	Ardea herodias	wetlands	
American Bittern	Botaurus lentiginosus	wetlands	
Least Bittern	Ixobrychus exilis	wetlands	
Cattle Egret	Bubulcus ibis	wetlands	
Green Heron	Butorides virescens	wetlands	
Reddish Egret	Egretta rufescens	wetlands	
Little Blue Heron	Egretta caerulea	wetlands	
Snowy Egret	Egretta thula	wetlands	
Tricolored Heron	Egretta tricolor	wetlands	
Yellow-crowned night heron	Nyctanassa violacea	24,29,46	
Black-crowned night heron	Nycticorax nycticorax	24,29,46	
Ibises and Spoonbills			
White Ibis	Eudocimus albus	wetlands	
Glossy Ibis	Plegadis falcinellus	OF	
Roseate Spoonbill	Ajaia ajaja	OF	
Storks & Cranes			
Wood Stork	Mycteria americana	wetlands	
Sandhill Crane	Grus canadensis	OF	
Pelicans			
American White Pelican	Pelecanus erythrorhynchos	marshes	
Brown Pelican	Pelecanus occidentalis	bay	
Rails & Gallinules			
Clapper Rail	Rallus longirostris	saltmarshes	
King Rail	Rallus elegans	marshes	
Virginia Rail	Rallus limicola	marshes	
Sora	Porzana carolina	marshes	
Common Moorhen	Gllinula chloropus	wetlands	
American Coot	Fulica americana	wetlands	
Ducks and Geese			
Wood Duck	Aix sponsa	wetlands	
American Wigeon	Anas Americana	wetlands	
Mallard	Anas platyrhynchos	24, 46, 63	
* Non-native Species	A 4 - 19		

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Hooded Merganser	Lophodytes cucullatus	wetlands
Red-breated merganser	Mergus servator	wetlands
Greater White-fronted Goose	Melanitta fusca	OF
Snow Goose	Chen caerulescens	OF
Gadwall	Anas strenera	OF
Blue-winged Teal	Anas discors	wetlands
Northern Shoveler	Anas chineata	wetlands
Northern Pintail	Anas acuta	OF
Green_winged Teal	Anas cracca	wetlands
Canvashack	Anus creccu Avthva valisinaria	OF
Pedhead	Ayinya vansineria Aythya amoricana	wetlands
Reuncau Ping packed Duck	Ayinya americana Aythya collaris	wetlands
Greater Seeup	Ayinya conuris	OF
Lagger Secur	Ayinya marita Anthna affinis	wetlands
Horloquin Duck	Ayinya ajjinis Histrionious histrionious	OF
Furf Sector	Molanitta novani oillata	Or bay
Suri Scoter	Melanilla perspicillala Melanitta nimur	bay
Black Scoler	Melanilla nigra	Day
White-winged Scoter	Melanitta fusca	bay
Burrienead	Bucephala albeola	bay
Common Goldeneye	Bucephala clangula	wetlands
Ruddy Duck	Oxyura jamaicensis	wettands
Hawks, Eagles and Kites		
Cooper's Hawk	Accipiter cooperii	MTC, OF
Sharp-shinned Hawk	Accipiter striatus	MTC, OF
Red-tailed Hawk	Buteo jamaicensis	MTC, OF
Red-shouldered Hawk	Buteo lineatus	MTC, OF
Broad-winged Hawk	Buteo platypterus	MTC, OF
Northern Harrier	Circus cyaneus	OF
Swallow-tailed Kite	Elanoides forficatus	OF
Peregrine Falcon	Falco peregrinus	MTC
American Kestrel	Falco sparverius	MTC. OF
Merlin	Falco columbarius	MTC. OF
Bald Eagle	Haliaeetus leucocenhalus	MTC OF
Mississippi Kite	Ictinia mississippiensis	OF
Osprev	Pandion haliaetus	MTC OF
Swainson's Hawk	Buteo swainsoni	OF
Golden Eagle	Aquila chrysaetos	OF
Vulturos		
vulturo Turkov Vulturo	Cathartas aura	MTC OF
Black Vulture	Corramps atratus	MTC, OF
	Corugyps utratus	WITC, UP
Turkey and Quail		
Northern Bobwhite	Colinus virginianus	8,41
Wild Turkey	Meleagris gallopavo	8,15

#### **Primary Habitat Codes Common Name** Scientific Name (for all species) **Snipes and Sandpipers** Spotted Sandpiper Actitis macularia 77 Sanderling 77 *Calidris alba* 77 Dunlin Calidris alpina Western sandpiper Calidris mauri 77 Least sandpiper Calidris minutilla 77 Semipalmated sandpiper 77 Calidris pusilla 77 Willet Catoptrophorus semipalmatus Limnodromus griseus Short-billed Dowitcher 77 77 Marbled Godwit Limo safedoa American Woodcock Scolopax minor 41.63 Solitary Sandpiper Tringa solitaria 77 American Oystercatcher *Haematopus palliatus* 77 American Avocet Recurvirostra americana salt marshes Greater Yellowlegs Tringa melanoleuca salt marshes Lesser Yellowlegs Tringa flavipes marshes Upland Sandpiper Bartramia longicauda OF Numenius phaeopus OF Whimbrel Long-billed Curlew Numenius americanus OF Ruddy Turnstone Arenaria interpres 77 Red Knot Calidris canutus 77 77 Pectoral Sandpiper Calidris melanotos Buff-breasted Sandpiper Tryngites subruficollis OF Common Snipe Gallinago gallinago marshes Shearwaters 77 Sooty Shearwater Puffinus griseus Seabirds Northern Gannet OF Sula bassanus **Brown Boobv** Sula leucogaster OF Masked Booby Sula dactylatra OF Magnificent Frigatebird Fregata magnificens OF Parasitic Jaeger Stercorarius parasiticus OF Gulls Herring gull 77 *Larus argentatus* Larus atricilla 77 Laughing gull **Ring-billed Gull** OF Larus delawarensis Bonaparte's gull Larus phildelphia 77 Franklin Gull *Larus pipixcan* 77 77 Larus hyperboreus Glaucous Gull Lesser Black-backed Gull Larus fuscus 77 Terns Black skimmer Rynchops niger wetlands, bay Sterna antillarum Least tern 77 77 Sandwich tern *Sterna sandvicensis*

