

Sanctuary Management Manual



*Protecting and
Preserving
Biological Diversity
Through
Responsible Stewardship
of Brevard County's
Natural Resources*

Environmentally Endangered Lands Program

Sanctuary Management Manual

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Preface

Environmentally Endangered Lands Sanctuary Management Manual

The Environmentally Endangered Lands (EEL) Sanctuary Management Manual presents the guiding principles, policies and procedures for conservation within the EEL Sanctuary Network.

The EEL Sanctuary Management Manual is presented to the Brevard County, Board of County Commissioners for their review and approval. Significant recommendations include:

- ☞ Ten principles for conservation are provided as directives for conservation, public access, passive recreation and environmental education within the EEL Sanctuary Network. EEL Program directives were authorized by Resolution 90-245 of the Board of County Commissioners of Brevard County, Florida, and approved by Brevard County voters in the 1990 EEL Program Referendum.

- ☞ A Vision for the EEL Program that provides for public access, passive recreation activities, and environmental education without detracting from the primary conservation goals of the program. The term “passive recreation” is defined to guide management decisions within the EEL Sanctuary Network.

- ☞ Guidance for Management Plan development and implementation for each sanctuary site within the Network.

- ☞ Categorization of each EEL Sanctuary within the Network based on resource vulnerability, public access, site location, extent of proposed sanctuary development and proposed levels of public use. The categories are:

 - Category 1 Sites - “Centers for Regional Management”; Category 2 Sites - “Intermediate Use Sites”; Category 3 Sites - “Primary Conservation and Research Sites”

- ☞ Recommendations for an EEL Program management structure with projections for staff size, composition, and responsibilities.

- ☞ Recommendation to rename the Selection Committee to the Selection and Management Committee .

- ☞ Creation of a new Citizens Advisory Committee.

- ☞ Financial projections and a plan for long-term funding for EEL Sanctuary management

Chapter 1

Introduction to the Environmentally Endangered Lands Program

1.1 History and Authority

The Environmentally Endangered Lands (EEL) Program was approved by Brevard County voters in a 1990 referendum. The program established a conceptual framework and funding mechanism to implement an EEL sanctuary network in Brevard County. Resolution 90-245 of the Board of County Commissioners of Brevard County, Florida authorized:

...“the issuance of bonds, in a principle amount not exceeding Fifty-five Million Dollars and No Cents (\$55,000,000 .00), to finance the cost of acquiring, protecting and maintaining environmentally endangered lands and making improvements as appropriate for passive recreation and environmental education”...

The land acquisition program is implemented by the Brevard County Environmentally Endangered Lands Program as a voluntary, willing-seller program that does not regulate or restrict private land rights. The acquisition of environmentally sensitive lands represents:

☞ *an effective conservation tool to ensure that ecosystems, natural communities and species are protected for future generations;*

☞ *a first step towards long-term protection of essential natural resources, open space, green space, wildlife corridors and maintenance of natural ecosystem functions;*

☞ *a mechanism to enhance community, environmental, and economic values through strategic planning for balanced growth management, conservation and economic development;*

☞ *an opportunity to establish a nature sanctuary network that provides passive recreation and environmental education programs to Brevard County residents and visitors.*

The EEL land acquisition program is a voluntary willing-seller program that does not regulate or restrict private land rights.

The EEL Program has been administered since 1990 with two citizen committees and county staff. The ***EEL Procedures Committee*** is responsible for the procedures and processes provided in the Land Acquisition Manual. The ***EEL Selection and Management Committee*** is responsible for establishing scientific criteria for land selection, creating the EEL Sanctuary Management Manual (provided herein), and providing technical oversight and assistance to develop site-specific management plans and implement responsible land stewardship practices.

The *Land Acquisition Manual* and the *EEL Sanctuary Management Manual* provide the guiding principles, policies and procedures for the Brevard County Board of County Commissioners, EEL Program Staff, EEL Program Advisory Committees and inter-agency land acquisition and management partners.

1.2 EEL Sanctuary Management Manual

The ***EEL Sanctuary Management Manual*** (SMM) guides conservation and land stewardship decisions implemented by the Brevard County EEL Program. The manual details principles and directives for conservation, public access and environmental education within the EEL Sanctuary Network.

The EEL Selection and Management Committee and EEL Staff are responsible for the maintenance of the EEL Sanctuary Management Manual. EEL Staff will coordinate all manual issuance.

The SMM is a long-standing document for conservation principles in the EEL Program. While regular revisions are not anticipated, changes or revisions to the manual, as recommended by the EEL Selection and Management Committee or the Board of County Commissioners, must receive final approval from the Board of County Commissioners.

The policies and directives for land management and stewardship (as described herein) were developed by the EEL Selection and Management Committee and EEL Program Staff. Post-acquisition implementation of the EEL Program shall focus on four broad program responsibilities described in the EEL Program referendum language and outlined below:

1.2.1 Land Conservation

Conservation is focused on the protection of Brevard's outstanding biological diversity, natural communities, and rare, threatened, endangered or endemic species. Long-term resource protection shall form the foundation for all decisions regarding public access and use on EEL sanctuary sites. The EEL Program shall maintain all EEL Sanctuaries as conservation areas with public access. Each EEL Program project represents a coordinated effort to establish a regional sanctuary network in Brevard County that complements the state and federal conservation network. EEL Program staff shall acquire and protect the lands proposed by the EEL Selection and Management Committee through the implementation of effective conservation practices, innovative partnerships and outside grants or contracts to extend EEL Program funds.

Long-term resource protection shall form the foundation for all decisions regarding public access and use on EEL sanctuary sites.

1.2.2 Capital Development and Sanctuary Maintenance

Site improvements shall be made, as needed, to provide property boundary protection, capital improvements for public use, enhanced site access, and restoration of disturbed natural communities. Site improvements shall be located and planned based on program objectives outlined in the SMM and in site-specific management plans, as approved by the Board of County Commissioners. Site design and capital improvements should contribute to environmental and cultural interpretation on-site. Long-term operations and maintenance are essential to achieve site protection and long-term stewardship goals. The SMM recommends a financial approach to ensure stable funding for the recurring costs of operations and management of the EEL sanctuary network.

1.2.3 Public Access and Passive Recreation

Finding a balance between public-use impacts and natural resource protection is a key challenge to implementing effective land protection and stewardship. The term "passive recreation" has a variety of definitions which can be confusing to land managers and the general public. The term does not adequately address types of use, levels of use and synergistic impacts of multiple use. Therefore, there is a need to clarify a definition of "passive recreation" within the EEL Program.

As a general guideline for EEL Program management decisions, passive recreation is defined as:

“a recreational type of use, level of use and combination of uses that do not individually, or collectively, degrade the resource values, biological diversity, and aesthetic or environmental qualities of a site.”

The EEL Program shall provide a range of public use opportunities that are consistent with the conservation and protection goals of the voter-approved referendum. Public use of EEL sanctuary sites shall be consistent with the passive recreation definition provided above.

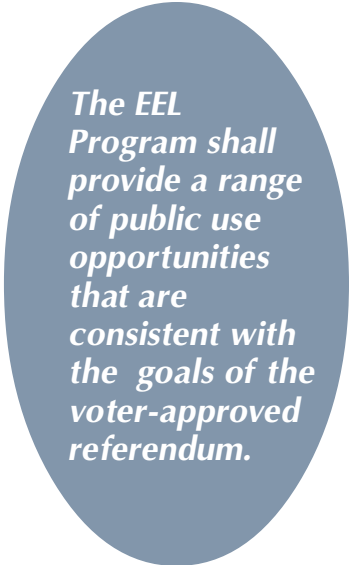
Public recreation uses such as hiking, nature observation, nature photography, canoeing, kayaking, bicycling, horseback riding, primitive camping, fishing, or hunting may be acceptable at selected sites after thorough site impact analyses. At all sanctuary sites, monitoring of natural resources and visitor impact analyses will be used to evaluate trends in resource quality and quality of visitor experiences.

Nature-based tourism represents an expanding market for Florida tourism. The rapid growth of nature-based tourism (or ecotourism) represents both an opportunity for enhanced conservation and a challenge to maintain natural resource quality with expanding public use.

1.2.4 Environmental Education

Environmental education contributes to public knowledge and awareness of the natural, historical and archaeological resource values of Brevard County. Implementation of the educational component of the EEL Program is essential to provide quality nature-based experiences for residents and visitors. The EEL Program shall:

1. implement environmental education programs;
2. encourage other agencies to implement environmental education programs; and
3. form partnerships, through formal agreements as approved by the Board of County Commissioners, with existing environmental education programs to



The EEL Program shall provide a range of public use opportunities that are consistent with the goals of the voter-approved referendum.

provide meaningful and effective environmental education on EEL sanctuary sites.

Environmental education programs that are developed and implemented within the EEL sanctuary network shall:

1. enhance public understanding and awareness of Brevard's rich natural resources;
2. enhance public understanding of conservation and sustainable development;
3. encourage public use of EEL Program sites;
4. consider special access needs of individuals, such as persons with physical disabilities and the elderly;
5. make education programs available to Brevard County schools, colleges, and universities;
6. encourage biological, geological, archaeological or other types of academic research on EEL sanctuary sites to better understand resource values, identify conservation needs and contribute to stewardship goals; and,
7. encourage and enhance environmental education and awareness through nature-based tourism in Brevard County.

The educational component of the EEL Program is essential to provide quality nature-based experiences for residents and visitors.

Chapter 2

Principles of Conservation

2.1 EEL Program Vision

Vision Statement of the EEL Program

The Environmentally Endangered Lands (EEL) Program acquires, protects and maintains environmentally endangered lands guided by scientific principles for conservation and the best available practices for resource stewardship and ecosystem management. The EEL Program protects the rich biological diversity of Brevard County for future generations. The EEL Program provides passive recreation and environmental education opportunities to Brevard's citizens and visitors without detracting from the primary conservation goals of the program. The EEL Program encourages active citizen participation and community involvement.



Anne Birch

The EEL Program encourages active citizen participation and community involvement.

2.2 Background

Programs that focus on land acquisition for conservation must balance a unique blend of issues that include land acquisition, land stewardship, ecosystem management, biology, ecology, geology, economics, environmental education, community planning, public access and recreation. The necessary integration and coordination of these diverse issues represent a major challenge to endangered land acquisition programs responsible for long-term resource protection.

Each sanctuary or management area will have a site-specific Comprehensive Management Plan developed by EEL Staff and the Selection and Management Committee. The EEL Program will strive to maintain a regional approach to managing the EEL Sanctuary

Network through the guidance provided in the SMM and through management partnerships with local, state, regional and national conservation agencies and private-sector conservation programs.

The EEL Program must plan for the long-term fiscal, scientific and management responsibilities of land stewardship to effectively implement the program vision. Implementation and funding of countywide EEL Program sanctuary management, as described herein, are considered essential priorities.

2.3 Ecosystem Management

The EEL Program will adopt and implement an ecosystem approach to environmental management. Ecosystem management is defined as an integrative, flexible approach to the management of natural resources. Key themes of ecosystem management include the following:



Ecosystem management is an integrative, flexible approach to the management of natural resources.

1. **Adaptive Management**—Natural areas must be managed in the context of the landscape in which they exist and based on scientific knowledge. Resource managers must adapt to continuing advances in the scientific understanding of ecosystems and changing environmental and human influences on the resources.
2. **Partnerships**—Inter-agency and private-sector partnerships are essential to manage and protect ecosystems. Natural resource management is complex and requires multi-disciplinary skills and experiences.
3. **Human Influences**—People are a part of nature. An important component of ecosystem management is recognizing the human roles and influences on ecosystem processes and patterns.
4. **Values**—Human values play a dominant role in setting ecosystem management goals. Resource management principles, goals, and objectives must be incorporated into the value system of our citizens.

5. **Holistic Approach**—Ecosystem management includes the maintenance, protection and improvement of both natural and human communities. This systems approach to management considers the “big picture” of natural resource protection, community economic stability and quality of life.

Therefore, implementation of an effective ecosystem management strategy for Brevard County involves the integration of all aspects of the ecosystem including species, natural communities, ecosystem functions, long-term management, community socio-economics and human use of the sites.

The responsibilities for ecosystem management and conservation are complex. Land management issues, such as fire management, protection and restoration of natural hydrologic cycles, removal of invasive exotics, and monitoring of species populations must be integrated with human issues, such as provisions for public access and levels of human use. The integration of ecosystem protection and human needs combine to form the foundation of an effective ecosystem management strategy.

Implementation of effective ecosystem management requires a level of partnership, cooperation, and coordination that is unprecedented in Florida. Innovative partnerships among individual citizens, corporations, community groups and governmental agencies at all levels is required.

