

**WIREGRASS PRAIRIE PRESERVE  
GENERAL MANAGEMENT PLAN**

Prepared by  
County of Volusia  
Division of Environmental Management

November, 2013

## Wiregrass Prairie Preserve Management Plan Summary

**Date of Plan:** November, 2013

**Approximate Acreage:** 1,419

**Location:** South/southeast of Lake Ashby, east and west of Pell Road, in the central portion of Volusia County.

**Acquisition History and Ownership:**

- 2002 ..... The County and the St. Johns River Water Management District jointly acquired 1,389 acres (acreage exclusively of non-vacated rights of way). Each party owns an undivided fifty percent interest in the property (Menard tract).
- 2007 .... The County individually acquired 10 acres located in the extreme southwestern corner of the Preserve, south of Rudman Road. (Brooks tract)
- 2008 .... The County individually acquired 20 acres located in the eastern boundary of the Preserve, between Rudman and Lopez Roads. (Agostini tract)

**Management Partners:** St. Johns River Water Management District

**Key Resource Issues:** Stewardship of the Preserve's natural resources will include, but may not be limited to,

- implementation of an "Objective-based Management" program in furtherance of the "Desired Future Conditions",
- prescribed burning,
- harvesting and other silvicultural activities,
- maintenance and restoration of surface hydrology,
- protection and enhancement of listed species,
- restoration of altered and degraded areas,
- control of exotic and invasive species, and
- management and long-term maintenance of pine plantations.

**Key Land Public Use Issues:** A variety of resource-based recreational opportunities, both existing and proposed, is provided across the Preserve. These uses consist of;

- a trails system,
- primitive camping (group and individual), and
- educational and other organized out-reach activities.



## TABLE OF CONTENTS

	<u>Page</u>
Introduction .....	1
Acquisition History and Ownership .....	5
Cooperative Management .....	5
Regional Overview and Significance .....	5
Overview of Existing Conditions .....	8
Future Land Use and Zoning	
Leases, Easements, Concessions and Other Restrictions	
Significant Improvements / Alterations	
Alignment of Boundary Fencing	
Topography and Surface Hydrology	
Soils	
Pine Plantations	
Natural Communities	
Exotic and Invasive Species	
Listed and Protected Species	
Cultural / Historical Resources	
Past Management Summary .....	41
Future Management Strategies .....	42
Resource Management	
Public Access and Use	
Miscellaneous and Administrative	
References .....	47
Appendices .....	48
A.    Cooperative Management Agreement between the County of Volusia and the St. Johns River Water Management District	
B.    Non-Exclusive Perpetual Access Easement	

## **LIST OF FIGURES**

<u>Number</u>		<u>Page</u>
1	General Location .....	2
2	Preserve Boundary .....	3
3	Aerial Photograph .....	4
4	Ownership of Preserve .....	6
5	Adjacent Conservation Lands .....	7
6	Significant Existing Improvements & Alterations .....	10
7	Generalized Topography .....	13
8	Generalized Soils .....	14
9	Pine Plantations .....	16
10	Composite Natural Communities .....	18
Individual Natural Communities Map Series		
<u>Number</u>		<u>Page</u>
11	Mesic Flatwoods .....	20
12	Basin Swamp .....	22
13	Hydric Hammock .....	24
14	Wet Flatwoods .....	26
15	Dome Swamp .....	28
16	Basin Marsh .....	30
17	Wet Prairie .....	32
18	Baygall .....	34
19	Depression Marsh .....	36
20	Conceptual Recreation Plan .....	45

## **LIST OF TABLES**

<u>Number</u>		<u>Page</u>
1	Natural Communities .....	17
2	Observed Exotic / Invasive Plant Species .....	37
3	Observed Exotic Animal Species .....	38
4	Observed Listed Animal Species .....	38
5	Observed Listed Plant Species .....	39
6	Species of Greatest Conservation Need, 2012 .....	40

## **INTRODUCTION**

Wiregrass Prairie Preserve (Preserve), approximately 1,419 acres, is situated south and southeast of Lake Ashby in the central portion of Volusia County (Figure 1).

The Preserve is comprised of properties owned either solely by the County of Volusia (County) or jointly with the St. Johns River Water Management District (District).

The Preserve is characterized by a mosaic of wetland and upland natural communities. Collectively, the communities of Mesic Flatwoods and Basin Swamp represent slightly less than two-thirds of the Preserve. The mixture of communities within the Preserve includes the imperiled community of Wet Prairie and the rarely occurring community of Basin Marsh.

This assortment of communities provides valuable and habitat for several protected species, including; hooded pitcher plant, Florida black bear, wood stork, gopher tortoise, eastern indigo snake. Of particular note is the occurrence of Rugel's pawpaw. This small plant of the flatwoods is endemic to Volusia County.

The Preserve provides opportunities for public use and enjoyment by accommodating a mixture of outdoor resource based recreational and educational experiences. Recreational opportunities include hiking, off-road bicycling, equestrian riding, hunting, and primitive camping.

The Preserve also provides a potential opportunity for the siting of potable water wells.

This plan updates and supersedes the prior management plan developed for the Preserve (August, 2003) and is intended to be compatible with and further the overall goals and objectives for the stewardship of conservation lands adopted by the County.

### **ACQUISITION HISTORY AND OWNERSHIP**

The core area of the Preserve was acquired in 2002 by the County and the St. Johns River Water Management District. This jointly-owned property, in which each party owns an undivided fifty percent interest, consists of approximately 1,389 acres.

Since this initial acquisition, the County has individually purchased two other privately-held properties, consisting in total of approximately 30 acres, as in-holdings and additions to the Preserve. These acquisitions were completed in the years 2007 and 2008.

The ownership pattern of lands within the Preserve is depicted by Figure 4 .

### **COOPERATIVE MANAGEMENT**

Volusia County, through a “Cooperative Management Agreement” with the St. Johns River Water Management District, has assumed management responsibilities for properties within the Preserve jointly-owned with the County (Appendix A).

### **REGIONAL OVERVIEW AND SIGNIFICANCE**

The Preserve is an essential component of a vast area of existing and proposed conservation lands. As depicted by Figure 5, adjacent conservation lands to the Preserve include both privately-held lands encumbered by public conservation easements and publicly-owned properties.

The Preserve is also partially situated within the Volusia Conservation Corridor (VCC), an established *Florida Forever* project area of the State’s Acquisition and Restoration Council. The VCC provides for a continuous corridor of environmentally significant land spanning the central wetlands and flatwoods of Volusia County.

Collectively, the Preserve and the adjacent conservation lands, existing and planned, serve to promote and protect biodiversity at the landscape level.