### **Bald Point State Park—Animals**

\* Non-native Species

Common Namo	Scientific Name	Primary Habitat Codes
Common Name	Scientific Name	(for an species)
Poyal torn	Storna marima	77
Koyai tern Forstor's torn	Sterna forstori	77
Cull billed tern	Sterna jorsteri Sterna vilotica	77
Cognian term	Sterna agonia	77
Caspian term	Sterna caspia Sterna himundo	77
	Slerna nirunao	//
	Childonias higer	//
Bridled tern	Sterna anaetnetus	//
Sooty term	Sterna fuscata	11
Plovers		
Ruddy Turnstone	Arenaria interpres	77
Snowy ployer	Charadrius alexandrius	77
Piping ployer	Charadrius melodus	77
Semipalmated ployer	Charadrius seminalmatus	77
Killdeer	Charadrius vociferous	77
Wilson's ployer	Charadrius wilsonia	77
Black hellied ployer	Physialis sayatarola	77
Diack benned plover	Τταντατίς σφατατοτά	
Doves		
Rock Dove	Columba livia	81
Common Ground-Dove	Columbina passerina	8
Mourning Dove	Zenaida macroura	MTC
Eurasian Collared-Dove	Streptopelia decaocto	81
White-winged Dove	Zenaida asiatica	OF
Cuckoos		
Yellow-billed Cuckoo	Coccyzus americanus	7,26
Black-billed Cuckoo	Coccyzus erythropthalmus	7,26,41
Grove-billed Ani	Crotophaga ani	OF
Owls		
Great Horned Owl	Bubo virginianus	МТС
Eastern Screech Owl	Otus asio	MTC
Barred Owl	Strix varia	MTC
Barn Owl	Tyto alba	MTC
Snowy Owl	Nyctea scandiaca	OF
Short-eared Owl	Asio flammeus	OF
Goatsuckers		
Chuck-will's-willow	Caprimulaus carolinansis	МТС
Common Nighthawk	Chordeiles minor	OF
Whin-noor will	Choraelles million Caprimulaus vociferus	Q 15
wmp-poor-wm	Caprimuigus vocijerus	0,13
Swifts		
Chimney Swift	Chaetura pelagica	OF

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Humminghinda	-	· · · · ·
Ruby-throated Humminghird	Archilochus colubris	MTC
Rufous Humminghird	Selasphorus rufus	MTC
Allen's Humminghird	Selasphorus sasin	MTC
Black-chinned Hummingbird	Archilochus alexandri	OF
Calliope Hummingbird	Stellula calliope	OF
Kingfishers		
Belted Kingfisher	Ceryle alcyon	wetlands
Woodpeckers		
Northern Flicker	Colaptes auratus	MTC
Pileated Woodpecker	Dryocopus pileatus	MTC
Red-bellied Woodpecker	Melanerpes carolinus	MTC
Red-headed Woodpecker	Melanerpes erythrocephalus	MTC
Downy Woodpecker	Picoides pubescens	MTC
Yellow-bellied Sapsucker	Sphyrapicus varius	МТС
Flycatchers		
Acadian Flycatcher	Empidonax virescens	MTC
Great Crested Flycatcher	Mylarchus crinitus	MTC
Eastern Phoebe	Sayornis phoebe	MIC
Eastern Kingbird	Tyrannus tyrannus	MIC
Y ellow-bellied flycatcher	Empidonax flaviventris	OF
Ash-throated Hycatcher	Mylarchus cinerascens	OF
Loget Elyeptohor	Empidon an minimus	OF
Say's Phose	Empluonax minimus Savornis sava	OF
Brown-crested Flycatcher	Myjarchus tyrannulus	OF
Western Kinghird	Tyrannus verticalis	7.8
Scissor-tailed Flycatcher	Tyrannus forficatus	7,8
Seissor uneur ryeutener	1 yr annas jor jieanas	7,0
Vireos		
Yellow-throated Vireo	Vireo flavifrons	OF
White-eyed Vireo	Vireo griseus	7,8
Red-eyed Vireo	Vireo olivaceus	7,8
Blue-headed Vireo	Vireo solitarius	OF
Bell s Vireo		OF
Philadelphia Vireo	Vireo philadelphicus	OF
Black-whiskered vireo	vireo altiloquus	OF
Jays and Crows		
American Crow	Corvus brachyrhynchos	MIC, OF
FISH CTOW	Corvus ossifragus	saltmarshes, OF
Blue Jay	Cyanocitta cristata	MIC

Common Name Scientific Name		Primary Habitat Codes (for all species)	
Martins			
Purple Martin	Progne subis	OF	
Swallows			
Barn Swallow	Hirundo rustica	MTC, OF	
Tree Swallow	Tachycineta bicolor	7,63	
Northern Rough-winged Swallow	Stelgidopteryx serripennis	7,63	
Bank Swallow	Riparia riparia	OF	
Cliff Swallow	Hirundo pyrrhonota	OF	
Titmice			
Tufted Titmouse	Baeolophus bicolor	MTC	
Carolina Chickadee	Poecile carolinensis	MTC	
Nuthatches			
Brown-headed Nuthatch	Sitta pusilla		
Wrens			
Carolina Wren	Thryothorus ludovicianus	MTC	
House Wren	Troglodytes aedon	MTC	
Sedge Wren	Cistothorus platensis	7,8,41	
Marsh Wren	Cistothorus palustris	63	
Gnatcatchers and Kinglets			
Blue-gray Gnatcatcher	Polioptila caerulea	MTC	
Ruby-crowned Kinglet	Regulus calendula	MTC	
Golden-crowned Kinglet	Regulus satrapa	MTC	
Thrushes			
Veery	Catharus fuscescens	MTC	
Hermit Thrush	Catharus guttatus	MTC	
Gray-cheeked Thrush	Catharus minimus	MTC	
Wood I hrush	Catharus mustelinus	MIC	
Swainson's Inrush	Catharus ustulatus	MIC, OF	
American Dahin	Statta statis Tundua mignatonius	MIC	
American Kouin Northern Waterthrush	Saiurus novaboracansis	OF	
Louisiana Waterthrush	Seiurus noveoorucensis	OF	
Louisiana waterunusii	Seturus motucutu	0I	
Thrashers	Democratika and Linearia	0 15	
May Calolfd Northern Maskinghird	Dumelella carolinensis	8, 15 MTC	
Proup Thresher	Mimus polygiollos	MIC	
	1 ολοδιοπά Γάμπ	WITC	
Starlings			
European Starling*	Sturnus vulgaris	82	
* Non-native Species	A 4 - 24		