2.4 Principles of Conservation

Acquiring, managing and using the resources within the EEL sanctuary network require adherence to the public mandate provided in the language of the 1990 EEL referendum. To ensure that the EEL Program meets the referendum directive and the program vision, as described

above, the EEL Selection and Management Committee adheres to ten basic “Principles of Conservation”. These ten principles are the foundation for balancing management and public use issues with the responsibility of resource conservation.

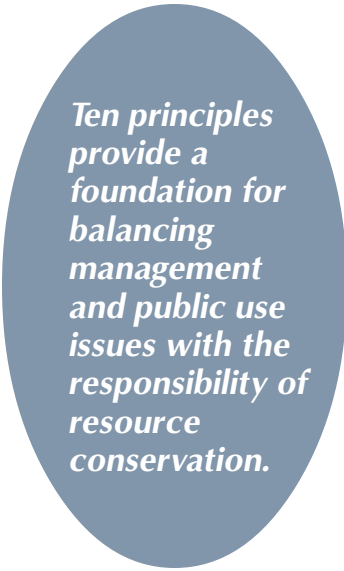


Anne Birch

The principles shall be used by the Brevard County Board of County Commissioners, EEL Program Staff, EEL Program Advisory Committees, and EEL Program partners as primary directives to guide decisions made in the implementation of the EEL Program. Policy makers and land managers must understand that decisions made today have long-term implications for the sustainable protection of natural resources. The EEL Program principles are based upon prudent scientific conservation concepts.

The Principles of Conservation are described in detail in ***Appendix A1***. In summary, they are based upon the best effort to:

1. Maintain all sites in a natural state and/or restore sites to enhance natural resource values.
2. Protect natural resource values by maintaining biological diversity and using conservation as a primary goal for decision making.
3. Balance human use with the protection of natural resources.
4. Apply the most accurate scientific principles to strategies for conservation.
5. Collect and use the most accurate data available for developing site management plans.
6. Consider the interests and values of all citizens, by using scientific information to guide management policy making.
7. Promote effective communication that is interactive, reciprocal, and continuous with the public.
8. Promote the value of natural areas to Brevard County residents and visitors through the maintenance of the quality of resource values, public services, and visitor experiences.
9. Promote the integration of natural resources conservation into discussions of economic development and quality of life in Brevard County.
10. Provide a responsible financial strategy to implement actions to achieve long-term conservation and stewardship goals.



Ten principles provide a foundation for balancing management and public use issues with the responsibility of resource conservation.

Chapter 3

Management Plan Development



Anne Birch

3.1 *Overview— Planning For Management*

Successful conservation and stewardship of endangered lands is dependent on the level and quality of the management planning and implementation process. EEL Program staff (with support from other resources) will be responsible for development of site-specific management plans for each site or management unit within the EEL Sanctuary Network. The EEL Selection and Management Committee shall ensure that management plans reflect the conservation and public use principles outlined in **Chapter 2** and detailed in **Appendix A1**.

EEL Program staff are responsible for ensuring that the site-specific management plans are implemented in a responsible and timely fashion, as funds are available. Site-specific management plans shall establish a performance-based structure for management plan implementation that is consistent with the Brevard County budget and Capital Improvement Plan processes.

Once a property is acquired, the EEL Program staff should strive to develop an interim management plan within 90 days. Interim management plans will describe site resources, site location, dominant natural communities, resource vulnerability, immediate management needs (i.e. site security, garbage removal or endangered species protection) and provisions for public access.

Successful conservation and stewardship of endangered lands depends on the level and quality of the management planning and implementation process.

Full Management Plans are to be prepared within one year of the acquisition of the essential management parcel(s) or within one year of being leased to a designated management agency. Management agencies may be government agencies, private not-for-profit conservation organizations or for-profit companies interested in managing all aspects or some aspects of a site through formal lease agreements with the Board of County Commissioners and/or the State of Florida. All Management Plans and Lease Agreements for EEL Program acquisitions shall be reviewed and adopted by the Board of County Commissioners. Management Plans for joint acquisitions with the St. Johns River Water Management District or the State of Florida will be developed pursuant to Florida Statutes.

Goals, strategies and actions for implementation will be described in the Management Action Plan section of the plan. Sanctuary-specific management plans and actions must be adaptive to respond to changing conditions, expanding scientific knowledge and evolving best management practices. Through ecological monitoring and visitor impact analyses, land managers will be able to modify the Management Plan, as approved by the Board of County Commissioners, to be responsive to changing resource conditions, new scientific knowledge, and visitor impacts.

Figure 3.1 provides an illustration of the basic sequence for post-acquisition management.

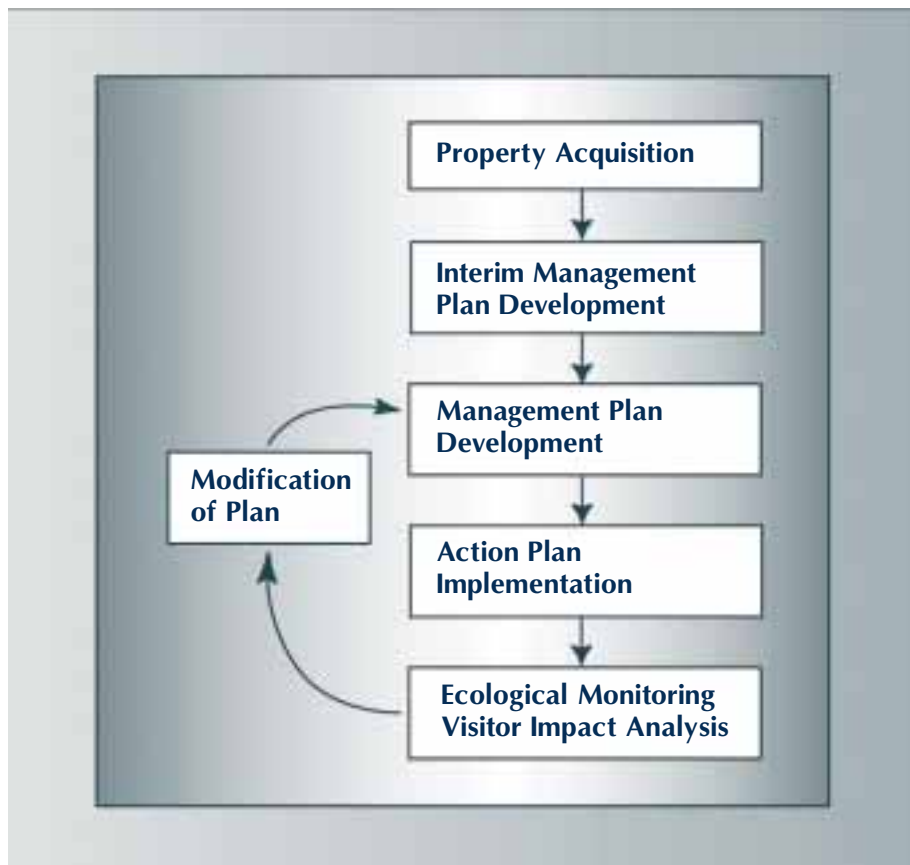


Figure 3.1 Sequence for Management Plan Development and Implementation

3.2 Management Plan Format


Figure 3.2 provides a format outline to guide management plan development. Brief descriptions for each component of a Sanctuary Management Plan are provided in **Appendix A3**.

The format represents the general structure recommended for all management plans developed within the EEL Sanctuary Network. Management plans are expected to vary from site to site as special environmental issues or different levels of public access and use are identified. The EEL Program Staff and Selection and Management Committee are responsible for management plan development and management plan scientific review, respectively.

Properties acquired by the EEL Program in partnership with the Conservation and Recreational Lands (CARL) Program of the State of Florida have management policy statements, management prospecti pursuant to §259.032(9)(b), F.S., and identified lead and cooperating management agencies pursuant to §259.035(2)(a), F.S. CARL projects managed by state agencies or local governments must qualify for state designated uses [§259.032(4), F.S.].

Conservation organizations approved by the state Land Management Advisory Council (LMAC) may also manage CARL projects via lease agreements with state agencies [§259.032(10), F.S.]. All managers must manage sites within CARL projects for the purposes for which they were acquired [§259.032(11)(a), F.S.] and are required to prepare management plans for review by the LMAC and for approval by the Board of Trustees of the Internal Improvement Trust Fund, State of Florida [§259.032(10), F.S. and §253.034(4), F.S.].

Management plans must include detailed management, development, and restoration proposals as well as related cost information. The Department of Environmental Protection is authorized to issue “interim assignment letters” to management agencies for CARL Projects prior to the execution of a formal lease approved by the Board of County Commissioners. LMAC has established guidelines for acceptable management practices for managers to follow until management plans are approved.



Sanctuary-specific management plans...must respond to changing conditions, expanding knowledge and evolving management practices.

PROPOSED MANAGEMENT PLAN FORMAT

- I. EXECUTIVE SUMMARY
- II. INTRODUCTION
- III. SITE DESCRIPTION AND LOCATION
- IV. NATURE RESOURCE DESCRIPTIONS
 - A. Physical Resources
 - a. Climate
 - b. Geology
 - c. Topography
 - d. Soils
 - e. Hydrology
 - B. Biological Resources
 - a. Ecosystem Function
 - b. Flora
 - c. Fauna
 - d. Special Concern Species
(Endemic, Rare, Threatened or Endangered)
 - e. Biological Diversity
 - C. Cultural
 - a. Archaeological
 - b. Historical
 - c. Land-Use History
 - d. Public Interest
- V. FACTORS INFLUENCING MANAGEMENT
 - A. Natural Trends
 - B. Human-Induced Trends
 - C. External Influences
 - D. Legal Obligations and Constraints
 - E. Management Constraints
- VI. MANAGEMENT ACTION PLANS
 - A. Goals
 - B. Strategies
 - C. Actions
- VII. PROJECTED TIMETABLE FOR IMPLEMENTATION
- VIII. FINANCIAL CONSIDERATIONS
- IX. APPENDIX
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Figure 3.2 Proposed Management Plan Format

Chapter 4


Implementing EEL Program Management

4.1 Concept—Managing the EEL Sanctuary Network

The EEL Program sanctuary network represents a collection of protected natural areas that form a regional conservation effort focused upon protection of biological diversity. Within the county-wide EEL Sanctuary Network, four management areas are defined within Brevard County. For each management area, a specific site is identified as a Center for Regional Management (Figure 4.1.) These centers provide strategically located hubs for implementing the county-wide conservation, passive recreation and environmental education goals of the EEL Program.

Sanctuary sites within the county-wide network will be designated for differing levels of management and public use. The EEL Selection and Management Committee established general public-use criteria and applied the criteria to the evaluation of each site within the sanctuary network. As sites are acquired and analyzed for ecological attributes, a single category or multiple categories of uses may be assigned to each site. The general categories for public use proposed in this Chapter represent preliminary recommendations which may change as information on natural resources is compiled. Any change to a general category of use shall be approved by the Board of County Commissioners.

A primary goal of the EEL Program is to implement a holistic approach to natural resources management that enhances natural and aesthetic values for Brevard County residents and visitors. The proposed regional management structure provides opportunities for effective resource protection, sanctuary management and innovative inter-agency management partnerships. The regional EEL sanctuary network structure, as proposed herein, provides opportunities to manage the EEL sanctuary network without



For each management area, a specific site is identified as a Center for Regional Management.



Figure 4.1 Centers for Regional Management and Regional Management Areas

excessive capital improvements and with minimal permanent staff. A map of the acquired and proposed EEL Sanctuary Network is provided in Figure 4.2.

Public-use levels are characterized by three descriptive categories that broadly define levels of public-use and sanctuary development. Site categorization may change based on opportunities and needs for provision of natural resource conservation and public use. Sanctuary categories are defined at three levels of use: Category 1 - Center for Regional Management; Category 2- Intermediate Use Area; and Category 3 - Primary Conservation and Research Area.

A regional approach to EEL Program sanctuary management provides opportunities to streamline sanctuary management, enhance the implementation of ecosystem management principles and decrease the need to provide full facilities and full-time staff on every site within the EEL sanctuary network.

4.2 Levels of Use

4.2.1 Category 1 Sites—Centers for Regional Management

The EEL Selection and Management Committee proposes four Category 1 Sites. Each site was chosen for its accessibility, suitability for environmental education center development, proximity to residential areas of the county and marketability for capital program campaigns to secure financial support from the private sector, foundations and outside grants. Collectively, the sites represent excellent examples of Brevard’s rich biological diversity and are geographically located to serve the entire county.

These sites are proposed for extensive public access and development of active environmental education/land management centers. Category 1 Sites will be ADA accessible, will have nature trails with interpretive signs, will sponsor significant environmental education programs and will have extensive volunteer programs. Category 1 Sites will be staffed by a full-time sanctuary manager, who will coordinate all management, education and volunteer efforts on-site and for all EEL sanctuaries within the designated regional management area. The four Category 1 Sites are proposed as *Centers for Regional Management*. Category 1 Sites will be open to the public during daytime hours.