Wiregrass Prairie Preserve

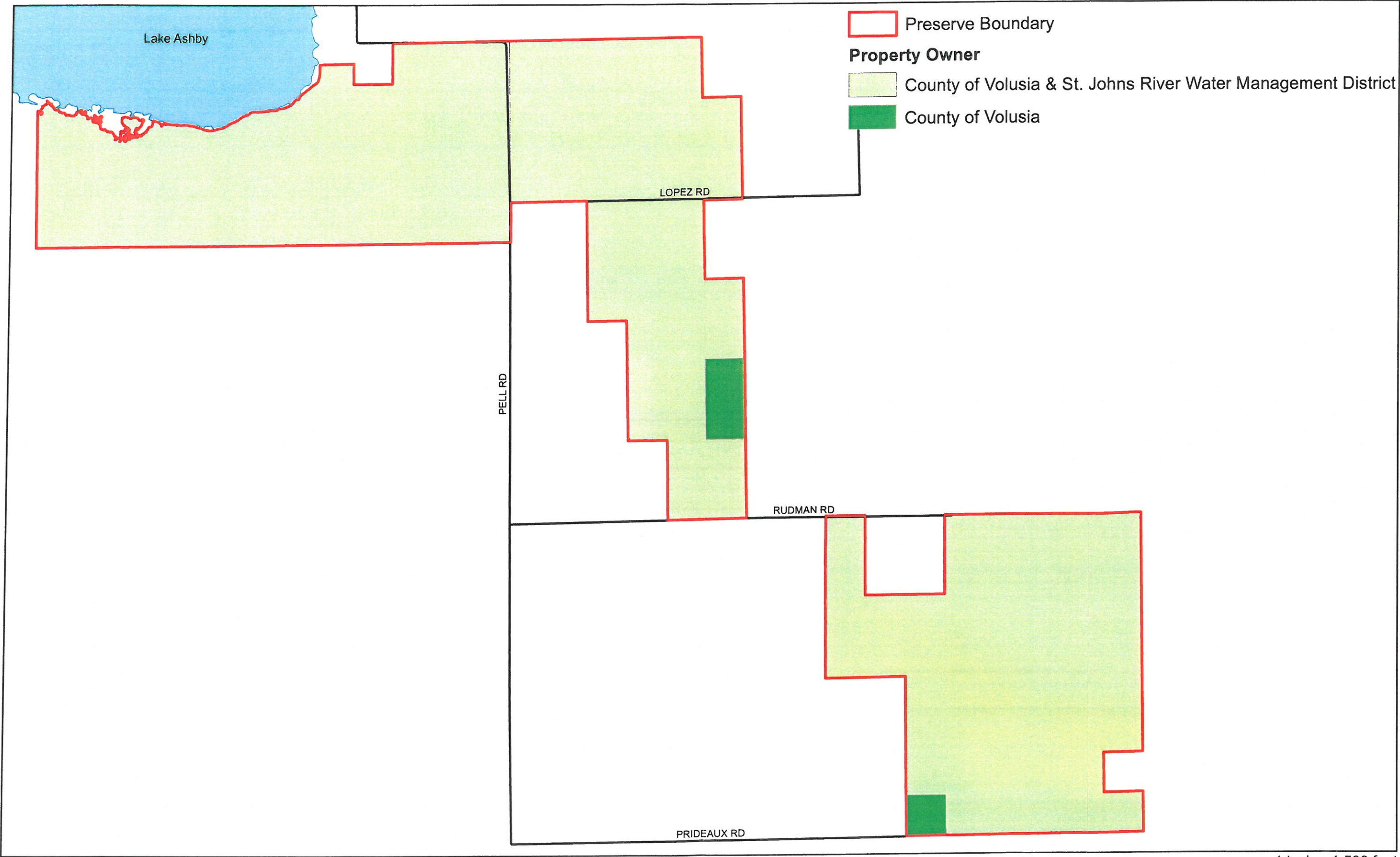


Figure 4. Ownership Pattern



Wiregrass Prairie Preserve

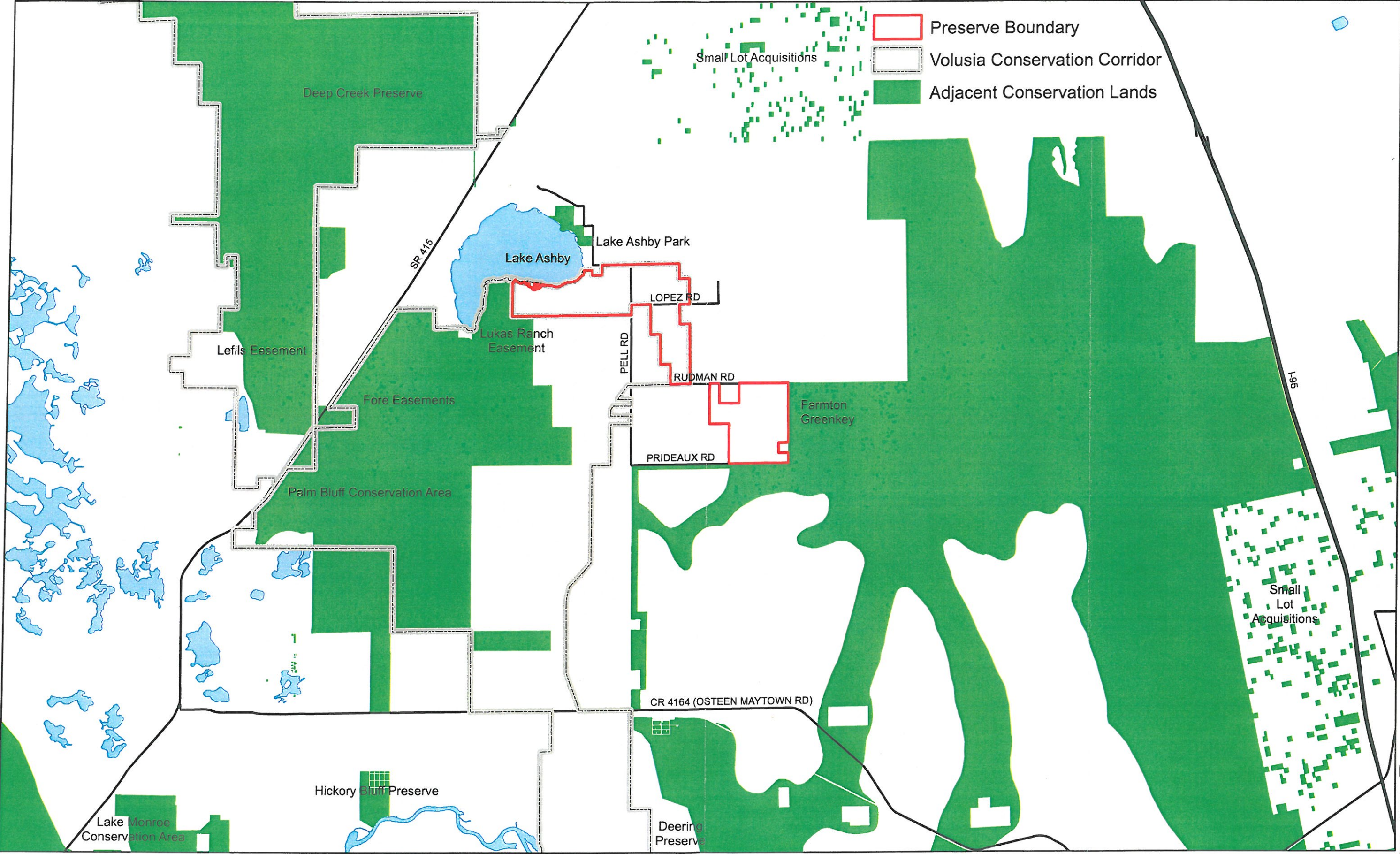


Figure 5. Adjacent Conservation Lands & Volusia Conservation Corridor



## **OVERVIEW OF EXISTING CONDITIONS**

### **Future Land Use and Zoning**

Future Land Use Designation: The entire Preserve has been assigned the future land use designation of Conservation

Zoning Classification: The zoning classification of Conservation is assigned to lands within the Preserve.

### **Leases, Easements, Concessions and Other Restrictions**

Leases: No leases are currently in effect within the Preserve.

Easements: In 2005, a “non-exclusive perpetual access easement” across land jointly owned by the District and the County was granted to the owner of the property situated in the extreme southwestern corner of the Preserve, south of Rudman Road (Appendix B). The grantee’s property has subsequently been acquired by the County.

Concessions: There are no concessions granted within the Preserve.

Other: Pell Road is the sole County maintained roadway providing direct access to the Preserve. However, this road is not maintained by the County north of the intersection with Rudman Road. Both Lopez and Rudman Roads, each unpaved, single lane routes, are not presently maintained by the County. Boy Scout Camp Road, which parallels the northern boundary of the Preserve, is also an unpaved, non-County maintained, roadway. A brief segment of this roadway between the Preserve and County’s Lake Ashby Park is privately maintained. Use of Ashby Way to access the portion of the Preserve south of Lake Ashby is precluded as this is a privately maintained residential street serving the Lake Ashby Estates neighborhood. The condition of these non-County maintained roadways will vary depending upon frequency of use, weather conditions, and other considerations.

### **Significant Improvements / Alterations**

With the exception of areas of pine plantation which are discussed further in the following section of this document, minimal significant improvements or alterations are found on the Preserve. These features, depicted by Figure 6, are generally situated at the periphery of the Preserve and consist of;

- several ditches,
- an internal road,
- a small cleared area, and
- remnant agricultural fields and pasture.

With the exceptions of the ditches extending north toward Lake Ashby and paralleling a segment of Pell Road, north of the intersection with Lopez Road, these ditches are integral components of broader drainage systems. Each of these ditches are approximately ten feet in width. The identified ditches are further discussed in the Surface Hydrology section of this document.

The road extending south from Rudman Road is a single lane, dirt route, established by the prior owner of the property. This road, segments of which are elevated and/or bordered by shallow swales, supported previous agricultural use of the property and provided the sole means of access to a residence situated on an adjoining privately-held parcel.

The parcel located in the extreme southwestern corner of the Preserve upon which the aforementioned residence was located, has been acquired by the County. The small altered area depicted by Figure 6 as “developed”, encompassing approximately 6 acres, is that associated with this old homesite.

Other alterations include an abandoned field (approximately 9 acres) and abandoned pasture (approximately 16 acres). Each of these areas are depicted by Figure 6.

Minor improvements found on the Preserve include; fencing, a potable water well and small shed remaining from a prior residential dwelling located in the southwestern corner of the property, several unimproved “woods” roads, and a pavilion and other items supporting public use and access.

### **Alignment of Boundary Fencing**

The survey of the property indicates the existing fencing paralleling a segment of the Preserve’s eastern boundary for a distance of approximately one-quarter of a mile south of Lopez Road is inset from the boundary by approximately twenty feet. This fencing, which was erected prior to public acquisition, roughly coincides with the tree line in this vicinity.



Wiregrass Prairie Preserve

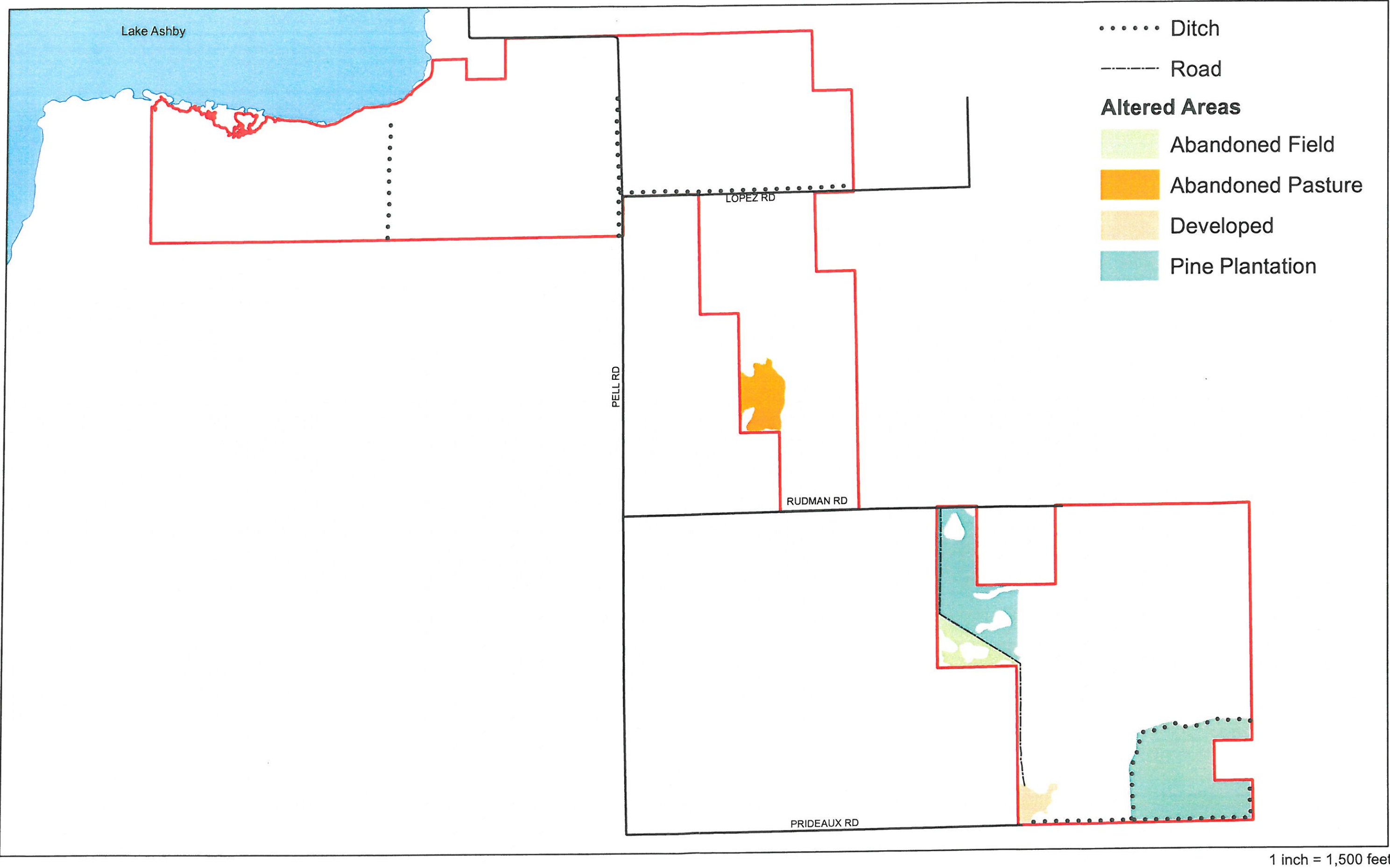


Figure 6. Significant Existing Improvements and Alterations

## **Topography and Surface Hydrology**

Topography - Topographic relief across the Preserve generally ranges between less than 15 feet to slightly over 35 feet above sea level (Figure 7).

As identified by the Volusia Soil Survey, the property is situated at the convergence of two physiographic regions of the county, the St. Johns River Valley and the Rima Ridge. The higher elevations of the Preserve, north of Lopez Road, are apparently situated at the extreme southern terminus of the Rima Ridge. This region is a relict shoreline that is older than the Atlantic Coastal Ridge. The balance of the property is within the St. Johns River Valley physiographic region.

Surface Hydrology – The Preserve includes approximately one mile of the southern shoreline of Lake Ashby. This large waterbody is the dominant surface water feature in the south-central portion of the county and is hydrologically linked to the St. Johns River. Based upon the presence of certain natural communities and casual observation of watermarks, the water level of the lake apparently varies seasonably by several feet. A portion of the wetlands bordering this waterbody may be sovereign land of the State.

The St. Johns River Water Management District maintains three surface water monitoring locations on Lake Ashby. Data collected from these stations indicate the water of the lake to generally be of good quality. The District also maintains a groundwater monitoring well near the intersection of Pell and Rudman Roads, adjacent to the southern portion of the Preserve

While a formal study of the hydrology of the Preserve has not been undertaken, certain general observations based upon field conditions and other information can reasonably be assumed.

Drainage within the Preserve appears to be predominantly toward the St. Johns River. For example, the area sited adjacent to Lake Ashby is linked to the St. Johns through wetlands, Deep Creek, and the Lake Ashby Canal. The southeastern section of the Preserve includes a sizable portion of the wetland known as Harris Bay. This wetland is apparently linked to the southern portion of Spruce Creek Swamp, situated about one mile to the east. Drainage of Harris Bay and the southern portion of Spruce Creek Swamp appears to be toward the St. Johns River via Cow Creek. Both Harris Bay and Spruce Creek Swamp receive an infusion of water from the Samsula Canal, which terminates adjacent to the border of these wetland areas.