Common Name	Scientific Name	Primary Habitat Codes (for all species)	
Waxwings			
Cedar Waxwing	Bombycilla cedrorum	7, 63, OF	
Warblers			
Black-throated Blue Warbler	Dendroica caerulescens	MTC	
Bay-breasted Warbler	Dendroica castanea	MTC	
Yellow-rumped Warbler	Dendroica coronata	MTC	
Prairie Warbler	Dendroica discolor	MTC	
Yellow-throated Warbler	Dendroica dominica	MTC	
Blackburnian Warbler	Dendroica fusca	MTC	
Magnolia Warbler	Dendroica magnolia	MTC	
Palm Warbler	Dendroica palmarum	MTC	
Chestnut-sided Warbler	Dendroica pensylvanica	MTC	
Yellow Warbler	Dendroica petechia	MTC	
Pine Warbler	Dendroica pinus	MTC	
Blackpoll Warbler	Dendroica striata	MTC	
Cape May Warbler	Dendroica tigrina	MTC	
Black-throated Green Warbler	Dendroica virens	MTC	
Common Yellowthroat	Geothlypis trichas	MTC	
Worm-eating Warbler	Helmitheros vermivorus	MTC	
Yellow-breasted Chat	Icteria virens	8, 15	
Swainson's Warbler	Limnothlypis swainsonii	MTC	
Canada Warbler	Wilsonia canadensis	OF	
Black-and-white Warbler	Mniotilta varia	MTC	
Connecticut Warbler	Oporornis agilis	MTC, OF	
Kentucky Warbler	Oporornis formosus	MTC, OF	
Northern Parula	Parula americana	MTC	
Prothonotary Warbler	Protonotaria citrea	MTC	
Ovenbird	Seiurus aurocapillus	MTC	
American Redstart	Setophaga ruticilla	MTC	
Orange-crowned Warbler	Vermivora celata	MTC	
Golden-winged Warbler	Vermivora chrysoptera	MTC	
Tennessee Warbler	Vermivora peregrina	MTC	
Blue-winged Warbler	Vermivora pinus	MTC	
Canada Warbler	Wilsonia canadensis	MTC	
Hooded Warbler	Wilsonia citrina	MTC	
Wilson's Warbler	Wilsonia pusilla	MTC	
Nashville Warbler	Vermivora ruficapilla	OF	
Black-throated Gray Warbler	Dendroica nigrescens	OF	
Cerulean Warbler	Dendroica cerulea	OF	
Tanagers			
Scarlet Tanager	Piranga olivacea	OF	
Summer Tanager	Piranga rubra	8	
Western Tanager	Piranga ludoviciana	OF	

#### **Primary Habitat Codes Common Name** Scientific Name (for all species) **Sparrows** Bachman's Sparrow Aimophila aestivalis 8,41 Grasshopper Sparrow Ammodramus savannarum 8.41 Song Sparrow Melospiza melodia MTC Savannah Sparrow Passerculus sandwichensis 8.41 Fox Sparrow Passerella iliaca OF Eastern Towhee *Pipilo erythrophthalmus* MTC Vesper Sparrow *Pooecetes gramineus* 8.15 **Chipping Sparrow** Spizella passerina 8,15 Field Sparrow Spizella pusilla 8,15,41 Zonotrichia albicollis White-throated Sparrow 8 Clay-colored Sparrow Spizella pallida 8,41 Lark Sparrow Chondestes grammacus 7,8,41 Lark Bunting *Calamospiza melanocorys* OF Nelson's Sharp-tailed Sparrow Ammodramus nelsoni OF Ammodramus maritimus Seaside Sparrow salt marshes Lincoln's Sparrow Melospiza lincolnii OF Swamp Sparrow Melospiza georgiana wetlands White-crowned Sparrow Zonotrichia leucophrys wetlands Gold-crowned Sparrow Zonotrichia atricapilla wetlands **Meadowlarks, Blackbirds and Orioles** Red-winged Blackbird Agelaius phoeniceus wetlands Bobolink Dolichonvx orvzivorus MTC Rusty Blackbird Euphagus carolinus MTC **Baltimore** Oriole *Icterus* galbula MTC Orchard Oriole MTC *Icterus spurius* Brown-headed Cowbird\* Molothrus ater MTC Common Grackle 8.41.81 *Ouiscalus quiscula* Eastern Meadowlark Sturnella magna 8.41 MTC Dickcissel Spiza americana Yellow-headed Blackbird Xanthocephalus xanthocephalus OF Boat-tailed Grackle **Quiscalus** major 77, saltmarshes Shiny Cowbird Molothrus bonariensis 81 **Bronzed** Cowbird OF Molothrus aeneus **Cardinals, Grosbeaks, and Buntings** Northern Cardinal *Cardinalis cardinalis* MTC Blue Grosbeak MTC, OF *Guiraca caerulea* Indigo Bunting Passerina cyanea 8, 15, 41 **Rose-breasted Grosbeak** *Pheucticus ludovicianus* 7,8 Dark-eyed Junco Junco hvemalis OF Pheucticus melanocephalus Black-headed Grosbeak OF Painted Bunting Passerina ciris MTC Finches American Goldfinch Carduelis tristis MTC, OF \* Non-native Species A 4 - 26

Common Name	Scientific Name	Primary Habitat Codes (for all species)
House Finch	Carpodacus mexicanus	MTC
Pine Siskin	Carduelis pinus	8,41
	MAMMALS	
Opossum	Didelphis virginiana	MTC
Shorttailed shrew	Blarina carolinensis	MTC
Least shrew	Cryptotis parva	MTC
Eastern mole	Scalopus aquaticus	8,15,41
Eastern pistrelle bat	Pipistrellus subflavus.	MTC
Southeastern bat	Myotis austroriparius	MTC
Big brown bat	Eptesicus fuscus	MTC
Nine-banded armadillo*	Dasypus novemcinctus	MTC
Eastern cottontail	Sylvilagus floridanus	8,41
Marsh rabbit	Šylvilagus palustris	41,26,63
Beaver	Castor canadensis	wetlands
Southeastern pocket gopher	Geomys pinetis	8,15
Eastern woodrat	Neotoma floridana	8,26,41
Cotton mouse	Peromyscus gossypinus	8,15
Gray squirrel	Sciurus carolinensis	MTC
Hispid cotton rat	Sigmodon hispidus	8,15
Covote*	Canis latrans	MTC
Bobcat	Felis rufus	MTC
River otter	Lutra canadensis	marshes, lakes
Striped skunk	Mephitis mephitis	MTC
Long-tailed weasel	Mustela frenata	MTC
Raccoon	Procvon lotor	MTC
Grav fox	Urocvon cinereoargenteus	MTC
Florida black bear	Ursus americanus floridanus	MTC
White-tailed deer	Odocoileus virginianus	MTC

#### **Terrestrial**

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

#### **Palustrine**

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

#### Lacustrine

- 43. Clastic Upland Lake
- 44. Coastal Dune Lake
- 45. Coastal Rockland Lake

#### Lacustrine--Continued

- 46. Flatwood/Prairie Lake
- 47. Marsh Lake
- **48**. River Floodplain Lake
- 49. Sandhill Upland Lake
- 50. Sinkhole Lake
- 51. Swamp Lake

### **Riverine**

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

#### **Estuarine**

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

#### <u>Marine</u>

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

#### **Subterranean**

- 79. Aquatic Cave
- 80. Terrestral Cave

#### **Miscellaneous**

- 81. Ruderal
- 82. Developed
- MTC Many Types Of Communities
- **OF** Overflying

Addendum 5—Designated Species List

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an <u>element</u> as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An <u>element occurrence</u> (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Game and Freshwater Fish Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

