

# **SARASOTA COUNTY LAND MANAGEMENT MASTER PLAN**



**As adopted by the  
Sarasota Board of County Commissioners  
December 7, 2004**

# **LAND MANAGEMENT MASTER PLAN OF SARASOTA COUNTY**

## **MANAGING THE COUNTY'S NATURAL ENVIRONMENTAL AREAS**

### **Introduction**

The purpose of the Land Management Master Plan (LMM PLAN) is to provide guidelines to those managing natural areas for conservation or preservation in Sarasota County. While the focus is on County owned or controlled lands, the LMM PLAN provides the private landowner and other public agencies with a framework for encouraging and sustaining the natural environment. When combined together, public and private efforts add greater sustainable benefits than any one entity can achieve.

The intent of the LMM PLAN is to provide focus and direction for proactive, rather than reactive, land management activities at the community and landscape levels throughout the County. The LMM PLAN is intended to be dynamic. Parts of it will certainly change as improvements to the land management process are made, but the underlying ecological integrity of the lands will remain intact.

This LMM PLAN is one step in a comprehensive land management planning effort that transcends political boundaries and achieves the long-term commitment of Sarasota County to provide the quality of life its citizens today and tomorrow desire. Such efforts today will conserve the County's unique environmental heritage and preserve important ecological functions by conserving, maintaining, and where necessary, restoring the natural environment for future generations.

### **Background**

Past land management in the County frequently occurred without an understanding of the landscape and the natural processes that drive the natural systems such as fire, water and succession, and was a piecemeal approach. Florida now has a vision for its lands under the Florida Forever Program. Agencies statewide frequently follow the conservation methods of the Florida Chapter of The Nature Conservancy (TNC) to sustain natural communities. TNC also coordinated a land management audit for the County in 2000, which included a recommendation to prioritize management on its sites (See Addendum A). The LMM PLAN adapts the State's vision, and TNC's management standards as set forth in the document entitled "Managing the Natural Resource Lands and Waters of the State of Florida", written in 2002, and includes the recommendations from TNC's audit.

By necessity the LMM PLAN is multidisciplinary, and although coordinated by Sarasota County Natural Resources staff, the effort involves ecologists, biologists, hydrologists, engineers, recreationists, archaeologists, planners, regulators, accountants, and information technologists from several Business Centers (Environmental Services, Emergency Services, Community Services, Growth Management, Public Works and Development Services) and other partners such as academia. One of the objectives of the LMM PLAN is to combine all the available environmental information in a user-friendly

geographic information system (GIS) and make it available to the public. The County will generate digital thematic maps portraying historic and existing:

- Aerial photographs
- Topography
- Soils
- Hydrology
- Land cover (natural plant communities according to Florida Natural Areas Inventory)
- Special natural features (springs)
- Distribution of protected species
- Exotic plants and animals
- Infrastructure (roads, utilities, rights-of-way, mitigation areas)
- Location of public and private natural areas and cultural/historical sites
- Public amenities existing or proposed

Land management necessarily follows the acquisition of natural environmental areas. Much of the County's acquired natural areas show the human impacts to the environment, and its natural processes and functions. In some cases natural areas (e.g. mangroves, sea grass beds, natural waterways, and hammocks) acquired will be left alone to allow natural succession to occur.

Land not managed leads to three undesirable results. First, the land changes; it does not look or function in the same manner. We lose the very reason the land was acquired, whether that was for open space, wildlife corridors, water resources, native habitat protection, historical resources or public nature-based recreation. Secondly, we lose the public's trust in our ability to provide the essential natural and cultural heritage of its resources in a cost-effective and timely manner. The longer we wait to manage the lands, the more it will cost. Third, unmanaged lands become vulnerable to pressures from unrelated and often detrimental uses, both on and off site.

A coordinated approach to natural environmental land management protects and sustains our local economy. The LMM PLAN provides the focus to keep us on track, measure our success and prioritize our actions. A healthy environment corresponds to a healthy economy (e.g. worldwide travelers visiting the county for bird watching, beaches).

#### Countywide Conservation Lands

As a geographic region, Sarasota County has over 100,000 acres of environmentally protected lands, 92% of which are under public ownership. (See Addendum B for natural environmental lands map.) Different agencies, depending upon how and when the lands were acquired, manage different portions of these lands.

- The Florida Park Service, as part of the Florida Department of Environmental Protection (FDEP), manages Myakka River and Oscar Scherer State Parks.
- Sarasota County Utilities, Parks and Recreation, and Natural Resources manage the Carlton Memorial Reserve, acquired in 1982, for water supply, open space and recreational purposes.

- Parks and Recreation manages additional public beach areas, funded in part through the penny sales tax referendum approved in 1986.
- In 1994, the Southwest Florida Water Management District purchased Myakka Prairie under its Save Our Rivers Program and turned management over to FDEP.
- The Myakka State Forest also is funded through the District's Save Our Rivers Program but is managed by the Florida Division of Forestry.
- In 1999, the penny sales tax partially financed the acquisition of the Jelks Preserve jointly managed by Parks and Recreation and Natural Resources.
- The Lemon Bay Preserve was acquired by Public Works to offset road-related impacts and additional acreage was added by Natural Resources through the 1999 voter approved bond referenda for environmentally sensitive lands.

There is considerable debate over the issue of public land management. What constitutes effective management of public lands is one of the outstanding questions. The cost of management and how the monies will be provided are yet others. Answers to these questions are complicated by the fact that land types vary and management means different things to different people depending on the agency, interest groups, and individuals involved with the management of Sarasota County's natural areas. This LMM PLAN provides a recommended foundation for Sarasota County to standardize the management process and language. Such standardization of process and language identifies adequate and appropriate phasing of actions, funding, and levels of service. It provides a common ground and language for all County departments, interest groups, and individuals to evaluate management progress and needs.

## **LMM PLAN**

This LMM PLAN contains four parts. Part I provides the guiding principles to manage public lands on the broad scale, at the ecosystem level. Part II lays out a brief summary of the steps that are necessary in the development of an effective resource management program. Part III describes a classification concept for resource management that Sarasota County will use to define, evaluate, plan for and address the management needs of its land portfolio, regardless of its current state and size. Part IV suggests measurable trends that will be evaluated on a countywide basis to determine whether our resource-based management programs are effectively fulfilling the vision of Sarasota County. The addenda include TNC's summary of its 2000 land management audit, a map of natural environmental areas in Sarasota County, an environmental lands inventory, a habitat matrix, the Land Management GIS Plan, individual management plan format, and governing documents for land management in Sarasota County.

## **PART I**

### **THE GUIDING PRINCIPLES TO ECOSYSTEM MANAGEMENT**

The effects of past activities on public and private lands have often led to degraded and altered water courses, unhealthy rangelands; degraded plant, animal, and fish habitats; and unhealthy forests. Fire exclusion, flood control, major road construction and other factors also caused significant declines in the numbers and ranges of many native plants

and animals, and in the County's biodiversity. If this decline continues, future generations of County residents and visitors will not be able to enjoy and benefit from the use of public lands.

Ecosystem management entails managing from a landscape perspective, looking at the "big picture", which requires working more closely with landowners, both public and private, to form new partnerships and teams, make scientific decisions, and measure progress based on the function and value of the land. Sustaining a healthy functioning ecosystem is the first priority of ecosystem management.

In managing the County's public natural environmental lands, the County will:

- Know the condition and resources of the land.
  - Recognize the connections across the landscape.
- Use science to make informed decisions.
  - Engage the best experts to recommend the best management practices.
  - Research and monitor to encourage better management and use of data and information.
- Maximize sustainable benefits from the land and repair damage, where feasible.
  - Protect, maintain and restore ecological integrity including diversity, and natural patterns and processes.
- Identify and emphasize long-term benefits to the County and region in addition to the short-term gains.
- Seek public participation in the development and/or revision to specific individual management plans for acquired sites.
  - Create stakeholder meetings of neighbors, public agencies, businesses, academia, and other interested parties.
- Use teams with a variety of skills to manage the land.
  - Establish cooperation between all levels of government and the public.
  - Engage the academic community.
  - Use the best available, cost effective technology.
- Be flexible and adapt to changing public demands and management techniques.
  - Incorporate new knowledge as it becomes available.
  - Manage natural systems holistically including both public and private connections.
- Work with the surrounding neighbors to find solutions and resolve differences.
  - Facilitate on-going public education and support for long-term commitment.

## **PART II**

### **THE BASIC ELEMENTS OF AN EFFECTIVE MANAGEMENT PROGRAM**

Given the unquestionable fact that management of public lands and waters will always be “a work in progress,” the following elements will ensure that the County’s approach to resource management is moving in the right direction.

#### **First:**

The goals for the management of the area will be clearly defined in a plan, and reflective of and compatible with the overriding purpose for which the area was acquired.

#### **Second:**

All areas will be made secure from destructive vandalism, and other forms of intentional abuse and impacts.

#### **Third:**

A survey of the area to identify significant native and exotic plant species, protected or endangered wildlife and habitats, and/or significant cultural resources will be undertaken.

#### **Fourth:**

Utilizing initial survey data from step three, an interim program will be set up to protect important natural areas and features from explosive growth of exotic vegetation as well as the excessive build-up of fuel loads. A plan for low-impact use will be prepared and ready for immediate implementation until a more comprehensive approach to the overall management program is implemented.

#### **Fifth:**

A detailed management plan will be crafted which outlines the objectives, actions, time-lines, opportunities for sustainable sources of income, and estimates of the human and financial resources needed, on an annual basis, to make acceptable progress toward the goals for the management of this property.

#### **Sixth:**

An annual work plan will be drafted and realistic funding allocated to accomplish the plan. The annual program will include a stable source of funding for staff and equipment sufficient to ensure that the property will not degrade through unregulated use, continued lack of fire management, exotics species invasion, neglect and/or vandalism under public ownership.

#### **Seventh:**

A coordinated reporting mechanism will be in place to consistently measure accomplishments towards the annual work plan objectives and the overall goals of the project.

### **PART III LEVELS OF MANAGEMENT**

The following outlines a set of management categories complete with a list of activities that will be used for all lands under that category regardless of agency mandate. These categories will be used to evaluate and plan for the management of all County-owned properties and other environmentally protected land in the County. This information provides a common language and standard for all of the people involved in the land management debate, regardless of agency, affiliation, or background. By assigning levels of management, the County will be implementing the TNC 2000 recommendation to prioritize management on its sites.

All County-owned properties with significant native habitat will be assigned to these management categories. Currently those natural areas identified for on going land management include lands under the responsibility of Natural Resources and Natural Area Parks. Other environmentally protected lands within the County, including but not limited to those under the responsibility of Resource Protection and Public Works, will be assigned to a management category for consistency in evaluation and management plan development. The management plan provides a tracking mechanism to identify how well the County is providing stewardship. Individual sites may move in the classification scheme over time as public priorities change; however the underlying ecological values and functions will take precedence.

#### **LEVEL I BASIC MANAGEMENT**

This conservative approach is the minimal level necessary to ensure that lands will not significantly degrade after acquisition by the County. This level of management secures the site from further neglect and/or future vandalism and that it will not significantly degrade from excessive fuel accumulation or exotic species proliferation. It ensures that all of the options of the County will be available as the needs of the resource and the desires of the citizens are better understood, and adequate funding is available to maintain existing management or achieve more intensive management goals. Most areas can be maintained indefinitely at this level of management without significantly affecting future potential for the site.

Initiation of management actions will commence immediately upon acquisition of lands and will utilize funding approved for such activities as signs, gates, fencing, and trash removal. Effective basic management should be in place as soon after acquisition as possible and never more than one year following acquisition. All lands acquired by Sarasota County for environmental purposes will receive this baseline funding.

