# Chapter 6B: Land Stewardship Annual Report

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## SUMMARY

In accordance with the land stewardship policy, lands acquired shall be managed and maintained in an environmentally acceptable manner and, to the extent practicable, in such a way as to restore and protect their natural state and condition.

The Land Stewardship Program is responsible for the management of the South Florida Water Management District (SFWMD or District) lands, including Save Our Rivers (SOR) and other conservation/natural lands and water resource project lands. In addition, the District is responsible for the implementation and administration of mitigation banks and regional off-site mitigation areas as well as the management of recreational areas on District lands. The project lands component of the Land Stewardship Program is responsible for managing those properties acquired by the District for future Comprehensive Everglades Restoration Plan (CERP) and other water resource projects until the land is needed for construction. Major functions of the natural lands component of the Land Stewardship Program include hydrologic and habitat restoration, exotic plant and animal control, prescribed burning, public use, environmental education, and mitigation.

The program's principal source of management funding has been the Water Management Lands Trust Fund, which uses a portion of the state's documentary tax revenue to pay for land management activities. Other funding sources include (1) off-site mitigation, (2) mitigation bank revenues, (3) lease revenues, (4) grants for wetland restoration and exotic control projects, (5) the Everglades Restoration Trust Fund, and (6) *ad valorem* tax revenue for CERP recreational programs.

The Fiscal Year 2008 (FY2008) (October 1, 2007–September 30, 2008) budget for the Land Stewardship Program was $11.5 million, or a unit cost of $21.2 per acre. Revenue generated from agricultural leases, sale of products, mitigation banks, and other alternative sources for FY2008 was in excess of $4.7 million. The total cost for FY2009 management activities is anticipated to be an estimated $12.4 million, or a unit cost of $22.9 per acre.

# BACKGROUND

The South Florida Water Management District (SFWMD or District) owns a wide variety of land assets that reflect its many programs, functions, and responsibilities. These lands all have a relationship to water resources, but otherwise have very different functions. The Save Our Rivers (SOR) Program began in 1981 with the legislative enactment of the Water Management Lands Trust Fund [Chapter 373.59, Florida Statutes (F.S.)], which enabled the state's five water management districts to buy lands needed for water management, water supply, and the conservation and protection of water resources, and to make them available for appropriate public use. Other funding for land acquisition has come from the Florida Forever Trust Fund (Chapter 259.1051, F.S.), Preservation 2000 (Chapter 259.101, F.S.), and the Save Our Everglades Trust Fund (Chapter 373.472, F.S.). In addition, the District has leveraged these funds with federal grants, including special appropriations within the Water Resources Development Act and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Wetland Reserve Program. Additionally, the District has been able to share acquisition costs with partners, including local governments, the Trustees of the Internal Improvement Trust Fund, and the Florida Communities Trust.

Over the course of its history, the District has acquired a real interest in 1,353,618 acres (ac) of land for conservation or the development of water resource improvement projects. It is with these lands that the primary responsibilities of the Land Stewardship Program reside.

Although any given tract of land will have a diverse set of physical, legal, and policy attributes that define the Land Stewardship Program's involvement, most of the tracts fall into one of five broad categories:

- Conservation lands that have the District as the lead manager with partners in a supporting role (218,260 ac)
- Conservation lands that have a partner as the lead manager with the District in a supporting role (965,732 ac)
- Project lands with a commercial/agricultural lease (69,232 ac)
- Vacant project lands (21,055 ac)
- Project lands that are under construction or completed (79,339 ac)

The stewardship of each of these broad land categories involves a unique management approach and a set of ongoing management activities. Each category presents unique challenges and opportunities for the District and its management partners.

The District also owns land along its canal rights of way and land around its structures and facilities; and it dredges spoil and staging areas adjacent to major canals, and fringing lands and islands inside of the Herbert Hoover Dike at Lake Okeechobee. The Land Stewardship Program's responsibilities with these lands are primarily limited to planning and administering recreational programs.

## CONSERVATION LANDS: DISTRICT AS LEAD MANAGER

*218,260 acres, 21 management areas*

District conservation lands (**Figure 6B-1**) were acquired to protect and enhance water resources by buffering critical flow-ways from urban development and by maintaining large wetland areas for aquifer recharge and additional storage of surface water. Land Stewardship's primary focus for these lands is to restore and maintain their ecological function so they are able to provide the benefits for which they were acquired.

In order to maintain these lands in their natural state and preserve their ecological function, the Division's land managers take actions to compensate for the loss of natural processes in the landscape. These processes are essential to keep native plant communities in a healthy and vibrant condition to support a diversity of plant and animal life and to provide the greatest benefit to the water resources of the District. Standard land management practices include:

- Burning fire-dependent plant communities with a fire return interval that mimics a natural fire regime
- Restoring hydrologic alterations to bring back a more natural hydroperiod
- Controlling non-native or invasive vegetation through the selective use of herbicides
- Restoring the physical structure of plant communities through vegetation management

Some of the District's natural lands are former ranch lands with a mixture of native range and improved pasture. Cattle grazing has been allowed to continue on many of these properties and is used as a land management tool. Additionally, the grazing leases often require the lessee to assume some the management responsibilities of the site, particularly infrastructure and fence maintenance. The District maintains an active role in resource management, recreational issues, and exotic species control. Another significant role on the part of the District is lease administration, and ensuring the lessees pay the appropriate property taxes. At the end of Fiscal Year 2008 (FY2008) (October 1, 2007–September 30, 2008), the District maintained 38 leases on natural lands covering 45,468 acres.

## NATURAL LANDS: PARTNER AS LEAD MANAGER

*965,732 acres, 25 management areas*

The District has been fortunate to have partners willing to serve as lead managers on many of its natural lands. The Florida Fish and Wildlife Conservation Commission (FWC), the Florida Department of Environmental Protection's (FDEP) Florida Park Service, local land preservation programs, and private mitigation bankers have missions compatible with the District's, making these entities valuable management partners.

Although Land Stewardship's role is significantly reduced by having another entity designated as a lead manager in the ongoing operations of a site, the program usually retains its supporting resource management role as needed. The legal instruments granting the lead manager designation (leases, management agreements, Memoranda of Understanding, etc.) define the relationship between the District and its partners. The Land Stewardship Program also maintains its ongoing commitment to provide the necessary administrative services regarding the agreements, such as compliance and management reviews, and to provide funding if necessary.

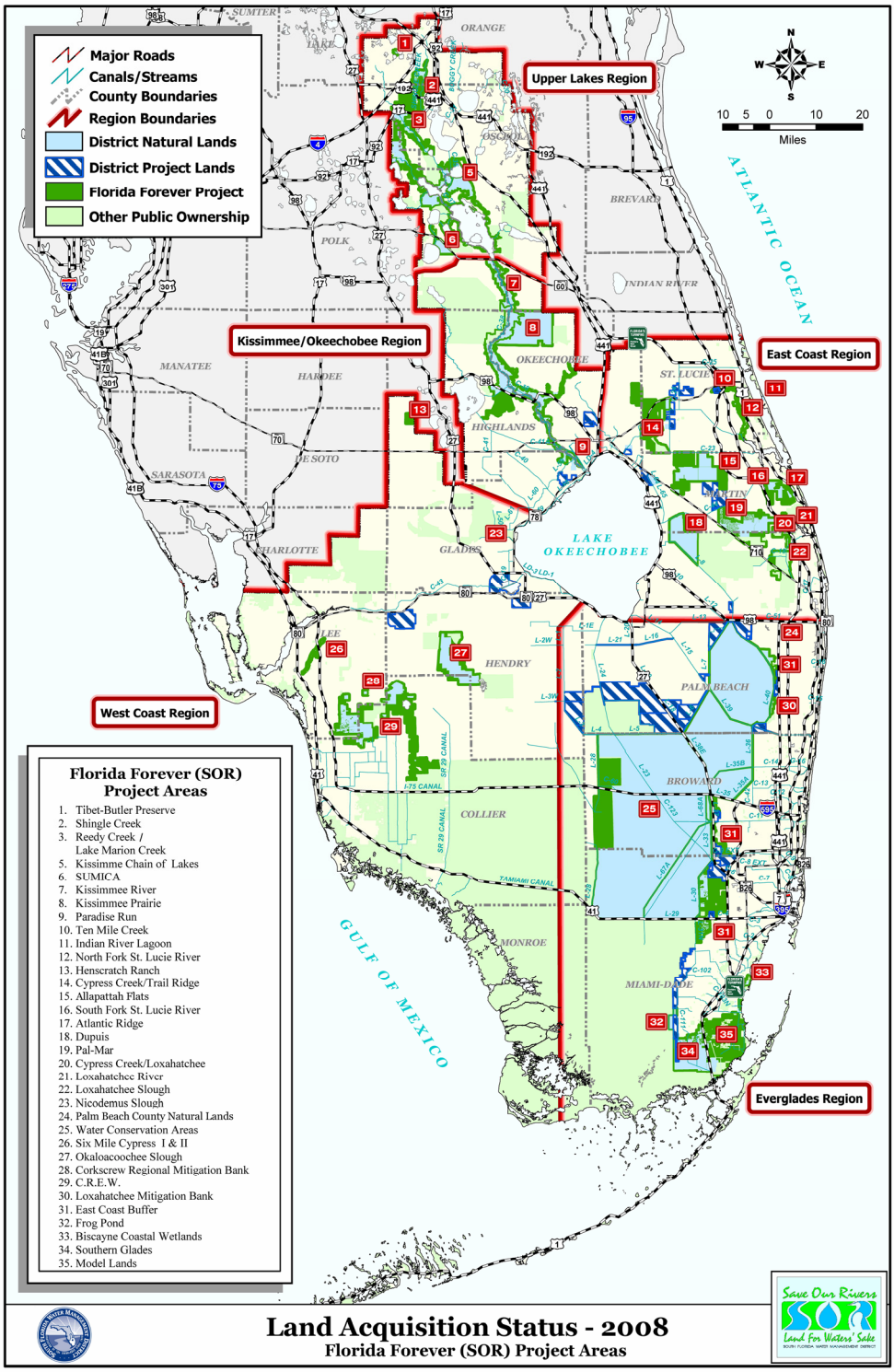


**Figure 6B-1.** Natural lands acquisition status in 2008.

## PROJECT LANDS: COMMERCIAL LEASES

*69,232 acres, 39 leases*

The District administers agricultural leases or commercial reservations on a large portion of its water resource project lands. The leases are an important source of revenue for the District and keep the properties in productive use and on the tax rolls until ready to be turned over to a project development team for construction. The lessee takes on most of the management responsibilities for these lands. However, the Land Stewardship Program devotes significant time and resources toward compliance inspections and the administration and financial management of the leases.

## PROJECT LANDS: VACANT LANDS

*21,055 acres*

Project lands unable to accommodate or attract an agricultural lessee during the interim period prior to construction are managed by the Land Stewardship Division with the goal of site security and general maintenance. The Division ensures access is secured, environmental hazards are remediated, proper signage is installed, and any law enforcement issues are addressed.

These lands are to be properly managed and maintained in an acceptable condition until construction on the property begins. Many of these lands are on the fringe of urban areas and experience illegal uses, such as dumping and the operation of off-road vehicles. These lands are physically inspected at least twice a year to monitor their condition and, if necessary, take corrective actions.

## PROJECT LANDS: UNDER CONSTRUCTION AND COMPLETED PROJECTS

*79,339 acres*

In FY2008, approximately 47 percent of District project lands were either under construction or completed, with the majority of these properties being Stormwater Treatment Areas (STAs) and reservoirs.