### FNAI GLOBAL RANK DEFINITIONS

G1	=	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made
G2	=	Tactor. Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because
G3	=	Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
G4	=	apparently secure globally (may be rare in parts of range)
G5	=	demonstrably secure globally
GH	=	of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GX	=	believed to be extinct throughout range
GXC	=	extirpated from the wild but still known from captivity or cultivation
G#?	=	tentative rank (e.g.,G2?)
G#G#	=	range of rank; insufficient data to assign specific global rank (e.g.,G2G3)
G#T#	=	rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to
		the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g.,G3T1)
G#Q	=	rank of questionable species - ranked as species but questionable whether it is species or subspecies: numbers have same definition as above (e.g., G2Q)
G#T#O	=	same as above, but validity as subspecies or variety is questioned.
GU	=	due to lack of information no rank or range can be assigned (e.g.,GUT2).
G?	=	not vet ranked (temporary)
S1	=	Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000
		individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2	=	Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or
		because of vulnerability to extinction due to some natural or man-made factor.
S3	=	Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4	=	apparently secure in Florida (may be rare in parts of range)
S5	=	demonstrably secure in Florida
SH	=	of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX	=	believed to be extinct throughout range
SA	=	accidental in Florida, i.e., not part of the established biota
SE	=	an exotic species established in Florida may be native elsewhere in North America
SN	=	regularly occurring, but widely and unreliably distributed; sites for conservation hard to determine
SU	=	due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?	=	not yet ranked (temporary)
Ν	=	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.
- E(S/A) = Endangered due to similarity of appearance.
- T(S/A) = Threatened due to similarity of appearance.

#### **STATE**

#### <u>Animals</u> (Listed by the Florida Fish and Wildlife Conservation Commission - FFWCC)

- LE = Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT = Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LS = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

#### <u>Plants</u> (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

- LE = Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- LT = Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state,but which have not so decreased in such number as to cause them to be endangered.

## **Bald Point State Park—Plants**

Common Name/	<b>Designated Species Status</b>		
Scientific Name	FDACS	USFWS	FNAI
Spoon-leaf sundew	LT		G5,S3
Drosera intermedia			
Godfrey's blazing star	LE	MC	G2,S2
Liatris provincialis			
Bent golden aster	LE	MC	G3,S3
Pityopsis flexuosa			
Large-leaved jointweed	LT	MC	G3,S3
Polygonella macrophylla			

