TED SPERLING PARK AT SOUTH LIDO BEACH AND NATURE PARK MANAGEMENT PLAN

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Division of Beaches and Water Access

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PARK AT A GLANCE

Size	167.63 acres
Location	2201 Benjamin Franklin Drive Sarasota, FL 34236
Management Priority	protect and enhance wildlife habitats that will provide nature-based recreation and environmental education for residents
Management Challenge	parking, flooding, aged facilities at the Nature Park
Primary habitats	beach dune maritime hammock bays and estuaries mangrove swamp developed
Imperiled species	inkberry loggerhead sea turtle green sea turtle gopher tortoise West Indian manatee See Table 3 for a more complete list
Cultural Resources	no known resources
Land Uses	passive, nature-based pubic recreation

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EXECUTIVE SUMMARY

Significance, size, location

Ted Sperling Park at South Lido Beach is approximately 167 acres located on the south end of Lido Key along Sarasota Bay and the Gulf of Mexico. It is immediately north of Big Sarasota Pass. The park is owned by Sarasota County Government and managed by the Beach and Water Access (BWA) division in the Parks, Recreation and Natural Resources (PRNR) department. The park is in Section 35, Township 36, South Range 17, East section 2 of northwest Sarasota County. The park has two separate sites, each with its own entrance and address—Ted Sperling Park at South Lido Beach (SLB*)*, 2201 Ben Franklin Drive, also known as "South Lido Beach" or the "beach park" and Ted Sperling Nature Park (NP), 190 Taft Drive, also known as the "nature park" or "kayak launch". Both sites are collectively referred to as Ted Sperling Park (TSP*)* or "the park" unless otherwise noted.

Acquisition history

Spurred by a growing environmental awareness, the public overwhelmingly approved a referendum in 1973 authorizing the County's purchase of the parcel for use as a recreational area and public open space.

Important habitats and species

Ted Sperling Park consists of five habitat types: beach dune, maritime hammock, bays and estuaries, mangrove swamp, and developed. It is potential habitat and potential breeding and nesting area for roughly 15 species of birds and reptiles protected by the state. The park also has potentially suitable habitat for several plant species protected by the state. Approximately 19 acres are classified as developed. These areas include restroom facilities, roads, parking lots, and picnic areas.

Natural and cultural resource management goals

The goals for managing the park are to ensure that the site will not significantly degrade, to provide for nature-based recreational opportunities, restore degraded natural areas, and to provide additional specialized and protective management actions that may be needed for critical natural resources onsite. Application of these levels of management collectively ensure that the site is secure from intentional acts of vandalism and that it will not significantly degrade from excessive use or invasive exotic species. Additionally, they ensure that Sarasota County meets the primary acquisition purpose of the site, which is to protect and enhance wildlife habitats that will provide nature-based recreation and environmental education for residents and visitors in the urban area. These objectives shall be achieved with monthly site visits by the park's manager, quarterly visits by the PRNR Quality Assurance Team, and daily maintenance performed by County or contractual staff.

Historical and current uses and facilities

Archeological evidence suggests the park property and surrounding waterways were highly productive fisheries with occasional inhabitants. By the late 1800s and early 1900s developers began dredging shallow areas to create more land mass, permanently altering the topography of Lido Key. Historically, the area received little recreational use due to the dense overgrowth and frequent flooding.

Infrastructure at SLB consists of restroom facilities, an office, playground, a sand-filled volleyball court, picnic tables, park benches, a canoe and kayak launch, boardwalks, foot bridges, interpretive sign with map, lighting structures, fencing and trash receptacles, and parking lots with identified spaces meeting requirements of the Americans with Disabilities Act (ADA). Common uses of SLB are fishing, canoeing, kayaking, swimming, sunbathing, biking, volleyball, cornhole, hiking, picnicking, birding, observing nature, shelling, and exercising.

Infrastructure at NP consists of two restroom facilities, two covered two-pole picnic shelters, a kayak launch, four kayak wash stations, information kiosk with mangrove tunnel map, picnic tables and grills, concrete cornhole game, and a fenced maintenance area. This enclosure is used for the safe storage of equipment, supplies, and tools needed to maintain park operations. Included items are a tractor and beach rake, utility vehicles used by beach attendants and park specialists to monitor the Certified Recreational Tour Operators (CRTO), a shed with a rolling door and standard door each with a wooden ramp, janitorial supplies, tools, extra garbage cans, Lifeguard Operations' truck and jet ski, County kayaks used for mangrove tunnel maintenance, tool bench, blowers, and yard tools.

Use and facilities management goals

The park is primarily utilized by the public for nature-based recreation. Along with hiking and biking trails, the park has other amenities which include playground, restrooms, picnic shelters, and a canoe and kayak launch. The Big Pass (southeast) side of the parcel is the destination for most of visitors to South Lido Beach and on average 250 vessels are launched at the Nature Park each day.

Management goals of Ted Sperling Park are related to protecting the site from abuse, overuse, and vandalism, treating invasive exotic vegetation, restoring habitat, removing trash and seaweed, providing safe infrastructure for public use, enforcing proper use and activity of the park, and managing the existing resources for both nature and human use, and providing a clean, safe, and accessible park for all visitors. Management activities occur daily except for treating invasive exotic plants and habitat restoration, which occur when staff time, funding, or other opportunities arise.

Purpose of plan

The purpose of this management plan is to identify ways to preserve the health and function of natural systems, protect historical resources that are part of Sarasota County's heritage, and provide nature-based recreational opportunities for the public. Management strategies are intended as guidelines to be used to address the complex management needs of the park. This plan will be updated in ten years to incorporate the most current methodologies and technological advances as they apply to the resource needs and management of the park. Annual reports that address park maintenance and management will be completed. This plan identifies specific PRNR performance measures established for the management of natural area lands and preserves.

MANAGEMENT STRATEGY OVERVIEW

NATURAL RESOURCES	**GOAL 1**	**Restore and maintain the natural communities/habitats of the preserve.**
	OBJECTIVE 1.1	Maintain invasive vegetation to keep park safe from large infestations
	OBJECTIVE 1.2	Eliminate species within the Florida Invasive Species Council (FISC) list of Noxious Weeds or if not possible, reduce population levels to protect communities and habitats
	OBJECTIVE 1.3	Restore the spoil area back to historic native habitat
	OBJECTIVE 1.4	Enhance natural areas based on specific natural community types
CULTURAL RESOURCES	**GOAL 2**	**Protect, preserve, and maintain cultural resources of the preserve**
	OBJECTIVE 2.1	Follow Sarasota County History Center protocol when ground disturbance is expected to occur
	OBJECTIVE 2.2	Provide interpretive programs or hikes
LAND USES	**GOAL 3**	**Maintain public access and passive recreational opportunities without adverse habitats and native species impact**
	OBJECTIVE 3.1	Provide and maintain public pedestrian access to the trails, beach, and water accesses
	OBJECTIVE 3.2	Provide a clean and safe environment for park visitors
	OBJECTIVE 3.3	Assess and address impacts of recreational activities to ensure the health of native habitats and communities
	GOAL 4	**Provide nature based educational and interpretive opportunities.**
	OBJECTIVE 4.1	Provide nature based educational and interpretive opportunities.
	OBJECTIVE 4.2	Provide interpretive programs or hikes
OPERATIONS	**GOAL 5**	**Provide administrative and fiscal support.**
	OBJECTIVE 5.1	Continue day to day administrative support at current levels
	OBJECTIVE 5.2	Continue to research and apply for funding assistance or grants to support operations
	GOAL 6	**Provide facilities that are clean, safe, and accessible.**
	OBJECTIVE 6.1	Provide adequate park staff and work with Facilities Maintenance to ensure grounds and buildings are clean and in good condition
	OBJECTIVE 6.2	Maintain accountability according to the Beaches and Water Access Environmental Policies and Procedures Manual

1 INTRODUCTION

1.1 LOCATION AND SETTING

Ted Sperling Park is approximately 167 acres located on the south end of Lido Key and is situated along Sarasota Bay and the Gulf of Mexico (Exhibit 1). It is immediately north of Big Sarasota Pass. The Park is owned by Sarasota County Government and managed by the Beaches and Water Access (BWA) division in the Parks, Recreation and Natural Resources (PRNR) department.

The park has two separate sites, each with its own entrance and address—Ted Sperling Park at South Lido Beach (SLB*)*, 2201 Ben Franklin Drive, also known as "South Lido Beach" or the "beach park" and Ted Sperling Nature Park (NP), 190 Taft Drive, also known as the "nature park" or "kayak launch". Both sites are collectively referred to as Ted Sperling Park (TSP*)* or "the park" unless otherwise noted (Exhibit 2).

The area consists of natural areas and impacted habitats that are open to public use. The waterways around TSP (Sarasota Bay, Little Sarasota Bay, and the Gulf of Mexico) receive heavy motorized-vessel traffic. TSP is situated less than one mile south of a public boat ramp at City of Sarasota's Ken Thompson Park on City Island. A canoe and kayak launch is located at the northeastern point of the nature park. It is an urbanized area with a mixture of residential and commercial land uses. The park is located in the City of Sarasota and zoned government use (Exhibit 3). Commercial, non-motorized vessel launching is prohibited at SLB, and although some private launches may occur, the site is not ideal for that purpose.

1.2 SITE SIGNIFICANCE AND PROTECTION PRIORITY

Sarasota Bay is designated as an Estuary of National Significance and Outstanding Florida Water (OFW) by the Florida Department of Environmental Protection (FDEP). These designations classify these waters worthy of special protection because of their natural attributes. The Sarasota Bay Estuary Program's Comprehensive Conservation and Management Plan includes watershed management actions to protect the estuary. The Southwest Florida Water Management District (SFWMD) identifies the surrounding waters as a priority in their Surface Water Improvement and Management (SWIM) Program, which is responsible for water quality and natural systems initiatives. The waterbody is also designated as a Florida priority estuarine conservation area by the Fish and Wildlife Conservation Commission (FWC).

Located on the west-central coast of Florida, the Sarasota Bay Watershed is famous for its sandy beaches, barrier keys, and sparkling blue water. The watershed spans from Anna Maria Sound in Manatee County, south to Roberts Bay North in Sarasota County, and includes the City of Sarasota to the east. The bay is bounded to the west by the barrier islands of Longboat Key and Lido Key, which are separated by New Pass. New Pass and Big Sarasota Pass, south of Lido Key, unite the bay with the Gulf of Mexico. Sarasota Bay is a highly productive coastal lagoon that hosts over a thousand native faunal species, including manatee, mullet, dolphin, spotted sea trout, snook, red drum, stone crab, blue crab, great blue heron, snowy egret, brown pelican, osprey, wood stork, roseate spoonbill, white ibis, and blue heron. Significant efforts are underway to protect and restore Sarasota Bay and its watershed (SBEP 2022, Sarasota County and SWFWMD 2012, Sarasota County 2022).

Archaeological evidence suggests that native peoples occupied the watershed for thousands of years. Large mounds of shells and fish bones indicate that fish sustained these prehistoric human settlements.

This current land mass and these keys did not exist 100 years ago. Instead, they were a loose group of small islets called the Cerol Isles, just west of the mainland, and they ebbed and flowed with the currents and storms. By the early 1920s, John Ringling had purchased Bird Key, St. Armand's Key, and a collection of small islands, which he filled with bay bottom dredging to create Lido Key. He also constructed a bridge connecting the islands to the mainland.

The significant natural features of the northeast portion of the property are the mangrove tunnels and Brushy Bayou. Substantial seagrasses in this lagoonal area provide food and protection for channeled whelk, hermit crabs, mullet, and other marine animals. The area is rich in coastal mangroves and mangrove islands, providing habitat for juvenile fish and large nesting water birds such as brown pelicans, great blue herons, and great egrets. This portion of the park is well-known for scenic landscapes and wildlife viewing. Florida Fish and Wildlife Commission (FWC) has identified speed zones for waters in and around the park including Little Grassy Lagoon and Grassy Lagoon for the protection of manatees (USFWS 2022). FWC did not include the approximately 152-acre body of water known as Brushy Bayou and any access tunnels.

Previously, a freshwater lake formed between the bay and Lido Key and was a vast breeding ground for mosquitoes. The Army Corp of Engineers carved out tunnels to help with mosquito control and to allow the high tide to mingle with the freshwater. Sarasota County maintains a permit for mangrove trimming to maintain traversable tunnels. Trimming is performed by a certified arborist.

1.3 Acquisition History

During the 19th century, what is now Lido Key consisted of a series of islands separated by shifting channels. An early immigrant pioneer, Otto Schmidt Zoldan, settled on the islands and acquired the properties in 1910 under the terms of the Homestead Act. Zoldan later sold his property, which, after a series of land transfers, was purchased by John Ringling during the early 1920s. Ringling planned an ambitious development of his island properties, greatly manipulating the shapes of the islands by moving millions of cubic feet of sand. Because of his interest in Italian culture, Ringling named one of the newly created islands after the Italian word for beach, "Lido". The great Florida land bust of 1926, however, led to the collapse of the "Ringling Isles" project and the temporary abandonment of development plans for the southern part of Lido key.

In 1967 Arvida Corporation sought permits for development of the southern tip of Lido Key. Arvida had hoped to dredge and fill 160 acres on south Lido, create an extended shoreline, a golf course, a hotel, canals, eliminate Brushy lagoon, from Otter Key bayside to the gulf front bulkhead of south Lido. Residents from Lido Key and Sarasota, including 50 local organizations, galvanized to fight for conservation of the marine and estuary environment. Of particular concern was the impact of dredging and filling on the shallow grassy flats, known for bird, fish and mammal habitat. This grassroots effort of private citizens, led by local businessman Ted Sperling, became the Save Our Bays Association (SOBA). The Sarasota City Commission unanimously denied the permit one last time in 1968.

Between 1968 and 1972, SOBA began the process of inquiry for land acquisition under a new Federal program from the Department of the Interior and Florida Department of Natural Resources to purchase environmentally sensitive lands for 'open space and recreation by the public'. Under the program guidelines, it was noted "gulf and bay frontage is our greatest natural resource and fast disappearing".

Without likelihood of permitting, Arvida was soon interested in selling the South Lido and Otter Key properties. SOBA and Sarasota County initiated the quest for the newly available funding. The preservation of Otter Key (30 acres), its mangrove bay bottom root system and South Lido property (130 acres) became one of the first opportunities for a Florida county to purchase and protect lands under new federal regulations. With a countywide Referendum held May 1, 1973, voters made a commitment to the land and its environmental protection. In a 9-1 countywide margin, voters approved an extra ½ mill on property taxes for 30 years or until funding was complete. The residents of Lido Key voted in a 10-1 margin to approve the purchase (Appendix A).

Federal and state grants totaling $943,000 were secured and set aside by Sarasota County for future purchases of environmentally sensitive land.

The South Lido County Park was established to be "forever maintained in its natural state for public use and recreation". It was soon named in remembrance of Ted Sperling, the commissioner, resident, and visionary who galvanized the community in this direction.

1.4 Management Authority and Responsibility

Management authority is the responsibility of Sarasota County Parks, Recreation and Natural Resources Department (PRNR) with the lead being the Beaches and Water Access Division (BWA). Management includes, but is not limited to, the upkeep of public use amenities, scheduling of events, and management of natural areas (Appendix B). BWA collaborates with the PRNR Natural Areas and Trails Division (NAT) on issues related to preservation and restoration of natural communities and critical habitat management. BWA coordinates infrastructure management and park maintenance with the PRNR Maintenance Services Division. PRNR also enlists the assistance of other departments, as necessary, that may have expertise or regulatory authority in particular areas of the park's management and operation.

Governing Documents

Management authority is given by the following County Codes and governing documents (see Appendix C):

1. The Sarasota County Comprehensive Plan (2016)
2. Code of Ordinances of Sarasota County (2022)
3. Sarasota County Strategic Plan (2022)
4. Sarasota County Code of Ordinances Article XXXI Section 54-1000 Manatee Protection Plan (2022)
5. Sarasota County Land Management Master Plan (2004)

1.5 Future Plans For The Site

Because parking areas suffer significantly from erosion, drainage issues, and capacity levels during peak use, future planning involves the redevelopment and configuration of this area. Paving the lots and adding sidewalks and proper drainage will enhance the safety and flow of the park. These improvements would require the removal of most of the invasive exotic Australian pine trees.

As the park grows in popularity, plans for South Lido Beach should include adding additional rinse stations, small shelters, and a main pavilion that could be used for private and public events or as an outdoor classroom for environmental education programs. The picnic areas are open and shaded only by Australian pines. Though the park has traditionally been maintained as a natural area, there is an increased need for recreational amenities to serve as gathering places. Adding shelters and a main pavilion could serve to build community and increase economic impact while still being designed to honor and protect the natural environment.

As the restroom facilities at the nature park age, facilities no longer meet the current visitor use levels. PRNR is planning to rebuild this facility though funding and a timeline has not been established. This part of the park is also dealing with insufficient capacity for parking. To plan for growth, we recommend that additional areas in the park be considered for parking. As the nature park serves as the maintenance area for the entirety of the site, there is also the need to increase the footprint of the maintenance yard and provide a permanent facility that can house utility vehicles and supplies. For optimal efficiency, the facility should have a maintenance garage as well as offices, restroom, break room, and parking for staff. The area of the nature park just to the north of the current maintenance yard is the best place for this expansion.

In place currently is a multiyear plan that outlines a project at the park to build a Multiuse Recreational Trail (MURT) through the park. This project came about through the Resources and Ecosystems Sustainability, Tourism Opportunities and Revived Economy (RESTORE) Act which establishes the framework for distribution of Clean Water Act penalties from the Deepwater Horizon accident and oil spill. On March 23, 2016, the County Commission elected to move forward with a project at the park. On October 4, 2018, Treasury approved Sarasota County's Multiyear Implementation Plan (MYIP). County staff will now begin the process of preparing and submitting a grant application to access project funds.