STAs are large, constructed wetlands designed to remove phosphorus from surrounding agricultural areas before the runoff reaches the Everglades. The STAs are divided into several cells, each with varying degrees of water quality treatment to maximize the cleanup. Reservoirs, which are designed to store large quantities of water during wet periods and enable some sediment and pollutants to settle out of suspension, provide timed releases to address water supply needs later in the year during dry periods. The Land Stewardship Program provides recreational planning during project development, and administers recreational programs following the completion of the project.

## THE LAND STEWARDSHIP PROGRAM AND GOALS

The Land Stewardship Program is responsible for the management of District lands including (1) natural lands and project lands, (2) the implementation and administration of mitigation banks and regional off-site mitigation areas, and (3) the management of recreation on District lands and canal rights of way. Many District-owned properties include upland areas that are disturbed and dominated by undesirable non-native plants. Restoring such areas with diverse native understory is challenging, but the rewards for wildlife habitat are great. In order to accomplish its mission of managing and protecting water resources, the District is moving forward to restore critical natural lands across South Florida.

The major goals of the program are to restore the natural lands to their original state and condition, manage them in an environmentally acceptable manner, and provide public recreational opportunities compatible with the resource. Additionally, the Land Stewardship Program includes activities to manage properties acquired by the District for future water resource project uses until needed for construction. The program is implemented by a professional staff of 34 individuals distributed throughout the geographic boundaries of the District. Additional background information about the Land Stewardship Program can be found on the District's web site at www.sfwmd.gov under the *What We Do*, *Land Resources*, *Vegetation and Land Management* tabs.

## Program Objectives

- Complete/update management plans for all projects
- Control invasive exotics
- Restore natural fire regime
- Restore native plant communities
- Employ multiple use practices
- Manage interim agricultural uses through reservations, lease agreements, or license agreements
- Open lands for appropriate public use
- Implement two mitigation banks and off-site mitigation per permit conditions

## Program Finances

Since its inception in the early 1980s, the Land Stewardship Program has been funded by a variety of sources. The principal source of management funding has been the Water Management Lands Trust Fund, which uses a portion of the state's documentary tax revenue to pay for land management activities. The fund reimburses actual expenditures based on quarterly invoices to the FDEP, which administers the fund. Appropriate expenditures are identified in the District's annual budget and approved by the District's Governing Board by a resolution to the FDEP. Since 2000, use of these funds has been limited to land management costs, the payment in lieu of taxes program, capital programs, the Surface Water Improvement and Management Program, and the retirement of the District's land acquisition bonds.

Other funding sources include (1) off-site mitigation, (2) mitigation bank revenues, (3) lease revenues, (4) grants for wetland restoration and exotic control projects, (5) the Everglades Restoration Trust Fund, and (6) *ad valorem* tax revenue for the Comprehensive Everglades Restoration Plan (CERP) recreational programs. Off-site mitigation funds are collected as a result of site-specific conditions placed on Environmental Resource Permits approved by the District's Governing Board for authorized impacts to wetlands. These funds must be spent strictly in accordance with the permit requirements for land acquisition, restoration, and general maintenance of the mitigation lands. This form of mitigation allows the District to direct mitigation funds where they most benefit the South Florida ecosystem. The Land Stewardship Program has obtained several grants to fund specific restoration projects on District lands. Additionally, substantial in-kind services are provided by the lessees, state and local governments, as well as numerous recreational groups and individual volunteers.

The FY2008 budget for the Land Stewardship Program was $11.5 million. This included personnel costs and contractual expenses for land management activities such as exotic control, cleanup, security, capital improvements, and general administrative costs.

Revenue generated from agricultural leases, sale of products, mitigation banks, and other alternative sources for the year was in excess of $4.7 million. In addition, the District saved more than $2.4 million (calculated at an average cost of $21 per acre) in management costs because of the 90 leases and agreements in place for the 116,875 acres under a commercial lease; and $3.2 million because of conservation lands managed by a partner (153,564 acres, excluding the Water Conservation Areas). By maintaining the leased properties on the local tax rolls, lessees paid $1.9 million in property taxes for a total contribution of over $12.2 million. Management activities for the Land Stewardship Program in FY2009 are anticipated to occur on 541,450 acres of land at an estimated total cost of $12.4 million.

# LAND STEWARDSHIP PROGRAM ACTIVITIES

## Hydrologic/Habitat Restoration

In addition to routine land management activities, the Land Stewardship Program is involved in restoring altered land to its natural condition. Intensive measures are often required to restore land that has been altered for agriculture, transportation, housing, or other intensive purposes. This work may involve reestablishing hydrology, removal of debris and altered soil, treating exotic vegetation, reestablishing native plant species, applying specific burn regimes, or other specialized techniques. Experimentation is often required to find a cost-effective way to restore a particular kind of disturbed land.

## Fiscal Year 2008 Restoration Highlights

### *Kissimmee Chain of Lakes Management Area*

Three large restoration projects are under way in the Kissimmee Chain of Lakes (KCOL) Management Area. These projects are on lands that have been drained through a series of small agricultural drainage ditches. The disturbed wetlands include small interior depression marshes and littoral zones along the shorelines. In FY2008, the major earthwork was completed for the Rough Island (1,000 acres) and Otter Slough (500 acres) projects. The 2,000-acre Gardner-Cobb restoration project is slated for completion in FY 2009.

### *Gulfstream Gas Pipeline (Kissimmee River)*

This project will remove Bahia grass (*Paspalum notatum Flueggé*) and other non-native cover and apply ground cover restoration with native seed on 40 acres in a linear strip on six District management units on the Kissimmee River. The native seeding did not take due to the droughts in FY2007 and FY2008 and will need to be reseeded in FY2009.

### *Starvation Slough Ground Cover Restoration (Kissimmee River)*

The District is attempting to restore the native dry prairie ground cover on what had been improved pasture using sod removal, native seeding, and natural recruitment. In FY2008, all 160 acres received follow-up spot-treatments with herbicide to remove invasive exotic plant species. Recruitment of desirable native species continues to increase each year. This year the palmettos have become noticeably more abundant after being essentially absent after the first two years of restoration. In FY2009, the site is scheduled to be burned, and a hog trapper will work the site to reduce damage from wild hogs.

### *DuPuis Ground Cover Restoration*

The ground cover restoration plot was in a monitoring phase this year, following two glyphosate treatments in FY2006. The treatments have significantly diminished the Bahia grass, while native grass and ground cover are increasing, and more ground birds, such as bobwhite quail, have been observed.

### *Nine Gems Restoration (Pal-Mar)*

Approximately 2,000 acres of Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*), and Old World climbing fern (*Lygodium microphyllum*) were treated. In FY2008, the survey and design work was completed for the extensive ditch plugging effort that is anticipated to occur in FY2009.

### *Williamson Ranch Restoration (Allapattah Flats)*

Approximately 500 acres of this newly acquired ranch within the Allapattah Flats Project in Martin County is expected to be restored and designed by the U.S. Department of Agriculture in FY2009 through the Wetland Reserve Program. This will likely include plugging agricultural drainage ditches and removing non-native vegetation.

## Vegetation Management

Vegetation management physically alters the composition or structure of a vegetative community to meet a management objective. In FY2008, vegetation management activities occurred on 10,377 acres of District–managed lands. The techniques used include mowing, disking, shredding, roller-chopping, timber thinning, and planting. These techniques are applied to one or more management objectives that may include:

- Restoring a degraded vegetative community
- Improving an area's suitability as wildlife habitat
- Exotic species control or weed management
- Fuel management in relation to prescribed fire or wildfires
- Clearing for maintenance or project management purposes

## Exotic Plant and Animal Control

The District is committed to reducing the proliferation of exotic plant infestations and controlling exotic vegetation where possible. Exotic plant control consists of the proper application of various environmentally acceptable chemical herbicides and mechanical removal performed by staff or private contractors. Partners that manage District lands under contract or lease are strongly encouraged to apply a similarly aggressive approach to exotic plant control.

Exotic plant control is the single-largest item in the Land Stewardship Program annual budget. In FY2008, 61,070 acres were treated for exotics, which exceeded the annual goal of 25,200 acres. Widespread release of the *Lygodium* moth (*Austromusotima camptonozal*) in the East Coast region continued in FY2008, and the tropical soda apple leaf beetles (*Solanum viarum*) in the Kissimmee and Upper Lakes regions. The tropical soda apple leaf beetle has made an appreciable impact in the control of tropical soda apple in areas where the beetles have been released with significant mortality of affected plants.

The District also controls the population and minimizes the impact of exotic animals, such as hogs, through hunting programs and contracted trappers. Burmese pythons are a growing threat to

the Everglades; District staff assist the FWC and National Park Service staff with efforts to rid the region of this exotic reptile.

## Prescribed Burns

Periodic fire is a natural element of native Florida ecosystems. The District uses prescribed burning to reduce hazardous buildup of vegetative fuel loads, enhance wildlife habitat, and encourage restoration of native plant communities. The District burns its lands to simulate natural fire cycles, which benefit native plant communities. The goal is to conduct at least 50 percent of District prescribed burns during the growing season to mimic the natural occurrence of lightning season fires. Many of the early acquired Save Our Rivers lands have now had a decade and a half of prescribed burns with benefits that resemble a more natural fire regime. The fire management program is based on ecological research and proven safety standards. It requires trained and experienced staff familiar with the diverse and unique fire management needs of the Florida landscape. In FY2008, 15,283 acres were burned through the application of prescribed fire, which exceeded the annual goal of 12,600 acres.

## Wildlife Management

Wildlife management on District lands is directed toward the goal of achieving natural species diversity consistent with the biological community types present. The Land Stewardship Program accomplishes this in several ways:

- Performing land management activities that maintain and/or improve native wildlife habitat
- Conducting specific management activities that benefit protected species
- Following management guidelines for listed species protection as determined by the South Florida Multi-Species Recovery Plan, Volume 1 (USFWS, 1998[1])
- Reducing non-native pest species populations where appropriate
- Maintaining a master file of confirmed and potential wildlife species
- Cooperating with the FWC on wildlife management issues
- Using best snag management practices; that is, removing snags only when they pose a safety hazard

Wildlife management through these actions primarily occurs with the application of prescribed fire and the control of exotic species. In addition, the Land Stewardship Division partners with the FWC on many wildlife management issues. This partnership has resulted in several District-managed lands being established as Wildlife Management Areas (WMAs), Wildlife and Environmental Areas, Public Use Areas, and Small-Game Hunting Areas. These designations allow the FWC to dedicate biological staff and resources toward the well-being of wildlife on District lands and enforce a stricter set of wildlife protection rules. Management actions that meet the needs of wildlife also further the District's objectives; therefore, the biological staff has significantly enhanced the District's land management efforts.

[1] USFWS. 1998. South Florida Multi-Species Recovery Plan, Volume I. pp. 2172. U.S. Fish and Wildlife Service, Atlanta, GA,

## Recreation

The District manages its lands and provides for a variety of outdoor recreational activities. All lands are available for public use, except in instances where there is no legal public access or where contract or lease restrictions prohibit public use. The vast majority of properties are managed as natural areas, with limited roads and vehicular access other than roadside parking. Common recreational opportunities include hiking, primitive camping, wildlife viewing, canoeing, fishing, horseback riding, and hunting.

Cooperative agreements with the FWC provide for hunting activities on nearly 684,531 acres. Acquisition and management partners from several counties have constructed environmental education centers, boardwalks, and interpretive trails, all at no cost to the District, that are used by thousands of school children and adults annually.

In July 2006, new public use rules were adopted for the various types of land designations within the District. This endeavor required considerable coordination and several public workshops to ensure a balance between public access, nature-based recreational opportunities, project compatibility, and restoration and protection of the natural state and conditions of the land. Public access and recreational use rules have been established for management areas, rights of ways, STAs, impoundment areas, and vacant undesignated lands. Following a similar process, in 2007, the District created a five-year recreational management and partnership plan that outlined proposed recreation capital improvements and new partnership programs that will be pursued over the 2007–2011 time frame.

