

**Land Management Plan for the  
DEER PRAIRIE CREEK PRESERVE**



**Prepared by  
Sarasota County Natural Resources  
and the Southwest Florida Water Management District**

**Adopted by the Sarasota County Board of County Commissioners  
March 20, 2007**

**Adopted by the Southwest Florida Water Management District Governing Board  
April 24, 2007**

**LAND MANAGEMENT PLAN FOR THE  
DEER PRAIRIE CREEK PRESERVE  
EXECUTIVE SUMMARY**

The Deer Prairie Creek Preserve<sup>1</sup> is an approximately 6,439-acre preserve located in southeastern Sarasota County, with entrances at 7001 Forbes Trail and 10201 S. Tamiami Trail, Venice (Sections 9, 10, 14, 15, 16, 21, 22, 23, 24, Township 39 South, Range 20 East). This property is bordered by the Myakka River on the west, I-75 on the north, and US 41 on the south. The Warm Mineral Springs neighborhood and City of North Port lie to the east. The Deer Prairie Creek Preserve was acquired in four separate parcels between 2000 and 2004 by Sarasota County through the Environmentally Sensitive Lands Protection Program in a 50/50 partnership with the Southwest Florida Water Management District (SWFWMD).

Historically, the site was logged, hunted, and used as rangeland. Currently, the site is comprised primarily of dry prairie and mesic flatwoods, with areas of hydric and prairie hammock as well as scrub, scrubby flatwoods, improved pasture, and tidal marsh. The preserve protects almost six miles of the Myakka River and nearly completes protection of Deer Prairie Creek itself, a critical tributary of the river. Numerous interior ditches within the preserve significantly affect the natural hydrology, as does a dam nearly a mile up the creek. Several pastures totaling approximately 486 acres remain, segmenting the natural habitat. However, the significant acreage of the site combined with its connectivity with other protected properties provides critical large scale wildlife habitat and ecosystem preservation.

Currently, there are minimal facilities on site, but significant potential exists to provide for low-impact recreational activities such as hiking, horseback riding, kayaking, fishing, bicycling, and nature appreciation.

The Deer Prairie Creek Preserve will be managed under Level 3, Nature Based Recreation and Restoration, and Level 4 Critical Area Management strategies as defined in the "Land Management Master Plan of Sarasota County: Managing the County's Natural Environmental Areas." The emphasis of these management strategies is to secure the site from vandalism, degradation, wildfire risk, and exotic species proliferation while providing resource dependent recreational opportunities and protecting critical natural and cultural features. These objectives shall be achieved with regular visits by County and SWFWMD staff and an annual report that summarizes issues related to exotic species control, occurrence records, unauthorized uses, and other relevant findings. Based on the annual summary report, appropriate adjustments shall be made to rectify any issues that are not addressed in this plan.

This plan identifies management strategies that shall be implemented through 2016.

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<sup>1</sup> Deer Prairie Creek Preserve as used in this document encompasses less acreage than the Deer Prairie Creek Site in the Environmentally Sensitive Lands Protection Program, which also includes properties north of Interstate 75. The additional properties will be addressed in a separate management plan.

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# **Land Management Plan for the DEER PRAIRIE CREEK PRESERVE**

## **INTRODUCTION**

The Deer Prairie Creek Preserve is an approximately 6,439-acre preserve located in south-central Sarasota County, with entrances at 7001 Forbes Trail and 10201 S Tamiami Trail, Venice (Sections 9, 10, 14, 15, 16, 21, 22, 23, 24, Township 39 South, Range 20 East). This property is bordered by the Myakka River on the west, Interstate 75 on the north, and US 41 on the south. The Warm Mineral Springs neighborhood and City of North Port lie to the east. The Deer Prairie Creek Preserve was acquired in four separate parcels between 2000 and 2004 by Sarasota County through the Environmentally Sensitive Lands Protection Program in a 50/50 partnership with the Southwest Florida Water Management District (SWFWMD).

The four parcels, Sarasota Ranchlands, Eagle Ridge, LOR, and Lykes, collectively protect a critical portion of the Myakka River. Through joint ownership and management with SWFWMD, the county has protected nearly the full extent of the Deer Prairie Creek, a tributary of the Myakka River. Within Sarasota County, additional protection of the creek is provided by the SWFWMD Schewe Ranch parcel, the ESLPP Blackburn property, T. Mabry Carlton Jr. Memorial Reserve and Myakka River State Park. Figures 1, 2, and 3 provide information on the location of the preserve and its connectivity with other public lands.



[Insert Figure 1. Project Location Map]





[Insert Figure 2. Site Map]



[Insert Figure 3. Adjacent Protected Public Lands Map]



## **Site Significance**

Deer Prairie Creek Preserve is a distinctive mosaic of both upland and wetland natural plant communities that lies adjacent to the Myakka River, an Outstanding Florida Water and Florida Wild and Scenic River. The property was jointly purchased by the county as part of its Environmentally Sensitive Lands Protection Program (ESLPP; see below) and by SWFWMD.

The project site will be managed for the conservation, protection, and enhancement of natural resources, and for public outdoor recreation that is compatible with the conservation, protection and enhancement of the project site. Scientific research, environmental education, and nature-based recreation will be encouraged as long as they do not jeopardize the protection of natural resources.

The current land use designations are Open Use Rural (one unit per ten acres) and Open Use Estate (one unit per five acres) along the western boundary. Sections of the property were identified as “Strategic Habitats” and as a hotspot of biological resources (providing habitat for over five focal species) in the Florida Fish and Wildlife Conservation Commission’s 1994 Closing the Gaps report (Cox, et al).

## **Environmentally Sensitive Lands Protection Program (ESLPP)**

The Sarasota County Comprehensive Plan provides for the protection and management of the County’s native habitats, balanced with the need for public resource-based, ecologically benign, and non-consumptive recreation.

The ESLPP acquires and protects natural lands. Priority sites within Sarasota County are selected using the following environmental criteria: connectivity, water quality, habitat rarity, land quality, and manageability.

The Deer Prairie Creek Preserve was purchased in part with funding from this program and in part with funding from SWFWMD. The SWFWMD contributed their portion of the funding through the P2000 and Florida Forever state-level preservation programs. The two agencies have agreed in the *Management Agreement Between Board of County Commissioners of Sarasota County and the Southwest Florida Water Management District for the Deer Prairie Creek Project* (Management Agreement 2006), to manage the preserve in a manner consistent with the purposes and intent of the ESLPP.

## **Purpose and Scope of Plan**

Each preserve within the county is managed in a manner consistent with the Land Management Master Plan (LMMP) of Sarasota County (Perry, 2004). The intent of the LMMP is to provide focus and direction for proactive, rather than reactive, land management activities at the community and landscape levels throughout the county. Consequently, each environmental land is assigned its appropriate management level(s) and actions are planned accordingly. At this time, the county will implement primarily Level III Nature Based Recreation and Restoration at

the Deer Prairie Creek Preserve. Critical Area Management strategies under Level IV of the LMMP will be applied in specific areas of the preserve to be defined following completion of the course filter surveys and as a part of the restoration and recreation plan development processes.

The Level III Nature Based Recreation Site and Restoration Property management strategy emphasizes the development of resource-dependent recreational activities and potential restoration. This level of management cannot be undertaken without accurate, site-based information and a disciplined planning process.

The Level IV Critical Area Management strategy will be used in the most sensitive areas of the property, including areas under the Scrub Jay Habitat Conservation Plan and designated scrub restoration areas, critical wildlife areas, and historic sites. Achieving this level of management will involve substantial commitment of time and funding for restoration and interpretation, among other things.

The basic management objectives shall be achieved with weekly site visits by County or SWFWMD staff, additional visits by the site's managers as deemed necessary, and an annual report. The annual report will summarize issues related to exotic species control and other restoration activities, visitor uses and unauthorized access, what additional management activities or improvements could be instituted, and other relevant observations. Basic public access and low impact uses will be identified and provided for through installation of basic public use amenities in areas deemed appropriate.

This plan identifies management strategies that shall be implemented through 2016. The plan was drafted by Sarasota County and reviewed by SWFWMD before its approval by the Sarasota County Board of County Commissioners on March 20, 2007 and the Southwest Florida Water Management District's Basin Board on April 11, 2007 and Governing Board on April 24, 2007. Amendments or modifications to this plan may be made as necessary before then following the review and approval process set forth in the Management Agreement. At the end of this plan's ten-year term, Sarasota County will review the plan and present a subsequent revised plan to SWFWMD for review and approval not later than December 2015.

### **Management Authority and Responsibility**

Management authority is the joint responsibility of Sarasota County Natural Resources and SWFWMD Land Resources as delineated in the Management Agreement. The county is designated as the lead agency for public recreation and education, restoration associated with the Scrub Jay Habitat Conservation Plan, resource monitoring, cattle leases, and wildfire response. The District is lead agency on prescribed burning, non-scrub jay restoration, routine maintenance on exotics, and timber management. Assistance is received from Sarasota County Parks and Recreation for some public use amenities such as picnic tables, kiosks and benches. A partnership may also be developed with The Nature Conservancy's Natural Heritage Fund for support of public use and educational amenities on the site.

