

**FORT ZACHARY TAYLOR HISTORIC
STATE PARK
UNIT MANAGEMENT PLAN**

APPROVED

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Recreation and Parks
JUNE 13, 2008**

TABLE OF CONTENTS

INTRODUCTION	1
PURPOSE AND SCOPE OF PLAN	1
MANAGEMENT PROGRAM OVERVIEW	5
Management Authority and Responsibility	5
Park Management Accomplishments.....	5
Park Goals and Objectives.....	7
Management Coordination	9
Public Participation	10
Other Designations.....	10

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION	11
RESOURCE DESCRIPTION AND ASSESSMENT	11
Natural Resources	11
Cultural Resources	19
RESOURCE MANAGEMENT PROGRAM	22
Special Management Considerations	22
Management Needs and Problems.....	23
Management Objectives	23
Management Measures For Natural Resources	24
Management Measures For Cultural Resources	26
Research Needs.....	27
Resource Management Schedule.....	27
Land Management Review	28

LAND USE COMPONENT

INTRODUCTION.....29

EXTERNAL CONDITIONS.....29

 Regional Population.....29

 Existing Use of Adjacent Lands.....30

 Planned Use of Adjacent Lands.....30

PROPERTY ANALYSIS.....31

 Recreation Resource Elements.....31

 Assessment of Use.....32

CONCEPTUAL LAND USE PLAN35

 Site Planning and Design Process35

 Potential Uses and Proposed Facilities.....35

 Facilities Development.....39

 Existing Use and Optimum Carrying Capacity39

 Optimum Boundary40

TABLE

TABLE 1 - Existing Use and Optimum Carrying Capacity.....40

LIST OF ADDENDA

ADDENDUM 1

 Acquisition History, Memorandum of Understanding with Amendment 1,
 Advisory Group List and Staff Report A 1 - 1

ADDENDUM 2

 References Cited A 2 - 1

ADDENDUM 3

 Soil Descriptions A 3 - 1

ADDENDUM 4

Plant And Animal List A 4 - 1

ADDENDUM 5

Designated Species List A 5 - 1

ADDENDUM 6

Priority Schedule and Cost Estimates..... A 6 - 1

MAPS

Vicinity Map2

Reference Map3

Soils Map13

Natural Communities Map15

2008 Australian Pine GPS Mapping Project27

Base Map33

Conceptual Land Use Plan36

Optimum Boundary Map41

INTRODUCTION

Fort Zachary Taylor Historic State Park is located in Monroe County, within the City of Key West, at the southwestern end of the Florida Keys (see Vicinity Map). Access to the park is from Southard Street through the Truman Annex and the Key West Naval Air Station (see Vicinity and Reference Maps).

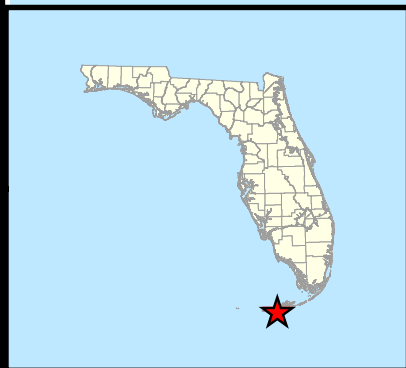
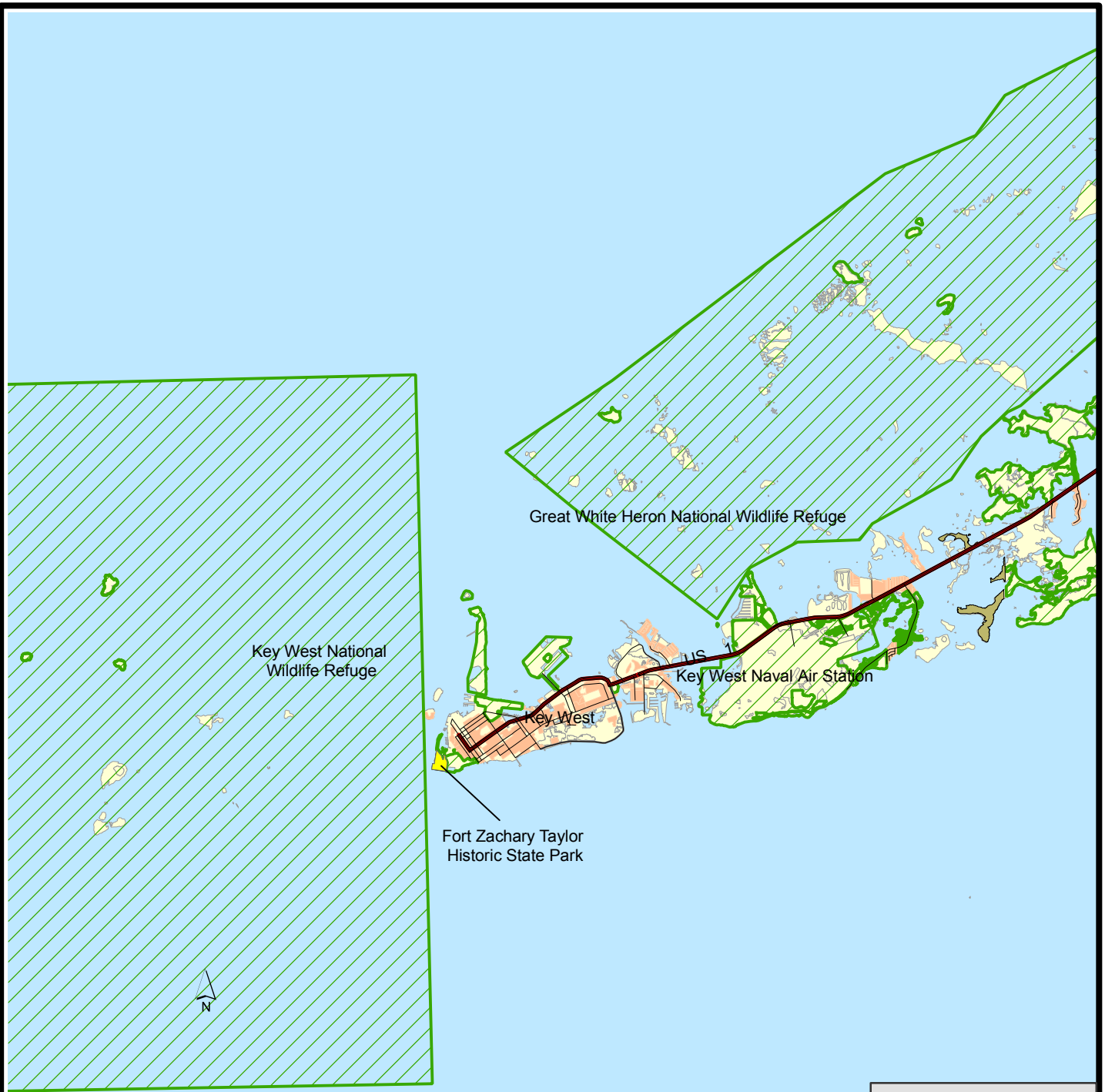
At Fort Zachary Taylor Historic State Park, public outdoor recreation and conservation is the designated single use of the property. There are no executive directives that constrain the use of this property; however, there is a Memorandum of Understanding between the State of Florida Department of Environmental Protection (DEP) and State Representative Ron Saunders, Florida House District 120. A copy of this Memorandum of Understanding may be found in Addendum 1.

The park was acquired on October 7, 1976 from the United States Government (see Addendum 1), and was added as a component of the state park system for its historic value and to be interpreted as a historic ruin. Fort Taylor is significant for its historical and strategic importance as a component of the nation's system of coastal defense for more than a century. The significance of the fort is reflected in its designation as a National Historic Landmark, one of only several dozen sites in Florida with such distinction. The park is currently comprised of slightly more than 56 acres.

Fort Zachary Taylor Historic State Park is categorized as a state special feature site within the Division's Unit Classification System. A special feature site is a discrete and well-defined object or condition that attracts public interest and provides recreational enjoyment through visitation, observation and study. Special feature sites must be of unusual or exceptional character, or have statewide or broad regional significance. Primary emphasis is placed on protection and maintenance of the special feature for long-term public enjoyment, and thus in the case of conflicts, resource considerations must prevail over user considerations. Uses permitted are almost exclusively of a passive nature. Other uses of the site are permitted if fully compatible. Program emphasis is directed toward interpretation of the special feature. Development in the park is geared toward protection and maintenance, access, safety and convenience of the user, and interpretation.

PURPOSE AND SCOPE OF THE PLAN

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



Legend

- Interstates
- FDOT US Routes
- FDOT State Roads
- FDOT Local Roads
- Park Boundary

Public Lands

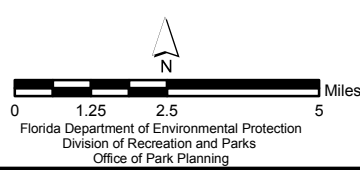
- Federal Managed Areas
- State Managed Areas
- Local Managed Areas
- Private Managed Areas
- Aquatic Preserves

Private Lands

- Developed
- Undeveloped

Sources: Florida Natural Areas Inventory, 2006
Florida Land Use, Cover and Forms Classification System, 2001



**FORT ZACHARY TAYLOR
HISTORIC STATE PARK**




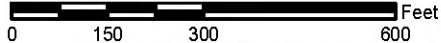
**VICINITY
MAP**



LEGEND

-  RECENT ADDITION
-  STATE PARK BOUNDARY

FORT ZACHARY TAYLOR
HISTORIC STATE PARK


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

REFERENCE
MAP

management plan will replace the August 10, 1999 approved plan. All development and resource alteration encompassed in this plan is subject to the granting of appropriate permits; easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

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

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

In the development of this plan, the potential of the park to accommodate secondary management purposes (“multiple uses”) was analyzed. These secondary purposes were considered within the context of the Division’s statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the park.

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

The use of private land managers to facilitate restoration and management of this unit was also analyzed. Decisions regarding this type of management (such as outsourcing,

contracting with the private sector, use of volunteers, etc.) will be made on a case-by-case basis as necessity dictates.

MANAGEMENT PROGRAM OVERVIEW

Management Authority and Responsibility

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

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

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.

Park Management Accomplishments

Since the 1999 approved plan, significant work has been accomplished and progress made towards meeting the Division's management objectives for the park. The following is a summary of activity since the last plan update related to resource

management, facility improvements, interpretation and park programs and volunteer involvement.

Resource Management

- Completed Master Plan for Fort Zachary Taylor Historic State Park (2006) that addresses stabilization/preservation needs of the fort and provides estimated costs.
- Park has made significant progress on removing exotic plants and replacing with appropriate native species.
- Revegetation plan developed to guide planting of native species in areas where exotics are planned for removal. The revegetation plan will be modified to comply with the terms of the amended Memorandum of Understanding contained in Addendum 1.
- Updated resource inventories, including documentation of migratory birds and butterflies using the park. Began inventory of near-shore marine resources.
- Funding acquired for shoreline renourishment project and design phase complete. Project completed in 2007.

Facility Improvements

- Design work complete on entrance realignment and new ranger station. Project to include city sewer and water hookup and integrates City and Navy development plans on adjacent land.
- Deck and merchandise sale area expansion completed on concession facility.

Interpretation and Programs

- Completed Fort Taylor Field Guide that organizes original documents, images and facts in a chronological framework to support exhibit and program development.
- Visitor service provider contracted in 2004 to provide food and rental services and coordinate group rentals.
- Main heritage program renamed (Civil War Heritage Days) and expanded. New cultural programs and special events developed. Park hosted many weddings, private events and family gatherings.
- Park conducted on and offsite programs for school groups focused on history of fort and park natural resources.
- Partnership formed with NOAA to utilize planned education center to bolster park programs.
- A butterfly garden was installed in 2003

Volunteers

- Additional volunteers recruited and involvement expanded to more areas of park operations.
- Additional volunteer host sites added to park.
- CSO strengthened through involvement of individuals with important professional expertise and ties to the community.

Acquisition

- Added approximately 1.5 acres of property to the park.

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 Resources

- 1.** Provide habitat protection and preservation in order to protect the flora and fauna species utilizing the site.
 - A.** Continue to remove exotic vegetation and replant with appropriate native hammock, coastal berm and beach dune species. The only exception to the removal of exotic species will be in relation to the Australian pine trees in the park. Mature Australian pines will remain unless they become a safety hazard, have died, or are toppled in windstorms (See Addendum 1 - Memorandum of Understanding).
 - B.** Conduct water quality monitoring in the moat.
 - C.** Continue to work with staff from the Florida Keys National Marine Sanctuary to protect the coral species found within park waters.
 - D.** Remove exotic and feral animal species from the park.
 - E.** Initiate a bird banding program to study bird populations utilizing the park particularly during migration.
 - F.** Conduct survey of submerged communities.
 - G.** Continue beach erosion measurements.
 - H.** Continue photo point documentation along beach.
 - I.** Survey breakwaters for stability.
 - J.** Stabilize rip-rap on southwest corner of the park.

Cultural Resources

- 2.** Enhance the cultural resources of the site by increasing their protection and preservation.
 - A.** Obtain funding to preserve, stabilize and waterproof the fort to prevent continued deterioration and to maintain as ruin.
 - B.** All artifacts have been transferred to the Florida Department of State, Division of Historical Resources (DHR) to facilitate improved management, curation and treatment of the artifacts. The DHR will in turn loan the Division any artifacts needed for display or interpretive use of at the fort.
 - C.** Avoid the excavation of additional artifacts and pursue research and non-invasive tests to determine the possible location and types of buried artifacts.
 - D.** Continue to work with the Friends of Fort Taylor Citizen Support Organization in mapping and preserving the artifacts from the fort.
 - E.** Stabilize the Barracks.
 - F.** Waterproof the Northern Casemate roof deck.
 - G.** Waterproof the roof decks of Battery Adair and Battery Osceola.
 - H.** Repoint masonry and repair plaster coating.
 - I.** Rehabilitate and stabilize Barracks spaces for interpretation.
 - J.** Rehabilitate Battery Adair and Battery Osceola for public access.
 - K.** Coordinate with other parks that manage cultural resources similar to Fort Taylor for conservation and preservation ideas and consistency.

Recreation

- 3.** Continue to provide quality resource based outdoor recreational and interpretive programs and facilities at the state park.
 - A.** Continue to interpret the fort as a historic ruin.
 - B.** Provide guided tours and living history programming to enhance an understanding of the significance of Fort Taylor.
 - C.** Partner with local business, civic and cultural organizations to provide enhanced programming and special event opportunities for park visitors.
 - D.** Continue to collaborate with local schools to develop and deliver educational programming for children.
 - E.** Maintain areas for picnicking and saltwater beach recreation.
- 4.** Seek funding to expand recreational and interpretive opportunities through the improvement of programs and the development of new use areas and facilities, as outlined in this management plan.
 - A.** Expand public access to the fort as areas are stabilized and made safe to the public.
 - B.** Establish an interim visitor center space within an appropriate area of the fort.
 - C.** Develop a comprehensive and consistent directional and interpretive signage program.
 - D.** Design and develop permanent and temporary exhibits consistent with

themes and content identified in the Master Plan for Fort Zachary Taylor Historic State Park (2006).

- E. Enhance guided tour programming to include tours focused on particular times or topics.
- F. Expand and update the self-guided tour as needed.
- G. Develop an audio-visual presentation that facilitates an understanding of the complex story of the fort.
- H. Construct a permanent visitor center to provide climate-controlled space for exhibits, interpretive programming and visitor orientation.
- I. Develop a marine resources education program.

Park Administration/Operations

- 5. Promote community support and bolster staff and funding resources through education, training and partnership opportunities.
 - A. Secure additional staffing or funding equivalent to meet increased management demands presented by expanded recreational and interpretive facilities.
 - B. Continue to support and expand the Friends of Fort Taylor Citizen Support Organization and park volunteer program.
 - C. Maintain a visitor services provider to enhance recreational services available to park visitors.
 - D. Pursue funding alternatives to the legislative budget appropriation process.
 - E. Ensure staff are properly trained and supervised in the areas of visitor services, natural and cultural resource management, park operations, interpretation and emergency procedures.
 - F. Establish and maintain partnerships with federal, state and local agencies and non-governmental organizations to enhance resource management and resource-based recreational opportunities.
- 7. Support land use planning policies, regulations and acquisition initiatives that serve to enhance management and protection of park resources.
 - A. Maintain close coordination with the U.S. Navy and City of Key West to ensure the interests of the park are represented within the context of their land use plans.
 - B. Network with other land and water management and regulatory entities to coordinate and enhance regional resource management and protection efforts.
 - C. Pursue acquisition of areas deemed important to be managed as part of the park.

Management Coordination

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

The Florida Fish and Wildlife Conservation Commission (FFWCC), assists staff in the enforcement of state laws pertaining to wildlife, fish and other aquatic life existing within park boundaries. The Department of State, Division of Historical Resources assists staff to assure protection of archaeological and historical sites. 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. The Florida Keys National Marine Sanctuary has assisted staff with relocation of coral species around the breakwaters. They are also collaborating with the park to provide additional educational opportunities, particularly in regards to the marine environment, through the Nancy Forster Environmental Education Facility that is adjacent to the park...

Public Participation

The Division provided an opportunity for public input by conducting a public workshop and an advisory group meeting. An initial public workshop was held on April 26, 2006. The purpose of this meeting was to solicit public comment on the scheduled update of this management plan. A second public workshop was held on October 15, 2007 to present the draft management plan to the public. An Advisory Group meeting was held on October 16, 2007. The purpose of this meeting was to provide the Advisory Group members the opportunity to discuss the draft management plan.

Other Designations

Fort Zachary Taylor Historic State Park is within an Area of Critical State Concern as defined in section 380.05, Florida Statutes. The park is a component of the Florida Greenways and Trails System. The fort was listed on the National Register of Historic Places in 1971 and designated a National Historic Landmark in 1973.