The proposed MURT is a 4,500-foot segment of an existing larger city-wide initiative, portions of which have been constructed outside of the park boundaries. The proposed construction would add recreational opportunities and expand access to the park by providing an improved bicycle and pedestrian trail that will stretch through natural park areas located between the Nature Park and South Lido Beach. The trail will be ten feet wide and will consist of boardwalks and asphalt pavement to accommodate multi-modal users and to accommodate ADA requirements. It is anticipated that procurement of design and engineering services, and subsequent design and permitting will take approximately one year. Once complete, and when adequate funds have accrued in Sarasota County’s Trust Fund allocation, an application will be made for construction funding.

Construction of the MURT will provide safe, functional access to park users who may be limited by disabilities, and to the public who will be provided off-street access from the north end to the south end of the park. The MURT will also prevent the park ecosystem from being trampled by visitors. To travel from the Nature Park at the northern end of the park to the beach and picnic areas in the southern portion of the park, park visitors must currently either drive or exit the park to walk on the sidewalk along the western side of Benjamin Franklin Drive. Construction of the MURT will not only allow safe transit from north to south in the park but will also provide a defined connection and access to offsite amenities including shops and restaurants located at St. Armand’s Circle for pedestrians, cyclists, and other recreational users. The construction of boardwalks and extension of the MURT will improve the ecotourism opportunities, which will create associated economic benefit for businesses near the park, including lodging, restaurants, and other local commercial establishments.

The first phase of habitat restoration will involve removal of established nuisance and invasive exotic plants to the greatest extent possible within budget limitations. Subsequent phases will include continuing nuisance and invasive vegetation maintenance and regrading of a portion of the mosquito ditches to restore more natural hydrology to the mangrove swamp. It is anticipated that native vegetation will naturally recruit into the areas from which nuisance and invasive exotic vegetation is removed. However, future phases may include replanting, if necessary. The overall cost for this work has not been estimated since it is not expected that sufficient funds from the current allocation will be available to undertake the work, and that the scope of work may be subject to revision as uses of the park change with improvements.

NATURAL RESOURCES MANAGEMENT PHILOSOPHY

Sarasota County's habitat management approach seeks to restore and maintain a natural balance which preserves the quality of diverse landscapes for the benefit of wildlife and visitors. As part of this effort, Sarasota County's environmental professionals apply a variety of specialized methods, including mechanical treatment of vegetation, prescribed fire, invasive plant and animal management, hydrologic restoration, and restoration of natural communities. Scientific monitoring, often facilitated by volunteers, enables us to gauge our effectiveness and develop responsive, proactive approaches.

With a focus on natural systems management, primary emphasis is placed on restoring and maintaining the natural processes that formed the structure, function, and species composition of Sarasota County's diverse natural communities as they occurred in pre-development. Single species management for imperiled species is appropriate in County parks and preserves when the maintenance, recovery or restoration of a species or population is difficult due to the requirement of long-term restoration efforts, unnaturally high mortality, or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes and should not imperil other native species or compromise the preserve's values.

Although prescribed fire is an essential component in natural systems management in Florida and it is not used as a management tool at this beach park. The population density of the island impacts to smoke sensitive facilities such as hospitals, airports, and schools, and a lack of significant burnable habitat are all factors that preclude this park from utilizing prescribed fire. Mechanical vegetation reduction will be implemented as needed for public safety and habitat needs.

Invasive plants and animals are a serious concern for the management of natural systems. Due to Florida's warm climate, non-native plants and animals thrive. Many invasive exotic species outcompete, displace, or inhibit growth of native species, altering natural habitats. If left unchecked and without natural controls from their native origin, invasive exotic plants and animals alter the character, productivity, and conservation values of the natural areas they infest. The Florida Invasive Species Council (FISC) supports the management of invasive exotic plants in Florida's natural areas (Florida Invasive Species Council 2022). FISC compiles invasive species lists that are revised every two years. Invasive plants are termed Category I invasives when they alter plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. Category II invasive exotic species are determined to have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species (https://floridainvasivespecies.org/). It is the aim of PRNR to eliminate or if not possible, to reduce FISC Category I and II invasive exotic plants to low ecological levels. PRNR utilizes the FISC classification system to determine management priorities when managing invasive plants.

Invasive exotic animal species include non-native wildlife species, free-ranging domesticated pets or livestock, and feral animals. Because of the negative impacts to natural systems attributed to invasive exotic animals, PRNR actively removes invasive exotic animals from County parks and preserves, with priority being given to those species causing the greatest ecological damage.

2 NATURAL RESOURCE MANAGEMENT COMPONENT

2.1 NATURAL RESOURCE INVENTORY

2.1.1 Topography

TSP was historically part of a cluster of low-lying islets, including what is now St. Armand's Circle, Coon Key, and Otter Key (Exhibit 4). The islets, called the Cerol Isles, consisted of marshes and mangrove swamps. During the 1920s, John Ringling converted several of these islets into one continuous island called Lido Key. The original natural inlet from the Gulf of Mexico, Big Sarasota Pass, is located at the tip of TSP. Natural occurrences such as opposing currents, wave activity, offshore shoals, wind, and storms have altered the channel in Big Sarasota Pass, oftentimes making it unnavigable.

The mangrove swamp at the nature park surrounds Brushy Bayou, a fisheries habitat made up of seagrasses which also serves as foraging grounds for wading and shore birds. The swamp is vegetated by mature mangrove trees, which help protect Lido Key and TSP from erosion and strong tidal currents in the area. Invasive exotic species such as Australian pine cover the spoil upland portions of the park that were filled during Ringling's initial development plans.

In the early 1970s mosquito ditches were created in the mangrove swamp to help reduce mosquito populations. Today, these ditches are known as the mangrove tunnels and are used by tens of thousands of park visitors every year.

2.1.2 Soils

The site is comprised of three soil types that can be categorized into hydric and mesic soil types (USDA, 2006) (Exhibit 5). The parent material of each of these soil types consists of sandy and/or loamy marine deposits.

Table 1. Soil types in the Preserve.

Soil Type	Associated Habitat	Drainage Characteristics
beaches	beaches and dunes	hydric, poorly drained, frequent flooding
Kesson and Wulfert mucks	marshes and swamps	hydric, poorly drained
Canaveral fine sand	maritime hammock and coastal strand	mesic, somewhat poorly drained, or moderately well drained

2.1.3 Hydrology

This park is in a Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA) (Exhibit 6). The SFHA is the area where the National Flood Insurance Program's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. Sarasota County defines a SFHA as a high-risk area defined as land with a one percent chance of flooding in any given year.

2.1.4 Natural Communities

The natural communities listed in this plan are identified using the Florida Natural Areas Inventory (FNAI) classification system (Exhibits 7a–b, Table 2, FNAI 2010). This classification system categorizes all natural habitats that occur in Florida.

Table 2. FNAI communities present in the park.

FNAI Communities	Acres	% of Park
beach dune	13.00	7.69
maritime hammock	23.03	13.62
mangrove swamp	71.2	42.00
developed	19.7	11.65
bays and estuaries	40.7	24.08
road	1.4	0.83

2.1.5 Imperiled Species

The park supports a variety of imperiled flora and fauna (Table 3, Appendices D and E). Preliminary site evaluations have been conducted at TSP to determine general habitat species composition, identify potential listed species and invasive species, and make focused attempts to verify if listed species are present.

FLORIDA'S NATURAL COMMUNITIES

The Florida Natural Areas Inventory (FNAI) provides a detailed guide to the standard classification system of 81 natural communities. The premise of this system is that physical factors such as climate, geology, soil, hydrology, and fire frequency determine the species configuration of an area. Areas that are similar with respect to those factors will tend to have natural communities with similar species compositions. Differences in species composition can occur, however, despite similar physical conditions and the reverse can occur. Some physical influences may vary from FNAI's descriptions for certain natural communities in this plan.

Flora

Inkberry *(Scaevola plumieri)* is a dense, multi-stemmed shrub with leaves that are light green and succulent with a waxy covering, alternately arranged along the stem. This species primarily exists sporadically in the dune system at the park. BWA manages this species by removing surrounding invasive exotic plants and by deterring unauthorized pedestrian paths through the dunes.

Prickly pear cactus *(Opuntia stricta)* is one of four native *Opuntia* species that occur in Florida. It grows north to south on the east and west coast and is quite common growing along coastal dunes, coastal grasslands, coastal hammocks and on shell mounds. The primary management objective is to protect this species from human impacts.

Giant airplant *(Tilandsia uticulata)* is listed as an endangered species primarily due to the impacts from the Mexican bromeliad weevil (*Metamasius callizona*). Giant airplant is the largest Tillandsia species in the United States, with leaves reaching two feet in length and a flower stalk up to six feet tall. BWA monitors existing populations for impacts from the weevil. If impacts are observed the plants may be relocated for preservation and seeds saved for future plantings.

Fauna

Loggerhead sea turtles *(Caretta caretta)* are the most common of the five sea turtles in Florida waters. For the 2020 nesting season, Mote Marine Laboratory and Aquarium documented over 3,000 loggerhead nests along 35 miles of beach in Sarasota County.

Green sea turtles *(Chelonia mydas)* in Florida are one of the largest groupings of this species in the western Atlantic. More than 37,000 green sea turtle nests were documented in Florida in 2015, a record

number. For the 2020 nesting season, Mote Marine Laboratory and Aquarium documented over 75 green nests along 35 miles of beach in Sarasota County.

Gopher tortoises *(Gopherus polyphemus)* have also been well-documented in dunes, coastal strand, and ruderal communities; however, no formal surveys or monitoring have been conducted. The gopher tortoise is considered to be a keystone species for Florida's natural mesic and xeric pyrogenic communities. Several other species may inhabit or utilize gopher tortoise burrows, including the Florida mouse (*Podomys floridanus*), a State-listed species of special concern, eastern indigo snake (*Drymarchon corais couperi*), a State and Federally listed threatened species, and Florida gopher frog (*Rana capito*), a State-listed species of special concern.

Least terns *(Sternula antillarum)* nest in small colonies and prefer the open beach and similar sandy areas with little vegetation. Their habitat is ephemeral, with nesting sites changing from year to year. The beach is also important, and potential, habitat for other nesting shorebirds. Least terns are a protected species under the U.S Migratory Bird Treaty Act. They are also a state-designated threatened species.

The Wilson's plover (*Charadrius wilsonia*)—while not a state or federally-listed species is classified as imperiled by FNAI—have also been observed onsite. County staff take measures to protect shorebirds by avoiding driving on or beyond the upper part of the beach, assisting Audubon in blocking off nesting areas, and driving slowly. Staff also educate the public by notifying them to keep dogs and other domestic animals off the beach, not to fly kites near nests, to stay out of nesting areas, and ultimately give the nests space.

Bald eagle *(Haliaeetus leucocephalus)* nests are not documented in the park though eagles are occasionally observed perched onsite or flying overhead. Bald eagles were removed from the endangered species list but are still protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Based at Audubon Center for Birds of Prey, Audubon EagleWatch seeks information about bald eagles, active nest locations, and possible disturbances or threats to nesting activities. The EagleWatch program provides valuable information on nesting activity and the current trends of eagle populations in Florida. (Audubon Center for Birds of Prey 2022). FWC also monitors eagle nests throughout the state (FWC 2019, 2021). Statewide surveys were performed until 2008, after which a rotating subset of counties were surveyed until 2017. Only a portion of known nests are surveyed each year by FWC (FFWCC, 2017). There are two nests within three miles of the park that were considered occupied as of 2021. One nest is located in North Lido Beach Park and the second across Big Pass in a residential area. More information regarding current eagle nests is on the Florida Audubon EagleWatch website https://cbop.audubon.org/conservation/about-eaglewatch-program .

West Indian manatees *(Trichechus manatus latirostris)* commonly use waters around Ted Sperling Park. Manatees are protected under the Endangered Species Act and the Marine Mammal Protection Act (NOAA Fisheries 2022). Sarasota County Code of Ordinances Article XXXI Section 54-1000 Manatee Protection Plan provides some protection of the West Indian manatee through regulation and control of development proposals with an effect on watercraft-related activities that could affect the manatee, their habitat, respite areas, travel corridors, or other areas that affect their survival, success, and persistence in Sarasota County and southwest Florida (Mote Marine Laboratory 2003). Manatees live in marine, brackish, and freshwater systems in coastal and riverine areas throughout their range. In the U.S., the most significant causes of death and injury for manatees are watercraft collisions. To reduce the effect of collisions on manatees, boat operators are required to slow down and/or avoid regulated

areas commonly used by manatees. The U.S. Fish and Wildlife Service, the Florida Fish and Wildlife Conservation Commission, and others designate, mark, and enforce manatee protection areas. Ted Sperling Nature Park along with all the waters around Sarasota County are described as a "Critical Habitat" for the West Indian Manatee as stated in 1976 in 50 CFR 17.95. "Manatee Zone" and "Slow Speed" signs are posted in the waterways around the park.

Table 3. Imperiled Flora and Fauna with documented sightings at Ted Sperling Park.

	Common Name	Scientific Name	Status
Plant	giant airplant	*Tilandsia uticulata*	Endangered (State)
	inkberry	*Scaevola plumieri*	Threatened (State)
	shell-mound prickly pear	*Opuntia stricta*	Threatened (State)
Bird	American kestrel	*Falco sparverius*	Threatened (State)
	American oystercatcher	*Haematopus palliatus*	Threatened (State)
	black skimmer	*Rynchops niger*	Threatened (State)
	least tern	*Sterna antillarum*	Threatened (State)
	little blue heron	*Egretta caerulea*	Threatened (State)
	reddish egret	*Egretta rufescens*	Threatened (State)
	roseate spoonbill	*Platalea ajaja*	Threatened (State)
	sandhill crane	*Antigone canadensis*	Threatened (State)
	tricolored heron	*Egretta tricolor*	Threatened (State)
	Wilson's plover	*Charadrius wilsonia*	Threatened (State)
Amphibian	gopher frog	*Rana capito*	Species of Special Concern (State)
Reptile	gopher tortoise	*Gopherus polyphemus*	Threatened (State)
	indigo snake	*Drymarchon couperi*	Threatened (Fed)
	American alligator	*Alligator mississipiensis*	Threatened (Fed)
	Atlantic green sea turtle	*Chelonia mydas*	Endangered (Fed)
	leatherback sea turtle	*Dermochelys coriacea*	Endangered (Fed)
	loggerhead sea turtle	*Caretta caretta*	Threatened (Fed)
Mammal	West Indian manatee	*Trichechus manatus latirostris*	Threatened (Fed)

2.2 Natural Resource Management

These management strategies protect the park from vandalism, degradation, and invasive exotic species proliferation, provide natural resource dependent recreational opportunities, and protect and manage listed species and their native communities. These strategies will be accomplished by regular, frequent site visits by County staff, a management program designed to restore the natural communities then monitor their floral and faunal components to track success, and an annual report that summarizes management and issues. Based on the annual summary report, adjustments shall be made to mitigate issues not addressed in this plan.

2.2.1 Beach Dune

The park has 13 acres of beach dunes. The beach dune community is presently a narrow band running northeast to southwest along the Gulf of Mexico side of the park. It is a dynamic community and often changes noticeably from season to season depending on the frequency of significant storm and tidal events. Dunes support a variety of plants (Table 4). The beach area (non-dune) in general does not support vegetation due to the forces generated by breaking waves and tides. Pioneer dunes are formed immediately landward of the highest tides. The fore dune occurs more landward, where wind-deposited

sand accumulates and is stabilized by plant rhizomes or roots. Foot traffic, erosion and invasive exotic plant species negatively impact the dune system. Although small in length, pedestrian trails reduce the overall coverage of native dune vegetation throughout the park.

Table 4. Common plants of beach dunes.

Common Name	Scientific Name
railroad vine	*Ipomoea pes-caprae*
sea oats	*Uniola paniculata*
bitter panicgrass	*Panicum amarum*
dune sunflower	*Helianthus debilis*
baybean	*Canavalia rosea*
seashore dropseed	*Sporobolus virginicus*
seacoast marshelder	*Iva imbricata*
beach creeper	*Ernodea littoralis*
inkberry	*Scaevola plumieri*

Current Conditions

A few invasive exotic plant species exist, including Australian pine, Brazilian pepper, carrotwood, and beach naupaka. They have been treated in the past, but continuous maintenance is challenging. Australian pines are the most controversial of both native and invasive exotic plants onsite. Beachgoers love the shade they provide and are vocal against their removal. These trees can be a perch for ospreys and provide nesting habitat for other bird species. They have a shallow root system, which makes them more vulnerable to falling during periods of high wind. Also, when Australian pines drop their leaves, it forms a dense, acidic mat around the base of the tree that suppresses growth of native species. Annual maintenance through removal and cleanups has been conducted by County staff and volunteers.

Boaters are heavy users of the eastern beach system. Boaters anchor up to either vegetation or the beach itself. Boaters use the designated picnic area, but often create their own trails when the beach has limited space. These unauthorized trails lead to a reduction in native vegetation, which causes a loss in habitat and makes the beach more prone to erosion.

Optimal Conditions

Optimally, the beach dune habitat would thrive if most invasive exotic plants were removed and replaced with native plants. Ideally, for every Australian pine removed, a native shade tree would be planted its place. Although planting in the exact same place may not be possible, it is important to maintain shade in high use areas. Unauthorized trails could be closed to public access and wayfinding signs for authorized trails installed.