The four Category 1 Sites that will function as centers for regional management for the EEL Program are:

Regional Management Center for North Mainland

Enchanted Forest Sanctuary—Location: S.R. 405, south of Titusville.

Regional Management Center for Central Mainland

Helen & Allan Cruickshank Nature Sanctuary—Location: North of Barnes Blvd., Rockledge.

Regional Management Center for South Mainland

Malabar Scrub Sanctuary—Location: Malabar Road, Malabar.

Regional Management Center for South Beaches

Barrier Island Ecosystem Center (within the Archie Carr National Wildlife Refuge)—Location: South Melbourne Beach.

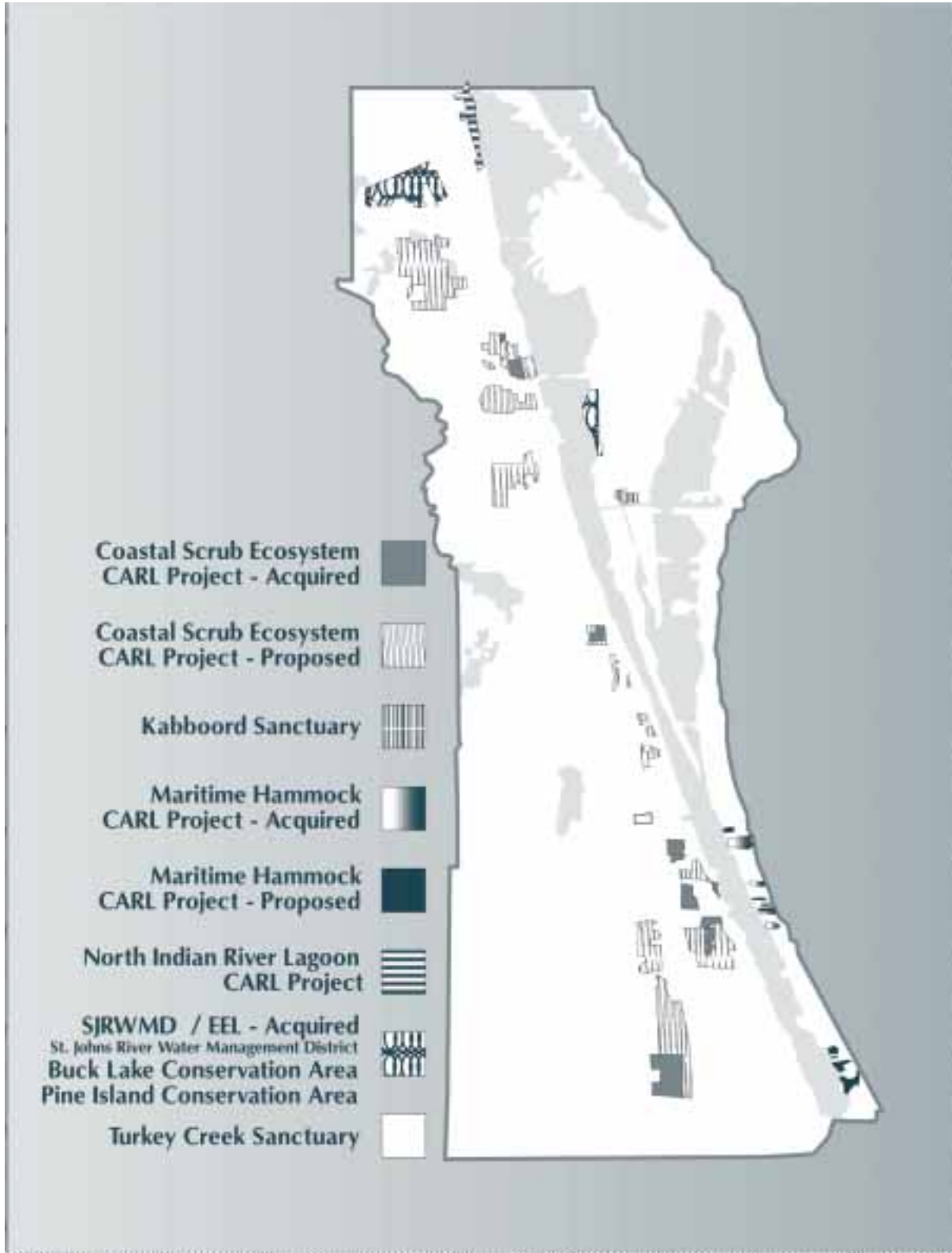


Figure 4.2 Map of Proposed EEL Sanctuary Network

The inventory of potential Category 1 Sites may be expanded based on public need for passive recreation, availability of capital development and management funds, or opportunities for innovative partnerships. Other potential Category 1 Sites include:

Turkey Creek Sanctuary

Currently has Margaret Hames Nature Center. Site Manager - City of Palm Bay—Location: Port Malabar Boulevard, Palm Bay.

Pine Island Conservation Area

Site with inter-agency management partners and multiple-use needs that include stormwater management—Location: north Merritt Island.

4.2.2 Category 2 Sites—Intermediate Use Sites

Intermediate use sites will have minimal capital development.

Improvements to Category 2 Sites include nature trails, dedicated parking area, interpretive signs along some nature trails, and some limited facilities (i.e. open shelters, educational kiosk, trail signs, etc.). These sites will be open to public access during daylight hours and will have legal ADA access.

Examples of EEL Program sanctuaries (acquired and proposed) that are likely Category 2 Sites for development include:

Kabboord Sanctuary

Location: North of Barge Canal - Sykes Creek.

Archie Carr/Maritime Hammock Properties

Location: Four conservation areas with numerous sites along Brevard's south beaches. Conservation areas include Coconut Point, Hog Point, Washburn Cove, & North Florida Beach.



Anne Birch

Jordan Boulevard Scrub

Location: North and south of Jordan Boulevard, southern section of Malabar.

Buck Lake Conservation Area

Location: North of S.R 46; west of I-95.

Fox Lake - South Lake Complex

Location: South of S.R. 46; west of I-95.

Grissom Road Scrub Complex

Location: East of I-95; between Port St. John and Canaveral Groves.

Ten Mile Ridge Scrub Complex

Location: East of Babcock Street; west of I-95; north of Grant Road, Palm Bay.

Micco Scrub

Location: North and south of Micco Road; west of I-95; east of Babcock Street.

North Indian River Lagoon Properties

Location: east and west of FEC Railroad from Little Flounder Creek north to the Volusia-Brevard County line.

Selected Indian River Lagoon Blueway properties

Location: Various locations in Brevard County along Indian River Lagoon shoreline.

4.2.3 Category 3 Sites—Primary Conservation and Research Sites

Category 3 Sites are proposed as sites with minimal or no improvements due to vulnerability of resources and/or need for intensive management and/or restoration. The designation of *Primary Conservation and Research Sites*:

1. provides enhanced conservation benefits to sites with exceptional resource values or vulnerabilities;
2. enables the EEL Program to address specific management needs for wildlife recovery or species protection;

Category 3 Sites are proposed with minimal or no improvements due to vulnerability of resources ...need for intensive management ...restoration.

3. provides for public access at levels that will not disturb on-going resource management and research projects; and,
4. decreases long-term EEL Program costs.

Category 3 Sites will provide opportunities for public access within limited areas of the site or management unit. Public access areas will be controlled at Category 3 Sites through the use of site design decisions and capital improvements, such as, limited trail networks, scenic overlooks, and elevated boardwalks.

Examples of proposed Category 3 Sites include:

Dicerandra Scrub

Location: South of S.R 50, Titusville.

Titusville Wellfield Area

Location: South of S.R 50, Titusville.

TICO Scrub Complex

Location: South of TICO Airport.

Rockledge Scrub

Location: South of Barnes Blvd., west of FEC Railroad.

Valkaria Scrub

Location: South of Valkaria Airport; north of Grant Road; west of U.S. 1, Valkaria.

Indian River Lagoon Blueway properties

Location: Various locations in Brevard County along Indian River Lagoon shoreline.

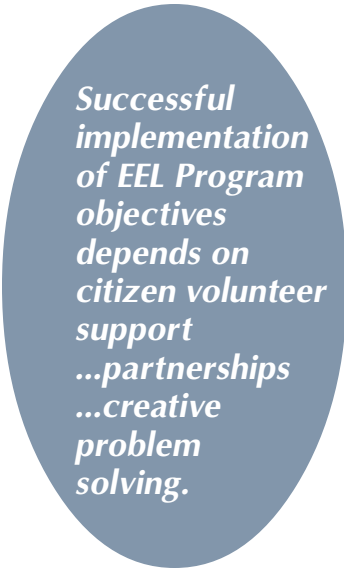
4.3 Program Structure

The success of the concepts and strategies proposed in the EEL Sanctuary Management Manual (as presented herein) is dependent upon the establishment of an administrative structure that :

1. employs a highly motivated staff of professional land managers;

2. establishes a dedicated and organized force of citizen volunteers; and,
3. implements innovative programs for continuous community involvement.

A small, but dedicated, staff can successfully implement the diverse management responsibilities of the EEL Program. To be successful, each sanctuary manager will require a high degree of authority to implement sanctuary management and program goals within each regional management area. A strong emphasis on partnership development and outside funding will be required of each sanctuary manager. Varying levels of public access and passive recreation will be available at each sanctuary. Adequate staff support is essential to provide responsible levels of management with safe and controlled public access within each sanctuary. Labor intensive tasks that require large staff support, like prescribed burning and scientific monitoring of species, will be implemented through private-sector partnerships, contracts, grants, and volunteers.

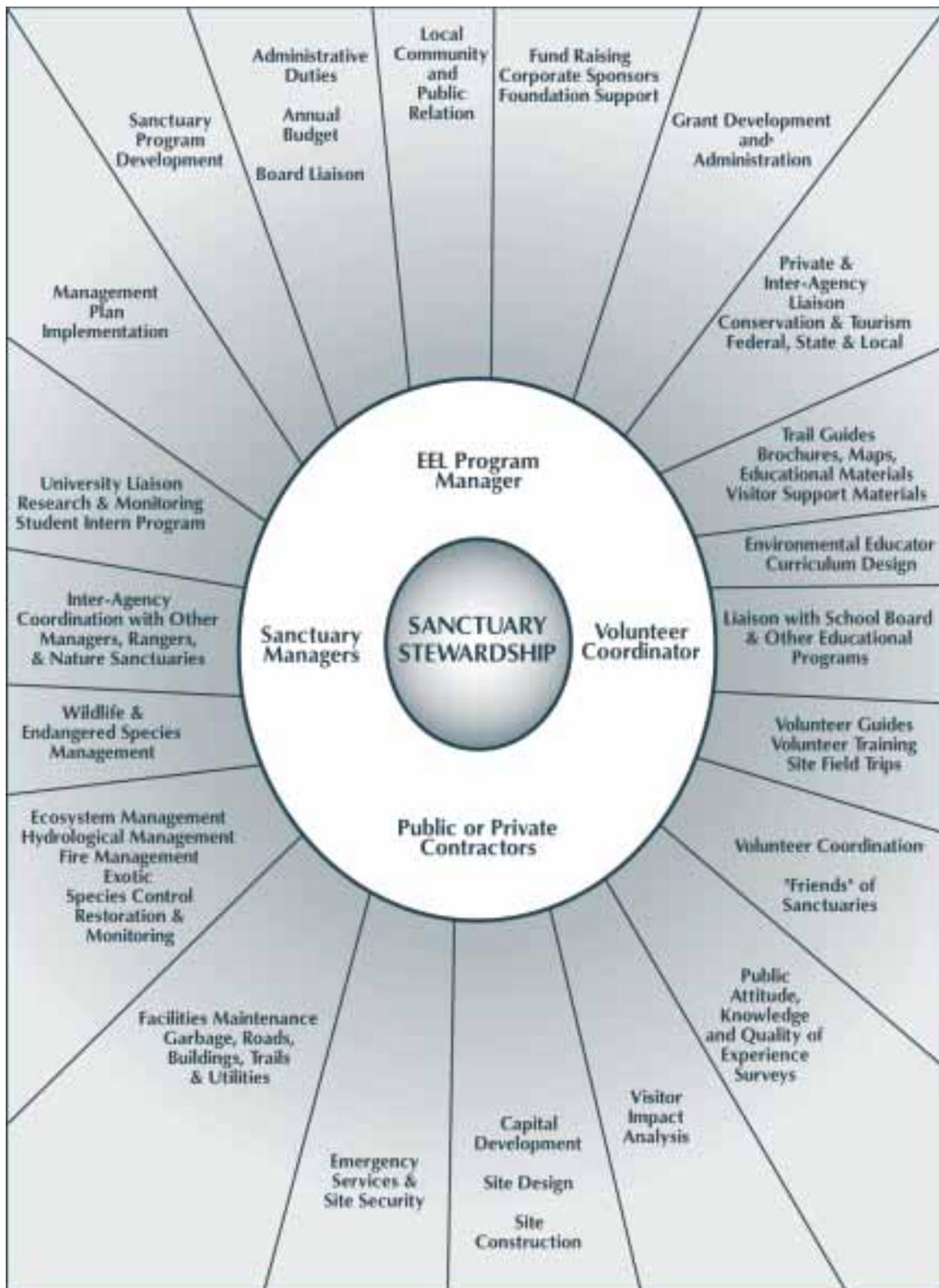


Successful implementation of EEL Program objectives depends on citizen volunteer support ...partnerships ...creative problem solving.