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

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION

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

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

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

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

Fort Zachary Taylor Historic State Park is part of the physiographic region of the Florida Keys with the edge of the continental shelf running parallel to the Keys approximately seven miles offshore. Although Fort Zachary Taylor HSP is now part of the island of Key West, the fort was originally built 1,200 feet from the shore in ten feet of water. Since then, extensive amounts of fill have been placed on all sides of the fort connecting it to the island of Key West. Elevation is from six to ten feet throughout the park except for a linear mound between the fort and the beach parking lot, and a mound of fill behind the fort, both of which exceed ten feet in elevation. Elevations

below mean high water are found in the moat surrounding the fort, in the submerged communities, and in the Key West Channel west of the park.

Geology

The upper layer geologic formation of the Florida Keys from Big Pine Key to Key West is Miami oolite. Unlike the Key Largo limestone substrate of the upper Keys (formed by ancient coral reefs), Miami oolite is a limestone substrate that was formed by abiotic processes when sea level was higher than its present level. The egg-shaped ooids formed by calcium carbonate precipitating out of the water and attaching to a particle, most often a grain of sand. Currents carried these particles until they became too heavy, at which time the ooids settled to the ocean floor. When sea level dropped close to its present level, the ooids were exposed to the elements and were cemented together by rainfall, through dissolution and re-solidification of the limestone. This process eventually formed what is now the lower Florida Keys, and because of the direction of the currents that originally carried the ooids, the lower Keys are orientated in the opposite direction from the upper Keys. However, core samples show the deepest depth of Miami oolite to be about 40 feet, with a more extensive layer of Key Largo limestone underneath, illustrating that that the lower Keys are geologically younger than the upper Keys.

Soils

Information published in the U.S. Department of Agriculture's Soil Survey of Monroe County, Keys Area, Florida identifies one soil type, Urban land, at Fort Zachary Taylor HSP (see Soils Map).

Urban land is typically covered by asphalt, concrete or other impervious surfaces that have been altered by dredging and filling for development. Addendum 3 contains a detailed description of this soil type.

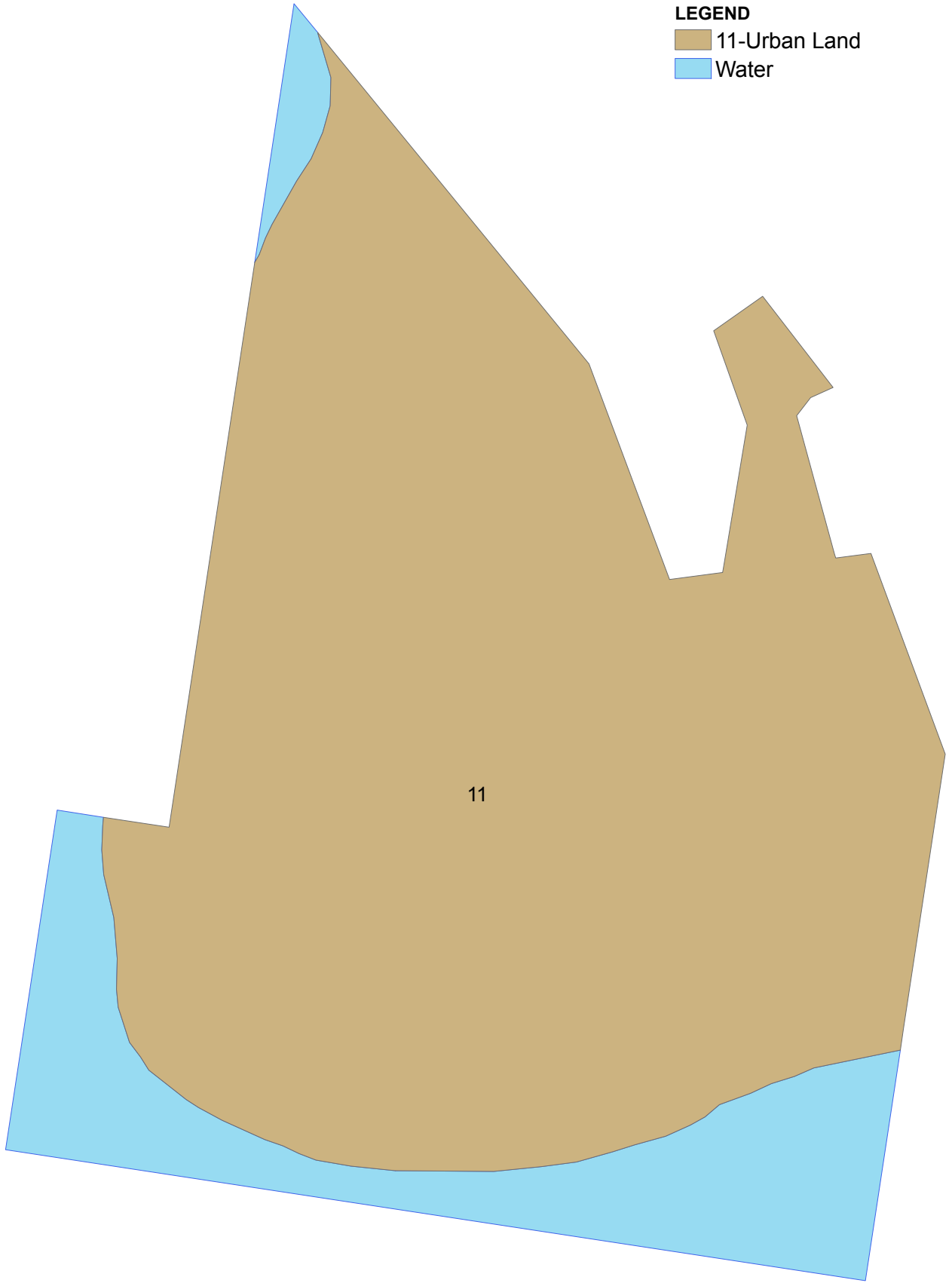
Management activities will comply with those practices that will best prevent soil erosion in order to conserve the water resources in the Florida Keys National Marine Sanctuary. At Fort Zachary Taylor HSP, the beach on the south end of the park and the rip-rap area along the western edge which is adjacent to the Key West Channel, are the two areas where erosion has been an issue. Recent hurricane activity has magnified the erosion problem along the beach by increasing the extent of the escarpment creating a steep drop to the beach. This is being addressed by engineers as part of the beach re-nourishment project for the park and will be graded down to allow a gradual slope to the beach. In the meantime, areas that are considered unsafe have been cordoned off so that park visitors can only access the beach where there is a safe, gradual slope to the water's edge.

Hurricane Wilma in 2005 deposited sand and tapered out an escarpment on the northwest side of the park adjacent to Key West Channel. However, the entire section

LEGEND

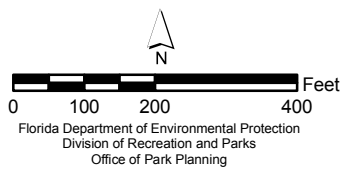
11-Urban Land

Water



11

**FORT ZACHARY TAYLOR
HISTORIC STATE PARK**



**SOILS
MAP**

of rip rap adjacent to the Key West Channel is in need of maintenance, particularly the area at the southwest corner where storm surge cut across this corner eroding away the fill material. This area has been stabilized by park staff, but additional boulders at the low end of the line of rip-rap will be needed to minimize future erosion.

Minerals

Miami oolite is the major mineral deposit at Fort Zachary Taylor Historic State Park. Minor mineral deposits in the park are calcite, halite and Key Largo limestone.

Hydrology

The primary natural source of freshwater in the Florida Keys is rain. Historically, early settlers collected rainwater in cisterns or used water from wells and solution holes that tapped the small, shallow freshwater lenses. These lenses form in the limestone above sea level during the rainy season. Until recently, nearshore freshwater upwelling, an extension of the Biscayne Aquifer, occurred in at least one location in the upper Keys. Drainage of the Everglades and the subsequent canalization of southeast Florida including the Florida Keys resulted in saltwater intrusion into the Biscayne Aquifer and changed the regional hydrology. Only on the larger islands such as Key Largo and Big Pine Key is rainwater retained for any length of time.

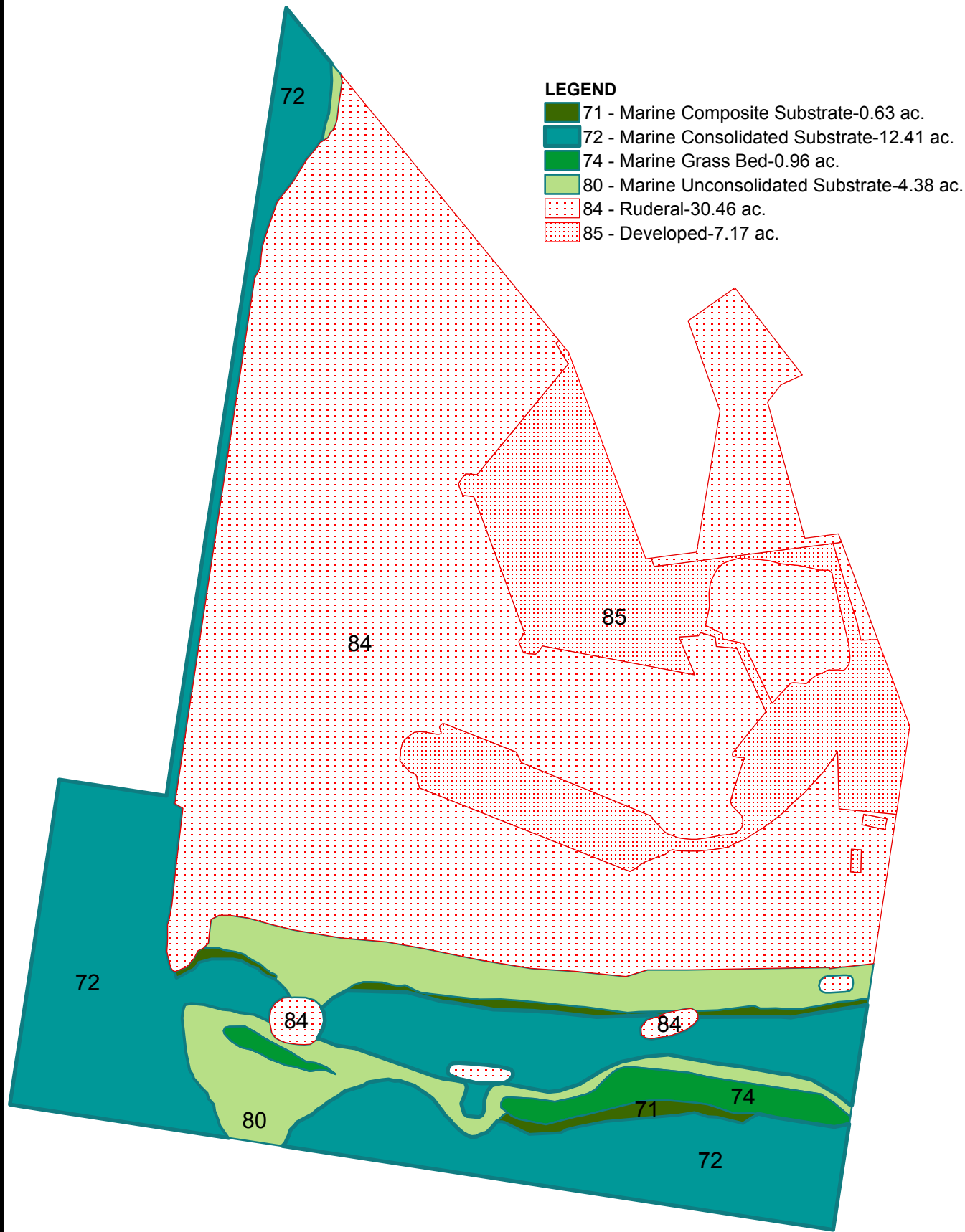
At Fort Zachary Taylor HSP, freshwater is still collected in the cisterns that are associated with the fort. The moat surrounding the fort retains brackish water from ground water and rainfall.

Natural Communities

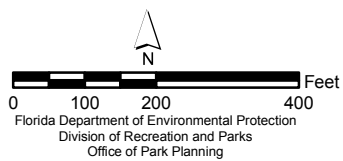
The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors, such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and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

The park contains four distinct submerged 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.

Marine composite substrate. At Fort Zachary Taylor HSP, marine composite substrate occurs in several locations between the marine consolidated substrate and the marine unconsolidated substrate. This community forms a mosaic with the other submerged



FORT ZACHARY TAYLOR
HISTORIC STATE PARK



NATURAL COMMUNITIES
MAP

communities and is a result of substrate composition and depth, which then determines the floral and faunal composition. The benthic floral and faunal organisms include a number of species of soft and stony corals, sea anemone (*Lebrunia danae*), sea urchin (*Echinometra lucunter*), tube dwelling worms, sponges, and a variety of macroalgae including *Dasycladus vermicularis*, *Penicillus* spp., *Halimeda* spp., and *Udotea* spp.

Marine consolidated substrate. Marine consolidated substrate is the predominant submerged community at Fort Zachary Taylor HSP and can be found to the south, and in the southwest and northwest corners of the park. This community is also referred to as hardbottom and consists of Miami oolite with minimal sediment accumulation. Marine consolidated substrate is an important community because it provides a foundation for the development of other marine communities. Seagrasses do not thrive in this habitat due to the lack of adequate sedimentation; instead it is dominated by stony corals including knobby brain coral (*Diploria clivosa*) starlet coral (*Siderastrea radians* and *S. siderea*), and diffuse ivory bush coral (*Oculina diffusa*), and a variety of macroalgae, sponges, and soft coral. Schools of fish are prevalent and include snapper (*Lutjanus* spp.) barracuda (*Sphyraena barracuda*), and small reef fish.

Portions of the marine consolidated substrate were impacted by shoreline stabilization projects when new breakwaters were installed and then modified. Efforts were made by park staff and staff from The Florida Keys National Marine Sanctuary to relocate the larger coral colonies to prevent their destruction. Recent hurricane activity altered the profile of the breakwaters and large boulders shifted from the upper sections into the submerged communities. However, this site was inspected in February 2006 and no adverse impacts were observed because of the fallen boulders with the corals on the backside of the breakwaters in good condition. Species observed during this survey include starlet coral, knobby brain coral, tube coral (*Cladocora arbuscula*), star coral (*Montastrea annularis*), and symmetrical brain coral (*Diploria strigosa*). A cushion sea star (*Oreaster reticulatus*) was also observed.

Marine grass beds. Seagrass beds at Fort Zachary Taylor HSP are found beyond the breakwaters in deeper water 200-400 feet from shore. This community is composed of a mixture of turtle grass (*Thalassia testudinum*), manatee grass (*Syringodium filiforme*), and a variety of sponges, invertebrates, macroalgae, and crustaceans.

Seagrass beds are ecologically significant because they are extremely productive, support a great diversity of plants and animals, stabilize sediment on the seafloor, and improve water clarity, which is critical for coral growth. Seagrass beds provide food and shelter for invertebrates and fish on a daily, seasonal, or life cycle basis. Many commercially important species utilize this habitat including snapper, and spiny lobster (*Panulirus argus*). Seagrass beds form shallow grass flats that provide important feeding grounds for numerous wading birds, manatees and sea turtles. Although damage to seagrass beds throughout the Florida Keys is prevalent due to boat traffic and boat

grounding incidents, the seagrass community at Fort Zachary Taylor HSP is deep enough that boat groundings do not appear to be a threat.

Marine unconsolidated substrate. Marine unconsolidated substrate consists primarily of unvegetated loose sand and marl depositions. At Fort Zachary Taylor HSP, it occurs in a narrow band along the south and northwest shorelines in the intertidal and shallow subtidal zones where sediment is deposited and wave action and foot traffic prevent colonization of seagrass or macroalgae. It also occurs in elongated pockets between marine grass bed and marine consolidated substrate. Despite the barren appearance of this habitat, the unconsolidated substrate supports a diverse array of infaunal organisms including worms, mollusks, shrimp and crabs. Large schools of fish are the conspicuous species in this habitat.

Ruderal and developed. The developed and ruderal areas at Fort Zachary Taylor HSP consist of dredged fill material on what was originally submerged land. The developed portions of the park include the fort, residences, a concession building, an administration office and shop area, parking lots, roads, volunteer camping sites, and public restroom facilities. The remaining uplands are considered ruderal and include native and exotic vegetative cover and an open field on the west side of the fort that provides an unobstructed view of the water from the fort.

Before this site came under management of the Florida Park Service, it was used by the U.S. Navy as a dumpsite. Miscellaneous materials are reported to be buried beneath the fill including scrap metal and oil drums. In addition, the adjacent Navy property was also identified as a site that contained toxic material. Sediment sampling conducted in 1996 in the moat found elevated levels of lead and mercury, and non-toxic levels of zinc and copper. The extent of soil contamination in the remainder of the park is unknown.

Historically, exotic vegetation, specifically Australian pine (*Casuarina equisetifolia*), woman's tongue (*Albizia lebeck*), yellow elder (*Tecoma stans*), Brazilian pepper (*Schinus terebinthifolius*), and portia (*Thespesia populnea*) have been the dominant species in the park. Exotic removal projects have been ongoing and these areas are then replanted with native vegetation including rockland hammock, coastal berm, and beach dune species. Because of its location at the southwest tip of the Florida Keys, Fort Zachary Taylor HSP is a major migratory route for birds. Native vegetation in the park will only enhance the birds' ability to survive both the north and south migration. Fort Zachary Taylor HSP is also a good location to observe rare Caribbean birds such as the Antillean short-eared owl (*Asia flames domingensis*) and the tropicbird (*Phaethon lepturus*) which have been observed in the park. A recent sighting of a loggerhead kingbird (*Tyrannus caudifasciatus*) to Fort Zachary Taylor HSP is noteworthy not just for its brief presence at the park, but as being the first confirmed sighting of this species in North America.

Fort Zachary Taylor HSP has been adversely impacted by several hurricanes in recent

years, knocking down large Australian pines in the picnic area and along the top edge of the beach causing beach erosion. Vegetation throughout the park suffered salt burn and uprooting causing some mortality.

