



# **Land Use and Management Plan for Flying Eagle Preserve**

## **Executive Summary**

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## Executive Summary

The mission of the Southwest Florida Water Management District is to manage water and related natural resources to ensure their continued availability while maximizing environmental, economic and recreational benefits. Central to this mission is protecting and maintaining water and water related natural resources that provide the District's 16-county region with its existing and future water supply and maintaining the balance between the land-use needs of current and future users. The District acquires and manages lands in support of this mission, and the District's goals and areas of responsibility.

To ensure that District lands are used and managed in ways that are consistent with Florida Statutes and the District's mission and goals, the District adopts land use and management plans. These plans guide the use and management of properties for a specific planning horizon by establishing a continuum of geographic zones determined by factors that include previously adopted management plans, water and natural resource data, existing recreational amenities and demands, adjacent land uses and public input.

Land use and management plans are created to maximize the quality of experience for recreationists and other users in ways that are compatible with the protection and sustainability of water resources and related natural systems. This executive summary provides a brief description of the property, summarizes the analysis and findings contained within the formal land use and management plan, and identifies programmatic accomplishments and goals for the relevant planning horizons.

## Flying Eagle Preserve at a Glance

The Flying Eagle Preserve is located in west-central Citrus County ([Figure 1](#)) within the Withlacoochee River watershed. Acquisition of lands within the Preserve began in 1986. It is part of a contiguous 122,000-acre core of protected public conservation/recreation lands and was primarily acquired to protect, restore and maintain the quality and natural functions of land, water and wetland systems of the state; and for natural flood control and water detention. The total acreage represented in the Flying Eagle Preserve Land Use and Management Plan is 16,334 acres, which includes a mosaic of lands owned and managed by the Southwest Florida Water Management District and lands held in trust by the State of Florida under the designation of sovereign submerged lands.

Flying Eagle Preserve includes 9.5 miles of frontage along the Withlacoochee River, which is designated by the Florida Department of Environmental Protection as an Outstanding Florida Water. The Preserve is comprised of 5,701 acres of mesic hammock and other forested uplands with 561 acres of pasture and other lands covering the remainder of the uplands. The remainder of the Preserve and interwoven state lands consists of basin marsh, swamp and other wetland communities. Important natural resources and their ecological significance are summarized in the Water and Natural Resource Data Section of this plan.

The Preserve has a rich historic and prehistoric past. Early accounts from the Seminole Wars indicate that the elevated hammocks along the Withlacoochee River and along the east and west sides of the Tsala Apopka Lake system served as settlement locales for the Seminole Indians and earlier native populations and as sites for their fields. Several archeological sites scattered throughout the Preserve have been identified, are preserved under the guidelines of the state's

Division of Historical Resources and are further protected by the District's ownership. Historical uses of the Preserve include cattle grazing, turpentining, logging and hunting. Since the 1970s, a portion of the Preserve has also been used as a youth education and recreation center operated by the Boy Scouts of America. Today, there are a variety of recreational opportunities compatible with the natural communities present at the Preserve including bicycling, birding, backpacking, equestrian riding, hiking, hunting, geocaching, interpretive uses, nature study, photography and a Boy Scout camp.

## Planning Process

Governing Board Policy 610-3 requires that District conservation lands be managed for water supply, natural systems, public access, recreation and education, biodiversity, archaeological resources and forestland. Governing Board Procedure 61-3 provides the framework to implement Policy 610-3 and to evaluate appropriate land management activities and recreation opportunities on District lands. The process includes the following steps:

- Review the previously adopted management plan
- Verify water and natural resource data
- Delineate management zones
- Review regional recreational supply and demand
- Complete land use matrix
- Obtain public input

The formal land use and management plan includes a comprehensive discussion about the natural systems and data evaluated during the development of this plan. This information, combined with information from previous plans is used to delineate management zones as shown in [Figure 2](#). These zones are established to protect and preserve sensitive natural communities, imperiled plant and wildlife populations, and several on-going restoration projects. Before the land use and management zone map is finalized, District staff conduct a regional recreation assessment to identify nearby recreational opportunities offered by other recreation providers including state and local governments. Additionally, staff inventory the resource-dependant recreation opportunities within the 20-mile radius of the Preserve and identify demographic trends that are likely to influence recreation demands.