## Fiscal Year 2008 Recreational Highlights

- Opened six new recreational areas to the public: (1) Hickory Hammock Equestrian Center, (2) Taylor Creek STA, (3) Harold Campbell Recreation site at STA-3/4, (4) STA-1E, (5) STA-1W, and (6) Chandler Slough
- Initiated a bank fishing (catch and release) program in STA-1E
- Completed a new boardwalk at the DuPuis Management Area. The boardwalk is approximately 400 feet long and meanders through a cypress swamp. It also includes a covered overlook with seating.
- Constructed two chickee shelters and a composting toilet at Taylor Creek STA
- Constructed a new trailhead and walkway at Shingle Creek Water Management Area
- Developed five new access points into the Allapattah Management Area.
- Completed Task 3, the Regional Conceptual Recreation Plan, of the CERP Master Recreation Plan in partnership with the U.S. Army Corps of Engineers (USACE). This substantial component of the Master Recreation Plan identifies the recreational components that could reasonably occur on the projects.
- Developed "Virtual Tours" on the District's Recreation web site
- Launched an online automated reservation application for the public to conveniently access and reserve space for activities, such as camping in certain areas
- Developed a public use plan for the Kissimmee Chain of Lakes
- Completed a revised edition of the Recreational Guide

## Environmental Education

The Land Stewardship Program creates environmental education kiosks and displays and builds partnerships with other entities to provide many of its environmental education programs. These partnerships have created a large network of facilities and programs, which have increased public awareness about the District's mission and programs to students, educators, and the public. This network features the following partnerships:

### *Shingle Creek*

A public access point with a boardwalk and pedestrian bridges was constructed behind Hunter's Creek Middle School in Orange County. The school benefits by providing its students with opportunities for ecological field studies in its own back yard, and the public benefits by having access during off-hours.

### *Reedy Creek/Lake Russell Unit*

The Osceola County School Board operates an environmental education center on the Lake Russell unit of the Reedy Creek Management Area. This center provides summer camps and several other ongoing programs for county students.

### *Tibet-Butler Preserve*

The Tibet-Butler Preserve, managed by the Orange County Parks and Recreation Department as an environmental education facility, has a full-time staff and an infrastructure that includes a museum facility and classrooms. The center provided dozens of educational programs and several special events in FY2008, including hiking programs, activities designed for pre-kindergarten students, and more advanced programs with a focus on reptiles, aquatic life, mammals, birds, and insects.

### *Kissimmee River/Riverwoods Field Laboratory*

The Florida Center for Environmental Studies operates under a contract with the District to provide Kissimmee River restoration-based programming from the Riverwoods complex. Programs include public boat and eco-tours, water resource education for teachers, student field studies, service learning, and public outreach.

### *Oxbow Eco-Center*

St. Lucie County operates the Oxbow Eco-Center on the North Fork of the St. Lucie River. The eco-center provides a variety of nature-based educational programs for thousands of students and the general public. The center also hosts special events several times a year, including an Earth Day event that draws as many as 2,000 visitors.

### *DuPuis Management Area Visitors Center*

Like the Riverwoods Field Laboratory, the DuPuis Management Area Visitors Center operates under a contract with the Florida Center for Environmental Studies. In addition to accommodating visitors in general, the center provides an array of programs related to natural land management and Everglades restoration, including a nature-based lecture series, service learning, field studies for students, and special events. In FY2008, the contract with the Center for Environmental Studies was extended for an additional three years.

### *Six Mile Cypress*

Lee County manages environmental education programs at the Six Mile Cypress property, which has attracted more than 100,000 visitors annually. Lee County staff at Six Mile Cypress visits dozens of classrooms throughout the school district and receives thousands of students on-site for educational programs, including all seventh-grade students. The District entered into an agreement with Lee County to cost-share the construction of a new environmental education center on the property.

### *Corkscrew Regional Ecosystem Watershed Land and Water Trust*

The District maintains a contract with CREW (Corkscrew Regional Ecosystem Watershed) Land and Water Trust for CREW Management Area to provide public outreach and educational programs. These programs include guided nature walks, sky-watching events, a large spring wildflower festival, teacher training, classroom visits, and service learning. During FY2008, the contract with CREW Land and Water Trust was extended for an additional three years.

### *Kiosk Installations*

The Land Stewardship Division has been increasing its outreach exposure by installing new informative kiosks near public access points and trailheads in most of the District's management areas. In FY2008, a total of 16 new kiosks were installed, including three at CREW, three in the Kissimmee River Management Area, one in Shingle Creek, two at Allapattah, one at Pal-Mar, and six in the STAs.

## Law Enforcement

The Land Stewardship Division is committed to protecting the natural and cultural resources of District lands. Primary problems encountered on District lands by law enforcement are:

- Illegal entry
- Dumping
- Illegal hunting
- All-terrain vehicle operation
- Cultural resource artifact collecting
- Open gates
- Cut fences
- Vandalism

The District is in its eighth year of a contract with the FWC, Law Enforcement Division, to provide law enforcement patrols on District lands. The District also funds five full-time law enforcement positions within the FWC for officers to patrol District lands exclusively. There are approximately 13,000 hours of patrols performed annually by 85 officers throughout the District.

The Land Stewardship Division role is to coordinate with the FWC as to where patrols should occur and the number of patrol hours for each area, advise the FWC on issues in each area and coordinate details to target problem areas, and serve as the liaison to convey information/issues from the land managers to law enforcement. In addition to working with the FWC, the division works with county law-enforcement agencies to protect resources on District lands.

The Land Stewardship Division also administers a law enforcement housing program on District properties. Law enforcement officers from three different agencies reside on District lands in 12 locations to provide an additional law enforcement presence. Officers living on

District property have proven to be an effective deterrent to illegal activities. Additional properties are being identified due to the success of this program.

## Mitigation

Under Chapter 373, F.S., the District is authorized to participate in and encourage the development of private and public mitigation banks and regional off-site mitigation areas. Chapter 62-342, Florida Administrative Code, of the state's mitigation banking rule also encourages each water management district to establish two mitigation banks. The use of mitigation and mitigation banking offers opportunities to generate supplemental revenue for the District's land acquisition, restoration, and management programs.

The District's mitigation bank sites include the Loxahatchee Mitigation Bank in Palm Beach County and the Corkscrew Regional Mitigation Bank in Lee County. The District is developing each bank in a public/private contractual agreement. Private bankers obtain permits, restore the land, reimburse the District for its land acquisition and staff costs, and then provide a revenue stream to the District for future projects. During FY2008, revenue collected from the Loxahatchee Mitigation Bank totaled $615,581, and revenue collected from the Corkscrew Regional Mitigation Bank totaled $137,738. Chapter 7 of this volume details the status of mitigation funds at the CREW and Pennsuco Regional Mitigation areas.

Mitigation funds from the construction of the Western Beltway, State Road (S.R.) 429 Project have benefited the Shingle Creek Management Area in Orange and Osceola counties. In FY2008, the beltway mitigation funds covered $148,000 worth of management costs.

## Infrastructure Management

The Land Stewardship Division not only has a wide variety of lands to manage, but also a wide variety of infrastructure on those lands, each with a unique set of management needs. District Policy 140-25(3)(k) states that "Infrastructure support shall be developed and maintained to provide safe access for responsible management and public use on District lands." The different types of infrastructure on District lands include:

- Roads
- Parking areas
- Officer housing
- Historic structures
- Recreational facilities
- Gates
- Fences
- Field offices and maintenance staging areas
- Water control structures

In addition, the District often acquires land with pre-existing structures that are incompatible with the purpose for which the land was acquired. Dealing effectively with this type of infrastructure has led to the development of an active demolition and environmental cleanup program.

## Planning

Land management planning is an important first step along the path of effective stewardship of District land resources. Management plans are required by Florida statutes to be written for all District conservation lands over 1,000 acres. These plans are to be reviewed by a multiparty review team and updated every 10 years, although the District is committed to exceeding this standard by having management reviews every five years. A management plan review team consists of one member each from these entities:

- South Florida Water Management District
- Private land manager
- Local soil and water conservation district board of supervisors
- Florida Division of Forestry (DOF)
- FWC
- FDEP
- Conservation organization
- Representative from the county where the property is located

The Land Stewardship Division participates in the management review teams for the conservation lands managed by a partner, and creates and updates management plans on conservation lands where the District is the lead manager. Management activities are designed for each site based on the Land Stewardship Program mission for conservation lands: "to provide natural resource protection and management while allowing compatible multiple uses on designated public lands." The Land Stewardship Program has three primary goals for managing the District's conservation lands: conserve and protect water resources, protect and/or restore land to its natural state and condition, and provide public use.

The general management plans include (1) goals and objectives, (2) past and present land uses, (3) resource data, (4) restoration and management needs, (5) public use programs, (6) compatible multiple uses, (7) monitoring programs, (8) site security, and (9) administrative duties to guide management actions for the five-year period. As such, general management plans serve as a collective information source for District management staff, agency partners, and the general public. In FY2008, general management plans were updated for the Kissimmee Chain of Lakes Management Area and the DuPuis Management Area. In addition, a new conceptual management plan was prepared for the 8.5 Square Mile Area as part of a transfer agreement with the USACE that will convey the property to the District for long-term management in FY2009.

## Monitoring

The primary purpose of the Land Stewardship Monitoring Program is to evaluate and document the effects of land management activities. Fire is the most important tool used. Regularly conducted prescribed burns maintain a desirable structure in the forests and marshes by preventing shrubs and trees from becoming too dense and, thereby, reducing plant diversity. Monitoring vegetative responses to fire helps burn managers understand the relationships between variables, such as weather, fuel accumulation, season, water levels, and how fire affects the vegetation.

In addition to gathering data on prescribed burning, Land Stewardship staff monitors the condition and structure of habitats to detect gradual desirable or undesirable changes. Such changes are often related to burning, but can also be caused by other factors such as changes in hydrology. Monitoring for habitat changes is efficiently done by repeatedly taking panoramic photos at fixed locations. The high-resolution digital photos show general size, density, and

diversity of vegetation. Locations are permanently marked with iron pipes, and Global Positioning System (GPS) coordinates are recorded to ensure the coordinates can be accurately relocated over extended periods of time.

Restoration projects are more complex and uncertain in outcome than regular land management. Hence, more intensive monitoring is appropriate. Panoramic photos are effective in documenting restoration by showing step-by-step progress of the project and long-term changes in plant communities. Scientific methods for measuring vegetation are used to document initial conditions that require restoration and achievement of desired changes. In FY2008, Land Stewardship staff maintained 70 photomonitoring points, and installed 23 new points and 28 new vegetation monitoring plots.

Wildlife monitoring on District lands is normally performed by FWC staff. Deer, hogs, and other game are counted, and variously measured and inspected as hunters remove animals. Quail and general breeding bird populations are estimated by listening surveys. Eagles and wading birds are counted from airplanes.

## Project Lands

The project lands component of the Land Stewardship Program is responsible for managing those properties acquired by the District for future Everglades restoration and other projects until the land is needed for construction. These lands will ultimately be used as STAs, surface water reservoirs, groundwater recharge areas, and/or buffer lands between the Everglades and other sensitive areas and urban development. These lands are not specifically acquired or designated for environmental enhancement, restoration, or preservation purposes, and generally are not proposed for recreational or other public uses except on a limited basis consistent with their designated future use. The project lands component has developed a multifaceted management approach to accomplish the following:

- Protect the natural resource
- Provide on-site management and security for District-owned lands at no cost to the District
- Minimize District expenses by increasing revenue from nongovernmental sources to offset District management, maintenance, and resource protection costs
- Generate additional funding for future acquisition
- Minimize impacts to the local agricultural economy by keeping viable agricultural lands in active production for as long as possible
- Minimize fiscal impacts to the local government by keeping lands on the tax roll until actually needed for construction

Historical property uses, such as grazing; sod, vegetable, and sugarcane farming; nurseries; and tree farms, are allowed to continue using reservations, leases, or similar agreements where appropriate. Generally, a competitive bid process is used to solicit proposals and award contracts, which include the appropriate cancellation clauses to make the land quickly available when needed. In some cases, short-term leases (five years or less) are negotiated as part of the acquisition package. Lessees are typically required to (1) actively manage the property, (2) control exotics, (3) provide security for the property, (4) implement applicable best management practices, (5) keep the property and facilities in good repair and condition, (6) obtain all required permits and approvals for their activities, (7) maintain required insurance coverage, and (8) pay applicable taxes.