Basic management may be the suitable long-term level for lands acquired with a less than fee interest (e.g. conservation easement). Management costs may be borne by the landowner with regular County review.

### **Characteristics of Basic Management:**

1. Initial funding is allocated and spending authority vested in the lead management agency.
2. Property secure from vandalism, dumping, and inappropriate public use through routine patrol (minimum once per quarter). Observations GPS monitored and GIS recorded.
3. An initial GPS inventory of the entire site including sensitive natural communities and species, cultural features, access and trails, and exotic vegetation is completed by appropriate professionals and entered onto the GIS.
4. Management activities may include fencing, posting, trash removal, and routine patrol.
5. Management activities may be undertaken through in-house staff, contracted labor, volunteers, and short-term lease and/or management agreements.
6. An interim program for maintenance of fuel levels and invasive, exotic species is in place either through authorized and appropriated contract funding, temporary leases, or funded agency work plans.
7. Goals for long-term management and use have been developed and if appropriate, a schedule to move to another management level of the site is determined.
8. Minimal hiking trails and simple parking facilities may be provided where there are useable areas already disturbed and appropriate for existing wildlife and the land. Non-motorized water-based activities can proceed as previously established. Existing motorized water-based activities are evaluated, and if appropriate, may continue.
9. Annual work plan developed to prioritize actions with funding.
10. Annual review completed to evaluate site conditions.

### **LEVEL II SPECIAL PURPOSE MANAGEMENT**

The management actions described in Level II may not be achieved before the end of the second year of ownership or longer on those areas designated as remaining in basic management for a longer period due to funding constraints. Areas designated to receive permanent Level II management are areas purchased for a specific purpose for which a level of controlled public use would be more appropriate. This may represent an interim level for properties that will advance to a higher management and more diverse use.

### **Characteristics of Special Purpose Management:**

1. Basic security is in place as described in Level I management.
2. A GPS inventory of the entire site including biodiversity and succession of sensitive natural communities and species, cultural features, access and trails, and exotic vegetation is completed and entered onto the GIS.
3. Existing road network is evaluated and an appropriate network of roads/trails for management and access is defined and standards of maintenance identified.



4. The site is patrolled at least once per month and key resources GPS monitored and GIS recorded.
5. Public access sites are identified referencing the inventory data. Basic parking lot, trails and signs are in place being careful not to impact intact high quality features.
6. The long-term management plan is completed and a phased work plan, projected budgets and sources of income identified.
7. In accordance with objectives of the management plan, resource management activities are scheduled and funded. These will include at minimum, maintenance of existing fire-type habitats, control of the spread of invasive exotics, and identification of needed hydrologic and habitat rehabilitation and restoration requirements complete with recommended time sequence for implementation. If it is determined that resource management maintenance or restoration activities will not be undertaken within significant areas of a site, a justification for this decision is articulated.
8. In accordance with the management plan, low impact boating, swimming, picnicking, fishing, nature study and environmental education will be identified as appropriate uses for suitable areas. Amenities and staff needed to effectively serve these activities will be established according to a realistic funding schedule.
9. A plan to address the needs and monitor the status of endangered species populations, especially those known to occur in low numbers on the site is in place.
10. A plan to provide research opportunities appropriate for the site is coordinated with academia to measure biodiversity and ecological health of identified natural systems.
11. An annual work plan is developed to prioritize actions with funding based on public and staff input.
12. An annual report is completed to describe what was done with what resources, and improvements needed.

### **LEVEL III**

#### **NATURE BASED RECREATION SITES AND RESTORATION PROPERTIES.**

This level of management is appropriate for relatively large tracts such as most natural area parks, preserves, and reserves and those areas acquired expressly for resource dependent recreational activity. This level of management provides for many types of public use, restoration, and more intensive uses.

The implementation of this level of management requires substantial financial investment and will not be undertaken without accurate, site-based information and a disciplined planning process. Permanent, irreversible actions at sites designated for this level of management will never be taken in advance of the process outlined below.

Sites identified for this level of management can be managed indefinitely at Level II. In addition to Level II management and before the full plan is developed, existing impacted

areas (especially those located along the periphery of the property), such as roads, campgrounds, houses, fishing docks, boat ramps, etc. will be evaluated for continued use at a level consistent with the ability of management to provide safe and secure access until the formal planning process is completed. Pine plantations, improved pasture and other highly modified agricultural lands will likewise be evaluated for continued use before the formal planning process is complete, assuming the uses are understood to be subject to change and there are no obvious environmental issues involved with the continued activity.

### **Characteristics of Nature Based Recreation Sites and Restoration Properties:**

1. Security measures are in place.
2. Improved pasture areas have been leased for continued low density grazing or arrangements are in place for mowing or burning of converted pastures to ensure that they will not become excessively weedy until restoration is initiated. Lease requires cattle will be restricted and fenced from flowing waterways.
3. A comprehensive GPS survey for natural communities and species, cultural features, access and trails, and exotic vegetation is complete and significant resources are carefully GIS mapped and available for management.
4. A timber survey is complete where appropriate.
5. Existing road/trail network is mapped and any known road problems and hydrologic concerns with road network are identified and mapped.
6. The property is designated into management use areas based on historic uses, current access, scenic values, potential recreational values and uses, sensitivity of resources and potential ease of access.
7. Regularly scheduled stakeholders' meetings for public input are established and media used to disseminate information.
8. A management plan is written or revised, if previously written at another management level, which addresses the following: location, estimated carrying capacity and types of approved uses; description of facilities needs and recommended time line for capital construction; location of permanent roads for resource management and visitor access; resource management needs and standards; protection of sensitive and limited natural and cultural features; funding needs, monitoring of management actions and use impacts; budgets; staffing needs; and a time line for implementation.
9. Restoration needs are identified to reestablish a functional ecosystem with sufficient biodiversity to continue over a long time span in response to changing environmental conditions.
10. A plan to provide research opportunities appropriate for the site is coordinated with academia to measure the success of managing the site's biodiversity and ecological health.
11. An annual work plan is developed to prioritize actions with funding based on public input.
12. An annual report is completed to describe what was done with what resources, and what improvements could be instituted.

## **LEVEL IV CRITICAL AREA MANAGEMENT**

This level of management is applicable to areas with natural and/or cultural features of highest quality where lack of immediate or highly protective management attention results in the potential extinction or extirpation of a species or natural community or loss of a one-of-a-kind cultural resource. These areas represent the most sensitive areas for management.

This level applies generally to environmentally sensitive lands acquired as part of an approved habitat conservation plan, critical wildlife areas such as bird rookeries, and historical sites. Some preserve areas and wildlife reserves may also be determined as needing higher protective management attention should conditions arise, (e.g. jeopardy opinion on endangered species.) Achieving this level of management will require substantial time and commitment of funding for things such as monitoring security, restoration, interpretation, facilities development, and /or appropriate high-level staff.

### **Characteristics of Level IV Critical Area Management:**

1. Critical natural and/or cultural features or species are identified, GPS located, marked, photographed, mapped and documented in GIS as thoroughly as possible (quantitatively and qualitatively) with restricted public access to such records.
2. Intensive security measures are in place to meet the needs of the critical resource (fire breaks, fences, water flow, seed sources and other necessary measures).
3. Appropriate experts and authorities are consulted as soon as possible to determine if there are any immediate actions that should be taken to safeguard against loss in the short term. These actions are implemented and documented under expert supervision.
4. Solicit research from universities and other qualified groups to increase knowledge and appropriate management for identified species, native communities and cultural features.
5. Exotic vegetation management activities are immediately initiated utilizing volunteer, contractual, or in-house staff to control exotic vegetation throughout the site. Quarterly assessment is required to assure comprehensive control of exotics. Utilize GPS/GIS tracking and mapping of exotics, to guarantee long-term management control.
6. The management plan is modified or completed addressing approved uses of site, access to site; monitoring plan to assess status, impacts and carrying capacity; restoration plan for site or feature; recovery plan for species; outreach plan to educate user groups and neighbors about size and its significance; management action timeline; staff and funding requirements and sources.
7. Measures of critical habitat success are developed with professional oversight.
8. An annual work plan is developed to prioritize actions with funding based on public agency support.
9. An annual report is completed to describe what was done with what resources, and what needs to be done better.

## **PART IV**

### **MEASURING OUR SUCCESS ON A COUNTYWIDE BASIS**

Natural resource managers are constantly confronted by the ever-increasing demands that are placed on these areas by a continually growing and changing population. Balancing conflicting user desires while maintaining the integrity of the natural system is the challenge that every manager faces. Standards and measures are defined that will provide feedback on the effectiveness of management and provide guidance to managers when conflicts arise.

The following sections suggest some measurable trends that will provide some reasonable indices to gauge our progress in protecting the County's unique and irreplaceable natural resources.

#### **General Native Communities:**

- Examples of all of Sarasota's native community types existing on public lands maintained according to function, connectivity and diversity, and expand into previously disturbed areas through natural succession or state-of-the-art restoration techniques.
- More native forested communities evolve to older growth forested areas.
- Listed species populations whose habitats needs were primarily met on public lands stabilize and many increase.
- Less acreage devoted to roads or converted to disturbed land cover types on public conservation lands.
- More acres of fire dependent, native communities burned using prescribed fire.
- The spatial extent of exotic species invasion decreases from our public lands and waterways.
- No new invasive exotic species invasions occur on public lands.
- Hydrologic regimes of streams and wetlands closely track natural weather patterns and natural conditions.
- The negative impacts of human use activities on water quality and submerged and emergent vegetation in areas adjacent to and surrounded by public lands stabilize and in some areas, show a steady decline of negative impacts.

#### **Conservation Issues:**

- An accurate vegetation community map has been developed, and published in a peer reviewed journal.
- An inventory for plant and animal species has been conducted and recorded in a statewide or regional database such as Florida Natural Areas Inventory (FNAI).
- An inventory of special features (cultural sites, record trees, rookeries, etc.) has been conducted and documented in a statewide database such as FNAI or State Historic sites.

- The above information is GPS mapped or otherwise documented in GIS and appropriately available to the public and maintained in a standardized, repeatable QA/QC environment.
- The management staff has at least a conceptual understanding of the historic conditions and the natural disturbance regimes of the site prior to European settlement and restoration goals designed to approximate these within the context of intended use, public desire and local environmental needs.
- Staff uses the above information to guide management and facilities planning, and educating the public.
- Invasive exotic species populations have been located and an on-going program to remove or maintain numbers at acceptable levels of impact is in place with specific, accountable goals for each site.
- Listed plant and animal species populations are being tracked through a monitoring program (at a presence/absence level for those populations that appear robust or at a more intensive level for those that are severely limited in numbers or if this is known to be one of the only populations under protected status).
- For those populations, which appear to be in decline, a specific program of research driven action is in place to address decline.
- The condition and needs of the natural communities are defined. A specific program is in place to maintain and/or improve the condition of those natural communities, which are known to be limited, and/or in severe decline in the County.
- For those natural communities in which fire is known to have been historically significant, a program is in place to restore, maintain or mimic the role of fire in the system. The approach is designed to be as consistent with the existing understanding of the natural fire regime as possible (i.e. frequency, season, intensity.) If it is determined that the fire maintained community will be allowed to succeed without fire disturbance, there is a clearly articulated reason for this decision.
- Point and nonpoint pollution sources generated from the site are known and a plan is in place and being implemented to address these. Offsite impacts to the site are addressed.
- Timber management of native forest types mimics the natural demographic and disturbance patterns in native stands.
- Disturbance of soil, native ground cover, and underwater vegetation is kept to a minimum area of impact and intensity, mimicking natural disturbance patch dynamics as much as possible.
- Dams, ditches, and other hydrologic alterations are located and evaluated as to the feasibility and cost/benefit of removal or repair. A plan (complete with implementation schedule and predicted performance versus monitored actual performance included in annual report) is in place as deemed appropriate given the analysis.