The land use and management zones established for the Flying Eagle Preserve were incorporated into a matrix that contains a broad range of resource-dependant recreation activities and renewable resource land uses. Consistent with preservation objectives, only those resource-based recreation activities that require minimal amenities and can still have a quality recreation experience were considered compatible as depicted in [Table 1](#). The full regional assessment that identifies public lands that are connected to or within proximity of the Preserve available for public use indicates that any future demands for resource-dependant recreation in the region for the next 15 years can be fulfilled by existing recreation opportunities.

Based on the intrinsic character of the Preserve, existing and proposed recreational opportunities on public lands within the region, and limitations on the Preserve, the existing trail network and designated uses at the Preserve are satisfactory and appropriate to provide users with a quality passive recreation experience. The location and type of uses are depicted in [Figure 2](#). District staff will continue to monitor future demands in the region for compatible resource-based opportunities that may be compatible at the Preserve.

Figure 1 – Location Map and Regional Conservation Corridor Links

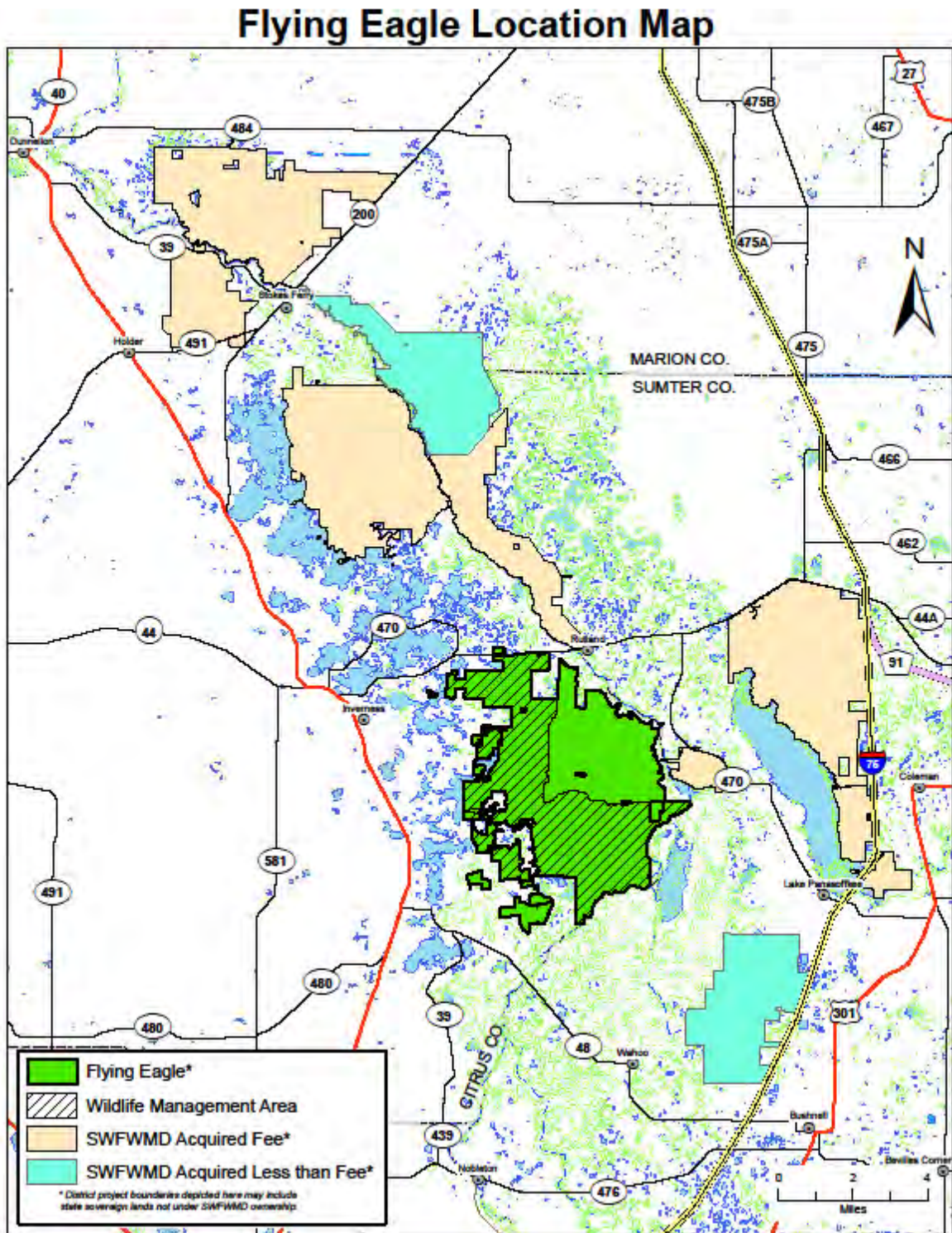