# PROJECT STATUS

The following project summary section provides a brief description of each SOR project, organized by the five land management regions: Upper Lakes, Kissimmee/Okeechobee, East Coast, Everglades, and West Coast. This section also includes regional maps for each of these management areas (**Figures 6B-2** through **6B-6**). **Table 6B-1** summarizes the FY2008 land acquisition status according to project for natural lands under the District's Land Stewardship Program. **Table 6B-2** highlights current and recreational use opportunities for the public, according to land management region.

**Table 6B-1.** Land Stewardship Program natural lands acquisition status for Fiscal Year 2008 (FY2008) (October 1, 2007–September 30, 2008).

| Project Name | County | Project Size (Acres) | District Ownership (Acres) | Acquisition Partners |
|---|---|---|---|---|
| Allapattah Flats | Martin | 40,363 | 21,714 | Martin County/federal |
| Atlantic Ridge Ecosystem[1] | Martin | 12,645 | 5,905 | Martin County/Conservation and Recreation Lands (CARL) |
| Biscayne Coastal Wetlands | Miami-Dade | 2,026 | 869 | Miami-Dade County |
| Corkscrew Regional Mitigation Bank | Lee | 633 | 633 | None |
| Corkscrew Regional Ecosystem Watershed | Lee/Collier | 63,063 | 27,465 | CARL/Lee County |
| Cypress Creek/Loxahatchee | Martin/Palm Beach | 4,374 | 4,180 | Martin County/Palm Beach County |
| Cypress Creek/Trail Ridge | St. Lucie | 31,999 | 1,233 | None |
| DuPuis | Palm Beach/Martin | 21,878 | 21,878 | None |
| East Coast Buffer – Natural Lands[2] | Broward/Miami-Dade | 49,643 | 13,554 | Broward County /Miami-Dade County/federal |
| Frog Pond – Natural Lands[3] | Miami-Dade | 2,484 | 1,914 | None |
| Henscratch Ranch* | Highlands | 3,296 | 1,308 | None |
| Indian River Lagoon | Martin/St. Lucie | 653 | 653 | St. Lucie County/CARL/federal |
| Kissimmee Chain of Lakes | Polk/Osceola | 38,273 | 35,552 | None |
| Kissimmee Prairie | Okeechobee | 38,284 | 38,284 | CARL |
| Kissimmee River | Highlands/Okeechobee/ Polk/Osceola | 75,617 | 69,913 | None |
| Lake Marion Creek and Reedy Creek | Polk | 39,323 | 12,915 | Polk County/Southwest Florida Water Management District/U.S. Fish and Wildlife Service |
| Loxahatchee Mitigation Bank | Palm Beach | 1,256 | 1,256 | Palm Beach County |
| Loxahatchee River | Palm Beach | 1,912 | 1,545 | Palm Beach County |
| Loxahatchee Slough | Palm Beach | 13,099 | 12,916 | Palm Beach County |
| Model Lands | Miami-Dade | 54,458 | 5,483 | Miami-Dade County |
| Nicodemus Slough* | Glades | 2,231 | 2,231 | None |

**Table 6B-1.** Continued.

| Project Name | County | Project Size (Acres) | District Ownership (Acres) | Acquisition Partners |
|---|---|---|---|---|
| North Fork St. Lucie River | St. Lucie | 3,714 | 482 | St. Lucie County/CARL |
| Okaloacoochee Slough | Hendry/Collier | 35,201 | 22,255 | CARL/DOF/FWC |
| Palm Beach County Natural Lands* | Palm Beach | 1,252 | 1,252 | Palm Beach County |
| Pal-Mar | Palm Beach/Martin | 35,760 | 23,296 | CARL/Palm Beach County/ Martin County/Florida Communities Trust/federal |
| Paradise Run | Glades | 3,841 | 3,308 | None |
| Shingle Creek | Orange/Osceola | 7,673 | 2,619 | City of Kissimmee |
| Six Mile Cypress | Lee | 2,083 | 843 | Lee County |
| Southern Glades[4] | Miami-Dade | 34,093 | 31.552 | None |
| South Fork St. Lucie River[1] | Martin | 184 | 184 | CARL |
| SUMICA | Polk | 4,009 | 4,009 | Polk County |
| Ten Mile Creek – Natural Lands[5] | St. Lucie | 240 | 184 | St. Lucie County |
| Tibet-Butler Preserve | Orange | 439 | 439 | None |
| Water Conservation Areas[6] | Broward/Palm Beach | 845,581 | 812,168 | None |
| **Totals** | | **1,473,492** | **1,165,221** | |

* Conservation Easement interest, only.
1. Portions of the Atlantic Ridge Ecosystem (247 acres) and South Fork of the St. Lucie River (100 acres) projects form the 347-acre Halpatiokee Park.
2 Approximately 22,547 acres of the East Coast Buffer/Water Preserve Areas are designated for construction projects and are not included in the Florida Forever SOR - Conservation Lands.
3 Approximately 3,360 acres of the Frog Pond acquisitions are designated for construction of the C-111 Spreader Canal and C-111 Canal (C-111/L-31N) projects.
4 Approximately 1,217 acres of the Southern Glades is designated for construction of the C-111 Spreader Canal Project.
5 Approximately 766 acres of the Ten Mile Creek Project is a constructed reservoir and acres are not included in the Florida Forever SOR - Conservation Lands.
6 Includes Water Conservation Areas 1, 2, and 3.

**Table 6B-2.** Public use opportunities for land management regions.

| | | Public Use Opportunities | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Land Management Region** | **Lead Manager** | **Airboating** | **Bicycling** | **Canoeing** | **Camping** | **Education / Visitor Center** | **Equestrian** | **Fishing** | **Hiking** | **Hunting** | **Picnic Tables** |
| **Upper Lakes Region** | | | | | | | | | | | |
| Kissimmee Chain of Lakes | SFWMD | ~ | ~ | ~ | ~ | | ~ | ~ | ~ | ~ | ~ |
| Lake Marion Creek | SFWMD | | ~ | | ~ | | | ~ | ~ | ~ | ~ |
| Reedy Creek | SFWMD | ~ | | ~ | ~ | ~ | | ~ | ~ | ~ | ~ |
| Shingle Creek | SFWMD | | ~ | ~ | | | | ~ | ~ | | |
| SUMICA | Polk County | | ~ | | ~ | | ~ | ~ | ~ | ~ | ~ |
| Tibet Butler Preserve | Orange County | | | | | ~ | | | ~ | | |
| **Kissimmee-Okeechobee Region** | | | | | | | | | | | |
| Kissimmee Prairie | FDEP | | ~ | | ~ | ~ | ~ | ~ | ~ | | ~ |
| Kissimmee River | SFWMD | ~ | ~ | ~ | ~ | | ~ | ~ | ~ | ~ | ~ |
| Paradise Run | SFWMD | | ~ | ~ | | | | ~ | ~ | ~ | ~ |
| **East Coast Region** | | | | | | | | | | | |
| Allapattah Flats | SFWMD | | | | | | | | ~ | ~ | |
| Atlantic Ridge | FDEP | | | | | | | | | | |
| DuPuis | SFWMD | | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ |
| Halpatiokee Park | Martin County | | ~ | ~ | ~ | | | ~ | ~ | | ~ |
| Indian River Lagoon | St. Lucie County | | | ~ | | | | | ~ | | |
| Loxahatchee River | FDEP | | ~ | ~ | ~ | | ~ | ~ | ~ | | ~ |
| Loxahatchee Slough | Palm Beach County | | | | | | | | ~ | | |
| North Fork St. Lucie River | FDEP | | | | | ~ | | ~ | ~ | | |
| Pal-Mar | FWC | | | ~ | ~ | | | ~ | ~ | ~ | |
| Riverbend Park | Palm Beach County | | ~ | ~ | | | ~ | ~ | ~ | | ~ |
| Ten Mile Creek | St. Lucie County | | ~ | ~ | | | ~ | ~ | ~ | | ~ |
| **Everglades Region** | | | | | | | | | | | |
| Arthur R. Marshall Loxahatchee National Wildlife Refuge (Water Conservation Area 1) | USFWS | | ~ | ~ | | ~ | | ~ | ~ | ~ | |
| Everglades and Francis S. Taylor Wildlife Management Area (Water Conservation Areas 2 and 3) | FWC | ~ | ~ | ~ | | | | ~ | ~ | ~ | |
| Everglades Buffer Strip | SFWMD | | | | | | | ~ | ~ | | |
| Model Lands | SFWMD | | | | | | | | ~ | ~ | |
| Southern Glades | FWC | ~ | ~ | ~ | | | ~ | ~ | ~ | ~ | ~ |
| Stormwater Treatment Area 1E | SFWMD | | ~ | | | | | | ~ | | |
| Stormwater Treatment Area 1W | SFWMD | | ~ | | | | | | ~ | ~ | |
| Stormwater Treatment Area 3/4 | SFWMD | | ~ | | | | | | ~ | ~ | |
| Stormwater Treatment Area 5 | SFWMD | | ~ | | | | | | ~ | ~ | |
| **West Coast Region** | | | | | | | | | | | |
| CREW | SFWMD | | | | ~ | | | | ~ | ~ | |
| Okaloacoochee Slough | DOF | | ~ | | ~ | | ~ | ~ | ~ | ~ | |
| Six Mile Cypress Slough | Lee County | | | | | ~ | | | ~ | | ~ |

# UPPER LAKES LAND MANAGEMENT REGION, ORLANDO SERVICE CENTER

This section presents an overview of the Upper Lakes Land Management Region, Orlando Service Center, comprising the Kissimmee Chain of Lakes, Lake Marion Creek and Reedy Creek, SUMICA, Shingle Creek, and Tibet-Butler Preserve areas (**Figure 6B-2**).

## KISSIMMEE CHAIN OF LAKES: MANAGED BY THE DISTRICT

- County: Osceola and Polk
- Project size: 38,273 acres
- District ownership: 35,552 acres
- Acquisition partners: None

The Kissimmee Chain of Lakes Project was designed to provide the capacity to store and flow water up to the 54-foot National Geodetic Vertical Datum 1929 contour line. Public access to most of the land is by boat, and several cattle leases and grazing reservations are within the KCOL Area. Resource management goals for the management area are to (1) maintain and, where possible, restore native plant communities, (2) provide cost-effective resource protection, and (3) provide opportunities for compatible public use. In FY2008, engineering and design was completed in accordance with an agreement with Polk County to cost-share the construction of a new boat ramp park on Lake Kissimmee. Polk County also acquired a public boat ramp on Lake Hatchineha, and together these two boat ramps will greatly improve public access to the entire management area. In addition, 7,000 acres of semi-improved pasture were mowed to reduce nuisance native and exotic plants, and to improve the conditions of the altered wet prairie communities on Gardner-Cobb Marsh, Lightsey Units, Catfish Creek, Rough Island, Johnson Island, and Lake Kissimmee East Shoreline. Approximately 5,050 acres were burned through the application of prescribed fire. Additionally in FY2008, the general management plan for the KCOL Management Area was updated for the 2008–2013 time frame. For FY2009, three restoration projects will continue to restore approximately 3,500 acres. It is anticipated that 10,000 acres of exotics will be treated and 4,000 acres will be burned.