The proposed structure of the EEL Program provides opportunities to create an inter-departmental team approach within Brevard County Government that effectively and efficiently uses available staff resources and some staff additions. The EEL Program staff structure and size, proposed herein, is targeted at a minimal level. The number of staff may increase as the EEL Program property inventory increases or sanctuary needs expand, pursuant to Board approval. EEL staff positions are authorized by the Board of County Commissioners as part of the annual budget process. The effective implementation of a range of essential program responsibilities will influence the ability of the EEL Program to meet the conservation goals of the program and provide public access, passive recreation and environmental education.

Figure 4.3 Presents the responsibilities associated with land and resource stewardship and the relative roles for existing and proposed EEL staff. Successful implementation of EEL Program objectives depend heavily on citizen volunteer support, private-sector partnerships, innovative inter-agency partnerships and creative problem solving.

Figure 4.3 EEL Sanctuary Network Stewardship Responsibilities



4.3.1 Board of County Commissioners

Responsibilities

The Board of County Commissioners has final responsibility for the financing and implementation of all aspects of the EEL Program. Specific responsibilities associated with land acquisition are outlined in the EEL Program Land Acquisition Manual. The Board is responsible for all policy decisions and expenditures of funds for management, passive recreation and environmental education. The Board will make all decisions relative to the funding of the EEL Program through its annual budget process. The Board is specifically authorized to issue ad valorem bonds for land acquisition and capital improvements, as approved by the electors in support of this program, and to expend ad valorem revenues not required for bond debt, as authorized by the Florida Statutes.

4.3.2 EEL Program Staff

Responsibilities

EEL Program staff are responsible for the implementation of all aspects of the EEL Program. Specific responsibilities include program administration, land acquisition, land management, environmental education, and passive recreation. Staff are expected to aggressively seek additional funding sources for the program, develop public and private sector partnerships and establish the EEL Program as a model program for Florida. Specific responsibilities are detailed in the Land Acquisition Manual.

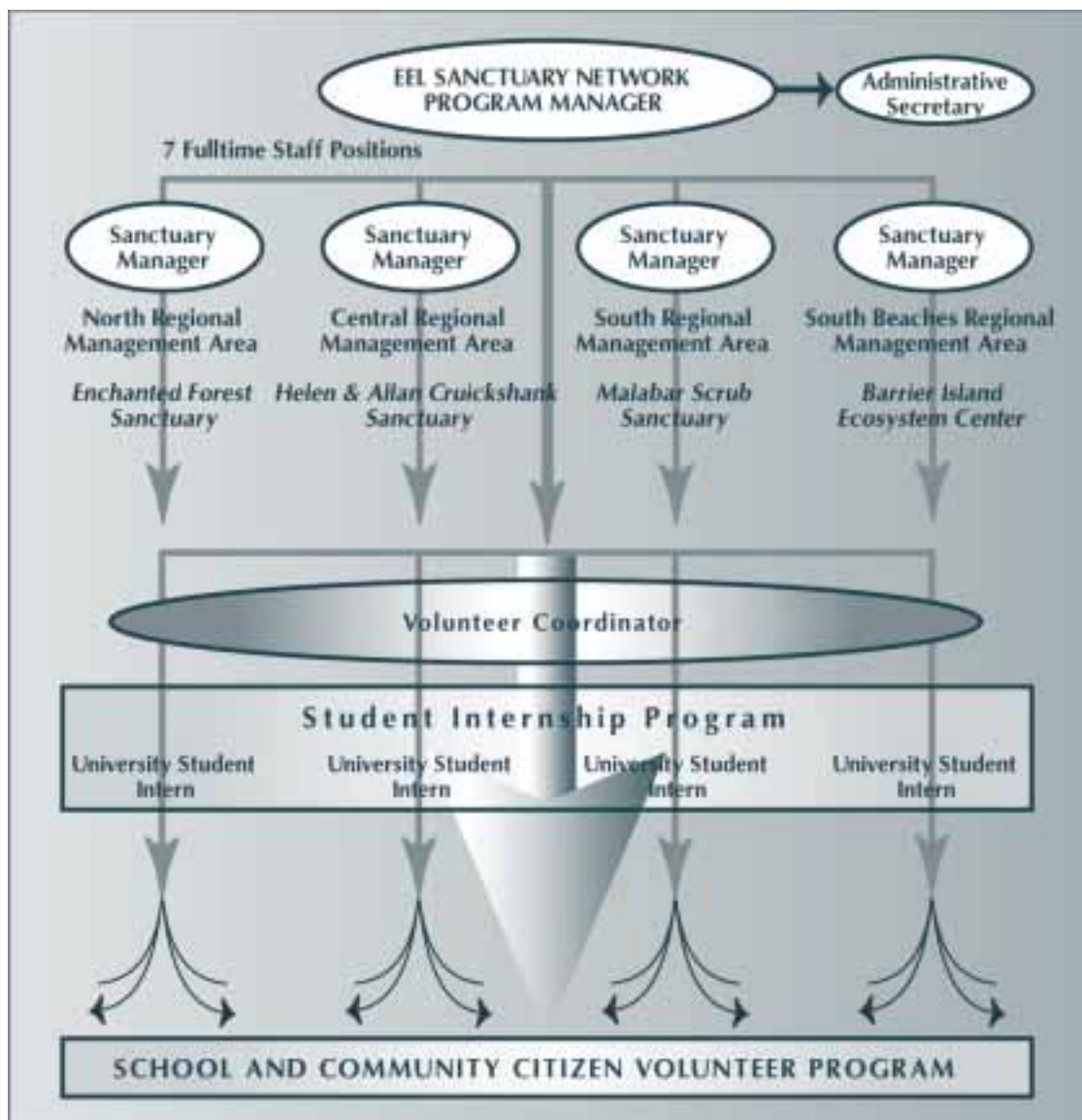
Staff Structure and Size

The EEL Program proposes a preliminary program staff of 7 full-time employees. New staff will be added as the responsibilities of the program grow and as necessary to maintain the quality and productivity of the program. The proposed positions include a Program Manager with land management credentials, Volunteer Coordinator, Administrative Secretary, and four Regional Sanctuary Managers. A Sanctuary Manager would be located at each of the environmental management and education centers at the proposed Category 1 sanctuaries.

Figure 4.4 shows the proposed administrative structure and relationships for existing and proposed EEL Program staff, citizen volunteers, and student interns.

The EEL Program Staff includes a Program Manager, Volunteer Coordinator, Administrative Secretary, and four Regional Sanctuary Managers.

Figure 4.4 EEL Program Proposed Staff Structure

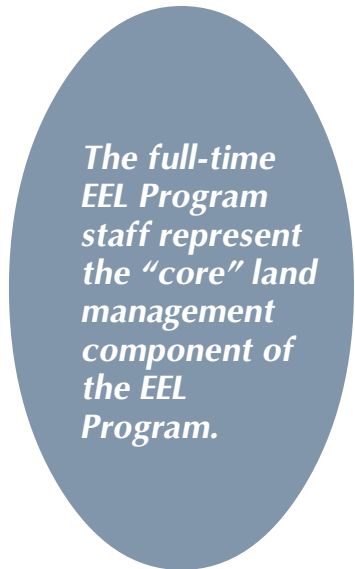


Additional staff may be requested from the Board of County Commissioners as part of the annual Brevard County budget process. The proposed staff size (seven full-time positions) is viewed as the minimal number of staff required to implement the EEL Program. Funding for staff positions would come from EEL Program administrative funds. At the proposed staff level, most labor intensive land management activities (i.e., prescribed burning, biological monitoring, invasive exotic species control) and environmental education programs would be implemented through outside contracts with private firms or other government agencies.

The EEL Land Management staff represent a core land management program within Brevard County Government. The Program Coordinator, Administrative Secretary and Volunteer Coordinator would have their primary offices located within the Parks and Recreation Department in Viera. The Sanctuary Managers would each administer one of the four environmental management and education centers identified as Category 1 sanctuaries. Each Sanctuary Manager would have office space within a center. Sanctuary Managers would be responsible for management of all EEL sites identified within the regional management area.

EEL Staff are encouraged to seek outside funding support from the private sector or foundations to provide supplemental salary support, funds for temporary staff positions or funds to implement programs. The full-time EEL Program staff represent the “core” land management component of the EEL Program.

EEL Program staff will coordinate and cooperate with other county offices. EEL Program staff are encouraged to develop a team approach within Brevard County Government to make efficient use of available staff resources and expertise. Inter-departmental partners include, but are not limited to, Office of Natural Resource Management, Parks and Recreation Department, County Attorneys Office, Public Works Department (Facilities Construction and Road and Bridge), Mosquito Control Department, Office of Agriculture and Extension Service, Public Safety Department, Surface Water Program and Office of Tourism (nature-based tourism).



The full-time EEL Program staff represent the “core” land management component of the EEL Program.

The County Manager or his/her designee is responsible to advise the EEL Program regarding the establishment of an inter-departmental team within Brevard County Government. The County Manager will work with EEL Staff to identify appropriate roles and responsibilities within each county government office. Participating county offices will work together to ensure good communication and coordination. The EEL Program Manager will ensure that sufficient operations and management funds are available and budgeted on an annual basis to fund internal service distribution costs and inter-departmental transfers of funds.

In addition to inter-departmental support for the EEL Program, EEL Program staff shall serve as a resource management advisory team for other offices of Brevard County Government. As an example, formal agreements should be established, pursuant to approval by the Board of County Commissioners, between the EEL Program and the County Parks & Recreation Department to address resource management and conservation needs on applicable county park lands, such as Beach & Riverfront acquisition sites within the Archie Carr Sea Turtle Refuge, Spessard Holland scrub, Erna Nixon Park, scrub at the Habitat Golf Course, or wetland conservation issues at the Habitat Golf Course. In such cases, public access will be maintained consistent with the goals of the program(s) responsible for the acquisition of the properties. An effective relationship between the EEL Program and the County Parks and Recreation Department is seen as an essential first step towards coordinated management of natural resources on public lands within Brevard County.

4.3.3 EEL Procedures Committee Responsibilities

The EEL Procedures Committee shall serve as an Advisory Committee to the Board of County Commissioners, County Staff and the EEL Selection and Management Committee regarding policies, procedures and standards for land acquisition. The EEL Procedures Committee will meet at the beginning of each fiscal year (between October 1 and December 1) for an Annual Joint Meeting with the Selection and Management Committee. The EEL Procedures Committee will meet as often as needed thereafter to complete any modifications to the Land Acquisition Manual (See Land Acquisition Manual for specific responsibilities).

Committee Structure

See Land Acquisition Manual for specific details.

4.3.4 EEL Selection and Management Committee

Responsibilities

The Selection and Management Committee is intended to be a long-standing scientific advisory committee to the EEL Program and the Board of County Commissioners during site selection, land acquisition, sanctuary management plan development and program implementation. (See Land Acquisition Manual for specific responsibilities).

The EEL Selection and Management Committee (SMC), formerly called the Selection Committee, was renamed as a result of the ratification of the EEL Sanctuary Management Manual, provided herein. The role of the SMC will be to function as a scientific advisory group for acquisition and management to EEL

Program staff and the Board of County Commissioners. The SMC reviews acquisition proposals and site-specific management plans. The SMC provides guidance and recommendations regarding sanctuary management objectives, ecosystem management principles and technical support in the development of management partnerships and funding support. The SMC works directly with the EEL Program Manager, each regional sanctuary manager and the Citizens Advisory Committee to implement the management plans, educational programs and passive recreation opportunities throughout the natural EEL Sanctuary Network.

Committee Structure

The SMC will be appointed by the Board of County Commissioners, using the scientific criteria established in the EEL Land Acquisition Manual, as recommended by the Procedures Committee and authorized by the Board of County Commissioners.