The ditches paralleling Pell and Lopez Roads, depicted by Figure 6, are inter-connected via culvert under Pell Road. These ditches are, in turn, tied to an off-site ditch paralleling the southern and western boundaries of that portion of the Preserve situated south of Lake Ashby. The ditch paralleling the western boundary is connected to Lake Ashby. All of these ditches are elements of an area-wide network spanning the adjacent agricultural and residential lands. Aerial photography suggests this network, including the significant on-site ditches, was established decades ago. Similarly, the brief segments of ditch paralleling the boundaries in the southeastern corner of the Preserve, south of Rudman Road, are also components of a broader off-site drainage network.

A comprehensive system of shallow ditches is not present within the Preserve. Swales parallel segments of the internal road extending south from Rudman Road. A small ditch loops across the southeastern corner of the Preserve. This ditch was apparently established by the prior landowner to facilitate agricultural use, a pasture, in this portion of the property. This ditch is linked to the wetlands and ditches paralleling the Preserve boundaries. An abbreviated segment of small ditch is also found in that portion of the Preserve south of Lake Ashby. This ditch was apparently dug in conjunction with

construction of a woods road extending from the adjoining residential area toward Lake Ashby. This ditch is tied to the larger ditch paralleling the southern boundary of this portion of the Preserve.

### **Soils**

Multiple soil types are found across the Preserve. A common descriptor for these various types is the characterization of each as being nearly level and poorly drained. As depicted by Figure 8, hydric soils are predominant. The better drained soils within the Preserve coincide with the higher elevations of the property, notably the portion within the Rima Ridge.



Wiregrass Prairie Preserve

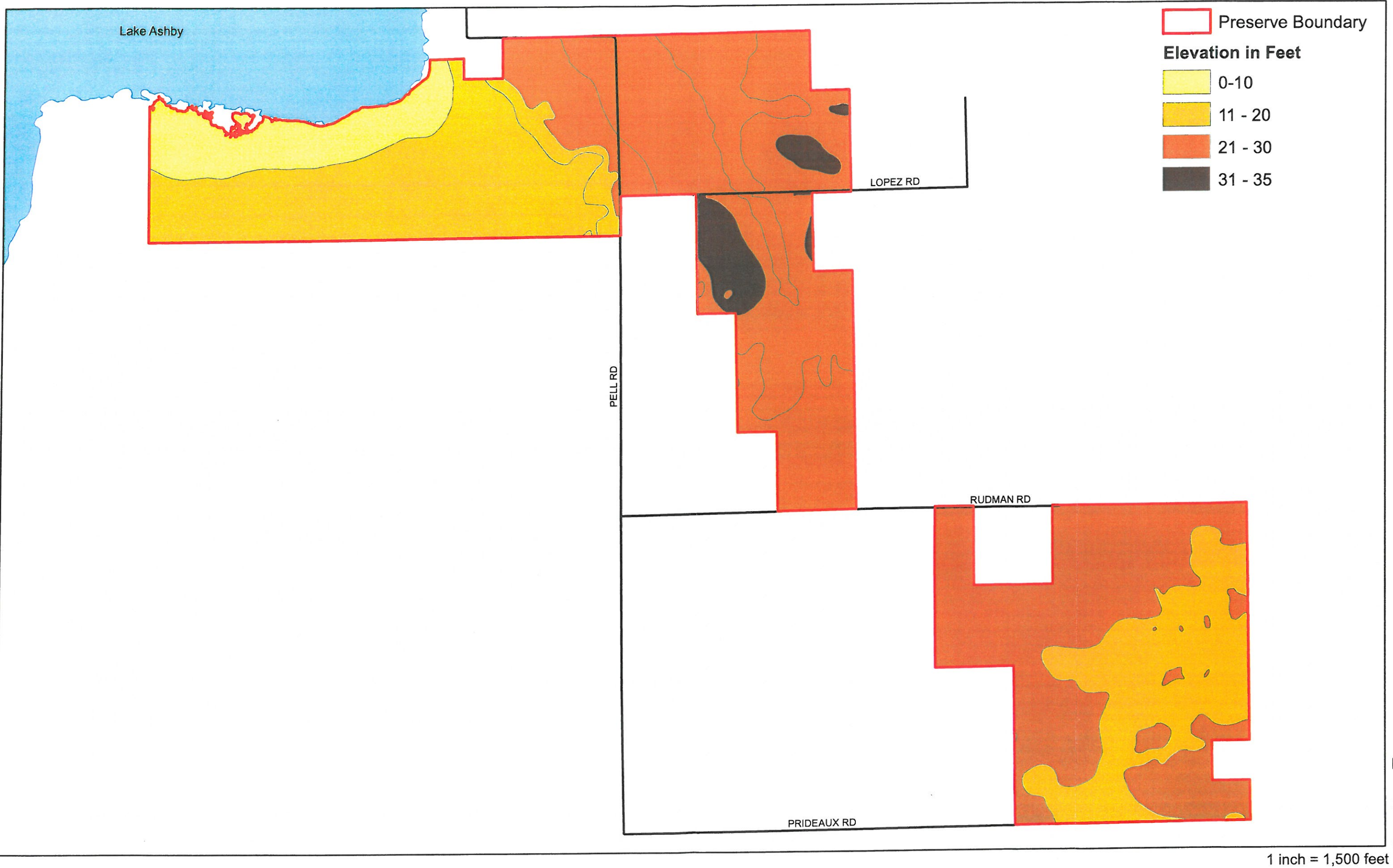


Figure 7. General Topography



# Wiregrass Prairie Preserve

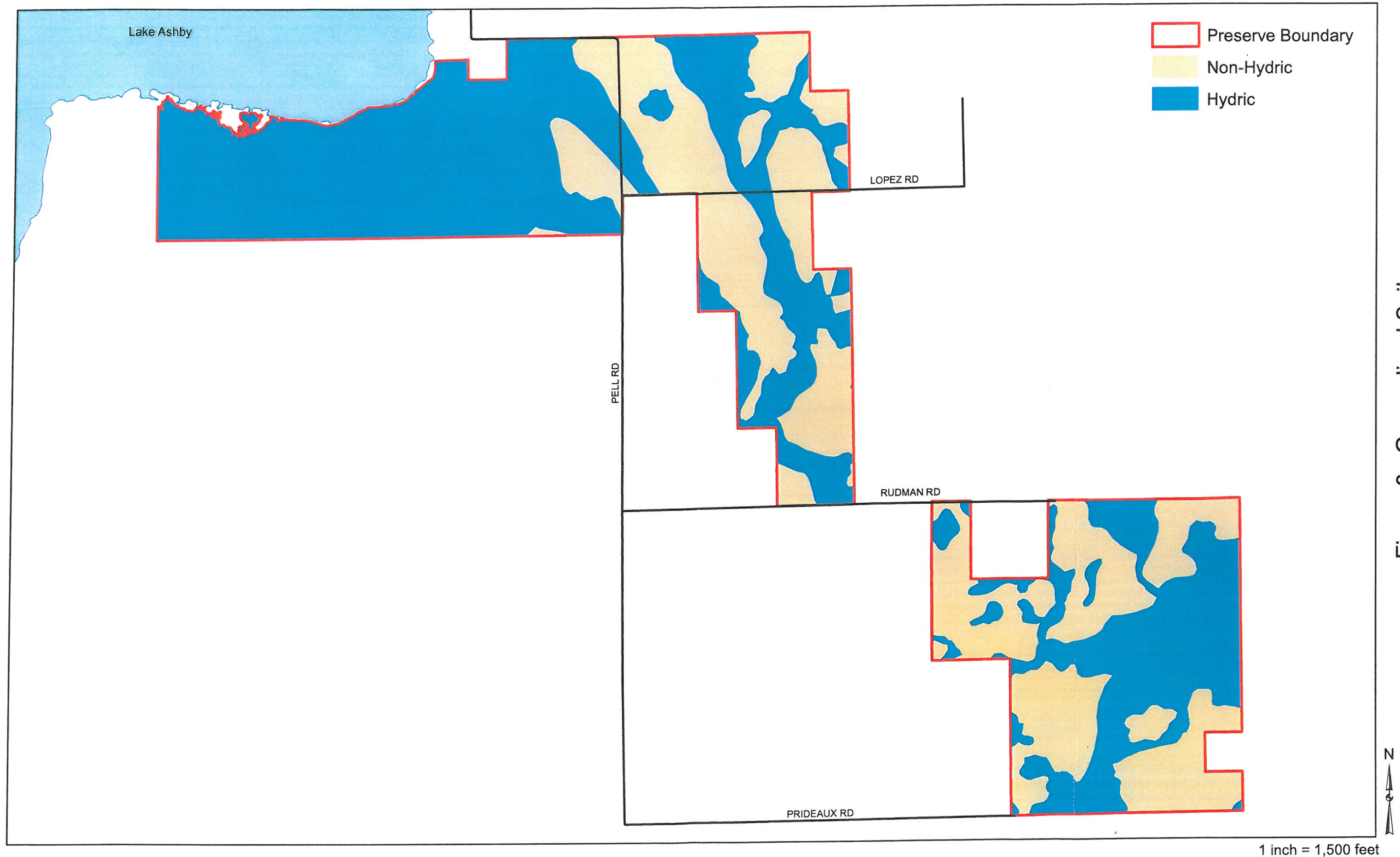


Figure 8. Generalized Soils

### **Pine Plantations**

Subsequent to public acquisition of the property, use by livestock of the pastures created by a previous landowner located in the southern portion of the Preserve has been discontinued. In late 2005, these pasturelands, depicted by Figure 9 and encompassing approximately one hundred five (105) acres, were extensively replanted in slash pine. The seedling survival has been good and even-aged stands of slash pine saplings now dominate the former pastures.

Bahia grass remains the prevalent groundcover within the plantations. As expected, native understory and groundcover has been slower to become established within these previously altered areas.

Given that the plantations are sited on previously altered areas and do not have an acceptable foundation of native understory or groundcover, a regime of even-aged forest management will continue within these areas. However, this endeavor will not include the use of artificial means or methods to preclude appropriate native groundcover and or understory species, quality and quantity, from the plantation areas.