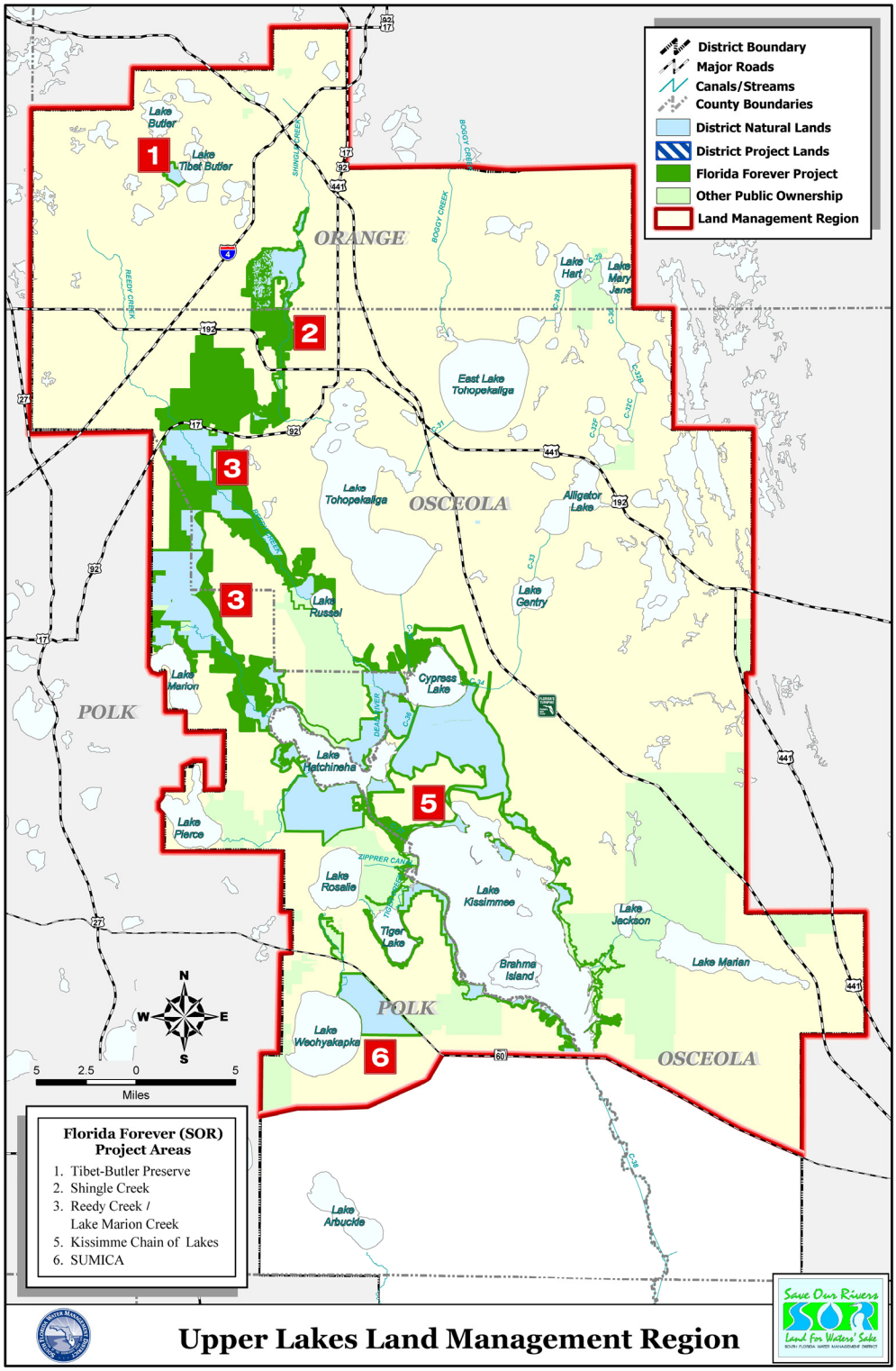


**Figure 6B-2.** Upper Lakes Land Management Region.

## LAKE MARION CREEK AND REEDY CREEK: MANAGED BY THE DISTRICT

- County: Polk
- Project size: 39,323 acres
- District ownership: 12,915 acres
- Acquisition partners: Polk County, Southwest Florida Water Management District (SWFWMD), and U.S. Fish and Wildlife Service (USFWS)

Polk County's Lake Marion Creek flows from Lake Marion to Lake Hatchineha. Contained within the project area are scrub, sand hills, pine flatwoods, and riverine swamp forests. The majority of the property is open for year-round hiking; camping is available by special use license. Lands in this project have been acquired with the assistance of Polk County, the SWFWMD, and the USFWS. Primary stewardship activities include prescribed burns, exotic plant control, resource protection, and public use. The FWC participates as a cooperative management partner by conducting a hunt program and security patrols. The area is managed as a Type 1 WMA.

The Lake Russell Management Unit in Poinciana is jointly managed by Osceola County Schools as an environmental education facility. A center with classrooms and displays provides interpretation to the scrub, Lake Russell, and the floodplain swamp communities that exist on-site. An interpretive hiking trail describes the unique plant communities and wildlife that exist in the scrub habitat of the site.

In FY2008, exotic treatment occurred on approximately 1,635 acres of Old World climbing fern, Caesar weed (*Urena lobata*), natal grass (*Rhynchelytrum repens*), and cogongrass (*Imperata cylindrica*). Cooperative management of exotics along Reedy Creek with the Nature Conservancy continues. Approximately 951 acres were burned through the application of prescribed fire. In FY2009, it is anticipated that 500 acres of exotics will be treated and 500 acres will be burned.

## SUMICA: MANAGED BY POLK COUNTY

- County: Polk
- Project size: 4,009 acres
- District ownership: 4,009 acres
- Acquisition partners: Polk County

Polk County, which participated as a 50 percent acquisition partner under its Environmental Lands Program, is also lead manager. A five-year management plan was prepared by Polk County and approved by the District. SUMICA, formerly known as Lake Walk-in-Water, is named after the historic logging town that existed on the site in the 1920s. Current public uses include hiking, hunting, camping, and horseback riding. There is an elevated walking trail to access the old elevated railroad tram and observation area. In FY2008, the District aided the county in burning 2,057 acres through the application of prescribed fire.

## SHINGLE CREEK: MANAGED BY THE DISTRICT AND OSCEOLA COUNTY

- County: Orange and Osceola
- Project size: 7,673 acres
- District ownership: 2,619 acres
- Acquisition partners: City of Kissimmee

The District has undertaken several successful restoration projects within Shingle Creek Swamp funded as mitigation sites to offset wetland impacts associated with the construction of the Orlando Beltway. The management plan was adopted at the December 2005 District Governing Board meeting. In FY2008, the entire 715 acres were surveyed and spot-treated for exotic vegetation, including Old World climbing fern, Para grass (*Urochloa mutica*), Caesar weed, and primrose willow (*Ludwigia peruviana*).

A new cooperative management agreement for the Babb, Ruba, Stefee, and St. Clair properties was executed with Osceola County and the City of Kissimmee in FY2008. In addition, the District approved a new management plan prepared and submitted by the county for the Osceola County properties. In FY2009, it is anticipated that 300 acres of exotics will be treated and 50 acres will be burned.

## TIBET-BUTLER PRESERVE: MANAGED BY ORANGE COUNTY

- County: Orange
- Project size: 439 acres
- District ownership: 439 acres
- Acquisition partners: None

The Tibet-Butler Preserve covers 439 acres along the southwest shore of Lake Tibet-Butler in Orange County. This site includes approximately 4,000 feet of shoreline on Lake Tibet. Vegetative communities include bay swamp, pine flatwoods, cypress swamp, and smaller areas of xeric oak and freshwater marsh.

The Orange County Parks and Recreation Department manages Tibet-Butler Preserve as an environmental education facility that is open for public use. A museum with a classroom was constructed in 1994. It has a full-time staff, which conducts programs for thousands of students each year. Land managers also treat exotic vegetation and maintain the system of hiking trails and boardwalks that lead to the many community types on the property. In FY2008, exotic plants were treated on 38 acres, and over 6,400 visitors participated in educational programs.

# KISSIMMEE/OKEECHOBEE LAND MANAGEMENT REGION, OKEECHOBEE SERVICE CENTER

This section presents an overview of the Kissimmee/Okeechobee Land Management Region, Okeechobee Service Center, comprising the Kissimmee Prairie Ecosystem, Kissimmee River, and Paradise Run areas (**Figure 6B-3**).

## KISSIMMEE PRAIRIE ECOSYSTEM: MANAGED BY THE FLORIDA PARK SERVICE

- County: Okeechobee
- Project size: 38,284 acres
- District ownership: 38,284 acres
- Acquisition partners: Conservation and Recreation Lands

Known as the Kissimmee Prairie Preserve State Park, the project is managed by the Florida Park Service under lease from the District and state of Florida. Recreational uses include hiking, bicycling, camping, horseback riding, and astronomy. A state-approved management plan is in place that addresses prescribed burns, exotic control, and public use. Exotic treatments and prescribed burns are ongoing. In FY2008, 7,154 acres were burned through the application of prescribed fire and 86 acres were treated for exotic plants.

## KISSIMMEE RIVER: MANAGED BY THE DISTRICT AND FWC

- County: Osceola, Polk, Highlands, and Okeechobee
- Project size: 75,617 acres
- District ownership: 69,913 acres
- Acquisition partners: None

The Kissimmee River is cooperatively managed by the District and FWC. The five-year plan for both areas includes prescribed burns, exotic plant control, upland shrub control, wildlife management, and forest management. An extensive public use program on the river attracted hundreds of visitors to the area. The program includes hunting, fishing, horseback riding, nature watching, hiking, camping, boating, and educational programs through the Riverwoods Field Lab. A new boat ramp and airboat port were constructed on the Istokpoga Canal.

In FY2008, 1,939 acres were burned through the application of prescribed fire and 6,226 acres were chemically treated for exotic plants. In FY2009, it is anticipated that 4,000 acres of exotics will be treated and 4,000 acres will be burned. A new post-burn monitoring program was developed in partnership with the Kissimmee River Restoration Program. In FY2009, floodplain burning will continue in monitored areas.