4.3.5 Citizen Advisory Committee

Responsibilities

Citizen participation will be encouraged by the establishment of a Citizen Advisory Committee (CAC). The primary function of the CAC will be to serve as an advisory committee to the EEL Selection and Management Committee (SMC).

The EEL SMC and Staff recommend that the Board of County Commissioners appoint a Citizen Advisory Committee within 60 days after the ratification and adoption of the EEL Sanctuary Management Manual. The major function of the CAC is to help implement the land management, environmental education and passive recreation goals of the program, as established by the EEL SMC and staff in the Sanctuary Management Plans. The CAC shall serve as a liaison between the EEL Program, the local communities and the citizens of Brevard County. The CAC will enhance public awareness about the EEL sanctuary network, identify sources for outside funding support and encourage private sector partnerships between the EEL Program and the business community.

Committee Structure

The structure of the CAC should promote optimal citizen input from knowledgeable individuals representing key areas of interest or constituencies. Collectively, the members of the Citizen Advisory Committee should represent a broad spectrum of experience and



The Selection and Management Committee is appointed by the Board using the criteria established in the EEL Land Acquisition Manual.

expertise that relate to EEL Program information needs. The Citizen Advisory Committee will be composed of eight (8) individuals. Each member will be appointed by standard procedures and practices of the Board of County Commissioners. The committee membership will consist of 1 educator, 1 individual from the business or financial community, 1 individual from the tourism industry, 1 individual representing recreational interests, 1 individual representing conservation interests, 2 individuals representing general citizens, and 1 individual representing a Board appointed Sub-Committee for individuals with physical/mental disabilities.

A representative from the EEL Selection and Management Committee, Tourist Development Council and Economic Development Council may each serve as advisory, non-voting members of the CAC.

A special three-member subcommittee of the CAC will be appointed by the Board of County Commissioners to represent individuals with physical and mental challenges or disabilities. This subcommittee will function as an advisory group to the CAC. The Chairperson or his/her designee will represent the 8th vote on the CAC.

4.3.6 *Community Volunteer Program Responsibilities*

The success of the EEL Program is heavily dependent

upon the implementation of effective citizen volunteer initiatives and establishment of a formal relationship with local universities and community colleges, as approved by the Board of County Commissioners. Creation of community volunteer groups, like the “Friends of Enchanted Forest”, will be encouraged. EEL Program staff, the CAC and the SMC will work collectively with local communities to ensure that effective volunteer groups are established for each natural area. Category 1 Sites with planned environmental management and education centers will receive priority consideration for the establishment of volunteer programs.



Anne Birch

Volunteer responsibilities will be determined by EEL staff at each of the EEL sanctuary sites. The EEL Program will treat citizen volunteers as unpaid staff. The EEL Volunteer Coordinator will establish the policies and procedures for volunteer support to ensure that volunteers:

1. are appreciated for their service to Brevard County;
2. are given appropriate levels of direction and support;
3. receive proper training and supervision; and
4. receive a positive volunteer experience.

Citizen volunteers should be viewed as local representatives and ambassadors for the EEL Program and Brevard County. The long-term success of the EEL Program and the EEL Sanctuary network is directly linked to the level of citizen support, active participation and commitment to conservation.

Volunteer Program Structure

The structure of the Volunteer Programs will be determined by EEL Program staff with advisory support from the Selection and Management Committee and the Citizens Advisory Committee.

4.4 Partnerships—Key To Success

The EEL Program shall actively seek partners to implement its goals for conservation, passive recreation and environmental education. Partnership agreements among governmental agencies and private-sector partners involved in land acquisition and stewardship provide numerous opportunities for increased program efficiency and effectiveness. Unfortunately, political and geographical fragmentation and separation among agencies can result in poor communication, inter-agency policy conflicts, overlap of interests and expenditures, and an absence of inter-agency coordination. The immediate need for effective land management and stewardship highlights the critical importance of coordinated and cooperative partnerships. Many of Florida's ecosystems overlap numerous geographical and political boundaries. Innovative partnerships are essential to effectively implement the concepts of ecosystem management.



Long-term success of the EEL Program and Sanctuary Network is linked to citizen support, active participation & commitment to conservation.

4.4.1 Land Management Partners

The EEL Program is encouraged to work closely with the St. Johns River Water Management District, Florida Department of Environmental Protection, Florida Division of State Lands, U.S. Fish and Wildlife Service, Florida Natural Areas Inventory, Florida Game and Fresh Water Fish Commission, Florida Division of Forestry, Florida Division of Historical Resources, The Nature Conservancy, Trust for Public Lands and other public and private conservation and management organizations. Partnerships in acquisition and management provide excellent opportunities to maximize the effective use of staff and funding. Partnerships establish new lines of communication and cooperation among agencies. EEL Staff will ensure that effective inter-agency partnerships are established, nurtured and continued as long-term relationships.

Partnerships in acquisition and management provide excellent opportunities to maximize the effective use of staff and funding.

EEL Staff should continue to seek partners for management through joint acquisition programs, transfer of property title to federal and state agencies as part of matching fund acquisition programs, establishment of Inter-agency Management Agreements and establishment of Inter-agency Working Groups to develop coordinated management plans. Preservation 2000 is likely to provide continuing management funds to a number of state agencies identified as primary managers of CARL Projects. EEL Staff is encouraged to seek state agency support for each Brevard County CARL Project through the various applicable Divisions within the Florida Department of Environmental Protection.

Private-sector partnerships with the growing nature-based tourism industry in Florida provide opportunities for responsible management of public access on endangered lands, enhanced conservation and increased funding for management and environmental education. Appendix A.3 presents a discussion of the opportunities and challenges to achieve a meaningful balance between nature-based tourism and responsible stewardship within the EEL Sanctuary Network. The section provides specific guidance to the ecotourism industry and EEL Sanctuary managers to ensure that the resource values of the EEL Sanctuary Network are not degraded and high-quality visitor experiences are maintained.

In addition, partnerships with private landowners having conservation interests provide effective opportunities to extend the resource protection of natural areas and decrease the need for

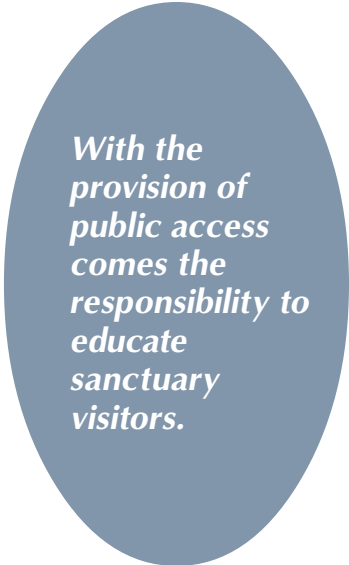
additional land acquisition. Private citizen and local community involvement in EEL Program conservation efforts are considered essential to the regional need of conservation in Brevard County. Areas in Brevard that are in low intensity land uses, such as silviculture and rangeland, may be compatible with the habitat conservation needs of many species. The management of wildlife habitat on a number of private lands in Brevard has been excellent. The EEL Program should seek ways to promote and enhance long-term conservation and management on private lands.

Land acquisition, conservation measures and management programs implemented by the EEL Program should consider and endorse the maintenance of existing, ecologically responsible, land uses on private lands through positive incentive programs such as tax breaks, conservation easements, or cooperative agreements with land owners. As the EEL Program natural areas network becomes established, EEL Staff and advisory committees should seek innovative opportunities through the Office of Natural Resources Management and the inter-agency partners to seek innovative management techniques and partnerships with the potential to provide resource or wildlife protection on private lands in coordination with and as a complement to the lands acquired by the EEL Program.

4.4.2 Environmental Education Partners

With the provision of public access comes the responsibility to educate sanctuary visitors to understand that their presence and behavior has a direct impact on resource quality and the quality of the nature-based experience. In this regard, environmental education is viewed as an essential component of the EEL Program conservation effort. Unfortunately, environmental education is not a traditional service provided by local government. The EEL Program shall identify and promote innovative partnerships to effectively and efficiently meet the program's environmental education objectives.

East Central Florida and Brevard County have numerous government agencies, not-for-profit organizations, public and private universities, public schools, and environmental education programs that provide unique opportunities to meet the environmental education goal of the 1990 referendum. There is a diverse and highly qualified pool of individuals and organizations



With the provision of public access comes the responsibility to educate sanctuary visitors.

Implementation of a student intern program provides numerous opportunities for enhancing partnerships with local professors and teachers.



Anne Birch

within the Brevard County region to provide environmental education programs on EEL Sanctuary sites. Potential partners for environmental education programming within the EEL Sanctuary Network include academic institutions, government agencies, private non-profit organizations and private corporations.

If sufficient interest exists, the EEL Program shall establish a student intern program with local academic institutions to provide opportunities for student internships. Implementation of a student intern program provides numerous opportunities for enhancing partnerships with local professors and teachers. Student intern programs can provide essential support to the EEL Program through independent field research, environmental education program development, resource monitoring and management planning. In addition, the EEL Program can provide opportunities to expand and modify local curricula to consider the emerging educational needs of the land management and tourism industry for nature-based tourism in Florida.

Chapter 5

Funding Long Term Management



5.1 Background

Numerous studies show that natural areas and open space contribute positive economic benefits to local communities. These benefits can be generally grouped within four categories: *environmental, economic, infrastructure and quality of life benefits*. Public land acquisition and land conservation provide natural resource opportunities and options for conservation and public recreation. Lands acquired through the Environmentally Endangered Lands Program represent public capital assets with environmental and economic values that grow over time and contribute to future generations. To increase understanding and awareness about the costs and benefits of land acquisition and conservation, EEL Program staff will generate a summary report on the subject which will be presented to the Board of County Commissioners.

The challenge for long-term stewardship of endangered lands is to develop effective policies and procedures to implement and finance resource management objectives. EEL sanctuaries require a variety of management actions that include provisions for public access, passive recreation, environmental education, active land

Lands acquired through the EEL Program represent public capital assets with environmental and economic values.

management, site security and recurring site maintenance. Control of invasive exotic species, fire management, restoration of natural hydrological regimes, endangered species monitoring, and a variety of other land management issues must be considered as long-term responsibilities.

Projections for management costs vary from site-to-site and agency-to-agency. Management costs generally are influenced by the size and location of a sanctuary, level of human disturbance and resource needs. Natural areas that are fully developed and can sustain high attendance have the largest costs and largest net positive economic impacts on local economies. Small sites, with high volume public use and high levels of restoration are more expensive to manage than large, pristine sites with low levels of public use. The three categories proposed for EEL sanctuary development in Chapter 3 provide a mechanism to deliver varying levels of visitor experiences with minimal costs to the program and protection of natural resources.

The recurring costs of program administration, land management and maintenance are long-term commitments that extend well beyond the land purchase. The direct and indirect costs associated with land acquisition and conservation must be considered in the comprehensive financial planning for endangered lands programs. Few local programs in Florida have established sufficient data bases or have sufficient experience to accurately predict long-term costs of endangered lands management. Few local, state or federal programs have sufficient funds, staff or expertise to manage ecosystems alone. Partnerships and inter-agency coordination are essential to successful land management and efficient resource allocation.

5.2 Approach To Financial Stability

The EEL Program shall recommend a financial plan to the Board of County Commissioners in the EEL Sanctuary Management Manual (provided herein) to ensure that the Brevard County Environmentally Endangered Lands Program meets its capital bond debt-service obligations and appropriates sufficient funds for long-term non-capital management.

The Brevard County Environmentally Endangered Lands Referendum of 1990 was one of the few local endangered lands referenda in Florida to provide language for protecting and maintaining environmentally endangered lands once they are acquired. A stable source of funds to support long-term management, passive recreation and environmental education goals is viewed by the EEL Staff and the Selection and Management Committee as an essential obligation of the EEL Program.

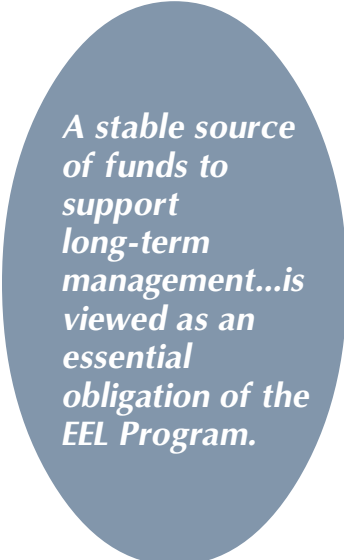
5.3 Financial Plan

The EEL Selection and Management Committee and Staff considered the following financial options to fund the long-term conservation and management responsibilities of the EEL Program.

1. Establishment of a management endowment using annual EEL Program ad valorem revenues not required for bond debt service.
2. Fund management activities until the Year 2011 with annual EEL Program ad valorem revenues not required for bond debt service.