Recent hurricane activity also impacted the offshore breakwaters and several of the boulders were knocked into the water. However, a site inspection conducted in February 2006 showed no adverse impacts to the submerged resources or to the coral species that are found on and near the breakwaters.

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.

All of the designated plant species found in the park were planted as part of the replanting efforts after exotic plant species were removed. Several of these are not appropriate for Fort Zachary Taylor HSP, as they are outside of their historic range south of Big Pine Key. Future plantings should include only those species that are historic to this area of the Florida Keys.

There are four federally listed animal species at Fort Zachary Taylor HSP; loggerhead turtle (*Caretta caretta*), West Indian manatee (*Trichechus manatus*), bald eagle (*Haliaeetus leucocephalus*) and roseate tern (*Sterna dougalli*). In addition to the federally listed species, six species are state listed; loggerhead turtle, West Indian manatee, bald eagle, roseate tern, peregrine falcon (*Falco peregrinus*), white-crowned pigeon (*Patogicenas leucocephala*), and least tern (*Sterna antillarum*). Because of its location at the southwest tip of the Florida Keys, Fort Zachary Taylor HSP is an important migratory route for birds. Hawk species including merlin (*Falco columbarius*) can be observed flying overhead, while wading birds and terns can be observed feeding in the park.

Loggerhead turtles are seen in the waters around Fort Zachary Taylor HSP and have nested in the park despite the coarse beach material. The beach re-nourishment project completed in late 2007 should improve the beach conditions potentially enhancing sea turtle nesting activity.

West Indian manatees (*Trichechus manatus*) are occasionally observed off the beach and in the shipping channel on the west side of the park.

Special Natural Features

The marine consolidated substrate habitat, which supports a diversity of soft and stony

coral species, is a special natural feature at Fort Zachary Taylor HSP. Typically, reef building coral species do not thrive in the nearshore waters of seagrass communities, so their persistence here is unique.

Cultural Resources

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

The Florida Master Site File (FMSF) lists the fort as the only cultural site (8MO206) within the unit. It will be managed and interpreted by the Florida Park Service as a ruin, with actions taken by the Division to prevent further deterioration. Due to the harsh environment and the constant exposure to the saltwater elements, portions of the fort are in fair condition, while others are in poor condition. In order to understand the needs of protecting and preserving the fort and its associated structures, the Division of Recreation and Parks contracted Bender & Associates to prepare a document that will guide the Park in the preservation of these cultural features. Because the fort will be managed and interpreted as a ruin, preservation is intended to prevent continued deterioration of the structure. The Master Plan for Fort Zachary Taylor Historic State Park was completed in 2006 (Bender and Associates), and will be used as a guideline for prioritizing the preservation efforts of the fort and its associated structures.

The Master Plan for Fort Taylor made the following statements about the condition of the fort:

“Over the decades time and the marine climate have taken a severe toll on the Fort’s structures. For example, the west wall of the Barracks was discovered to be in danger of collapse... Other Fort structures have deteriorated severely and need attention. Thousand of artifacts have been recovered over the years, but many remain in need of preservation and curation.”

It goes on with the following:

“The greatest threats to the long term preservation of Fort Taylor are structural

decay of individual building components and water intrusion that contributes to the deterioration of historic fabric and structural components. Without question, the single most endangered element is the Barracks Building... At Battery Osceola and Adair, severe cracking and displacement of walls requires repair... and requires “stabilization of exfoliating metals and stopping water intrusion that is contributing to the deterioration of metals.”

This report identifies 25 specific and detailed recommendations for repairs to all parts of the fort. These actions will only accomplish the stated goal of stabilization and preservation. They will also allow portions of the facility to be reopened for public visitation and use. This massive, National Landmark is the most threatened historic building managed by the Division of Recreation and Parks and the most challenging in terms of need for funding and technical challenges.

In addition to the FMSF, Fort Taylor is listed on the National Register of Historic Places and designated as a National Historic Landmark. It represents a history of United States seacoast fortification from 1776 to 1947. Realizing the importance of Key West's deep-water port, the fort was included as part of a system of coastal fortifications. Construction of the fort was approved in 1836 and began in 1845 as part of the Third Tier of Defense Fortifications. It was named after President Zachary Taylor and designed by Major General Joseph Totten. Fort Jefferson was constructed during the same time in a similar design. Due to setbacks from yellow fever outbreaks, hurricanes, and the isolated location of Key West, the three-story fort was not completed until 1866. Fort Taylor was decommissioned in 1947 and turned over to the General Services Administration, and then utilized by the U.S. Navy as a storage facility.

Fort Taylor was built 1,200 feet from shore in water that was approximately ten feet in depth. It was built in the form of a trapezoid with three seaward curtains 255 feet in length and two and a half stories high, and the gorge, or land face, 495 feet long and three stories high. It was constructed of granite, brick, and concrete faced. The gorge contained the barracks, kitchen, mess hall and sally port. The three exterior faces contained the casemates, or gunrooms. There were small iron embrasures that the cannons were fired through, as well as rifle slits on the first level at the bastions that faced land. A large earthen cover face was added along the gorge wall in 1861 as a response to the threat of land attack by Confederate supporters in Key West. Fresh water was supplied by a desalination plant and cisterns located beneath the walls of the fort. The fort was connected to the island of Key West via a causeway and a drawbridge. A site plan of the fort shows the layout of the batteries, casemates, barracks and parade ground. A detailed account of the construction and history of the fort can be found in Foster (1974) and Williams (1954).

The fort remained in Union hands throughout the Civil War and played a key role in the war's outcome as a blockade to Confederate shipping of supplies to the south. At

one time, there were reported to be 299 captured ships in Key West harbor. Fort Taylor was one of only four forts in the south that remained in Union control throughout the Civil War. The fort continued as a military post throughout the nineteenth century. Following the Civil War, construction ceased since the brick fortifications could not withstand the fire from the newly developed rifled cannons.

During the Spanish American War, extensive modifications were made to it, including the removal of the upper two levels of the structure, reinforcement of the decks with concrete and the installation of new armaments. The south and west exterior curtains were extensively altered to build emplacements for new guns. They were referred to as Battery Osceola and Battery Adair. At the same time, many of the outmoded Civil War period armaments and ammunition were buried in the lower casemates of the fort. Because of this, the fort contains the richest store of Civil War cannon and ammunition of any other fort in the United States. The fort was considered the most important land base for the Spanish American War. The fort was also an active defensive fortification during World War I, World War II and the Cuban Missile Crisis, but played less strategic roles. Due to this long period of activity, the walls of Fort Taylor, and the artifacts contained within them, provide an invaluable archaeological record of changes in military strategy and technology over a period of approximately 150 years. Although utilized in four wars, the fort never had to endure direct assault from an enemy. It was abandoned as a military installation in 1963 and transferred to the State of Florida in 1976.

In 1968, excavations began to unearth many of the original armaments from the fort. Excavated artifacts included gun cradles, carriages, a desalinization plant, numerous cannons, and over 1000 cannon balls and projectiles (England 1977). In December 1995, an inventory of exposed metal artifacts was conducted by the Florida Bureau of Archaeological Research and park staff. Numerous other artifacts may exist in a number of other casemates that remain entirely or partially filled with sand. Each of the casemates has a large cistern under it most of which have never been excavated.

In addition to the unearthed weaponry, title for which will be transferred to the Division of Historical Resources, Florida Department of State in 2007, the park also possesses a collection of historic and interpretive objects. Most of the historic objects were acquired by donation from private individuals over the years, much of it war paraphernalia that represents various aspects of military activity and life in the 19th and 20th century. Some of the objects may have been found on-site, such as glass bottles, and qualify as archaeological artifacts that DHR has a vested interest in. Many of these objects were used in interpretive displays in the Barracks Building, and stored here after the building was closed for repair. Archival material includes documents, maps, drawings, photographs and books about the fort, coastal fortifications and the Key West area. Finally, exhibit models of the fort's weaponry and construction, which were built by Howard England, have taken on significance in their own right for their interpretive

value and fine craftsmanship. Much of the collection has been temporarily transferred to the Division's central collection facility until the park can suitably store the collection on-site.

The Master Plan for Fort Zachary Taylor Historic State Park made recommendation for the treatment and storage of unearthed materials. In terms of its other collections, priorities include moving the remaining collection objects in the barracks to suitable temporary storage, transferring archival material into acid-free container, developing a catalog with the Division's new collection management software, and adopting an official Scope of Collection Statement.

Recent storm events have caused additional damage to some of the fort structures. Hurricane Wilma in October 2005 damaged many of the aluminum roof panels on the barracks building.

RESOURCE MANAGEMENT PROGRAM

Special Management Considerations

Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the Division's statutory responsibilities, and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of early successional communities such as sand pine scrub and coastal strand.

A timber management analysis was not conducted for this park. The total acreage for the unit is below the 1,000-acre threshold established by Florida Statutes. In addition, because Fort Zachary Taylor Historic State Park was acquired for the protection of the historic fort, timber management is not appropriate at this unit, except as provided for in the Memorandum of Understanding with Amendment 1 (see Addendum 1).

Additional Considerations

Fort Zachary Taylor Historic State Park includes 400 feet of Sovereign Submerged land on the south end of the park, on the southwest corner and on the northwest corner. Management of these submerged communities consists mostly of prohibiting access of boaters close to the shore.

Management of natural communities is often enhanced by physically restoring areas that have been disturbed or otherwise manipulated by people. Such management is

often achieved in the course of hydrologic, scenic or other restoration measures, such that two or more management goals can often be achieved simultaneously. Since all of the uplands at Fort Zachary Taylor HSP consist of fill material, and that the original land was submerged communities, restoration back to this original state is neither feasible nor desired. However, restoration can take place in the form of exotic species removal and re-vegetation with appropriate native species to create a semblance of a natural community even though some functions may never be replicated. Priority will be given to those sites that include the greatest biodiversity desirable for the long-term health of natural communities. Expansion of such sites will provide the necessary seed source for similar, adjacent natural communities that are currently degraded.

Management Needs and Problems

1. Exotic plant and animal control.
2. Water quality monitoring in the moat.
3. Protect the coral species that are located near the breakwaters.
4. Stabilize the shoreline at the south end of the park.
5. Establish system of conserving fort artifacts to prevent continued deterioration.
6. Establish a mechanism of preserving, stabilizing and waterproofing the fort and its associated structures to prevent continued deterioration.
7. Produce a comprehensive inventory of the artifacts from the fort.
8. Relocate Navy structure that is attached to the east wall of the barracks causing water intrusion.

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.

Natural Resources

1. Continue to remove exotic vegetation and replant with appropriate native hammock, coastal berm and beach dune species. The only exception to the removal of exotic species will be in relation to the Australian pine trees in the park. Mature Australian pines will remain unless they become a safety hazard, have died or are toppled in windstorms (see Addendum 1).
2. Conduct water quality monitoring in the moat.
3. Continue to work with staff from the Florida Keys National Marine Sanctuary to protect the coral species that are located near the breakwaters.
4. Remove exotic and feral animal species where applicable.
5. Continue with beach erosion measurements and photo plots.
6. Survey breakwaters and determine if they need to be stabilized.

7. Develop a marine resources educational program.
8. Stabilize rip-rap on southwest corner of park adjacent to Key West Channel.

Cultural Resources

1. Utilize the Master Plan for Fort Zachary Taylor Historic State Park (2006) to prioritize the preservation of the fort and its related structures to prevent continued deterioration. This would include continued funding for brick and mortar maintenance and repairs as well as maintenance for exhibited artifacts and displays.
2. Obtain funding for preservation of the fort and its associated structures.
3. Title to all artifacts excavated from the fort has been transferred to the Florida Department of State, Division of Historic Resources to facilitate improved management, curation and treatment of the artifacts. DHR will in turn loan any artifacts needed for display or interpretive use at the fort.
4. Pursuant to DHR recommendations, no further excavation in or around the fort will be conducted to disturb or exhume additional buried artifacts.
5. Work with other parks that manage similar cultural resources in an effort to be consistent in management of cultural resources and for conservation and preservation ideas.
6. Pursue long-term solution of removal of Naval facility which is built next to the east wall and causing water problems.
7. Continue to formalize collection management by adopting an official Scope of Collection Statement, maintaining a separate catalog for the park's collection, re-housing the archives and securing temporary storage for the remaining items in the barracks.
8. Stabilize Barracks.
9. Waterproof the Northern Casemate roof deck.
10. Waterproof the roof decks of Battery Adair and Battery Osceola.
11. Repoint masonry and repair plaster coating.
12. Rehabilitate and stabilize Barracks spaces for interpretation.
13. Rehabilitate Battery Adair and Battery Osceola for public access.

Management Measures for Natural Resources

Hydrology

Ground water management is applicable at this site. The moat surrounding the fort needs to be monitored for high levels of toxic substances particularly lead, mercury, zinc and copper.

Management activities will follow generally accepted best management practices to prevent soil erosion and conserve water resources at the park and the adjacent waters of the Florida Keys National Marine Sanctuary. The rip-rap on the southwest corner needs to be stabilized from impacts from the 2005 hurricane season.

Prescribed Burning

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

Prescribed burning is not an appropriate resource management tool at Fort Zachary Taylor HSP. Restored habitats in the park are not fire dependent communities so prescribed burning is not utilized as a resource management tool.

Designated Species Protection

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

Removing exotic plant species and increasing the abundance and diversity of appropriate native plant species will enhance the designated animal species of the park as well as resident and migratory bird populations. The only exception to the removal of exotic species will be in relation to the Australian pine trees in the park. Mature Australian pines will remain unless they become a safety hazard, have died or are toppled in windstorms (see Addendum 1 - Memorandum of Understanding with Amendment 1). Regular patrols of the beach during turtle nesting season should be conducted for signs of both false crawls and successful nesting activity.

Exotic Species Control

Exotic species are those plants or animals that are not native to Florida, but were introduced because of human-related activities. Exotics have fewer natural enemies and may have a higher survival rate than do native species, as well. They may also harbor diseases or parasites that significantly affect non-resistant native species. Consequently, it is the strategy of the Division to remove exotic species from native natural communities. The only exception to the removal of exotic species will be in relation to the Australian pine trees in the park. Mature Australian pines will remain

unless they become a safety hazard, have died or are toppled in windstorms (see Addendum 1 - Memorandum of Understanding with Amendment 1).

The threat of exotic plant infestation at Fort Zachary Taylor HSP comes from several sources; exotic species already found in the park, those spread by natural means (i.e. birds, wind, and water), those spread from the City of Key West, and those inadvertently planted without proper approval by Park Management. The most serious exotic plant threats at Fort Taylor are Australian pine (see 2008 Australian Pine GPS Mapping Project), yellow elder, woman's tongue, portia and Brazilian pepper. With the exception stated above, the park will continue to remove exotic species and replant with appropriate native vegetation. A native re-vegetation plan has been established for the park.

Free roaming domestic cats from the City of Key West are the major exotic animal problem in the park. Other exotic animal threats established at Fort Taylor include giant toad (*Bufo marinus*), domestic chickens (*Gallus gallus domesticus*), Cuban tree frog (*Hyla septentrionalis*), and brown anole (*Anolis sagrei*). Iguanas (*Iguana iguana*) have also been observed in the park, although their numbers remain low. Exotic animal removal methods will vary depending upon the species but will include trapping and the use of approved pesticides (for fire ants).

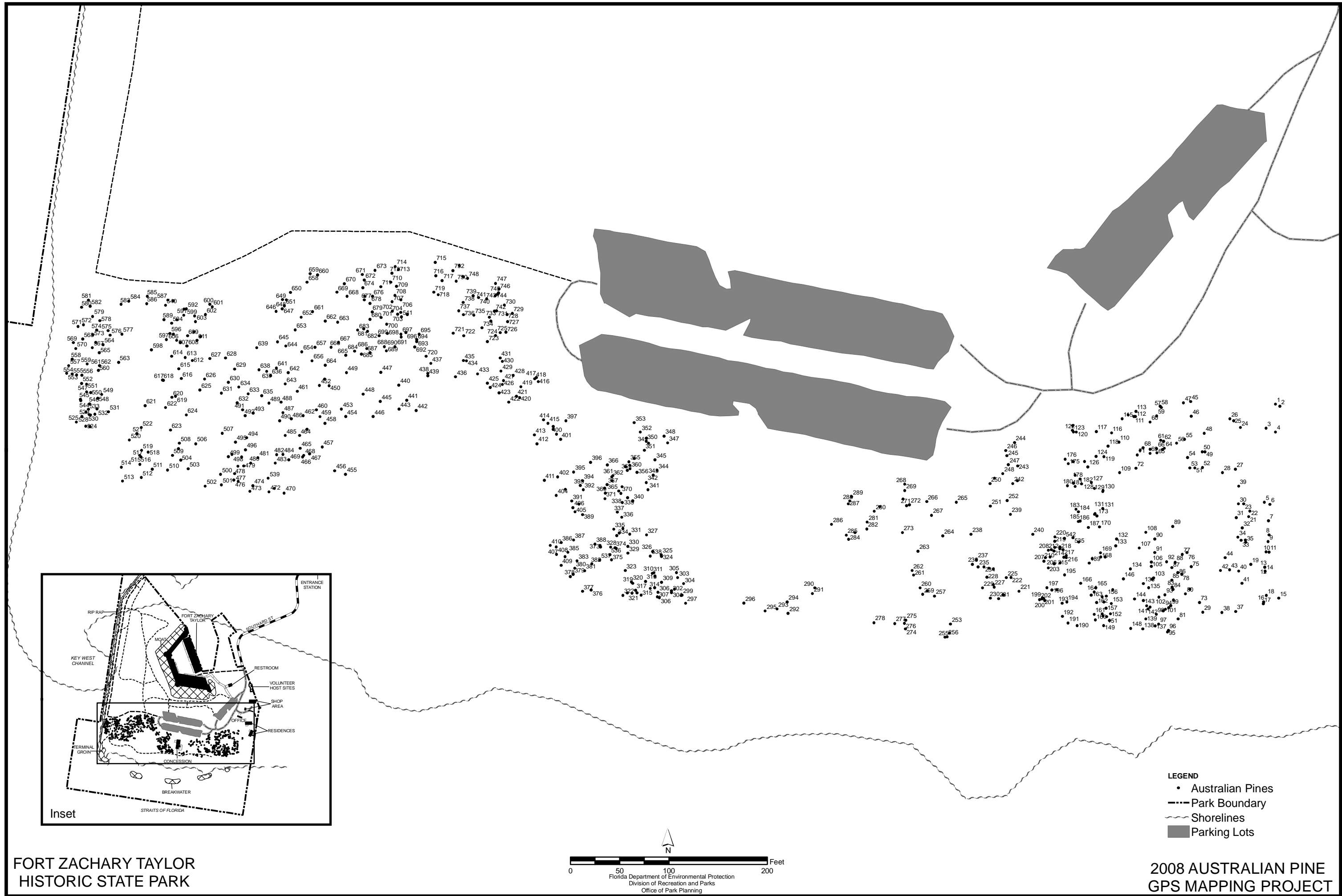
Problem Species

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. There are no problem species at Fort Zachary Taylor HSP.