### **Bald Point State Park—Plants**

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

Scientific NameFFWCCUSFWSFNA1REPTILESAmerican alligator Alligator mississippiensisLST(S/A)G5,S4Eastern diamondback rattlesnake Crotalus adamanteusG5,S3G5,S3Eastern indigo snake Drymarchon corais cooperiLTLTG4T3,S3Gopher tortoise Gopherus polyphemusLSG3,S3Southern hognose snake Heterodon simusG2,S2GUIf salt marsh snake Nerodia clarkii clarkiiG4T3,S3?BIRDSCooper's hawk Accipiter cooperii Ajaia ajajaLSG5,S4Ajaia ajajaLSG5,S2Great egret Ardea albaLSG5,S4Little blue heron Egretta caeruleaLSG5,S4Snowy egret Egretta thulaLSG5,S4	Common Name/	mmon Name/ <u>Designated Species Status</u>			
REPTILESAmerican alligator Alligator mississippiensisLST(S/A)G5,S4Eastern diamondback rattlesnake Crotalus adamanteusG5,S3G5,S3Eastern indigo snake Drymarchon corais cooperiLTLTG4T3,S3Gopher trotise Gopher trotise Gopher us polyphemusG3,S3G3,S3Southern hognose snake Heterodon simus Nerodia clarkii clarkiiG2,S2G4T3,S3?Cooper's hawk Accipiter cooperii Bachman's sparrow Aimophila aestivalis Roseate spoonbill Ajaia ajajaLSG5,S4Aitie blue heron Egretta caeruleaLSG5,S4S1,S4Feretta caeruleaLSG5,S4S1,S4Snowy egret Egretta thulaLSG5,S4S1,S4	Scientific Name	FFWCC	USFWS	FNAI	
American alligatorLS $T(S/A)$ $G5,S4$ Alligator mississippiensisLS $T(S/A)$ $G5,S4$ Eastern diamondback rattlesnake $G5,S3$ Eastern indigo snake $G5,S3$ Drymarchon corais cooperiLTLT $LT$ $G4T3,S3$ Gopherus polyphemusLS $G3,S3$ Southern hognose snake $G2,S2$ Heterodon simus $G2,S2$ $G4T3,S3?$ $G4T3,S3?$ BIRDSCooper's hawkAccipiter cooperii $G4,S3?$ Bachman's sparrow $G3,S3$ $G3,S3$ Aimophila aestivalis $G3,S3$ $G3,S3$ Roscate sponbill $Ajaia ajaja$ LS $G5,S4$ Little blue heron $Egretta \ Caerulea$ LS $G5,S4$ Egretta caeruleaLS $G5,S4$ $S54$		REPTILES			
Alligator mississippiensisLST(S/A)G5,S4Eastern diamondback rattlesnakeG5,S3Eastern indigo snakeG5,S3Drymarchon corais cooperiLTLTG4T3,S3Gopher tortoiseG3,S3Southern hognose snakeG2,S2Heterodon simusG2,S2Gulf salt marsh snakeG4T3,S3?BIRDSCooper's hawkAccipiter cooperiiG4,S3?Bachman's sparrowG3,S3Aimophila aestivalisG3,S3Roseate spoonbillG5,S2Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSG5,S4S6,S4Snowy egretG5,S4Egretta thulaLSG5,S4G5,S4	American alligator				
Eastern diamondback rattlesnake Crotalus adamanteus Eastern indigo snake Drymarchon corais cooperi LT LT Gopher tortoise Gopher tortoise Gopherus polyphemus LS G3,S3 Southern hognose snake Heterodon simus G2,S2 Gulf salt marsh snake Nerodia clarkii clarkii G4T3,S3? BIRDS Cooper's hawk Accipiter cooperii G4,S3? Bachman's sparrow Aimophila aestivalis Roseate spoonbill Ajaia ajaja LS G5,S4 Little blue heron Egretta caerulea LS G5,S4 Snowy egret Egretta thula LS G5,S4	Alligator mississippiensis	LS	T(S/A)	G5,S4	
Crotatus adamanteusG5,53Eastern indigo snakeDrymarchon corais cooperiLTLTDrymarchon corais cooperiLTLTG4T3,S3Gopher tortoiseG3,S3G3,S3Southern hognose snakeG2,S2Heterodon simusG2,S2Gulf salt marsh snakeG4T3,S3?BIRDSCooper's hawkAccipiter cooperiiG4,S3?Bachman's sparrowG3,S3Aimophila aestivalisG3,S3Roseate spoonbillG5,S2Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSowy egretG5,S4Firicolored heronLSG5,S4Tiricolored heron	Eastern diamondback rattlesnake			05.02	
DescriptionLTLTLTG4T3,S3Gopher tortoiseLSG3,S3Southern hognose snakeG2,S2Heterodon simusG2,S2Gulf salt marsh snakeG4T3,S3?Nerodia clarkii clarkiiG4T3,S3?BIRDSG4T3,S3?Cooper's hawkG4,S3?Accipiter cooperiiG4,S3?Bachman's sparrowG3,S3Aimophila aestivalisG3,S3Roseate spoonbillG5,S2Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,S4Fricolored heronG5,S4	<i>Crotalus adamanteus</i> Fastern indigo snake			65,83	
Gopher tortoiseLSG3,S3Gopherus polyphemusLSG3,S3Southern hognose snakeG2,S2Heterodon simusG2,S2Gulf salt marsh snakeG4T3,S3?Nerodia clarkii clarkiiG4T3,S3?BIRDSCooper's hawkAccipiter cooperitG4,S3?Bachman's sparrowG3,S3Aimophila aestivalisG3,S3Roseate spoonbillG5,S2Ajaia ajajaLSGreat egretG5,S4Little blue heronG5,S4Egretta caeruleaLSSnowy egretG5,S4Egretta thulaLSG5,S4Tricolored heron	Drymarchon corais cooperi	LT	LT	G4T3.S3	
Gopherus polyphemusLSG3,S3Southern hognose snake Heterodon simusG2,S2Gulf salt marsh snake Nerodia clarkii clarkiiG4T3,S3?BIRDSG4T3,S3?Bachman's sparrow Aimophila aestivalisG4,S3?Bachman's sparrow Aimophila aestivalisG3,S3Roseate spoonbill Ajaia ajajaLSGreat egret Ardea albaG5,S2Great egret Egretta caeruleaLSG5,S4LSLittle blue heron Egretta caeruleaLSSnowy egret Egretta thulaLSG5,S4Tricolored heron	Gopher tortoise				
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Heterodon simusG2,S2Gulf salt marsh snake Nerodia clarkii clarkiiG4T3,S3?BIRDSG4T3,S3?Cooper's hawk Accipiter cooperiiG4,S3?Bachman's sparrow Aimophila aestivalisG3,S3Roseate spoonbill Ajaia ajajaLSGreat egret Ardea albaG5,S2Great egret Egretta caeruleaLSSnowy egret Egretta thulaLSG5,S4Tricolored heron	Southern hognose snake				
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BIRDSCooper's hawk Accipiter cooperiiG4,S3?Accipiter cooperiiG4,S3?Bachman's sparrow Aimophila aestivalisG3,S3Roseate spoonbill Ajaia ajajaLSGreat egret Ardea albaG5,S2Great egret Ardea albaG5,S4Little blue heron Egretta caeruleaLSSnowy egret Egretta thulaG5,S4Tricolored heronG5,S4	Nerodia clarkii clarkii			G4T3,S3?	
Cooper's hawk Accipiter cooperii $G4,S3?$ Bachman's sparrow Aimophila aestivalis $G3,S3$ Roseate spoonbill Ajaia ajaja $LS$ Great egret Ardea alba $G5,S2$ Great egret Ardea alba $G5,S4$ Little blue heron Egretta caerulea $LS$ G5,S4 $G5,S4$ Snowy egret Egretta thula $LS$ G5,S4 $G5,S4$		BIRDS			
Cooper's hawkG4,S3?Accipiter cooperiiG4,S3?Bachman's sparrowG3,S3Aimophila aestivalisG3,S3Roseate spoonbillG5,S2Ajaia ajajaLSGreat egretG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,S4Egretta thulaLSFaretta thulaLSTricolored heronG5,S4					
Accipiter cooperitG4,357Bachman's sparrowG3,83Aimophila aestivalisG3,83Roseate spoonbillG5,82Great egretG5,84Ardea albaG5,84Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,84Egretta thulaLSG5,84Tricolored heron	Cooper's hawk			C4 \$22	
Aimophila aestivalisG3,S3Roseate spoonbillISAjaia ajajaLSGreat egretG5,S2Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,S4Egretta thulaLSFricolored heronG5,S4	Bachman's sparrow			04,55?	
Roseate spoonbillLSG5,S2Great egretG5,S4Ardea albaG5,S4Little blue heronG5,S4Egretta caeruleaLSSnowy egretG5,S4Egretta thulaLSG5,S4Tricolored heron	Aimophila aestivalis			G3,S3	
Ajaia ajajaLSG5,S2Great egretG5,S4Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,S4Egretta thulaLSTricolored heronG5,S4	Roseate spoonbill			,	
Great egretG5,84Ardea albaG5,84Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,84Egretta thulaLSTricolored heronG5,84	Ajaia ajaja	LS		G5,S2	
Ardea albaG5,S4Little blue heronEgretta caeruleaEgretta caeruleaLSSnowy egretG5,S4Egretta thulaLSTricolored heronG5,S4	Great egret			05.04	
Entite ofder heronLSG5,S4Snowy egretEgretta thulaLSG5,S4Tricolored heronG5,S4G5,S4	Ardea alba Little blue beren			65,84	
Snowy egretLSG5,S4Tricolored heronLSG5,S4	Esta caerulea	LS		G5 S4	
<i>Egretta thula</i> LS G5,S4 Tricolored heron	Snowy egret			05,51	
Tricolored heron	Egretta thula	LS		G5,S4	
	Tricolored heron				
Egretta tricolor LS G5,S4	Egretta tricolor	LS		G5,S4	
Swallow-tailed kite	Swallow-tailed kite			C4 5352	
<i>Elanolaes forficalus</i> 04,5255 White ibis	Etanolaes jorficalus White ibis			04,5255	
<i>Eudocimus albus</i> LS G5 S4	<i>Eudocimus albus</i>	LS		G5 S4	
Merlin	Merlin	_~		,	
<i>Falco columbarius</i> G4,SU	Falco columbarius			G4,SU	
Peregrine falcon	Peregrine falcon				
Falco peregrinusLEG4,S2	Falco peregrinus	LE		G4,S2	
American Kestrel	American Kestrel	тт		C5T4 92	
American ovstercatcher	<i>Fuico sparverius</i> American ovstercatcher	LI		0314,83	
Haematopus palliatus LS G5.S2	Haematopus palliatus	LS		G5.S2	