Management Guidelines

Reduce invasive exotic plants throughout the park annually. All efforts (e.g., treatment methods, herbicide types and record keeping) will adhere to the guidelines presented in the County's Integrated Pest Management Plan (Sarasota County 2015). Standard operating procedures are listed in PRNR documents, including 7.5.3 Tree Management in County Parks, 7.9 Natural Areas Management Statement, 7.9 Removal of Australian Pines in High Use Public Areas, and 7.9 Sarasota County Parks,

Recreation and Natural Resources Beaches and Water Access Division Guide. Evaluate the cost to benefit of grants and other funding assistance as they arise.

Plant native vegetation in strategic areas that will persist and provide positive long-term impact. Plantings should occur during the rainy season to increase the plants' strength and resiliency. Identify priority areas annually.

Reduce foot-traffic. Evaluate unauthorized paths and close them if environmental impacts are significant.

2.2.2 Bays and Estuaries

The park has approximately 40.7 acres of estuary. Bays and estuaries provide extensive economic support for the local and surrounding economies, while providing numerous ecological benefits. For example, bays and estuaries support over 95 percent of commercial and recreational fish caught in the area.

Current Conditions

These systems are rich with seagrass beds and aquatic life, which make them a destination for kayakers and other park users. These areas are tidally influenced and can experience periods of little to no water. There may be times where kayakers are not be able to access the tunnels due to extreme low tides. Over the years "sandy point" located at the end of the walking trail has started to enlarge and close off a portion of Big Grassy Lagoon.

Optimal Conditions

This habitat is near optimal condition, but an annual seagrass survey is recommended to monitor the overall health of this system. Sarasota County surveys seagrasses in Sarasota Bay but does not monitor them in the park. There are no motorized vessels allowed in the park, mangrove tunnels, or bayou. Although there are no signs currently indicating "no motorized vessels", if motorized vessels become a significant issue, signs will need to be added and permitted through FWC and U.S. Coast Guard.

Management Guidelines

Establish an annual or biannual seagrass survey for the park. Develop a partnership with Sarasota County Stormwater Environmental Utility and other groups like the Sarasota Bay Estuary Program or Sarasota Bay Watch to develop and implement a seagrass survey. Continue to monitor conditions of mangrove tunnels, human impacts, and invasive exotic plants. Coordinate workdays as needed.

2.2.3 Maritime Hammock

The park has approximately 23 acres of maritime hammock. A closed canopy of live oak and cabbage palm and a buildup of leaf litter and humus combine to create a unique microclimate in the hammock. Maritime hammocks support a variety of plants (Table 5). Maritime hammock occurs in the west and eastern portions of the park. There are hiking trails, picnic areas with tables and grills, and a small fishing pier.

Table 5. Common plants of maritime hammock.

Common Name	Scientific Name
Southern red cedar	*Juniperus silicicola*
wild coffee	*Psychotria nervosa*
snowberry	*Chiococca alba*
myrsine	*Rapanea punctata*
coralbean	*Erythrina herbacea*
saffron plum	*Sideroxylon celastrinum*
live oak	*Quercus virginiana*
cabbage palm	*Sabal palmetto*
green buttonwood	*Conocarpus erectus*

Current Conditions

Maritime hammocks are in fair health due to prevalent invasive exotic plants. There is Brazilian pepper scattered throughout, along with Australian pine, carrotwood, and lead tree. Invasive exotic plant treatments have been done, but ongoing and more intensive treatment or removal is needed.

Optimal Conditions

Optimally, all invasive exotic species must be removed. More aggressive annual maintenance is required. Optimal conditions will be reached when natural native seed propagation occurs.

Management Guidelines

Conduct an annual assessment to evaluate invasive exotic species. Reduce invasive exotic species, focusing on Brazilian pepper and Australian pine as they heavily suppress growth of native understory plants. Hand-pull invasive exotic plants. Include actions that enhance maritime hammock during planning and implementation of the MURT project.

2.2.4 Mangrove Swamp

The park has 71.2 acres of mangrove swamp, making it the largest single habitat. Mangrove swamps are coastal wetlands influenced by varying tides, and located where fresh and saltwater combine. Black, white, and red mangroves live in this habitat (Table 6). Mangrove swamps provide habitat for marine life, provide protection from erosion, storm surge, and wave action, and serve as a filtration system for runoff. Mangroves also sequester amounts of carbon dioxide from the atmosphere.

Table 6. Common plants of mangrove swamps.

Common Name	Scientific Name
red mangrove	*Rhizophora mangle*
black mangrove	*Avicennia germinans*
white mangrove	*Laguncularia racemosa*
buttonwood	*Conocarpus erectus*
falsewillow	*Baccharis spp.*
sea purslane	*Sesuvium portulacastrum*
bushy seaside oxeye	*Borrichia frutescens*

Current Conditions

The mangrove swamp habitat is in good condition. There are small spoil mounds located in this habitat, which are susceptible to invasive vegetation. Brazilian pepper, Australian pine, and carrotwood are the three most common invasive exotic plants. This system experiences high use from kayakers.

Optimal Conditions

Optimal conditions consist of removal of all invasive exotic plants. Once removed, recruitment of native plants will occur.

Management Guidelines

Monitor and treat Brazilian pepper, Australian pine, and carrotwood annually. Treat these species in place, ideally during low tide, as to not disturb the mangrove systems. Monitor mangrove tunnels quarterly for obstructions and hazards to kayakers using park staff and a county arborist. Only prune mangroves using a professional mangrove trimmer or certified arborist. Management of this system can primarily be handled in-house, with larger projects using the assistance of contractual service.

2.2.5 Altered (Developed) Landcover Types

The park has 19 acres of altered landcover types. The most prevalent altered landcover types include roads and developed areas, including picnic shelters, hiking trails, boardwalks, parking lots, restroom facilities, playground, and picnic areas. One two-lane paved road provides public access to both South Lido and Ted Sperling Park. This paved road transitions to a dirt road and parking lot, which provide access to most of the public use amenities in the park. A variety of plants live in these altered landscapes (Table 7).

Table 7. Common plants of altered landcover types.

Common Name	Scientific Name
cabbage palm	*Sabal palmetto*
railroad vine	*Ipomoea pes-caprae*
dune sunflower	*Helianthus debilis ssp. vestitus*

Current Conditions

The altered landcovers at the park are predominantly associated with public use infrastructure. The facilities are maintained as safe and accessible for park visitors. Replacement timeline recommendations are evaluated regularly to determine when infrastructure will need to be significantly repaired, enhanced, or replaced. Australian pine trees are the most significant invasive exotic species in this area. Visitors tend to gather underneath these trees due to enjoy the shade they provide.

Optimal Conditions

Optimally, public use infrastructure is well maintained, and enhancement projects are continually being identified based on best management practices and current guidelines related to accessibility. A comprehensive landscape plan is needed to enhance the area.

Management Guidelines

Reduce and eventually eradicate invasive exotic species. Conduct annual surveys and treatment efforts. Make all public use infrastructure safe and accessible for park visitors. Complete quarterly inspections

by a county arborist or Environmental Specialist to ensure Australian pines do not pose a safety concern for falling branches or trees.

2.2.6 Management Zones

To coordinate management efforts and maintain data history pertaining to invasive exotic species control, the preserve is divided into seven management zones (Exhibit 8, Table 8). All areas are targeted for invasive exotic species control annually (Exhibit 9, Table 9).

Table 8. Management Zones used to track invasive plant management in the park.

Zone	Acres
1	11.38
2	55.12
3	20.21
4	12.36
5	27.22
6	15.64
7	18.85

Table 9. Optimal annual IPM rotation intervals and targets.

Natural Community	Acres	Technique(s)	Annual Target (acres)
maritime hammock	23.03	Foliar, cut stump, girdle	All
mangrove swamp	71.2	Foliar, cut stump, girdle	All
beach dune	13.00	Foliar, cut stump, girdle	All
bays and estuaries	40.7	Foliar, cut stump, girdle	All
developed	19.7	Foliar, cut stump, girdle	All

2.2.7 Special Considerations

Beach erosion

Lido Key and Ted Sperling Park have been affected by rough seas and storm surge for decades. Numerous times, portions of the beach were declared to be in a state of emergency, particularly after tropical storms. Plans for a long-term renourishment project took over twenty years due to permitting and litigation. In April 2020, the Army Corps of Engineers and the City of Sarasota began dredging Big Pass and pumping sand onto Lido Key, beginning at the southern tip of Ted Sperling Park at South Lido Beach. Roughly 700,000 cubic yards of sand were pumped onto a 1.56-mile stretch of Lido Key, extending the beach's width by an average of approximately 300 feet. The affected shoreline reaches from the north public beach access to Ted Sperling Park. Two groins made of nearly 5,000 tons of armor stone have also been installed along South Lido Beach to further reduce the effects of erosion.

Harmful Algal Blooms and Seaweed

Harmful algal blooms (HABs) and in particular red tide often have a significant visitor impact at South Lido Beach. Clean up of both marine debris from HABs and large amounts of seaweed can be done by hand (County staff and/or Sherriff Work Offender Program) and mechanical equipment (beach rake).

Roll-off dumpsters and dump trucks are often utilized for disposal. Expired marine life of significance (e.g., goliath grouper, shark, and dolphins) that wash ashore are reported to FWC. Mote Marine shall be contacted if expired sea turtles wash ashore. Red tide often occurs during the hot summer months, but also can be a year-round event. Red tide thrives when waters are warm and there is an abundance of excess nutrients in the water.

PRNR secures a beach cleaning permit from the Florida Department of Environmental Protection each year. This permit establishes special precautions and stipulations but enables PRNR to use mechanical equipment to remove marine debris from Siesta Beach and from Lido Key up to four days a week. Routine beach cleaning operations occur in these two portions of the county because equipment access points are established, the contour of the shoreline is conducive to equipment operations, and the consistency and compaction of the sand allows for safe operations. The permit also provides allowances for PRNR to clean the entire 35 miles of coastline during times of emergency such as following storms or during HAB events. When these issues arise, PRNR utilizes a County-approved special conditions beach cleaning policy to administer the removal of large amounts of shoreline debris. This policy establishes operational procedures for the removal of dead fish, seaweed, or debris left by the tides or storm events. Stranded seaweed and dead fish provide an important food source for beach and near-shore food chains. Removal of debris, dead fish, or seaweed should only occur when all the following criteria are met:

- Accumulation reaches an estimated volume to fill one five-yard truck per two-mile continuous section of beach that is accessible to motorized equipment or vehicles if two tidal cycles have not removed it naturally; and beach to be cleaned is
    - Owned by the County and open to the public; or
    - Below the approximate mean highwater line and near a County-owned public beach or beach access; or
    - Part of a federal or state beach renourishment project and seaward of the erosion control line (ECL); and
- Cleaning can be accomplished in compliance with all applicable local, state, and federal regulations; and
- Funding is available.

Sarasota County Parks and Recreation's special conditions beach cleaning policy may apply to private beaches for County-managed removal of dead fish and seaweed only under all the following conditions:

- Accumulation reaches an estimated volume to fill one five-yard truck per two-mile continuous section of beach that is accessible to motorized equipment or vehicles if two tidal cycles have not removed it naturally; and
- Cleaning can be accomplished in compliance with all applicable local, state, and federal regulations; and
- The area to be cleaned is landward of the approximate mean highwater line and seaward of the any pronounced escarpment, dune, vegetated area, or shore protection structure such as a revetment; and
- The beach is near a County-owned public beach or beach access and has been customarily crossed and used by the public; and
- Funding is available, and a public purpose can be established; and
- The owner(s) have provided written permission to the County. Such permission shall acknowledge the historical customary use of the beach by the public.

Overnight Camping

Regular monitoring for overnight camping throughout the park is necessary, especially in the southern portion and deep in the mangroves. Over the last five years, dozens of camps have been removed. County staff coordinates with Sarasota Police Department (SPD) on the removal of camps that contain life sustaining valuables. Trash is disposed of appropriately. If camps are inhabited, County staff contacts SPD Homeless Outreach Team (HOT), which assists the individual and ensures removal of the campsite.

Non-Native Fauna

In a suburban setting, raccoons, armadillos, spiny-tailed iguanas, dogs, and feral cats can be troublesome to natural area parks, where they are known to prey on shorebird and sea turtle nests and gopher tortoise burrows. According to FWC, nonnative species do not belong in Florida. Some do not cause many, if any, problems. Others, however, are invasive, meaning that they negatively impact native fish and wildlife, cause damage that is costly to repair, or pose a threat to human health and safety.

County staff has focused removal efforts on addressing smaller species (e.g., racoons and armadillos) that have detrimental impacts to sea turtle nests. Black spiny tailed iguanas have been observed in the northern portion of the park. During routine inspections to the park's natural communities, staff will note any evidence of nuisance animals, as well as evidence of new, potentially problematic invasive exotic animals. Trapping efforts will increase in the springtime and in conjunction with sea turtle nest protection operations, and nesting shorebird and seabird season.

County staff and independent trappers monitor traps and remove animals in accordance with state laws. In-house efforts are conducted throughout the year but largely increase one month prior to the expected shorebird and sea turtle nesting seasons and continue throughout the season on an as needed basis. These seasonal activities are influenced by observations of staff and volunteers.

Optimal management of non-native fauna should include routine removal. In 2020 Sarasota County established an agreement with the United States Department of Agriculture (USDA) for the removal of a variety of species. This agreement provides use of a USDA employee and associated equipment to manage non-native fauna on County-managed lands. Although most of the efforts are focused on feral hog management, BWA can utilize this resource to manage other species of concern. Staff will continue to monitor and remove non-native species but additional resources are needed for eradication. BWA also coordinates with FWC for the removal of fish crows and other species that depredate shorebird nests. FWC has been the lead on these activities and coordinates with multiple agencies to ensure that safety and environmental regulations are met. A variety of methods have been used to reduce or deter the crow populations on Lido Key including trapping, shooting, and nonlethal electric shock.

Management of Invasive Exotic Plants

The objective of basic management is to assure the site will not significantly degrade due to invasive exotic species proliferation. Habitat restoration efforts can be hindered by undesirable vegetation if left unchecked. Site management will concentrate on eradicating FISC Category I species (Appendix D).

Invasive plant species will continue to be removed and/or treated. Coverage will be evaluated quarterly to assess the success of treatment as well as to determine the need for additional control. Control methods used are based on current techniques as detailed by FDEP and other local, regional, and federal resource management agencies.

All treatments of invasive exotic plant species will be completed in accordance with Sarasota County's Integrated Pest Management Procedural Guidelines, effective June 22, 2015, Resolution No. 2005-110. Integrated Pest Management is a practice of promoting sustainable pest management methods that minimize health, environmental, and economic risks. All necessary techniques are consolidated in a unified program so that pests are kept at acceptable levels in an effective and economical manner that is not detrimental to human health and the environment.

It is the goal of Sarasota County Government to reduce the risk to human health and the environment by minimizing the use of pesticides through application of integrated pest management practices and emphasizing proven, effective least toxic and non-toxic approaches and products. Sarasota County uses the principle of substitution to promote use of safer chemicals by staff and contractors. This principle states that hazardous chemicals should be systemically replaced by less hazardous alternatives or, preferably, alternatives for which no hazards can be identified. The County reviews the list of approved chemicals each year and identifies candidates for substitution. The use of bio-controls is also a priority of the program.

Currently, BWA environmental specialists produce quarterly work orders in Maximo, a scheduling and tracking software, which allows staff to schedule workdays and to keep track of the hours spent on invasive exotic vegetation removal. If work cannot be completed within a quarter, it is deferred in Maximo stating additional resources are needed. There are two BWA environmental specialists managing the natural areas under the division's responsibility. It is recommended that an additional fulltime employee be hired to help manage these natural areas.

More information on treatment methods can be referenced in the Beaches and Water Access Integrated Pest Management Guide.

2.2.8 Research and Monitoring

To practice adaptive management, vegetation communities and wildlife species need to be monitored for shifts in diversity, total populations, and demographics.

Ted Sperling Park at South Lido was acquired, in part, to preserve native communities. More detailed surveys could be undertaken to identify the presence of additional rare or protected species. Occurrence of newly discovered rare or listed plant and wildlife species will be reported to agencies and the FNAI. Species-specific management strategies will be developed to ensure the persistence of these species.

Monitoring targets include, but are not limited to, flora and fauna that are protected, are critical to the health of the environment, like keystone species, or are detrimental to the health of the environment, like invasive exotic species. Target communities are usually those that are native to the site and need to be restored, maintained, or are necessary for other management goals. The monitoring targets at the park are the gopher tortoises and burrow commensal species, sea turtles, and nuisance and invasive exotic plant species, together with the natural communities they inhabit.

The monitoring program should, at a minimum, include the following components:

- Habitat assessment—conducted annually to determine fuel loads and habitat structure and to develop recommendations for management activities.
- BioBlitz surveys—used to track native and non-native species though the iNaturalist App. This survey is done in coordination with Selby Botanical Gardens.

- Invasive species monitoring—conducted quarterly in all natural and ruderal communities of the park to assess the success of treatment as well as the need for additional follow-up control.
- Sea turtle monitoring—continuation of the established monitoring of the beach by Mote Marine Laboratory and Aquarium during nesting season (May–October).
- Site stewardship—weekly inspections of the park by staff to assess issues related to security, encroachment, and condition of site for public use and access. Inspection results are reported to the site's designated manager.

The BioBlitz is relatively new to Ted Sperling Park at South Lido. It is a citizen science-based program where volunteers help to identify and document species in the park. Data is collected via smartphone through the web-based app iNaturalist. The app allows users with a smartphone to take photos and identify species and upload them onto the app's server for public viewing. The BioBlitz is typically done with the help of Selby Botanical Gardens, although BioBlitz events can occur throughout the year without other organizations if needed.