# Wiregrass Prairie Preserve

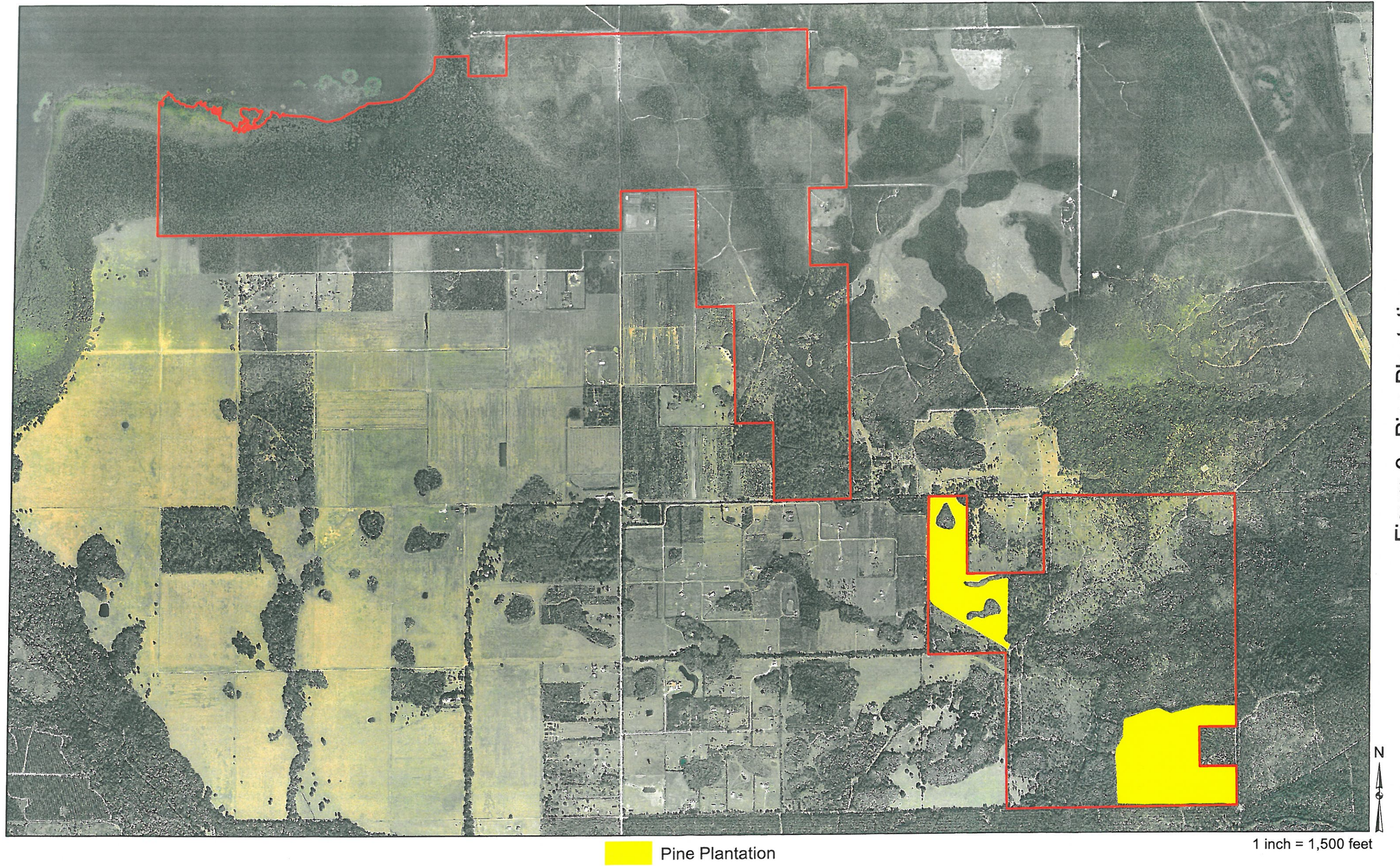


Figure 9. Pine Plantation



### Natural Communities

Referring to Figure 10, the Preserve is a mosaic of wetland and upland communities. This mixture of communities includes both the common, e.g. Mesic Flatwoods, and the imperiled, e.g. Wet Prairie.

Collectively, the natural communities represent approximately ninety (90) percent of the Preserve, with the communities of Mesic Flatwoods and Basin Swamp being predominant.

Table 1. Natural Communities\*

<i>Natural Communities</i>	<i>Approximate Acreage</i>
Mesic Flatwoods	573
Basin Swamp	355
Hydric Hammock	112
Wet Flatwoods	107
Dome Swamp	62
Basin Marsh	37
Wet Prairie	34
Baygall	11
Depression Marsh	3
<b>TOTAL</b>	<b>1,294</b>

\*Table includes natural communities only.

In general, these communities are in good condition.

Significant portions of the property were burned during the outbreak of wildfires that occurred across the county during the late Spring/early Summer of 1998. Based upon observations at that time, it appears that the fires within the Preserve were likely locally intense. However, the affected communities have significantly recovered from this event during the subsequent years.

The continued long-term viability of the communities of the Preserve will generally be dependent upon implementation of stewardship activities including, but not necessarily limited to, harvesting, planting, prescribed burning, and the maintenance and restoration of surface hydrology.



# Wiregrass Prairie Preserve

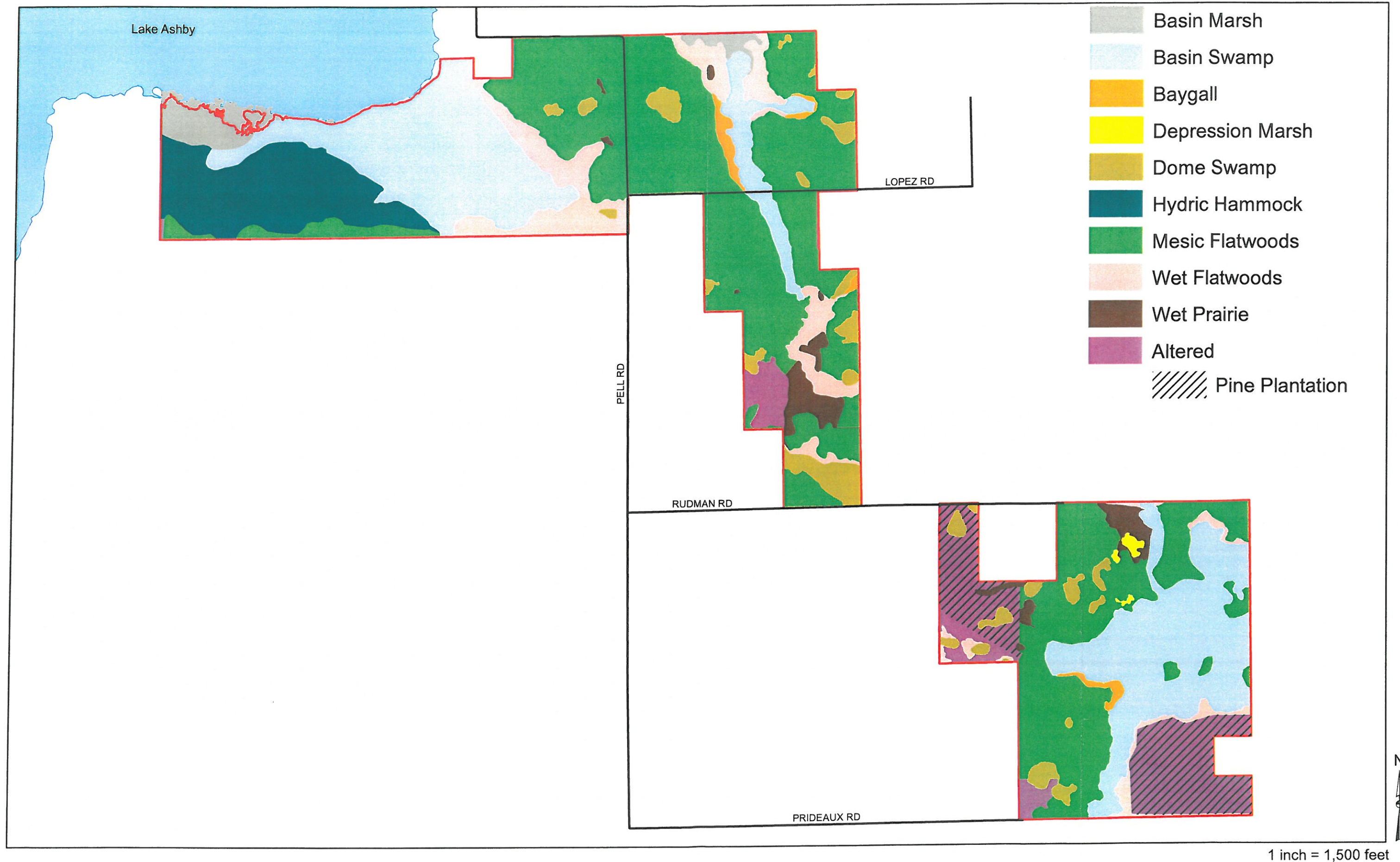


Figure 10. Natural Communities

## MESIC FLATWOODS

### General Description

Mesic flatwoods are characterized as an open canopy forest of widely spaced pine trees, with a shrub layer dominated by gallberry (*Ilex glabra*) and saw palmetto (*Serenoa repens*), grasses – such as wiregrass (*Aristida stricta*) and broomsedges (*Andropogon spp.*) and forbs.

Longleaf pine (*Pinus palustris*) is a major component of the overstory. Other species present include slash pine (*Pinus elliottii*) and pond pine (*Pinus serotina*).

### Natural Fire Cycle

The integrity of this community is dependent on periodic fires. Without relatively frequent fires, typically every 3 to 10 years – with intervals of 3 to 5 years being optimal, the community may transition into a hardwood dominated forest.

### Approximate Acreage

573

### Need for Restoration

Moderate. Long-term restoration of the community will include activities such as, but not limited to, harvesting and the use of prescribed fire and/or appropriate surrogate.

Restoration of this community may also include the removal of existing slash pine and pond pines, retaining longleaf pines, and practices facilitating the establishment and long-term growth/health of longleaf pine.