## NATURAL RESOURCE COMPONENT

### Resource Description and Assessment

#### Location and Setting

The site is located in south-central Sarasota County within the Myakka River floodplain. The Myakka River serves as the property's western boundary except for the northernmost half mile which borders a property owned by the Diocese of Venice that is currently undeveloped (zoned Open Use Rural). It is important to note that for nearly half the property's western border with the Myakka River, both sides of the river are preserved due to the Jelks Preserve. To the east, the property is bordered by the City of North Port, the neighborhood of Warm Mineral Springs, and by the Schewe Ranch parcel which is owned and managed as a preserve by SWFWMD and. These are partially developed neighborhoods zoned RSF-3 (4.5 units/ acre). The site's northern boundary is made up primarily by the Schewe Ranch parcel and the Interstate, with a small portion of the boundary comprised of property owned by the Diocese of Venice. The southern boundary is primarily the Warm Mineral Springs neighborhood, but also includes around ten commercial parcels (zoned CG and CI), US 41, and a canal off the river that has parcels zoned Open Use Conservation on the south bank.

The development pressure around the site is limited given the buffer provided by the river and Schewe Ranch parcel. New homes are being developed along the border in Warm Mineral Springs and North Port, but not at an overwhelming speed or in a coordinated way. The property is, however, bordered by the major thoroughways of US 41 and I-75, which of course present a challenge for wildlife migration and hydrologic continuity. Both the neighborhoods and the highways also introduce a level of complication to the application of prescribed fire.

The property's proximity to other publicly owned lands provides an opportunity to coordinate with neighboring land managers and agencies to accomplish shared goals and implement ecological management on more of a landscape level. For example, the joint ownership of Deer Prairie Creek Preserve with SWFWMD facilitates coordination with management activities on the neighboring Schewe Ranch parcel as well. Management activities such as firebreaks, timbering, and trail maintenance are often accomplished on both parcels simultaneously and in coordination to ensure effective management across boundaries. Similarly, Sarasota County Resource Management staff coordinates the planning of management activities and public use amenities on nearby county-owned parcels such as the Jelks Preserve and the Churchill and Jordyn parcels just north of the interstate from Deer Prairie Creek Preserve. This coordination helps ensure the most efficient use of resources, effective application of management techniques and complimentary design of public use amenities across the various preserves. Management goals on Deer Prairie Creek Preserve will also be coordinated with those of conservation partners throughout the Myakka River Basin through participation in the Myakka River Coordinating Council.

## Climate

The climate of Sarasota County is oceanic and subtropical. The temperature is influenced by latitude, low elevation, winds that sweep across the peninsula, and proximity to the Gulf of Mexico. Consequently, the climate is characterized by high relative humidity, short mild winters, long warm summers, and rainfall that is abundant throughout the year, but is heaviest from June through September (Hyde et al., 1991).

## Topography, Soils, Hydrology

### *Topography*

Nearly all of Sarasota County is in the Gulf Coastal Lowlands (White 1970). The Deer Prairie Creek Preserve site is very flat and all within 5 to 15 feet of sea level. The property gently slopes up away from the Myakka River and from Deer Prairie Creek with the highest point at 15 feet being in the northeast segment of the property. The approximate contour lines are visible on Figure 4.

### *Soils*

There are nineteen soil types on this site, categorized into two general soil moisture classifications: mesic and hydric (Hyde, *et al.*, 1991). They are illustrated in Figure 5 and described in detail in Appendix A. The predominant soil type is EauGallie and Myakka fine sand, a non-hydric soil that covers nearly 65% of the property. It occurs throughout the flatwoods and dry prairie habitats. The most common hydric soil type on the property is Holopaw fine sand, depressional, which occurs on nearly 10% of the property. This represents a challenge for access in some areas where trails cross these wet areas and depressions, as this soil type is typically ponded for up to nine months of the year.

### *Hydrology*

The Myakka River and Deer Prairie Creek are the distinguishing hydrologic features on the preserve. An artificial dam that was constructed in the 1950s remains in place, impeding the flow of Deer Prairie Creek and restricting tidal influence upstream of the dam. In addition, numerous canals and ditches crisscross the property, draining wetlands and directing the flow toward the river and creek.

Over one third of the site is located within the Special Hazard Flood Area of the Myakka River Basin (see Figure 6).



[Insert Figure 4. Topography Map]



[Insert Figure 5. Soils Map]



[Insert Fig. 6 Flood Plain Map]



## Cultural/Historical Setting and Resources

Because of the preserve's proximity to the Myakka River and inclusion of Deer Prairie Creek, it is expected that Native Americans as well as Euro- and Afro-Americans utilized the site or exploited its natural resources. Two archaeological and historical surveys were completed on the site, one by Archaeological Consultants, Inc. (ACI) in September 2004 on the LOR parcel and one by Panamerican Consultants, Inc. (PCI) in August 2003 on Sarasota Ranchlands, Eagle Ridge, and Lykes. These surveys identified and evaluated both previously and newly recorded cultural resources within the property boundaries. Both survey reports are currently on file at the Sarasota County History Center.

The PCI survey revealed three new archaeological sites. The Inland Myakka Midden (8SO3204) is a low-density midden site, which was likely a temporary campsite that would have been incapable of supporting large populations of people. The faunal remains found at the site indicate short term (days) occupancy taking advantage of the locally available resources including from the adjacent wetland.

The Oxbow Myakka Midden (8SO3205) on the edge of the Myakka River is defined by eleven positive shovel tests during the survey and was determined to be a short-term campsite/extractive camp. One lithic flake and various animal taxa were found, with a high representation of aquatic animals. The site covers a fairly large surface area of 56,250 square meters (over 13 acres) and may date to the archaic period (7500 to 500 BC). The single lithic artifact recovered is composed of dolomite, an atypical material of Native American use. This unique find indicates that the site has the potential to further understanding of the use and sources of dolomite in the area; therefore more information is needed to determine whether this site is eligible for listing on the National Registry of Historic Places (NRHP).

The Myakka River Canal (8SO3206), which runs northeast to southwest at the north end of the property and drains into the Myakka River, was identified as a recent cultural feature. Approximately 4 to 5 meters in width, the canal was not likely used as a transportation waterway, but rather was constructed only for drainage purposes. The canal was present as early as 1948 as it is apparent on the Sarasota County 1948 soils map. The survey of this common feature type did not reveal associated cultural material and it was concluded that the feature is not of outstanding historical significance.

In addition to the newly recorded sites, PCI (2003) attempted to investigate the previously recorded Mumford site (8SO390), which is located in the northwest corner of the property, but at the time of the survey it was not accessible due to a dredged area between the site and the mainland. Given the inaccessibility, the area will not likely be disturbed by management activities. However should this area ever become accessible in the future, additional investigation may be warranted to determine if the site still exists.

Finally, three archaeological occurrences (AO) were found in the PCI survey. The findings at the AOs consist of single, small to medium chert flakes from the Tampa Bay area and a silicified limestone flake from the Suwannee River chert formation. While each occurrence is the result of

human activity in the past, they currently do not meet minimum State of Florida standards to be identified as an archaeological site. Should additional materials or information be identified with an occurrence then at that time its eligibility as an archaeological resource can be re-evaluated.

The ACI survey of the LOR parcel found three new archaeological sites and five archaeological occurrences. Each site provides further evidence of prehistoric Native American and historic usage of the land within the parcel.

A survey of the Deer Prairie Creek Site (8SO2954) on the eastern bank of the creek recovered lithic materials from nine shovel tests in an area of 10,000 square meters (2.47 acres). The lithic materials included thermally altered chert and coral and a modified Florida Archaic Stemmed point, which have been correlated with the Middle to Late Archaic periods (5500-500 BC). The depth range of the artifacts also indicates that there may have been more than one period of site occupation in the form of short-term campsites occupied during local resource exploitation.

The Deer Prairie Creek Scrub Site (8SO4511) is located further north along the creek. It too represents a short-term campsite occupied during local resource exploitation. The artifacts found in two positive shovel tests consist of non-decortation waste flakes produced during the making of tools.

The Deer Prairie Creek Historic Trail Site (8SO4512) was identified on the 1954 Soil Survey of Sarasota County and is still in use. Historical associations with the trail are unknown, but it is likely that the resource served as an internal trail for the area's turpentine industry.

A previously recorded archaeological site called the No Name site (8SO1312) on the property was described, according to an unconfirmed informant report, as a mid-1800s log house on the western bank of Deer Prairie Creek. During the ACI field survey, however, no historic artifacts or features were recovered. The consultants submitted a change of status form on that site to reflect that 8SO1312 is no longer extant.