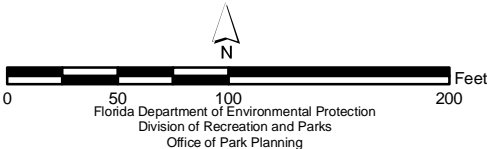
Management Measures for Cultural Resources

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

Projects such as additions, exterior alteration or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination.



**FORT ZACHARY TAYLOR
HISTORIC STATE PARK**



LEGEND

- Australian Pines
- Park Boundary
- Shorelines
- Parking Lots

**2008 AUSTRALIAN PINE
GPS MAPPING PROJECT**

In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case-by-case basis.

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

Management of the cultural resources at Fort Taylor will include the preservation of the fort as recommended in the Master Plan for Fort Zachary Taylor Historic State Park (2006). Because the fort is to be maintained and interpreted as a ruin, preservation and conservation efforts will be to prevent continued deterioration. In addition to the preservation of the fort the management of the cultural resources at this park will also include the preservation, conservation and inventory of artifacts. All artifacts that will not be used for interpretive purposes or on display have been removed from the park and stored in a Division of Historical Resources facility for preservation and conservation. Pursuant to DHR recommendations, no further excavation in or around the fort will be conducted to disturb or exhume additional buried artifacts.

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. Continue to update plant inventory.
2. Conduct water quality monitoring in the moat.
3. Continue to monitor stony coral populations.
4. Conduct vertebrate and invertebrate inventories
5. Conduct survey of submerged communities.
6. Establish bird-banding stations to monitor migratory bird activity in the park.

Cultural Resources

1. The Master Plan for Fort Zachary Taylor Historic State Park will be the tool to guide research and preservation of the fort.
2. Complete interpretive guide for the fort.
3. Address additional research needs that may arise.

Resource Management Schedule

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is contained in Addendum 6. Cost estimates for conducting priority management

activities are based on the most cost effective methods and recommendations currently available.

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.

Fort Zachary Taylor Historic State Park was subject to a land management review on November 21, 2002. The review team made the following determinations:

- 1.** The land is being managed for the purpose for which it was acquired.
- 2.** The actual management practices, including public access, did not comply with the management plan for this site.

The Division presented its management plan to the Board of Trustees and committed to completing a master plan to address management of the fort. The Master Plan for Fort Zachary Taylor Historic State Park was completed in June 2006.

LAND USE COMPONENT

INTRODUCTION

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

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

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

EXTERNAL CONDITIONS

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

Regional Population

Ft. Zachary Taylor Historic State Park is located within Monroe County, and the boundaries of the City of Key West. The largest urban center, Miami, is situated 160 miles northeast on the mainland. Monroe County (population 81,236) grew a mere two percent between 1990 and 2000. State rules related to the county's Area of Critical State Concern designation and local land development codes designed to meet the requirements of an ACSC serve to limit growth in the keys. As a result, only a modest increase in resident population is anticipated for the future in Monroe County. The County contains a significant Hispanic population (20 percent) and a slightly higher median age (44.4) than the state average (BEBR, University of Florida,

2006). As of 2000, nearly 53,000 people resided within 50 miles of the park.

Existing Use of Adjacent Lands

The park is located on the extreme southwestern tip of the island of Key West surrounded by water to the west and south. The land surrounding the park was created by dredge and fill activities by the U.S. Navy over many years, culminating during World War II. The Key West Naval Air Station (NAS) has served a variety of purposes over the years, most recently as a submarine base. As part of the Base Realignment and Closure process, the Navy has made some changes to its operations in this area and transferred a portion of the base to the City of Key West for its Truman Waterfront Development project. The Navy maintains several warehouse structures immediately adjacent to the fort and a residential and recreation area adjacent to the western boundary of the park. One of the buildings abuts the east side of the Barracks building and contributes to moisture problems that could compromise the integrity of the wall. It is in the long-term interest of Fort Taylor to have the adjacent structures relocated away at some point in the future.

The active tourism and commercial center of the City of Key West is about one-half mile northeast of the park, and the Bahama Village residential community is about one-quarter mile east of the site. The western side of the site is adjacent to a deep-water shipping channel, and large cruise ships are moored directly north of the park.

Planned Use of Adjacent Lands

In 1995, the U.S. Navy, pursuant to the 1995 Base Realignment and Closure (BRAC) process, declared certain land holdings and facilities of the Key West Naval Air Station as surplus to their needs. Over 30 acres have been conveyed to the City of Key West for redevelopment along the Truman waterfront. The City's master plan proposes a mix of commercial, residential, marina, cultural, park and open space uses for the area. In addition, as part of the BRAC process, approximately 1.5 acres contiguous with the park was transferred to the state to be managed as part of Ft. Zachary Taylor Historic State Park (see Reference Map).

The conversion of the Navy property will no doubt provide an economic revitalization to the area and make the park much more visible to Key West residents and visitors. These changes will result in the park becoming one of the anchor attractions that support the redevelopment of the Truman waterfront area and likely to increase future levels of visitation.

Changes to vehicular circulation in this area are being planned as part of the City's redevelopment efforts. In addition, the U.S. Navy has deemed that the current alignment of Southard Street between the park boundary and the existing ranger station is too close for security purposes and must be shifted away from their property. This requires a realignment of the entrance to the state park.

The Navy has recently replaced some of its warehouse structures adjacent to Fort Zachary Taylor with new ones and is not anticipated to relinquish control of the land immediately adjacent to the fort in the near future. A pedestrian bridge has been proposed to link this area to the adjacent residential compound.

Coordination between all parties is needed to realize the potential benefits of the redevelopment of this area and to ensure the interests of the state park are considered. Division staff will continue to provide feedback to the City of Key West and the U.S. Navy to ensure the operational needs of the park are accommodated in future plans for the area.

PROPERTY ANALYSIS

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

Recreation Resource Elements

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

The fort occupies about three acres of the site, overlooking the Gulf of Mexico and the Atlantic Ocean. It was constructed on coral bedrock offshore from the extreme western tip of Key West, and has been in active use since its construction began in 1845. The fort's history was previously related through a museum containing artifacts and models of the original facilities and weapons. Unfortunately, structural problems have necessitated the closure of several areas of the fort to public access, including the former museum. Several original Civil War cannons are on display in the enclosed parade ground in the fort, outside the fort near the entrance, and at the entrance to the park drive. Guided tours of the fort are provided by park and volunteer staff.

The fort was originally surrounded by water and connected to Key West by a causeway and wooden bridge. Over the years, spoil from numerous dredging projects was gradually dumped around its perimeter. By 1968, the fort was landlocked and attached to the island of Key West. The fill around the fort created a pleasant man-made beach, located directly south of the fort itself, which is a popular

feature of the park. However, the shoreline is susceptible to erosion and requires periodic maintenance to provide a safe, high-quality beach. Rock groins and corals in the nearshore waters are attractive for snorkeling. A concession facility sells food, drink and beach supplies and rents snorkeling equipment and kayaks, and picnic tables and grills are located throughout the area.

Although the focal point of the state park is the historic fort, this unit also provides opportunities for day-use recreational activities adjacent to a scenic shoreline. For visitors who seek peace and quiet, the site offers a relaxing coastal setting in striking contrast to the busy city of Key West. The western shoreline of the historic site was armored with riprap to minimize erosion and to help maintain the adjacent deep-water shipping channel. Fishing and sunbathing are popular activities along this western shoreline. The adjacent channel is approximately 33 feet deep. It provides anglers with opportunities to fish for a variety of saltwater species. Swimming is not allowed along the western shoreline since the current can be very strong and boat traffic is heavy.

Assessment of Use

Past uses of the park, land administration issues, applicable zoning and future land use designations, current recreation activities and visitor programs, established protected zones, and existing facilities are briefly described in the following sections. The Base Map reflects all legal boundaries, structures, facilities, roads and trails existing in the park.

Past Uses

The U.S. Navy owned the site prior to 1976 when the Department of the Interior deeded it to the state of Florida. Between World War I and World War II, the Florida National Guard held summer encampments at Fort Taylor.

Future Land Use and Zoning Designations

The 2006 future land use (FLU) and zoning designations for park uplands are Military (M). This district is not subject to the City's regulatory review process.

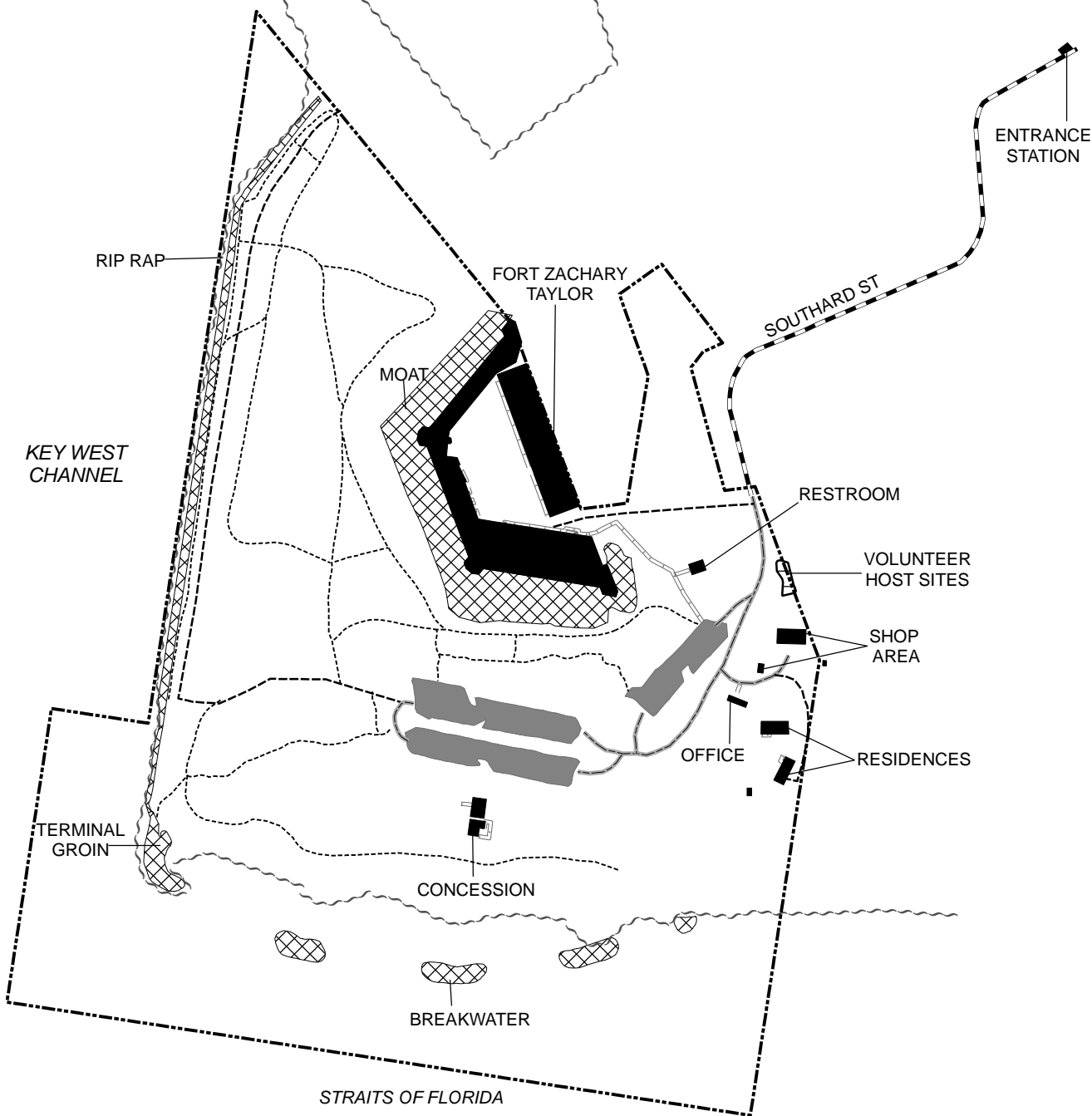
Submerged lands of the park are designated Conservation-Open Water (C-OW). All uses are considered conditional within this district, must be water-dependent and include docks, piers, boardwalks and watercraft.

Current Recreational Use

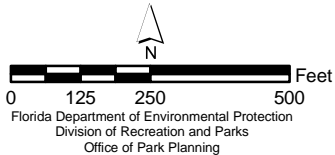
Visitation at the park has trended upward over the last 10 years with a high of 353,700 visitors reported in fiscal year 2003/04. It was estimated that 252,798 people visited the park in fiscal year 2006/07, the most recent complete year of reported attendance. Visitation peaks in late winter/early spring and again throughout the summer months.

LEGEND

- Park Boundary
- County Road
- Park Road Paved
- - - Park Road Unpaved
- ... Hiking\Biking Trails
- Walkways
- ~ Shorelines
- Structures
- Parking Lots
- ⊗ Water Control Structures



**FORT ZACHARY TAYLOR
HISTORIC STATE PARK**



**BASE
MAP**

Historic fort tours are provided daily and the Division coordinates a regular schedule of living history events at the park. Fishing, swimming, snorkeling, and picnicking are popular recreational activities engaged in by visitors to the park. The park's beach attracts large numbers of visitors as sandy beaches are limited in Key West. The park's attractive waterfront location is also a draw for group events and weddings and a contracted visitor service provider is available for event planning.

Current Visitor Programs

The story of Fort Taylor is a long and complicated history requiring multi-faceted, interactive interpretive programming to provide visitors a clear understanding of its role in military history. Guided tours, offered twice daily, allow visitors to understand the evolution of U.S. coastal fortifications and armaments, as Fort Taylor was radically altered over time in response to new artillery technology. Varieties of resource-oriented programs are also provided upon request throughout the year in addition to self-guided tours using interpretive handouts. The Division regularly holds living history events at the park that are coordinated with local schools to involve children. The park also frequently hosts a variety of cultural events such as musical concerts and art shows.

The Master Plan for Fort Zachary Taylor Historic State Park identified the potential for enhancing and expanding park programming as budget and staffing resources permit. It is recommended that guided tours be expanded to focus on particular time periods or topics outlined in the Master Plan. Consideration should be given to the use of audio-devices for self-guided tours and the development of an audio-visual presentation. The latter is dependent on developing suitable space within the fort or construction of a permanent facility. Outreach with local schools could be strengthened with programs linked to local and state curricula. The Master Plan includes recommended time periods, interpretive themes and content to guide future improvements to the park's interpretive program.

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 Fort Zachary Taylor Historic State Park, the fort and surrounding moat have been designated as a protected zone due to historic significance.

Existing Facilities

The historic fort is the largest and most notable structure on the site. A restroom building and paved parking for 34 vehicles serves visitors touring the fort. The picnic area and swimming area utilize a combination bathhouse/concession building and a paved parking lot that accommodates approximately 107 vehicles. Support facilities include an entry booth, two ranger residences, a shop building, park office and volunteer host sites.

CONCEPTUAL LAND USE PLAN

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

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.

Potential Uses and Proposed Facilities

At Fort Zachary Taylor Historic State Park, the primary emphasis is placed on protection and maintenance of the historic resources of the park, while allowing the public an opportunity to experience and understand them. This plan proposes additional facilities to enhance the Division's ability to tell the story of Fort Taylor. Due to the intense urban density of its surroundings, recreational uses of the park have gained an importance not usually encountered at special feature sites in the



State Park system. In addition, changes in adjacent land uses require plans to address vehicular circulation and access to the park.

It is worth noting that land use recommendations in the previous management plan were based largely on the assumption that the Navy would convey the property containing the warehouses adjacent to the fort to the state to be managed as part of the park. This would have allowed the removal of a portion of these structures, adaptive reuse of one for interpretive purposes, extension of the moat and the reestablishment of the historic entry to the fort through the Sally Port. While the transfer of this property is still desirable, current conditions are such that this does not appear possible. The following land use recommendations are based on the assumption that the Navy will continue to use the adjacent property for military purposes for the near future. If this situation were to change, consideration will be given to amending the conceptual land use plan to take advantage of these circumstances.

Interpretive Facilities

Access to a cross section of the various fort components is critical to the full interpretation of the fort. The recently completed Master Plan identified areas of the fort that are currently not structurally safe and are now closed to the public. It is important to reestablish public access to as many areas of the fort as is practical and safe as stabilization work is completed. Varieties of physical improvements are recommended in this plan to address the interpretive needs of the park, some of which are dependent on stabilizing areas of the fort.

Signage is an important element of a park interpretive program. It is recommended that a comprehensive, consistent signage program be implemented that addresses visitor circulation and serves as a foundation for the self-guided component of the park interpretive program. Signs are recommended to be located at key interpretive stops throughout the fort and vicinity that are linked together to create an interpretive trail revealing the story of Fort Taylor. Information communicated through the sign program can be supplemented with handouts or even audio devices.