Common Name/	<b>Designated Species Status</b>		
Scientific Name	FFWCC	USFWS	FNAI
Southern bald eagle			
Haliaeetus leucocephalus	LT	LT	G4,S3
Worm-eating warbler			~ - ~ .
Helmitheros vermivorus			G5,S1
Wood stork	T D		C 4 C2
Mycteria americana	LE	LE	G4,82
Osprey			C5 9294
I ouisione waterthrush			03,8384
Seiurus motacilla			G5 \$3
Least hittern			05,55
Ixohrychus exilis			G5 S4
Reddish egret			00,01
Egretta rufescens	LS		G4.S2
Yellow-crowned night heron	_ ~		
Nyctanassa violacea			G5,S3
Black-crowned night heron			,
Nycticorax nycticorax			G5,S3
Glossy Ibis			
Plegadis falcinellus			G5,S3
Sandhill crane			
Grus canadensis	LT		G5T2T3,S2S3
Brown pelican			
Pelecanus occidentalis	LS		G4,83
Clapper rail			C5T2 92
Rallus longirostris			6513,83
American avocet			C5 82
Magnificant frigatohird			05,52
Frequeta magnificens			G5 S1
Black skimmer			05,51
Rynchons niger	LS		G5 S3
Least tern	25		00,00
Sterna antillarum	LT		G4,S3
Sandwich tern			,
Sterna sandvicensis			G5,S2
Royal tern			
Sterna maxima			G5,S3
Gull-billed tern			
Sterna nilotica			G5,S2
Caspian tern			~ - ~ -
Sterna caspia			G5,S2
Sooty tern			05.01
Sterna juscata			65,81
Snowy plover	ΙT		CAS1
Cnuraurius aiexanarius	LI		04,51
r ipilig plover			

Common Name/	<b>Designated Species Status</b>		
Scientific Name	FFWCC	USFWS	FNAI
Chang drive mole due	ΙT	IТ	$C^{2}$ S2
Vilson's ployer		LI	05,52
Charadrius wilsonia			G5 S2
Black-whiskered vireo			05,52
Vireo altiloguus			G5 S3
American redstart			05,55
Setophaga ruticilla			G5.S2
Painted Bunting			9
Passerina ciris			G5,S3
	MAMMALS		
Big brown bat			
Eptesicus fuscus			G5,S3
Southeastern bat			,
Myotis austroriparius			G4,S3
Florida black bear			
Ursus americanus floridanus	LT		G5T2,S2

Common Name/	<b>Designated Species Status</b>		
Scientific Name	FFWCC	USFWS	FNAI

Addendum 6—Timber Management Analysis

The timber assessment required by Chapters 253 and 259, Florida Statutes, was conducted by Florida Park Service, District 1 staff in coordination with the Florida Division of Forestry, Tates Hell State Forest.

Most of the park's uplands were converted to pine plantation long prior to State acquisition. The majority of these planted sites are former mesic and wet flatwoods natural communities. Nearly all of the scrubby flatwoods areas located on the St. Joe acquisition parcel were timbered and planted as well. With few exceptions, these areas were planted with slash pine, the species of pine that most probably dominated this low coastal peninsula. The few naturally occurring pines found in the former mesic and wet flatwoods sites have all been slash pine. This is consistent with other coastal flatwoods sites in Franklin County, including natural areas located on the original Bald Point State Park Tract. Naturally, occurring longleaf pines have only been found in slightly higher scrubby flatwoods sites, where they are mixed in with mature sand pine, or simply persist as a former component of the original canopy in areas planted over with slash.

Some level of thinning should be considered for all scrubby flatwoods stands, particularly those areas that include planted sand pines. It is unclear whether longleaf was the dominant overstory pine in scrubby flatwoods sites or merely a component in a former mixed slash – longleaf overstory. However, it is evident that scattered longleaf pines were once more prevalent in some of these slightly higher sites. Other "high/dry" sites may have been dominated by a low-oak scrub with very little pine overstory. This alone is enough to consider some level of selective removal/thinning in order to re-establish areas of low-oak scrub, or open up other areas for targeted longleaf reintroduction. Given the small size of the planted pines, a chip harvest is best suited for the scrubby flatwoods areas.

The majority of the scrubby flatwoods stands consist of young slash pines with an average dbh under 5 inches. A few of the scrubby flatwoods plantation sites near Alligator Point Road (CR-370) are a mosaic of slash and sand pine. All of the trees in these stands are roughly 8-10 years old. The slash pines are, on average, 15 feet tall, and have an average dbh of 4 inches. The sand pines have an average height of 12-15 feet, with an average dbh of 4 inches. All of the scrubby flatwoods plantation sites currently have a site density of approximately 450-550 stems per acre.

All of the mesic and wet flatwoods sites have been planted with slash pine. The majority of the stands are young (8-12 years). In general, the average dbh at the time this plan was written was roughly 4 inches. Average height within most of the stands was 15-20 feet.

There are a relatively small number of sites with 15-25 year old slash. Average dbh within these areas is 7-9 inches. Average tree height is roughly 30-35 feet. Again, these sites comprise a small minority of the planted portions of the park, and nearly all occur in very wet sites where access is difficult.

Most of the mesic and wet flatwoods sites have very heavy understory fuel loads consisting chiefly of gallberry, lyonia, titi, palmetto and wax myrtle. The level of fuel loading would result in excessive pine mortality if these areas were burned in their current condition. It is therefore recommended that site managers consider a large-scale fuel wood thin for the majority of accessible stands. A chip harvest of perhaps every other row of trees would serve to disrupt and reduce understory fuels, thus making prescribed burning a more controllable and less damaging activity. In most areas, this would also serve to re-establish a lower, more natural overstory density. Despite being a partial cut, a chipping harvest of this size and magnitude would likely provide enough basal area to attract a contractor. Any commercial harvest shall be coordinated

through the DOF.

Timber removal contracts will include guidelines for access routes, equipment staging, acceptable/unacceptable levels of ground disturbance, project timeline and general work expectations/requirements.

Once the planted areas have been thinned, it is recommended that they be managed, essentially, as natural areas. These stands should be burned every 2-3 years in order to reduce heavy live fuel loads, encourage grasses and forbs and improve wildlife habitat.

Prepared by: John McKenzie FPS, Steve Jennings DOF

Addendum 7—Priority Schedule And Cost Estimates

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

### **Resource Management**

1.	Prescribed burning:
	Ground ignition 4-6 burns (300 - 500 acres) per year x 10 years. Average \$4,000/year for equipment, supplies and maintenance. Subtotal:
2.	Prescribed burning mechanical treatment or line prep, initial interface firelines:
	Subtotal\$19,500.00
3.	Prescribed Burning mechanical treatment or line prep, interface line maintanence every 24 months.
	Subtotal\$45,000.00
4.	Prescribed burning restoration, aerial ignition 10 year cost:
	Subtotal\$40,000.00
5.	Prescribed burning restoration, aerial ignition machine:
	Subtotal\$17,000.00
6.	Construction of low water crossings for resource management:
	Estimated cost: Permitting, design and construction. Subtotal:
7.	Timber removal planning:
	Estimated cost: Conceptual planning for selective timber removal operations in support of
	natural areas restoration (FPS and DOF personnel). Subtotal:\$3,500.00
8.	Natural Community management, sand pine plantation mapping survey.
	Subtotal\$2,500.00
9.	Base line water quality analysis:
	Estimated cost: Includes DEP personnel, equipment, lab costs. Subtotal:
10.	Rare plant surveys:
	Estimated cost: Professional baseline plant survey with GPS/GIS survey/mapping of rare
	plant occurrences (personnel, equipment). Subtotal:
11.	Annual gopher tortoise monitoring:
	Estimated cost: Includes OPS personnel, GPS/GIS equipment, and field equipment.
	Subtotal:
12.	Annual monitoring of sea turtle nesting activity:
	Estimated cost: Includes OPS personnel, GPS/GIS equipment, and field equipment.
	Subtotal:

<sup>\*</sup> Categories of the uniform cost accounting system not reflected in this addendum, have no schedule or cost associated with them.