#### **Security and Property Management Issues:**

- Boundaries are marked, fenced, or otherwise designated and secure.

- No new roads or facilities are constructed in natural habitats without a thorough inventory and understanding of potential impacts to the native habitats and species as well as the logical placement for user groups.
- Access occurs through legally defined and regularly monitored points of entry.
- Roads and trails are marked, regularly patrolled (minimum once a month) and unauthorized vehicular traffic is controlled.
- Trash dumping has stopped and any existing areas have been evaluated for contaminants and have a plan for removal as necessary. In case of known environmental hazards (e.g. dipping vats), their location is documented, and a plan developed to address those areas that are threatening water supplies and human occupations.
- Historic roads and trails have been evaluated as to their necessity for management and public access. Roads and trails that severely impede hydrological function or severely impact natural ecotonal habitats or highly threatened natural communities or listed species have been identified and a plan is in place (including an implementation schedule) to repair, close, or redirect these roads as most appropriate. A program is in place to reduce and/or contain existing road footprints.
- Areas of active erosion caused by historic land use practices (old mine pits, road or trail problems, logged or grazed slopes, etc.) have been identified, activities stopped if necessary, and a program is in place to stabilize erosion and revegetate as necessary.
- Landscaping is done using native species. Existing non-native landscaped areas are being converted to natives with an aggressive exotic management program.
- Conversion of intact native habitats to improved pasture or plantation forests does not occur. Improved pastures and plantation forests that exist as a result of previous management decisions and are determined to be non-recoverable to a more native aspect are the areas preferred for infrastructure development or lease. Those that persist are maintained in such a way as to minimize off-site impacts and ensure commodity production is sustainable and requires the least amount of agency input.
- Endangered species are tracked, mapped and monitored according to the best available experts and practices.

**Public Involvement:**

- Managers know their neighbors and have relayed major management activities using technology for efficient and convenient communication.
- Managers understand the significance of the site relative to the larger ecological region in which it occurs and they are in regular contact with other agency staff as necessary to coordinate activities that are required to realize the goals of the site.
- Managers have a commitment to increasing knowledge and involvement, encouraging university faculty and students, other resource managers, historians, scientists, etc. to study and share information germane to the area's long-term protection. Such efforts are conducted in a consistent and repeatable format.

- In heavily used areas, acceptable levels of impact have been estimated with input from agency biologists, scientific advisors, and managers.
- Managers have established methods for input from user groups. Where possible, organized user groups participate in patrol, interpretation, and maintenance of use areas. User groups might also assist in establishing appropriate use densities under acceptable standards of impact.
- Property use rules are well posted and enforced by the County.
- In heavily used areas, informational signs and/or programs are available to educate users and provisions are made for monitoring impacts and closing areas when necessary.

## **Partners**

There are numerous initiatives within the County that will benefit from this collaborative land management effort including trails, parks, watersheds, sustainable infrastructure, habitat corridors, regional mitigation, long-range planning, and land acquisition programs. Coordination with other federal, state, regional, and local agencies and private landowners also will be improved. Such entities include:

- U.S. Fish & Wildlife Service
- U.S. Army Corps of Engineers
- The Nature Conservancy
- Sarasota Bay and Charlotte Harbor National Estuary programs
- West Coast Inland Navigation District
- Southwest Florida Water Management District
- Florida Fish & Wildlife Conservation Commission
- Florida Division of Historical Resources
- Florida Communities Trust
- Florida Greenways Coordinating Council
- Florida Department of Environmental Protection (Myakka River and Oscar Scherer State Parks)
- Florida Division of Forestry (Myakka State Forest)
- Neighborhood and community planning initiatives (e.g. Osprey, Nokomis, South Venice, Englewood)
- Private natural areas (e.g. Countryplace, Venetian)
- Conservation easements (e.g. Longino Ranch, Heritage Ranch)
- Sarasota County School Board (e.g. McIntosh Middle School, Booker Environmental Academy, Pine View, Venice High School)
- Manatee County Conservation Lands Management
- Charlotte County Parks & Recreation
- Southwest Florida Land Managers Working Group
- Suncoast Exotic Plant Working Group
- Municipalities of Longboat Key, Sarasota, Venice and North Port

The previously listed trends are incorporated into the following 6 goals and 26 measures.

## **PERFORMANCE MEASURES**

### **GOAL 1: Enhance the coordination of protection of areas with high ecological value.**

Measure: The number of acres protected through the use of alternatives to fee simple acquisition.

Measure: The number of acres acquired through the County's or other natural resource agencies land acquisition programs that contribute to the completion of ESLPP sites.

Measure: The number of shared acres managed through partnerships including state and local governments, non-profit organizations, and others.

Measure: The customer satisfaction rating of environmental information on publicly owned lands stored and retrievable using the best available, cost effective technology.

Measure: The shared costs between agencies to restore the Myakka Island (those publicly owned lands along the Myakka River).

### **GOAL 2: Increase the protection of SW Florida's biodiversity at the species, natural community, and landscape levels.**

Measure: The number of acres protected of County-designated areas of high ecological value.

Measure: The percentage of publicly owned lands that enhance the comprehensive plans of the National Estuary Programs of Sarasota Bay and Charlotte Harbor.

Measure: The number of acres of under-represented ecosystems acquired and managed.

Measure: The number of acres of significant landscapes, landscape linkages, and conservation corridors, acquired or otherwise protected giving priority to completing connections.

### **GOAL 3: Protect, maintain, and restore the quality and natural functions and values of land and water resources of the County.**

Measure: The number of acres of publicly owned land identified as needing restoration; acres undergoing restoration; and acres with restoration activities completed.

Measure: The number of acres acquired that protect natural floodplain functions.

Measure: The number of acres of functional wetland systems protected.



Measure: The percentage of publicly owned lands in which invasive, non-native plants are under maintenance control.

Measure: The percentage of publicly owned lands in which fire dependent communities are treated within the standard fire regime.

**GOAL 4: Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the County.**

Measure: The number of acres acquired and managed which provide retention and storage of surface water in naturally occurring storage areas, such as wetlands, consistent with the maintenance of water resources or water supplies and consistent with Southwest Florida Water Management District and the County water supply plans.

Measure: The number of protected acres of ground water recharge areas critical to the surficial, intermediate and Floridan aquifers, other natural systems, or water supply.

Measure: The stream or natural flow volume restored using existing facilities or facilities created with minimal disturbance to existing natural resources.

Measure: The percentage of proposed state, regional or county projects reviewed by a multi-disciplinary team in the conceptual phase for impact to the natural systems.

**Goal 5: Increase natural resource-based public recreational and educational opportunities.**

Measure: The percentage of acres identified and used on publicly owned lands for natural resource-based public recreation or environmental education, especially those identified in the County's Parks Needs Assessment.

Measure: The number of amenities and miles of trails that are available for public recreation, giving priority to those that provide significant connections as identified in the County's Trails Master Plan and the Florida National Scenic Trail.

Measure: The number of partnerships formed with little or no cost to the County that provide natural resource-based public recreation or environmental education as identified in the County's Trails Master Plan and County's Parks Needs Assessment.

Measure: The number and percentage of satisfied users to publicly owned lands providing natural resource-based public recreation or environmental education.

**Goal 6: Preserve significant archaeological or historic sites.**

Measure: The percentage of publicly owned land surveyed for high probability areas.

Measure: The percentage of known site types occurring in Sarasota County, which are owned by the County.

Measure: The percentage of known eligible sites on publicly owned land recorded with the National Register of Historic Places.

Measure: The percentage of publicly owned sites with completed recommended research by authorized partners at little or no cost to the County.

### **Summary**

Acquisition of a piece of property is a one-time event. Management of that property is a continual process. It is important to understand this distinction in order to effectively design systems and approaches to ensure that the management of the lands and waters held in trust for this and future generations are managed effectively over time.

This LMM PLAN will bring all land management plans to a consistent format under established policies for their use. It should be stressed that this LMM PLAN is intended to provide the foundation for the individual land management plans needed to achieve site-specific actions. The main goal of the LMM PLAN is to provide strategies, policies and guidelines to consider when managing natural environmental areas in Sarasota County.

The addenda include TNC's summary of its 2000 land management audit, a map of natural environmental areas in Sarasota County, an environmental lands inventory, a habitat matrix, the Land Management GIS Plan, individual management plan format, and governing documents for land management in Sarasota County.

# Addenda

**ADDENDUM A: Summary and Team Members from The Nature Conservancy – An Evaluation of Sarasota County’s Management of Conservation Lands, James Murrian, Walt Thomson, Lincoln Bormann, May 2000.**

## Executive Summary

### **Primary goals of the evaluation**

1. To review the goals and management plans for specific sites;
2. To gauge the effectiveness in implementation of plans for individual sites;
3. To determine overall effectiveness of management given the resources available, and;
4. To determine the overall effectiveness and efficiency of management to restore and maintain natural communities to promote biodiversity.

### **Key findings and recommendations**

Management funding should be increased. While management practices are acceptable, the number of acres treated each year is inadequate. The basic objective should be to shift from a management regime involving mostly restoration (e.g. exotics removal and roller chopping) which has high per acre costs to a less expensive maintenance program (at approximately one-tenth of the overall cost per acre). The county needs to spend more up front both to get to an adequate level of management and to potentially reduce costs significantly on an annualized basis.

Resource Management is markedly understaffed. Even with the ability to contract for services, the County needs to add staff to manage existing conservation lands. For example, the team recommended that managing the Carlton and Pineland Reserves alone would require at least 4-6 full time staff, just for prescribed fire, security, monitoring, planning and contract administration.

Annual management goals should be set based on need rather than available funding. The current available funding approach clearly is not resulting in an adequate level of management. Management targets should be set based on the requirements of the ecosystem (habitat and species).

Managers should prioritize among sites. The county should focus all of its management resources on larger properties where biodiversity is higher and management costs are lower due to fewer constraints and economies of scale. For example, the county might want to transfer sites like Alligator Creek from Resource Management to Parks and Recreation for development into more active recreation areas or other uses.

Increased coordination among County staff is needed. There needs to be a higher level of coordination among staff in different business centers to avoid duplication and avoid potential conflicts in management objectives.