# Wiregrass Prairie Preserve

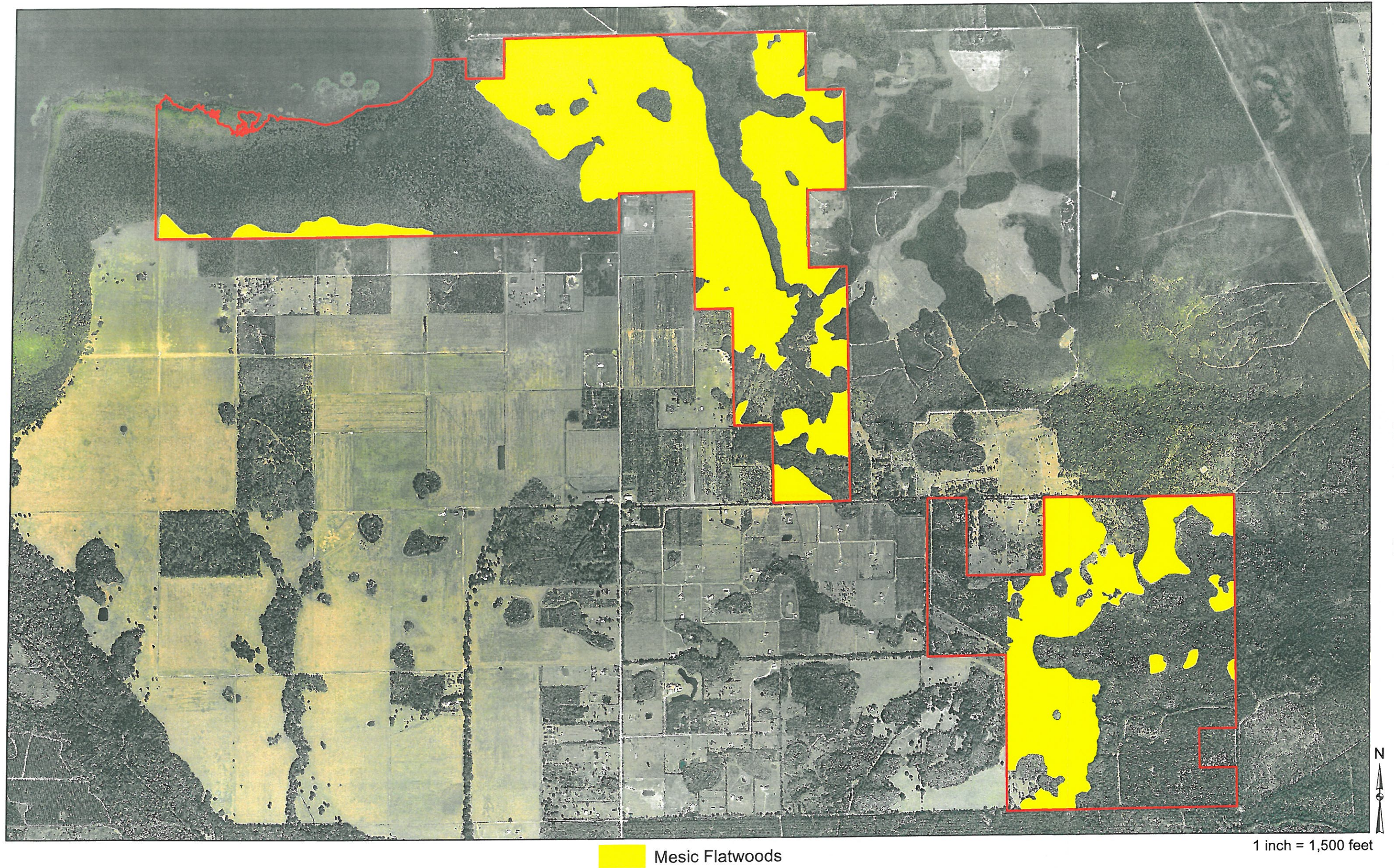


Figure 11. Mesic Flatwoods



## **BASIN SWAMP**

<u>General Description</u>	<p>Typically occurring in large, landscape level, depressions, this community often exists around lakes. Although highly variable in species composition, this forested wetland is vegetated with hydrophytic trees and shrubs that can withstand an extended hydroperiod.</p> <p>Species present within this community include; black gum (<i>Nyssa biflora</i>), bald cypress (<i>Taxodium distichum</i>), pond cypress (<i>Taxodium ascendens</i>), red maple (<i>Acer rubrum</i>), sweetbay (<i>Magnolia virginiana</i>), sweetgum (<i>Liquidambar styraciflua</i>), American hornbeam (<i>Carpinus caroliniana</i>), slash pine (<i>Pinus elliottii</i>), fetterbush (<i>Lyonia lucida</i>), wax myrtle (<i>Myrica cerifera</i>), commom buttonbush (<i>Cephalanthus occidentalis</i>), arrowheads (<i>Sagittaria spp.</i>) lizard's tail (<i>Saururus cernuus</i>), laurel greenbrier (<i>Smilax laurifolia</i>) and eastern poison ivy (<i>Toxicodendron radicans</i>). Isolated occurrences of large pine (<i>Pinus spp.</i>) are also present.</p>
<u>Natural Fire Cycle</u>	<p>Variable, depending upon factors such as water levels, dominant vegetation and fire exposure. Fire may be absent from the interior of the community for decades or centuries. Fire at the periphery of the community may be more frequent, depending upon the adjacent community.</p>
<u>Other Considerations</u>	<p>Basin Swamps provide habitat for several rare plant and animal species, including serving as important foraging and nesting grounds for the wood stork (<i>Mycteria americana</i>).</p> <p>Based upon observations immediately following the "fire storm" of 1998, fires within the community were likely locally intense.</p>
<u>Approximate Acreage</u>	355
<u>Need for Restoration</u>	<p>Minimal. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community.</p>



# Wiregrass Prairie Preserve

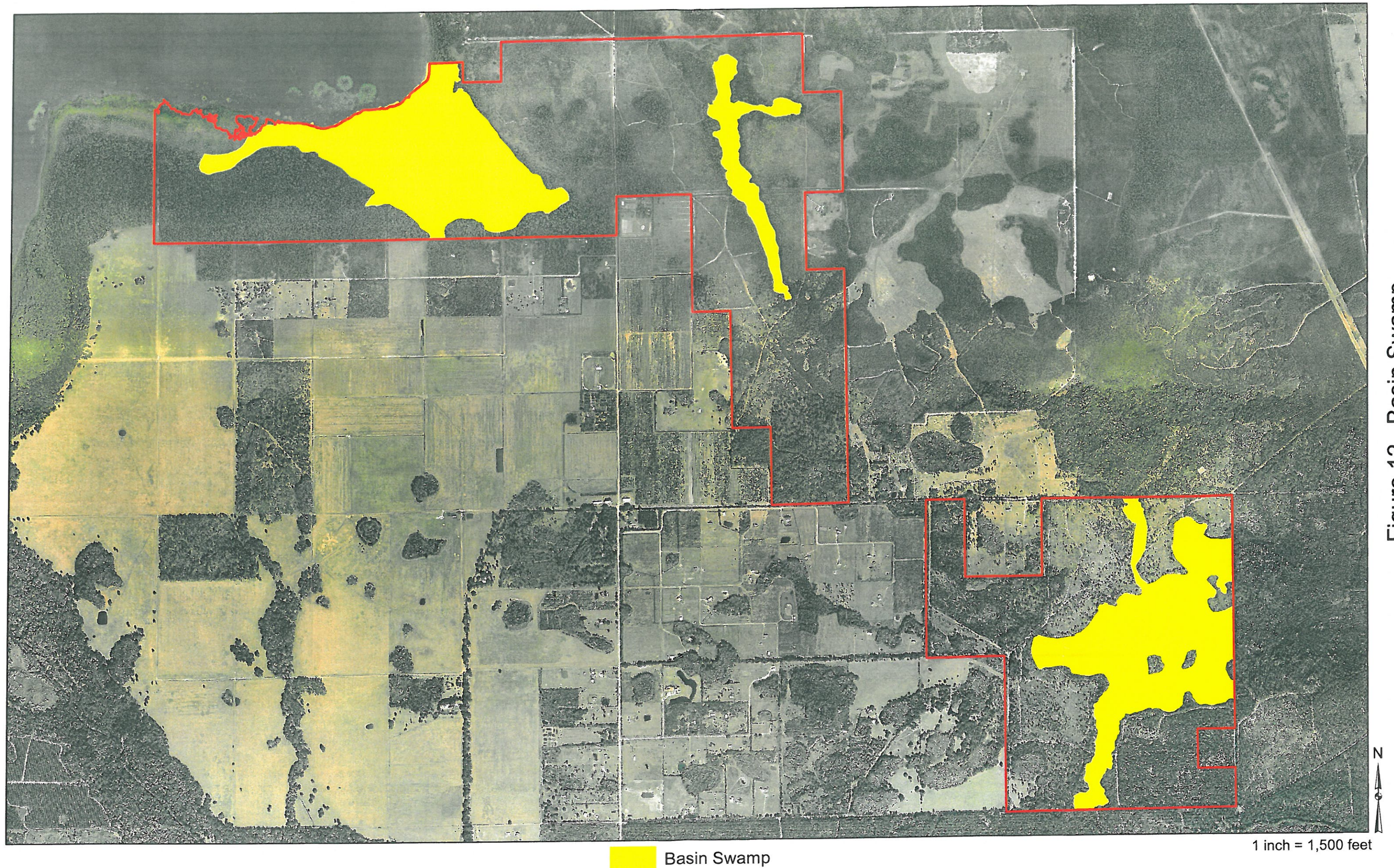


Figure 12. Basin Swamp



## HYDRIC HAMMOCK

### General Description

Typically an evergreen hardwood and/or palm forest with a variable understory occurring on moist soils.

The species composition of the community is largely determined by the pattern of inundation. A variety of hardwoods such as live oak (*Quercus virginiana*), sweetbay (*Magnolia virginiana*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*) and water oak (*Quercus nigra*) along with cabbage palm (*Sabal palmetto*) may be present in the canopy. Other species which may be present include; wax myrtle (*Myrica cerifera*), American beautyberry (*Callicarpa americana*), eastern poison ivy (*Toxicodendron radicans*), greenbriers (*Smilax* spp.), cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), and air-plants (*Tillandsia* spp.).

### Natural Fire Cycle

Although the community may occasionally burn, fire is not essential for the maintenance of this community.

### Approximate Acreage

112

### Additional Considerations

This community is a preferred habitat of feral hog (*Sus scrofa*).

### Need for Restoration

Miminal. As the duration and frequency of flooding are the primary determinants of species composition of this community, maintenance or restoration of the natural hydrology is important.



# Wiregrass Prairie Preserve

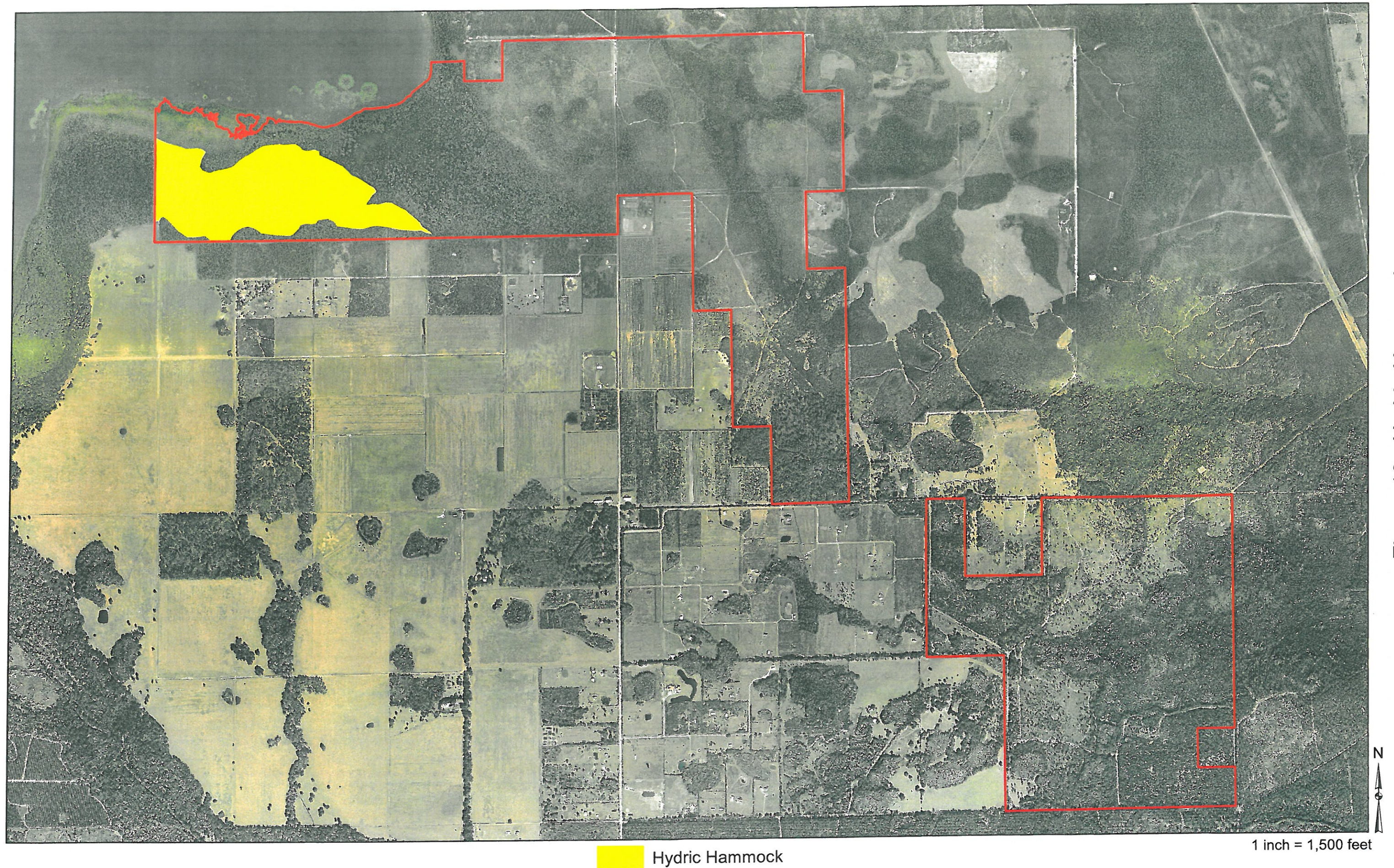


Figure 13. Hydric Hammock



## WET FLATWOODS

### General Description

This community, occurring on relatively flat, poorly-drained terrain, is characterized by relatively open-canopy forests of scattered pine trees with a sparse or absent midstory and a dense groundcover of hydrophytic grasses, herbs and low scrubs. Within the Preserve, the overstory is predominantly slash pine with isolated occurrences of pond pine (*Pinus serotina*). The subcanopy, if present, includes species such as sweetbay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), and wax myrtle (*Myrica cerifera*). Typical groundcover includes wiregrass (*Aristida stricta*), carolina redroot (*Lachnanthes caroliana*), and pitcher plant (*Sarracenia spp.*)

### Natural Fire Cycle

The integrity of this community is dependent on periodic fires, typically every 3 to 5 years.