Sea turtle nesting is monitored each year through a contract with Mote Marine Laboratory (Mote), which uses Mote staff combined with a group of volunteers to do the work. Sarasota County has participated in the Statewide Nesting Beach Survey Program (SNBSP) since its inception in 1979. During sea turtle nesting season, May 1st–October 31st, Mote staff and volunteers patrol the beach to record the number of nests, false crawls, and successful nests. Patrols begin on April 15th, although the season officially starts May 1st. PRNR will continue to participate and coordinate with Mote for nest monitoring and tagging operations.

Sea Turtle Tagging and Monitoring Program

- Sarasota County and Mote established a relationship in 1986. Mote's program formed in 1982.
- Turtle tagging does not occur on Lido Key. The County's tagging program is on Manasota Key and the majority of tagging done by Mote is on Casey Key.
- Field work is coordinated by County staff with assistance from volunteers and Mote staff
- Additional information is available at https://mote.org/seaturtles

Sea Turtle Nest Monitoring and Data Collection

- Collaboration between Mote and Sarasota County.
- Mote's Sea Turtle Conservation and Research Program (STCRP) has surveyed Sarasota County's beaches, including Lido Key, since 1982.
- STCRP staff, interns, and volunteers survey 35 miles of sea turtle nesting habitat every day of the nesting season looking for new crawls and checking on existing staked nests.
- Data are submitted to FWC as part of the SNBSP program and the Nest Productivity Assessment Program. Data are reviewed to examine how productivity and success, determine the needs for endangered species monitoring for beach nourishment projects, and to answer specific research questions.

While no specific research needs have been identified, many opportunities exist for research that would enhance the County's ability to manage this park and other coastal natural areas. Staff could partner with various volunteer groups, environmental organizations, or educational institutions to conduct research for endangered species protection.

Sea turtles and sea turtle populations have long been the subjects of research conducted by Mote Marine Laboratory, the Florida Fish and Wildlife Research, the National Marine Fisheries Service, and the U. S. Fish and Wildlife Service. The County should seek opportunities to contribute to or share data with ongoing researchers. Opportunities include the following:

- Long-term monitoring of the effects of increased recreational use on nesting shorebirds and seabirds
- Monitoring the effects of increased recreational use on faunal populations.
- Monitoring gopher tortoise movement and burrow selection patterns in relation to the ecological characteristics of the park, and in relation to land management actions.
- Implement an amphibian monitoring program to determine the presence of frog and toad species. The Frog Listening Network could be used as a baseline to establish such a program. This could be conducted by local volunteers.
- Carrying capacity study to examine the amount of visitor use the park can withstand before detrimental impacts occur to habitats, plants, and animals.
- Evaluation of native and invasive exotic plant species recolonization following treatment and/or removal of nuisance and invasive species. This may assist managers in identifying dispersal mechanisms as well as treatment needs in a suburbanized setting.
- Additional investigation into the park's potential to contain historical, archaeological, and cultural resources.
- Other monitoring programs that track the effectiveness of any future mitigation or management efforts.

3 CULTURAL RESOURCE MANAGEMENT COMPONENT

3.1 CULTURAL RESOURCE INVENTORY

3.1.1 Archeological Sites

There are no known archaeological sites on the property.

3.1.2 Historical Structures and Uses

There are no historical structures on the property.

3.2 CULTURAL RESOURCE MANAGEMENT

All sites have been impacted by human disturbances, including dredging of the intracoastal waterway and creation of ditches, infrastructure, and roads. These impacts reduce the conditions of each site. Sarasota County Historical Resources will be contacted before any earth moving projects begin. Even if the earth movement is not in a designated site, there is still potential for archeological findings and significance.

4 LAND USE COMPONENT

4.1 CURRENT LAND USES, AMENITIES, AND FACILITIES

The zoning districts that make up the park and the adjacent lands are Residential Single Family (RSF-1), Residential Multi Family (R-2), Open Use Conservation (OUC), special districts, Waterfront Resort, Marine Park (MP), and Government Use (GU) (Exhibit 3).

4.1.1 Agriculture

Not applicable

4.1.2 Public Access and Recreational Uses

Parking, picnic facilities, and trails were established such that minimal impacts occur to the park's native habitats and communities (Exhibit 10). The main access to the gulf beach is by way of several pedestrian accesses cut through the dune. Informational signs and cigarette butt receptacles are provided. The bay side access is wide open and includes paved sidewalks to access the shore. There is one main footpath trail entrance that leads to numerous trails and boardwalks through the maritime hammock. This path is located on the northeast side of the park. It is accessible for authorized vehicles and has a swingarm gate that remains locked. The system of trails also contains four ancillary trails that lead to the shoreline and are equipped with picnic tables, grills, and garbage and recycle cans. These trails are popular for boaters as they offer a private, secluded area to picnic. Users of these trails can access Brushy Bayou, and Big Grassy Lagoon and dead end at Sandy Point. Sandy Point is a small tidal peninsula of sand and seasonal grasses (sandspurs) located on the northeast side of the park which is accessible by foot or boat.

The nature park access areas are limited to one paved driveway (parking lot) and one shell foot path to the launch. From this end of the park, only one designated nature trail entrance exists through the maritime-mangrove hammock adjacent to the corner of Taft Drive and Ben Franklin Drive. Parking for hikers wishing to enter here is available on the south side of Taft Drive or in the nature park. No trails connect the two sections of the park. With the future MURT, they may connect over the mangrove tunnels. Increased visitor use is likely to occur with the completion of the MURT and the northern additions of the Legacy Trail.

The park is a popular location for events and gatherings. In addition to birthday parties, weddings, and other celebrations, the park is also used for events such as open water rowing competitions, sunrise beach walks, and shorebird nest monitoring and education. Conditions of facilities and amenities are regularly monitored and assessed (Table 10).

Table 10. Current condition and maintenance requirements of onsite facilities and amenities.

Type	Improvement	Condition Assessment	Maintenance Goal
public	parking areas south lido	fair – dirt parking lots with 9 paved ADA spaces	weekly grading
	parking areas nature park	good – paved and 2 paved ADA, shell for the kayak vendors	monitor during quarterly inspections
	pedestrian dune paths	good – except for the recent explosion of sand spurs	monitor after tidal and storm events and for trimming requirements
	mowing and trimming	good	monitor monthly during inspections

	beach raking	poor – rarely raked	monitor monthly during inspections
	wood benches	good	monitor during quarterly inspections
	picnic shelters nature park	good	monitor during quarterly inspections; removal may be required
	picnic tables	good	monitor during quarterly inspections
	beach accesses	fair	monitor during quarterly inspections
	Gulf of Mexico access	good	monitor during quarterly inspections
	bay access	good	monitor during quarterly inspections
	nature trails	good, lots of poison ivy	monitor during quarterly inspections; mow and trim as contractually required
	boardwalks	good	monitor during quarterly inspections
	Canoe and kayak launch	fair – accessibility issues; park size and capacity does not meet use	monitor during quarterly inspections; potential improvement project to consider
	playground	good	monitor during quarterly inspections
	restroom facilities south lido	good	monitor during quarterly inspections
	restroom facilities nature park	poor	monitor during quarterly inspections
	outdoor shower south lido	poor – new deck for current tower and additional showers are needed	monitor during quarterly inspections; potential improvement project
	outdoor shower nature park	Poor, falling apart and inadequate	monitor during quarterly inspections; potential improvement project
support	maintenance garage and staff breakroom	good	monitor during quarterly inspections

The main park entrance, parking lot, and various trail and beach areas are clearly identified with signs describing permitted and prohibited activities. A variety of unauthorized uses are known (Table 11). Fencing is warranted along the eastern parking lot boundary as it is frequently breached by vehicles that drive on the beach. Regular patrols by PRNR staff will help to assure that unauthorized access does not occur.

Table 11. Potential or known unauthorized uses. Potential unauthorized uses and activities are set forth in the County Facility Rules, in addition to applicable rules in Chapter 90 of the Sarasota County Code of Ordinances.

Unauthorized Use	Potential	Known
fossil mining		x
overnight camping		x
pets (leashed and unleashed); non-service animals		x
unauthorized fires		x
unauthorized paths to the beach		x

4.1.3 Outreach and Education

To increase nature-based public recreational and educational opportunities, BWA will invite the local community, clubs, and school groups to assist in eradicating invasive exotic plants and replace them with native species. Guided nature walks, bird hikes, Project Wild activities, and dip netting programs

will continue to be implemented. The addition of directional, educational, and informational signs at key points and establishment of a brochure and trail map will help to exclude visitors from sensitive habitat areas, educate visitors about the park's unique and sensitive resources, and provide for natural resource protection. An educational kiosk with a map is planned for the west side of South Lido Beach with information pertaining to the Gulf of Mexico and beach ecology. The existing kiosk at the nature park provides education and helps visitors navigate through the kayak tunnels. An additional kiosk located on the east side (bay side) of Ted Sperling Park at South Lido to inform visitors of the diverse ecology and protected species located on that side of the park will be requested.

A seasonal volunteer-based Beach Ambassador pilot program will be introduced at the nature park in the winter of 2023 to assist park visitors with general questions and locally available entertainment opportunities. A standard size bulletin board installation will be requested near the building to inform patrons of current events and seasonal information.

4.1.4 Land Use on Adjacent Lands

The existing waterways around the park experience heavy boating traffic and robust currents. The park is located less than one nautical mile from two public boat ramps and one privately owned ramp on Bird Key. The nature park boat ramp is located on the northeast tip of the property and is accessible from the park entrance on Taft Dr. This is an urbanized area, with surrounding lands consisting of a mixture of residential uses, that include single family, resorts, condominiums, and time share units (Sarasota County Property Appraiser 2019). The park is located in the City of Sarasota and zoned for Government Use.

North

Lands owned by the City of Sarasota are within one mile of the park. These parcels include Lido Public Beach, concession, and pool. The amenities at Lido Public Beach include restrooms, vehicle parking, outdoor rinse stations, gift shop, Sarasota County Beach Patrol office, storage shed, and three dune walkovers to access the beach. The most northern end of the beach converts into North Lido Trails and is owned by the City of Sarasota but maintained by PRNR through an interlocal agreement. There are three Sarasota County-owned Lifeguard towers on Lido Public Beach. This area is the only lifeguard monitored beach on Lido Key. There is one privately owned property adjacent to park. Sarasota Sands Resort, 2150 Ben Franklin Drive borders the northwest portion of the park. There are privately owned parcels located across the street on Ben Franklin Drive, Taft Drive, and McKinley Drive.

South

The park's south boundary is bordered by Big Pass with a view of Siesta Key.

East

The park's east boundary is bordered by Big Pass with a view of Siesta Key and Bird Key.

West

The parks west boundary is bordered by the Gulf of Mexico.

4.2 Proposed Land Uses, Amenities, and Facilities

The MURT is a proposed amenity that will traverse the park with an anticipated completion in 2023. To keep up with demand and current structural engineering codes for coastal development, the existing facilities need to be enhanced and expanded. On many occasions, the park is overwhelmed with

vehicular parking. As the lots are only gravel without designated spaces, except for ADA spaces, they can become compacted and unsafe for pedestrians. To limit unauthorized parking and manage the atmosphere of the park, contracted security services are utilized for vehicle access. Significant parking lot enhancements must be considered to bring order and safety to the park. As part of this design, the flow and traffic patterns of South Lido Beach, will also be considered. Continued growth of the park is producing more waste. The garbage, recycling, and yard waste enclosure should be relocated and designed to be accessible by staff and contractors when the park is at full capacity. A compactor could be installed to keep up with the increased waste that is generated onsite.

The restrooms at the nature park are aging and are a proposed facility replacement. The future restroom facility will need to meet coastal construction codes, be larger in size to include a welcome center, and be fully accessible.

The current maintenance yard is small and contains only a shed, both of which are quickly being outpaced by the demands of the park. With expected increased use, the maintenance hub at the nature park should be expanded to the north into the open space. Planning for future growth will include an expanded paved maintenance yard, a large permanent structure that contains garage bays for equipment storage, office space, breakroom, and restrooms for increased staffing, volunteers, and equipment.

With the amount of green space and increased demands at Ted Sperling Park at South Lido, a plan for shelters and picnic areas will be developed. The plan should include a large central pavilion that could accommodate 100 people as well as at least five smaller shelters to accommodate ten people each. The large pavilion should be multipurpose with water and electricity. With amazing views of Sarasota County waterways, consideration will be given for building a gazebo that could serve as a popular wedding venue. The pavilion and gazebo would be available for reservations and provide revenue to PRNR. To provide regular and ongoing environmental education sessions, an outdoor classroom could be developed. Though a multipurpose pavilion will serve as a classroom, the concept for an outdoor classroom will be more integrated into the natural surroundings. Each of these facilities will be accessible and inclusive for everyone.

Future amenities should provide the public monthly rental lockers for kayak and canoe storage as well as an accessible launch for non-motorized watercraft. Both amenities will be designed to provide an easier transition and access to the beautiful waterways around the park.

Accessibility enhancements and upgrades are expected for all public use facilities. These changes are part of a department-wide plan to meet, and in some cases, exceed federal accessibility requirements. Additional enhancements to existing public use amenities may occur, but these are anticipated to be general maintenance items.

Little Grassy Lagoon and Big Grassy Lagoon have been designated by FWC as slow speed zones all-year to protect habitat and wildlife. Areas within the park boundaries, such as the mangrove tunnels and Brushy Bayou, are excellent locations for which to pursue a designation for non-motorized vessel use and are prime locations for environmental education and water quality research and monitoring.

Due to regular flooding, road improvements need to be considered. Benjamin Franklin Drive and Taft Drive are maintained by the City of Sarasota.

4.3 Current and Proposed ADA Components

There are no significant proposed ADA components, other than the MURT. During 2015, PRNR initiated a contract with Accessibility Consultation and Training Services, Inc. to assist in completing accessibility assessments and establishing an accessibility plan for improvements and enhancements throughout the department. This agreement was a total amount not to exceed $52,800.00 for the initial three-year term inclusive of costs necessary to provide all services outlined in the agreement.

Existing accessible components at Ted Sterling Park at South Lido include nine paved parking spaces, one family restroom and one stall in each of the men and women restrooms, restroom components (e.g., hand dryers, soap dispensers and sinks), one sidewalk, table and grill near the playground, playground, one table and grill on the bay side of the park, one rinse station, and two uncooled water fountains. The nature park has two paved ADA parking spaces. The restroom building is an aging facility with proposed changes to bring it into compliance with current ADA regulations. These proposed changes are improvements to restroom infrastructure, water fountains, kayak rinse station, and a vessel launch.

In 2018, the playground was donated and built by the Where Angels Play Foundation. Volunteers and PRNR staff assembled and installed the playground. Where Angels Play Foundation builds playgrounds that are dedicated to families that have lost children to tragedies, accidents, or health conditions. The playground is inspected regularly and maintained in safe working order. Because the playground is near a saltwater environment, special attention should be given to the components which are subject to sand, salt, and extreme temperatures. PRNR should replace components as they breakdown over time. Long-term planning should consider a building a shade structure rated for hurricane strength winds and upgrading the surrounding amenities.

The most challenging concerns to overcome have been the parking at Ted Sperling at South Lido. The primary paved parking is located in the loop that visitors tend to use as a loading and unloading area. This area was not intended for this use and has signs to define the area. This conduct results in extreme backups and makes the ADA parking inaccessible. This issue will be addressed through a redesign of the parking lot. The new traffic flow pattern through the park will reduce traffic congestion by providing a designated area for unloading.

The most challenging concerns at the nature park are deteriorating restroom facilities and the lack of accessible vessel launching infrastructure. As indicated in Section 4.2, plans for amenities will include a larger accessible restroom and an accessible launch for non-motorized watercraft.

4.4 Visitor Use Management And Carrying Capacity

Several user groups enjoy recreational non-motorized vessel uses such as kayaking, canoeing, and rowing in the nature park. Fishing, picnicking, bird watching, hiking, sunbathing, jet skiing, and grilling are the main activities at South Lido Beach. There is potential for conflict between the various user groups as swimming is prohibited at South Lido Beach, due to the strong currents, and it is a popular boat anchoring area. Complaints are addressed as they arise and usually are related to crowds and loud music. If specific use or activity has a negative effect on the natural habitat, wildlife, or the experience of other park visitors, that use or activity will be reviewed and may be deemed inappropriate for the park. If this occurs, there will be limitations placed on the use or activity or it may no longer be permitted.

As of 2022, the carrying capacity of the park for visitor use has not been identified. Parking capacity is approximately 200 undesignated spaces at South Lido Beach and 100 at the nature park. Understanding

carrying capacity is useful for avoiding negative impacts to native plants and animals and the visitor experience. We recommend that a carrying capacity study be completed prior to 2027 to allow staff to assess current levels of use compared to recommended capacity and adjust operations. This information will also be useful in developing park improvement projects.

Given the strains being placed on the park and the coinciding safety issues that arise from capacity issues, we recommend that a Park Ranger Program, or similar, be instituted. Onsite enforcement capabilities, including issuing citations, would provide a calming presence, increase awareness of park rules and environmental concerns, and alleviate pressures on local law enforcement. Together with the carrying capacity study, a cost analysis study, and report for the number of law enforcement and emergency management calls, funding for the program could be justified.

5 OPERATIONS COMPONENT

Land and facility management activities are accomplished using a combination of County staff and resources, volunteers, and contractors. Sarasota County is responsible for all property maintenance activities for the site. Key activities include administrative duties, janitorial services, trash removal, trail and fence maintenance, recreational amenities upkeep, and natural resources management.