## **Team Members**

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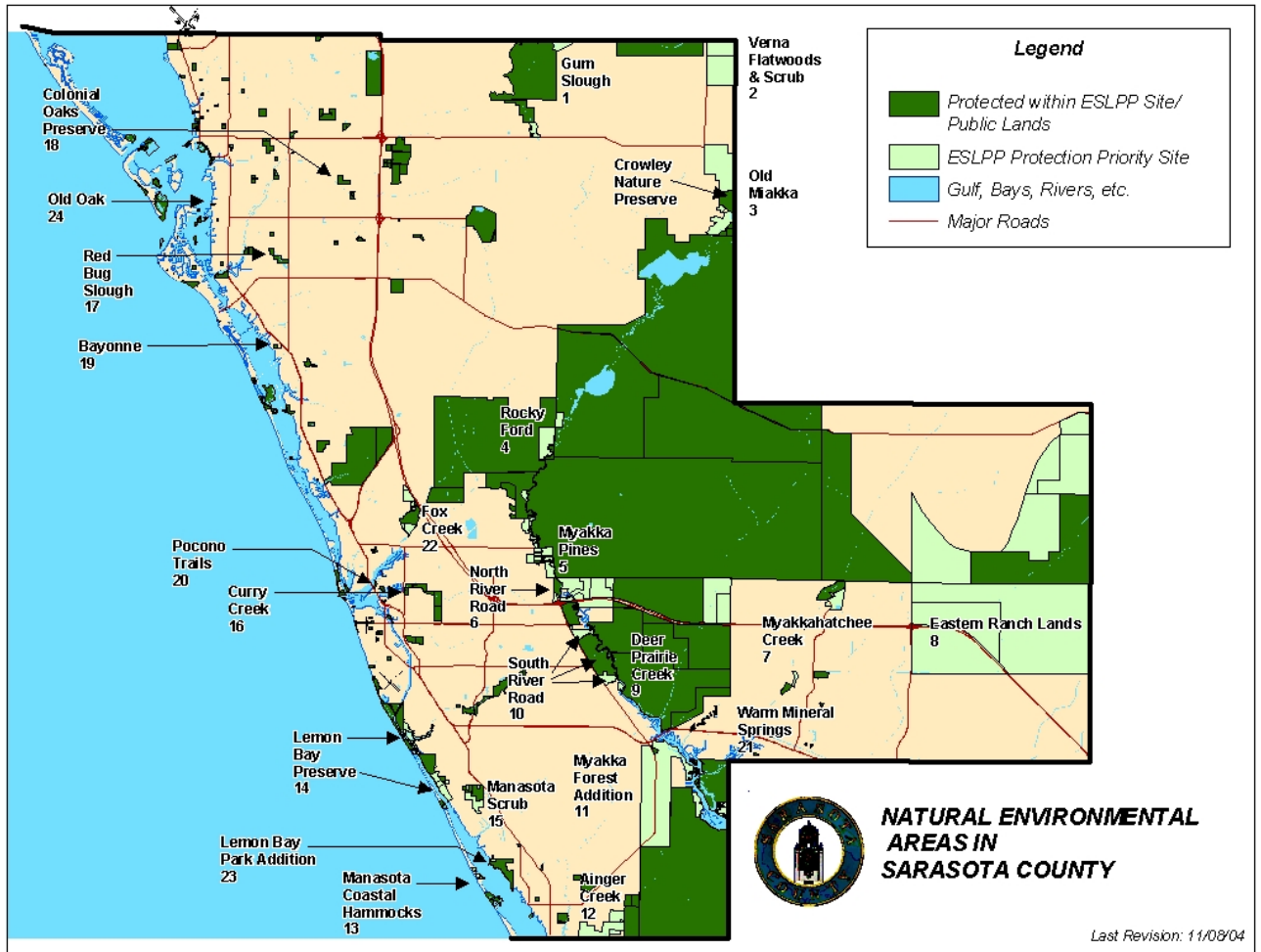
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## ADDENDUM B: Natural Environmental Areas in Sarasota County



## ADDENDUM C: Environmental Lands Inventory in Sarasota County

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Ainger Creek	State DOF /NR-ESLPP	121	1,3	riverine wetlands, hammock & pine flatwoods	coordinate with DOF, combine management w/state forest	primitive trails, horseback riding
Alligator Creek Conservation Area	NR	211	1	creek	exotic control	green space
Bay Street Park	P&R	20	1, 3	scrub, pine flatwoods, hammock, wetlands	exotic control, fuel reduction, trail, habitat enhancement, management plan	picnic shelter, restrooms, playground, retention pond, future trail
Bayonne Site	NR-ESLPP	11	1, 2	scrub, shell mound, historic site	exotic plant control, trails & signs, parking	primitive trails
Bee Ridge & Honore Park	P&R	50	1, 2, 3	pine flatwoods, pasture, hammock, swamp	exotic control, management plan	nature-based recreation, cattle
Blackburn Point Park	P&R	5	1, 2	bay shoreline, mangroves	exotic control, management plan, parking, boat ramp	fishing, small boat access, nature appreciation, mitigation site
Blind Pass Beach & Intracoastal	P&R	66	1, 3	bay & gulf shoreline, beach, dune, mangroves, coastal hammock, sea turtle nesting	exotic control, spoil pile removal, management plan	swimming, fishing, dock, nature trails, picnicking, restrooms, PW mitigation site, future boat ramp
Carlton Memorial Reserve	NR/P&R/Utilities	24,565	1, 2, 3, 4	riverine wetlands, hammock & pine flatwoods, Florida panther	update management plan, exotic control (plant & animal), archaeological survey & restoration, prescribed burning, improved access	water treatment plant, public use area w/restrooms, picnicking, ADA accessible trails, log cabin; hiking, biking and horseback riding trails; cowboy camp; listed species habitat; PW restoration site

Management Classification  
 1 Basic  
 2 Special Purpose  
 3 Nature Based Recreation  
 4 Critical Habitat

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Caspersen Beach	P&R/NR	113	1, 3	bay & gulf shoreline, beach, mangroves, coastal hammock	exotic plant control, limit vehicular access, facility maintenance	swimming, fishing, primitive trails, ADA accessible boardwalk, restroom, gazebo, parking lot, part of Venetian Waterway Trail, ALS adopted site
Caspersen Intracoastal	P&R/NR	110	1, 3, 4	bay & gulf shoreline, beach, mangroves, scrub, listed species	exotic plant control, prescribed burning, reclamation	nature trails, potential scrub-jay habitat restoration, part of Venetian Waterway Trail
Curry Creek Preserve	NR-ESLPP	82	1, 3	creek, longleaf pine, scrub	trails, exotic plant control, prescribed burning, restoration	nature-based recreation
Deer Prairie Creek	SWFWMD/NR-ESLPP	6371	1, 2, 3, 4	river, creek, salt spring, hammock, scrub, pine flatwoods & dry prairie	joint management plan, exotic control, archaeological survey, prescribed burning, trails, canoe launch, restoration, improved access	primitive trails & camping, canoe launch, biking, horse trails, fishing
Eastern Ranchlands	SWFWMD/NR-ESLPP	3420	1	private management	annual monitoring	conservation easement
Edwards Island (Big & Little)	P&R/NR	32	1	bay islands w/cedars, mangroves	exotic control, management plan	spoil island restoration project
Fox Creek	PW	376	1, 2, 3	creek, mangrove, marsh, scrubby flatwoods, pasture, bald eagle	scrubby flatwoods treatment, prescribed burning, protect active eagle nest	Honore Avenue mitigation & possible ESLPP site, wildlife viewing, canoeing, fishing, blueways and greenways trails

Management Classification  
1 Basic  
2 Special Purpose  
3 Nature Based Recreation  
4 Critical Habitat



Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Gum Slough	TNC/Prvt	2172	1	slough and adjacent uplands	annual monitoring	conservation easement
Indian Mound Park	P&R	10	2, 3	bay shoreline, shell mound	management plan	fishing, boating, nature trails, picnic pavilion, restrooms
Jelks Preserve	NR/P&R	615	1, 3	riverine wetlands, hammock & pine flatwoods	management plan, exotic plant control, prescribed burning	primitive trails, canoe/kayak launch
Kiwanis Park/Buchan Park	P&R	29	1	pine flatwoods, airport, emergency services station	management plan, prescribed burning, exotic control	primitive trails, playground, model car race track, potential scrub enhancement
Knight Trail Park	P&R/Utilities	377	1, 2, 3	pine flatwoods, wetlands, hammock, scrub	exotic control, management plan	gun range, primitive trails, fitness trail, former Venice spray irrigation site, scrub habitat restoration
Larry C. Manning Memorial Preserve	NR	13	1	forested wetland	monitor & treat exotics, management plan updated 11/04	green space, mitigation
Lemon Bay Park	P&R/NR	196	1, 3, 4	bay shoreline, pine flatwoods, eagle nests	exotic control, fuel reduction, archaeological survey, update management plan	ADA accessible boardwalk, primitive trails, nature center w/restrooms; tennis courts
Lemon Bay Preserve	PW/NR-ESLPP	165	3, 4	scrub, spoil mounds, FL scrub-jays	update management plan, exotic control (plant & animal), restoration, prescribed burning, improved access	road mitigation site, primitive trails, scrub & hydrological restoration
Lemon Bay Preserve Additions	NR-ESLPP	21.04	1, 3	pine flatwoods, fresh & saltwater marshes, mangroves, bald eagle & FL scrub-jays	exotic plant control, prescribed burning, restoration	primitive trails, listed species habitat

Management Classification  
1 Basic  
2 Special Purpose  
3 Nature Based Recreation  
4 Critical Habitat

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Longwood Park	P&R	20	1	pine flatwoods, wetlands	exotic control, fuel reduction, management plan	picnicking, walking, playground
Manasota Scrub	NR-ESLPP/P&R	145.1	1, 3	scrub, pine flatwoods	management plan, exotic plant control, prescribed burning, restoration, trails	primitive trails, listed species habitat, scrub enhancement
Myakka Pines	NR-ESLPP	22	1, 3	river shoreline, freshwater wetlands, hammock & pine flatwoods	management plan	wildlife corridor, canoe/kayak landing
Myakka Prairie	FDEP /SWFWMD	8249	3, 4	slough, freshwater wetlands, dry prairie, pine flatwoods, hammock	monitor & treat exotics, management plan updated 10/04	nature-based recreation, wildlife corridor
Myakka River State Park	FDEP	28890	3, 4	river, slough, freshwater marshes, hammock, dry prairie, pine flatwoods, scrub	monitor & treat exotics, management plan updated 10/04	nature-based recreation, wildlife corridor, dry prairie restoration, research sites, listed species habitat
Myakka River/Schewe	SWFWMD	3992.76	3, 4	slough, freshwater wetlands, pine flatwoods, hammock	combine management with Deer Prairie Creek, revise management plan	nature-based recreation, wildlife corridor
Myakka State Forest	State DOF	8,593	3	river, freshwater wetlands, pine flatwoods, hammock	update management plan	canoe/kayak dock, primitive camping & trails, mountain biking
Myakka State Forest Addition	NR-ESLPP	3.7	1	pine flatwoods	DOF manage with state forest; site monitoring	primitive trails, open space
Myakkahatchee Creek Conservation Easement	SWFWMD	4548.01	1, 2	slough, pine flatwoods, dry prairie and freshwater marshes	annual monitoring	conservation easement; no public access
Myakkahatchee Creek Environmental Park	P&R	166.59	3	slough, hammock, pine flatwoods	exotic control, fuel reduction	trails, observation deck, restrooms, primitive group camping, City of North Port owns

Management Classification

1 Basic

2 Special Purpose

3 Nature Based Recreation

4 Critical Habitat

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Neville Marine Preserve	P&R/NR	116	1	bay, salt tern, spoil islands, mangroves	exotic control, management plan	spoil island restoration project
North Metro Park	P&R	600	1	man-made lake, pine flatwoods	exotic control, management plan	fishing, walking, boat ramp, restrooms, paved urban trails
North River Road	NR-ESLPP	304	1, 3	riverine wetlands, hammock, pine flatwoods	exotic plant control, prescribed burning, restoration, trails, management plan	fishing, hiking, canoe/kayak landing
Oaks Park	P&R	11.36	1	hammock, stream	exotic control	City of North Port owns
Old Miakka	Prvt	108	1	river, freshwater wetlands, oak hammock	site monitoring	river corridor protection, fishing, primitive trails
Oscar Scherer Buffer	NR	303	1, 3, 4	pine flatwoods, freshwater marshes, bald eagle nests	management plan	potential Honore extension, primitive trails connected to RR corridor & OSSP, fishing, listed species habitat
Oscar Scherer State Park	FDEP	1,384	3, 4	creek, scrub, pine flatwoods, FL scrub-jays	update management plan	nature-based recreation, scrub restoration, listed species habitat
Otter Key	P&R/NR	30	1	mangrove island with minimal upland	exotic control management plan	spoil island restoration project
Palmer Point Beach	P&R	30	1	bay & gulf shoreline, beach, dune, mangrove, sea turtle nesting	exotic control, management plan	swimming, nature trails, ALS adopted site