13.	<b>3.</b> Annual exotic plant removal:	
	Estimated cost: Includes OPS personnel, herbicides, and eq	uipment.
	Subtotal:	\$5,000.00
14.	4. Macro-invertebrate survey:	
	Estimated cost: Includes contracted or OPS personnel and e	equipment.
	Subtotal:	\$20,000.00
15.	5. Vertebrate survey:	
	Estimated cost: Includes contracted or OPS personnel and e	equipment.
	Subtotal:	\$20,000.00
16.	6. Routine Cultural resource monitoring and management:	
	Estimated cost: Includes personnel and equipment.	
	Subtotal:	\$20,000.00
17.	7. Cultural resource and landscape management, pre-developm	nent archaeological survey of
	new campground: Estimated cost: Contractual services	e y
	Subtotal	\$60,000.00
18.	8. Cultural resource and landscape management, pre-developm	nent archaeological survey of
	new park drive corridor: Estimated cost: Contractual service	es es
	Subtotal:	\$60,000.00
	Total Cost:	\$573.250.00

### Visitor Service—Recreation

1. To manage newly added park acreage, secure staff or equivalent resources to plan, coordinate, initiate and conduct educational and interpretive programs, manage volunteer and CSO programs, promote the park, operate the ranger station, and maintain trails, campground, restrooms, and primitive campsites:

Estimated Cost: One time cost of \$30,000 x 2 (vehicles) plus recurring costs of \$9,915 x 2 (expense package) and \$28,408 x 2 (salary) plus \$20,000 (OPS) for 10 years.

### Estimated Cost: \$60,000 plus \$96,646/year in recurring cost

Total Cost: ...... \$1,026,646.00

<sup>\*</sup> Categories of the uniform cost accounting system not reflected in this addendum, have no schedule or cost associated with them.

### **Capital Improvements**

<b>Development Area or Facilities</b>	<b>Estimated</b> Cost
Beach Access	\$446,500.00
Camping	\$891,000.00
Cabins	\$990,000.00
Interpretive Facilities	\$48,000.00
Support Facilities	\$2,470,000.00
Trails	\$285,880.00
Picnicking & Water Access	\$914,000.00

Total Cost with Contingency:	\$7,517,956.00
I bear cost with contingency.	. ΨΙ 95Ι Ι 9750.00

NOTE: These preliminary cost estimates, based on Divisions standards, do not include costs for site-specific elements not evident at the conceptual level of planning. Additional costs should be investigated before finalizing budget estimates. All items fall in the new facility construction category © of the uniform cost accounting system required by ch. 259.037 F.5.

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

**Additional Information** 

**FNAI Descriptions** 

**DHR Cultural Management Statement** 

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

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

The levels of the hierarchy are:

Natural Community Category - defined by hydrology and vegetation.

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

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

TERRESTRIAL COMMUNITIES XERIC UPLANDS COASTAL UPLANDS MESIC UPLANDS ROCKLANDS MESIC FLATLANDS

PALUSTRINE COMMUNITIES

WET FLATLANDS SEEPAGE WETLANDS FLOODPLAIN WETLANDS BASIN WETLANDS LACUSTRINE COMMUNITIES

RIVERINE COMMUNITIES

SUBTERRANEAN COMMUNITIES

MARINE/ESTUARINE COMMUNITIES

Definitions of Terms Used in Natural Community Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Flatwoods/Prairie Lake** - generally shallow basin in flatlands with high water table; frequently with a broad littoral zone; still water or flow-through; sand or peat substrate; variable water chemistry, but characteristically colored to clear, acidic to slightly alkaline, soft to moderately hard water with moderate
mineral content (sodium, chloride, sulfate); oligo-mesotrophic to eutrophic.

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

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

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

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

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

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

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

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

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

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

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

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

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

**MARINE/ESTUARINE** (The distinction between the Marine and Estuarine Natural Communities is often subtle, and the natural communities types found under these two community categories have the same

descriptions. For these reasons they have been grouped together.) - Subtidal, intertidal and supratidal zones of the sea, landward to the point at which seawater becomes significantly diluted with freshwater inflow from the land.

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

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

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

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

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

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

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

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

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

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

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

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

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

#### **Physiography**

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

**Flatland** - generally level area in region without significant topographic relief; flat to gently sloping **Basin** - large, relatively level lowland with slopes confined to the perimeter or isolated interior locations **Depression** - small depression with sloping sides, deepest in center and progressively shallower towards the perimeter

**Floodplain** - lowland adjacent to a stream; topography influenced by recent fluvial processes **Bottomland** - lowland not on active floodplain; sand/clay/organic substrate

### **Hydrology**

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

### **Climatic Affinity of the Flora**

tropical - community generally occurs in practically frost-free areas

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

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

### <u>Fire</u>

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

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

anise - Illicium floridanum bays: swamp bay - Persea palustris gordonia - Gordonia lasianthus sweetbay - Magnolia virgiana beakrush - Rhynchospora spp. beech - Fagus grandifolia blackgum - Nyssa biflora blue palmetto - Sabal minor bluestem - Andropogon spp. buttonbush - Cephalanthus occidentalis cabbage palm - Sabal palmetto cacti - Opuntia and Harrisia spp., predominantly stricta and pentagonus cane - Arundinaria gigantea or A. tecta cattail - *Typha* spp. cedars: red cedar - Juniperus silicicola white cedar - Chamaecyparis thyoides or C. henryi cladonia - Cladonia spp. cypress - *Taxodium distichum* dahoon holly - Ilex cassine diamondleaf oak - Quercus laurifolia fire flag - Thalia geniculata Florida maple - Acer barbatum gallberry - Ilex glabra gums: tupelo - Nyssa aquatica blackgum - Nyssa biflora Ogeechee gum - Nyssa ogeche hackberry - Celtis laevigata hornbeam - Carpinus caroliniana laurel oak - Quercus hemisphaerica live oak - Quercus virginiana loblolly pine - Pinus taeda longleaf pine - *Pinus palustris* magnolia - Magnolia grandiflora maidencane - Panicum hemitomon needle palm - Rhapidophyllum hystrix