It is recommended that portions of the fort be rehabilitated and period rooms established in the Barracks, with reproduced artifacts and furnishings to give visitors a feel for a particular time of the fort's history. These exhibits will in no way be allowed to compromise the historical integrity or the structural fabric of the historic building. Consideration will also be given to reestablishing an interpretive space in the fort with exhibits designed to withstand a lack of climate control, at least until a permanent facility is constructed.

A permanent "Interpretive Center/Gateway" is recommended to meet the full

interpretive potential or the park. Under existing conditions, the options for interpreting the fort are limited. Exhibits requiring climate-controlled space cannot be displayed due to concerns for the historic fabric of the fort. There is no central point of visitor contact, other than the ranger station, to orient visitors and provide interpretive materials, nor is there convenient space to meet with groups and deliver interpretive talks, slide shows or show other audiovisual programs. For these reasons, an open-air visitor center is recommended to be constructed in existing open space between the parking area and the fort. The interpretive gateway is envisioned as a series of interpretive kiosks, artifact displays housed in climate controlled enclosures (but viewed from outside), and seating areas designed within the existing open area. Visitors will gain an understanding of the cultural and natural resources of the park and their management as they traverse the area and enter the fort itself. Careful analysis of the viewing experiences available to visitors as they approach the fort along the gateway route will precede actual design. The facilities will be designed to protect the existing viewshed, and enhance it where possible. No impact to existing native vegetation will result from the interpretive center development. This concept will also result in a reduction of energy use and noise in an interpretive facility that is both environmentally sound and cost effective. The existing restroom will need to be renovated or replaced to integrate it with the new facility.

Support Facilities

A new ranger station is currently in the design phase and will be located just north of the fort parking lot. The Division is currently in negotiation with the City of Key West to determine the new alignment of the park entrance road. The road layout is being coordinated with the City's plans for access to the Truman Waterfront redevelopment project. Bicycle and pedestrian facilities will be incorporated into the design of the road and ranger station to accommodate the high number of visitors biking and walking to the park.

A multi-purpose storage facility is also recommended at the northwest corner of the park, if that area is not transferred to the City of Key West to allow construction of a traffic circle, as discussed below. The park has a significant need for storage of both equipment and artifacts. While construction of an artifact storage facility is being pursued in Tallahassee to facilitate the Division of Historic Resource's preservation treatment process, onsite storage will help with the organizing and care of the park's significant number of artifacts. A portion of this facility would need to be climate controlled to provide protection from the corrosive effects of the salt air. Landscape buffers and fencing should be incorporated into the design of this project to provide security and screen it from the entrance road and adjacent land uses. If the area is removed from the park, then the needed storage will be incorporated in the park maintenance area facilities discussed below.

A lack of both administrative office space and residences for park staff has been long-

standing problems at Fort Zachary Taylor Historic State Park. The park's office needs will be provided with the development of the new ranger station. A duplex housing unit is recommended to be constructed in the current location of the office trailer. An additional 3-bay equipment storage building is also proposed to be located adjacent to the park's shop building, and the multi-purpose storage space discussed above will be incorporated in this building or as an addition to the existing shop building, if necessary.

Facilities Development

Preliminary cost estimates for the following list of proposed facilities are provided in Addendum 6. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist the Division in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes.

Interpretive Facilities

Interpretive Center/Gateway
Interpretive Signage
Period Rooms in Barracks building

Support Facilities

Staff residences (1 duplex unit)
Ranger station
New entrance road
Equipment and multi-purpose storage facility

Existing Use and Optimum Carrying Capacity

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site and the unit's classification is selected (see Table 1).

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

Table 1--Existing Use And Recreational Carrying Capacity

Activity/Facility	Existing Capacity		Proposed Additional Capacity		Estimated Recreational Capacity	
	One Time	Daily	One Time	Daily	One Time	Daily
Fort	300	1,800	100	600	400	2,400
Parade Ground	2,000	2,000			2,000	2,000
Visitor Center/Gateway			168	672	168	672
Picnicking/Swimming	750	1,500			750	1,500
Fishing	50	100			50	100
TOTAL	3,100	5,400	268	1,272	3,368	6,672

Note: Parade ground capacity reflects use during infrequent special events.

Optimum Boundary

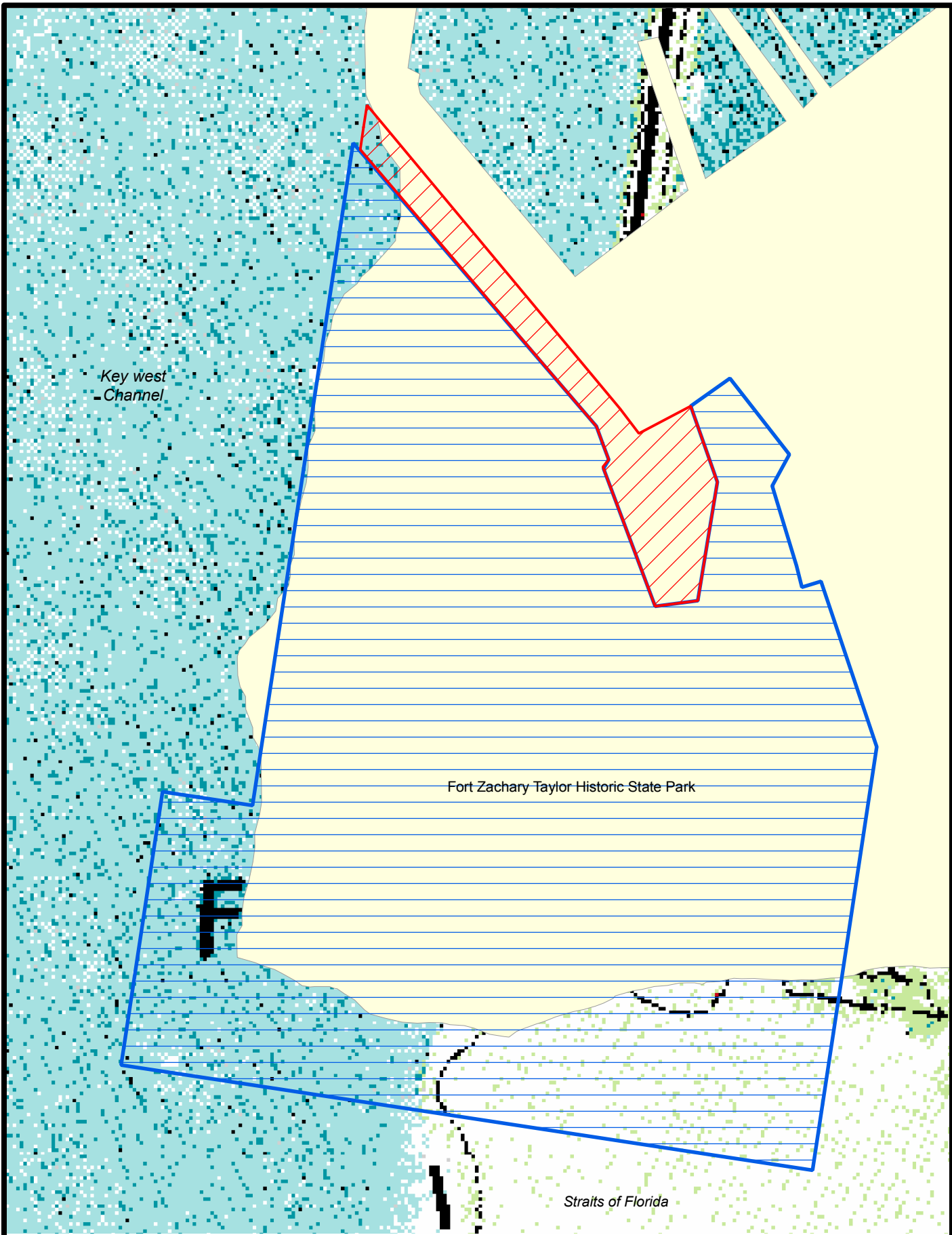
The optimum boundary map reflects lands identified for direct management by the Division as part of the park. These parcels may include public as well as privately owned lands that improve the continuity of existing park lands, provide additional natural and cultural resource protection, and/or allow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

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

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.

The adjacent lands identified on the optimum boundary map include property of the U.S. Navy. Management of these lands as part of the park would allow the removal of non-historic structures adjacent to the fort and provide additional uplands to help meet recreational and support facility needs.

Approximately one-half acre of park land at the northeastern corner of the property

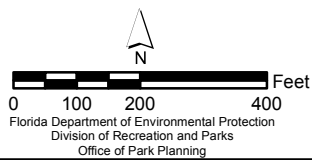


Key west
-Channel

Fort Zachary Taylor Historic State Park

Straits of Florida

**FORT ZACHARY TAYLOR
HISTORIC STATE PARK**



LEGEND

- Park Boundary
- Optimum Boundary

OPTIMUM BOUNDARY MAP

has been requested by the City of Key West and the U.S. Navy to allow construction of a traffic circle and security point that will provide access to the Navy property and the City's cruise ship port to the north. This request is under consideration.

**Addendum 1—Acquisition History, Memorandum of Understanding with
Amendment 1, List of Advisory Group Members and Advisory Group Staff Report**

Fort Zachary Taylor Historic State Park Acquisition History

Purpose of Acquisition

The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) acquired Fort Zachary Taylor Historic State Park to manage the property to protect and restore the natural and cultural values of the property for the benefit of the citizens of the state.

Sequence of Acquisition

On October 7, 1976, the Trustees obtained title to a 30.00-acre property that later became Fort Zachary Taylor Historic State Park. This property was acquired from the United State of America, Department of the Interior (the Department). On 21, 1979, the Trustees acquired another 13.32-acre property from the Department, and on August 10, 2006, the Department donated a 1.58-acre property to the Trustees. On February 17, 1984, the United State of America through the Department of the Navy granted a 50-year access easement to the Department of Natural Resources, predecessor in interest to the Department of Environmental Protection, Division of Recreation and Parks (Division). This 2.585-acre easement was granted to the Division to construct, operate and maintain an access road to the park. In January of 1989, the Trustees granted an 8.82-acre sovereignty Submerged land easement to the Division.

Title Interest

The Trustees hold fee simple title interest in Fort Zachary Taylor Historic State Park.

Management Leases

On December 22, 1976, Trustees leased Fort Zachary Taylor Historic State Park to the Division under lease No. 2923. This lease is for a period of ninety-nine (99) years, and it will expire on December 21, 2075.

According to Lease No. 2923, the Division will manage For Zachary Taylor Historic State Park only for the conservation and protection of natural and historical resources and to use the property for resource-based public outdoor recreation compatible with the conservation and protection of the resources.

Special Conditions on Use

Fort Zachary Taylor Historic State Park is designated single-use to provide resource-based public outdoor recreation and other park related uses. Uses such as water resource development projects, water supply projects, storm-water management projects, and linear facilities and sustainable agriculture and forestry, unless specifically stated otherwise in this unit management plan, are not consistent with this plan.

Fort Zachary Taylor Historic State Park Acquisition History

Outstanding Reservations

Following is a listing of outstanding rights, reservations and encumbrances that apply to Fort Zachary Taylor Historic State Park.

Instrument:..... Quitclaim Deed
Instrument Holder:..... The United States of America
Beginning Date:..... August 10, 2006
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: The deed states that in the event that there is a breach of any of the conditions and covenants contained in the Quitclaim Deed by the Grantee (The Board of Trustees of the Internal Improvement Trust Fund of the Sate of Florida), its successors and assigns, all right, title and interest in and to the subject property shall revert to and become the property of the Grantor (the United States of America) at its option.

Instrument:..... Quitclaim Deed
Instrument Holder:..... The United States of America.
Beginning Date:..... October 7, 1976
Ending Date: No ending date
Outstanding Rights, Uses, Etc.: The deed states that if at any time the United States of America shall determine any part of the subject property is needed for the national defense, all right, title and interest in the property shall revert to and become the property of the United States of America.

Instrument:..... Quitclaim Deed
Instrument Holder:..... The United States of America.
Beginning Date:..... November 21, 1979
ENDING DATE:..... No ending date
Outstanding Rights, Uses, Etc.: The deed states that if at any time the United States of America shall determine that any part of the subject property is needed for the national defense, all right, title and interest in the property shall revert to and become the property of the United States of America.

Fort Zachary Taylor Historic State Park Acquisition History

Instrument:.....Easement
Instrument Holder:United States of America
Beginning Date:February 17, 1984
Ending Date:February 16, 2034
Outstanding Rights, Uses, Etc.:.....The easement grants the State (Trustees), to construct, install, operate, maintain and repair a road station for access to Fort Zachary Taylor.

Instrument:..... Sovereignty Submerged Lands Easement
Instrument Holder:..... Trustees
Beginning Date:..... December 20, 1988
Ending Date: No ending date
Outstanding Rights, Uses, Etc.: In the event that the subject land ceases to be used for the purposes specified in this easement, the easement shall be terminated without notice from the instrument holder.

Fort Zachary Taylor Historic State Park Acquisition History

MEMORANDUM OF UNDERSTANDING

This memorandum is made between the State of Florida Department of Environmental Protection (DEP) and State Representative Ron Saunders. The parties agree as follows:

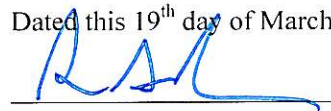
1. DEP is the state agency responsible for the operation, and maintenance of state parks, including Fort Zachary Taylor Historic State Park located in Key West, Florida.
2. State Representative Ron Saunders represents District 120 in the Florida House of Representatives, Fort Taylor Park is located entirely and solely within the boundaries of House District 120.
3. Fort Zachary Taylor Historic State Park contains Australian pines (*Casuarina equisetifolia*) that have been in the park for many years and provide shade for visitors. Although DEP has a policy of eradicating Australian pines in state parks, DEP agrees to the following policy which shall be unique and applicable only to the Australian pines located in Fort Zachary Taylor Historic State Park.
4. DEP will remove existing Australian pines in Fort Zachary Taylor Historic State Park only if the pines have died, are toppled by windstorms, or constitute a public safety hazard. No Australian pines will be removed for building, landscaping, or hardscaping purposes. The existing pines shall remain unencumbered on the property until their natural death. DEP, at their discretion, may remove new Australian pine seedlings.
5. DEP shall use due care to avoid damaging any of the existing Australian pines. Within one (1) month of the date of this memorandum DEP shall carefully remove any overlaid calcium compounds or other introduced materials from the tree flare without damaging the existing roots or flare. Existing standards and practices shall be adhered to regarding the health and maintenance of the existing pines.
6. DEP now has a GPS survey indicating the location of each existing Australian pine in the park. Within three (3) months of the date of this memorandum, DEP shall conduct an update of the survey, with participation extended to members of the interested public, to determine the number, location and apparent health of all Australian pines in existence. Notations shall be made to the current survey in the event that any trees have been or should be removed. Copies of the current annotated survey shall be made available to the City of Key West and the office of the undersigned on an annual basis.
7. A copy of this memorandum will be included and incorporated in the Fort Zachary Taylor Historic State Park Unit Management Plan.

On this date, the language above is adopted as the Division of State Parks' policy regarding Australian pines in Fort Zachary Taylor Historic State Park and any changes to this policy shall only be made upon the agreement of DEP and Monroe County Representative Saunders or his successor in office.



Bob Ballard
Deputy Secretary for Land & Recreation
Department of Environmental Protection

Dated this 19th day of March, 2008.



Ron Saunders
State Representative
Florida House District 120

cc: Governor Charlie Crist
Secretary Michael Sole, DEP

Memorandum of Understanding
Amendment No. 1

This amendment is to modify the Memorandum of Understanding between Representative Saunders, Florida House District 120, and Bob Ballard, Deputy Secretary for Land and Recreation, Florida Department of Environmental Protection, dated March 19, 2008, regarding Fort Zachary Taylor Historic State Park.

Paragraph 5 is amended to read:

Department of Environmental Protection (DEP), shall use due care to avoid damaging any of the existing Australian pines.
Within six (6) months of the date of this memorandum DEP shall carefully remove any overlaid calcium compounds or other introduced materials from the roots and tree flare without damaging the existing roots or flare. Existing standards and practices shall be adhered to regarding the health and maintenance of the existing pines.

Paragraph 8 is added to read:

This amendment and all future modifications to the March 19, 2008, Memorandum of Understanding shall be executed by Save Our Pines and the Director of the Division of Recreation and Parks.

On this date, the language above is amended to the Division of State Parks' policy regarding Australian pines in Fort Zachary Taylor Historic State Park.

Dated this 25th Day of April



Helen Harrison
Chairperson
Save Our Pines



Mike Bullock
Director
Florida Park Service

c: Representative Ron Saunders
Bob Ballard, Deputy Secretary, Land and Recreation

Fort Zachary Taylor Historic State Park Advisory Group Members

Morgan McPherson, Mayor
c/o Vivian Perez
City of Key West
525 Angela Street, 2nd Floor
Key West, Florida 33040

Noble Hendrix
South Dade Soil and Water Conservation
District
25399 Southwest 157th Avenue
Homestead, Florida 33031

Mark Knapke, Park Manager
Fort Zachary Taylor Historic State Park
P.O. Box 6560
Key West, Florida 34949

Randy Grau, Biologist
Florida Fish and Wildlife Conservation
Commission
P.O. Box 430541
Big Pine Key, Florida 33043-0541

Mark Torok, Senior Forester
Division of Forestry
Everglades District
3315 Southwest College Avenue
Ft. Lauderdale, Florida 33314

Jerry Buckley, Lead Planner
Area of Critical State Concern Field Office
Department of Community Affairs
2796 Overseas Highway, Suite 212
Marathon, Florida 33050

David Ferro, Historical Architect
Florida Division of Historical Resources
500 South Bronough Street
Mail Station 8
Tallahassee, Florida 32399-0250

David Score, Superintendent
Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, Florida 33040

Captain James R. Brown
Commanding Officer
U.S. Naval Air Station, Key West
P.O. Box 9001, Building A324
Key West, Florida 33040

Mark Hedden, President
Florida Keys Audubon Society
P.O. Box 1573
Key West, Florida 33041

Ms. Helen Harrison
Save Our Pines
825 White Street
Key West, Florida 33040

Alison Higgins
The Nature Conservancy
P.O. Box 440237
Summerland Key, Florida 33042

Cory Malcolm, Director of Archaeology
Mel Fisher Maritime Heritage Society
200 Greene Street
Key West, Florida 33040

Daniel T. Dedeo, President
Friends of Fort Taylor, Inc.
4A Calle Dos
Key West, Florida 33040

Sterling Christian, Operations Director
The Truman Annex Master Property
Owners Association, Inc.
201 Front Street, Suite 103
Key West, Florida 33040

Matthew Babich, General Manager
Southernmost Hotel & Resort
1319 Duval Street
Key West, Florida 33040

Fort Zachary Taylor Historic State Park Advisory Group Members

Fort Zachary Taylor Historic State Park Advisory Group Staff Report

The Advisory Group meeting to review the proposed land management plan update for Fort Zachary Taylor Historic State Park was held at the Harvey Government Center in Key West, on October 15, 2007. The meeting began at 9:00 A.M.