Management Classification  
1 Basic  
2 Special Purpose  
3 Nature Based Recreation  
4 Critical Habitat

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Phillippi Estate Park	P&R	60	1, 2, 3	creek, mangroves, hammock, historic house w/parking, shell mound	exotic control, management plan	fishing, canoe/kayak launch, nature trails, gazebo, special events
Pinecraft Park	P&R	15	1	hammock	exotic control, management plan	trails, boat ramp, fishing
Pinelands Reserve	NR/Solid Waste	6,151	1, 2, 3	pine flatwoods, hammock, freshwater marshes, slough, bald eagles, FI panther	update management plan	nature-based recreation, wetland mitigation, landfill, horse trails, fishing, trail connection to Carlton
Plantation Park	P&R	20	1	pine flatwoods, wetlands	initial assessment & planning, management plan	open space, primitive trails
Pocono Trails	NR-ESLPP	8.17	1, 3	creek, mangroves, upland	management plan	nature-based recreation
Potter Park (includes Stoneybrook)	P&R	37	1	pine flatwoods, scrub, hammock, stream, wetlands	exotic control, fuel reduction, management plan	YMCA, trails, climbing wall & tower, trail w/boardwalk
Quick Point	Town of LBK	34	1, 3	bay shoreline, mangroves	exotic monitoring	ADA accessible trails, fishing, canoe/kayak launch; Town of LBK owns
Rattlesnake Island	P&R/NR	11	1	bay island	management plan	spoil island restoration project
Red Bug Slough	NR-ESLPP/P&R	72	1, 3	slough, pine flatwoods, hammock	management plan, exotic control, resolve encroachments	nature-based recreation, environmental ed site, stormwater waterway
Rocky Ford	NR-ESLPP	904.58	1, 3	riverine wetlands, oak hammock, pine flatwoods, Florida panther	management plan	nature-based recreation

Management Classification  
1 Basic  
2 Special Purpose  
3 Nature Based Recreation  
4 Critical Habitat

Name	Management Responsibility	Acres	Management Classification	Assets	Needs	Uses
Rothenbach Park	P&R	315	1, 3	former landfill, hammock	management plan	urban, paved trail - multi use
Service Club Park	P&R/NR	10	1	beach, dune, pine flatwoods, scrub, FL scrub-jays	exotic control	picnic shelters, restrooms, parking, City of Venice owns
Siesta Beach Nature Trail	P&R	11	1	gulf shoreline, beach, dune, mangrove	exotic control, fuel reduction	picnicking, trails
South Lido Beach & Intracoastal (Otter Key)	P&R	100	2, 3	bay & gulf shorelines, mangroves, spoil mounds, hammock	exotic control, management plan	NEP restoration project; restrooms, swimming, picnicking, primitive trails w/boardwalk & observation tower, canoe/kayak launch
South Venice Civic Assoc. parcels (17)	P&R/PW	60	1	17 vacant lots, scrub, pine flatwoods, stormwater lakes	site assessment, exotic control, management plan	open space, potential scrub enhancement on some lots
Venetian Waterway Park	P&R/WCIND City of Venice	12	2	ICW linear park	exotic control, scrub enhancement	multi-use linear trail; City of Venice owns; potential scrub enhancement
Warm Mineral Springs Creek	NR-ESLPP	1.85	3, 4	vacant lots along creek	management plan	shoreline protection for manatees, open space
Wellfield Park	P&R	155	2	pine flatwoods, creek, hammock	exotic control	City of Venice owned, open space with active recreation
Woodmere Park - West	P&R	10.8	1, 2	longleaf pine	management plan	open space, canoe/kayak launch
	Total	104,738				

Management Classification  
1 Basic  
2 Special Purpose  
3 Nature Based Recreation  
4 Critical Habitat

## ADDENDUM D: Habitat Matrix for Sarasota County

### I. Terrestrial

<b>A. Xeric Uplands</b>		
<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Sandhill	Turkey Oak Ridges	412/Longleaf pine-xeric oak; 421/Xeric oak
Scrub	Sand Pine Scrub	413/Sand Pine
Xeric Hammock	Xeric Hammocks	421/Xeric oak; 423/Oak-Pine-Hickory; 425/Temperate Hardwood; 427/Live Oak; 432/Sand Live Oak
<b>B. Coastal Uplands</b>		
<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Beach Dune	Beaches, Dunes	322/Coastal Scrub; 710/Beaches
Coastal Berm		322/Coastal Scrub; 426/Tropical Hardwoods; 612/Mangrove Swamps
Coastal Grassland		310/Herbaceous; 322/Coastal Scrub; 419/Other Pines; 428/Cabbage Palm
Coastal Rock Barren		322/Coastal Scrub
Coastal Strand		322/Coastal Scrub; 426/Tropical Hardwoods
Maritime Hammock	Coastal Hammock	322/Coastal Scrub; 425/Temperate Hardwood; 426/Tropical Hardwoods; 427/Live Oak; 432/Sand Live Oak
Shell Mound	Indian Mounds	425/Temperate Hardwood; 426/Tropical Hardwoods; 427/Live Oak
<b>C. Mesic Uplands</b>		
<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Bluff		310/Herbaceous
Slope Forest		431/Beech-Magnolia; 434/Hardwood-Conifer Mixed; 438/Mixed Hardwoods; 439/Other Hardwoods
Upland Glade		310/Herbaceous
Upland Hardwood Forest	Mesic Hammocks	431/Beech-Magnolia; 434/Hardwood-Conifer Mixed; 438/Mixed Hardwoods

Upland Mixed Forest	Mesic Hammocks	414/Pine-Mesic Oak; 423/Oak-Pine-Hickory; 425/Temperate Hardwood; 434/Hardwood-Conifer Mixed; 438/Mixed Hardwoods
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Upland Pine Forest		414/Pine-Mesic Oak; 423/Oak-Pine-Hickory
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**D. Rocklands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Pine Rockland		411/Pine Flatwoods; 419/Other Pines
Rockland Hammock	Mesic Hammocks	426/Tropical Hardwoods; 427/Live Oak
Sinkhole		423/Oak-Pine-Hickory; 427/Live Oak

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**E. Mesic Flatlands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Dry Prairie	Dry Prairies	310/Herbaceous; 321/Palmetto Prairies
Mesic Flatwoods	Pine Flatwoods	411/Pine Flatwoods; 414/Pine-Mesic Oak; 428/Cabbage Palm
Prairie Hammock	Mesic Hammocks	425/Temperate Hardwood; 427/Live Oak; 428/Cabbage Palm
Scrubby Flatwoods	Scrubby Flatwoods	411/Pine Flatwoods; 419/Other Pines

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**F. Wet Flatlands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Hydric Hammock	Swamps; Mesic Hammocks	617/Mixed Wetland Hardwoods
Marl Prairie		621/Cypress; 641/Freshwater Marshes
Wet Flatwoods	Pine Flatwoods	411/Pine Flatwoods; 419/Other Pines; 428/Cabbage Palm; 622/Pond Pine; 624/Cypress-Pine-Cabbage Palm
Wet Prairie	Wet Prairies	310/Herbaceous; 641/Wet Prairies

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**G. Seepage Wetlands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Baygall	Heads	611/Bay Swamps; 614/Titi Swamps

Seepage Slope	310/Herbaceous
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**H. Floodplain Wetlands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Bottomland Forest	Swamps	615/Stream and Lake Swamps (Bottomland); 617/Mixed Wetland Hardwoods; 623/Atlantic White Cedar; 630/Wetland Forest Mixed
Floodplain Forest	Swamps	615/Stream and Lake Swamps (Bottomland); 617/Mixed Wetland Hardwoods; 630/Wetland Forest Mixed
Floodplain Marsh	Marshes and Sloughs	641/Freshwater Marshes
Floodplain Swamp	Swamps	613/Gum Swamp; 621/Cypress
Freshwater Tidal Swamp	Swamps	613/Gum Swamp; 615/Stream and Lake Swamps; 621/Cypress; 624/Cypress-Pine-Cabbage Palm
Slough	Marshes and Sloughs	621/Cypress
Strand Swamp	Swamps; Heads	621/Cypress
Swale	Marshes and Sloughs	641/Freshwater Marshes; 643/Wet Prairies

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**I. Basin Wetlands**

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<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Basin Marsh	Marshes and Sloughs	641/Freshwater Marshes; 643/Wet Prairies; 644/Emergent Aquatic Vegetation
Basin Swamp	Swamps	614/Gum Swamps; 616/Inland Ponds and Sloughs; 621/Cypress
Bog	Marshes and Sloughs (?)	310/Herbaceous
Depression Marsh	Wet Prairies	641/Freshwater Marshes; 644/Emergent Aquatic Vegetation
Dome Swamp	Heads	613/Gum Swamps; 616/Inland Ponds and Sloughs; 621/Cypress



**II. Lacustrine**

<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Clastic Upland Lake		
Coastal Dune Lake		
Coastal Rockland Lake		
Flatwoods/Prairie/Marsh Lake		
River Floodplain Lake and Swamp Lake		
Sandhill Upland Lake		
Sinkhole Lake		

**III. Riverine**

<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Alluvial Stream		
Blackwater Stream	Coastal Streams, Myakka River	
Seepage Stream		
Spring-run Stream		

**IV. Subterranean**

<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Aquatic and Terrestrial Cave		

**V. Marine and Estuarine**

<b>FNAI DESIGNATION</b>	<b>APOXSEE DESIGNATION</b>	<b>FLUCCS DESIGNATION</b>
Consolidated Substrate		
Unconsolidated Substrate		
Coral Reef		
Mollusk Reef	Oyster Bars	
Octocoral Bed		
Sponge Bed		
Worm Reef		
Algal Bed		
Seagrass Bed	Seagrass Beds	
Tidal Marsh	Tidal Marsh	
Tidal Swamp	Mangrove Swamp	
Composite Substrate		

## **ADDENDUM E: Land Management GIS Plan**

A centralized Geographic Information System (GIS) is a high priority and will aid the County in accomplishing their land management goals. A GIS provides the ability to link, analyze, and overlay resource data in ways that cannot be done on paper maps or with tabular databases alone. GIS is a comprehensive, analytical tool that can improve the efficiency and accuracy of management decisions. GIS can track and illustrate past and current resource conditions and can perform modeling techniques to predict future changes within the County's ecosystem and infrastructure.

The GIS program does not stand alone, but rather is an integrated tool with other data management projects, tools, and activities for the overall management of the County. The GIS plan is necessary to identify the GIS program development required to satisfy and support these broader County management needs.

Purposes of this GIS Plan:

1. To outline the long-term goals of the GIS Program
2. To associate those goals with the goals of the Land Management Master (LMM) Plan
3. To identify the necessary elements for a functional GIS program

### **Detailed List of Land Management Data**

The awareness of the value of GIS in land management operations has increased recently and the number of potential GIS applications is innumerable. Natural Resources staff developed the following list that will be used to develop a data catalog, as representative of the types of data collected.

- Wildlife Surveys
  - Bald eagle nests
  - Scrub jays
  - Panther signs
  - Gopher tortoise burrows
  - Herpetological arrays
- Vegetation
  - Photo points
  - Exotics
  - Vegetation reduction
  - Habitat
- Prescribed fire zones
- Wild fire areas
- Trails
  - Types
  - Washouts
  - Conditions
- Gates and information for locks and security

- Fence lines
- Breaches in fence lines and gates
- Structures
  - Bridges
  - Buildings
  - Culverts
  - Camps
- Trash
- Pig rooting
- Timbering
  - Timbering areas
  - Timber ramps
  - Timber trails
- Monitor station locations
  - Wells
  - Wetlands
  - Vegetation transects
  - Surface water stage/discharge
  - ARMS
  - Meteorological
  - Seagrass beds
  - Oyster beds
- Historic maps
  - 1847 General Land Office Plats
  - 1948 aerial photographs
- ESLPP
  - Priority protection sites
  - Other publicly owned land
- Archeological
  - High probability
  - Confirmed historical locations
- Park and recreation amenities (*future*)
- Public access and facilities (*future*)
- Recreation facilities (*future*)

Sarasota County Natural Resources collects this data for a variety of reasons, most of which correspond to responsible management of publicly owned lands. Staff generates databases of environmental conditions that are typically updated at frequent intervals and tied to land management activities. They provide technical expertise and guidance for operational and planning purposes in addition to producing reports for regulatory agencies, government officials, and the public.