The five archaeological occurrences found by ACI on the LOR parcel revealed artifacts including small, non-thermally altered flakes made of chert and coral and a single scraper tool. While each occurrence is the result of human activity in the past, they currently do not meet minimum State of Florida standards to be identified as an archaeological site. Should additional materials or information be identified with an occurrence then at that time its eligibility as an archaeological resource can be re-evaluated.

No historic structures (50 years of age or older) were observed on the property in either survey. The existing non-historic structures are discussed in the Existing Uses and Facilities section below.

#### *Site Protection: Threats and Protective Actions*

None of the cultural or historical sites are currently eligible for inclusion in the National or Local Register of Historic Places. Nevertheless, such resources are a valuable cultural asset and the



land managers, other support staff, and any contractors working in the area should be aware of their locations to avoid unnecessary disturbances.

The archaeological and historical sites on Deer Prairie Creek Preserve can be protected, as necessary, by avoiding large-scale ground disturbing activities and through advanced project planning. The potential or unintentional disturbances that may damage these areas include building construction, fireline discing, natural erosion, vehicle activity, land management activities, animal disturbance, or tree falls.

Currently, The Deer Prairie Creek Archeological Site (8SO2954) on the eastern bank of the creek is the only area where public use infrastructure may be placed near an archeological site. In the planning and design of infrastructure in this area, the land manager should work to limit the ground disturbing activities within the archeological site boundary and consider other protection measures should public use increase to a level that poses a threat to the cultural resource.

Of the other archeological sites on the property, only the Deer Prairie Creek Historic Trail Site (8SO4512) is frequently subject to mechanical activity and vehicular traffic. Given the lack of archeological significance this is less of a concern, but the land manager should be aware of the cultural significance of the trail itself and use caution where appropriate. The trail may also represent a good public education opportunity on the property's recent history.

The Oxbow Myakka Midden (8SO32005) is positioned along a trail that is infrequently traveled, but should that area be part of a prescribed burn, the equipment operators should be made aware of its location and instructed to avoid discing within the site boundary. Aside from the crossing near trail marker 160, the Myakka River Canal (8SO3206) is not subject to mechanical or vehicular activities and the Inland Myakka Midden (8SO3204) is set back significantly from the trail.

All staff should be made aware of the location of the cultural resources and informed of protection measures. If any artifacts surface because of management activities, the County archaeologist should be contacted so that they can be properly documented as to provenance, collected carefully and transported to the Sarasota County History Center for curation. In addition, all planned management activities that occur in vicinity of the cultural resources should be coordinated with the Sarasota County History Center staff.

### Plant Communities

Vegetative communities are classified using the Florida Natural Areas Inventory (FNAI) classification system (FNAI, 1990). This classification system categorizes all natural habitats that occur in Florida. As with all available classification systems, there are some drawbacks to using the FNAI system. First, Deer Prairie Creek Preserve, as well as most preserves in west central Florida have been altered to some degree due to past land uses (e.g., silviculture, grazing), hydrologic alterations (e.g., ditching, draining), and fire suppression. Secondly, the FNAI system provides a general approach to habitat classification for the entire state of Florida. The uniqueness of the west Florida region coupled with past land uses and disturbances have

resulted in some difficult classification decisions—many on site vegetative communities do not fit well within any of the FNAI classifications. Consequently, where these classification decisions were difficult, rationale and explanation for classification decisions are provided within the text<sup>2</sup>.

A habitat trend analysis has been conducted to compare conditions from the 2004 aerial photograph with the 1948 aerial photograph and 1847 maps (see Appendix B). In general, the preserve is dominated by mesic communities in various stages of fire suppression and hydric communities, consisting of both isolated wetlands and wetlands associated with the site's drainage ways, creeks, and river. These are illustrated in Figure 7.

#### *Mesic Flatwoods (2,367 acres)*

Slash pines (*Pinus elliottii*) dominate the sparse canopy. There are scattered oaks within the subcanopy, a direct result of fire suppression. In general, the shrub stratum is dominated by saw palmetto (*Serenoa repens*), with wax myrtle (*Myrica cerifera*), staggerbush (*Lyonia fruticosa*), and fetterbush (*Lyonia lucida*) common co-dominants in the lower areas. In the higher, drier flatwoods, gallberry (*Ilex glabra*) co-dominates with saw palmetto. Other common species include grape vine (*Vitis spp.*), wiregrass (*Aristida stricta* v. *beyrichiana*), and broomsedge (*Andropogon* sp.).

#### *Dry Prairie (1,231 acres)*

Natural dry prairie areas are vegetatively similar to pine flatwoods except there are few to no pines. On the site, several areas that are structurally similar to dry prairie are probably cut-over (i.e., logged) mesic flatwoods. The shrub stratum is dominated by saw palmetto, with wax myrtle, fetterbush, and gallberry also commonly occurring.

#### *Scrub (152 acres)*

Scrub occurs in many forms, but in this area is characterized as an open canopy with dense clumps or vast thickets of scrub oaks and other shrubs dominating the understory. The ground cover is generally very sparse, with open patches of sand and lichens common. Typical plants include Chapman's oak (*Quercus chapmanii*) and other scrub oaks, saw palmetto, and staggerbush. On this property, the scrub area follows the ridges of Deer Prairie Creek with a larger area on the west side of the creek just north of the dam.

#### *Scrubby Flatwoods (213 acres)*

Scrubby flatwoods tend to include an open canopy forest of widely scattered pine trees with a sparse shrubby understory and numerous areas of barren white sand. The vegetation is a combination of scrub and mesic flatwoods species. Typical plants include slash pine, sand live oak (*Quercus geminata*), Chapman's oak, myrtle oak (*Quercus myrtifolia*), saw palmetto, staggerbush, wiregrass (*Aristida beyrichiana*), and blueberry (*Vaccinium spp.*). The largest

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<sup>2</sup> The explanation of the habitat descriptions is usually prefaced with the phrase “as used here”.

section of scrubby flatwoods on this property occurs along the middle portion of the Myakka River between the hammock and mesic flatwoods habitats.

#### *Pasture (486 acres)*

There are over 480 acres of land on the northwest and southeast corners of the property that were cleared and converted to improved pasture by previous owners. The northwest and southeast pastures were historically dominated by dry prairie, but the pasture to the west of the creek on the southern portion of the property was historically primarily scrub. Live oak (*Quercus virginiana*) and wax myrtle are recruiting into the pastures, which are still dominated by bahiagrass (*Paspalum notatum*).

#### *Wet Flatwoods (245 acres)*

Wet flatwoods are characterized by relatively open-canopy forests of scattered pine trees and cabbage palms, with sparse to shrubby understory and a groundcover of hydrophytic herbs and shrubs. Typical plants include slash pine, sweetbay (*Magnolia virginiana*), spikerush (*Eleocharis spp.*), sedges, gallberry, saw palmetto, and bluestem (*Andropogon spp.*). The area of wet flatwoods is concentrated in the center of the property, surrounding smaller areas of prairie hammock and wet prairie.

#### *Wet Prairie (150 acres)*

Wet prairie, concentrated in the northeast and central areas of the property, is a treeless plain with a sparse to dense ground cover of hydrophytic grasses and herbs. The primary species include wiregrass, maidencane (*Panicum hemitomon*), hatpins (*Syngonanthus flavidulus*), marsh pink (*Sabatia grandiflora*), wax myrtle, and St. John's wort (*Hypericum fasciculatum*).

#### *Prairie Hammock (649 acres)*

As used here, there are two vegetative communities that have been classified as prairie hammock. These subtly different habitats are virtually indistinguishable on aerial imagery because the dense canopies are comprised of the same species. The first vegetative community occurs in what were historically hammocks that occurred in association with dry or wet prairie. They are typically natural hammocks that occur in fire shadows due to wetness and juxtaposition. These areas are characterized by an overstory of live oak, laurel oak (*Quercus laurifolia*), and cabbage palm (*Sabal palmetto*). There is a relatively sparse subcanopy and herbaceous understory due to shading and seasonally high water. Salt bush (*Baccharis halimifolia*) and wax myrtle are common shrubs in the sparse shrub stratum.

The other prairie hammock habitats on site include areas of dry and wet prairie where fire suppression has occurred. Consequently, this vegetative community is comprised of a combination of “natural” prairie hammock species coupled with species that occur in dry/wet prairie and respond favorably to fire suppression. Typically, these areas are comprised of a dense live oak/laurel oak canopy with scattered cabbage palms. The understory is comprised of

a dense shrub stratum that is dominated by saw palmetto. Other common shrubs include common persimmon (*Diospyros virginiana*), fetterbush, gallberry, and wax myrtle.