Brevard County may use the ad valorem millage in excess of that necessary for debt service for any lawful purpose solely related to the capital project for which the voted millage was approved, including operations and maintenance. Pursuant to §200.181 F.S. and §125.013 F.S., (as amended in 1996).

3. Bonding to the full capacity of the ad valorem revenue (up to a cap of \$55 million, or the maximum level of bonds and bond debt that can be issued with the voter-approved millage rate of 0.25 mils) and funding 100% of long-term EEL Program management costs from annually appropriated general revenue.
4. Paying for long-term EEL Program management costs from a combination of annually appropriated general revenue and EEL Program ad valorem



A stable source of funds to support long-term management...is viewed as an essential obligation of the EEL Program.

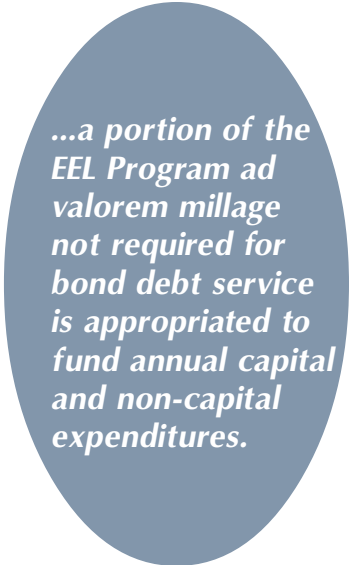
revenue not required for bond debt reduction. General revenue appropriations would be phased-in at increasing incremental amounts over the 15 years of the program. The general revenue millage levels would be set to ensure that 100% funding levels were achieved through general revenue appropriations in the year 2011. The potential for future bond issues would be based on EEL Program ad valorem millage available for expanded debt service.

On September 23, 1997, the Board of County Commissioners discussed financial options available to fund management within the EEL Sanctuary network. As a result of the discussions, the Board voted to use annual EEL Program ad valorem revenues not required for bond debt to fund management within the sanctuary network. This decision ensures that sufficient ad valorem funds are available for future land acquisition, sanctuary management, passive recreation and environmental education, pursuant to the EEL Program referendum through 2011.

Figure 5.1 presents a graphic representation of the relationship between projected ad valorem revenues, debt service responsibilities, projected annual management expenditures and revenues available for legal use within the program.

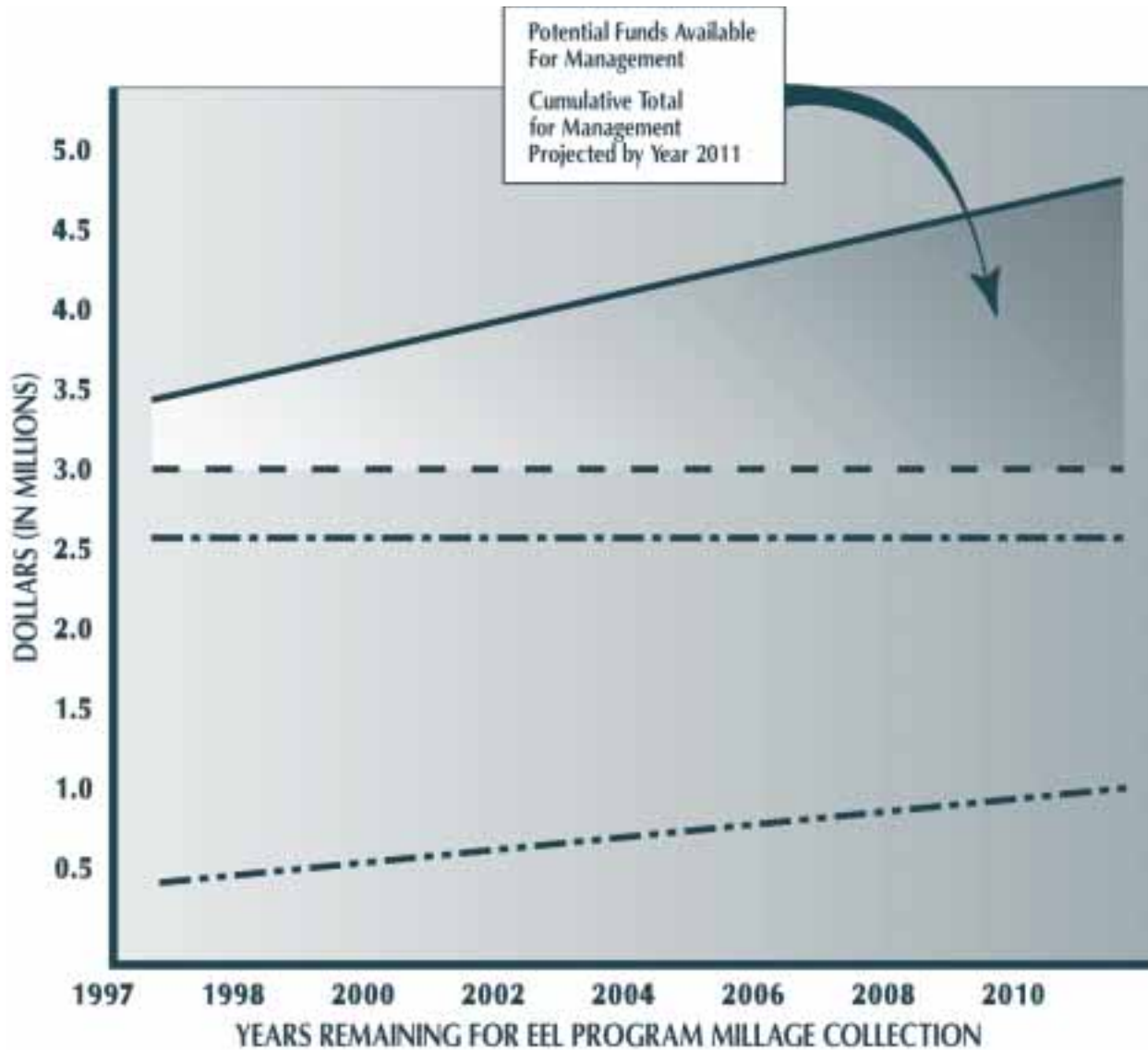
Table 5.1 presents projected annual revenues, expenditures, and surplus millage figures for each remaining year of the EEL Program.

Based on the financial projections, the EEL Program shall annually appropriate a portion of the EEL Program ad valorem millage not required for bond debt service to fund annual EEL Program capital and non-capital expenditures. Annual budget appropriations of available EEL Program ad valorem revenues shall begin in FY 1997-1998 and continue until the Year 2011. The EEL Program budget will be reviewed and adopted annually as part of the Brevard County budget process and as authorized by the Board of County Commissioners. After 2011, the Board of County Commissioners will consider funding options and financial resources to address the needs of the EEL Program pursuant to the directives of the 1990 voter-approved referendum.



...a portion of the EEL Program ad valorem millage not required for bond debt service is appropriated to fund annual capital and non-capital expenditures.

Figure 5.1 Conceptual Graph of EEL Program Revenues and Projected Costs



LEGEND—Growth Projection Assumptions	
	Annual Ad Valorem Revenue @ 0.25 mils and 2.5% Annual Growth
	Combined Costs: Debt Service & Administration/Management Costs
	Bond Debt Service: 1991 Bond Series, 1996 Bond Refinancing, 1993 Bond Series
	Annual Administrative & Management Costs

Table 5.1 EEL Program Financial Projections for Revenue, Expenditure, and Management

Fiscal Year	ANNUAL DEBT SERVICE										MILLAGE W/ 0.25 MIL CAP		EXPENDITURES
	Assess. Value at Annual Incr.	Millage	Tax Coll. at 96%	Interest Revenue	Total Revenue	Principal & Interest Payments	Tax Coll. Prop. Appr. & Incid.	Total Disburse.	Millage	Tax Coll. at 96%	Cumul. Total	Annual O & M Expenditure Potential	
1997	\$14,174,765,816	0.197	\$2,674,240	\$100,000	\$2,774,260	\$2,655,688	\$130,000	\$2,785,688	0.053	\$727,683	\$727,683	\$450,000	
1998	\$14,529,134,961	0.192	\$2,676,783	\$100,000	\$2,776,783	\$2,655,066	\$133,250	\$2,788,316	0.058	\$810,209	\$1,537,892	\$450,000	
1999	\$14,892,363,335	0.187	\$2,680,434	\$100,000	\$2,780,434	\$2,655,537	\$136,581	\$2,792,118	0.063	\$893,734	\$2,431,626	\$450,000	
2000	\$15,264,672,419	0.183	\$2,683,309	\$100,000	\$2,783,309	\$2,655,118	\$139,996	\$2,795,114	0.067	\$980,212	\$3,411,838	\$450,000	
2001	\$15,646,289,229	0.179	\$2,686,468	\$100,000	\$2,786,468	\$2,654,908	\$143,496	\$2,798,404	0.071	\$1,068,642	\$4,480,480	\$450,000	
2002	\$16,037,446,460	0.175	\$2,688,462	\$100,000	\$2,788,462	\$2,653,398	\$147,083	\$2,800,481	0.075	\$1,160,525	\$5,641,005	\$450,000	
2003	\$16,438,382,622	0.171	\$2,694,341	\$100,000	\$2,794,341	\$2,653,845	\$150,760	\$2,804,605	0.079	\$1,250,871	\$6,891,876	\$450,000	
2004	\$16,849,342,187	0.167	\$2,697,096	\$100,000	\$2,797,096	\$2,654,946	\$154,529	\$2,809,475	0.083	\$1,346,746	\$8,238,622	\$450,000	
2005	\$17,270,575,742	0.163	\$2,704,087	\$100,000	\$2,804,087	\$2,658,365	\$158,392	\$2,816,757	0.087	\$1,440,851	\$9,679,473	\$450,000	
2006	\$17,702,340,135	0.159	\$2,704,633	\$100,000	\$2,804,633	\$2,655,005	\$162,352	\$2,817,357	0.091	\$1,543,899	\$11,223,372	\$450,000	
2007	\$18,144,898,639	0.156	\$2,712,972	\$100,000	\$2,812,972	\$2,659,602	\$166,411	\$2,826,013	0.094	\$1,641,803	\$12,865,175	\$450,000	
2008	\$18,598,521,105	0.152	\$2,713,674	\$100,000	\$2,813,674	\$2,656,172	\$170,571	\$2,826,743	0.098	\$1,749,972	\$14,615,147	\$450,000	
2009	\$19,063,484,132	0.148	\$2,716,583	\$100,000	\$2,816,583	\$2,654,938	\$174,836	\$2,829,774	0.102	\$1,858,654	\$16,473,800	\$450,000	
2010	\$19,540,071,236	0.145	\$2,724,150	\$100,000	\$2,824,150	\$2,658,450	\$179,206	\$2,837,656	0.105	\$1,965,467	\$18,439,267	\$450,000	
2011	\$20,028,573,016	0.142	\$2,728,104	\$100,000	\$2,828,104	\$2,658,088	\$183,687	\$2,841,775	0.108	\$2,078,754	\$20,518,021	\$450,000	

Each year, during the County budget process, the EEL Program will provide an annual budget for operations and management, a capital expenditure budget, and a capital improvement plan. Funds that remain available in excess of annual debt service requirements can be used for additional capital expenditures for land acquisition, capital improvements, land management, new bonding, bond debt reduction or other lawful purposes solely related to the Environmentally Endangered Lands Program.

In recognition of the importance of cost-benefit analyses to assist program planning and annual budget allocations, EEL staff are encouraged to identify and quantify (when possible) the economic costs and benefits of EEL sanctuaries as part of the annual EEL Program budget and capital improvement planning process. The EEL Program is encouraged to contract with professional financial or economic consultants to help EEL Program staff in the collection of economic data. At a minimum, each site or management unit should collect data about annual sanctuary attendance, expenditures and revenues.

The growth of nature-based tourism as a major force in the world and Florida tourism markets suggests that the EEL Sanctuary network has the potential to generate revenues at EEL Sanctuary sites. The EEL Program staff shall explore opportunities for enhanced revenue generation from outside grants, foundation support and private-sector partnerships as long as these efforts are consistent with the EEL Program conservation goals.



Appendix

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- A.1 EEL Program Conservation Principles and Directives*
 - A.2 EEL Management Plan Description*
 - A.3 Nature-Based Tourism: Balancing Public Use and Conservation*

A.1 EEL Program Conservation Principles and Directives

Principle 1

Maintain all sites in a natural state and/or restore sites to enhance natural resource values pursuant to management plans as approved by the Board of County Commissioners. All sites in the EEL Sanctuary Network shall be maintained in a desirable natural state or restored to enhance natural resource values for species, natural communities and ecosystems.

The EEL Program shall:

- a. Make management decisions recommendations to ensure that natural resource values are maintained, restored or enhanced as natural assets for future generations.