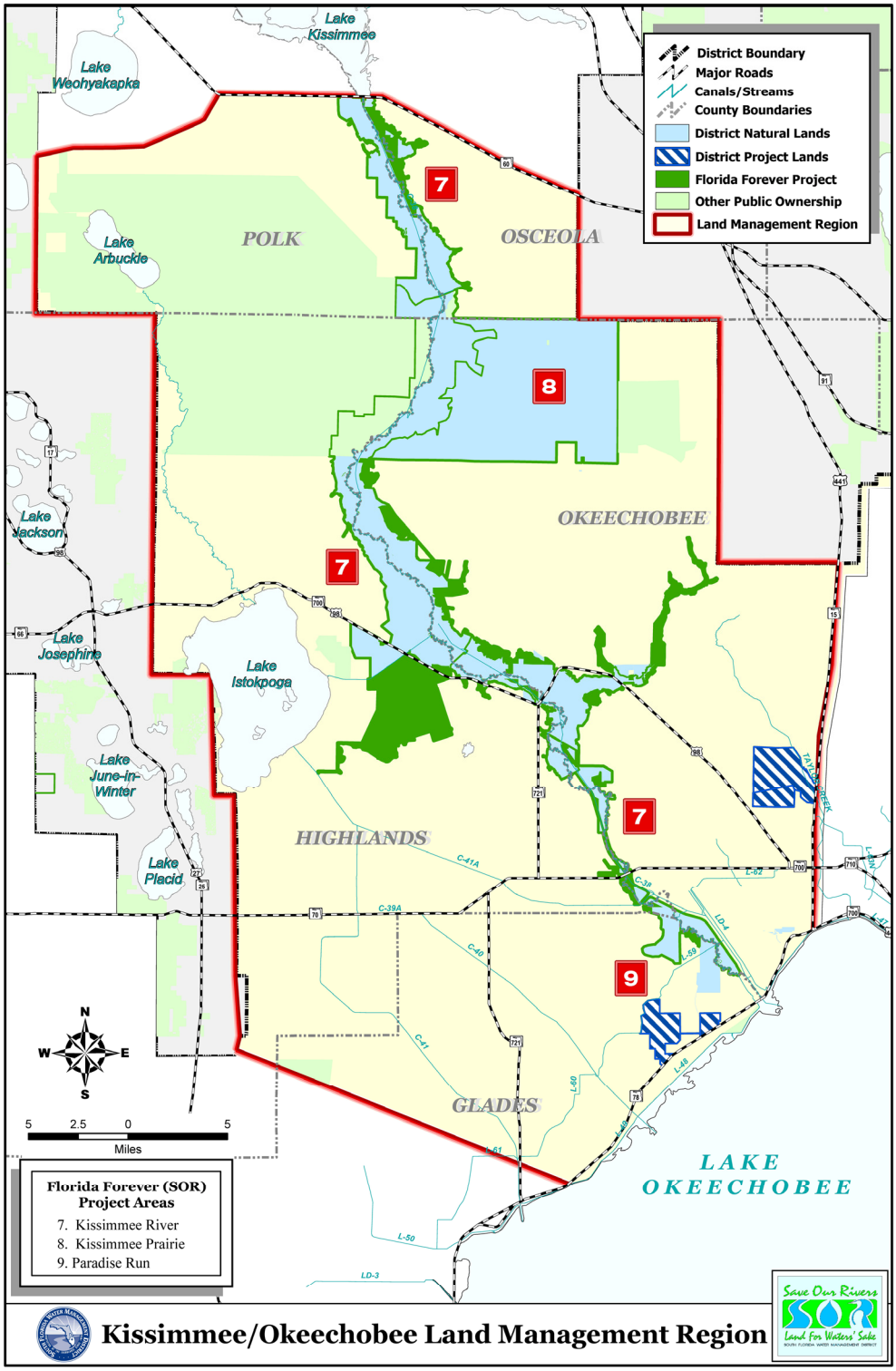


**Figure 6B-3.** Kissimmee/Okeechobee Land Management Region.

## PARADISE RUN: MANAGED BY THE DISTRICT

- County: Glades
- Project size: 3,841 acres
- District ownership: 3,308 acres
- Acquisition partners: None

Paradise Run lies west of the C-38 canal, between structure S-65E and Lake Okeechobee, and is open for public use, including hunting, under the FWC's Public Use Area concept. There are also two cattle leases on the property. Along with Pool A of the C-38 canal, the Paradise Run area of the C-38 canal will not be backfilled. Remnant river oxbows are still present, although the surrounding land has been drained and is now improved pasture and spoil.

# EAST COAST LAND MANAGEMENT REGION, WEST PALM BEACH/DUPUIS

This section presents an overview of the East Coast Land Management Region, West Palm Beach/Dupuis, comprising Allapattah Flats, Atlantic Ridge Ecosystem, Cypress Creek/Loxahatchee, Cypress Creek/Trail Ridge, Dupuis Management Area, Halpatiokee Regional Park, Indian River Lagoon, Loxahatchee River, Loxahatchee Slough, North Fork St. Lucie River, and Pal-Mar (**Figure 6B-4**).

## ALLAPATTAH FLATS: MANAGED BY THE DISTRICT AND FWC

- County: Martin
- Project size: 40,363 acres
- District ownership: 21,714 acres
- Acquisition partners: Martin County and the federal government

With funding assistance from Martin County and the federal government, Allapattah was purchased as part of CERP's Indian River Lagoon – South, Project Implementation Report Recommended Plan. Allapattah Flats is also known as the Allapattah Complex Natural Water Storage and Treatment Area. The plan proposes to plug and fill the ditches and swales that were excavated to drain and improve the property for cattle grazing. Afterward, low berms will be constructed at strategic locations to protect roadways, and water control structures will be replaced, allowing greater control of the site's water resources and rehydration of the property's extensive wetland systems. Restoration will be partially funded through the NRCS Wetland Reserve Program. The project is expected to provide the benefits of flood attenuation, improved water quality, and reduction of discharge into the C-23 canal and, eventually, the Indian River Lagoon. The FWC implemented rules establishing the property as a WMA and has posted the property boundaries.

In FY2008, 80 acres were burned through the application of prescribed fire and 2,838 acres were chemically treated for exotic plants. Wetland restoration activities continued on Parcel A, and a new trailhead was completed and opened to the public. In FY2009, it is anticipated that 500 acres of exotics will be treated, 1,500 acres will be burned, four additional trailheads will be constructed, and the General Management Plan will be updated.

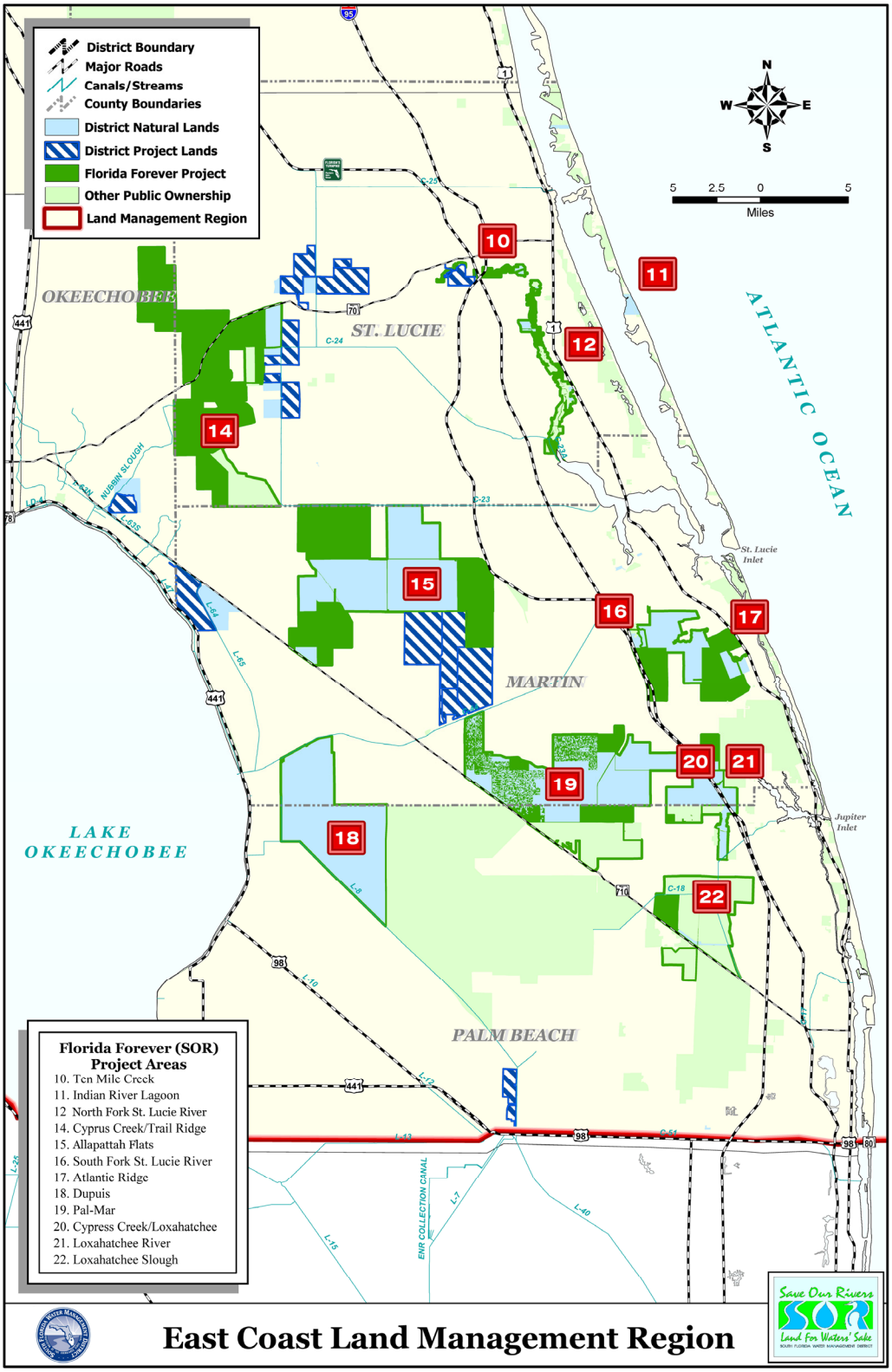


**Figure 6B-4.** East Coast Land Management Region.

## ATLANTIC RIDGE ECOSYSTEM: MANAGED BY THE FLORIDA PARK SERVICE

- County: Martin
- Project size: 14,975 acres
- District ownership: 5,910 acres (247 of which are managed by Martin County as an addition to Halpatiokee Regional Park)
- Acquisition partners: Conservation and Recreation Lands and Martin County

Atlantic Ridge is managed by the Florida Park Service, under a joint management lease from the District and the FDEP, Division of State Lands, and will be eventually designated as the Atlantic Ridge Preserve State Park. The management plan outlines the goals and objectives for the park. This plan describes hydrologic restoration and staffing needs, plans for exotic control and prescribed burns, and a public use program. It is proposed that initial public facilities will include a trailhead, small shelter, parking area, and restroom. Public access to the property was constructed in FY2007 through a new residential development off Cove Road, and the property opened to the public in FY2008. In FY2008, 144 acres were burned.

## CYPRESS CREEK/LOXAHATCHEE: MANAGED BY THE DISTRICT AND PALM BEACH COUNTY

- County: Martin and Palm Beach
- Project size: 4,374 acres
- District ownership: 4,180 acres
- Acquisition partners: Martin and Palm Beach counties

This project is divided between Martin and Palm Beach counties and forms connections with Pal-Mar and District-owned lands in Jonathan Dickinson State Park. Nearly 3,000 acres are high-quality natural area, containing a mixture of pine flatwoods, cypress swamps, and freshwater marshes. The area is the headwaters to Cypress Creek, a major tributary to the Northwest Fork of the Loxahatchee River. The remainder of the site has been cleared and used for intensive agriculture for many years. In FY2008, 781 acres of Old World climbing fern, guava (*Psidium littorale var. cattleianum*), downy rose myrtle (*Rhodomyrtus tomentosa*), Australian pine (*Casuarina equisetifolia*), Brazilian pepper, and melaleuca were chemically treated. Restoration plans are under way to enhance the impacted natural areas and convert the agricultural lands to reestablish sheetflow as a component of CERP. In FY2009, the 1,400-acre natural area within the site will undergo a follow-up treatment for exotics.

## CYPRESS CREEK/TRAIL RIDGE: MANAGED BY THE DISTRICT

- County: St. Lucie
- Project size: 31,999 acres
- District ownership: 1,233 acres
- Acquisition partners: None

The Cypress Creek/Trail Ridge Complex is a component of CERP's Indian River Lagoon – South, Project Implementation Report Recommended Plan. It is also known as the Cypress Creek/Trail Ridge Natural Water Storage and Treatment Area. Some of the property identified within the Cypress

Creek/Trail Ridge footprint includes the St. Lucie County-owned Bluefield Ranch property and Pinelands. The District acquired 1,233 acres along the eastern edge of the proposed project in late 2005. The plan proposes to plug and fill many of the ditches and swales excavated to drain and improve the property for cattle grazing in order to improve the property's wetland character and minimize flows to the canal system and, ultimately, the St. Lucie and Indian River Lagoon estuaries. In FY2008, 270 acres of Brazilian pepper were chemically treated. In FY2009, follow-up treatment is anticipated.