*Hydric Hammock (302 acres)*

On this property, hydric hammock is located in small sections along the river and in isolated areas internally in the northwest section of the property. This habitat type is a well-developed hardwood and cabbage palm forest with an understory composed primarily of palms and ferns. Typical plants include cabbage palm, southern magnolia (*Magnolia grandiflora*), wax myrtle, saw palmetto, poison ivy (*Toxicodendron radicans*), dahoon holly (*Ilex cassine*), and Walter's viburnum (*Viburnum obovatum*).

*Tidal Marsh (187 acres)*

Tidal marshes are characterized by FNAI as expanses of grasses, rushes and sedges along coastlines of low wave energy and river mouths. Black needle rush (*Juncus roemerianus*) and smooth cordgrass (*Spartina alterniflora*) are indicator species which usually form dense, uniform stands. Tidal marshes as used on this property also include occasional mangroves and leather ferns (*Acrostichum danaeifolium*). The habitat type occurs along the southern portion of the Myakka River and about a half mile up Deer Prairie Creek from the river.

*Depression Marsh (272 acres)*

These basin-shaped marshes flood as the groundwater level rises. Depression marshes typically have a well-defined transition zone with St. John's wort and cordgrass (*Spartina bakeri*). The interior is dominated by arrowhead (*Sagittaria lancifolia*), maidencane, pickerelweed (*Pontederia cordata*), and fragrant water lily (*Nymphaea odorata*).

[Insert Fig. 7. Natural Communities map]



## Flora and Fauna

Preliminary inventories of vegetation occurring on the preserve have been conducted. All vegetation documented on site has been listed in phylogenetic order by family (see Appendix C).

Wildlife species that have been documented on site are listed in Appendix D.

As the preserve was acquired to protect the environmentally sensitive nature of the area including the native vegetation communities and wildlife habitats, more detailed surveys will identify the presence of any rare species and/or those listed by state and federal agencies. Any occurrence of rare or listed plant and wildlife species will be reported to appropriate agencies as well as the Florida Natural Areas Inventory.

Through these inventories, target species shall be identified and species-specific management strategies shall be developed to ensure the continuation of these species. Target species, as used here, includes all listed species and keystone species<sup>3</sup>.

## Special Elements

Special elements are defined as spatial and/or temporal site characteristics that warrant particular management attention and potential action. Special elements identified on the preserve are as follows.

- *Joint Ownership and Management.* The site was purchased jointly by Sarasota County and the Southwest Florida Water Management District (SWFWMD).<sup>4</sup> The two agencies have agreed on a joint management agreement that assigns management responsibilities between the two agencies. In addition, the agencies maintain frequent communication on all management issues and planning, and regularly confer on management questions. (See Appendix E for relevant documentation.)
- *Development of mitigation areas designed to compensate for nearby road construction.* The expansion of River Road and eventual widening of I-75 have raised the prospect of requests for mitigation on the Deer Prairie Creek site. A floodplain mitigation area has been surveyed in the pasture near the river in the northwest portion of the property as a possible compensation site for the North River Road expansion. This area was historically dry prairie and has non-hydric soils. As a result, artificial conversion to a hydric habitat could be difficult and invite invasion by exotic species. The decision on each potential project will be made on a case-by-case basis. Each decision will be made

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<sup>3</sup> Keystone species, as used here, is a species whose presence contributes to a diversity of life and whose extinction would consequently lead to the extinction of other forms of life. Keystone species help to support the ecosystem (entire community of life) of which they are a part.

<sup>4</sup> There is one area of the property that is not owned jointly, but rather by Sarasota County exclusively due to lead contamination at the time of purchase which has since been resolved. This area (less than ¼ acre) is included in the revised legal description in the survey of the LOR parcel included in Appendix A and indicated in the included legal description as less out parcels “A” and “B.”

jointly between SWFWMD and Sarasota County, centered on the principle that only projects that meet the restoration objectives stated below are appropriate on this conservation land.

- *Deer Prairie Creek Dam.* The Deer Prairie Creek watershed is one of the most natural watersheds in Sarasota County. Among the few manmade alterations is a dam that was built in the 1950s, about one mile upstream from the mouth of Deer Prairie Creek. The dam has an estimated crest elevation of 3.31 feet (National Geodetic Vertical Datum) and impounds approximately 8.25 acres of surface water (Kimley-Horn, 2006). Given the long-term presence of the dam, it has had a significant influence on the current habitat structure of the area and a state of equilibrium has been established. While the viability of hydrological restoration should be further investigated, the potential benefits of such a project will need to be weighed against the impacts on existing habitats and species diversity, as well as concerns over emergency access and recreational value. The uplands around the ponded area, for instance, represent a unique environmental feature with significant aesthetic and recreational value as discussed in the Proposed Land Use Plan section below.

A partial assessment of the pros and cons of hydrological restoration in this area was completed by Sarasota County staff in 2005. This analysis found that 2.56 acres of tidal marsh and 0.78 acres of tidal creek could be restored, and 1.48 additional acres of tidal marsh could be created in areas of past excavation. These improvements would supplement the results in past restoration projects further north within the watershed. On the other hand 6 acres of current freshwater habitat would be lost, natural sediment transport might be increased, and a bridge or alternative crossing would need to be installed to ensure access to the west side of the creek (Jones 2005).

The decision on any such large-scale project will be made jointly between both management agencies based on an evaluation of the relative merits of the options, the ecological tradeoffs involved, and public access impacts. A decision on the dam will be made within 2 years of the adoption of this management plan.

### Inventory Needs

Initial site assessments and preliminary site evaluations have been conducted on the preserve pursuant to the “Survey Protocol for Master Land Management Plan of Sarasota County” (see the LMMP Addendum). The initial site assessment is a one-time-only, general survey used to prioritize sites for acquisition. The preliminary site evaluation is conducted to determine general habitats and community succession, species present, identify potential listed species and exotic species, and make preliminary, focused attempts to verify if listed species are present.

Coarse filter surveys are recommended to occur at a minimum of once every five years for preserves managed at Level III. The survey methods are designed to efficiently provide managers with site-specific floral and faunal inventories, characterizing species richness and not abundance. Through time, the data collected can be tracked by repeating the surveys with the development of every management plan update. In the event that these coarse filter surveys



document listed species' use of the preserve, said species may be targeted for more intensive surveys. Habitat-specific species richness trends (or the lack thereof) can be identified by comparison of findings on any five-year coarse filter survey.

Timbering surveys are also recommended for preserves managed at Level III. SWFWMD conducted a timbering survey and implemented a timbering contract on the property in 2006. The operation will be tracked and results recorded in GIS, photo, and narrative forms.

Identification of critical natural and/or cultural features or species is recommended for Level IV Management. The historical survey has occurred and critical areas have been included in the GIS database. Critical natural resources and listed species will be identified in the coarse filter surveys mentioned above. Fine filter surveys will be applied to these critical natural resources and any areas subject to restoration on the property. Fine filter surveys are designed to enable statistical tracking of the effectiveness of management strategies and are recommended for Management Levels III and IV. Some of the listed species currently identified on the property include giant airplant (*Tillandsia utriculata*), butterfly orchid (*Encyclia tampensis*), wood stork (*Mycteria americana*) and Florida scrub jay (*Aphelocoma coerulescens*). For additional species see Appendices C & D.

#### Site Issues, Management Considerations and Constraints, Restoration Opportunities

The primary issues, considerations for management, and restoration opportunities for the site are:

- *Fire suppression.* The effects of fire suppression may be reduced with prescribed fire and mechanical or grazing-based vegetation reduction. Soon after mechanical vegetation reduction, prescribed burning should occur to influence the recovery of desirable species instead of nuisance, pioneering species. Areas that have been subject to fire suppression for long intervals have a high concentration of volatile fuels. These areas may require fuel reduction burns (dormant season burns) before ecological burns (growing season burns) may begin. Prescribed burning priorities will focus first on securing the wildland urban interface and then on application of prescriptions on interior management zones. Burn intervals and goals will emulate the natural fire process and be adapted to responses in growth and structure. An annual prescribed burn plan will be developed by SWFWMD and coordinated with the county.
- *Exotic nuisance species control.* Several exotic species listed as Category I invasive exotics by the Florida Exotic Pest Plant Council (FLEPPC, 2005), including Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*), and cogon grass (*Imperata cylindrica*), exist on site. Old World climbing fern (*Lygodium microphyllum*), also a Category I nuisance exotic plant, although sporadic, can become prevalent if not controlled upon early detection. Category II plants occurring on site include the ubiquitous Caesar's weed (*Urena lobata*). Control activities are underway with priority attention and resources being focused on the Category I plants as time and resources allow.