Principle 2

Protect natural resource values by maintaining biological diversity and using conservation as a primary goal for decision making. The EEL Program will strive to maintain biological diversity at genetic, species, natural community, and ecosystem levels to secure present and future natural resource values and options.

The EEL Program shall:

- a. Make resource management decisions with the understanding that resource conservation was the primary goal of the voter-approved referendum in 1990.
- b. Manage and monitor total impacts on ecosystems and sites within the natural areas network.
- c. Work to preserve essential natural features of the ecosystem.
- d. Identify natural communities, species and processes that are particularly important to the maintenance of an ecosystem, and make special efforts to protect them.
- e. Manage and monitor in ways that do not further fragment natural areas.
- f. Maintain, mimic or enhance patterns of natural processes; including disturbances at scales appropriate to the natural system.
- g. Avoid disruption of food webs, especially removal of top or basal species.
- h. Avoid significant genetic alteration within populations.
- i. Recognize that biological processes are often nonlinear, are subject to critical thresholds and synergism's, and that these issues must be identified, understood and incorporated into management strategies.
- j. Recognize that events, like hurricanes, damaging wildfires, or epidemics are unpredictable and potentially devastating to species viability. The EEL sanctuary network should be developed with consideration for the probability of uncontrolled natural events.



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Principle 3

Balance human access to EEL Sanctuary sites and public use with the protection of natural resources.

The EEL Program shall:

- a. Recognize that an acceptable balance can be attained between resource protection and public use. Land management practices and sanctuary development plans will use spatial, temporal, visual or auditory controls (like elevated boardwalks, scenic overlooks, specific trail location and educational signage) to provide appropriate public access and use, rather than to exclude the public from EEL sanctuaries.
- b. Recognize that the total impact of humans on natural resources is the product of human population size, per capita consumption, extent of public access, incidental taking of habitats, and habitat degradation caused by human activities.
- c. Recognize that public interest in recreation on protected natural areas is high and that public interest is projected to increase over time.
- d. Take appropriate actions to successfully meet the conservation needs of a natural area site with provisions for responsible public access and use.
- e. Recognize that natural resource conservation by private land owners on private lands is an important part of the statewide conservation effort in Florida and Brevard County.



Principle 4

Apply the best most accurate current scientific principles to strategies for conservation. Strategies to conserve and manage living resources should be formulated and implemented using the best available scientific and natural resource management principles. The full range of knowledge and skills from both the natural and social sciences is required to achieve a balance between resource conservation and human use.

The EEL Program shall:

- a. Identify the local and regional pool of scientific and resource management experts and provide opportunities for their active participation with the EEL Selection and Management Committee and EEL Staff.
- b. Establish formal financial partnerships through contracts with interested scientific and land management agencies and institutions, as approved by the Board of County Commissioners, to apply local, regional and national expertise to EEL Program initiatives.
- c. Recognize that science is a vital part of natural resource conservation. Science can be used to describe resource inventories, understand natural processes, and provide predictive capabilities.

- d. Identify a local and regional pool of individuals recognized for their expertise and knowledge in social sciences (i.e., education, recreation, individuals with special needs, art, literature, tourism, etc.). Encourage their active participation in the EEL Program projects through active participation in the EEL Volunteer Programs.



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- e. Encourage EEL Staff to consult with a wide range of knowledgeable individuals and institutions recognizing that all conservation issues have biological, economic, and social implications. Ignoring any of these may lead to conflicts that will impair effective conservation.
- f. Encourage public participation in land management and stewardship through active community involvement in EEL sanctuary programs and projects.

Principle 5

Collect and use the best data available for developing site management plans. Resource inventories, ecological surveys, and land management assessments should precede and guide the provision of public access and use. The information should be made available for critical scientific and public review.

The EEL Program shall:

- a. Develop Interim Management Plans within 90 days and Management Plans within one year after the acquisition of a management unit or sanctuary site. In cases where a management unit may be composed of multiple properties, a management plan would not be required until one year after all the essential properties are assembled. Interim Management Plans can be developed for individual management units within large multi-parcel projects.

In cases where property ownership is to be transferred to the State of Florida Board of Trustees of the Internal Improvement Trust Fund as part of Multi-Party Acquisition Agreements in the Conservation and Recreational Lands (CARL) Program, Management Plans or Interim Management Assignment Letters will be completed within one year of the property transfer to the State as directed in §259.032 F.S. and §253.034 F.S. The EEL Program will comply with future amendments to the Florida Statutes and state land management policies as applicable to joint CARL Projects.

- b. Prepare Interim Management Plans, Management Plans or Interim Management Assignment Letters to the Board of County Commissioners for review and ratification to allow for public comment and discussion.
- c. Identify uncertainties and assumptions regarding natural history, size and productivity of site resources.
- d. Identify major ecological and sociological uncertainties and assumptions regarding resource uses and visitor impacts.

- e. The EEL Program shall ensure that the level of resource use does not risk degradation of the resource nor allow expansion of public use at rates that exceed the known vulnerability of the resource and its relationship with other ecosystem components.
- f. Evaluate human use impacts through on-going visitor impact analyses. The results of these observations shall guide all resource management decisions.
- g. Encourage private sector - public sector partnerships to implement site management or specific programs so that: 1. the partnership shall not result in the exclusion of the public from acceptable resource uses defined in the Management Plan, and 2. the partnership shall result in a net economic and/or resource management benefit to the EEL Program, the sanctuary site and the citizens of Brevard County.

Principle 6

Consider the interests and values of all citizens by using scientific information to guide management policy making.

The EEL Program shall:

- a. Whenever possible, provide positive incentives to the users of living resources that correspond to the values those resources have to society. Ensure that these incentives promote conservation, and constrain uses that do not promote, or are inconsistent with, the conservation objectives of the EEL Program.
- b. Implement conflict resolution mechanisms to minimize conflicts over resource uses among competing stakeholders.
- c. Encourage the integration of science and best management practices with policy making, independent of resource users and special interests.
- d. Require that policy makers and resource managers be held accountable for the use of the best possible data and analysis in establishing policy and management decisions.
- e. Use the criteria and procedures in the EEL Land Acquisition Manual and EEL Sanctuary Management Manual to guide policy and conservation decisions.
- f. Ensure that formal institutions responsible for resource management decisions have temporal and spatial perspectives consistent with the ecological character of the resources and organizational structures.

Principle 7

Promote communication that is interactive, reciprocal and continuous.

The EEL Program shall:

- a. Ensure that communication is provided to the general public and is based on mutual respect and sound information.
- b. Require external and internal review of all reports and analyses to verify objectivity and results.



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- c. Inform and motivate the public regarding conservation, land stewardship and responsible use of the EEL Program natural areas network.
- d. Encourage inter-disciplinary communication to inform decision makers, land managers and the general public.
- e. Promote enhanced public understanding and awareness of Brevard's rich biological diversity through programs that support public use of the EEL Program Sanctuary Network, environmental education and responsible nature-based tourism.

Principle 8

Promote the value of natural areas to Brevard County residents and visitors through the maintenance of the quality of resource values, public services and visitor experiences. The environmental and economic values of the EEL Program sanctuary network depends upon high quality natural resources and the provision of exceptional visitor experiences.

The EEL Program shall:

- a. Develop public-use facilities and programs that create a positive visitor experience.
- b. Hire sufficient EEL Program staff or contract outside land management services as approved by the Board of County Commissioners to ensure that conservation objectives are achieved and quality passive recreation and environmental education are provided.
- c. Implement a long-term economic plan that provides sufficient funding for resource protection, public access and environmental education.
- d. Encourage the development of programs that provide natural or human transportation corridors or connections to the surrounding landscape and community. The EEL Program shall ensure that all public access points or trails are compatible with the conservation goals of EEL Sanctuary sites. Examples of connectors include greenways, pedestrian trails, bicycle paths, horse trails and wildlife corridors.
- e. Ensure that sanctuary site design and development contributes to environmental and cultural protection and interpretation.
- f. Integrate cultural, archaeological, historical and architectural considerations into site protection, site design and interpretive programs.
- g. Develop environmental education programs with support from local and regional educators, education programs, nature-based tourism interests, non-profit groups, private corporations and other interested organizations.



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Principle 9

Promote the integration of natural resources conservation into community discussions of economic development and quality of life.

The EEL Program shall:

- a. Initiate and enhance communication and cooperation with local governments, chambers of commerce, economic development councils, tourist development councils, school boards and other community programs within Brevard County and Florida.
- b. Actively participate in local, state and national discussions and planning efforts to expand and promote responsible nature-based tourism in Florida.
- c. Recognize that the EEL Sanctuary Network is an integral part of the local community and Brevard County. Public use of a sanctuary site and development within a site shall be compatible with the interests of the local community.
- d. Encourage public recognition and understanding of the value of history, natural resource protection and human community development to promote a common vision, pride and respect for Brevard County and Florida.
- e. Encourage public sector/private sector partnerships for conservation, education and nature-based tourism.

Principle 10

Provide a responsible financial strategy to support implementation of management actions to achieve long-term conservation and stewardship goals.

The EEL Program shall:

- a. Recognize that conservation, passive recreation and environmental education are long-term EEL Program responsibilities that require a financial commitment extending beyond the sunset date of the EEL Program ad valorem revenue collection.
- b. Identify and implement a financial strategy that provides sufficient funds for conservation, passive recreation and environmental education programs.
- c. Provide a long-term financial plan to the Board of County Commissioners that allows the EEL Program to be economically self-sufficient. The plan shall decrease the future need for increased taxes above and beyond the 1990 EEL Referendum.
- d. Acknowledge that all lands acquired by the EEL Program will require varying levels of management and experience varying levels of public use.

A.2 FES Management Plan Description

Proposed Management Plan Format

I. EXECUTIVE SUMMARY

The executive summary should identify the location, size, general natural resource features, and primary management goals for the site. The Executive Summary should be written for the general public and limited to two pages in length (8.5" X 11").

II. INTRODUCTION

The introduction should serve as a brief introduction to the site. Information could include a brief description of the location, acquisition history, ownership pattern, key resource values, unique resources and a description of the structure of the Management Plan.

III. SITE DESCRIPTION AND LOCATION

Provide a detailed site and location description. Maps should be provided which clearly provide directions for site access.

IV. NATURAL RESOURCE DESCRIPTIONS

A. PHYSICAL RESOURCES

- a. CLIMATE—Describe the climatic conditions that effect the site and relate to the biological diversity or natural resource conditions.
- b. GEOLOGY—Provide a description of the geological resources of the site. Include maps and photographs as appropriate.
- c. TOPOGRAPHY—Provide topographic maps of the site, if available. Describe important topographic features.
- d. SOILS— Provide USGS soil maps for the site with the property boundary clearly delineated and labeled.
- e. HYDROLOGY—Describe major hydrological features of the site. Provide aerial photos and maps of major hydrological features including surface water features and ground water flow, if available.

B. BIOLOGICAL RESOURCES

- a. ECOSYSTEM FUNCTION—Describe the site in the context of the regional landscape. Describe the ecosystem values and the role of the site on key ecosystem functions.
- b. FLORA—List the known plant species on-site. Describe natural communities and dominant plant species. Provide vegetation maps and acreage for natural community types. Describe each natural community occurring on-site. Discuss fire management. Discuss invasive exotic species that impact the site.
- c. FAUNA—List known animals on-site. Provide territory data and maps, if available. Discuss management needs for each major species. Discuss invasive exotic species that impact the site.



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- d. **SPECIAL CONCERN SPECIES**—List all known endemic species that occur on-site. List all known rare, threatened or endangered species that are listed by federal or state agencies. Evaluate the vulnerability of non-listed species special to a site. Identify major management needs for each species. Identify whether recovery plans have been developed and how they relate to on-site management needs.
- e. **BIOLOGICAL DIVERSITY**—Describe the biological diversity of the site. If species inventories are available, synthesize the data into summaries that can be used to qualitatively or quantitatively describe the biological diversity value of the site. Identify and implement strategies for assessing quality and trends in biological diversity based on indicator species and management practices.

C. CULTURAL

- a. **ARCHAEOLOGICAL**—List all known archaeological sites on the property. Provide maps with general locations, if available. Site descriptions and locations should be provided to the Division of Historic Resources for the historic record. Care should be taken to not encourage public access to or disruption of significant archaeological resources or burial sites.
- b. **HISTORICAL**—Provide a brief history of the property to include past ownerships. Include information of historical or cultural interest.
- c. **LAND-USE HISTORY**—Describe the land-use history of the property. Provide specific details about consumptive resource uses or management strategies that influence current management decisions or restoration plans.
- d. **PUBLIC INTEREST**—Identify historical user groups on the site and public interests. Describe all public interests that may influence the ability to implement management strategies or cause potential user conflicts. Identify local municipalities and potential management partners.