Ms. Leigh Espy represented Mr. Score (Florida Keys National Marine Sanctuary) and Mr. Thomas Tukey represented Mr. Christian (Truman Annex Master Property Owners Association). Mayor McPherson (City of Key West), Mr. Hendrix (South Dade Soil and Water Conservation District), Alison Higgins (The Nature Conservancy) and Captain Brown (US Naval Air Station, Key West) could not attend the meeting. All other appointed Advisory Group members attended. A copy of the membership list is attached. Division staff attending included Paul Rice, Mark Knapke, Ernie Cowan, Janice Duquesnel and Lew Scruggs.

Mr. Scruggs began the meeting by explaining the purpose of the Advisory Group and discussing the process by which the members comments and staff recommendations would be summarized and delivered to the members, with a request for additional comments in writing. He provided a brief overview of the Division's planning process and summarized public comments received during the previous evening's public workshop. He then asked each member of the advisory group for his or her comments on the plans.

Summary of Advisory Group Comments

Mr. Buckley (Florida Department of Community Affairs) stated that the draft plan appeared to be thorough and well considered both from planning and biological perspectives.

Ms. Harrison (Save Our Pines, Inc.) said that her opposition to Australian pine (A.P.) removal and her concerns about future disruption of the quality recreational setting that exists at the park, the addition of a picnic shelter and its proposed location on the point, and the trend toward commercialization of the park were well expressed at the previous night's public workshop. Ms. Harrison said that the unique character of the beach at the state park will be forever lost if the A.P. are removed. She urged the Division to focus its efforts and funding on the preservation of Ft. Taylor, noting that both funding and water for establishing new plantings are in short supply. She expressed opposition to placement of sand on the beach because of the impact that may have on coral and seagrass communities offshore when the sand is washed out by storms. She stated that the rocky beach is acceptable at this park and should be left as it is. Ms. Harrison expressed strong concern that commercialization threatens to overtake the park in the future. She stated that the proposed shelter should not be placed in such a prime viewing location, situated to remove A.P., and used to privatize that portion of the park. She emphasized that the character of the beach area at Ft. Taylor, the element that attracts its visitors and is highly valued by many Key West residents, is its

simplicity and it's feeling of openness, created by the clear understory of the A.P. zone. Ms. Harrison returned to these themes several times during the ensuing Advisory Group discussion. She asked that the City of Key West and Monroe County resolutions supporting retention of A.P. in the state park be mentioned in the management plan.

Mr. Babich (Southernmost Hotel and Resort) asked if visitor surveys had been conducted to evaluate visitor preferences. Mr. Knapke replied that surveys are desirable and may be conducted in the future, but have not been funded to date. Mr. Babich stated that the Fort is an important tourist destination in Key West and its preservation should receive high priority in the Division's plan. He noted that the beach recreation provided by the park is also a very important benefit of the park, so the maintenance of good water quality offshore should also receive high priority. He said that a picnic shelter, properly designed and located, would be beneficial to recreational users, and suggested locating the shelter north of the area occupied by A.P. He recommended that the architectural style of the pavilion should match the park's historic structures. Mr. Babich did not take a position on the question regarding removal of A.P. from the park.

Mr. Torok (Florida Department of Agriculture and Consumer Services, Division of Forestry) said that the plan is good, in his opinion. He said that he had attended the workshop and understood the local opposition to exotic plant removal in this state park. He stated that exotic plant removal is required for proper environmental protection of state lands, and that this case is complicated because continuation of shade is very important to the social and recreational functions of the park. He suggested that manpower for the planting and maintenance of native species could be accomplished by volunteers. He noted that education regarding the impacts of exotic vegetation may be the key to the current impasse regarding the A.P. Mr. Torok said that the Division's planting plan appears to be well devised, but that dealing with the issue of shade retention will obviously be the biggest issue. He noted that education on the environmental issues facing state land management is very important and expressed strong support for effective interpretive signage and programs to aid in the process.

Ms. Espy (Florida Keys National Marine Sanctuary) said that the National Marine Sanctuary (NMS) general management plan is in updating process at this time. She requested that the Division's management plan make full note of the many partnerships and collaborative efforts between the two agencies. She asked that the NMS boundaries appear on all appropriate maps in the state park management plan. Ms. Espy noted that there is no discussion in the draft plan regarding potential impacts of the proposed beach renourishment on the park's submerged communities. She said her agency strongly supports efforts to connect the park to municipal sewage systems to protect water quality. Ms. Espy said that the NMS removes exotic species from land under their management. She noted that environmental education is a very high priority, and the NMS is eager to pursue educational partnerships with the park in the future.

Regarding new buildings, Ms. Espy recommended that "green" building design should be incorporated to reduce the park's carbon footprint and minimize impacts to the park.

Mr. Tukey (Truman Annex Master Property Owners Association, Inc.) stated that the Association is opposed to the removal of A.P. at the state park and would provide a written statement to that effect. He said the Association supports preservation of the Fort. He stated that, excepting the plan for A.P. removal, the Division's draft plan appears to be a good and comprehensive effort, and noted that education is an important aspect of the park's mission. Mr. Tukey suggested that native plants should be planted in the large open area west of the Fort. He urged the Division staff to try to balance the community's wishes with environmental protection in the park. He questioned why A.P. are banned on state lands, and Ms. Duquesnel provided a brief explanation of the ecological impact of invasive exotic plants on conservation lands. Mr. Tukey asked why these issues are a great concern in the case of this state park, given its small size and location at the edge of a completely urbanized landscape, with no natural areas into which the trees could spread. Ms. Espy replied that A.P. infestations do affect shoreline areas in the NMS along the Truman waterfront, and their policy also is to remove the plants whenever found.

Mr. Hedden (Florida Keys Audubon Society) stated that he is opposed to locating the pavilion as shown in the draft management plan. He said that it should be located in a scarified area. He noted that management of the open field west of the Fort can affect bird use of the area, having noted that mowing the field for a special event in the past resulted in essentially no bird activity in that area for the following six months. He questioned whether the visitor center development would degrade the environment surrounding it, citing the disturbance caused by removing native vegetation for construction, noise from air conditioning systems, etc. He stated that the park provides critical habitat for migrating bird species and that native vegetation in the park should be protected and expanded wherever possible. Mr. Hedden opposed the idea of reducing the berm between the parking areas and the Fort to create views of the Fort, since that action would reduce habitat. He supported the plan to remove A.P. and planting of native species, but urged no net loss of shade canopy in the park. He urged no loss of public access to the park and stated that visitor service providers in the park should not displace public users.

Mr. Grau (Florida Fish and Wildlife Commission) stated his support for removal of A.P. from the park. He noted the extreme importance of native vegetation at this site since it is the last and first stopover point for migratory birds flying between North and South America, and that A.P. do not provide adequate food or habitat for these species. He stated that the park provides an important refuge for birds because it is vegetated and is relatively free of predators, such as feral cats. Ms. Harrison read a portion of a letter by Mr. Carl Goodrich, birding enthusiast, stating that A.P. provide a food source for migrating birds. Ms. Duquesnel replied that studies of migrating birds at Bill Baggs

Cape Florida State Park on Key Biscayne showed an explosion of the numbers of birds visiting the park because native plants were restored after Hurricane Andrew removed the park's A.P. monoculture. She noted that significant weight gains of the birds are recorded because of the food source provided by the diversity of plants now available on the park. Mr. Grau agreed that scientific studies show that native vegetation is extremely important to migratory bird species because of the diversity of forage it provides. Mr. Knapke noted that studies of numbers, feeding behaviors and weight gains of visiting birds are needed both before and after the proposed A.P. removal projects, and are recommended by the draft management plan. Mr. Grau also noted the importance wildlife watching as both a recreational activity and as an economic benefit to areas local to destinations for wildlife enthusiasts. He asked if the Fort's cannons have been treated for preservation. Mr. Knapke and Mr. Dedeo explained that efforts are underway to install the cannons in cradles, but that more extensive treatment is yet to occur.

Mr. Dedeo (Friends of Ft. Zachary Taylor Historic State Park (CSO)) suggested that species lists in the management plan should be alphabetized by common name for readers not schooled in scientific terminology. He asked what other invasive exotic plants are present in the park, and Ms. Duquesnel and Mr. Knapke provided the information. Mr. Dedeo stated that the CSO's primary focus is on Fort Taylor, its preservation and interpretation. He noted that the opponents of the Division's draft plan bring a lot of passion and many good points to the discussion. However, he disagreed that a majority of residents want the A.P. to remain at the park. Mr. Dedeo said that the park needs the private-sector visitor service provider, since neither park staff nor his organization are able to provide the services desired by park visitors. He suggested that the locations of the picnic shelter and the visitor center should be revisited to assure that only minimal impacts to native habitat and to established public uses in the park will occur when they are developed. He suggested that the visitor center should have a small gift shop space to be operated by the C.S.O. He asked what plans the Navy has for the warehouse buildings along the barracks wall of the Fort (the park's optimum boundary). Staff replied that, after September 11, 2001, it appeared that transfer of that area by the Navy to the state, in the foreseeable future, would be unlikely.

Mr. Malcolm (Mel Fisher Maritime Heritage Society) stated that a long-term funding commitment by the state is vital for the preservation of Fort Taylor, and approved the amount identified as needed to fund the Fort's preservation. He said that the artifact management plan outlined in the draft management plan is good, and that the master plan for stabilization and preservation of the Fort is well thought out. He stated that employee housing located as shown on the draft conceptual land use plan would block access to the Fort's Sally Port if the Navy buildings are removed in the future, and may impact the Civil War era earthworks that protected the landward face of the Fort. He asked about reference to water and soil contaminant testing in the mote and areas

surrounding the Fort. Mr. Knapke explained the contamination that remained in the soil and water as a result of military landfill uses, and said that periodic monitoring is all that has been recommended by health officials. Mr. Malcolm stated that he is not in favor of a free standing visitor center for the park. He suggested that the funds would be better applied toward the priority activities for preservation of the historic structure. He recommended that one of the interior spaces of the Fort should be adapted to use as the visitor center, providing a much more powerful interpretive experience by using the historic resource itself. Mr. Malcolm said that he is a long-time user of the park, and that he understands the need for A.P. removal, yet feels that the Division sends a mixed message by pursuing A.P. removal, yet importing "exotic" sand for beach nourishment projects. He noted that 3 or 4 beach nourishment projects have occurred during his time in Key West, and, over time, the deposited sand is moved offshore by wave action. He reaffirmed that the shade and feeling of spaciousness that the high canopy of A.P. provide are what generates the strong attraction and affinity for the park that is felt by Key West residents, but that they may be more attached to a "sense of place" than to the A.P. themselves. He noted that visitors do not seem to be using areas that have been planted with native plant species, because canopies in those areas are not high enough, and visibility is more contained. Mr. Malcolm suggested planting a monoculture of coconut palms to replace the A.P., since that species could provide the immediate high canopy and shade that is most important. Staff discussed the fact that coconut palms are also considered exotic species, and are invasive to a degree. The liability that would be incurred because of falling coconuts was also mentioned. Mr. Malcolm said that the proposed shelter location on the point is inappropriate, would destroy the "feel" of that location, and would be most prone to hurricane damage. He said that, although the Fort is the park's most significant resource, the waterfront of the park is the reason for the park's visitation. He suggested that the Division should provide graphic representations of what is being proposed to allow people to visually, not just verbally, understand these concepts.

Summary of Comments by General Public at the Advisory Group Meeting

Mr. David Horan, a local attorney representing the Save Our Pines, Inc. organization, said that statements saying that anyone supports the removal of the A.P. are false. He noted that Key West residents are an eclectic group, and that he is working with a group of wealthy individuals who would like to provide the park with staff housing and a water system (possibly using the Fort's cisterns). He cautioned the Division against basing its decision on A.P. removal on the U.S. Army Corps of Engineers permit for the beach nourishment project, saying that the 2006 Rapano decision by the U.S. Supreme Court removed the Corps authority over uplands, such as the beach and A.P. areas in the state park. Mr. Horan stated that Governor Crist has offered his support to retain the A.P. in the park, in a personal communication.

Mr. Nels Muench asked if more pines are to be cut down in the park and when will that happen. He stated that it was a sever shock to local residents when pines were cut in March of this year with no advance notice. He asked the Division to make a commitment to advance notice for any future cutting operations.

Mr. R.L. Blazevic provided anecdotal accounts of the introduction of A.P. to Florida and of his involvement in the initial excavation efforts in the Fort. He urged the Division to consider future erosion potential along the park's shoreline in plans for vegetation management. He noted that the corrosion of artifacts buried in the walls of Fort Taylor continues and that they should be excavated and treated for preservation. Mr. Blazevic said that native trees will provide adequate shade in the park. He disagreed that a majority of people care much about the A.P. He said the Florida Park Service is doing a good job at the state park.

Ms. Susan Kitchar said that the idea of planting coconut palms for high-canopy shade in the park may have merit. She reiterated that large trees must be planted if shade is to be retained. Ms. Kitchar asked that the park remain open until one hour after sunset, to accommodate those people who come to view sunsets from the park's shoreline. She asked that interpretive programs for Fort Taylor not glorify war, but provide education that is geared toward peace. She stated that the park concession building is too big and is ugly. She agreed that any new building in the park need to be designed using "green" technology.

Summary of Advisory Group Members Written Comments

Edward Barham, Environmental Director, Naval Air Station Key West, provided the written comments. On p. 17, discussion of adjacent Navy property identified as a site of toxic contamination should note that the site was fully remediated by the Navy. Regarding the proposed location of park residences on land recently deeded to the state by the Navy, Mr. Barham advised that the deed prohibits residential use of the land, since the Navy's activities in the adjacent buildings are incompatible with that use. Regarding text on p. 23 of the draft plan about the need for a Navy building to be relocated to protect the Fort, Mr. Barham notes that Building 795 has been relocated, and that the Navy requests the state to observe a 30 foot building setback on the recently-transferred property. Finally, Mr. Barham points out that the proposed storage facility on the transferred property conflicts with ongoing discussions between the Navy, City of Key West and the Division regarding new entrances to both the state park and the Navy Pier. He requested that architectural finishes on any buildings in this area match the finishes on the Navy and Fort structures.

Australian pines—As managers of Florida's 161 state parks, the Division of Recreation and Parks is committed to seeking a balance between the protection and enhancement of our state's natural and cultural resources and the provision of high-quality outdoor

Addendum 2 – References Cited

Fort Zachary Taylor Historic State Park References Cited

- Bender & Associates, Architects, PA, 2006. Master Plan for Fort Zachary Taylor Historic State Park. Prepared for the State of Florida/DEP, DRP.
- Bureau of Economic and Business Research (BEBR), University of Florida. 2006. Florida Statistical Abstract 2006. Gainesville, Florida.
- England, H.S. 1977. Fort Zachary Taylor: "A sleeping giant awakes." Unpublished document.
- Florida Department of Agriculture and Consumer Services, Division of Plant Industry, 2000. Notes on Florida's endangered and threatened plants.
- Florida Natural Areas Inventory and the Florida Department of Natural Resources, 1990. Guide to the Natural Communities of Florida.
- Florida Natural Areas Inventory, 1999. Tracking lists of special plants and lichens, invertebrates, vertebrates, and natural communities.
- Foster, W.H. 1974. This place is safe: Engineer operations at Fort Zachary Taylor. 1845-1865. Unpublished Master's thesis, Florida State University.
- Hoffmeister, John E., 1974. Land from the sea. University of Miami Press.
- Humann, Paul, 1993. Reef coral identification Florida Caribbean Bahamas. Paramount Miller Graphics, Inc., Jacksonville, Florida
- Humann, Paul, 1992. Reef fish identification Florida Caribbean Bahamas. Vaughn Press, Orlando, Florida.
- Littler, Diane Scullion, M.M. Littler, K.E. Bucher, and J.N. Norris, 1989. Marine plants of the Caribbean, a field guide from Florida to Brazil. Smithsonian Institution Press, Washington, D.C.
- Long, R.W. and Lakela, O., 1978. A flora of tropical Florida. Miami, Florida: Banyan Books.
- Nelson, Gil, 1994. The trees of Florida. Sarasota, Florida: Pineapple Press, Inc.
- Shepard Associates Architects and Planners, Inc. 1989. Phase 1-3. Historic preservation planning - Fort Zachary Taylor State Historic Site. Unpublished report - completed for the Department of Natural Resources.

Fort Zachary Taylor Historic State Park References Cited

- Taylor, Walter K., 1992. The guide to Florida wildflowers. Taylor Publishing Company, Dallas, Texas.
- United States Department of Agriculture, Natural Resources Conservation Service, 1995. Soil survey of Monroe county, Keys area, Florida.
- Voss, Gilbert L., 1976. Seashore life of Florida and the Caribbean. E.A Seemann Publishing, Inc. Miami, Florida.
- Wunderlin, Richard P., 1998. Guide to the vascular plant of Florida. University Press of Florida.