GIS data management involves the flow of data from source to database, from database to user, and if modifications have been made, from the data user back to the database, with necessary steps to ensure that data is complete, secure, documented, and accessible.

These steps include a suite of necessary data operations: formatting, quality assurance, documentation (metadata), cataloguing, tracking, backup, delivery, and updating.

### **GPS/GIS Needs Identified by Land Management Master Plan**

#### Level 1 – Basic Management

3. An initial GPS inventory of the entire site including sensitive natural communities and species, cultural features, access and trails, and exotic vegetation is complete and entered onto the GIS. “Trash piles”, as an example, would be a temporary file that would be archived following the removal of the trash.

#### Level 2 - Special Purpose Management

2. A GPS inventory of the entire site including sensitive natural communities and species, cultural features, access and trails, and exotic vegetation is complete and entered onto the GIS. Areas designated for special purpose are included in this inventory (e.g. landfill, water treatment plant, mitigation site).
3. Existing road network is evaluated and an appropriate network of roads/trails for management and access is defined and standards of maintenance identified.
4. The site is patrolled at least once per month and key resources GPS monitored and GIS recorded.

#### Level 3 – Nature Based Recreation Sites and Restoration Properties

3. A comprehensive GPS survey for natural communities and species, cultural features, access and trails, and exotic vegetation is complete and significant resources are carefully GIS mapped and available for management.
4. A timber survey is complete where appropriate.
5. Existing road/trail network is mapped and any known road problems and hydrologic concerns with road network are identified and mapped.
6. Public use areas are identified and mapped.

#### Level 4 – Critical Area Management

1. Critical natural and/or cultural features or species are identified, GPS located, marked, photographed, mapped and documented in GIS as thoroughly as possible (quantitatively and qualitatively) with restricted public access to such records.
5. Exotic vegetation management activities are immediately commenced utilizing volunteer, contractual, or in-house staff to control exotic vegetation throughout the site. Quarterly assessment is required to assure comprehensive control of exotics. Utilize GPS/GIS tracking and mapping of exotics, to guarantee long-term management control.

## **Data Acquisition**

Natural Resources data for input to the Land Management GIS will primarily come from four sources:

1. Data obtained from outside sources (other than Sarasota County) such as SWFWMD, FMRI, etc. This data normally comes with its own Metadata, however, if the Metadata does not comply with Sarasota Metadata Standards, then a new Metadata set will have to be created.
2. Data obtained from other County sources (other than Natural Resources), such as the SDE Database or directly from other business units. Metadata may or may not come with the data.
3. Data digitized from aerial photographs, property surveys or other sources by Natural Resources. Metadata will have to be created.
4. GPS data recorded by Natural Resources or by contractors. Metadata will have to be created for this data. Collection of GPS data should comply with “The Sarasota County GPS Procedures Guideline” and should be graded according to accuracy (in the metadata) as either:
  - A. Autonomous GPS (Accuracy better or equal to 30 meters horizontal). This data is usually taken with a GPS set that does not have the capability to record RTD (Real Time Differential).
  - B. Mapping Grade (Accuracy equal or better to 1 meter horizontal). Recorded with a GPS set with RTD and capable of being post-processed for differential correction.
  - C. Survey Grade (Accuracy equal or better than 1 cm. Horizontal). This type of data is taken using a survey grade GPS and done by a survey crew supervised by a Florida registered Professional Surveyor and Mapper.

## **Data Quality Assurance/Quality Control**

GPS data recorded by Natural Resources staff will be turned into the Resource Management GIS Manager or designee for downloading and entry into the Land Management GIS. The GIS Manager or designee will be responsible for entering the attributes for the data. At a minimum, this will include: the property on which the data was recorded, the type of data (e.g. exotics, trails, etc.), the labeling of the individual data (e.g. Melaleuca, dirt trail, etc.), the date the data was recorded, the person who recorded the data and the type GPS set used.

Only the GIS Manager or a person designated by the GIS Manager will complete all attribute data entry. Quality control of the data is the responsibility of the individual who recorded the data. The GIS Manager will (after entering the data into the GIS- working files) return the data to the person who recorded it in a format that can be checked (e.g. map, table, etc.). In general quality control should follow good data management practices. All attribute accuracy assessments and corrective actions should be documented. Contractors or cooperators should consult with the County, land managers, or program GIS/data manager if guidance is needed about good data management practices. The GIS Manager will ensure that data from all sources has been through quality control and has a complete set of Metadata before it is entered into the final Land Management GIS. All files entered into the final Land Management GIS must be of

sufficient quality that they could be entered into the Sarasota County SDE database with no additional corrections.

The following is a checklist for data quality control:

1. Someone familiar with the source data, usually the person who collected it, will be assigned for the QC review.
2. Does the layer or file name make sense, fit the SCGIS guidelines or adequately describe the data theme?
3. Do the field names make sense from a layperson's perspective? Any spelling mistakes?
4. If the source material is paper, visually compare the paper source to the layer.
5. Does the layer replace an older layer that can be archived?
6. Does the layer align with the needs outlined in the MML Plan?
7. Has the metadata been completed correctly?

### **Metadata**

In compliance with the Sarasota County Metadata Standards, metadata for all Land Management files in the SDE database has been developed and is kept up-to-date in the following files and folders:

GIS.BurnsManagedLands (folder containing 9 files)

GIS.Scrubjay (folder containing 5 files)

GIS.Waterways (folder containing 5 files)

GIS.EslppLands

GIS.FlucModifiedManagedLands

GIS.GatesManagedLands

GIS.MajorPublicLands

GIS.TelemetrySites

GIS.TrailsManagedLands

Metadata is not currently being developed for over 1000 other GIS files originated and used by Natural Resources. As part of the Land Management GIS plan, metadata would be developed for all new and existing themes. It is anticipated that many of the existing themes can be merged to substantially decrease this task. The Sarasota County Metadata Standards, ISO Style, provide the fields that need to be included in the Metadata. In addition to the 6 fields described below, additional elements have been described by the International Organization for Standardization' (ISO) document 19115 *Geographic Information – Metadata* and other elements as defined by ESRI are included in Appendix 1 of the Sarasota County GIS Data Standards document.

Name: This is the title of the data set.

Example: "GIS.SCgis\_GLO\_Plats"

Coordinate System: Describe the projection of the data, and the scale at which it was digitized.

Example: “Florida State Plane, West Zone, NAD 83, Units Feet. Digitized from USGS 1:100,000 scale maps”

**Keywords:** Common-use words or phrases used to describe the subject of the data. The more keywords you provide, the easier it will be for users to find your data in a search.

Example: “Existing Land Use, Cover, King Pig, Planning, Conservation”

**Location:** Server=gisdb1; Service=sde\_prod; User=GIS; Version= SDE.DEFAULT

**Abstract:** Description of the data set.

Example: “Data is the original General Land Office (GLO) Township Plats from the mid to late 1800s. Original plats are in TIFF format and were georeferenced to our data sets using ArcGIS 8.2.”

The metadata should also include the name of the Data Creator or another contact name as well as information pertaining to how and when the data will be updated and maintained.

### **Control of Data Files**

In order to maintain control of GIS data, any changes to data files once entered into the Land Management GIS (either working or final) will only be made by the GIS Manager or a designated person. All other persons will have read-only access to the data. Persons that need to make changes to any data files for individual maps may do so by copying a GIS file, renaming it and placing it in their own folder. If the individual then desires to have these changes placed into the Land Management GIS, the GIS Manager shall be notified and given a copy of the new file. The GIS Manger or designated person will then enter the changes and update the Metadata.

### **Notices**

To prevent the duplication of effort, a Notice of New Data should be sent to other users to inform them that a new layer is now available for use. It should include the name of the layer, the contact person, and a short description.

### **Projection**

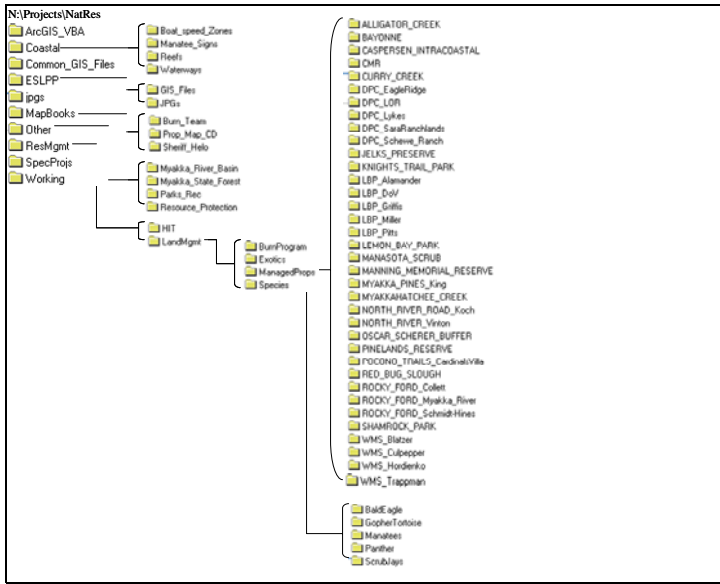
The standard projection used for all Land Management GIS products is Florida State Plane, West, NAD 83. The unit of measure is in feet. The collection of GPS data in projections other than this standard becomes problematic when the data is applied to maps in the standard projection, resulting in inaccuracies in the data and extra time to correct the problem.

### **Data Directory Structure**

All of the Land Management GIS data is being transferred into the N:/ drive. The new file structure is designed to make themes and completed projects easy to locate and use.

The existing file structure is depicted on the following page.

Current file structure on N drive:



**Archiving**

The GIS Manager is responsible for the review and cataloging of existing data files, creating metadata for these files, elimination of duplicate and or redundant data and archiving “old files”. This task will comply with the standards of the Sarasota County Geomatics Unit. All files will be placed on the GIS server in appropriate folders. All files on this folder are backed up onto tape drives daily.

**Hardware/Software/Budget Planning**

**GPS Hardware/Software**

Natural Resources currently have the following GPS equipment:

<u>Equipment</u>	<u>Property Control No.</u>	<u>Purchase Date</u>	<u>Price</u>
(1) Trimble ProXR GPS	40040883	05/04/99	\$10,995
(1) Trimble GeoXT GPS	40051376	09/18/03	\$5,615
(1) Trimble GeoXT GPS	40050833	06/20/03	\$6,595*
(1) Impulse Laser Rangefinder	40041116	06/29/99	\$5,429

*\*Price included Pathfinder Office and Terrasync Software. The Pathfinder Office Software is used with all three GPS to communicate with a PC. The Terrasync Software is used on both GeoXTs.*

All the above GPS sets are capable of producing accuracy of equal to or better than 1-meter horizontal providing the procedures in “The Sarasota County GPS Procedures Guideline” are followed.