## DUPUIS MANAGEMENT AREA: MANAGED BY THE DISTRICT AND FWC

- County: Palm Beach and Martin
- Project size: 21,878 acres
- District ownership: 21,878 acres
- Acquisition partners: None

The DuPuis Management Area is cooperatively managed by the District and FWC. The DuPuis five-year management plan includes prescribed burns, exotic plant control, upland shrub control, wildlife management, and forest management. In FY2008, approximately 4,275 acres were burned through the application of prescribed fire; 1,743 acres were chemically treated for exotic plants; and 300 acres of overgrown shrub vegetation were mechanically shredded, roller-chopped, or mowed. A total of 40 acres of dead pine trees were salvage harvested to prevent the spread of pine bark beetles (*Dendroctonus frontalis*). An additional 10 red-cockaded woodpeckers (*Picoides borealis*) were reintroduced to the area in FY2008. An additional 10 birds will be released in FY2009. The DuPuis Management Area was the recipient of the Florida Wildlife Federation's 2008 Conservation Award.

In addition, an extensive public use program at DuPuis attracted thousands of visitors to the area and included activities such as hunting, fishing, horseback riding, nature watching, hiking, camping, and educational programs through the DuPuis Visitors Center. Public use was enhanced in FY2008 with the construction of a new recreation area boardwalk. In FY2009, it is anticipated that 2,000 acres of exotics will be treated and 7,000 acres will be burned.

## HALPATIOKEE REGIONAL PARK: MANAGED BY MARTIN COUNTY

- County: Martin
- Project size: 347 acres
- District ownership: 347 acres
- Acquisition partners: None

Halpatiokee Regional Park is composed of a portion of the Atlantic Ridge Ecosystem Project (247 acres) and a portion of the South Fork of the St. Lucie River Project (100 acres). Martin County manages the natural area in conjunction with Halpatiokee Regional Park staff. The property consists of pine flatwoods that surround a series of lakes originally excavated to provide fill for the construction of Interstate 95. The South Fork property is a mixture of river floodplain, pine flatwoods, and scrub.

## INDIAN RIVER LAGOON: MANAGED BY ST. LUCIE COUNTY

- County: St. Lucie/Martin
- Project size: 653 acres
- District ownership: 653 acres
- Acquisition partners: St. Lucie County, Conservation and Recreation Lands, and the federal government.

Indian River Lagoon is managed by St. Lucie County under a lease from the District and the Florida Park Service. The Indian River Lagoon property has been part of the county's nonchemical mosquito control efforts, which have greatly improved water quality, wildlife, and fisheries habitat in the lagoon. Mosquito impoundment berms are accessible to the public and provide excellent opportunities for fishing, crabbing, and bird watching. The Blind Creek property includes ocean beachfront access and a dune crossover. During FY2008, approximately 80 acres were treated for exotics.

## LOXAHATCHEE RIVER: MANAGED BY PALM BEACH COUNTY AND THE FLORIDA PARK SERVICE

- County: Palm Beach
- Project size: 1,912 acres
- District ownership: 1,545 acres
- Acquisition partners: Palm Beach County

District-owned lands along the river are managed by the Florida Park Service and Palm Beach County Parks and Recreation Department. The Florida Park Service manages the area north of S.R. 706 (Indiantown Road) as part of Jonathan Dickinson State Park, while Palm Beach County manages the lands south of the road as Riverbend County Park. Both land managers have extensively treated exotics. Palm Beach County, in cooperation with the District, is completing hydrologic restoration of its management area in an attempt to restore the Eastern Slough, a historic tributary to the Loxahatchee River. The restoration project will enable water to be delivered to the Loxahatchee River through a more natural flow-way. The Florida Park Service conducted a 60-acre burn in FY2008.

## LOXAHATCHEE SLOUGH: MANAGED BY PALM BEACH COUNTY

- County: Palm Beach
- Project size: 13,099 acres
- District ownership: 12,916 acres
- Acquisition partners: None

Palm Beach County's Department of Environmental Resources Management is currently managing the project. The Loxahatchee Slough is a wide, shallow channel of water that flows approximately 250 days per year. It provides a deep drainageway through historical strand swamp and peat soil swale systems. The slough is a regionally significant wetland and the historic headwaters of the Loxahatchee National Wild and Scenic River. It is a mosaic of high-quality freshwater wetlands, such as cypress swamps, marshes, and wet prairies, interspersed with pine flatwoods and hammocks. In FY2008, the

District transferred the bulk of its ownership to Palm Beach County and the county granted the District a conservation easement over its holdings.

## NORTH FORK ST. LUCIE RIVER: MANAGED BY ST. LUCIE COUNTY AND THE FLORIDA PARK SERVICE

- County: St. Lucie
- Project size: 3,714 acres
- District ownership: 482 acres
- Acquisition partners: St. Lucie County and Conservation and Recreation Lands

The state of Florida, St. Lucie County, and District-owned lands along the North Fork are being managed by St. Lucie County and the Florida Park Service as part of the North Fork Aquatic Preserve. Both agencies are treating exotics and conducting limited prescribed burns, which is extremely difficult due to the surrounding urbanized area. In FY2008, 75 acres were retreated for exotics.

St. Lucie County constructed and now operates the Oxbow Eco-Center, which is an environmental education facility along the North Fork of the St. Lucie River in Port St. Lucie. This facility combines indoor displays with outdoor programming that incorporates interpretive trails, towers, and boardwalks. Approximately 26,000 students and visitors participated in classes, workshops, and special events at the facility.

## PAL-MAR: MANAGED BY THE DISTRICT, FWC, AND PALM BEACH COUNTY

- County: Palm Beach and Martin
- Project size: 35,760 acres
- District ownership: 23,296 acres
- Acquisition partners: Conservation and Recreation Lands, Palm Beach County, Martin County, the Florida Communities Trust, and the federal government

State and District-owned lands are under management lease to the FWC using an approved management plan as the John C. and Mariana Jones/Hungryland Wildlife and Environmental Area. Palm Beach County manages its lands south of Indiantown Road as the Trail Glades Natural Area. The property is open for public use activities, including hiking, primitive camping, hunting, fishing, bicycling, and horseback riding. The FWC is conducting resource inventories and has mapped exotic infestations.

The Nine Gems property, or Pal-Mar East, is being managed cooperatively by the District, Martin County, and the FWC. The District is conducting resource management and restoration activities, Martin County is developing the recreational facilities, and the FWC is administering the hunt programs. In FY2009, it is anticipated that 400 acres of exotics will be treated. Additionally, the District will be restoring the hydrology of the site under an NRCS Wetland Reserve Program grant.

# EVERGLADES LAND MANAGEMENT REGION, MIAMI SERVICE CENTER/WEST PALM BEACH

This section presents an overview of the Everglades Land Management Region, Miami Service Center/West Palm Beach, comprising the Biscayne Coastal Wetlands, East Coast Buffer Natural Lands, Loxahatchee Mitigation Bank, Model Lands, and Southern Glades areas (**Figure 6B-5**).

## BISCAYNE COASTAL WETLANDS: MANAGED BY THE DISTRICT

- County: Miami-Dade
- Project size: 2,026 acres
- District ownership: 869 acres
- Acquisition partners: Miami-Dade County

The CERP Biscayne Coastal Wetlands Project provides an opportunity to reestablish sheetflow through coastal wetlands and provide a buffer between Biscayne Bay and metropolitan Miami-Dade County. Most of the land within the Biscayne Coastal Wetlands Project will be used for implementation of the CERP project. During FY2008, the primary management activity was control of exotics with 192 acres treated. In FY2009, it is anticipated that 50 acres of exotics will be treated.

## EAST COAST BUFFER NATURAL LANDS: MANAGED BY THE DISTRICT

- County: Broward and Miami-Dade
- Project size: 49,643 acres
- District ownership: 13,554 acres
- Acquisition partners: Broward and Miami-Dade counties, and the federal government

The East Coast Buffer Project provides a buffer between the developed areas and the Everglades. Initially, the Audubon Society proposed the storage of excess waters currently discharged to tide. Instead, the project proposes to discharge excess waters into a series of storage areas, which would then be incorporated into a larger system of regional marshes. This concept, known as the East Coast Buffer, was furthered by the District as a continuous buffer between the Everglades and the urban metropolis in the Lower East Coast. The primary goal is to (1) raise water levels to minimize seepage from the WCAs, (2) reestablish natural hydroperiod patterns, and (3) maintain flood protection for urban and agricultural areas. The project integrates the development of deepwater reservoirs located along the edge of the east coast urban service area with a series of shallower, connected wetland marshes. The latter represents the natural lands component of the East Coast Buffer. These properties include the Strazulla Wetlands, the Everglades Buffer Strip, the Bird Drive Recharge Area, the Pennsuco Wetlands, and a few other parcels that lie outside of the proposed reservoir facilities. During FY2008, the primary management activity was control of exotics with 13,262 acres treated. In FY2009, it is anticipated that exotic control treatments will occur on Strazulla, Bird Drive, the Everglades Buffer Strip, and the Pennsuco Wetlands.

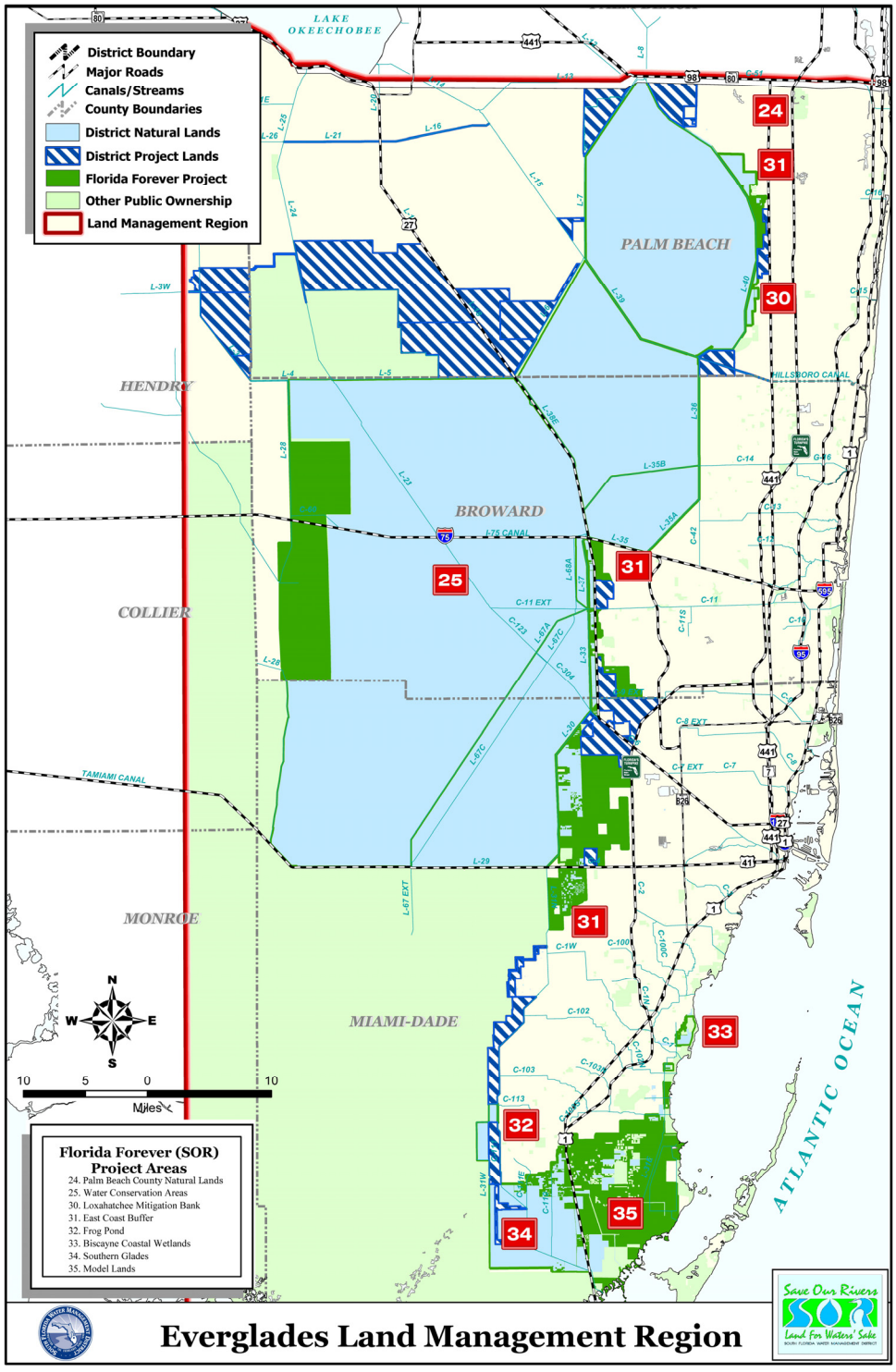


**Figure 6B-5.** Everglades Land Management Region.

## LOXAHATCHEE MITIGATION BANK: MANAGED BY TETRA TECH EC, INC.

- County: Palm Beach
- Project size: 1,256 acres
- District ownership: 1,256 acres
- Acquisition partners: Palm Beach County