Exotic animal species can also have detrimental impacts on native plant communities and wildlife. Feral hogs (*Sus scrofa*) root up natural vegetation and contribute to erosion problems, particularly when rooting activities are concentrated adjacent to surficially connected drainage systems. Feral hogs may also impact native wildlife populations such as quails, turkey, and rattlesnakes. A program is under way to remove feral hogs from the site. A large snake deemed to be a Python (*Python molurus bivittatus* or *Python reticulatus*) was also sighted on the northwestern portion of the property. The snake was most likely a pet dumped on the preserve by its previous owner and represents a threat to native species. The expert recommendation on this species is to trap or kill it in order to prevent these impacts and reduce the potential for breeding with other released specimens that might be on the property (Meshaka 2006). Other such exotic pet species known to occur in the county include the green iguana (*Iguana iguana*) and monitor lizards (*Varanus spp.*). Managers should be on the look out for these animals and act quickly to eradicate them according to standard exotic species management practices before populations get out of hand.

Other exotic species recorded on the site are listed in the species lists in Appendix C and Appendix D.

- *Rerouting of trails and firebreaks to reverse impacts to historic wetlands.* Trail improvements for access, fire protection and prescribed burning have been focused on the network of existing trails. Many of the existing trails impacted historical wetlands (Figure 8). Staff is currently assessing the options for mitigating the impact of these trails where possible, including rerouting around the most sensitive wetlands, creating hardened crossings for vehicles and providing “high flow” footbridges for recreational access. A strategy for addressing these trails and a ranking of the highest priority impacts will be developed within one year of the adoption of this agreement.
- *Recreational use compatibility with restoration and maintenance efforts.* Pedestrian, bicycle, and equestrian traffic are the only currently allowable methods for the public to access the preserve’s interior. Trails where equestrian and bicycle uses are allowed will be delineated and access for all users will be re-routed as necessary so as not to conflict with restoration and management activities (e.g. prescribed burning). Trail and firebreak maintenance will be conducted in such a manner as to minimize the effect on public access so long as it does not impact the effectiveness of the maintenance activity. Firebreaks, for instance, will be disked to a depth necessary for wildfire protection, but that will still allow for use by hikers and authorized vehicles within a reasonable period of time following establishment. Where possible, the disking will be located on the side of the trail, leaving a mowed edge unaffected.
- *Regional development.* The lands adjacent to the preserve are slowly being developed on a lot-by-lot basis, given previously unfinished platted developments in North Port and Warm Mineral Springs. This development pattern makes for a complicated mix of sentiments among neighbors on management activities such as prescribed fire. For those unaware of the dynamics at work in Florida’s natural systems, additional communication and education efforts will be necessary. In addition to the increasing number of

permanent residents becoming neighbors to the Deer Prairie Creek Preserve, I-75 is being designed to accommodate thousands more on a daily basis within the next decade.



[Insert Fig. 8 Wetland Trails Map]



## **Resource Management Action Plan**

### Overall Approach, Special Considerations

Application of the basic concepts of the LMMP have resulted in the conclusion that Management Levels III and IV are most appropriate for this property: Level III, Nature Based Recreation Site and Restoration Property, and Level IV, Critical Area Management.

#### Level III. Nature Based Recreation Site and Restoration Property

The goals of this management level are intended to provide for many types of public use as well as for natural area restoration. Any activities whether to support public recreation or restoration are undertaken through a disciplined planning process to ensure there are no obvious environmental issues involved with the proposed activity. According to the LMMP, the goals, objectives and actions prescribed to this level specifically address the following:

- 1) Appropriate security measures are in place: fencing is in place on the northern, eastern, and southern boundaries; the Myakka River provides somewhat of a physical barrier on the western boundary. Preserve rules are posted along all boundary lines. Formal public access points are not yet provided, but regular patrols are made of the entrance areas.
- 2) Improved pastures and other impacted areas are maintained to insure weedy species don't proliferate until a restoration plan is designed and implemented.
- 3) Inventories of natural communities, species, cultural features, access and exotic vegetation are complete. Significant resources are mapped and indicated for management (see Figures 7, 9 and Appendices C and D).
- 4) A timber survey is complete.
- 5) The road/trail network is mapped. Any known hydrologic concerns with the trail network are identified and mapped (Figure 8).
- 6) Property is designated into management areas based upon habitat types and prescribed burning characteristics (Figure B-3).
- 7) Regularly scheduled "stakeholders" meetings for public input (currently not used for the Deer Prairie Creek Preserve). Media and neighbor contacts are used to disseminate information.
- 8) Management plan developed.
- 9) General restoration goals have been identified and specific restoration plans are under consideration.
- 10) Research will be solicited from universities as appropriate.
- 11) An annual work plan has been developed and tasks identified (see Table 1).
- 12) Progress shall be tracked (see Operations Component Section).

#### Level IV. Critical Area Management

This level of management is applicable to the most sensitive areas on the property with the highest quality natural and/or cultural features. Without immediate or highly protective management activities, there is the potential for loss of a species, natural community or one-of-a-

kind cultural resource. This is particularly applicable in the areas designated in the Scrub Jay Habitat Conservation Plan and historic sites.

- 1) Critical cultural features have been identified and mapped. An initial inventory of critical natural features and species has been completed and more in depth surveys (coarse and fine filter surveys) are necessary to fully identify critical management needs
- 2) Intensive security measures were not deemed necessary for the historical sites, but precautionary policies are in place. Once identified, the critical natural resources will be protected as necessary.
- 3) Experts will be consulted as necessary.
- 4) Research will be solicited from universities as appropriate.
- 5) Exotic species management is underway and will be adjusted as needed to respond to critical area needs.
- 6) As critical resources are identified, management techniques to protect them will be added to the management plan including use limitations, monitoring plans, restoration and recovery plans, outreach and education, and timeline, funding, and staff requirements.
- 7) Measures of critical habitat success will be developed.

This management plan has been developed to address security, exotic species removal and other restoration opportunities, preliminary site assessments, and the development of an annual work plan and annual review.

#### Management Goals, Objectives, and Actions

The goals for managing the Deer Prairie Creek Preserve are to achieve the objectives set forth for Levels III and IV management approaches. These are to insure that the site will not significantly degrade after acquisition, to provide for nature-based recreational opportunities, to restore degraded natural areas, and to protect natural and cultural features of the highest quality.

More specifically, 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 fuel accumulation or exotic species proliferation. Additionally, they ensure that the primary purpose of acquisition of the site is met, which is to protect, preserve and enhance the environmentally sensitive lands and its wildlife and habitats. In doing so, Sarasota County will also provide nature-based recreation and environmental education for residents and visitors. Site-specific key management objectives and proposed actions follow.

Objective #1: Manage the preserve's upland communities as mesic flatwoods, dry prairie, and prairie hammock.

*Management Action #1: Management of the Preserve's Upland Communities.* Prescribed burning will be the primary upland management technique on the site, in some cases combined with vegetation reduction or timbering where necessary. Prescribed burning will enhance and preserve the mesic flatwoods. Typically, a prescribed fire regime for mesic flatwoods occurs



between 3 and 5 years, but adjustments to the burn intervals may be necessary based on responses in growth and structure, assessments of wildfire risk, and fuel availability. Where possible, as areas are returned to more natural fire regimes and intervals, burn unit sizes will be increased in size. In addition, natural breaks (ponds, creek, hammock edges) will be used where possible, allowing fire to burn into more mesic areas, as would have occurred under natural circumstances. This will help reduce the encroachment of prairie hammocks onto the flatwoods. The overall goal is to transition to growing season burns, contingent upon the successful restoration of burn intervals and fuel load reductions.

In addition, timbering will be used to begin the restoration of mesic flatwoods and dry prairie to their historical stand density. Timbering will result in a reduction in canopy cover, an increase in forbs and grass production due to the increase in light, and a decreased vertical fuel load through the compression of tall shrubs. Resultant stands will be mixed aged. Cattle grazing will also be considered in areas where additional or longer-term vegetation reduction would contribute to management and fire mitigation goals. Since acquisition, approximately 85 acres have been roller chopped, 729.4 acres have been subject to prescribed burning and 275 acres have been timbered.

Objective #2: Enhance, protect and where possible, restore existing wetlands.

*Management Action #2: Adjustments to Trails and Firebreaks for Wetland Restoration.* Over twenty-five sections of the existing network of trails and firebreaks are impacting wetlands. In some cases, the routes can easily be relocated to improve hydrology and provide uninterrupted, necessary vehicular access. In other situations, hardened crossings may be necessary to permit water flow without further degrading the wetland habitat. In some areas of higher public use, pedestrian bridges can be provided with the cooperation of the Florida Trails Association, local grants, and support labor by area volunteers.

Objective #3: Control nuisance exotic plant and animal species.

*Management Action #3: Nuisance Exotic Species Control.* Nuisance exotic plant species are evaluated semi-annually to assess the success of treatment as well as to determine the need for additional control. The levels of management for this site set forth the objectives of assuring the site will not significantly degrade from exotic species proliferation and that critical natural resources are particularly protected. Therefore, control methods are designed to sustain, reduce or, in some cases, eradicate nuisance exotic populations. Since acquisition, SWFWMD has provided about one third of a full time employee's time to treat the exotics on this site. Significant progress has been made on the most aggressive species such as melaleuca (*Melaleuca quinquenervia*), cogon grass (*Imperata cylindrica*), and Brazilian pepper (*Schinus terebinthifolius*). Contractors have been employed to treat Brazilian pepper along Deer Prairie Creek south of the dam and along the Myakka River. Plans are underway for an additional contract to treat exotics on internal portions of the property. Limited areas of Old World climbing fern (*Lygodium microphyllum*) have been found along Deer Prairie Creek and the Myakka River and were treated as discovered. Initial attacks throughout the preserve have made an impact, but the scale of the site and dispersal of the exotics presents a significant challenge.