### Approximate Acreage

107

### Need for Restoration

Moderate. Long-term restoration of the community will include activities such as, but not limited to, harvesting and the use of prescribed fire and/or appropriate surrogate.



Wiregrass Prairie Preserve

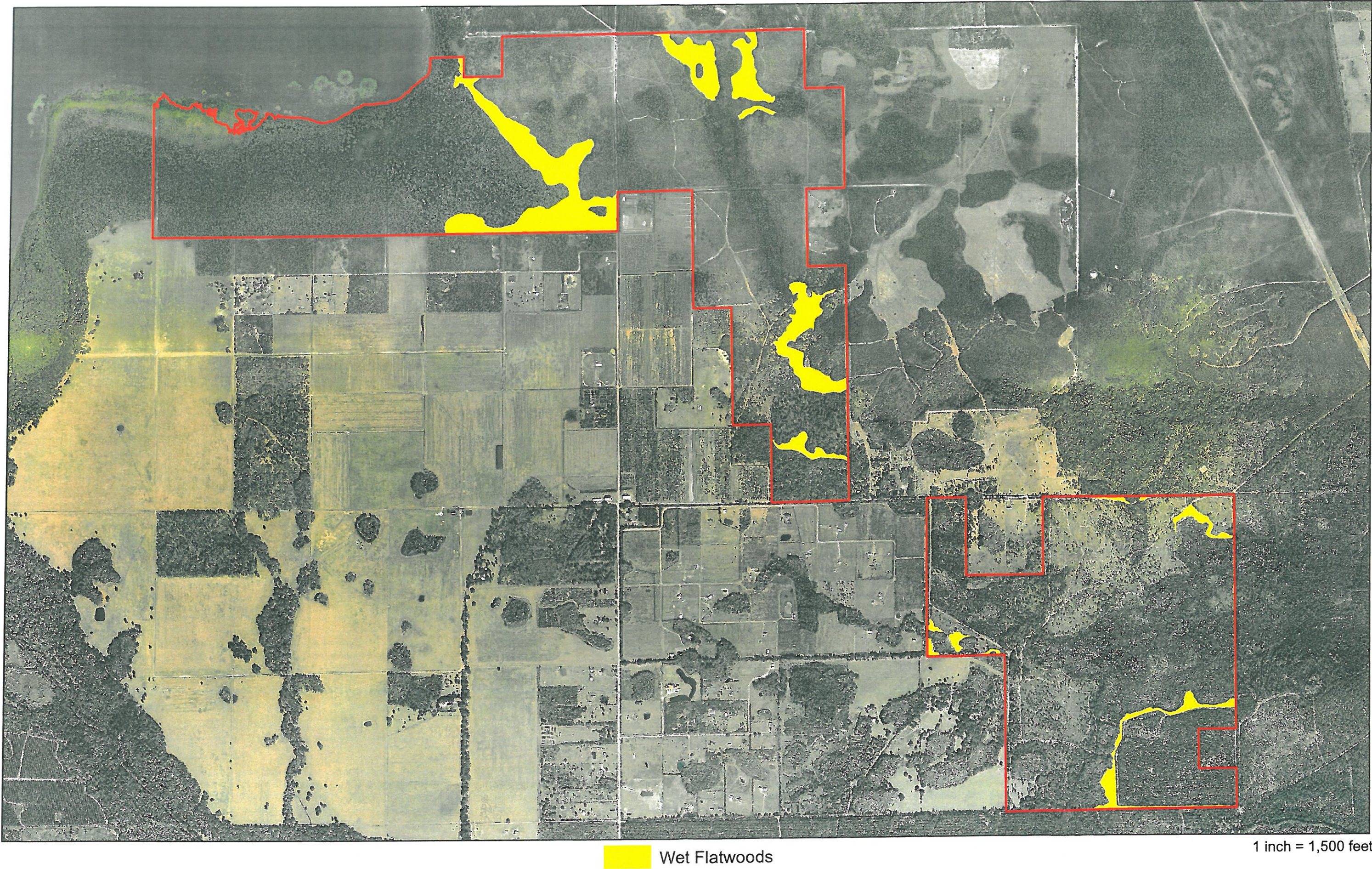


Figure 14. Wet Flatwoods



## **DOME SWAMP**

### General Description

This community is an isolated, forested, depressional wetland found amid a landscape of pyrogenic communities. Typically circular in configuration, with smaller trees growing in the shallower waters at the outer edge of the community while larger trees are found in the deeper interior waters, the community may also extend across broader irregularly shaped areas. The vegetative composition of this community is generally comprised of bald cypress (*Taxodium distichum*), pond cypress (*T. ascendens*), swamp tupelo (*Nyssa biflora*) with slash pine (*Pinus elliottii*) at the edges. Dahoon holly (*Ilex cassine*) may be present with younger cypress in the subcanopy. Shrubs consist of occasional wax myrtle (*Myrica cerifera*) and, less often, shiny lyonia (*Lyonia lucida*). The groundcover is typically a mixture of virginia chain fern (*Woodwardia virginica*) and grasses such as blue maidencane (*Amphicarpum muhlenbergianum*), maidencane (*Panicum hemitomom*), and witchgrass (*Panicum spp.*).

### Natural Fire Cycle

Fire is essential for the maintenance of this community. Typically fires occur every 3 to 5 years at the periphery and from 100 to 150 years toward the center of the dome.

### Approximate Acreage

62

### Additional Considerations

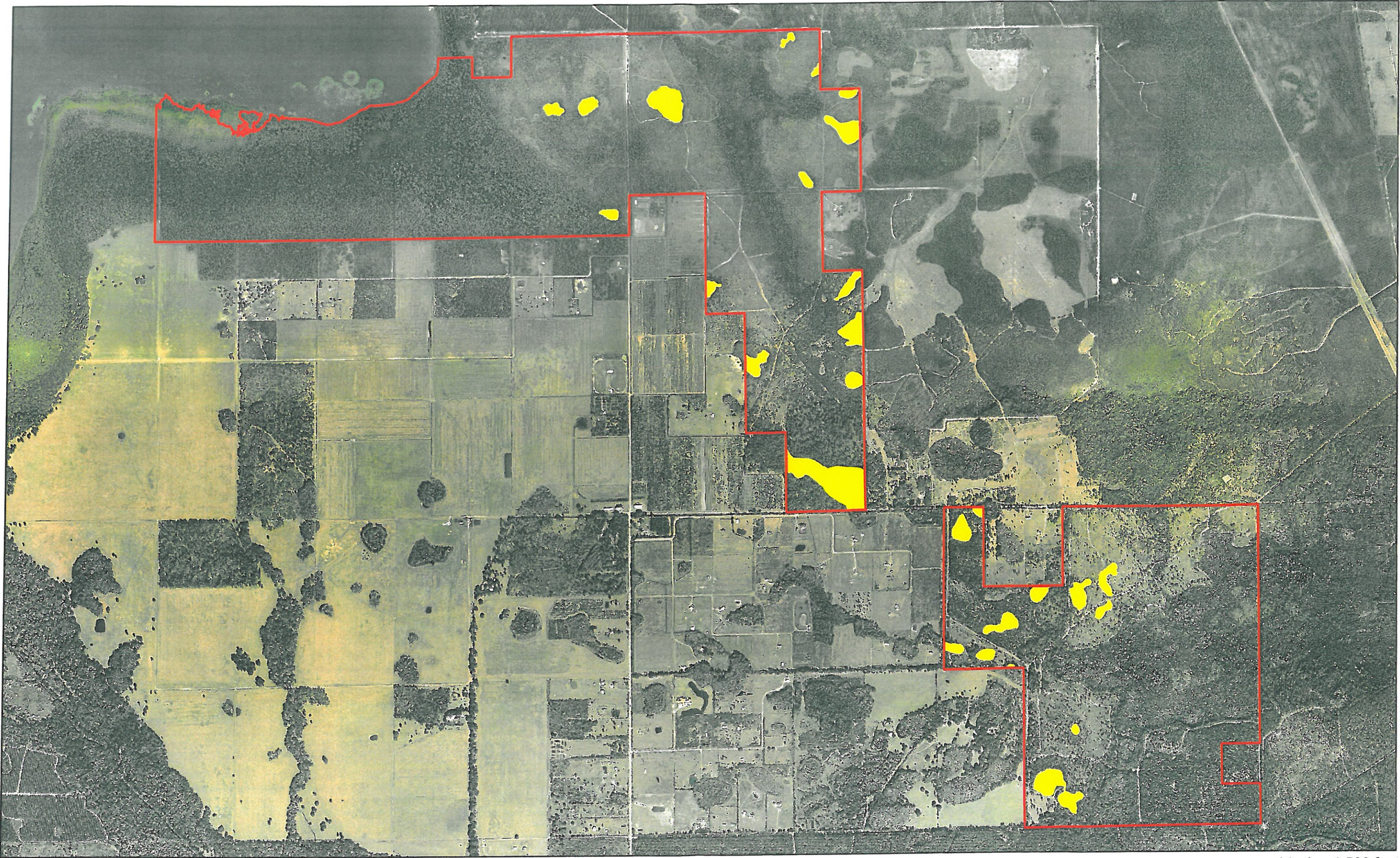
None.

### Need for Restoration

Minimal. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community.



Wiregrass Prairie Preserve



 Dome Swamp

1 inch = 1,500 feet

Figure 15. Dome Swamp



## **BASIN MARSH**

### **General Description**

This community is a regularly inundated herbaceous wetland occurring in isolated or mostly isolated depressions. The community may occur in locales ranging from adjacent to lakes to sites amid both pyrogenic and non-pyrogenic landscapes.

This community is comprised of numerous species including; Carolina willow (*Salix caroliniana*), buttonbush (*Cephalanthus occidentalis*) elderberry (*Sambucus canadensis*), southern cattail (*Typha domingensis*) and sawgrass (*Cladium jamaicense*). The grassy zone is typically characterized by sand cordgrass (*Spartina bakeri*), maidencane (*Panicum hemitomon*) and smooth beggarticks (*Bidens laevis*).

### **Natural Fire Cycle**

Unknown. However, the frequency of fire will vary depending upon the hydrology of the marsh and the exposure to fire from the surrounding area.

### **Approximate Acreage**

37

### **Other considerations**

This is a rarely occurring community within the state.

### **Need for Restoration**

Minimal. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community.