Ted Sperling Park has a unique operational aspect, as it is a County-owned and operated park that exists within the City of Sarasota limits. Although it is also located in the county and staffed by Sarasota County, consideration must be given to City rules, policies, and procedures. Response to emergency calls is provided by City of Sarasota Police Department. Also, whenever County staff are considering changing operations or enhancing facilities, the city building codes and ordinances should be examined.

Sarasota County has an interlocal agreement with the City of Sarasota to manage the beach seaward of the dune line at Lido Beach as well as North Lido Park. Staff stationed at the park manage visitor services, maintenance, and resources for these other parks. As the venues are owned by the City of Sarasota, the County staff work in conjunction through the interlocal agreement to deliver services. As part of this arrangement, lifeguard services are also provided by Sarasota County for Lido Beach.

Sarasota County beach attendants conduct maintenance operations and monitoring of the park, and through an interlocal agreement with the City of Sarasota, the sand portion of Lido Public Beach and all North Lido Park.

Beach maintenance workers are contracted staff whose work consists primarily of trades worker job responsibilities. Continuous quality control inspection practices allow County staff to implement operational changes needed to correct issues and improve work processes to minimize and prevent the occurrence of cleaning or maintenance deficiencies and to ensure the park is safe, clean, and accessible.

All County staff are trained so that they can perform their assigned tasks efficiently, safely, and professionally. Employees are required to be dressed in uniform, have their employee identification badge visible, and conduct themselves in a courteous, professional manner. BWA has an annual training schedule to ensure staff remains current on all procedures, policies, and safety protocols.

All park facilities and amenities are cleaned and stocked at hourly intervals throughout each day from 5:30 am to 10 pm. These hours shift slightly during time changes. As restrooms get heavy use

immediately before and after tours, maintenance of these facilities at the nature park has critical timeframes that coincide with the daily kayak tours offered by vendors.

Park inspections are performed weekly by the Supervisor, monthly by walk-throughs with the Siesta and South Lido Beach Coordinator, and periodically by the PRNR quality assurance program. Deficiencies are addressed using every available option. Small repairs and upgrades can be performed by onsite staff, while larger and more complex issues are handled through work orders with the facilities maintenance or maintenance services divisions. Any projects beyond the size and scope of routine maintenance are directed through the PRNR park planning team.

Three street legal 4x4 utility task vehicles (UTV) and a truck are essential for the beach attendants to properly accomplish their job assignments. All staff are trained quarterly on UTV driving, cleaning, and maintenance procedures.

5.1 Current Staff

Three full time (two for day shift, one for night shift) County Park Attendants (Beach Attendants) are responsible for the daily maintenance operations such as trash removal and janitorial services. Schedules vary but typically there are two attendants working together five days a week and single coverage two days a week. The person on night shift works with one Contracted Temporary Personnel. These employees are also responsible for providing similar services for the sand portions at Lido Public Beach and the North Lido Trails. These additional parks are owned by the City of Sarasota and managed by PRNR.

Additional County employees providing services for Ted Sperling Park include an Area Parks Supervisor and a Parks Naturalist. One contracted, full time, Beach Attendant works Thursday–Monday evenings. One day per week a Contacted Trades Worker is scheduled to assist in general maintenance and fills in to perform daily cleaning duties. Additional County employees that provide routine support are Parks Specialists, Skilled Trades Workers, Equipment Operators, and Horticultural Specialists. These positions are utilized as needed (e.g.., boardwalk and plumbing repairs) and for routine maintenance (e.g., parking lot grading and vegetation management).

The Business Operations division for PRNR staffs the Commercial Recreational Tour Operators program in the nature park with two fulltime recreation specialists with additional fulltime staff filling in. A supervisor is onsite throughout the week to ensure the program is operating efficiently and effectively. Seven contracts were awarded to conduct commercial tours. Each contract was awarded a three-year term with the option to renew for an additional year twice. First-year revenues from this program were estimated to be $500,000 for FY22.

A detailed map for mowing and trimming contractors is on file with Sarasota County and updated annually (Exhibit 11).

5.2 Optimal Staff

Current staffing allows for public use amenities to be maintained at an ideal level outside of peak season. Sufficient day- and night-shift staff are scheduled for those times as long as the contracted and County positions are filled. The two slowest days of the week are Tuesday and Wednesday. There is only one daytime staff on those days, and this is sufficient. Peak levels for Ted Sperling Park are holidays, spring break, and winter tourist season. During those times, BWA staff has difficulty maintaining order

and safety in the parks without additional resources. Additional staff are brought in for overtime to help with the maintenance of the parks. Security services are contracted to manage the gates at South Lido Beach and maintain order in the park. These services cost $12,000 for FY21. If the park continues to reach or exceed capacity levels, optimal staffing will have five park attendants servicing the area throughout peak seasonal times.

Minor repairs are currently addressed through one contracted staff position, with major repairs being addressed through PRNR Maintenance Services Division or Facilities Maintenance staff. To increase efficiency with repairs and upgrades, PRNR is developing a plan to incorporate trades worker positions into the BWA Division. The CRTO program requires one fulltime Recreation Specialist, with help from two others and a supervisor. This program would benefit from having three fulltime Recreation Specialists to have full coverage to provide program oversight. Park rule enforcement positions should be considered for this park to ensure it remains safe and accessible and to enforce the most common park rule violations that occur.

5.3 Agency and NGO Partners

The Sarasota County Sheriff's Office (SCSO) provides as needed assistance with park operational needs through the Sheriff's Work Offender Program (SWOP). SWOP provides a coordinator, supplies, equipment, and the nonviolent offender labor to complete small projects (e.g., spreading mulch and trash pickup) and large projects (e.g.., removal of marine debris during red tide events and after storms). SWOP is typically at Ted Sperling Park one to three times a year. Sarasota Police Department also conducts regular patrols of the park and enforces issues related to trespass.

Parks Advisory and Recreation Council (PARC) is an advisory council to the Sarasota County Board of County Commissioners that makes recommendations on issues regarding beaches, parks, and recreation.

5.4 Volunteers

Friends of Sarasota County Parks, Inc. (Friends) was established in September 2003, as a federally qualified 501(c)3 independent nonprofit corporation organized and existing under the laws of the State of Florida, to promote, enhance and maintain community support for Sarasota County parks and public recreational lands through activities, fundraising, and volunteer efforts (Friends of Sarasota County Parks (2022). Friends includes a parent organization plus park chapters. The chapters vary in number and reflect the changing interests of the groups. A chapter has not been established at Ted Sperling Park. This opportunity will be under consideration in the coming years as staff identify significant volunteer projects, routine activities, and as the number of organizations and individuals interested in volunteering at the park increases. School, youth, church, and adult groups routinely schedule to complete litter control at the park. In addition to these one-time events, Keep Sarasota County Beautiful (KSCB) coordinates annual litter control events.

KSCB is a countywide beautification program that initiates community litter cleanup projects. Established in 1987, the organization is an affiliate of Keep America Beautiful Inc., a national, nonprofit organization. KCSB hosts several countywide cleanup events throughout the year. The Great American Cleanup (spring), The Liberty Litter Cleanup (summer), and The International Coastal Cleanup (fall). Ted Sterling Park is included in these three events.

The Sarasota Bay Estuary Program (SBEP) is dedicated to restoring Sarasota Bay. They strive to improve water quality, increase wildlife habitat, and enhance the natural resources of the area for use and enjoyment by the public (SBEP 2022). The health of Sarasota Bay has seen significant gains since it was named an estuary of national significance by the U.S. Congress in 1989. SBEP regularly hosts volunteer gatherings at Ted Sperling Park to perform invasive exotic plant removal, water quality testing, and environmental education.

The Lido Key Residents Association (LKRA), formed in 1972, is one of the largest Community Associations in Sarasota. The group assists with the needs of the park during holidays, specifically the 4th of July, by distributing garbage bags to the park patrons, as part of our "yellow bag" campaign. The yellow bag campaign was initiated by KSCB to reduce marine debris left on the beaches during peak times and has shown a measurable difference.

Throughout the year, various businesses, organizations and groups volunteer at TSP and their service hours are tracked by PRNR. Most of these groups perform beach cleanups, invasive plant removal, and small maintenance projects. Onsite staff have a list of maintenance and environmental protection needs that can be tackled in a day or a few hours by volunteers.

5.5 Law Enforcement and Security

Primary law enforcement response is provided by the Sarasota Police Department (SPD) with support, when necessary, from Sarasota County Sherriff's Office and FWC. The most common request for support is related to vandalism, overnight camping, crowd management, parking enforcement, and protection of native habitats. Both agencies have watercraft and provide water-based services (marine units) when necessary or requested. On occasion, the fire department from the Town of Longboat Key responds to calls. Florida Fish and Wildlife Conservation Commission also provides law enforcement services for wildlife and marine violations when requested. Sarasota Sherriff's Animal Control will issue tickets during regular business hours when requested. SPD closes the gates at both entrances each night after the park closes. They patrol the parking lots and restroom facilities to mitigate unauthorized activities.

Sarasota County has contracted with security services during holidays and peak season to provide parking lot monitoring and gate closures once the lot is at full capacity. SPD requests that the loading and unloading of vehicles with attached trailers be prohibited during those times. The frequency of their activities at the park varies by the time of the year, but they typically are onsite for all holiday weekends, spring break, and major special events from 7:00 a.m. to 8:00 p.m.

Given the capacity issues, yearly expense of contracted security services, and number of calls to law enforcement, the park would benefit from the addition of a position that focuses on park rule enforcement. This could ensure the park remains safe and accessible while enforcing the most common violations such as dogs, litter, open fires, and propane grills.

5.6 Funding

Most maintenance and operations funding is provided through the Tourist Development Tax (TDT). For FY2020, beach maintenance received 24 percent of TDT and beach renourishment received 10 percent of TDT. Fifty percent of the initial two percent levy (20 percent of TDT) for beach maintenance is allocated to the County and municipalities based on population. The FY2020 budget or TDT revenue

included County beach maintenance $3,893,702 (18.5 percent of TDT) and beach renourishment $2,068,500.

Additional funding is provided through general funds allocated to each PRNR division. Grants and other funding assistance opportunities are often received through organizations that include FWC and West Coast Inland Navigation District. The CRTO program generated $500,000 for the special recreation fund in FY22. Though routine maintenance for TSP would come from the general fund or the TDT Fund, there is the possibility that special projects or enhancements could be funded through the special recreation fund.

5.7 Costs

Costs are rough estimates taken from current actual expenditures in August 2020 (Appendix F). In all but salaries, costs were increased to account for inflation, but escalators were not applied. Salaries are fully loaded, and escalators are built in for 10-year estimates. Site managers estimated the amount of time each staff position would spend on the natural area and divided annual salary accordingly to determine salary costs for natural areas. In addition to the operational costs listed herein, the park requires staff services from maintenance services, facilities maintenance, capital improvement projects, emergency operations, and SCSO. These staff perform routine maintenance, conduct major projects, and respond to safety issues on an intermittent basis. The salaries of these staff are not accounted for in the operational costs of the park and are not projected for future funding.

	ACTIVITY	ESTIMATED 10-YR COST
NATURAL RESOURCES	integrated pest management surveying	$3,000
	integrated pest management treatment	$30,000
	hydrologic restoration	$10,000
	mechanical vegetation management	$50,000
	TOTAL COSTS	**$93,000**
CULTURAL RESOURCES	surveying	$3,000
	monitoring	$3,000
	TOTAL COSTS	**$6,000**
LAND USES	*Maintenance*	
	fencing and post and rope	$10,000
	benches	$5,000
	tools and equipment	$25,000
	parking lots	$120,000

	restrooms	$75,000
	grills	$10,000
	tables	$10,000
	grounds mowing	$200,000
	power washing	$24,000
	building maintenance	$150,000
	trails	$30,000
	Recreation and Visitor Services	
	kiosks	$10,000
	signs and banners	$10,000
	playgrounds	$20,000
	events	$5,000
	TOTAL COSTS	**$704,000**
OPERATIONS	salary of Park Naturalist	$430,000
	salary of Beach Coordinator	$85,000
	salary of Administrative Assistant	$11,000
	salary of Park Attendant (3)	$825,000
	Contracted Staff	$267,000
	office equipment	$6,000
	utilities (water, sewer, electric, garbage)	$440,000
	offices	$10,000
	security	$150,000
	fleet (UTV's and Trucks)	$230,000
	TOTAL COSTS	**$2,454,000**

Notes:

1. Fully burdened salary is based on FY 22.
2. Salary multiplier is 2.5%.
3. Average hourly rate for salary is based on 2080 total hours per year.

6 GOALS, OBJECTIVES, AND ACTIONS IMPLEMENTATION MATRIX

	GOALS / OBJECTIVES / ACTIONS		MEASURE (metric)	TARGETS 2022	2024	2026	2028	2030
NATURAL RESOURCES	**GOAL 1**	**Restore and maintain native habitats and communities.**						
	OBJECTIVE 1.1	Manage invasive exotic plants to keep park visitors safe.						
	Action	Monitor the conditions of the Australian pines and remove deteriorating or dead trees and branches.	# of trees surveyed	TBD	TBD	TBD	TBD	TBD
	OBJECTIVE 1.2	Eliminate FLEPPC Category I and II plants, or it not possible, reduce population levels.						
	Action	Annually survey at least 50 percent of the preserve based on treatment regions.	# of zones surveyed per treatment region	2	2	2	2	2
	Action	Annually treat a minimum of 20 percent of known infestation sites in survey area.	% of known infestations treated per treatment region	TBD	TBD	TBD	TBD	TBD
	Action	Annually update the invasive exotic plant management work plan.	Plan updated annually	20%	20%	20%	20%	20%
	Action	Continue to build invasive exotic plant database using GIS database.	IPM status report completed annually	x	x	x	x	x
	Action	Write scopes of work and manage contractors as needed for larger infestations and difficult areas.	# of acres treated by contractor	TBD	TBD	TBD	TBD	TBD

	OBJECTIVE 1.3	Restore the spoil area back to historical native habitat.						
	Action	Assess the ecological benefits and feasibility of restoring the spoil area.	Feasibility study completed			x		
	OBJECTIVE 1.4	Restore vegetative height and density to accepted levels based on habitat type.						
	Action	Survey the height and density of vegetation in each zone.	# of zones surveyed	3	3	3	3	3
	Action	Employ mechanical treatment in identified zones.	# of acres of identified zones mechanically treated	TBD	TBD	TBD	TBD	TBD
	Action	Establish and implement a monitoring protocol to assess the effects of management activities on natural habitats.	Monitoring protocol implemented	x	x	x	x	x
	Action	Assess the results of resource management activities on natural habitats.	# of acres assessed after activity	TBD	TBD	TBD	TBD	TBD
CULTURAL RESOURCES	**GOAL 2**	**Protect, preserve, and maintain cultural resources.**						
	OBJECTIVE 2.1	Follow Sarasota County History Center protocol when ground disturbance is possible.						
	Action	Inform Sarasota County History Center of ground disturbance producing activity outside of normal management parameters.	Documentation of communication	TBD	TBD	TBD	TBD	TBD
	OBJECTIVE 2.2	Protect the site with security during peak use times.						
	Action	Hire security or Sheriffs to manage crowd control.	# of vehicles and patrons	TBD	TBD	TBD	TBD	TBD
	Action	Implement a Park Ranger Program and position.	# of patrons using the park				x	

LAND USES	**GOAL 3**	**Maintain public access and passive recreational opportunities without adversely impacting native habitats and communities.**							
	OBJECTIVE 3.1	Provide and maintain public pedestrian access to trails, beach, and water accesses.							
	Action	Survey for maintenance and repair needs of the access point and trailheads.	# of access points surveyed	All	All	All	All	All	
	Action	Support the Capital Improvement Program throughout the building of the MURT.	Support provided	x	x	x	x	x	
	OBJECTIVE 3.2	Provide a clean environment for visitors.							
	Action	Provide picnic tables, benches, and grills.	# of amenities in good condition	TBD	TBD	TBD	TBD	TBD	
	Action	Survey, pickup, and remove trash from the parking area, trail system, and picnic area.	# of miles of trails surveyed	TBD	TBD	TBD	TBD	TBD	
	Action	Supply trash and recycle receptacles.	# of receptacles	TBD	TBD	TBD	TBD	TBD	
	Action	Clean and stock restrooms according to SOP.	# of cleanings per day	TBD	TBD	TBD	TBD	TBD	
	OBJECTIVE 3.3	Assess impacts of recreational activities to ensure the health of native habitats and communities.							
	Action	Establish and implement a monitoring protocol to assess the effects of recreational activities on natural habitats.	Protocol implemented	x	x	x	x	x	
	Action	Determine recreational carrying capacity.	Carrying capacity determined	x	x	x	x	x	
	Action	Support and build the Business Operations Certified Recreational Tour Operator Program within park carrying capacity	# of tours and rentals	x	x	x	x	x	

	GOAL 4	**Provide nature based educational and interpretive opportunities.**							
	OBJECTIVE 4.1	Provide interpretive signs and kiosks							
	Action	Inventory interpretive signs and kiosks	# of signs	x	x	x	x	x	
	Action	Survey for repair needs to interpretive signs	# of signs surveyed	ALL	ALL	ALL	ALL	ALL	
	Action	Install additional informational and interpretive signs	# of signs installed	TBD	TBD	TBD	TBD	TBD	
	OBJECTIVE 4.2	Provide interpretive programs and hikes.							
	Action	Coordinate staff, outside department, and volunteer-presented interpretive programs and walks.	# of interpretive programs and walks offered per year	2	2	2	2	2	
	Action	Advertise interpretive programs and walks through County media.	# of advertisements for each program or walk	2	2	2	2	2	
	Action	Maintain data including date of event, subject, presenter, and number of people attending.	Up to date database	2	2	2	2	2	
OPERATIONS	**GOAL 5**	**Provide administrative and fiscal support.**							
	OBJECTIVE 5.1	Continue administrative support at current levels.							
	Action	Process purchase orders, pay invoices.	Administrative support provided	TBD	TBD	TBD	TBD	TBD	
	Action	Track utility and refuse costs.	Administrative support provided	x	x	x	x	x	