Initial attacks will need to continue over the next several years and follow-up control treatments will be necessary beyond that.

Control methods used are based on the most up to date techniques as detailed by the Florida Department of Environmental Protection Bureau of Invasive Species and other local Regional and Federal resource management agencies (see Appendix F) for the latest species-specific eradication techniques.

Feral hog control is currently in place. Over 170 hogs were removed from the site in 2006. Partially flooded conditions in the wet season and the scale of the site complicate trapping efforts, but control efforts will continue. Given the scale of the hog infestation, additional trapping effort or supplemental removal methods may be necessary in the future. The possibility of a limited hog hunt one or two weekends a year was discussed by the Environmentally Sensitive Lands Oversight Committee in January and February of 2006 at the request of SWFWMD. ESLOC confirmed the need for more effective hog management strategies but noted the additional staff time that would be required in such a hunt. An assessment of the effectiveness of the feral hog control program currently in place on the property will be conducted and further information will be gathered on the most effective and efficient methods around the state.

Objective #4: Protect against vandalism and misuse of the natural resources and against wildfire on the site.

*Management Action #4: Site Stewardship.* The preserve boundaries are clearly identified with fencing around the upland perimeter and signage as to permitted and prohibited activities. Regular visits by County and SWFWMD staff can assist in preventing unauthorized access. Careful planning of infrastructure will minimize the impact from visitor usage on the natural areas of the preserve. Outreach to the surrounding neighborhoods can help to educate the community about the site's uniqueness and involve them in its protection and management. As visitor numbers increase, the security situation will be regularly reassessed and additional measures may be required. Wildfire prevention will be a priority on the preserve given proximity of the urban area, the fire history in the area and the fuels build up due to fire exclusion. The methods to be applied toward this goal will include prescribed fire, installation and maintenance of firebreaks, mechanical vegetation reduction, and cattle grazing in areas where a higher fire risk or urban interface would necessitate longer-term vegetation reduction efforts. Maintaining and improving access for emergency vehicles will also be critical to ensuring a rapid response in the event of a wildfire on the property. As a result, trails will be maintained and problem areas improved. Furthermore, additional dedicated access points will need to be acquired, as there is currently no legal access to the eastern portion of the property bordering the Warm Mineral Springs and North Port neighborhoods, the areas of greatest concern for wildfires.

Objective #5: Scheduling of annual surveys of listed plant and animal species, and preservation of the habitats that protect, restore, and preserve the native plants and animals identified on the preserve.

*Management Action #5: Vegetation and Wildlife Monitoring Program.* Coarse filter survey methods are designed to efficiently provide managers with site-specific floral and faunal inventories, characterizing species richness and not abundance. Establishment of permanent survey locations will allow for tracking of management progress. Coarse filter surveys may identify any listed species on the site that may be targeted for more intensive surveys such as fine filter surveys. Habitat-specific species richness trends (or the lack thereof) can be identified by comparison of findings on any five-year coarse filter survey. Regular monitoring of Florida scrub jay families will occur annually, with particular focus in nesting season. Managers will monitor for bald eagle (*Haliaeetus leucocephalus*) and swallow-tailed kite (*Elanoides forticatus*) nesting areas and adjust the management strategy upon identification.

Objective #6: Develop the project site with outdoor recreational amenities that allow public access while protecting the natural resources.

*Management Action #6: Public Access, Trail Network and Informational Signage.* Plans for parking, picnic facilities, observation benches, and designated trails are being developed with an aim to minimize impacts to the natural resources of the preserve. To the extent possible, existing trails have been used as fire breaks and/or are part of the preserve's nature trail network. Additional trail planning will include collaboration with the Sarasota County Trail Master Plan adopted in December 2006. The addition of informational signage at key points of interest and provision of park maps will allow visitors to experience the preserve while causing minimal impacts. Those areas where public use would detrimentally impact natural or cultural resources will be delineated in cooperation with SWFWMD within one year of the adoption of this document and appropriate use restrictions will be put in place thereafter.

Objective #7: Restore scrub habitat to enhance protection of this rare community and its related wildlife.

*Management Action #7: Scrub Restoration Plan.* In coordination with the Scrub Jay Habitat Conservation Plan currently under development, the limited areas of scrub and scrubby flatwoods on the property will be assessed for restoration potential and a restoration plan will be developed to maximize high quality habitat. While application of a burn regime has begun in some areas of scrub, additional strategic management activities will be focused on priority areas as outlined in the restoration plan.

Objective #8: Restore pastures and impacted areas where possible.

*Management Action #8: Impacted Areas Maintenance and Restoration Plan.* Over 550 acres of the property are identified as pasture or disturbed habitat. These areas will be assessed for their restoration potential and maintenance needs. Restoration potential will be determined by current site condition, seed source availability, management needs and implications for public use. Where restoration is appropriate a plan will be put in place within three years of the adoption of this plan, identifying the necessary restoration steps, intermediate maintenance strategy, budget, and timeline. Where restoration is not appropriate for reasons of existing habitat, project viability, financial limitations, public use potential, or other considerations, the area will be maintained through such techniques as mowing, mechanical treatment, cattle grazing, and other

methods in addition to a prescribed burning regime. These techniques will also be used as appropriate on the areas that are identified as restoration priorities in the period until that restoration can be implemented.

### Monitoring Program for Adaptive Management and Restoration

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

Monitoring targets are designated species and communities that are important for natural resource managers to observe. These include, but are not limited to, floral and/or faunal species that are protected, are critical to the health of the environment (e.g., keystone species), or are detrimental to the health of the environment (nuisance exotic species). Target species often also include game species and any other species that may have some importance to the site. 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 land managers will visit the site as frequently as necessary given site conditions and projects at the time. Exotic species control mechanisms will be evaluated semi-annually to assess the success of treatment as well as the need for additional follow-up control. Additionally, County or SWFWMD staff will visit the site weekly to assess other issues (e.g., security, encroachment, condition of site for public use and access, etc.) and report back to the site's designated manager. As visitor use increases, a more intensive staff presence will be necessary.

### Research Needs and Opportunities

While no research needs are identified at this time, many opportunities exist for research that would enhance the county's ability to manage this and other natural areas. Opportunities include the following.

- What are the hydrologic effects of the existing trail and firebreak network and of fire plowlines?
- What are the impacts on species richness of management activities such as timbering or cattle grazing should they occur on the site?
- Detailed monitoring of Florida scrub jay populations, including research on foraging patterns, nesting preferences, and territory delineation. Such research could help guide future management activities, particularly given the use of marginal habitat by current family groups on the site.
- Identification of ditches and other hydrological impacts on the site and an assessment of restoration options.
- Auditory exotic vs. native frog and toad species surveys would be valuable in understanding the extent to which exotic species intrude into natural areas. The Frog Listening Network has conducted studies of this type in the area and the local chapter presents a possible volunteer source for such a project.
- Other monitoring programs that track the effectiveness of any future mitigation or management efforts.

- Opportunities will be explored to coordinate larger-scale ecosystem level research opportunities such as through the biological field research station being planned at the Carlton Reserve.

### Public and Interagency Coordination

The joint Sarasota County and SWFWMD ownership and management of this property brings with it a unique need for interagency coordination. Consistent and productive communication is essential to effective management of the property, as is a commitment to the involvement of both agencies in significant management decisions. The Management Agreement delineates agency responsibilities and should be used as a guide for annual management and budget planning.

The county has an agreement with the Florida Division of Forestry to assist with containment in the event that a wildfire occurs. Assistance in initial fire response is the responsibility of Sarasota County Emergency Services in coordination with the designated land manager. When requested by the county and provided with reasonable notice, SWFWMD will provide mutual aid in response to wildfires on the property.

Annual records of listed species occurrence shall be provided to the Florida Natural Areas Inventory. In addition, an agreement has been made with The Nature Conservancy for support in the implementation of a Jay Watch Volunteer Monitoring program on the property.

## **LAND USE COMPONENT**

Historically, the site was logged, hunted, and used as rangeland. With increased residential development in the area, fire suppression and nuisance exotic species proliferation re-defined the character of the site's natural resources. The site is currently comprised of mesic and wet flatwoods, scrub and scrubby flatwoods, prairie and hydric hammock, and depression and tidal marshes.