V. FACTORS INFLUENCING MANAGEMENT

- A. **NATURAL TRENDS**—Discuss all known natural trends on-site that influence resource values or management strategies.
- B. **HUMAN-INDUCED TRENDS**—Identify and describe all known human influences on-site. Describe management strategies for reduction of impacts, resource restoration or resource enhancement. Develop ways to assess carrying capacity of natural resources. Implement strategies for visitor impact analysis that consider species-level, natural community-level and ecosystem-level human influences.
- C. **EXTERNAL INFLUENCES**—Identify and describe any external influences on-site. External influences can include site encroachments from adjoining property owners or uses.
- D. **LEGAL OBLIGATIONS AND CONSTRAINTS**—Describe any legal obligations or constraints to land management and conservation. Examples may include prescriptive rights, impacts of easements, retained rights for mining or timber operations. Other legal influences may come from local ordinances and land use laws.
- E. **MANAGEMENT CONSTRAINTS**—Describe the major influences that constrain implementation of a sound management plan. Example of management constraints include problems with access, lack of staff, lack of funding, difficulty implementing prescribed burns due to proximity of a residential neighborhood, etc.
- F. **PUBLIC ACCESS AND PASSIVE RECREATION**—Identify and describe the types of passive recreation proposed for the site and factors associated with the provision of public access. This section should address how passive recreational opportunities on-site will meet the

needs of the community and how site-specific recreation opportunities complement the overall sanctuary network. Capital development needs should be addressed as they relate to public access and use.

VI. MANAGEMENT ACTION PLANS

A. GOALS

B. STRATEGIES

C. ACTIONS— The Management Action Plan section of the Management Plan provides the specific goals to guide implementation. This is one of the most important aspects of a management plan. Management action plans provide a strategic approach to management of a natural area. The management goals should be identified in this section with specific strategies to implement the goals and specific action items required to implement the strategies. Management Action Plans should represent the focus of the EEL Program Vision and consider the Program responsibilities as authorized by the 1990 voter-approved referendum and the EEL Selection and Management Committee ecological criteria (see the EEL Land Acquisition Manual and the EEL Sanctuary Management Manual provided herein). At a minimum, specific management goals should address the following:

- a. Conservation of ecosystem functions.
- b. Conservation of natural (native) communities.
- c. Conservation of species (including endemic, rare, threatened and endangered species).
- d. Restoration of wetlands, wetland/upland ecotones and natural hydroperiod.
- e. Restoration of altered or disturbed uplands, including those altered by fire exclusion or suppression.
- f. Collection of data to refine and improve management.
- g. Documentation of significant archaeological and historic sites.
- h. General upkeep and security of the property.
- i. Documentation of historic public use.
- j. Opportunities for multiple uses and compatibility (i.e., stormwater control, water recharge, etc.).
- i. Provision of public access and responsible public use.
- j. Provision of environmental education programs.
- k. Assessment of carrying capacity of natural resources with public use.

Staff should consult with land managers and potential management partners to ensure that all important conservation and management issues are addressed in the Management Plan. The success of a management plan and management plan implementation shall be evaluated and assessed on an annual basis. Although the general goals of the plan are not likely to change dramatically over time, the specific strategies and action items must be responsive to changing needs and conditions at the site.

An example of a goal with several strategies and recommended actions is provided below to provide staff guidance regarding the level of detail needed to address specific goals, strategies and actions within the Management Action Plan section of the Management Plan document.



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Example: Management Action Plan Section

Strategy 1: Design and implement a natural systems fire management program.

ACTIONS: • Develop a fire management plan for the site. • Identify and evaluate proposed fire management units. • Develop a detailed fire prescription for each management unit. • Document federal and state listed species within each management unit. • Identify and secure perimeter fire breaks. • Develop public education and neighborhood information packets. • Develop an emergency fire response program • Ensure that adequately trained staff or contract consultants are available. • Establish photo points of all units. • Establish a partnership with the Division of Forestry.

Strategy 2: Restore altered upland habitats within the sanctuary network.

ACTIONS: • Evaluate conditions of native upland communities. • Inventory the types and environmental quality of all upland habitats within the sanctuary network. • Inventory listed species that occur on-site. • Identify and prioritize upland sites requiring restoration. • Assess effect of management on adjacent habitats or properties. • Develop a strategy for restoration activities for each site in the sanctuary network. • Implement restoration activities for upland habitats. • Monitor impacts of restoration activities and evaluate success of restoration projects.

Strategy 3: Restore or rehabilitate original wetlands, wetland and upland ecotones, natural hydroperiods, and natural wetland linkages with surface waters.

ACTIONS: • Ensure the successful implementation of any wetland restoration and mitigation plans on the properties. • Integrate restoration and mitigation plans with overall site management planning. • Inventory extent and quality of all wetlands within the sanctuary network. • Prioritize wetland restoration and rehabilitation projects based on ecological significance and funding availability. • Assess management activities on surrounding land uses.



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VII. PROJECTED TIMETABLE FOR IMPLEMENTATION

Provide a projected timetable for action plan implementation. Prioritize each action item in the timetable based on relative conservation value and needs. Make timetables realistic.

VII. FINANCIAL CONSIDERATIONS

Discuss the mechanism of funding and projected costs of management plan implementation. Attempt to estimate projected revenues and costs as accurately as possible. Prioritize expenditures based on relative conservation value and needs. Budget projections for individual sites or management units will be used for annual budget preparation for the EEL Program.

VIII. APPENDIX

Provide any additional information or supplemental information important to the management plan.

IX. BIBLIOGRAPHY

Provide citations for original research or publications used to develop the Management Plan.

A.3 Nature Based Tourism: Balancing Public Use and Conservation

Introduction

The vast natural resources of Brevard County and the emergence of ecotourism as one of the fastest growing segments of the world's tourist industry represents a unique opportunity to create a partnership between the tourist/entertainment industry, the education community and the conservation community in Brevard County.

With over 43 million visitors each year, Florida represents an established tourist destination with a sophisticated tourist infrastructure that markets its assets for high volume use. The protection of Brevard's quality of life and aesthetic values depend upon economic development that is quality oriented and provides a net positive value to the economy and the quality of life in Brevard's local communities. The future of sustainable nature-based tourism in Brevard County depends upon the quality of the nature-based experience rather than the delivery of high volume tourism.

Although most people link Florida with the traditional tourist destinations of Disney in Orlando and the Kennedy Space Center in Brevard County, Florida's many natural wonders attract a growing number of visitors each year. Nearly half of the tourists in Florida visit a state or national park. These tourists are often searching for an experience that brings them closer to the natural world. For most tourists, the quality of the nature-based experience is related to effective presentation of environmental education programs.

It takes an experienced and knowledgeable eye to appreciate the beauty and complexity of Florida's natural areas. Transitions from one natural community to another are subtle and not easily recognized. For most tourists, discovery of the "real Florida", its people, its natural resources and its heritage requires an educated and entertaining guide. The EEL Program shall work with conservation groups, educators, universities and the tourist industry to develop and provide meaningful and responsible nature-based experiences for Brevard's residents and visitors.

Brevard County is blessed with rich biological diversity and some of the most unique natural areas in Florida. For example:

The Archie Carr National Wildlife Refuge is the most important sea turtle refuge in North America. More Loggerhead turtles nest along the beaches of Brevard and Indian River Counties than anywhere else in the world.

Kennedy Space Center (KSC), the Cape Canaveral National Seashore, and the Merritt Island National Wildlife Refuge are some of the most important tourist attractions in Brevard County. The Merritt Island National Wildlife Refuge is known internationally for its wildlife resources, saltwater recreational fishing, world-class bird watching and duck hunting resources.

The dry, sandy scrub habitats of Brevard's Atlantic Coastal Ridge and barrier island represent one of the nations most endangered natural communities. Brevard's "ancient desert" community has yet to be discovered by the nature-based traveler to Florida. Many of the plants and animals found in Florida scrub are seen no where else in the world.



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The St. Johns River is one of the most significant river systems in Florida, providing excellent fresh water fishing, canoeing, air boating, hunting and wildlife viewing opportunities.

The Indian River Lagoon is recognized as one of the nation's most diverse estuaries and an estuary of "national significance". A recent economic study contracted by the Indian River Lagoon National Estuary Program estimated the economic value of the Lagoon at over \$700 million per year for the five-county region.

Within the EEL Sanctuary Network, Brevard County can create and enhance a diverse array of nature-based tourism opportunities and environmental education programs to attract, educate and entertain local residents and tourist visitors.

A successful and sustainable ecotourism industry must maintain the sensitive balance between ecosystem protection and public access. Effective partnerships between the tourism industry and the environmental community must be established through strategic planning, cooperation and open communication. Local communities interested in promoting successful ecotourism programs should focus on providing a quality experience in a well-managed natural area.

If land management decisions are wise, Florida can provide a natural areas network with great value to future generations; the environment, local economies and a high quality of life. Quality is more important than quantity. Development of a stable and sustainable ecotourism industry is more important than maximizing annual profits at the expense of natural areas. In the end, opportunities for ecosystem protection and responsible ecotourism within the EEL Sanctuary Network will be guided by management principles provided in the EEL Sanctuary Management Plan (provided herein) and in comprehensive management plans for specific sanctuaries.

Conservation and Sustainable Ecotourism

The development of a sustainable system of nature-based tourism within the EEL Sanctuary Network depends upon:

- 1. Identification of appropriate goals for nature-based tourism that:**
 - a. establish a responsible ethic for public use of natural resources;
 - b. provide public access to natural areas;
 - c. provide knowledge, understanding, & appreciation for environment, culture & history through meaningful high-quality experiences; and
 - d. encourage the tourism industry to share benefits and revenues to enhance conservation .
- 2. Identify appropriate pre-conditions for sustainable nature-based tourism. Preconditions include:**
 - a. a commitment to implement resource conservation practices;
 - b. use of information from research and monitoring to direct public use and conservation activities;
 - c. availability of knowledgeable and trained guides or educators;
 - d. placing limitations on land use based on carrying-capacity of resources;
 - e. planning human activities based on natural resource assets; and
 - f. provision of facilities and infrastructure to provide quality experiences and support levels for public use.
- 3. Promote actions within the nature-based tourism industry that:**
 - a. encourage formal partnerships that ensure common management goals and shared benefits;

- b. identify target audiences and market demand;
 - c. monitor market opportunities and changes;
 - d. train ecotourism guides and educators;
 - e. organize and revise nature-based activity programs on a regular basis;
 - f. evaluate and enforce guidelines which regulate the use of an area;
 - g. strengthen networks among private sector and public sector partners; and
 - h. strengthen partnership trust.
- 4. Plan and implement management strategies to address human use impacts, protection of natural resources, and maintenance of high-quality nature-based visitor experiences. Responsible stewardship of biological diversity should include:**
- a. identification of key impact indicators;
 - b. establishment of standards for impact indicators;
 - c. comparison of standards and existing conditions;
 - d. identification of probable causes of impacts;
 - e. identification of management strategies for impact reduction; and
 - f. implementation of management strategies.

Corporate Responsibilities

Economic opportunity and market size will drive the expansion of ecotourism in Brevard County and Florida. To ensure that ecotourism is sustainable and that it promotes responsible conservation, the tourist industry must be educated about conservation and land stewardship responsibilities. The EEL Program shall coordinate and cooperate with the tourist industry through the Tourist Development Council and other state and local tourist programs.

The EEL Program shall integrate EEL Program conservation principles and management plans into corporate strategies for public use and nature-based tourism.

The following are basic guidelines for the tourist industry to ensure that conservation, recreation and education goals of nature-based tourism are compatible with the goals of the EEL Sanctuary Network:

- a. create a common vision for sustainable use and conservation;
- b. integrate the EEL Program conservation principles and management plans into corporate strategies for public use and nature-based tourism;
- c. enhance corporate sensitivity to local issues;
- d. promote public education, awareness, appreciation and understanding;
- e. support adaptive management, research and long-term monitoring;
- f. value quality of visitor experience over quantity of visitors; and
- g. lead by example.

Local communities within areas of natural significance have unique opportunities to showcase their local resources to visitors and new residents. The EEL Program Sanctuary Network can create meaningful public-sector and private-sector partnerships to promote conservation, public use of EEL sanctuaries and local economic development.

Environmentally Endangered Land Program

Vision Statement

The Environmentally Endangered Lands (EEL) Program acquires, protects and maintains environmentally endangered lands guided by scientific principles for conservation and the best available practices for resources, stewardship and ecosystem management. The EEL Program protects the rich biological diversity of Brevard County for future generations. The EEL Program provides passive recreation and environmental education opportunities to Brevard's citizens and visitors without detracting from the primary conservation goals of the program. The EEL Program encourages active citizen participation and community involvement.



Dr. Duane De Freese