# Wiregrass Prairie Preserve

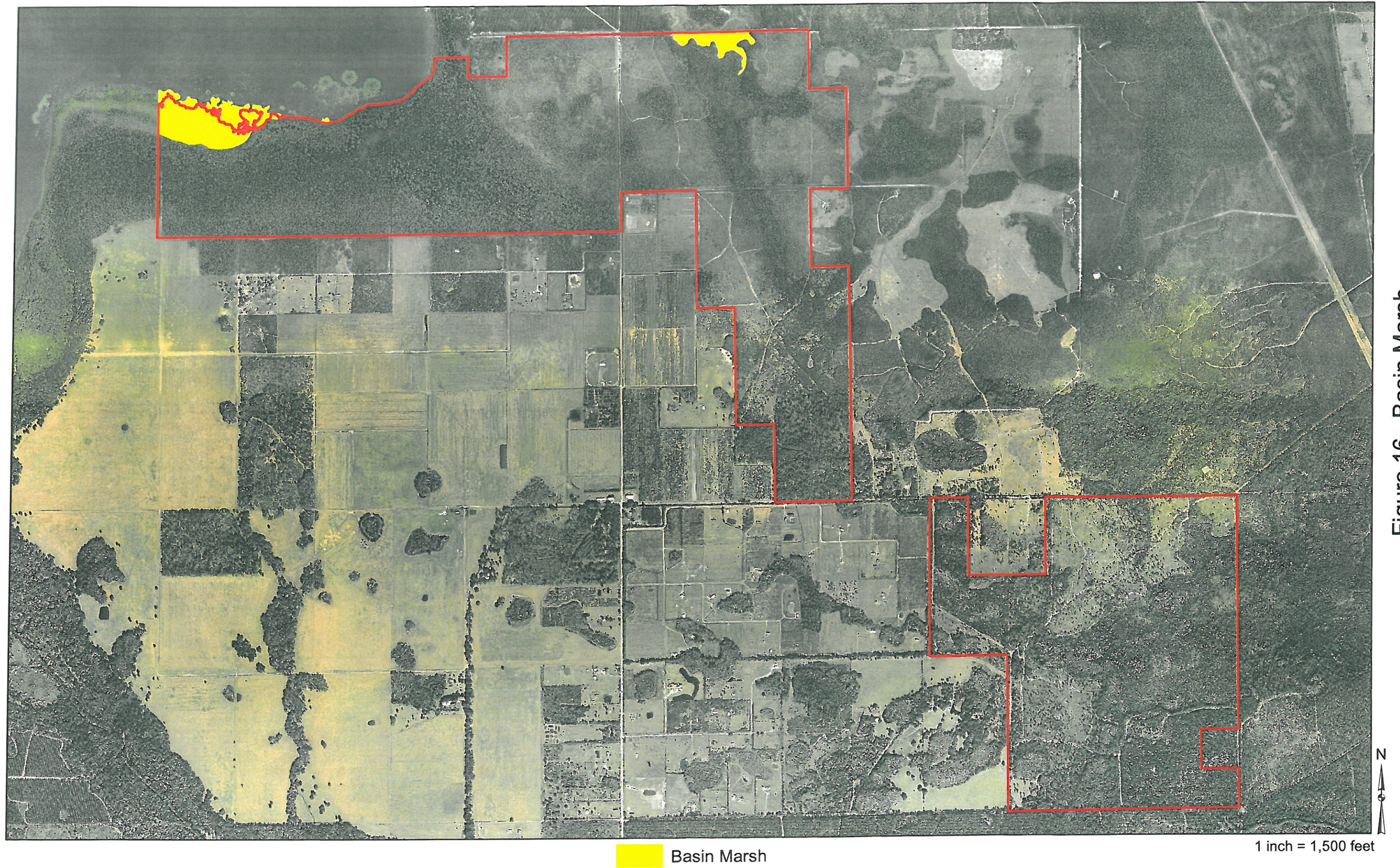


Figure 16. Basin Marsh



## WET PRAIRIE

### General Description

A treeless plain with a sparse to dense ground cover of grasses and herbs. This seasonally inundated community is found on low, nearly flat, poorly drained terrain. This community is closely associated and often grades into Wet Flatwoods, Mesic Flatwoods, or Dry Prairie. Species present include wiregrass (*Aristida spp.*), St. John's wort (*Hypericum spp.*), yellow-eyed grass (*Xyris spp.*) and various sedges.

### Natural Fire Cycle

Typically, the natural fire cycle is from two (2) to four (4) years. The integrity of areas experiencing longer fire intervals may be subject to deterioration through invasion by wax myrtle (*Myrica cerifera*) or slash pine (*Pinus elliotii*).

### Approximate Acreage

34

### Additional Considerations

This community has been designated as "imperiled" at both the State and Global levels.

### Need for Restoration

Minimal to Moderate. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community. Due to extended fire cycles, slash pine has encroached into portions of this community. An abundance of pine may contribute to hydrologic changes through transpiration.



# Wiregrass Prairie Preserve

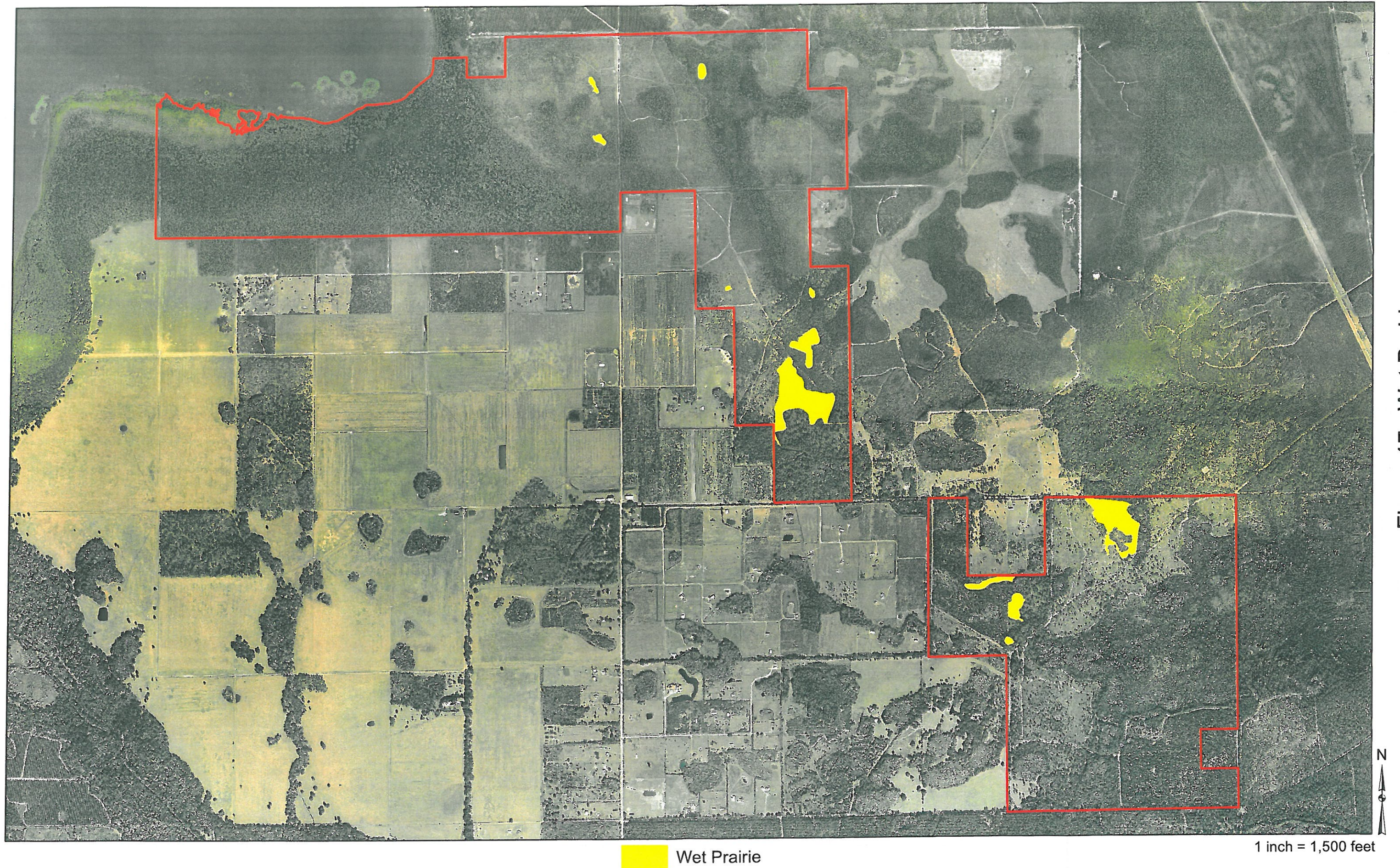


Figure 17. Wet Prairie



## **BAYGALL**

### General Description

An evergreen forested wetland found on wet soils at the periphery of a slope, edge of a floodplain, in a depression or stagnant drainage.

Species which may be present in the canopy include; Loblolly bay (*Gordonia lasianthus*), sweetbay (*Magnolia virginiana*), and swamp bay (*Persea palustris*). Other species which may be present include; fetterbush (*Lyonia lucida*), wax myrtle (*Myrica cerifera*), dahoon (*Ilex* spp.), greenbrier (*Smilax laurifolia*), muscadine (*Vitis roundifolia*), cinnamon fern (*Osmunda cinnamomea*), various other ferns (*Woodwardia* spp.) and sphagnum mosses (*Sphagnum* spp). As the canopy and understory do not commonly form distinct strata, this community can appear impenetrable.

### Natural Fire Cycle

This community is intolerant of fire and may catastrophically burn during drought conditions.

### Approximate Acreage

11

### Additional Considerations

None.

### Need for Restoration

Minimal. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community.



# Wiregrass Prairie Preserve

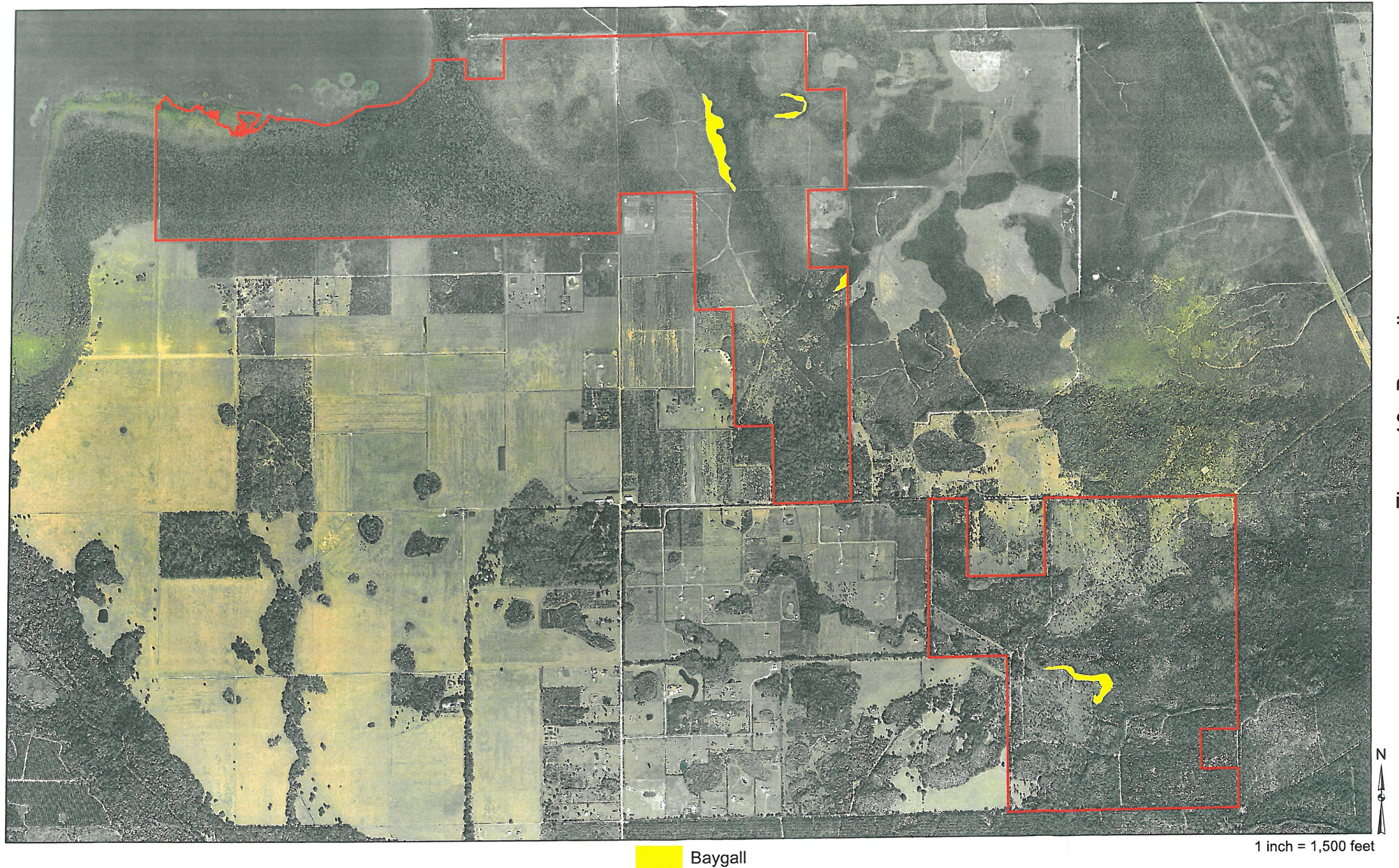


Figure 18. Baygall



### DEPRESSION MARSH

#### General Description

Typically a shallow depression occurring in fire-maintained landscapes, including flatwoods. Depression marsh may occur at the edges of dome swamps.