Addendum 3 – Soils Descriptions

Fort Zachary Taylor Historic State Park Soil Descriptions

(11) Urban land – This map unit is on Key West and the adjacent smaller keys. Individual areas are subject to rare flooding from hurricanes and other tropical storms. Elevations are dominantly 3 to 10 feet above sea level according to National Geodetic Vertical Datum of 1929.

This map unit is covered by asphalt, concrete, buildings and other impervious surfaces. The natural soil is covered and cannot be readily observed. Urban land makes up about 80 percent of most areas of this map unit. The undeveloped areas of this map unit include Udorthents, which were developed by spreading crushed bedrock over the original soil material.

The Urban land is associated with Udorthents and Beaches.

The drainage and permeability of the Urban land are variable.

Most areas of Urban land are covered by impervious surfaces. Grasses and other plants selected for planting during landscaping are dominant in the areas that support vegetation.

Soil properties in this map unit are variable; therefore, careful onsite investigation is needed to determine the limitations for any proposed use.

Fort Zachary Taylor Historic State Park Soil Descriptions

Addendum 4 – Plant And Animal List

Fort Zachary Taylor Historic State Park (Plants)

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

PTERIDOPHYTES

Brake fern **Pteris vittata*

ANGIOSPERMS

Monocots

Christmas palm **Adonidia merillii*
 Bushy bluestem*Andropogon glomeratus var. pumilus*
 Pitted bluestem **Bothriochloa pertusa*
 Fishtail palm **Caryota mitis*
 Southern sandbur*Cenchrus echinatus*
 Coastal sandbur*Cenchrus incertus*
 Silver palm **Coccothrinax barbadensis*
 coconut palm **Cocos nucifera*
 Dayflower*Commelina erecta*
 Dayflower **Commelina diffusa*
 Corn plant **Cordyline terminalis*
 Bermuda grass **Cynodon dactylon*
 False saw grass*Cyperus ligularis*
 Egyptian grass **Dactyloctenium aegyptium*
 Saltgrass*Distichlis spicata*
 Gulf coast spike rush*Eleocharis cellulosa*
 Pothos **Epipremnum pinnatum*
 Gophertail lovegrass **Eragrostis ciliaris*
 Finger grass*Eustachys petraea*
 Hurricane grass **Fimbristylis cymosa*
 Spider lily*Hymenocallis latifolia*
 Key grass*Monanthochloe littoralis*
 Tufted paspalum*Paspalum blodgettii*
 Salt joint grass*Paspalum setaceum*
 Senegal date palm **Phoenix reclinata*
 Natal grass **Rhynchelytrum repens*
 Cabbage palm*Sabal palmetto*
 Bowstring hemp **Sansevieria hyacinthoides*
 Wire bluestem*Schizachyrium gracile*
 Foxtail grass*Setaria parviflora*
 Coral dropseed grass*Sporobolus domingensis*
 St. Augustine grass **Stenotaphrum secundatum*

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Plants)

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Key thatch	<i>Thrinax morrisii</i>	81
Florida thatch palm.....	<i>Thrinax radiata</i>	81
Oyster plant *	<i>Tradescantia spathacea</i>	
Sea oats	<i>Uniola paniculata</i>	
Dominican panicum	<i>Urochloa adspersa</i>	
Signal grass *	<i>Urochloa subquadriflora</i>	
Turf grass *	<i>Zoysia matrella</i>	

Dicots

rosary pea *	<i>Abrus precatorius</i>	
Indian mallow.....	<i>Abutilon permolle</i>	
Cinnecord +.....	<i>Acacia choriophylla</i>	
Sweet acacia	<i>Acacia farnesiana</i>	
Woman's tongue *	<i>Albizia lebbek</i>	
Chaff flower	<i>Alternanthera flavescens</i>	
Alice-clover *	<i>Alysicarpus vaginalis</i>	
Common ragweed.....	<i>Ambrosia artemisiifolia</i>	
Jamaica apple *	<i>Annona reticulata</i>	
Scarlet milkweed *	<i>Asclepias curassavica</i>	
Salt bush	<i>Baccharis halimifolia</i>	
Spanish needle.....	<i>Bidens alba var. radiata</i>	
Green shrimp plant *	<i>Blechum pyramidatum</i>	
Sea ox-eye daisy	<i>Borrichia arborescens</i>	
Sea oxeeye	<i>Borrichia frutescens</i>	
Bougainvillea *.....	<i>Bougainvillea glabra</i>	
Bahama strong bark.....	<i>Bourreria succulenta</i>	
Blueheart	<i>Buchnera americana</i>	
Black olive *	<i>Bucida buccera</i>	
Gumbo limbo.....	<i>Bursera simaruba</i>	
Locustberry +.....	<i>Byrsonima lucida</i>	81
Gray nicker-bean.....	<i>Caesalpinia bonduc</i>	
Beautyberry.....	<i>Callicarpa americana</i>	
Bay-bean	<i>Canavalia rosea</i>	
Jamaica caper	<i>Capparis cynophallophora</i>	
Limber caper	<i>Capparis flexuosa</i>	
Goatweed	<i>Capraria biflora</i>	
Papaya*	<i>Carica papaya</i>	
Australian pine *	<i>Casuarina equisetifolia</i>	
Madagascar periwinkle *	<i>Catharanthus roseus</i>	

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Plants)

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Blodgett's spurge.....	<i>Chamaesyce blodgettii</i>	
Hairy spurge.....	<i>Chamaesyce hirta</i>	
Graceful sandmat.....	<i>Chamaesyce hypericifolia</i>	
Blackweed.....	<i>Chamaesyce prostrata</i>	
Jack-in-the-bush.....	<i>Chromolaena odorata</i>	
Cocoplum +.....	<i>Chrysobalanus icaco</i>	
Satinleaf +.....	<i>Chrysophyllum oliviforme</i>	81
Key lime *.....	<i>Citrus aurantiifolia</i>	
Pitch apple *.....	<i>Clusia rosea</i>	
Pigeon plum.....	<i>Coccoloba diversifolia</i>	
Seagrape.....	<i>Coccoloba uvifera</i>	
Croton*.....	<i>Codiaeum variegatum</i>	
Buttonwood.....	<i>Conocarpus erecta</i>	
Dwarf horseweed.....	<i>Conyza canadensis var. pusilla</i>	
Cordia.....	<i>Cordia globosa</i>	81
Geiger tree *.....	<i>Cordia sebestena</i>	
Calabash tree *.....	<i>Crescentia cujete</i>	
Rhacoma.....	<i>Crossopetalum rhacoma</i>	81
Rattlebox.....	<i>Crotalaria pumila</i>	
Beach croton.....	<i>Croton punctatus</i>	
Leafless cynanchum.....	<i>Cynanchum scoparium</i>	
Virgate mimosa.....	<i>Desmanthus virgatus</i>	
Beggarweed.....	<i>Desmodium incanum</i>	
Florida begger weed *.....	<i>Desmodium tortuosum</i>	
Varnish leaf +.....	<i>Dodonaea viscosa</i>	
Red-edged dracaena *.....	<i>Dracaena marginata</i>	
Milkbark.....	<i>Drypetes diversifolia</i>	81
Southern fleabane.....	<i>Erigeron quercifolius</i>	
Marsh fleabane.....	<i>Erigeron vernus</i>	
Black torch.....	<i>Erithalis fruticosa</i>	
Beach creeper.....	<i>Ernodea littoralis</i>	
White stopper.....	<i>Eugenia axillaris</i>	
Spanish stopper.....	<i>Eugenia foetida</i>	
Surinam cherry *.....	<i>Eugenia uniflora</i>	
Grassleaf spurge *.....	<i>Euphorbia graminea</i>	
Seaside gentian.....	<i>Eustoma exaltatum</i>	
Creeping morning glory.....	<i>Evolvulus alsinoides</i>	
Inkwood.....	<i>Exothea paniculata</i>	
Strangler fig.....	<i>Ficus aurea</i>	
Shortleaf fig.....	<i>Ficus citrifolia</i>	

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Plants)

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Laurel fig *	<i>Ficus microcarpa</i>	
Governor's plum *	<i>Flacourtia indica</i>	
Stalkless yellowtop	<i>Flaveria trinervia</i>	
Blanket flower *	<i>Gaillardia pulchella</i>	
Milk pea	<i>Galactia striata</i>	
Milk-pea	<i>Galactia volubilis</i>	
Southern gaura	<i>Gaura angustifolia</i>	
Seven-year apple	<i>Genipa clusiifolia</i>	
Wild cotton	<i>Gossypium hirsutum</i>	81
Lignum vitae +	<i>Guajacum sanctum</i>	81
Blolly	<i>Guapira discolor</i>	
Crabwood	<i>Gymnanthes lucida</i>	
Firebush	<i>Hamelia patens</i>	
Scorpion tail	<i>Heliotropium angiospermun</i>	
Seaside heliotrope	<i>Heliotropium curassavicum</i>	
Bladder mallow	<i>Herissantia crispa</i>	
Hibiscus *	<i>Hibiscus rosa-sinensis var. rosa-sinensis</i>	
Mahoe*	<i>Hibiscus tiliaceus</i>	
Wild indigo *	<i>Indigofera spicata</i>	
Indigo *	<i>Indigofera suffruticosa</i>	
Morning glory	<i>Ipomoea indica var. acuminata</i>	
Railroad vine	<i>Ipomoea pes-caprae ssp. brasiliensis</i>	
Moonvine	<i>Ipomoea violaceae</i>	
Joewood	<i>Jacquinia keyensis</i>	81
Jasminum *	<i>Jasminum fluminense</i>	
Life plant *	<i>Kalanchoe pinnata</i>	
Black ironwood	<i>Krugiodendron ferreum</i>	
Wild lantana	<i>Lantana involucrata</i>	
Wild lettuce *	<i>Launaea intybacea</i>	
Peppergrass	<i>Lepidium virginicum</i>	
Lead tree *	<i>Leucaena leucocephala</i>	
Wild tamarind +	<i>Lysiloma latisiliquum</i>	
Mango *	<i>Mangifera indica</i>	
Wild dilly	<i>Manilkara jaimiqui subsp. emarginata</i>	81
Marsh elder	<i>Melanthera nivea</i>	
Chinaberry *	<i>Melia azedarach</i>	
Spanish lime *	<i>Melicoccus bijugatus</i>	
Poor man's patch	<i>Mentzelia floridana</i>	
Poisonwood	<i>Metopium toxiferum</i>	
Cheeseweed	<i>Morinda royoc</i>	

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Plants)

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Twinberry stopper +	<i>Myrcianthes fragrans</i>	
Cochineal cactus *	<i>Opuntia cochenillifera</i>	
Prickly-pear cactus	<i>Opuntia stricta</i>	
Lady's sorrel	<i>Oxalis corniculata</i>	
Pellitory	<i>Parietaria floridana</i>	
Chicken weed	<i>Pectis prostrata</i>	
Devil's backbone *	<i>Pedilanthus tithymaloides</i>	
Avocado *	<i>Persea americana</i>	
Creeping charlie	<i>Phyla nodiflora</i>	
Jamaica dogwood	<i>Piscidia piscipula</i>	
Blackbead	<i>Pithecellobium keyense</i>	81
Cat's claw	<i>Pithecellobium unguis-cati</i>	
Bushy fleabane	<i>Pluchea carolinensis</i>	
Marsh fleabane	<i>Pluchea odorata</i>	
Frangipani *	<i>Plumeria alba</i>	
Wild poinsettia	<i>Poinsettia cyathophora</i>	
Wild poinsettia	<i>Poinsettia heterophylla</i>	
Rustweed	<i>Polypremum procumbens</i>	
Purslane	<i>Portulaca oleracea</i>	
Guava *	<i>Psidium guajava</i>	
White indigo-berry	<i>Randia aculeata</i>	
Red mangrove	<i>Rhizophora mangle</i>	
Least snoutbean	<i>Rhynchosia minima</i>	
Firecracker bush *	<i>Russelia equisetiformis</i>	
Soapberry	<i>Sapindus saponaria</i>	
Milkweed vine	<i>Sarcostemma clausum</i>	
Inkberry	<i>Scaevola plumieri</i>	81
Umbrella tree *	<i>Schefflera actinophylla</i>	
Brazilian pepper *	<i>Schinus terebinthifolius</i>	
Sea purslane	<i>Sesuvium portulacastrum</i>	
Spreading fan petals	<i>Sida abutilifolia</i>	
Broomweed	<i>Sida acuta</i>	
Saffron plum	<i>Sideroxylon celastrinum</i>	
Paradise tree	<i>Simarouba glauca</i>	
Greenbrier +	<i>Smilax auriculata</i>	
American black nightshade	<i>Solanum americanum</i>	
Bahama nightshade	<i>Solanum bahamense</i>	
Potato tree	<i>Solanum erianthum</i>	
Necklace-pod *	<i>Sophora tomentosa var. occidentalis</i>	
Necklace-pod	<i>Sophora tomentosa var. truncata</i>	

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Plants)

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Large leaf buttonweed.....	<i>Spermacoce assurgens</i>	
Buttonweed *	<i>Spermacoce verticillata</i>	
Wedelia *	<i>Sphagneticola trilobata</i>	
West Indian pinkroot.....	<i>Spigelia anthelmia</i>	
Blue porterweed	<i>Stachytarpheta jamaicensis</i>	
Pencil flower	<i>Stylosanthes hamata</i>	
Bay cedar	<i>Suriana maritima</i>	
West Indian mahogany +.....	<i>Swietenia mahagoni</i>	81
Tabebuia *	<i>Tabebuia heterophylla</i>	
Yellow elder *	<i>Tecoma stans</i>	
Tropical almond *	<i>Terminalia catappa</i>	
Portia *	<i>Thespesia populnea</i>	
Florida trema	<i>Trema micranthum</i>	
Puncture weed *	<i>Tribulus cistoides</i>	
Mexican daisy *	<i>Tridax procumbens</i>	
Yellow alder *	<i>Turnera ulmifolia</i>	
Calusa grape +	<i>Vitis shuttleworthii</i>	
Waltheria	<i>Waltheria indica</i>	
Washington palm *	<i>Washingtonia robusta</i>	
Wild lime	<i>Zanthoxylum fagara</i>	

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

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

AMPHIBIANS

Giant toad * <i>Bufo marinus</i>	81
Cuban tree frog * <i>Hyla septentrionales</i>	81,82

REPTILES

Green anole .....	.....<i>Anolis carolinensis</i>	81,82
Brown anole * <i>Anolis sagrei</i>	81,82
Atlantic loggerhead turtle.....	.....<i>Caretta caretta</i>	68,71,77
Six-lined racerunner .....	.....<i>Cnemidophorus sexlineatus sexlineatus</i>	81,82
Southern black racer .....	.....<i>Coluber constrictor</i>	81,82
Red rat snake .....	.....<i>Elaphe guttata guttata</i>	81,82
Southeastern five-lined skink .....	.....<i>Eumeces inexpectatus</i>	81,82
Ashy gecko * <i>Sphaerodactylus elegans</i>	81,82
Reef gecko .....	.....<i>Sphaerodactylus notatus</i>	81,82

MAMMALS

Domestic cat * <i>Felis domesticus</i>	81,82
West Indian manatee .....	.....<i>Trichechus manatus</i>	68,71,77

BIRDS

Common loon .....	.....<i>Gavia immer</i>	68,71,77
Purple gallinule .....	.....<i>Porphyryla martinica</i>	81,82
Brown pelican.....	.....<i>Pelecanus occidentalis</i>	68,71,77
Double-crested cormorant .....	.....<i>Phalacrocorax auritus</i>	68,71,77
Magnificent frigatebird .....	.....<i>Fregata magnificens</i>	68,71,77
White-tailed tropicbird.....	.....<i>Phaethon lepturus</i>	68,71,77
Great blue heron.....	.....<i>Ardea herodias</i>	77
Cattle egret.....	.....<i>Bubulcus ibis</i>	81,82
Green heron .....	.....<i>Butorides virescens</i>	77
Little blue heron .....	.....<i>Egretta caerulea</i>	77
Snowy egret .....	.....<i>Egretta thula</i>	77
Tricolored heron.....	.....<i>Egretta tricolor</i>	77
Yellow-crowned night heron.....	.....<i>Nyctanassa violacea</i>	77
White ibis.....	.....<i>Eudocimus albus</i>	77
Turkey vulture.....	.....<i>Cathartes aura</i>	81, Overflying
Black vulture.....	.....<i>Coragyps atratus</i>	81, Overflying

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Red-shouldered hawk	<i>Buteo lineatus</i>	Overflying
Broad-winged hawk	<i>Buteo platypterus</i>	Overflying
Northern harrier	<i>Circus cyaneus</i>	Overflying
Bald eagle	<i>Haliaeetus leucocephalus</i>	Overflying
Osprey	<i>Pandion haliaetus</i>	Overflying
Merlin	<i>Falco columbarius</i>	Overflying
Peregrine falcon	<i>Falco peregrinus</i>	Overflying
American kestrel	<i>Falco sparverius</i>	Overflying
Antillean short-eared owl	<i>Asio flammeus domingensis</i>	81, Overflying
Killdeer	<i>Charadrius vociferous</i>	81,82
Black bellied plover	<i>Squatarola squatarola</i>	81
Upland plover	<i>Bartramia longicauda</i>	81
Brown noddy	<i>Anous stolidus</i>	68,71,77
Laughing gull	<i>Larus atricilla</i>	68,71,77
Ring-billed gull	<i>Larus delawarensis</i>	68,71,77
Least tern	<i>Sterna antillarum</i>	68,71,77
Roseate tern	<i>Sterna dougallii</i>	68,71,77
Common tern	<i>Sterna hirundo</i>	68,71,77
Royal tern	<i>Sterna maxima</i>	68,71,77
Sandwich tern	<i>Sterna sandoicensis</i>	68,71,77
Black skimmer	<i>Rynchops niger</i>	68,71,77
Rock pigeon	<i>Columba livia</i>	81
Ground dove	<i>Columbina passerina</i>	81
White crowned pigeon	<i>Patagiocenas leucocephala</i>	81
Mourning dove	<i>Zenaida macroura</i>	81
Chuck-will's-willow	<i>Caprimulgus carolinensis</i>	81
Common Nighthawk	<i>Chordeiles minor</i>	Overflying
Belted Kingfisher	<i>Ceryle alcyon</i>	68,77
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	81
Downy Woodpecker	<i>Picoides pubescens</i>	81
Loggerhead kingbird	<i>Tyrannus caudifasciatus</i>	81
Tree swallow	<i>Iridoprocne bicolor</i>	81
Fish Crow	<i>Corvus ossifragus</i>	81
Gray Catbird	<i>Dumetella carolinensis</i>	81
Northern Mockingbird	<i>Mimus polyglottos</i>	81,82
American Robin	<i>Turdus migratorius</i>	81
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	81
Bay-breasted Warbler	<i>Dendroica castanea</i>	81
Palm Warbler	<i>Dendroica palmarum</i>	81
Pine Warbler	<i>Dendroica pinus</i>	81