### **Existing Uses and Facilities**

While there are no large-scale public use facilities on the property at this time, there are trail markers and picnic tables and, as of January 2007, a parking lot is under development at the north entrance. The preserve is currently being used by hikers and bicyclists who are accessing the site from the north and south entrances. From the south entrance the public can hike to the ponded area by the Deer Prairie Creek dam where there are picnic facilities. There is also occasional access to the property from the river and creek by boat. There are currently trail markers at each trail intersection to aid in navigation of hikers, staff, and emergency vehicles.

There are existing structures on site that were built by previous owners and must be considered in the application of public use plans. The concrete block frame of a slaughterhouse used by the previous owners in their cattle operation remains in the northwest section of the property. While

the structure was not deemed historically significant (as it was not over fifty years old at the time of the historical survey), it could represent a potential opportunity for cultural interpretation. Similarly, there are cattle pens and a pole barn near the pasture on the northwest section of the property and another set of cattle pens near Deer Prairie Creek in the south of the property. This remaining infrastructure from past cattle operations could serve as a good public education opportunity on past uses of the property and the agricultural history of the county.

Additional areas of human influence also exist on the property. The dam on Deer Prairie Creek near the south of the property has an impact on both hydrology and recreation potential as discussed above. There is also a long open area along the road from the southern entrance that was historically created to serve as an airstrip, although it was primarily used for cattle grazing. Decisions on the use of this area should consider public use opportunities as well as the management of the area to reduce encroachment of undesirable species. The pastures in the northwest and southeast sections of the property must be similarly managed. There is also a small pasture in the center of the property, to the east of the Creek that was created by previous owners as a dove hunting field.

### **Proposed Land Use Plan**

Facilities and recreational opportunities currently proposed are listed below and represented in Figure 9. Within three years of the adoption of this plan, Sarasota County will implement a work assignment with the design consultants currently under continuing professional services contract to develop a public use master plan for the preserve. Activities and amenities recommended in the master plan will be discussed with SWFWMD following the procedure outlined in the Management Agreement. The public use concepts discussed in this document, therefore, represent an interim conceptual plan that will be reviewed and likely modified as part of the development of the master plan.

1. Parking areas at the north and south entrances. The north entrance has an impacted area that is large enough to provide limited parking for horse trailers in addition to an area for personal vehicles. Initially, a small parking area is planned for the area adjacent to the gate at the south entrance to provide public access in the short term. As public visits and interest increase, it may be appropriate to move to a second phase of public use, providing easier access to the interior of the property. The likely focus would be on the ponded area near the Deer Prairie Creek dam. This internal access will require additional installed amenities such as picnic areas and fishing facilities, as well as increased staff capacity to ensure more regular patrols of these internal public areas. Upon moving into the second phase of use, the public access at the southern entrance will be reevaluated and a new parking area may be developed further in from US 41, perhaps in the already impacted area of the airstrip. Public use facilities such as restrooms or an interpretive center could be needed in this phase. The decision on whether to install these facilities will be based upon a thorough visitor management needs assessment and on an analysis of potential environmental impact.
2. The existing trail and firebreak network will serve as the initial set of hiking, bicycling, and equestrian trails. Upon installation of parking lots, short trails will be designed to facilitate a short-term visitor experience that involves a diversity of habitats and interest

points. As the need arises, a more extensive primitive resource-based hiking trail system can be assessed and implemented on the interior of the property in combination with the closure of preexisting roads deemed unnecessary for management purposes and inappropriate for public use. Fragments of old trails exist throughout the property that could be enhanced for hiking purposes. In general, additional trails should be narrow and winding with as much shade as possible. Where trails cross small streams or sloughs, footbridges may be built. Hiking-only trails will be designated as appropriate. The property's location and size also presents an opportunity to be a part of a potential larger north-south trail connecting several of the protected properties along the east side of the Myakka River. The county and SWFWMD will remain informed as planning for that trail proceeds in addition to broader county-wide trail planning through the Sarasota County Trail Master Plan.

3. Benches and/or picnic tables may be established at scenic areas, particularly along the Myakka River and Deer Prairie Creek.
4. Existing trails will be re-routed out of wetlands whenever possible (see Figure 8).
5. If legal access can be acquired in the residential area of Warm Mineral Springs, a walk-through will be considered to accommodate growing usage. Should significant public use arise from North Port, a footbridge over the canal may be considered upon consultation and cooperation with city authorities and with necessary funding. Historic unauthorized all-terrain vehicle usage in this area will necessitate a careful design process to minimize security and trespassing concerns.
6. Remaining cattle grazing infrastructure presents an interesting cultural education opportunity. The slaughterhouse, cattle pens, and pole barn could be the focus of a historical interpretive trail from the north entrance.
7. The site's location on the River and Creek presents an opportunity for providing canoe/kayak access, but the location of a potential launch site must be decided upon only after weighing access and security logistics with environmental impacts. Perhaps the most viable location would be an offshoot of Deer Prairie Creek that intersects the main access road from the south entrance between trail markers B and C. There also may be value to a launch point north of the Deer Prairie Creek dam to provide access to the northern section of the creek or a portage area so those south of the dam can continue their paddle north. Permanent paddling infrastructure along Deer Prairie Creek will only be installed, however, following a decision on whether to remove the dam to ensure that recreational planning is based on an accurate assessment of future flow. In addition, it may be of value to establish canoe/ kayak landings so that paddlers who access the river at another point (such as Snook Haven just up river) can come ashore and explore by foot or have a picnic on the property before continuing by water. Potential locations for these landings include marker 102 on the Myakka River and west of marker A on Deer Prairie Creek. A plan for provision of paddling amenities will be made subsequent to a decision on the future of the Deer Prairie Creek dam.
8. Equestrian and bicycle use will be permitted only on certain trails on the property. These trails will be designated in signage and in equestrian- and bicycling-focused outreach materials and maps. Proof of a negative Coggins test will be required for all horses entering the preserve.
9. Camping is a possibility on the site in the future given its scale and number of already impacted areas, but locations must be fully assessed to limit environmental and security

impacts and staff capacity must be adequate to manage this new type of visitor. Primitive campsites could be established with limited impact in the interior of the property and accommodations may be made for camping by groups on a limited basis in the future once public access is improved and staff capacity increases. Prior authorization and a backcountry camping permit would be required for any camping on the property and requests would be evaluated on a case-by-case basis.

10. Leashed dogs may be permitted on a specific delineated loop trail or trails near the urban interface. The potential trail(s) will be designated following an assessment of appropriate areas given proximity to neighborhoods, protection of habitat and native species, and sensitivity of trails to determine that such a use would not negatively affect preservation goals on the property.
11. Vendors or concessions may be considered to provide services and amenities that meet the objectives of this plan and contribute to the visitor experience without inappropriate environmental impact. Examples of such services may include tour guides (e.g. hike, bicycle, kayak, equestrian, and potentially tram or buggy tours depending on the level of future public use) or equipment rentals such as canoes or kayaks. These services may require additional infrastructure or facilities. As with all public use decisions, the decision on additional amenities and services will be based on a conservative assessment of need and impact.
12. Specific requests for additional uses of the property not specifically addressed in this plan will be considered on a case-by-case basis. Such requests will be evaluated by Sarasota County staff based upon environmental impact, consistency with the management plan and other County regulations and priorities, level of public benefit, and precedent implications. Sarasota County will make an initial determination and present the evaluation and recommendation to SWFWMD for comment.



[Insert Fig. 9 Existing/ Potential Infrastructure Map]



## **Visitor Use Management Recommendations**

The Deer Prairie Creek Preserve is situated in a rural landscape with only minimal accessible urban interface. The area around the southern entrance, however, is quickly becoming suburbanized. While current use is quite minimal, as public access amenities are improved and surrounding populations increase, the visitor usage will likely increase substantially. The following methods can assist in evaluating the numbers and impacts from visitors.

- All scheduled plant and wildlife surveys of the Deer Prairie Creek Preserve will include inspections for deterioration of all provided facilities and fencing that are proximal to the survey areas.
- Volunteers should be recruited from the neighborhoods near the Deer Prairie Creek Preserve and from other regular visitors and community groups. These individuals could be trained to complete comprehensive questionnaires about all provided recreational facilities and infrastructure such as fencing and trails.

## **Monitoring Use Methodology**

Considering the use and access proposed for the preserve, public use analysis is not applicable at this time.

## **OPERATIONS COMPONENT**

### **Administration**

The county and SWFWMD are jointly responsible for management and operation of the Deer Prairie Creek Preserve. Emergency support from outside entities (e.g., wildfire, criminal activities) shall be coordinated through Sarasota County Natural Resources, Resource Management, which will in turn immediately communicate these instances with SWFWMD.

### **Staffing Recommendations**

The county and SWFWMD have each assigned one land manager that is responsible for the preserve. Each of these managers shall visit the site at least monthly and as often as deemed necessary given management objectives and will share findings with the other agency. In addition, both agencies will cooperate in writing an annual report that assesses at a minimum:

- Actions that have occurred on site
- Consistency of site management with the land management plan
- Results of floral and faunal monitoring
- Listed species element occurrence records
- Updates to the GIS-based land management database for the site
- All operational findings from monthly site visits

Additionally, County or SWFWMD staff will visit at least once per week to patrol the property and check, in particular, on the public use areas.