The Loxahatchee Mitigation Bank site lies adjacent to the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge). This site provides habitat connectivity that augments existing Everglades wetland systems. Unfortunately, Brazilian pepper and other exotics have degraded the area, adversely impacting native wildlife habitat including a number of threatened and endangered species. The goal of the bank is to restore habitat values and enhance a degraded Everglades ecosystem through hydroperiod restoration, exotic vegetation removal, revegetation with desired species, and prescribed burns. Through an open and competitive solicitation process, Tetra Tech EC, Inc. (Tetra Tech) was selected to establish the Loxahatchee Mitigation Bank. Permitting and construction have been completed; exotic vegetation removal and native community enhancements are ongoing. As of November 2008, the Loxahatchee Mitigation Bank completed its sixth year of monitoring toward attainment of the success criteria. In FY2008, the fifth revenue disbursement, amounting to $615,581, was provided by Tetra Tech to the District; the total received to date is $2,050,581. During FY2008, the primary management activities were control of exotics, the clearing and windrowing of dead Brazilian pepper, and prescribed burning. Exotics were treated on 2,017 acres and 115 acres were burned.

## MODEL LANDS: MANAGED BY THE DISTRICT

- County: Miami-Dade
- Project size: 54,458 acres
- District ownership: 5,483 acres
- Acquisition partners: Miami-Dade County

The Model Lands Project will play a vital role in conveying and treating sheetflow from the southern Miami-Dade County area to the downstream estuaries into Biscayne Bay and Biscayne National Park. The project area is a combination of fresh and saltwater wetlands, with portions of the land heavily infested with exotic vegetation. Although more than 15,500 acres are in public ownership, there is no public use program due to lack of legal access and scattered ownership. Major management activities have included treating exotic vegetation and restricting detrimental activities, such as off-road vehicular use, which can cause long-term ecological impacts, poaching, and dumping. The primary management focus for the District and Miami-Dade County is the treatment of exotic species, including coral ardisia (*Ardisia crenata*), Brazilian pepper, melaleuca, Australian pine, and the increasingly observed patches of Japanese climbing fern (*Lygodium japonicum*). In FY2008, over 151 acres of exotics were treated for the first time. In FY2009, it is anticipated that 250 acres of exotics will be treated.

## SOUTHERN GLADES: MANAGED BY THE DISTRICT, FWC, AND MIAMI-DADE COUNTY

- County: Miami-Dade
- Project size: 34,093 acres
- District ownership: 31,552 acres
- Acquisition partners: Miami-Dade County

Southern Glades is cooperatively managed by the FWC under a lease agreement as the Southern Glades Wildlife and Environmental Area. It is publicly open to hiking, wildlife viewing, fishing, hunting, airboating, bicycling, and horseback riding. The District performed exotic plant control on 610 acres in FY2008. In FY2009, it is anticipated that 640 acres of exotics will be treated.

# WEST COAST LAND MANAGEMENT REGION, CORKSCREW REGIONAL ECOSYSTEM WATERSHED MANAGEMENT CENTER

This section presents an overview of the West Coast Land Management Region, Crew Management Center, comprising the Corkscrew Regional Mitigation Bank, CREW, Okaloacoochee Slough, and Six Mile Creek (**Figure 6B-6**).

## CORKSCREW REGIONAL MITIGATION BANK: MANAGED BY MARINER PROPERTIES DEVELOPMENT, INC.

- County: Lee
- Project size: 633 acres
- District ownership: 633 acres
- Acquisition partners: None

The Corkscrew Regional Mitigation Bank is located in southern Lee County along Corkscrew Road (S.R. 850). It is adjacent to the Imperial Marsh/Stairstep Mitigation Area, established to offset impacts associated with the Southwest Florida Regional Airport. The goal of the bank is to improve habitat values and restore the historic function of the upland/wetland mosaic through hydroperiod restoration, revegetation, exotic vegetation removal, and prescribed burns. The bank site contributes to corridor building and the green infrastructure within the regional context. Mariner Properties Development, Inc., selected through an open and competitive solicitation process, is establishing the bank. During FY2008, major hydrologic restoration work was completed and over 40,000 pine trees were planted. In FY2009, restoration progress will continue.

## CORKSCREW REGIONAL ECOSYSTEM WATERSHED: MANAGED BY THE DISTRICT AND FWC

- County: Lee, Collier
- Project size: 63,063 acres.
- District ownership: 27,465 acres (2,183 additional acres are leased from the Trustees of the Internal Improvement Trust Fund)
- Acquisition partners: Lee County and Conservation and Recreation Lands

The District and FWC jointly manage CREW. Property boundaries are posted, and the FWC's wildlife officers patrol the property. The public use and environmental education program is directed by CREW Land and Water Trust. In FY2008, approximately 170 acres were burned through the application of prescribed fire and 6,900 acres of exotics were treated. Restoration work continued on the CREW Management Center (288 acres), East Corkscrew Marsh (80 acres), East Bird Rookery Swamp (70 acres), and Tree Wizard (10 acres). In FY2009, it is anticipated that 4,000 acres of exotics will be treated and 1,000 acres will be burned.

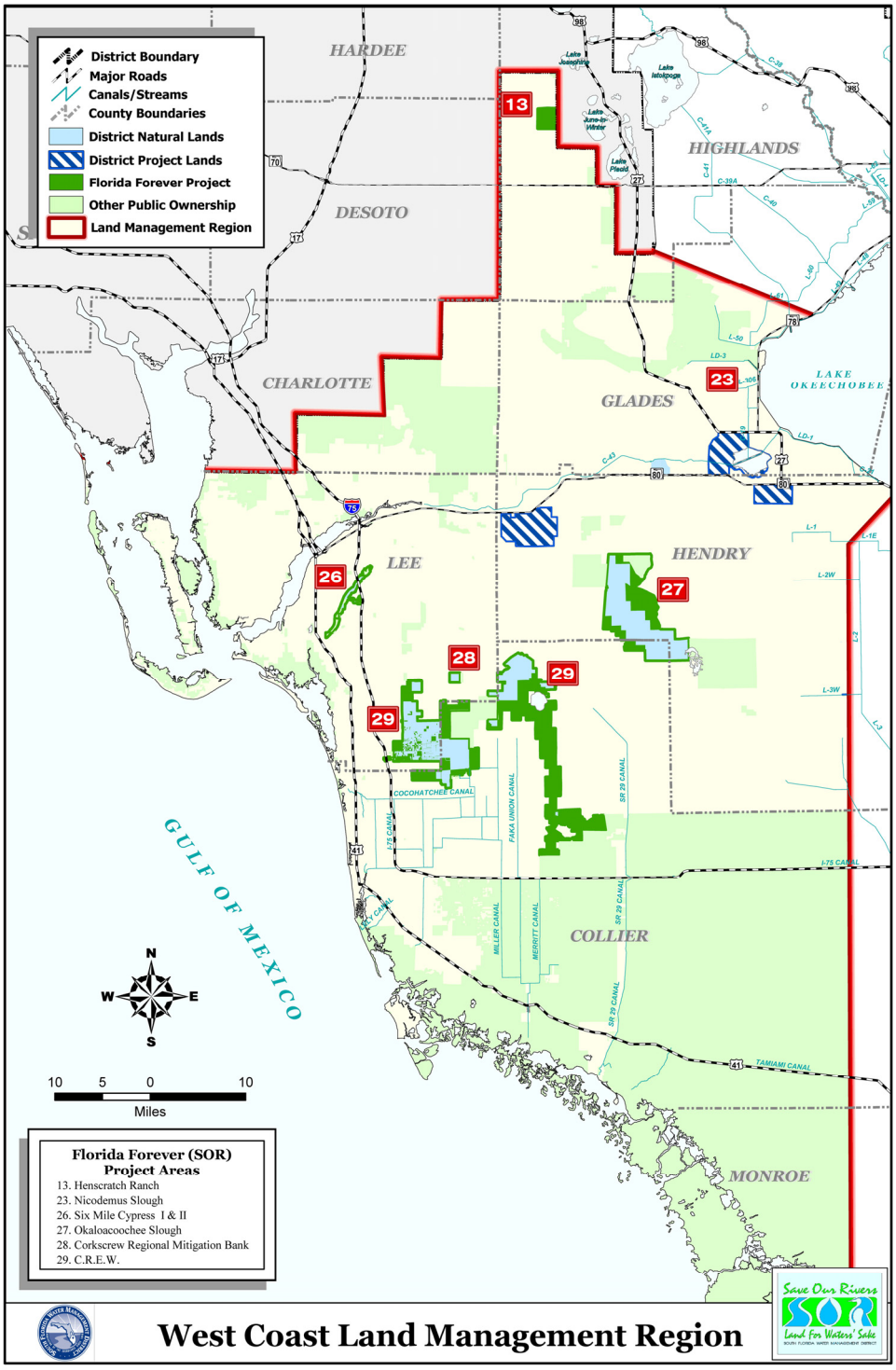


**Figure 6B-6.** West Coast Land Management Region.

## OKALOACOOCHEE SLOUGH: MANAGED BY THE DOF AND FWC

- County: Hendry and Collier
- Project size: 35,201 acres
- District ownership: 22,255 acres
- Acquisition partners: Conservation and Recreation Lands, Florida Fish and Wildlife Commission, and Division of Forestry

The DOF and FWC purchased additional lands in the project, expanding the original purchase by the District and the state. The project is managed as Okaloacoochee Slough State Forest, with the DOF as lead manager and the FWC responsible for wildlife management under a four-party lease agreement with the FDEP, Division of State Lands, and the District. The FWC also manages the project as a Type 1 WMA and conducts a public hunting program. An approved management plan is in place.

## SIX MILE CYPRESS: MANAGED BY LEE COUNTY

- County: Lee
- Project size: 2,083 acres
- District ownership: 843 acres
- Acquisition partners: Lee County

The Six Mile Cypress property is jointly owned by Lee County and the District. Since acquisition, the property has been managed by Lee County Parks and Recreation. The management plan was updated in 2008. Six Mile Cypress likely has the highest rate of public visitation of any District project. Each year approximately 50,000 Lee County students and visitors use the outdoor classroom facility and boardwalk built and maintained by Lee County.