Figure 2 - Flying Eagle Recreation and Zone Map

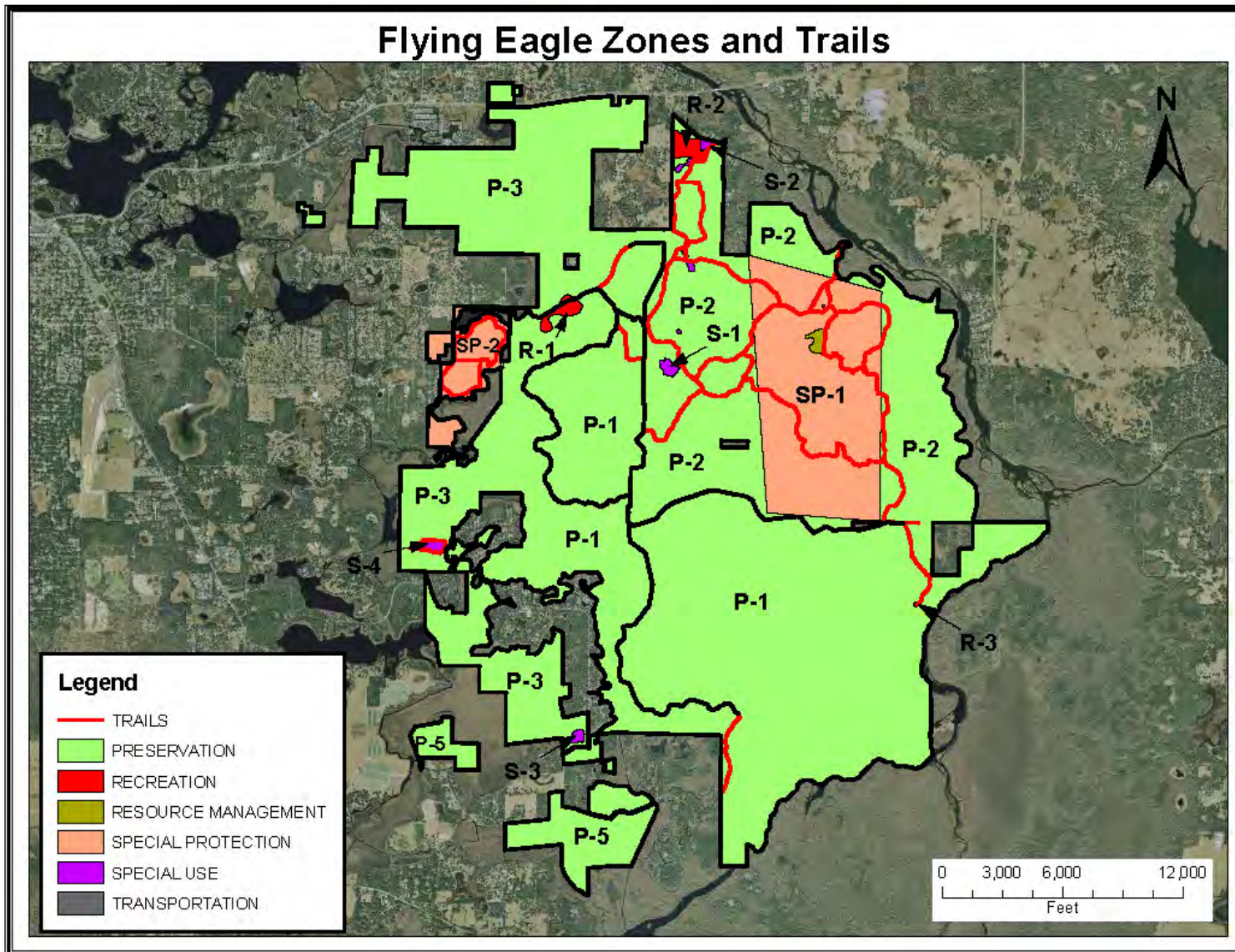


Table 1 - Land Use Matrix for Flying Eagle Preserve

Land Use Categories	Resource-Dependant Recreation															
	Mobility-impaired access	Access-Walkthrough	Access-5 vehicle maximum	Access->5 vehicles	Bicycling- Unimproved dirt trail	Birdwatching	Camping-Backpacking	Camping-Group	Equestrian	Hiking	Geocaching	Interpretive areas or trails	Nature Viewing	Nature Photography	Special Hunts	Wildlife Management Area
<b>Management Zones</b>																
Preservation-1		✓			✓	✓			✓	✓	✓		✓	✓		✓
Preservation-2		✓			✓	✓			✓	✓	✓		✓	✓	✓	
Preservation 3		✓				✓				✓	✓		✓	✓		✓
Preservation 4																
Special Protection 1		✓			✓	✓			✓	✓	✓		✓	✓	✓	
Special Protection 2		✓			✓	✓				✓	✓		✓	✓		✓
Recreation 1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		
Recreation 2		✓		✓	✓	✓				✓	✓	✓	✓	✓		
Recreation 3		✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓		
Special Use 1	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		
Special Use 2		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		
Special Use 3		✓			✓	✓				✓	✓		✓	✓		

## **Accomplishments and Goals**

The current Land Use and Management Plan guides the use and management of Flying Eagle Preserve throughout the ten-year period from 2010 to 2020. This Executive Summary describes the accomplishments that occurred from 1988 until 2010 and the goals identified for 2010 to 2020. The various goals and accomplishments are listed according to the corresponding management-related program. Additionally, District staff have identified external factors that have the potential to impact appropriate management and use of District lands.

### ***Resource Protection and Security Program***

#### ***Accomplishments***

- Entered into contract for security services to patrol lands and provide information and other support to the public.
- Installed and currently maintain approximately 22.5 miles of boundary fencing.

#### ***Goals***

- Continue to identify and address security issues on the Flying Eagle Preserve.
- When available, explore potential acquisitions of parcels that, while further enhancing the conservation value of the Flying Eagle Preserve, serve to improve access and security.
- Assist the Gulf Ridge Council (or subsequent entity responsible for management of the youth camp) as needed to refine and implement an appropriate security strategy for the youth camp.
- Remove unnecessary interior fencing from within the McGregor-Smith addition.
- Assess all fencing along the boundary to ensure compliance with legal requirements and replace/install fencing as necessary. Continuously evaluate effectiveness of security and adapt as appropriate.