### **Facilities**

Maintenance of recreational facilities is the responsibility of Sarasota County according to the Management Agreement. Once public access areas are established, an agreement will be made with Sarasota County Parks and Recreation or appropriate designee to provide trash removal, mowing, and general upkeep of the facilities. Where appropriate, volunteers may be enlisted to help maintain the trails.

### **Resource Management Operations**

The preserve's designated land managers will visit the site at least monthly. The managers shall:

- Assess the overall natural condition of the site.
- Document species occurrences.
- Identify any encroachment/security issues.
- Evaluate management needs and public use considerations.

Distribution and type of nuisance exotic species will be located using GPS during the fall and spring. To the extent feasible, that assessment will include presence and indications of exotic animal species in addition to exotic plant species.

Coarse filter vegetative and wildlife surveys are recommended upon the adoption of this management plan and at each 5-year interval thereafter in order to track progress in meeting management goals and objectives. The surveys shall follow the methods adopted with the "Survey Protocol for Master Land Management Plan." Fine filter surveys will be implemented on selected habitats and species following the completion of the course filter surveys.

Upon return from all site visits, the species occurrence database shall be updated and notes will be made summarizing the site visit and documenting the above parameters. Any findings of special interest shall be communicated with the partner agency representative, documented and addressed in the annual report. The annual report shall summarize the findings of monthly site visits and any documentation of interest on the operations and maintenance of the site. The annual report shall also track management progress as it relates to the timelines presented in this plan.

### **Security and Maintenance**

Both Sarasota County and SWFWMD staff will be visible on the preserve and will keep the public informed of the county ordinances and state statutes governing appropriate behavior and the operating hours for this type of public land. The visibility of agency staff can also help prevent vandalism. To augment these security measures, signage of the rules and regulations are

posted at the public access entrances and along the perimeter. The Sarasota County Sheriff's Department will be responsible for enforcing trespass and illegal hunting ordinances.

### **Estimated Management and Visitor Use Budgets**

#### Recurring Annual Costs for SWFWMD and Sarasota County

- 1) Land Management staff: 1152 man hours for the land manager(s) (6 hrs/site visit, 15 site visits /mo. and 72 hrs/ year for reporting and misc., @ \$ 37/hr which includes overhead)  
= \$ 42,624.00
  
- 2) Mowing and misc. maintenance:  
Contractor mowing and maintaining trails (80 acres of trails @ \$75/acre= \$6,000/  
mowing \* 2 mowings per year = \$12,000).  
Contractor mowing of pastures until restoration or cattle grazing begins (486 acres, ½  
mowed per year in strips @ \$50/acre = \$12,150/ year).  
= \$ 24,150.00
  
- 3) Exotic species removal:  
Maintenance: 60 labor days annually performing maintenance plus chemical costs (480  
hours @ \$18/hour = \$8,640) plus chemical costs (\$5000)= \$13,640.00  
Contracts: Contract labor targeting 10 acres of pepper/ year @ \$ 2,500/ acre =\$25,000  
=\$ 38,640.00
  
- 4) Signage (\$100/ year replacement costs)  
= \$ 100.00
  
- 5) Prescribed burns (average 1000 acres per year @ \$35/acre)  
= \$ 35,000.00/year
  
- 6) Mechanical vegetation reduction: (200 acres per year at \$65 per acre)  
= \$ 13,000.00/year
  
- 7) Other Direct Expenses  
\$ 4000.00/year for trail infrastructure upkeep  
\$ 220.00/year brochure costs (1000 x 22¢/each)  
\$ 350.00/year for travel  
\$ 4,570.00/year

**Total Recurring Annual Costs:**  
**\$158,084.00 per year**

Additional Tasks Year 1 (of management plan implementation):

**1) Coarse Filter Survey (Once per 5 years)**

PLANT

Field Prep (6 Hours)

+ Surveys (6hrs/habitat type \* 10 habitat types=60 hrs)

= 66 hrs @ \$35/hour = \$2,310

ANIMAL

Field Prep (6 hrs)

+ Seasonal bird surveys (15hrs/habitat type \* 10 habitat types=150; currently provided by volunteers)

+ Tortoise Population estimate (16-20 hrs/ 100acres \* 368 acres of scrub and scrubby flatwoods = 58.9 to 73.6hrs)

+ Anuran surveys (18-24hrs)

+ Herp stations [site selection (2-4 hrs/ habitat \* 10 habitats= 20-40) + site set up (2-4 hrs/ habitat \* 10 habitats= 20-40) + survey (1-2 hrs/habitat \* 10 habitats = 10-20) = 50-100 hrs]

=133-204 hrs (not including volunteer time) @ \$35/ hour = \$4,655 – \$7,140

Direct Expense:

Herpetofaunal Monitoring Stations: 20stations \* \$25-30 stations = \$500-600

Total Coarse Filter Survey Cost = max \$10,050

**2) Fine Filter Survey**

PLANT

Site Set up: 24-30 hours (ONE TIME ONLY)

+Surveys: 48-60 hours annually

+ Data Entry: 3-5 hours annually

(= 75 to 95 hours per selected habitat first year; 51-65 hours/ habitat/ year thereafter for an estimated 3 habitats= max 285 hours the first year; 195 hours/ year thereafter @ \$35/ hour)

Total Plant Fine Filter Survey Costs = max \$9,975 the first year; \$6,825 / year thereafter

ANIMAL

*Herp Stations*

Herp Station Site Selection: 4 hours (ONE TIME ONLY)

+ Site Set up: 24 to 30 hours (ONE TIME ONLY)

+ Check traps: 60 hours annually

+Data entry and analysis: 6-9 hrs annually

(=94 to 103 hours per habitat the first year; 66 to 69 hours per year thereafter for an estimated 3 habitats = max 309 hours the first year; 207 hours/ year thereafter @ \$35/ hour)  
= max \$10,815 the first year; \$7,245/ year thereafter

*Seasonal Bird Surveys (currently provided by volunteers)*

Set up: 16-20 hrs (ONE TIME ONLY)

+ Surveys: 24-30 hrs annually

= 40-50 hrs first year; 24-30 hrs per year thereafter (for whole property)

*Anuran Surveys*

8 hours per year (for whole property) @ \$35/ hour

= \$280 per year

*Gopher Tortoise Surveys*

Surveys: 8-12 hrs per selected burn annually

+ GIS Map development: 4-10 hrs per selected burn annually

= 12-22 hrs per burn; 2 burns annually = 44 hrs max annually @ \$35/ hour)

= \$1,540 per year

*Other Trap Surveys Site Set Up: 6 hours per habitat (ONE TIME ONLY)*

+ Check Traps: 54-108 hrs per habitat annually

+ Data Entry and analysis: 6-9 hrs per habitat annually

=66-123hrs per habitat first year; 60 – 117 hrs per habitat annually thereafter for an estimated 3 habitats = max 369 hrs first year; 351hrs / year thereafter @ \$35/ hour)

= \$12,915 the first year; \$12,285/ year thereafter

*Annual Data Entry and Analysis: 12-16 hrs annually @ \$35/ hour*

= \$420-\$560 per year

Total Animal Fine Filter Survey Costs = \$26,110 the first year; \$21,910 per year thereafter

*Total Plant and Animal Fine Filter Survey Costs = \$36,085 the first year; \$28,735 per year thereafter*

**Total Survey Costs for Year 1 (Coarse and Fine Filter): \$46,135 max**

**Total Fine Filter Survey Costs Per Year Thereafter: \$28,735**

**Total Coarse Filter Survey Costs Every Five Years: \$10,050**

**Proposed Management Schedule (See Table 1).**





**Table 1. Proposed Five-Year Management Schedule**

*(Schedule will be updated annually to include successive years through 2016.)*

Task	2007												2008												2009											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Exotic Species Removal																																				
Land Manager's site visit (once per month)																																				
Operation site visit (weekly)																																				
Prescribed Burns (1000 acres per year average)																																				
Course Filter Surveys																																				
Fine Filter Surveys evaluation/ scheduling																																				
Annual Report																																				
Public Use Zones Meetings (decision by last meeting)																																				
DPC Dam Removal Meetings (decision by last meeting)																																				
Restoration Plan Meetings (decision by last meeting)																																				

Task	2010												2011												
	J	F	M	A	M	J	J	A	A	S	O	N	D	J	F	M	A	M	J	J	A	A	S	O	N
Exotic Species Removal																									
Land Manager's site visit (once per quarter)																									
Operation site visit (once per month)																									
Prescribed Burns 1000acres per year average.																									
Restoration Plan Meetings (decision by last meeting)																									
Annual Report																									

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