overcup oak - Quercus lyrata pickerel weed - Pontederia cordata or P. lanceolata pignut hickory - Carya glabra pop ash - Fraxinus caroliniana pond apple - Annona glabra pond pine - Pinus serotina pyramid magnolia - Magnolia pyramidata railroad vine - Ipomoea pes-caprae red cedar - Juniperus silicicola red maple - Acer rubrum red oak - Quercus falcata rosemary - Ceratiola ericoides sagittaria - Sagittaria lancifolia sand pine - Pinus clausa saw palmetto - Serenoa repens sawgrass - Cladium jamaicensis scrub oaks - Quercus geminata, Q. chapmanii, Q. myrtifolia,Q. inopina sea oats - Uniola paniculata seagrape - Coccoloba uvifera shortleaf pine - Pinus echinata Shumard oak - Quercus shumardii slash pine - Pinus elliottii sphagnum moss - Sphagnum spp. spikerush - Eleocharis spp. spruce pine - Pinus glabra St. John's wort - Hypericum spp. swamp chestnut oak - Quercus prinus sweetgum - Liquidambar styraciflua titi - Cyrilla racemiflora, and Cliftonia monophylla tuliptree - Liriodendron tulipfera tupelo - Nvssa aquatica turkey oak - Quercus laevis water oak - Quercus nigra waterlily - Nymphaea odorata white cedar - Chamaecyparis thyoides white oak - Ouercus alba willow - Salix caroliniana yucca - Yucca aloifolia

## A. GENERAL DISCUSSION

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

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

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

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

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

# B. STATUTORY AUTHORITY

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

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

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

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

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

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

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

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

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

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

# C. MANAGEMENT POLICY

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

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

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

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

- 1. State land managers shall coordinate all planned activities involving known archaeological or historic sites or potential site areas closely with the Division of Historical Resources in order to prevent any kind of disturbance to significant archaeological or historic sites that may exist on the tract. Under 267.061(1)(b), F.S., the Division of Historical Resources is vested with title to archaeological and historic resources abandoned on state lands and is responsible for administration and protection of such resources. The Division will cooperate with the land manager in the management of these resources. Furthermore, provisions of 267.061(2) and 267.13, F.S., combined with those in 267.061(3) and 253.034(4), F.S., require that other managing (or permitting) agencies coordinate their plans with the Division of Historical Resources at a sufficiently early stage to preclude inadvertent damage or destruction to known or potentially occurring, presently unknown archaeological and historic sites. The provisions pertaining to human burial sites must also be followed by state land managers when such remains are known or suspected to be present (see 872.02 and 872.05, F.S., and 1A-44, F.A.C.)
- 2. Since the actual resources are so poorly known, the potential impact of the managing agency's activities on historic archaeological sites may not be immediately apparent. Special field survey for such sites may be required to identify the potential endangerment as a result of particular management or permitting activities. The Division may perform surveys, as its resources permit, to aid the planning of other state agencies in their management activities, but outside archaeological consultants may have to be retained by the managing agency. This would be especially necessary in the cases of activities contemplating ground disturbance over large areas and unexpected occurrences. It should be noted, however, that in most instances Division staff's knowledge of known and expected site distribution is such that actual field surveys may not be necessary, and the project may be reviewed by submitting a project location map (preferably a 7.5 minute U.S.G.S. Quadrangle map or portion thereof) and project descriptive data, including detailed construction plans. To avoid delays, Division staff should be contacted to discuss specific project documentation review needs.
- **3.** In the case of known significant sites, which may be affected by proposed project activities, the managing agency will generally be expected to alter proposed management or development plans, as necessary, or else make special provisions to minimize or mitigate damage to such sites.
- 4. If in the course of management activities, or as a result of development or the permitting of dredge activities (see 403.918(2)(6)a, F.S.), it is determined that valuable historic or archaeological sites will be damaged or destroyed, the Division reserves the right, pursuant to 267.061(1)(b), F.S., to require salvage measures to mitigate the destructive impact of such activities to such sites. Such salvage measures would be accomplished before the Division would grant permission for destruction of the affected site areas. The funding needed to implement salvage measures would be the responsibility of the managing agency planning the site destructive activity. Mitigation of historic structures at a minimum involves the preparation of measured drawings and documentary photographs. Mitigation of archaeological resources involves the excavation, analysis and reporting of the project findings and must be planned to occur sufficiently in advance to avoid project construction delays. If these services are to be contracted by the state agency, the selected consultant will need to obtain an Archaeological Research Permit from the Division of Historical Resources, Bureau of Archaeological Research (see 267.12, F.S. and Rules 1A-32 and 1A-46 F.A.C.).
- **5.** For the near future, excavation of non-endangered (i.e., sites not being lost to erosion or development) archaeological site is discouraged. There are many endangered sites in Florida (on

both private and public lands) in need of excavation because of the threat of development or other factors. Those within state-owned or controlled lands should be left undisturbed for the present - with particular attention devoted to preventing site looting by "treasure hunters". On the other hand, the archaeological and historic survey of these tracts is encouraged in order to build an inventory of the resources present, and to assess their scientific research potential and historic or architectural significance.

- **6.** The cooperation of land managers in reporting sites to the Division that their field personnel may discover is encouraged. The Division will help inform field personnel from other resource managing agencies about the characteristics and appearance of sites. The Division has initiated a cultural resource management training program to help accomplish this. Upon request the Division will also provide to other agencies archaeological and historical summaries of the known and potentially occurring resources so that information may be incorporated into management plans and public awareness programs (See Management Implementation).
- **7.** Any discovery of instances of looting or unauthorized destruction of sites must be reported to the agent for the Board of Trustees of the Internal Improvement Trust Fund and the Division so that appropriate action may be initiated. When human burial sites are involved, the provisions of 872.02 and 872.05, F. S. and Rule 1A-44, F.A.C., as applicable, must also be followed. Any state agent with law enforcement authority observing individuals or groups clearly and incontrovertibly vandalizing, looting or destroying archaeological or historic sites within state-owned or controlled lands without demonstrable permission from the Division will make arrests and detain those individuals or groups under the provisions of 267.13, 901.15, and 901.21, F.S., and related statutory authority pertaining to such illegal activities on state-owned or controlled lands. County Sheriffs' officers are urged to assist in efforts to stop and/or prevent site looting and destruction.

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

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

- **1.** A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- **2.** The historic character of a property shall be retained and preserved. The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided.
- **3.** Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- **4.** Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
- **5.** Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
- **6.** Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
- **7.** Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- **8.** Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
- **9.** New additions, exterior alterations, or related new construction shall not destroy materials that characterize the property. The new work shall be differentiated from the old and shall be

compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

**10.** New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (see <u>Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings</u> [Revised 1990]).

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

## D. MANAGEMENT IMPLEMENTATION

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

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

### A. Historic Sites

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

#### **B.** Archaeological Sites

- (1) Site location (written narrative and mapped location).
- (2) Cultural affiliation and period.
- (3) Site type (midden, burial mound, artifact scatter, building rubble, etc.).

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

## E. ADMINISTERING AGENCY

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

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

### **Contact Person**

# Susan M. Harp

Historic Preservation Planner Telephone (850) 245-6333 Suncom 205-6333 FAX (850) 245-6437