### ***Public Use Program***

#### ***Accomplishments***

- Designated and marked 16 miles of hiking trails, nine miles of equestrian trails and 13 miles of biking trails.
- Established two primitive, one equestrian and one group camp sites
- Entered into an agreement with the Florida Fish and Wildlife Conservation Commission (FWC) to establish Flying Eagle as a Wildlife Management Area.
- Assisted with construction of the Withlapopka Park.
- Entered into use agreement with the Gulf Ridge Council of the Boy Scouts of America and established the McGregor-Smith lease area for their use.
- Coordinated with the FWC to establish a public access point on the west side of the property.
- Installed boat slides at Moccasin Slough Bridge to improve boating access across the structure.



### *Goals*

- Evaluate recreational amenities to ensure accurate information is presented in periodic Recreation Guide updates.
- Increase volunteer activity focusing on recreational amenities and resource management services.
- Schedule public speaking engagements and field trips with adjacent and potentially impacted residential communities and user groups to educate residents and users on resource management activities, particularly ongoing restoration, exotic species control and prescribed fire application. Develop relationships with neighbors and user groups to facilitate communication and feedback loops on management activities.
- Enhance monitoring program for recreation use areas and trails. Establish methods to most effectively monitor trail use, number of users, and success of public access points.
- Coordinate with the Gulf Ridge Council to seek alternative strategies to strengthen the partnership for the McGregor-Smith youth camp. Strategies may include additional partners.

## ***Land Maintenance Program***

### *Accomplishments*

- Stabilized roads as needed.
- Installed culverts as needed.
- Conducted boundary surveys to resolve encroachments.
- Mapped and continue standard maintenance of all roads, firebreaks, gates, culverts, and associated infrastructure.

### *Goals*

- Coordinate with the Gulf Ridge Council and additional youth center cooperators to develop a strategy for capital improvements and demolitions of existing structures in support of the youth center operation.

## ***Fire Management Program***

### *Accomplishments*

- Burned 5,573 acres with approximately 40 percent conducted in the growing season. Burn units are generally on a three- to four-year rotation.

### *Goals*

- Obtain necessary authorization from the Department of Environmental Protection for use of heavy equipment in sovereign lands to conduct fireline construction and maintenance.
- Conduct one priority marsh burn between the East-West Dike Road and the main airboat trail and between Main Road and the river.
- Conduct remaining fuel reduction burns on the McGregor-Smith addition.
- Complete installation of upland firebreaks required for marsh burning. Coordinate with the District's Operations Department to complete.
- Coordinate with District Operations Section, Florida Division of Forestry (FDOF), and FWC to satisfy equipment and personnel requirements for large burns.
- Develop aerial burn plan for priority marsh areas. Include FDOF and FWC as necessary in the planning process.

- Coordinate with FDOF to develop a public outreach initiative to educate local residents on the importance of marsh burning on the property and what to expect when burns are conducted.
- Conduct post-mechanical treatment burns of restoration units as they accumulate sufficient fuel loads. Burns will take place during the growing season whenever possible.
- Continue post-mechanical treatment burns of restoration units as they accumulate sufficient fuel loads. Burns will take place during the growing season whenever possible.
- Conduct remaining priority marsh burn between the East-West Dike Road and the main airboat trail, and between Main Road and the river.
- Conduct second burn of one previously completed priority marsh unit.

## ***Exotic Species Control Program***

### ***Accomplishments***

- Instituted a systematic invasive species control program targeting exotic flora.
- Spent a total of \$25,000 since 1998 to treat a variety of exotic plants occurring on the property.

### ***Goals***

- Enhance mapping and prioritization of invasive plant infestations treatment. Treat accordingly and perform follow-up assessments of infestation sites.
- Monitor restored wetlands adjacent to Shinn Ditch for invasive plant infestations.
- Achieve maintenance level of feral hog control on Flying Eagle Preserve.
- Achieve maintenance level treatment status for Chinese tallow and cogon grass.
- Inventory and assess the need and ability to control invasive plants and wildlife. Review exotic plant management program to assess new infestations and establish priorities for species control. Adapt as necessary.