OBJECTIVE 5.2	Continue to research and apply for funding assistance or grants to support operations							
Action	Apply for land management funding	# of applications for funding	TBD	TBD	TBD	TBD	TBD
GOAL 6	**Provide facilities that are clean, safe, and accessible.**							
OBJECTIVE 6.1	Provide adequate park staff and work with facilities to ensure grounds and buildings are clean and in good condition.							
Action	Schedule park staff and work with Facilities, Utilities, and Maintenance Services.	# of staff and work orders	TBD	TBD	TBD	TBD	TBD
Action	Work with Maintenance Services on playground safety inspections.	# of inspections	2	2	2	2	2
Action	Survey parking, maintenance building, and maintenance yard for appropriate levels of service.	Survey completed	x	x	x	x	x
Action	Work with Maintenance Services on Quality Assurance Reports for corrective action.	Grade of park	x	x	x	x	x
OBJECTIVE 6.2	Maintain accountability according to the Beaches and Water Access Environmental Policies and Procedures Manual.							
Action	Confirm all division staff review the Beaches and Water Access Environmental Policies and Procedure Manual.	Manual reviewed by staff	x	x	x	x	x
Action	Provide monthly training sessions for staff to obtain the knowledge and skills to the job.	# of training sessions provided	12	12	12	12	12