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Blackpoll Warbler.....	<i>Dendroica striata</i>	81
Common Yellowthroat.....	<i>Geothlypis trichas</i>	81
Blue Grosbeak.....	<i>Guiraca caerulea</i>	81
Indigo Bunting.....	<i>Passerina cyanea</i>	81
Bobolink.....	<i>Dolichonyx oryzivorus</i>	81
European Starling *	<i>Sturnus vulgaris</i>	81
Domestic chicken *	<i>Gallus gallus domesticus</i>	81

FISHES

Flat needlefish.....	<i>Ablennes hians</i>	68,69,71,77
Sargeant major.....	<i>Abudefduf saxatilis</i>	68,69,71,77
Doctorfish.....	<i>Acanthurus chirurgus</i>	68,69
Blue tang.....	<i>Acanthurus coeruleus</i>	68,69
Porkfish.....	<i>Anisotremus virginicus</i>	68,69,71,77
Spanish hogfish	<i>Bodianus rufus</i>	68,69
Bar jack.....	<i>Caranx ruber</i>	68,69,71,77
Snook	<i>Centropomus undecimalis</i>	68,69,71,77
Southern stingray	<i>Dasyatis americana</i>	68,69,71,77
Ladyfish.....	<i>Elops saurus</i>	69,71,77
Silver porgy	<i>Diplodus argenteus</i>	68,69,71,77,
Highhat.....	<i>Equetus acuminatus</i>	68,69,71
Yellowfin mojarra	<i>Gerres cinereus</i>	68,69,71,77
Green moray	<i>Gymnothorax funebris</i>	68,69,71,77
White margate	<i>Haemulon album</i>	68,69,71,77
Tomtate.....	<i>Haemulon aurolineatum</i>	68,69,71,77
White grunt.....	<i>Haemulon plumieri</i>	68,69,71,77
Bluestriped grunt	<i>Haemulon sciurus</i>	68,69,71,77
Slippery dick.....	<i>Halichoeres bivittatus</i>	68,69,71,77
Puddingwife	<i>Halichoeres radiatus</i>	68,69,71,77
Queen angelfish.....	<i>Holacanthus ciliaris</i>	68,69,71,77
Barred blenny	<i>Hypleurochilus bermudensis</i>	68,69,71,77
Bermuda chub	<i>Kyphosus sectatrix</i>	68,69,71,77
Hogfish	<i>Lachnolaimus maximus</i>	68,69,71
Spotted trunkfish	<i>Lactophrys bicaudalis</i>	68,69,71,77
Mutton snapper	<i>Lutjanus analis</i>	68,69,71,77
Gray snapper	<i>Lutjanus griseus</i>	68,69,71,77
Lane snapper.....	<i>Lutjanus synagris</i>	68,69,71,77
Tarpon.....	<i>Megalops atlanticus</i>	68,69,71,77
Black grouper.....	<i>Mycteroperca bonaci</i>	68,69,71,77

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Yellowtail snapper	<i>Ocyurus chrysurus</i>	68,69,71
Rainbow parrotfish.....	<i>Scarus guacamaia</i>	69
Spotted scorpion fish.....	<i>Scorpaena plumieri</i>	69
Princess parrotfish	<i>Sparisoma taeniopterus</i>	69
Stoplight parrotfish.....	<i>Sparisoma viride</i>	69
Great barracuda.....	<i>Sphyraena barracuda</i>	69,71
Longfin damsel.....	<i>Stegastes dienciaeus</i>	69
Dusky damsel	<i>Stegastes fuscus</i>	69
Beaugregory	<i>Stegastes leucostictus</i>	69
Cocoa damsel.....	<i>Stegastes variabilis</i>	69
Bluehead	<i>Thalassoma bifasciatum</i>	68,69
Permit.....	<i>Trachinotus falcatus</i>	69,71,77
Yellow stingray.....	<i>Urolophus jamaicensis</i>	69,71

All species occurring in the near shore waters of the park are the reef fish of the tropical Atlantic Ocean. These species can be found in "Reef Fish Identification" by Paul Humann

INVERTEBRATES

Gulf fritillary	<i>Agraulis vanillae</i>	81
White peacock.....	<i>Anartia jatrophae</i>	81
Florida white.....	<i>Appias drusilla</i>	81
Monk skipper.....	<i>Asbolis capucinus</i>	81
Great southern white.....	<i>Ascia monuste</i>	81
Polydamas swallowtail	<i>Battus polydamas lucayus</i>	81
Three spot skipper	<i>Cymaenes tripunctus tripunctus</i>	81
Queen.....	<i>Danaus gilippus</i>	81
Monarch.....	<i>Danaus plexippus</i>	81
Dusky wing.....	<i>Erynnis zarucco</i>	81
Barred sulphur.....	<i>Eurema daira</i>	81
Little yellow	<i>Eurema lisa</i>	81
Sleepy orange.....	<i>Eruema nicippe</i>	81
Crab spider.....	<i>Gasteracantha cancriformis</i>	81,82
Zebra longwing	<i>Heliconius charitonius</i>	81
Ceraunus blue.....	<i>Hemiargus ceraunus antibubastus</i>	81
Fiery skipper	<i>Hylephila phyleus phyleus</i>	81
Black widow spider	<i>Latrodectus mactans</i>	81,82
Cassius blue	<i>Leptotes cassius</i>	81
Eufala skipper.....	<i>Lerodea eufala</i>	81
Ruddy daggerwing.....	<i>Marpesia petreus</i>	81
Dainty sulphur	<i>Nathalis iole</i>	81

* Non-native Species

A 4 - 10

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Golden orb spider	<i>Nephila clavipes</i>	81
Ocola skipper	<i>Panoquina ocola ocola</i>	81
Giant swallowtail	<i>Papilio cresphontes</i>	81
Mangrove skipper	<i>Phocides pigmalion</i>	81
Large orange sulphur	<i>Phoebis agarithe</i>	81
Orange barred sulphur	<i>Phoebis philea philea</i>	81
Cloudless orange sulphur	<i>Phoebis sennae</i>	81
Cuban crescentspot	<i>Phyciodes frisia</i>	81
Phaon crescentspot	<i>Phyciodes phaon</i>	81
Pearl crescent	<i>Phyciodes tharos tharos</i>	81
Hammock skipper	<i>Polygonus leo</i>	81
Tropical checkered skipper	<i>Pyrgus oileus oileus</i>	81
Gray hairstreak	<i>Strymor melinus</i>	81
Dorantes skipper	<i>Urbanus dorantes dorantes</i>	81
Long-tailed skipper	<i>Urbanus proteus</i>	81
Red admiral	<i>Vanessa atalanta rubria</i>	81
Painted lady	<i>Vanessa cardui</i>	81
Broken dash	<i>Wallengrenia otho</i>	81

MARINE

Annelids

Christmas tree worm	<i>Spirobranchus giganteus</i>	68,69
---------------------------	--------------------------------------	-------

Crustaceans

Smooth goose-neck barnacle	<i>Lepas anatifera</i>	68,69
Channel clinging crab	<i>Mithrax spinosissimus</i>	68,69,71
Spiny lobster	<i>Panulrius argus</i>	68,69,71
Spotted spiny lobster	<i>Panularis guttatus</i>	68,69,71
Nimble spray crab	<i>Percnon gibbesi</i>	68,69

Echinoderms

Heart urchin	<i>Clypeaster subdepressus</i>	68,69,71
Long-spined urchin	<i>Diadema antillarum</i>	68,69,71
Sea urchin	<i>Echinometra lucunter</i>	68,69,71
Variiegated urchin	<i>Lytechinus variegates</i>	68,69,71
Cushion sea star	<i>Oreaster reticulatus</i>	68,69,71

Hydroids

Feather hydroid	<i>Gymnangium</i> sp.	68,69
-----------------------	----------------------------	-------

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for all species)
Macroalgae		
Fern algae	<i>Caulerpa</i> spp.	68,69,71
.....	<i>Cystoseira myrica</i>	68,69,71
.....	<i>Dasycladus vermicularis</i>	68,69,71
.....	<i>Dictyota cervicornis</i>	68,69,71
Oatmeal algae	<i>Halimeda</i> spp.	68,69,71
.....	<i>Heterosiphonia gibbesii</i>	68,69,71
.....	<i>Laurencia</i> spp.	68,69,71
.....	<i>Padina sanctae-cruicis</i>	68,69,71
Shaving brush algae.....	<i>Penicillus</i> spp.	68,69,71
Fan algae.....	<i>Udotea</i> spp.	68,69,71
Mollusks		
Spotted sea hare	<i>Aplysia dactylomela</i>	68,69,71
American starsnail	<i>Lithopoma americanum</i>	68,69,71
Caribbean reef squid.....	<i>Sepioteuthis sepioidea</i>	68,69,71
Queen conch	<i>Strombus gigas</i>	68,69,71
Seagrass		
Shoal grass.....	<i>Halodule wrightii</i>	71
Turtle grass	<i>Thalassia testudinum</i>	71
Manatee grass	<i>Syringodium filiforme</i>	71
Sponges		
Vase sponge	<i>Ircinia campana</i>	68,69,71
Loggerhead sponge.....	<i>Sphaciospongia vesparia</i>	68,69,71
Fire sponge.....	<i>Tedania ignis</i>	68,69,71
Candle sponge	<i>Verongia longissima</i>	68,69,71
Fire coral		
Fire coral.....	<i>Millepora alcicornis</i>	69

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for all species)
Anemones		
Giant anemone	<i>Condylactis gigantean</i>	69
Branching anemone	<i>Lebrunia danae</i>	69
Sun anemone	<i>Stoichactis helianthus</i>	69
Mat zoanthid.....	<i>Zoanthus pulchellus</i>	69
 Soft coral		
Sea fan.....	<i>Gorgonia</i> sp.	69
Sea rods.....	<i>Plexaurella</i> sp.	69
Sea plumes	<i>Pseudoptergorgia</i> sp.	69
 Stony coral		
Tube coral.....	<i>Cladocora arbuscula</i>	69
Knobby brain coral	<i>Diplora clivosa</i>	69
Symmetrical brain coral	<i>Diplora strigosa</i>	69
Golfball coral.....	<i>Favia fragrum</i>	69
Mountainous star coral	<i>Montastrea annularis</i>	69
Diffuse ivory bush coral.....	<i>Oculina diffusa</i>	69
Mustard hill coral.....	<i>Porites astreoides</i>	69
Lesser starlet coral.....	<i>Siderastrea radians</i>	69
Massive starlet coral	<i>Siderastrea siderea</i>	69

* Non-native Species

+ Cultivated

Fort Zachary Taylor Historic State Park (Animals)

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for all species)
--------------------	------------------------	--

* Non-native Species
+ Cultivated

Habitat Codes

Terrestrial

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

Palustrine

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

Lacustrine

45. Clastic Upland Lake
46. Coastal Dune Lake
47. Coastal Rockland Lake

Lacustrine—Continued

48. Flatwood/Prairie Lake
49. Marsh Lake
50. River Floodplain Lake
51. Sandhill Upland Lake
52. Sinkhole Lake
53. Swamp Lake

Riverine

54. Alluvial Stream
55. Blackwater Stream
56. Seepage Stream
57. Spring-Run Stream

Estuarine

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

Marine

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

Subterranean

82. Aquatic Cave
83. Terrestrial Cave

Miscellaneous

84. Ruderal
 85. Developed
- MTC** Many Types of Communities
OF Over Flying

Addendum 5 – Designated Species List

Rank Explanations For FNAI Global Rank, FNAI State Rank, Federal Status, And State Status

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

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

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

FNAI GLOBAL RANK DEFINITIONS

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

Rank Explanations For FNAI Global Rank, FNAI State Rank, Federal Status, And State Status

LEGAL STATUS

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

FEDERAL (Listed by the U. S. Fish and Wildlife Service - USFWS)

LE = Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.

PE = Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.

LT = Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.

PT = Proposed for listing as Threatened Species.

C = Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.

E(S/A) = Endangered due to similarity of appearance.

T(S/A) = Threatened due to similarity of appearance.

STATE

Animals (Listed by the Florida Fish and Wildlife Conservation Commission - FFWCC)

LE = Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

LT = Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

LS = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

Plants (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

LE = Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

LT = Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

Fort Zachary Taylor State Park Designated Species (Plants)

Common Name/ <i>Scientific Name</i>	FDACS	<u>Designated Species Status</u>	
		USFWS	FNAI
Locustberry + (cultivated only – not native to park) <i>Byrsonima lucida</i>	T		G3,S3
Satinleaf + (cultivated only – not native to park) <i>Chrysophyllum oliviforme</i>	T		
Cordia <i>Cordia globosa</i>	E		
Rhacoma <i>Crossopetalum rhacoma</i>	T		G5,S3
Milkbark <i>Drypetes diversifolia</i>	E		G3G4,S2
Wild cotton <i>Gossypium hirsutum</i>	E		G4G5,S3
Lignum vitae + (cultivated only – not native to park) <i>Guajacum sanctum</i>	E		G4G5,S2
Joewood <i>Jacquinia keyensis</i>	T		G4,S3
Wild dilly <i>Manilkara jaimiqui subsp. emarginata</i>	T		G4Q,S3
Blackbead <i>Pithecellobium keyense</i>	T		
Inkberry <i>Scaevola plumieri</i>	T		
West Indian mahogany + (cultivated only – not native to lower Keys) <i>Swietenia mahagoni</i>	E		G3G4,S2
Key thatch <i>Thrinax morrisii</i>	E		G4G5,S3
Florida thatch palm <i>Thrinax radiata</i>	E		G4G5,S2

Fort Zachary Taylor State Park Designated Species (Plants)

Common Name/ <i>Scientific Name</i>	FDACS	<u>Designated Species Status</u> USFWS	FNAI
--	--------------	---	-------------

Fort Zachary Taylor State Park Designated Species (Animals)

Common Name/ <i>Scientific Name</i>	Designated Species Status		
	FFWCC	USFWS	FNAI
REPTILES			
Atlantic loggerhead turtle <i>Caretta caretta</i>	T	T	G3,S3
Red rat snake <i>Elaphe guttata guttata</i>			G5T2Q,S2
BIRDS			
Little blue heron <i>Egretta caerulea</i>			G5,S4
Snowy egret <i>Egretta thula</i>			G5,S4
Tricolored heron <i>Egretta tricolor</i>			G5,S4
Merlin <i>Falco columbarius</i>			G4,SU
Peregrine falcon <i>Falco peregrinus</i>	E	E	G4,S2
Magnificent frigatebird <i>Fregata magnificent</i>			G5,S1
Bald eagle <i>Haliaeetus leucocephalus</i>	T	T	G4,S3
Yellow-crowned night heron <i>Nyctanassa violacea</i>			G5,S3?
Osprey <i>Pandion haliaetus</i>			G5, S3S4
White-crowned pigeon <i>Patogicenas leucocephala</i>	T		G3,S3
Brown pelican <i>Pelecanus occidentalis</i>			G4,S3
Black skimmer <i>Rynchops niger</i>			G5, S3
Least tern <i>Sterna antillarum</i>	T		G4,S3
Roseate tern <i>Sterna dougallii</i>	T	T	G5,S1
Royal tern <i>Sterna maxima</i>			G5,S3
Sandwich tern <i>Sterna sandvicensis</i>			G4,S2
MAMMALS			
West Indian manatee <i>Trichechus manatus latirostris</i>	E	E	G2S2

Fort Zachary Taylor State Park Designated Species (Animals)

Common Name/ <i>Scientific Name</i>	<u>Designated Species Status</u>		
	FFWCC	USFWS	FNAI
STONY CORALS			
Knoby brain coral <i>Diplora clivosa</i>			G4G5,S?
Symmetrical brain coral <i>Diplora strigosa</i>			G4,S?
Mountainous star coral <i>Montastraea annularis</i>			G5,S?
Massive starlet coral <i>Siderastrea siderea</i>			G4,S?

Addendum 6—Priority Schedule and Cost Estimates

**Fort Zachary Taylor Historic State Park
Priority Schedule And Cost Estimate**

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. Remove exotic vegetation and replant with appropriate native species except as required by the Memorandum of Understanding. **Estimated Cost: \$ 25,000**
2. Monitor water quality in the moat. **Estimated Cost: \$25,000**
3. Stabilize the riprap on the west side of the park. **Estimated cost: \$75,000**
4. Preserve, stabilize and waterproof the fort and its associated structures as outlined in the approved Master Plan for the fort. **Estimated Cost: \$9,725,000**
5. Conserve and preserve fort artifacts as outlined in the approved Master Plan for the fort. **Estimated Cost: \$200,000**

Total Cost:.....\$10,050,000.00

Visitor Services

1. Expand/improve interpretive programming.

Total Cost:.....\$100,000.00

Capital Improvements

Development Area or Facilities	Estimated Cost
Interpretive Facilities	\$3,600,000.00
Support Facilities	\$1,417,500.00

Total Cost with Contingency:.....\$6,021,000.00

**Fort Zachary Taylor Historic State Park
Priority Schedule And Cost Estimate**