## ***Water Resources and Natural Communities Restoration Program***

### ***Accomplishments***

- Contracted with Florida Natural Areas Inventory (FNAI), Florida State University, to map existing and historic natural communities, quantify current conditions, and record observed plant and wildlife species.
- Completed construction of four ditch blocks within Shinn Ditch and four culvert modifications along the east west berm road for the rehydration of Grand Prairie and associated marshes.
- Completed restoration of approximately 1,416 acres of herbaceous wetlands.
- Initiated restoration activities in several imperiled plant communities (scrub, sandhill, and wet prairie) via mechanical treatment of approximately 707 acres of hardwood canopy encroachment.

### *Goals*

- Develop control plan as needed to repair areas subject to erosion problems.
- Coordinate with FWC staff conducting pilot project to treat invasive marsh vegetation and other habitat enhancement projects as needed.
- Assess Grand Prairie uplands as a possible recipient site for native seed on the McGregor-Smith addition.
- Complete mechanical restoration of scrub including follow-up treatments and prescribed burns.
- Conduct seeding of Grand Prairie uplands if determined to be a suitable recipient site.
- Complete mechanical restoration of wet prairie.
- Identify and map gopher tortoise habitat enhancement areas and complete restoration (3-10 years).

### ***Resource Utilization Program***

#### *Goals*

- While this plan does not recommend any such activities, the potential for resource management activities that are renewable and capable of producing revenue to offset management costs may be further explored.

### ***Resource Monitoring Program***

#### *Accomplishments*

- Completed gopher tortoise burrow surveys in approximately 50 percent of suitable habitat (scrub, sandhill, xeric pastures and old fields).
- Coordinated with University of Florida researchers conducting long term study to track establishment of a translocated gopher tortoise population.
- Implemented gopher tortoise burrow surveys in areas of sub-optimal habitat, especially in mesic hammocks occurring on well drained soils.
- Coordinated with FWC staff to track locations of whooping cranes from the non-migratory Florida population.
- Assisted FNAI staff with locations of rare plant populations.
- Worked with botanists to identify, map and monitor numerous rare plant populations including state listed species and several tracked by FNAI.

#### *Goals*

- Complete inventory of tortoise burrow locations and identify priority habitat improvement areas.
- Conduct scoping of tortoise burrows at selected locations to survey for commensal species such as gopher frog, Florida mouse, eastern indigo snake and eastern diamondback rattlesnake.

## Challenges to Achieving Goals

There are several key factors external to the District that could significantly impact the achievement of long-term goals described in this plan. Below is a summary of external factors that may affect or influence future management of Flying Eagle Preserve.

- Exotic flora and fauna that originate offsite and rapidly infest Flying Eagle.
- Funding for land use and management expenses susceptible to changes and allocation of land management funds.
- Multiple desires and goals of stakeholders and other state organizations that affect protection of Flying Eagle's resources and enforcement of District Rules.
- Increasing restrictions with regard to exotic plant and animal treatments, such as herbicide application restrictions.
- Narrow burn windows to conduct marsh burns due to exacting conditions required for effectiveness and smoke management.
- Development adjacent to or in proximity to Flying Eagle may affect resources and ecosystem processes within the property.
- Legal impediments and policy shifts affecting fire management, such as increasing air quality standards.
- Management practices of adjacent landowners engaged in timber harvesting, mining, cattle grazing, water withdrawal or water pollution may adversely affect the property's resources.
- Expansion of primary roads and highways which impact habitat and buffers.
- Natural disasters such as hurricanes, floods, climate change and disease that potentially cause unrecoverable resource losses and affect the long-term balance and viability of populations and functionality.

This executive summary is designed as a companion to the full, comprehensive land use and management plan. It provides a brief description of the property, summarizes the analysis and findings contained within the formal land use and management plan, and identifies programmatic accomplishments and goals for the relevant planning horizons. A detailed land use and management plan is available upon request.