7 REFERENCES

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8 EXHIBITS

EXHIBIT 1 – LOCATION MAP

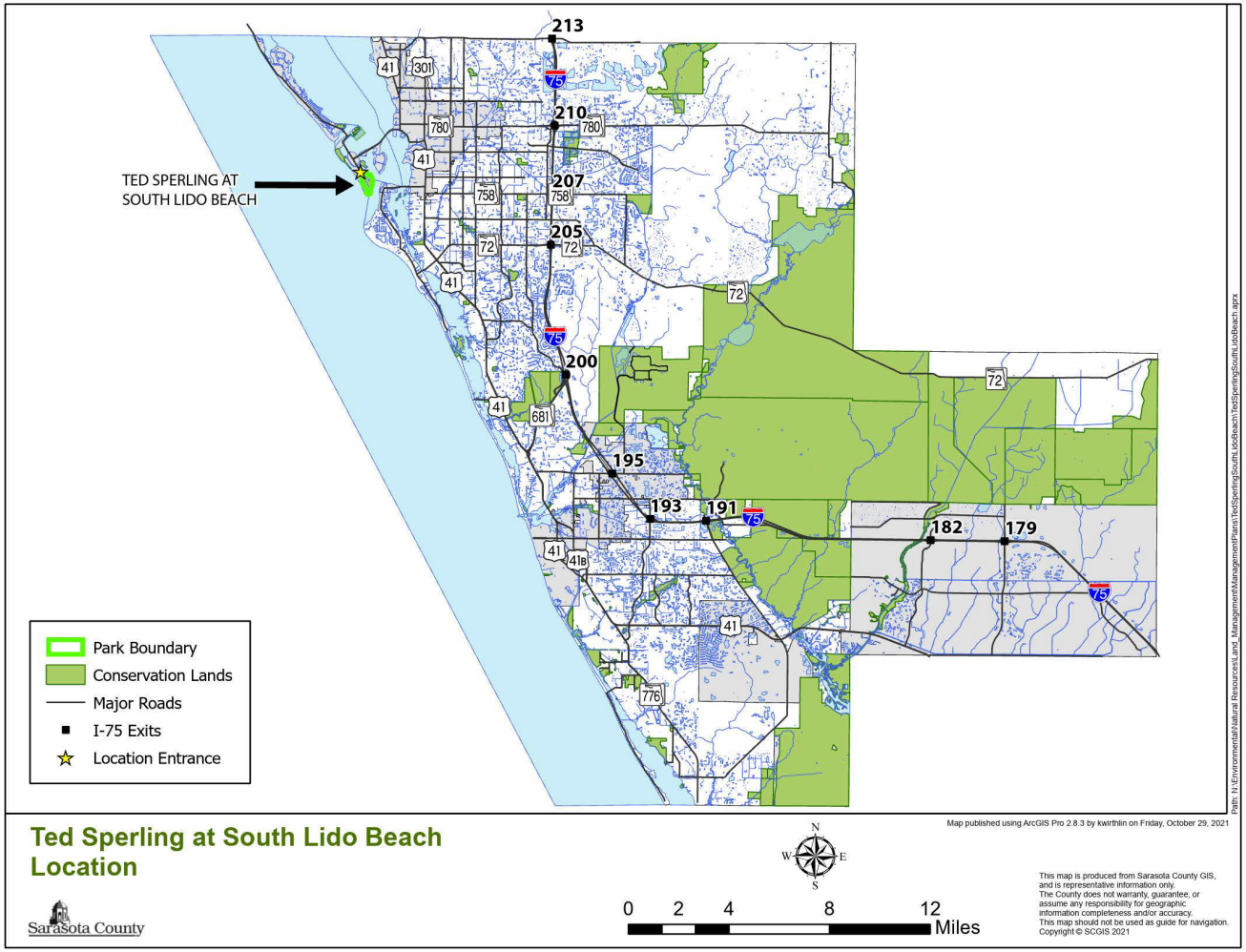

EXHIBIT 2 – PRESERVE BOUNDARY

EXHIBIT 3 – ZONING MAP

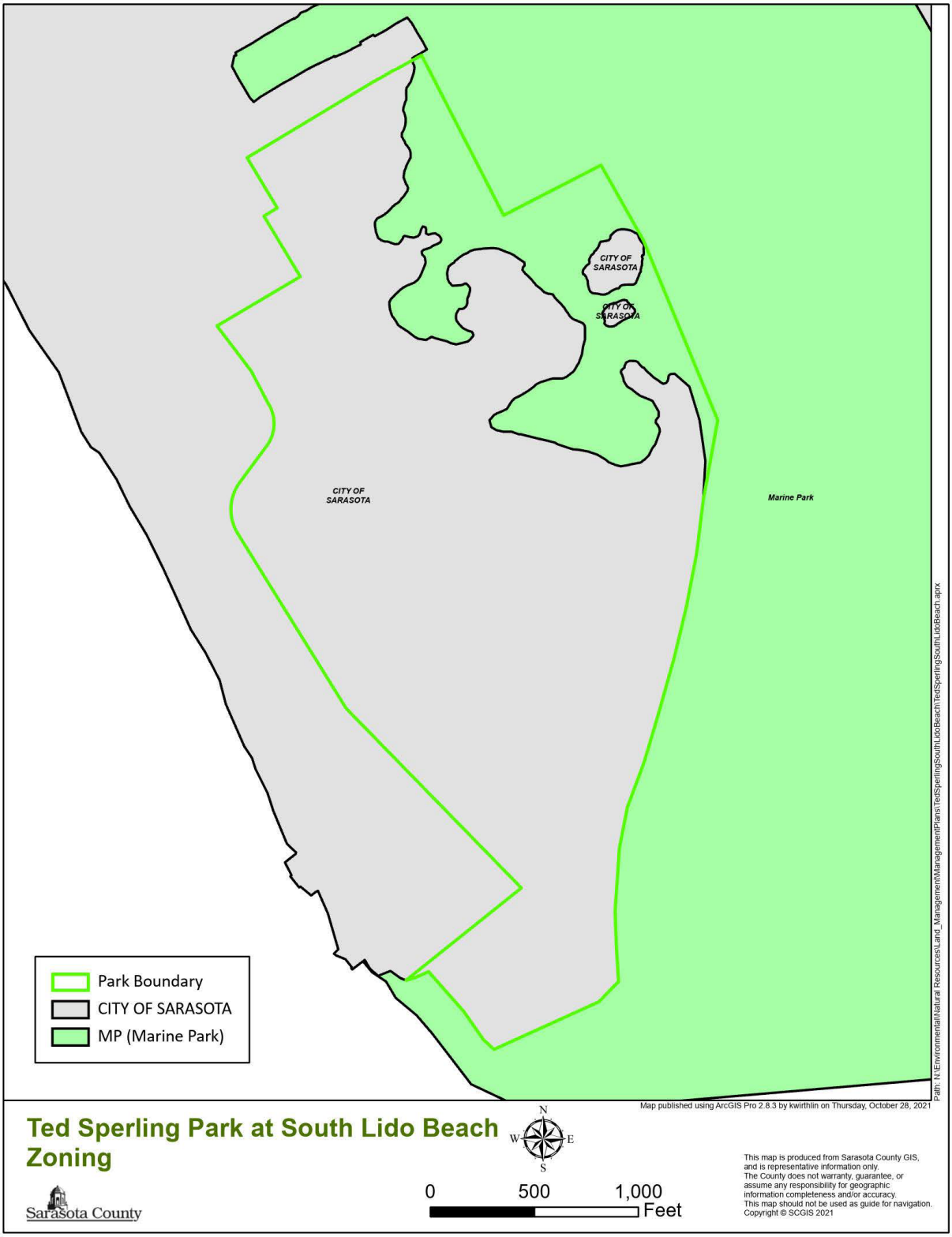

EXHIBIT 4 – ELEVATION MAP

EXHIBIT 5 – SOILS MAP

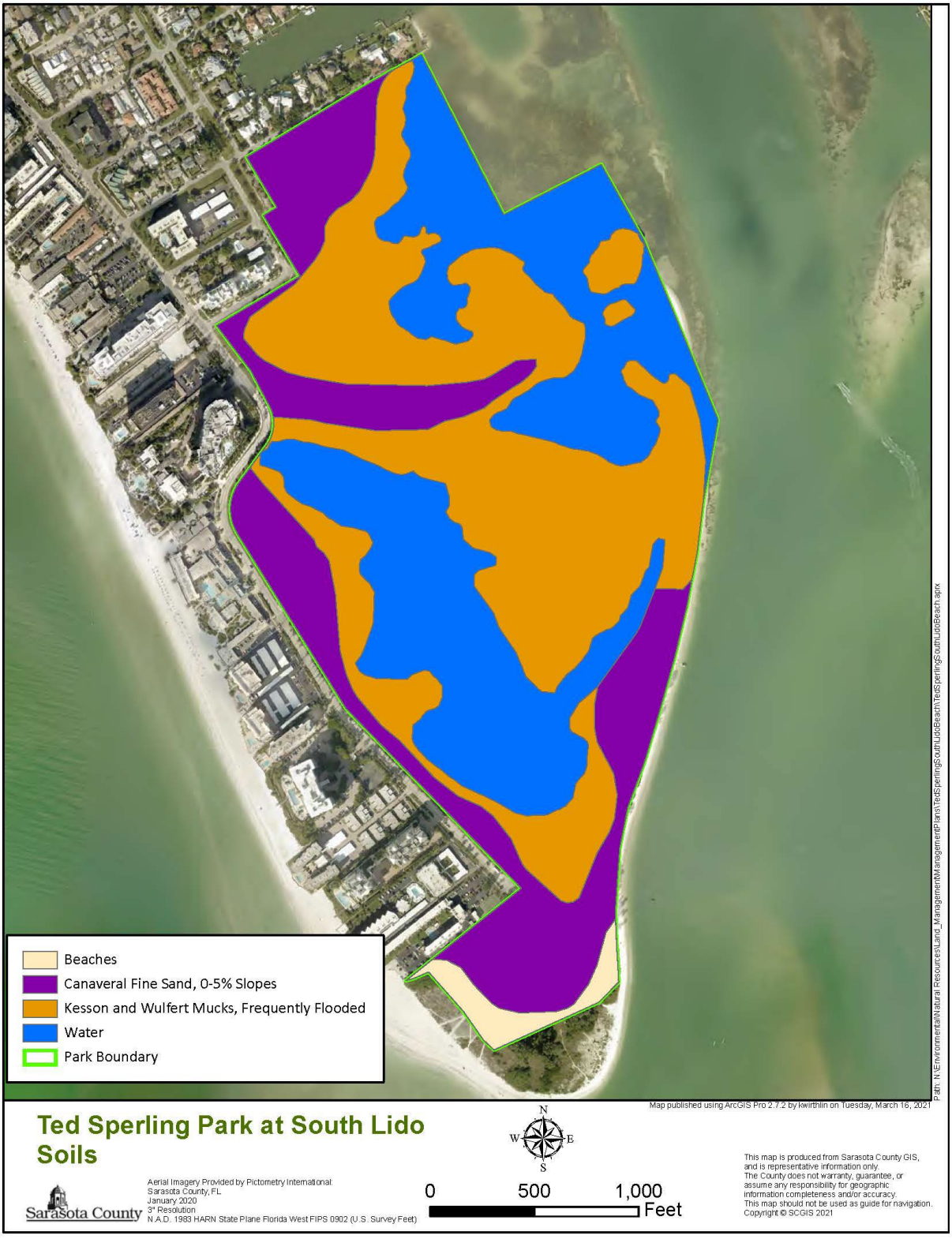

EXHIBIT 6 – FLOOD MAP

EXHIBIT 7A – HABITAT MAP

EXHIBIT 7B – HISTORICAL AERIAL

EXHIBIT 8 – MANAGEMENT ZONE MAP

EXHIBIT 9 – IPM ROTATION MAP

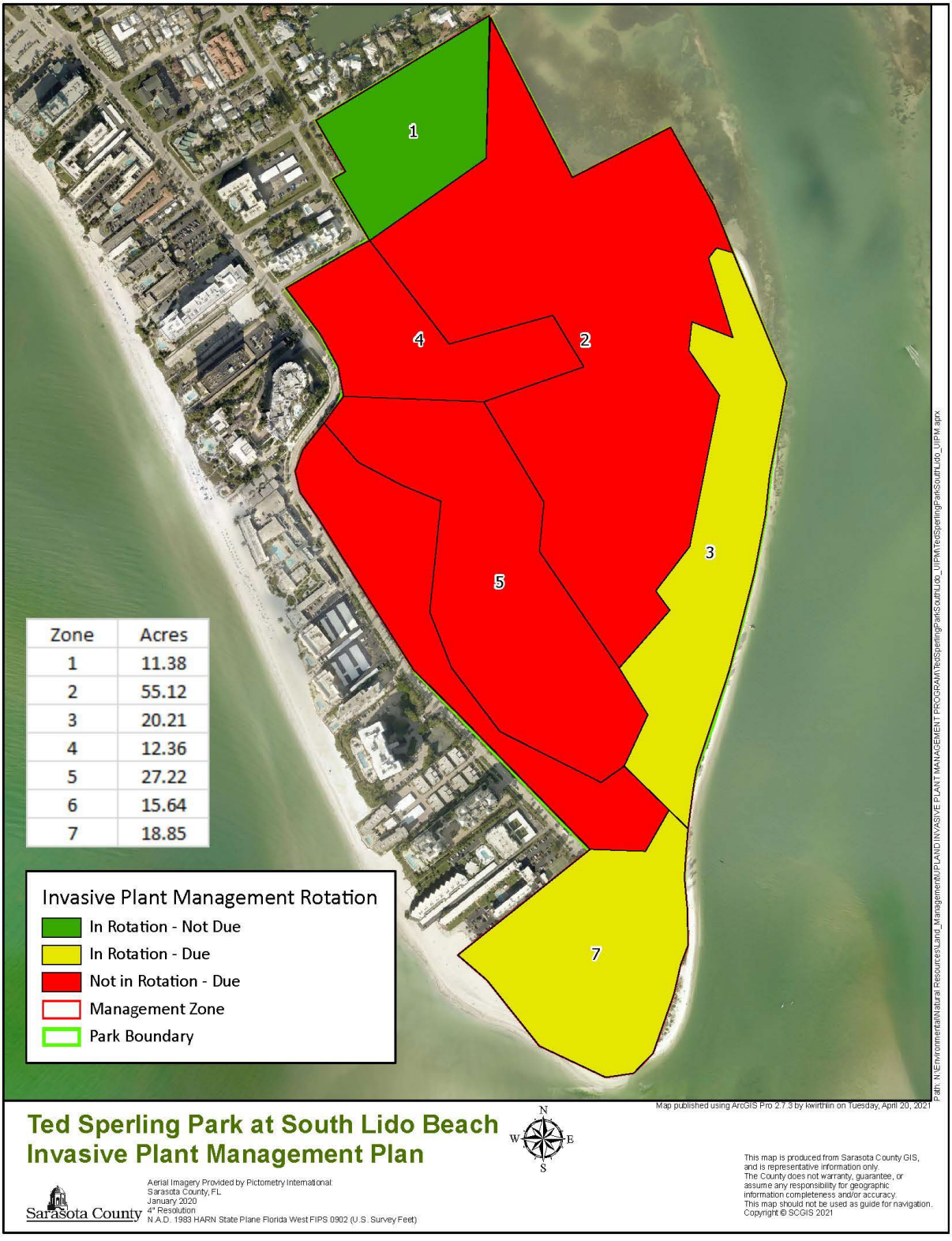

EXHIBIT 10 – FACILITIES, IMPROVEMENTS AND PUBLIC ACCESS AMENITIES MAP

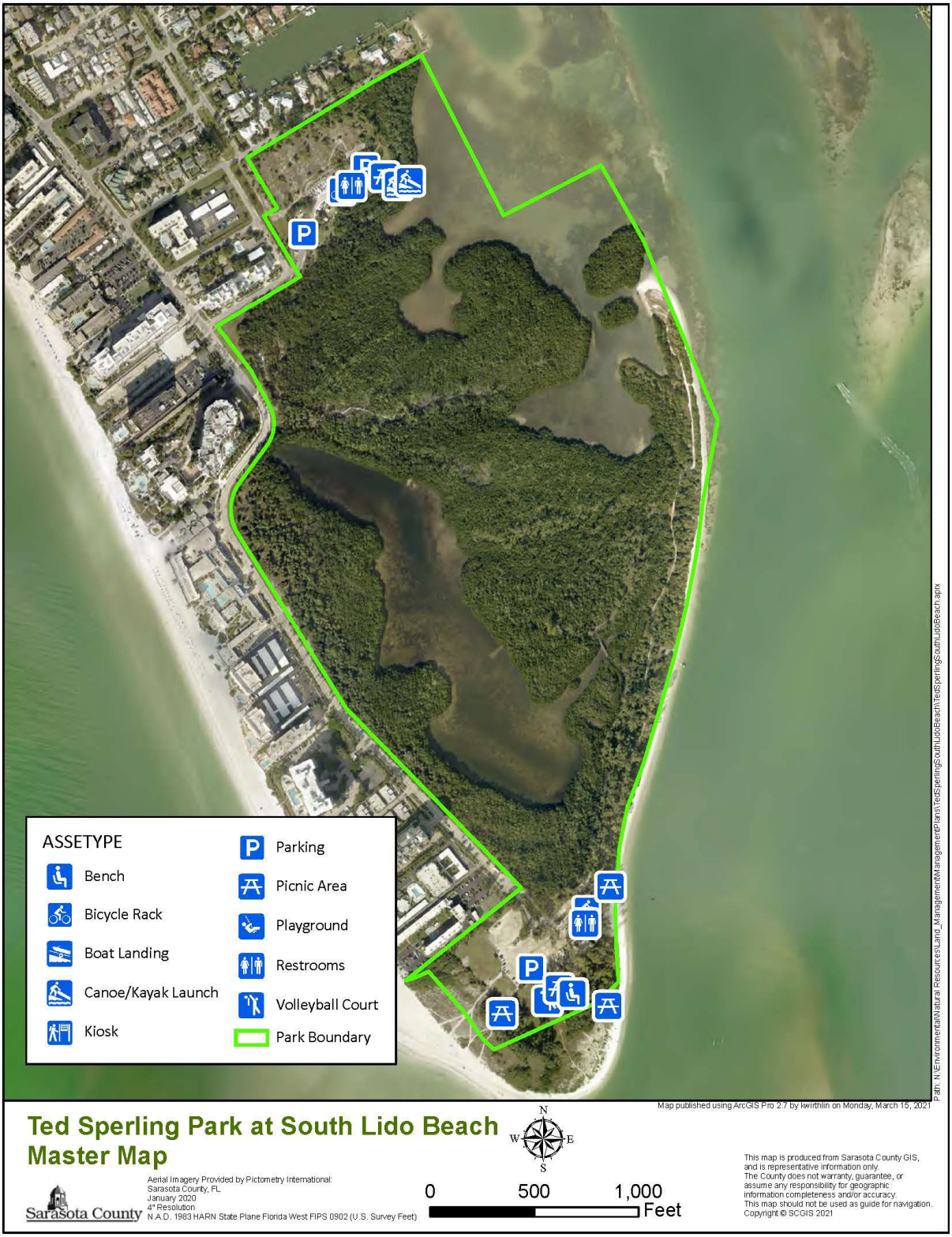

EXHIBIT 11 – CONTRACTOR MOWING AND TRIMMING MAPS


South Lido Beach - Nature Park Area
190 Taft Dr., Sarasota 34236
Bed Area
Square Footage:
N/A
Ted Sperling Park at South Lido Beach
BENJAMIN FRANKLIN DR
Legend
Boardwalk
General Use Trail
Bed Area Maintenance
Maintenance Area
Park Boundary
Sarasota County
N
W
E
S
0 30 60 120 180 240
Feet
Map published using ArcGIS 10.8
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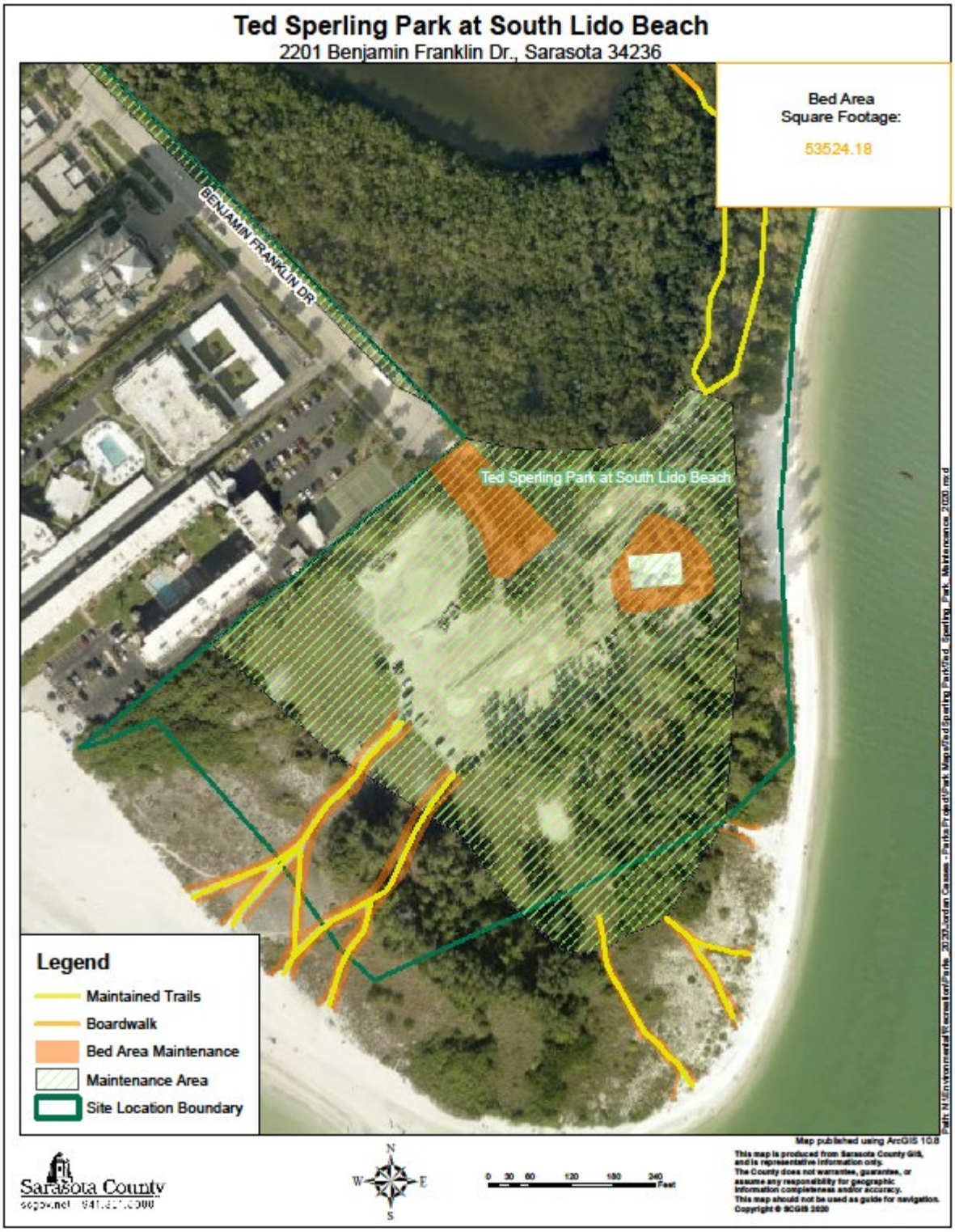
Ted Sperling Park at South Lido Beach
2201 Benjamin Franklin Dr., Sarasota 34236
Bed Area
Square Footage:
53524.18
BENJAMIN FRANKLIN DR
Ted Sperling Park at South Lido Beach
Legend
Maintained Trails
Boardwalk
Bed Area Maintenance
Maintenance Area
Site Location Boundary
Sarasota County
N
W
E
S
0 30 60 120 180 240
Feet
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9 APPENDICES

APPENDIX A – ACQUISITION DOCUMENTS

Deeds of Sale

1. Purchase date: 02/11/1974
   Otter Key (30 acres) and South Lido (130 acres)
   Quitclaim Deed and Purchase Contract can be accessed and viewed via Smartsheet.

APPENDIX B – LAND USE AGREEMENTS AND EASEMENTS

Utility Easements

1. Non-Exclusive Permanent Utility Easement Contract No. 2015-069: 12/09/2014
   Document can be accessed and viewed via Smartsheet.

2. Non-Exclusive Permanent Utility Easement Contract No. 2015-070: 12/09/2014
   Document can be accessed and viewed via Smartsheet.

3. Partial Termination of Easement Rights: 02/04/2015
   Otter Key (30 acres) and South Lido (130 acres)
   Document can be accessed and viewed via Smartsheet.

APPENDIX C – GOVERNING DOCUMENTS AND ORDINANCES

1. Sarasota County Comprehensive Plan
   https://www.scgov.net/Home/ShowDocument?id=35042

2. Code of Ordinances of Sarasota County
   https://library.municode.com/fl/sarasota_county/codes/code_of_ordinances

3. Sarasota County Strategic Plan
   https://www.scgov.net/government/county-administration/strategic-plan

4. Sarasota County Code of Ordinances Article XXXI Section 54-1000 Manatee Protection Plan
   https://library.municode.com/fl/sarasota_county/codes/code_of_ordinances?nodeId=COORSACOFL

5. Sarasota County Land Management Master Plan (2004)
   https://www.scgov.net/Home/ShowDocument?id=1306

APPENDIX D – LIST OF PLANT SPECIES

The preliminary plant list has been compiled for the park as a partial listing of currently known species. As new species are discovered by County staff or by other knowledgeable individuals, their identification will be confirmed according to Wunderlin (1998) and added to the existing species list. Survey information on the occurrence of listed plant species will be forwarded to the Florida Natural Areas Inventory (FNAI) in accordance with their procedures.

FAMILY	SCIENTIFIC NAME	COMMON NAME(S)	STATUS
Adoxaceae	*Viburnum obovatum*	Walter's Viburnum	
Agavaceae	*Yucca aloifolia*	Spanish bayonet	
Aizoaceae	*Sesuvium portulacastrum*	sea purslane	
Amaranthaceae	*Blutaparon vermiculare*	samphire	
Amaranthaceae	*Suaeda linearis*	sea Blite; annual seepweed	
Anacardiaceae	*Rhus copallinum*	winged sumac; shining sumac	
Anacardiaceae	*Schinus terebinthifolius*	Brazilian pepper tree	FLEPPC(I)
Anacardiaceae	*Toxicodendron radicans*	poison ivy	
Ananthacea	*Avicennia germinans*	black mangrove	
Apocynaceae	*Carrissa macrocarpa*	natal plum	Not Native
Apocynaceae	*Catharanthus roseus*	Madagascar periwinkle	Not Native
Arecacae	*Washingtonia robusta*	Washington fan palm	FLEPPC(II)
Arecaceae	*Phoenix reclinata*	Senegal date palm	FLEPPC(II)
Arecaceae	*Sabal palmetto*	cabbage palm; sabal palm	
Arecaceae	*Serenoa repens*	saw palmetto	
Asparagaceae	*Asparagus aethiopicus*	Sprengers asparagus fern	FLEPPC(I)
Asteraceae	*Ambrosia artemisiifolia*	common ragweed	
Asteraceae	*Baccharis halimifolia*	sea myrtle; groundsel tree	
Asteraceae	*Bidens alba var. radiata*	Spanish needles; beggarticks	
Asteraceae	*Borrichia frutescens*	bushy seaside oxeye	
Asteraceae	*Erechtites hieraciifolius*	American burnweed; fireweed	
Asteraceae	*Erigeron quercifolius*	oakleaf fleabane	
Asteraceae	*Flaveria Linearis*	narrowleaf yellowtops	
Asteraceae	*Helenium amarum*	Spanish daisy; bitterweed	
Asteraceae	*Helianthus debilis subsp. vestitus*	dune sunflower	
Asteraceae	*Heterotheca subaxillaris*	camphorweed	
Asteraceae	*Iva frutescens*	bigleaf sumpweed	
Asteraceae	*Iva imbricata*	seacoast marshelder	
Asteraceae	*Pityopsis graminifolia*	narrowleaf silkgrass	
Asteraceae	*Rayjacksonia phyllocephala*	camphor daisy	
Asteraceae	*Solidago mexicana*	seaside goldenrod	
Asteraceae	*Sphagneticola trilobata*	wedelia	FLEPPC(II)
Asteraceae	*Verbesina virginica*	white crownbeard; frostweed	
Bataceae	*Batis maritima*	saltwort; turtleweed	
Boraginaceae	*Heliotropium angiospermum*	scorpion's tail	

Boraginaceae	*Heliotropium angiospermum*	scorpionstail	
Boraginaceae	*Heliotropium curassavicum*	seaside heliotrope; salt heliotrope	
Brassicaceae	*Cakile lanceolata*	coastal searocket	
Bromeliaceae	*Tillandsia recurvata*	ball moss	
Bromeliaceae	*Tillandsia usneoides*	Spanish moss	
Bromeliaceae	*Tillandsia utriculata*	giant air plant	Endangered
Burseraceae	*Bursera simaruba*	gumbo limbo	
Cactaceae	*Opuntia mesacantha*	pricklypear	
Cactaceae	*Opuntia stricta*	shell-mound pricklypear	Threatened
Casuarinaceae	*Casuarina equisetifolia*	Australian pine	FLEPPC(I)
Chrysobalanaceae	*Chrysobalanus icaco*	coco plum	
Cistaceae	*Helianthemum corymbosum*	pinebarren frostweed	
Combretaceae	*Conocarpus erectus*	silver buttonwood	
Combretaceae	*Laguncularia racemosa*	white mangrove	
Commelinaceae	*Commelina erecta*	whitemouth dayflower	
Commelinaceae	*Tradescantia spathacea*	Moses-In-The-Cradle; oyster-plant	FLEPPC(I)
Convolvulaceae	*Ipomoea alba*	moonflowers	
Convolvulaceae	*Ipomoea cordatotriloba*	tievine	
Convolvulaceae	*Ipomoea indica*	oceanblue morning-glory	
Convolvulaceae	*Ipomoea pes-caprae*	railroad vine	
Crassulaceae	*Kalanchoe x houghtonii*	mother-of-millions	FLEPPC(II)
Cucurbitaceae	*Momordica charantia*	balsampear	FLEPPC(II)
Cupressaceae	*Juniperus virginiana*	redcedar	
Cyeraceae	*Fimbristylis spadicea*	marsh fimbry	
Cyperaceae	*Cyperus croceus*	Baldwins flatsedge	
Cyperaceae	*Cyperus ligularis*	swamp flatsedge	
Cyperaceae	*Cyperus spp.*	flatsedge	
Cyperaceae	*Fimbristylis cymosa*	hurricanegrass	
Dioscoreaceae	*Dioscorea bulbifera*	air potato	FLEPPC(I)
Euphorbiaceae	*Croton punctatus*	Gulf croton; beach tea	
Euphorbiaceae	*Euphorbia bombensis*	Dixie sandmat	
Euphorbiaceae	*Euphorbia cyathophora*	wild poinsettia	
Euphorbiaceae	*Euphorbia hypericifolia*	graceful sandmat	
Euphorbiaceae	*Euphorbia mesembrianthemifolia*	coastal beach sandmat	
Fabaceae	*Abrus precatorius*	rosary pea	FLEPPC(I)
Fabaceae	*Caesalpinia bonduc*	gray nicker	
Fabaceae	*Canavalia rosea*	baybean	
Fabaceae	*Canavalia rosea*	baybean; seaside jackbean	
Fabaceae	*Centrosema virginianum*	spurred butterfly pea	
Fabaceae	*Chamaecrista fasciculata*	partridge pea	