### **GIS Hardware/Software**

Natural Resources currently have the following GIS equipment:

<u>Equipment</u>	<u>Property Control No.</u>	<u>Purchase Date</u>	<u>Price</u>
(1) Dell Computer	40044438	09/10/01	\$7,776
(1) HP DesignJet 800ps-Plotter	40051159	08/14/03	\$8,492*
(1) Xerox Phaser 6200- Laser Printer	40051382	08/19/03	\$3,844**

*\*Price includes 5-year maintenance/repair contract.*

*\*\* Price includes 3-year maintenance/repair contract.*

### **GIS Software**

Natural Resources use the Sarasota County standard GIS software: ESRI ArcGIS 8.X, ESRI Terrasync software is used on all GeoXT GPS and ESRI Pathfinder Office is used to interface field data with PC's.

Natural Resources purchased an ArcInfo license at a cost of \$5,037 to ensure that staff always have one license available for using ArcGIS8 (ArcMap, ArcCatalog, ArcTools). Currently there are 22 ArcInfo floating licenses available through Geomatics on a first come basis. The above equipment is considered adequate for Natural Resources needs; however, a replacement schedule/budget needs to be established.

### **Yearly Operating Budget for GIS Supplies**

#### HP Design Jet 800ps Plotter:

7 – rolls HPC 6030C Heavyweight Coated Paper (36" x 100')	(\$42.90/roll)	- \$300/year
2 – rolls HP C6025A High Gloss Photo Paper (24" x 100")	(\$104/roll)	- \$208/year
2 – sets ink cartridges (magenta, cyan, yellow, black)	(\$113.40/set)	- \$227/year
1 – set printheads (magenta, cyan, yellow, black)	(\$132/set)	- \$132/year
<b>Xerox Phaser 6200 Printer</b>		
3 – sets toner cartridges (magenta, cyan, yellow, black)	(\$799.86/set)	- \$2400/year
1 – Imaging Unit	(\$269.99)*	
1 – Transfer Roller	(\$39.99)*	
1 – 220V Fuser	(\$199.99)*	

*\* Usage rate not established, estimate maximum of 1/year.*

## **ADDENDUM F: Individual Management Plan Format**

### **I. Executive Summary**

### **II. Table of Contents**

### **III. Lists of Tables, Figures, Exhibits and Addenda**

### **IV. Introduction**

- Site Significance
- History of Program, site, acquisition
- Purpose and scope of plan
- Management Level according to Land Management Master Plan
- Management authority and responsibility

### **V. Natural Resource Management Component**

- Resource description and assessment
  - Location and setting
  - Climate
  - Topography, soils, hydrology, geology
  - Cultural/historical setting and resources
  - Plant communities/vegetation classification
  - Flora and fauna
  - Special elements (listed species, sensitive resources)
  - Inventory needs
  - Site issues, management considerations and constraints, restoration opportunities
- Resource Management action plan – natural and cultural resources, restoration
  - Overall approach, special considerations
  - Management goals/objectives/strategies/actions
  - Monitoring program for adaptive management and restoration
  - Research needs
  - Public & interagency coordination

### **VI. Land Use Component**

- Land use history, adjacent land uses
- Existing uses and facilities, potential use analysis
- Proposed land use plan, recreational opportunities
- Visitor use management recommendations
- Monitoring use methodologies

### **VII. Operations Component**

- Administration, agency responsibilities
- Staffing recommendations
- Facilities, access and parking options
- Resource management operations
- Security and maintenance
- Estimated management and visitor use budgets
- Proposed management schedule

### **VIII. Literature Cited/References**

### **IX. Exhibits and Addenda**

## **ADDENDUM G: Governing Documents Relating to Land Management**

**Chapter 258.501, Florida Statutes:** Established the Myakka River Wild and Scenic Designation and Preservation Act in 1985, to protect the heritage and enhance the integrity and resources of the Myakka River through an interagency and intergovernmental coordination group called the Myakka River Management Coordinating Council. Amended in 1990, the designated river portions include the Myakka River Protection Zone.

**Myakka Wild and Scenic River Management Plan:** Adopted by the Governor and Cabinet on 22 May 1990, to manage the 34-mile wild and scenic river from the Sarasota/Charlotte line north to the SR 780 bridge. Plan is updated every ten years.

**Chapter 62D-15, Florida Administrative Code:** Adopted 22 July 1991, to implement a regulatory program under the Myakka River Wild and Scenic River Rule to protect the resource values of the Myakka River.

**Ordinance No. 82-94:** Authorized \$30 million dollar bond referendum to acquire Ringling-MacArthur Tract (now known as Carlton Reserve) as a potable water supply source and for recreational and open space purposes (50% repayable from penny sales tax and remainder from grants and ad valorem taxes). Note: voter approved referendum on 2 November 1982

**Resolution No. 82-200:** Adopted 14 September 1982, to limit RM Tract recreational activities to non-consumptive, ecologically benign and resource-based with special consideration to environmental education and research. Site management will be compatible with Myakka River State Park.

**Ordinance 83-44:** Adopted 1983, to protect trees during development in the unincorporated areas of the County.

**Ordinance 90-01:** Adopted 1990, to control invasive exotic plant species in Sarasota County by prohibiting the importation, transportation, sale, propagation or planting of melaleuca, Australian pine or Brazilian pepper.

**Resolution No. 92-106:** Adopted 5 May 1992, to create seven-member Environmentally Sensitive Lands Advisory Board to develop criteria to identify lands and methods for acquisition.

**Resolution No. 92-272:** Adopted 3 November 1993, to establish five criteria for identifying and ranking environmentally sensitive lands.

**Resolution No. 93-231:** Adopted 5 October 1993, to require economic analyses for all County ordinances unless ordinance required by State or Federal law or exempt by the BCC.

**Ordinance No. 94-009:** Adopted 15 March 1994, to establish policies and procedures for environmentally sensitive lands not currently publicly owned. (Sarasota County Environmentally Significant Lands Protection Ordinance)

**Resolution No. 94-236:** Adopted 20 September 1994, to establish nine-member Myakka River Planning Advisory Board to create Myakka River Protection Ordinance. Now known as the Myakka River Planning Advisory Council.

**Ordinance No. 97-024:** Adopted 11 March 1997, amending Ordinance 90-01 to include carrotwood, Chinese tallow and beach naupaka as invasive exotic plant species to be controlled. (Sarasota County Invasive Plant Species Ordinance)

**Ordinance No. 97-082:** Adopted 14 October 1997, to protect marine turtles nesting and hatching along the beaches of Sarasota County and includes artificial lighting standards. (Sarasota County Sea Turtle Protection Ordinance)

**Ordinance No. 98-025:** Adopted 1998, to provide management basis to protect a 220-foot protection zone as part of the Myakka River Protection Plan

**Ordinance No. 98-029:** Adopted 2 June 1998 with sunset provision 30 June 2005, to amend Ordinance 83-44 to some definitions, exemptions, permitting criteria, and administration relating to tree protection in the unincorporated areas of the County.

**Ordinance No. 98-045:** Adopted 5 May 1998 with sunset provision 31 May 2005, to prohibit unauthorized removal or destruction of property on parks, beaches, recreation areas, or other public lands with a second degree misdemeanor penalty for violations.

**Ordinance No. 98-096:** Adopted 1998, to increase up to .25 mill in ad valorem taxes for 20 years and authorize general obligation bonds up to \$53,000,000 (maturity deadline date, 31 December 2019), both subject to referendum, to acquire, protect and manage environmentally sensitive lands.

**Ordinance No. 99-004:** Adopted 1999, to create 9-member Environmentally Sensitive Lands Oversight Committee to submit proposed protection priority sites to the Board for approval and provide recommendations to the Board on the management, restoration and/or public use of each property; to provide policies for such lands. (Environmental Sensitive Lands Protection Ordinance)

**Ordinance No. 99-030:** Adopted 29 April 1999, to amend Ordinance No. 97-082 by removing Longboat Key, City of Venice from the County's sea turtle protection because they have their own regulations for such protection.

### **Sarasota County Comprehensive Plan**

*Apoxsee*, Sarasota County's 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. This balance is aligned with

the Conservation and Recreation Lands Trust Act (Chapter 259.032, Florida Statutes). “It is the policy of the state that the citizens of this state shall be assured public ownership of natural area for the purposes of maintaining this state’s unique natural resources; protecting air, land, and water quality; and providing lands for natural resource based recreation.” Administrators and land managers with the state and county realize that the act of ownership alone will not accomplish this balance. Whether the balance will be achieved will be decided by the manner in which the natural resources (lands and waters) are managed.

*Apoxsee* lists specific goals, objectives and policies that are updated every seven years, and which create a strong framework for public and private land management. The challenge is to coordinate such management to meet the objectives of different owners, priorities, and resources. The goals, objectives and policies of *Apoxsee* pertinent to land management follow.

## Chapter 2 – Environment

### Goal 5

Conserve, protect, maintain, and where necessary, restore the natural resources of Sarasota County to ensure their continued high quality and critical value to the quality of life in the County.

#### **Objective 5.2**

To protect the quality and quantity of all jurisdictional waters, recognize the ongoing study efforts, and ensure that the current water quality in the County be improved through the year 2010.

- Policy 5.2.5.  
The County shall continue to monitor and assess any variations in the hydroperiod of wetlands, various aquifers, and flora and fauna located on the T. Mabry Carlton Jr., Memorial Reserve in accordance with the provisions of Ordinance 82-94. (*RU-30, Ord. 97-061, July 8, 1997*)

#### **Objective 5.3**

To protect and conserve surface and groundwater resources.

- Policy 5.3.4.  
Sarasota County will cooperate with other governmental entities to protect water resources.
- Policy 5.3.5.  
The County shall work with the Southwest Florida Water Management District to identify and protect from depletion and contamination those aquifers that feed Warm Mineral Springs. The County will work with the State of Florida to secure matching funding for the acquisition of Warm Mineral Springs. (*RU-30, Ord. 97-061, July 8, 1997*)

#### **Objective 5.4**

To identify, manage, and protect all ecological communities and wildlife, especially critical habitats and endangered, threatened, and species of special concern identified in official federal, State, or international treaty lists.

- Policy 5.4.2.  
The County will continue to work with State and federal agencies regarding the development and implementation of protection guidelines relating to threatened and endangered species. By July 1, 2000, the County Natural Resources Department shall prepare a plan to adopt and allow the County to enforce guidelines adopted by State and federal agencies or specific authorizations granted by State and federal agencies that protect listed species occurring within the County. Unless precluded by State or federal laws, the County may adopt more stringent regulations where deemed appropriate. (*RU-30, Ord. 97-061, July 8, 1997*)
- Policy 5.4.3.  
Require development order applicants to consult with the appropriate agencies and to use recognized sampling techniques to identify endangered, threatened, and species of special concern.

#### **Objective 5.5**

To preserve significant areas and representative samples adequate to maintain the functions and values of native habitat.