Fabaceae	*Crotalaria spectabilis*	showy rattlebox	Not Native
Fabaceae	*Dalbergia ecastaphyllum*	coinvine	
Fabaceae	*Desmodium sp.*	beggar's lice	
Fabaceae	*Galactia volubilis*	Eastern milkpea	
Fabaceae	*Leucaena leucocephala*	white leadtree	FLEPPC(II)
Fabaceae	*Macroptilium lathyroides*	wild bushbean	
Fabaceae	*Medicago lupulina*	black medick	Not Native
Fabaceae	*Sophora tomentosa*	yellow necklacepod	
Fabaceae	*Stylosanthes hamata*	cheesytoes	
Fabaceae	*Vachellia farnesiana var. farnesiana*	sweet acacia	
Fabaceae	*Vigna luteola*	hairypod cowpea	
Fagaceae	*Quercus virginiana*	live oak	
Gentianaceae	*Eustoma exaltatum*	marsh gentian; catchfly prairie-gentian	
Goodeniaceae	*Scaevola plumieri*	beachberry; inkberry	Threatened-State
Goodeniaceae	*Scaevola taccada*	beach naupaka	FLEPPC(I)
Iridaceae	*Sisyrinchium angustifolium*	narrowleaf blue-eyed grass	
Lamiaceae	*Monarda punctata*	spotted beebalm	
Lamiaceae	*Monarda punctata*	spotted beebalm	
Lamiaceae	*Trichostema dichotomum*	forked bluecurls	
Malvaceae	*Talipariti tiliaceum var. tiliaceum*	sea hibiscus; mahoe	FLEPPC(II)
Malvaceae	*Urena lobata*	caesar weed	FLEPPC(I)
Moraceae	*Ficus aurea*	strangler fig	
Moraceae	*Ficus Microcarpa*	indian laurel	FLEPPC(I)
Myricaceae	*Myrica cerifera*	wax myrtle	
Myrsinaceae	*Ardisia escallonioides*	marlberry	
Myrsinaceae	*Myrsine cubana*	myrsine	
Myrtaceae	*Eugenia axillaris*	white stopper	
Nephrolepidaceae	*Nephrolepis brownii*	Asian sword fern	FLEPPC(I)
Olacaceae	*Ximenia americana*	tallowwood; hog plum	
Oleaceae	*Forestiera segregata*	Florida privet	
Onagraceae	*Gaura angustifolia*	Southern beeblossom	
Onagraceae	*Oenothera humifusa*	seabeach evening primrose	
Orobanchaceae	*Agalinis maritima var. grandiflora*	saltmarsh false foxglove	
Passifloraceae	*Passiflora suberosa*	corkystem passionflower	
Petiveriaceae	*Rivina humilis*	rougeplant	
Phyllanthaceae	*Phyllanthus abnormis*	Drummonds Leafflower	
Pinaceae	*Pinus elliottii var. densa*	South Florida slash pine	
Plantaginaceae	*Bacopa monnieri*	herb-of-grace	
Plumbaginaceae	*Limonium carolinianum*	Carolina sealavender	

Poaceae	*Andropogon spp.*	bluestem	
Poaceae	*Artistida stricta var. beyrichiana*	wiregrass	
Poaceae	*Cenchrus spinifex*	coastal sandbur	
Poaceae	*Cynodon dactylon*	Bermudagrass	Not Native
Poaceae	*Dactyloctenium aegyptium*	durban crowfootgrass	FLEPPC(II)
Poaceae	*Digitaria sp.*	crabgrass	
Poaceae	*Distichlis spicata*	saltgrass	
Poaceae	*Eragrostis spectabilis*	lovegrass	
Poaceae	*Eustachys petraea*	pinewoods finger grass	
Poaceae	*Eustachys sp.*	fingergrass	
Poaceae	*Melinis repens*	rose natalgrass	FLEPPC(I)
Poaceae	*Muhlenbergia capillaris*	hairy muhly	
Poaceae	*Panicum amarum*	bitter panicum	
Poaceae	*Paspalum vaginatum*	seashore paspalum	
Poaceae	*Setaria corrugata*	coastal bristlegrass; coastal foxtail	
Poaceae	*Spartina alterniflora*	saltmarsh cordgrass; smooth cordgrass	
Poaceae	*Spartina bakeri*	sand cordgrass	
Poaceae	*Spartina patens*	marshhay cordgrass	
Poaceae	*Spartina patens (Sporobolus pumilus)*	marshhay cordgrass; saltmeadow cordgrass	
Poaceae	*Sporobolus indicus*	smutgrass	non-native
Poaceae	*Sporobolus virginicus*	seashore dropseed	
Poaceae	*Stenotaphrum secundatum*	St. Augustine grass	
Poaceae	*Uniola paniculata*	sea oats	
Poaceae	*Urochola maxima*	guineagrass	FLEPPC(II)
Polygalaceae	*Asemeia violacea*	showy milkwort	
Polypodiaceae	*Coccoloba uvifera*	seagrape	
Polypodiaceae	*Phlebodium aureum*	golden polypody	
Polypodiaceae	*Pleopeltis michauxiana*	resurrection fern	
Portulacaceae	*Portulaca oleracea*	little hogweed	
Psilotaceae	*Psilotum nudum*	whisk-fern	
Pteridaceae	*Pteridium aquilinum*	bracken fern	
Rhizophoraceae	*Rhizophora mangle*	red mangrove	
Rubiaceae	*Chiococca alba*	snowberry	
Rubiaceae	*Chiococca alba*	snowberry; milkberry	
Rubiaceae	*Ernodea littoralis*	beach creeper	
Rubiaceae	*Hamelia patens*	firebush	
Rubiaceae	*Psychotria nervosa*	wild coffee	
Rubiaceae	*Randia aculeata*	white indigoberry	
Rubiaceae	*Richardia grandiflora*	largeflower Mexican clover	FLEPPC(II)
Rubiaceae	*Spermacoce verticillata*	shrubby false buttonweed	FLEPPC(II)

Ruscaceae	*Dracaena hyacinthoides*	bowstring hemp; mother-in-law-tongue	FLEPPC(II)
Rutaceae	*Zanthoxylum clava-herculis*	Herules-club	
Samolaceae	*Samolus ebracteatus*	water pimpernel; limewater brookweed	
Sapindaceae	*Cupaniopsis anacardioides*	carrotwood	FLEPPC(I)
Sapindaceae	*Dodonaea viscosa*	varnishleaf; Florida hopbush	
Sapotaceae	*Sideroxylon celastrinum*	saffron plum	
Smilacaceae	*Smilax auriculata*	earleaf greenbrier	
Smilacaceae	*Smilax routundifolia*	roundleaf greenbrier	
Smilacaceae	*Smilax sp.*	greenbriar; catbriar	
Solanaceae	*Lycium carolinianum*	Christmasberry	
Solanaceae	*Physalis sp.*	groundcherry	
Solanaceae	*Physalis walteri*	Walters groundcherry	
Turneraceae	*Turnera ulmifolia*	yellow alder; ramgoat dashlong	Not Native
Urticaceae	*Pilea microphylla*	artillery plant; rockweed	
Verbenaceae	*Callicarpa americana*	beautyberry	
Verbenaceae	*Lantana involucrata*	wild lantana	
Verbenaceae	*Lantana strigocamara*	shrub verbena	FLEPPC(I)
Verbenaceae	*Phyla nodiflora*	fogfruit	
Vitaceae	*Parthenocissus quinquefolia*	Virginia creeper	
Vitaceae	*Vitis aestivalis*	summer grape	
Vitaceae	*Vitis rotundifolia*	muscadine	
Zamiaceae	*Zamia integrifolia*	coontie	

APPENDIX E – LIST OF WILDLIFE SPECIES

The preliminary animal list has been compiled for the Preserve as a partial listing of currently known species.

	FAMILY	SCIENTIFIC NAME	COMMON NAME	STATUS
AMPHIBIANS				
	Bufonidae	*Anaxyrus quercicus*	oak toad	
	Bufonidae	*Anaxyrus terrestris*	Southern toad	
	Eleutherodactylidae	*Eleutherodactylus planirostris*	greenhouse frog	non-native
	Hylidae	*Osteopilus septentrionalis*	Cuban treefrog	non-native
	Hylidae	*Hyla cinerea*	green treefrog	
	Hylidae	*Hyla squirella*	squirrel treefrog	
	Ranidae	*Lithobates capito*	gopher frog	FWC (SSC)
REPTILES				
	Anguidae	*Ophisaurus ventralis*	Eastern glass lizard	
	Cheloniidae	*Chelonia mydas*	Atlantic green sea turtle	E (FWC) E (USFWS) S2 (FNAI) Appendix I
	Cheloniidae	*Caretta caretta*	loggerhead sea turtle	T (FWC) T (USFWS) S3 (FNAI) Appendix I
	Colubridae	*Coluber constrictor priapus*	Southern black racer	
	Colubridae	*Diadophis punctatus punctatus*	Southern ringneck snake	
	Colubridae	*Drymarchon corais couperi*	Eastern indigo snake	T (FWC) S3 (FNAI)
	Colubridae	*Elaphe obsoleta quadrivittata*	yellow rat snake	
	Colubridae	*Elaphe guttata guttata*	red rat snake; corn snake	S2 (FNAI)
	Colubridae	*Masticophis f. flagellum*	Eastern coachwhip	
	Colubridae	*Thamnophis sirtalis sirtalis*	common garter snake	
	Dactyloidae	*Anolis carolinensis*	green anole	
	Dactyloidae	*Anolis sagrei*	brown anole	non-native
	Dermochelyidae	*Dermochelys coriacea*	leatherback sea turtle	E (FWC) E (USFWS) S2 (FNAI) Appendix I
	Iguanidae	*Ctenosaura similis*	black spinytail iguana	non-native Appendix II
	Scincidae	*Eumeces inexpectatus*	Southeastern five-lined skink	
	Scincidae	*Scincella lateralis*	ground skink	

	Testudinidae	*Gopherus polyphemus*	gopher tortoise	SSC (FWC) C2 (USFWS) S3 (FNAI) Appendix II
BIRDS				
	Accipitridae	*Accipeter cooperii*	Cooper's hawk	
	Accipitridae	*Haliaeetus leucocephalus*	bald eagle	BGEPA (USFWS)
	Alcedinidae	*Megaceryle alcyon*	belted kingfisher	
	Anatidae	*Melanitta americana*	black scoter	
	Anatidae	*Aythya affinis*	lesser scaup	
	Anatidae	*Anas fulvigula*	mottled duck	
	Anatidae	*Oxyura jamaicensis*	ruddy duck	
	Anhingidae	*Anhinga anhinga*	anhinga	
	Ardeidae	*Ardea herodias*	great blue heron	
	Ardeidae	*Bubulcus ibis*	cattle egret	
	Ardeidae	*Ardea alba*	great egret	
	Ardeidae	*Buotrides virescens*	green heron	
	Ardeidae	*Egretta caerulea*	little blue heron	T (FWC)
	Ardeidae	*Egretta rufescens*	reddish egret	T (FWC)
	Ardeidae	*Egretta thula*	snowy egret	
	Ardeidae	*Egretta tricolor*	tricolored heron	T (FWC)
	Ardeidae	*Nyctanassa violacea*	yellow-crowned night heron	
	Cardinalidae	*Cardinalis cardinalis*	Northern cardinal	
	Cathartidae	*Coragyps atratus*	black vulture	
	Cathartidae	*Cathartes aura*	turkey vulture	
	Charadriidae	*Pluvialis squatarola*	black-bellied plover	
	Charadriidae	*Charadrius vociferus*	killdeer	
	Charadriidae	*Charadrius semipalmatus*	semipalmated plover	
	Columbidae	*Columbina passerina*	common ground dove	
	Columbidae	*Streptopelia decaocto*	Eurasian collared-dove	
	Columbidae	*Zenaidura macroura*	mourning dove	
	Columbidae	*Columba livia*	rock pigeon	
	Corvidae	*Corvus ossifragus*	fish crow	
	Corvidae	*Corvus brachyrhynchos*	American crow	
	Corvidae	*Cyanocitta cristata*	blue jay	
	Falconidae	*Falco sparverius*	American kestrel	T (FWC) S3 (FNAI) Appendix II
	Gaviidae	*Gavia immer*	common loon	

Gruidae	*Antigone canadensis*	sandhill crane	T (FWC)
Haematopodidae	*Haematopus palliatus*	American oystercatcher	T (FWC) S2 (FNAI)
Hirundinidae	*Hirundo rustica*	barn swallow	
Hirundinidae	*Progne subis*	purple martin	
Hirundinidae	*Tachycineta bicolor*	tree swallow	
Icteridae	*Quiscalus major*	boat-tailed grackle	
Icteridae	*Quiscalus quiscula*	common grackle	
Icteridae	*Sturnella magna*	Eastern meadowlark	
Icteridae	*Agelaius phoeniceus*	red-winged blackbird	
Laniidae	*Lanius ludovicianus*	loggerhead shrike	
Laridae	*Rynchops niger*	black skimmer	T (FWC) S3 (FNAI)
Laridae	*Sterna forsteri*	Forster's tern	
Laridae	*Larus argentatus*	herring gull	
Laridae	*Leucophaeus atricilla*	laughing gull	
Laridae	*Sterna antillarum*	least tern	T (FWC)
Laridae	*Larus delawarensis*	ring-billed gull	
Laridae	*Thalasseus maxima*	royal tern	
Laridae	*Sterna sandvicensis*	sandwich tern	
Mimidae	*Dumetalla carolinensis*	gray catbird	
Mimidae	*Mimus polyglottos*	mockingbird	
Mimidae	*Mimus polyglottos*	Northern mockingbird	
Pandionidae	*Pandion haliaetus*	osprey	
Parulidae	*Setophaga palmarum*	palm warbler	
Parulidae	*Setophaga discolor*	prairie warbler	
Parulidae	*Setophaga coronata*	yellow-rumped warbler	
Passeridae	*Passer domesticus*	house sparrow	
Pelecanidae	*Pelecanus erythrorhynchos*	American white pelican	
Pelecanidae	*Pelecanus occidentalis*	brown pelican	S3 (FNAI)
Phalacrocracidae	*Phalacrocorax auritus*	double-crested cormorant	
Picidae	*Dryobates pubescens*	downy woodpecker	
Picidae	*Colaptes auratus*	Northern flicker	
Picidae	*Melanerpes carolinus*	red-bellied woodpecker	
Picidae	*Sphyrapicus varius*	yellow-bellied sapsucker	
Polioptilidae	*Polioptila caerulea*	blue-gray gnatcatcher	
Psittacidae	*Myiopsitta monachus*	monk parakeet	
Scolopacidae	*Calidris canutus*	red knot	
Scolopacidae	*Arenaria interpres*	ruddy turnstone	
Scolopacidae	*Calidris alba*	sanderling	
Scolopacidae	*Tringa semipalmata*	willet	
Sturnidae	*Sturnus vulgaris*	European starling	

	Sulidae	*Morus bassanus*	Northern gannet	
	Threskiornithidae	*Plegadis falcinellus*	glossy ibis	
	Threskiornithidae	*Platalea ajaja*	roseate spoonbill	T (FWC)
	Threskiornithidae	*Eudocimus albus*	white ibis	
	Troglodytidae	*Thryothorus ludovicianus*	Carolina wren	
	Troglodytidae	*Troglodytes aedon*	house wren	
	Turdidae	*Turdus migratorius*	American robin	
	Tyrannidae	*Sayornis phoebe*	Eastern phoebe	
	Tyrannidae	*Myiarchus crinitus*	great crested flycatcher	
	Vireonidae	*Vireo griseus*	white-eyed vireo	
MAMMALS				
	Dasypodidae	*Dasypus novemcinctus*	nine-banded armadillo	non-native
	Canidae	*Canis latrans*	coyote	
	Didelphidae	*Didelphis virginiana*	Virginia opossum	
	Felidae	*Lynx rufus*	bobcat	
	Leporidae	*Sylvilagus floridaus*	Eastern cottontail	
	Procyonidae	*Procyon lotor*	raccoon	
	Sciuridae	*Sciurus carolinensis*	grey squirrel	
	Trichechidae	*Trichechus manatus latirostris*	West Indian manatee	T (USFWS)

KEY TO WILDLIFE LISTED STATUS		
Florida Fish and Wildlife Conservation Commission (FWC) Designations	E	endangered
	T	threatened
	SSC	species of special concern
United States Fish and Wildlife Service (USFWS) Designations	E	endangered
	T	threatened
	C2	candidate for listing with some evidence of vulnerability, but for which not enough information exists to justify listing
Convention on International Trade In Endangered Species of Wild Fauna And Flora (Cites) Designations	I	Appendix I species
	II	Appendix II species
Florida Natural Areas Inventory (FNAI) Designations	S2	imperiled in the state because of rarity (6–20 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 because of other factors
	S4	apparently secure in the state (may be rare in parts of state)

APPENDIX F – ANNUALIZED COST SCHEDULE

RESOURCE MANAGEMENT	Units	Cost per unit
prescribed fire preparation	per mile	$ 250.00
prescribed fire	per acre	$ 40.00
prescribed fire monitoring	per hour	$ 50.00
integrated pest management surveying	avg per acre	$ 30.00
integrated pest management treatment	avg per acre	$ 125.00
hydrologic restoration	per mile	$ 8,000.00
mechanical vegetation management	per acre	$ 150.00
cultural resource management	per site	$ 500.00
ADMINISTRATION and OPERATIONS		
salary of Land Manager	per hour	$ 47.00
salary of Supervisor	per hour	$ 50.00
salary of Administrative Assistant	per hour	$ 30.00
annual cost of computers, printers, phone	per year	varies
utilities	per year	varies
offices	per year	varies
security	per year	$ 13,000.00
fleet	per year	$ 4,000.00
MAINTENANCE		
fencing board	1 linear foot	$ 29.00
fencing wire	1 linear foot	$ 12.00
trail markers	1 marker	$ 16.00
benches	1 bench	$ 160.00
tools	1 site	$ 4,000.00
parking lot aggregate material	cost per parking spot	$ 60.00
parking lot grass	cost per parking spot	$ 10.00
road repairs	1/2 mile	$ 20,000.00
restrooms	cost per toilet	$ 750.00
portable toilets	cost per toilet	$ 1,440.00
grills	1 grill	$ 400.00
tables	1 table	$ 250.00
pavilions	square foot	$ 1.00
camp sites	per campsite	$ 300.00
grounds mowing (x12 events annually)	per acre	$ 600.00
power washing	per hour	$ 100.00
building maintenance	per structure	$ 500.00
RECREATION and VISITOR SERVICES		
kiosk/sign replacement costs	per unit	$ 1,000.00
brochures	per brochure	$ 5,000.00

events	per event	$ 3,500.00
visitors center (staffing and contents)	per year	$ 4,000.00
camping	per campsite	$ 200.00
permitted events	per event	$ 320.00

Notes:

1. Current Loaded Salary is based on FY 21.
2. Assumed 2.5% multiplier for salary.
3. Divided salary total hours by 2080 for average hour rate