- Policy 5.5.3.  
Develop mechanisms to acquire, physically link natural areas into a contiguous system or otherwise protect environmentally significant lands through a voluntary program and coordinate County resources with existing State programs such as the Conservation and Recreation Lands (CARL) Program, the Save Our Rivers (SOR) Program, and with groups such as the Nature Conservancy and the Trust for Public Lands. Priority should be given to acquiring and otherwise protecting properties which are adjacent to or in close proximity to existing preservation areas, with emphasis on maintaining opportunities for a regional greenways system that may include a mix of flow ways, areas subject to flooding, native habitats, recreational trails and wildlife corridors. (*RU-30, Ord. 97-061, July 8, 1997*)
- Policy 5.5.4.  
Sarasota County shall immediately establish additional incentives for landowners to protect the naturally beneficial features of the lands identified as having high ecological value pursuant to policy 5.5.2, rather than emphasizing reliance upon regulatory police power authority. These additional incentives shall utilize a full range of techniques as appropriate (including, but not limited to, tax incentives, and provisions for variable lot sizes in Rural Areas.) (*RU-30, Ord. 97-061, July 8, 1997*)

- Policy 5.5.5.  
Upon approval by the Board of County Commissioners of areas of high ecological value, pursuant to Policy 5.5.2, the development review process shall be modified to require the identification of conservation and preservation habitats in those areas, which have the potential of becoming incorporated into an overall corridor, network through the voluntary incentive program. *(RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.5.6.  
The clustering of residential developments, or the implementation of other measures to minimize adverse environmental impacts, shall be required whenever areas of significant native habitats are involved. *(Renumbered by RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.5.7.  
In accordance with the requirements of Chapter 163, Part II, Florida Statutes, as the same may be amended, the County shall develop guidelines in the Land Development Regulations (LDR), Zoning Ordinance, and/or other existing regulations which regulate development and specify the necessary design standards in environmentally significant/sensitive areas (for example, Barrier Islands, floodplains, watersheds, and water recharge areas) and on properties adjacent to Public Conservation/Preservation Lands. *(RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.5.8.  
The County shall protect mangroves to the fullest extent allowed by State law. *(RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.5.9.  
Maintain and promote rural and natural resource land management practices such as prescribed burning through the requirement that all new development in the Rural area or adjacent to Public Conservation/Preservation Lands shall, as part of the development review process, recognize and accept existing rural and natural resource land management practices. *(RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.5.10.  
Protect the natural diversity, processes and functions of natural communities in the Myakka River State Park and Oscar Scherer State Park from development impacts by coordination with Florida Department of Environmental Protection and Southwest Florida Water Management District to maintain and enhance soils, groundwater, surface and subsurface waters, shorelines, vegetative communities and wildlife habitats within these management areas. *(RU-30, Ord. 97-061, July 8, 1997)*

- Policy 5.5.11.  
Native habitats set aside in preservation and conservation areas shall be managed in accordance with resource management plans, which are subject to review and approval by the County through the development review process, to ensure maintenance of the functions and values of these native habitats. *(Renumbered by RU-30, Ord. 97-061, July 8, 1997)*

### **Objective 5.6**

To preserve the natural aesthetic quality in developed areas through the planting, maintenance, and preservation of native plantings and other appropriate ornamental plantings and buffer strips in street rights-of-way and in other public and private open spaces. To manage the urban plantings efficiently, maximizing the use of limited resources.

- Policy 5.6.1.  
The County shall promote the conservation of native vegetation removed during land clearing and utilize this resource for transplanting and revegetation.
- Policy 5.6.2.  
The appearance of selected arterial roads shall be improved with the planting of low-maintenance, native or other appropriate ornamental plants and trees.
- Policy 5.6.4.  
The County shall incorporate native vegetation into the landscaping of all County-owned buildings and grounds, where appropriate, and provide for the continued maintenance thereof.
- Policy 5.6.5.  
Where practical, invasive and nuisance plants will be removed from new developments and County-owned property and replaced with native or other appropriate ornamental species. *(RU-30, Ord. 97-061, July 8, 1997)*
- Policy 5.6.7.  
Pursue an interdepartmental/interagency approach to the development of management plans and/or guidelines for County-owned Public Conservation/Preservation Lands, and the native areas within parks in order to protect, maintain, and restore, where necessary, native habitats. Previously approved management plans shall be considered in the implementation of this Policy. *(RU-30, Ord. 97-061, July 8, 1997)*

### **Objective 5.7**

To increase the environmental awareness of all County residents.

- Policy 5.7.2  
The County shall fund and implement the T. Mabry Carlton Jr., Memorial Reserve Public Use Plan including the establishment of the Environmental



Education and Research Center, as proposed in the T. Mabry Carlton Memorial Reserve Land Use Plan. (*RU-30, Ord. 97-061, July 8, 1997*)

- Policy 5.7.3  
Educational materials shall be made available to developers, homeowners, and other interested citizens concerning proper maintenance, management, restoration, and development in natural areas (for example, pamphlets about habitat creation, endangered species, management of development ponds, shoreline and dune vegetation, xeriscape, water conservation, and the Street Tree Program).

### Chapter 3 – Recreation and Open Space

#### Goal 1

It shall be the Goal of Sarasota County to provide, protect, and maintain a high-quality, environmentally sensitive, accessible, economically efficient system of parks, recreation facilities, and recreational open space that serves all Sarasota residents and visitors.

#### **Objective 1.1**

To acquire, develop, maintain and protect parks and recreation facilities, consistent with the needs of Sarasota County's population, as determined by the County's recreation levels of service, through the year 2010.

- Policy 1.1.5.  
Recreational uses implemented on the Pinelands Reserve and the T. Mabry Carlton, Jr. Memorial Reserve shall be limited to activities, which are ecologically benign, non-consumptive and resource-based. (*RU-31, Ord. 97-062, July 8, 1997*)
- Policy 1.1.6.  
Sarasota County shall continue, and whenever and wherever feasible, expand its beach and waterfront acquisition efforts. Priority shall continue to be given to those parcels, which will expand existing public beaches, serve the greatest number of persons, or protect important native habitats. (*Renumbered by RU-12, Ord. 93-032, May 11, 1993*)
- Policy 1.1.7.  
Increase the ecologically benign recreation potential of Sarasota County's natural waterways (bayous, rivers, and creeks). Establish locations, design standards, and implementing techniques for providing public access to appropriate waterways. Designate canoe access points on appropriate bayous, rivers, and creeks, including Lakeview Park, North Creek, Blind Pass, and Red Lake. (*RU-31, Ord. 97-062, July 8, 1997*)
- Policy 1.1.8.  
Continue to coordinate with the sheriff's department to expand personnel, where necessary, and improve security at parks and recreation sites. Work with neighborhood associations, nearby residents, and law enforcement agencies to

improve security at sites where 24-hour surveillance or controlled access is inappropriate, or impossible to provide. *(RU-31, Ord. 97-062, July 8, 1997)*

- Policy 1.1.9.  
The acquisition and retention of native habitat areas shall be retained as a high priority in the County's recreation planning and development activities. *(Renumbered by RU-31, Ord. 97-62, July 8, 1997)*

### **Objective 1.2**

To ensure that recreational lands and facilities are compatible with surrounding land uses and the natural environment in accordance with the Environment Chapter, through the year 2010.

- Policy 1.2.1.  
Design future park improvements to existing park facilities and on-going park operations to minimize the impacts of people on sensitive natural systems.
- Policy 1.2.3.  
Eradicate exotic and nuisance vegetation at park and recreation sites; restore native habitats; and utilize indigenous vegetation in landscaping to reduce maintenance costs (for example, grass mowing). *(RU-31, Ord. 97-062, July 8, 1997)*
- Policy 1.2.4.  
Encourage conservation and ecologically sensitive management of undeveloped lands for their environmental, recreational and open space value through acquisition and during development review processes.
- Policy 1.2.5.  
Sarasota County will identify areas, which could qualify as "natural area" parks. When acquired and included in the park system, such areas will be kept in their natural state, receiving maintenance according to normal practices associated with native habitats, as directed by Sarasota County's Natural Resources Department. *(RU-31, Ord. 97-062, July 8, 1997)*

### **Objective 1.3**

To improve access to parks and recreation facilities for all Sarasota County residents, through the year 2010.

- Policy 1.3.3.  
Complete a study as part of the preparation of the Countywide Bicycle Plan (see Transportation Policy 1.4.1.) that analyzes the potential for developing a system consisting of bikeways, footpaths and/or nature trails, including the consideration of the Rails to Trails Program, linking parks and recreation areas, schools, libraries, beaches, and barrier islands with residential areas. Where possible provide linkages between parks and recreation areas and consider developing

guidelines or standards for internal bicycle and pedestrian facilities and bicycle parking in these areas. *(RU-31, Ord. 97-062, July 8, 1997)*

- Policy 1.3.4.  
Develop greenway policy designed to establish strategies regarding the coordinated identification, protection, and management of linear open space connectors in cooperation with private landowners. *(RU-31, Ord. 97-062, July 8, 1997)*

#### **Objective 1.4**

To ensure that parks, recreation facilities, and recreational open spaces are economically feasible to develop, operate, protect, and maintain, through the year 2010. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*

- Policy 1.4.1.  
Accept no parcel for inclusion in the County's park system that is of a size or character that cannot be economically maintained, as determined by the Board of County Commissioners with input from the Sarasota County Department of Parks and Recreation, and other appropriate County Departments. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*
- Policy 1.4.2.  
Coordinate with local recreation-oriented groups (for example, soccer clubs, gun clubs) to exchange their development of facilities for the use of appropriate County park areas. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*
- Policy 1.4.4.  
Mowing of County parks shall be limited to necessary corridors and playing fields to protect native forbs, shrubs, and grasses. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*

#### **Objective 1.5**

To maintain, and improve where possible, coordination with other County boards and agencies, the County's municipalities, the Region, and the State in the development and provision of parks and recreation facilities. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*

- Policy 1.5.1.  
Consolidate, where possible, the provision and maintenance of parks and recreation areas with other units of government to avoid overlap and duplication of effort. *(Renumbered by RU-31, Ord. 97-062, July 8, 1997)*
- Policy 1.5.2.  
Continue to pursue funding available through federal and State recreation assistance programs. *(RU-31, Ord. 97-062, July 8, 1997)*

## Chapter 8 – ECONOMY

### Goal 1

It shall be the Goal of Sarasota County to achieve a diversified and stable economy that is compatible with planned growth and quality of life objectives and that provides maximum legitimate employment opportunities for all segments of the Sarasota County population.

#### **Objective 1.1**

Encourage the conservation and enhancement of those natural and cultural resources, which represent the foundations of the County's retirement, recreation, and tourist-oriented economy. *(RU-36, Ord. 97-067, July 8, 1997)*

- Policy 1.1.1  
All development shall be consistent with environmental protection policies in the Future Land Use Plan and the Environment Plan.
  
- Policy 1.1.5.  
Develop and support education programs intended to increase public awareness of the historic, cultural, and natural resources found throughout Sarasota County. *(RU-36, Ord. 97-067, July 8, 1997)*
  
- Policy 1.2.2.  
Encourage adequate educational and training programs and facilities to enable existing Sarasota County residents to supply adequate and skilled labor to the various sectors of the economy, and to encourage increasing the employability of Sarasota County's workforce by encouraging a stronger linkage between the business community and the educational delivery system. *(RU-36, Ord. 97-067, July 8, 1997)*
  
- Policy 1.3.4.  
Identify, and correct or eliminate those laws, regulations, and governmental practices that, as determined by the Board of County Commissioners, restrict business, professional, and vocational activities, and no longer serve a valid public purpose. *(RU-36, Ord. 97-067, July 8, 1997)*
  
- Policy 1.3.7.  
Encourage the location and clustering of major non-retail activities and selective commercial and government uses using the planned development concept. These activities should: locate in close proximity to I-75 and within two and one-half miles of an interchange; have access to public transit routes where feasible; have access to appropriate utilities (water, gas, electricity, telephone, sewer) or to allow provision of these utilities; and minimize adverse impacts on the natural environment and adjacent land uses. *(RU-36, Ord. 97-067, July 8, 1997)*

- Policy 1.3.9.  
Foster the development of infrastructure needed to support business and industrial growth deemed consistent with the Future Land Use Plan including: Education, Investment incentives, Public works projects, Environmental conservation Participation by the business sector (*RU-36, Ord. 97-067, July 8, 1997*)

**Sarasota 2050 RMA-1:** Adopted 10 July 2002, as an overlay to the current Sarasota County Comprehensive Plan to achieve public benefits, of which the primary ones are livable communities and preservation of open space and environmental lands. It is a voluntary, incentive based program. The Greenway Resource Management Area designates a network of riverine systems, floodplains, native habitats, storm surge areas and uplands as priority resources for perpetual protection. This designation could add an additional 26,000 acres to protected environmental land in the County.