The community is characterized by shrubs or low growing grasses and herbs. Species which may be present include a sub-canopy of Carolina willow (*Salix caroliniana*), wax myrtle (*Myrica cerifera*) and buttonbush (*Cephalanthus occidentalis*) with an understory of St. John's wort (*Hypericum* spp.), yellow-eyed grass (*Xyris* spp.), Virginia chain fern (*Woodwardia virginica*), maidencane (*Panicum hemitomom*) and redroot (*Lachnanthes caroliniana*).

#### Natural Fire Cycle

This community typically burns with the frequency of the surrounding landscape. Infrequent fire may result in the invasion of woody plants into this characteristically herbaceous community.

#### Approximate Acreage

3

#### Additional Considerations

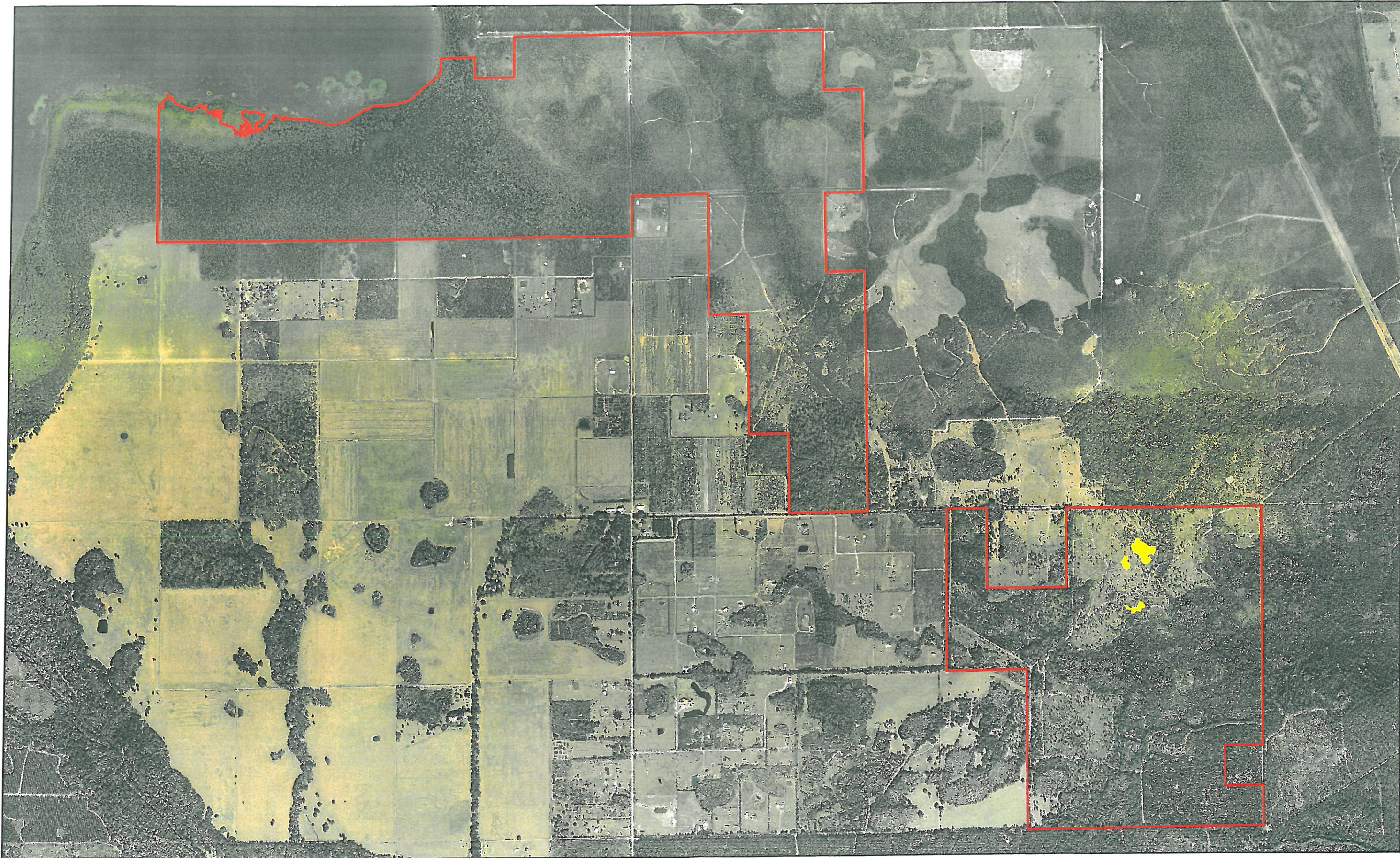
None.

#### Need for Restoration

Minimal. Maintenance or restoration of the natural hydrology is an important consideration in the management of this community.



Wiregrass Prairie Preserve



Depression Marsh

1 inch = 1,500 feet



Figure 19. Depression Marsh



## Exotic and Invasive Species

Invasive and non-indigenous species have the potential to adversely affect ecosystem function and to significantly alter population levels of native animals. Several of these undesirable have been observed on the Preserve to date. However, the population and/or coverage of these species is generally considered to be minimal and appropriate control and monitoring efforts have been implemented.

### Plants

The exotic/invasive plants observed to date on the Preserve are itemized in the following table. With a single exception, each of these species is classified as a Category I invasive by the Florida Exotic Pest Plant Council. Several of these plants – Brazilian Pepper, both of the Climbing Ferns, and Tropical Soda Apple – are also designated as noxious weeds by the Florida Department of Agriculture and Consumer Services.

Table 2. Observed Exotic / Invasive Plant Species

Scientific Name	Common Name	Florida Exotic Pest Plant Council Category*
<i>Cinnamomum camphora</i>	Camphor Tree	I
<i>Cyperus esculentus</i>	Yellow Nutsedge	NL
<i>Lygodium japonicum</i>	Japanese Climbing Fern	I
<i>Lygodium microphyllum</i>	Old World Climbing Fern	I
<i>Nephrolepis cordifolia</i>	Sword Fern	I
<i>Psidium cattleianum</i>	Strawberry Guava	I
<i>Psidium guajava</i>	Guava	I
<i>Schinus terebinthifolia</i>	Brazilian Pepper	I
<i>Solanum viarum</i>	Tropical Soda Apple	I
<i>Urena lobata</i>	Caesar-weed	I

#### \*Category Descriptions

Category I – Exotic/invasive species that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with native species. This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused.

Category II – Exotic/invasive species that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. These species may become ranked Category I, if ecological damage is demonstrated.

With the exception of a small area north Lopez Road with an abundance of *Lygodium sp.*, the occurrence of exotic/invasive plants is generally sporadic across the Preserve.

The presence of tropical soda apple is largely confined to the portions of the Preserve which were previously used for the grazing of livestock.



## Animals

A listing of exotic species observed to date on the Preserve is presented in the following table.

Table 3. Observed Exotic Animal Species

Scientific Name	Common Name
<i>Bubulcus ibis</i>	Cattle Egret
<i>Canis latrans</i>	Coyote
<i>Dasypus novemcinctus</i>	Nine-banded Armadillo
<i>Hoplosternum littorale</i>	Armored Catfish
<i>Pavo sp.</i>	Peafowl
<i>Pomacea canaliculata</i>	Channeled Apple Snail
<i>Streptopelia decaocto</i>	Eurasian Collared Dove
<i>Sus scrofa</i>	Feral Hog

An infestation of Channeled Apple Snail occurs in the ditches paralleling the woods road extending north from the residential area south of Lake Ashby toward that waterbody. Occurrences of this species have also been noted in other ditches not on the Preserve but within the general area. Recognizing the connectivity of the drainage system, control of this species may be difficult.

Otherwise, the presence of exotic species within the Preserve is generally intermittent and sporadic.

## Listed and Protected Species

### Listed

Fauna - To date, the following species that have been observed on the property. Given the proximity of other conservation lands, sightings on adjacent lands, and other considerations it can reasonably be expected that other species may be present.

Table 4. Observed Listed Animal Species

Scientific Name	Common Name	Federal Designation*	State Designation*
<i>Alligator mississippiensis</i>	American Alligator	T	T
<i>Drymarchon couperi</i>	Eastern Indigo Snake	T	T
<i>Egretta caerulea</i>	Little Blue Heron	NL	S
<i>Eudocimus albus</i>	White Ibis	NL	S
<i>Gopherus polyphemus</i>	Gopher Tortoise	NL**	T
<i>Mycteria americana</i>	Wood Stork	E	E
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	NL	S

\* E = Endangered, T=Threatened, S = Species of Special Concern, NL = Not Listed

\*\* Candidate for Listing

Flora – The following listed species that have been observed on the Preserve, to date. Given that rare or unique natural communities are present within the Preserve, additional specimens may be present.

Table 5. Observed Listed Plant Species

Scientific Name	Common Name	Federal Designation	State Designation
<i>Calopogon multiflorus</i>	Grasspink	NL	E
<i>Deeringothamnus rugelii</i>	Rugel's pawpaw	E	E
<i>Eulophia ecristata</i>	Non-crested Eulophila	NL	T
<i>Lilium catesbaei</i>	Pine Lily	NL	T
<i>Osmunda cinnamomea</i>	Cinnamon Fern	NL	CE
<i>Osmunda regalis</i>	Royal Fern	NL	CE
<i>Pinguicula caerulea</i>	Blue Butterwort	NL	T
<i>Pinguicula lutea</i>	Yellow Butterwort	NL	T
<i>Sarracenia minor</i>	Hooded Pitcher Plant	NL	T
<i>Spiranthes longilabris</i>	Longlip Ladies Tresses	NL	T

\* E = Endangered, T=Threatened, CE = Commercially Exploited, NL = Not Listed

The long term viability of these plants may be dependent upon periodic fire and/or the maintenance of certain hydrologic conditions.

Of particular note is the occurrence of Rugel's pawpaw. This small plant of the flatwoods is endemic to Volusia County. Flowering may be promoted by fire during the growing season. Management and protection of this plant also includes the avoidance of soil disturbance.

#### Other Protected Species

- (a) Florida black bear (*Ursus americanus floridanus*) – This animal has been occasionally observed, or evidence of its presence noted, on the Preserve. Until recently, the black bear was classified as a Threatened species by the State. Although no longer identified as a listed species, the bear is protected by administrative rules.
- (b) Osprey (*Pandion haliaetus*) - This raptor is smaller than the bald eagle and typically shares the same habitats. Listed as a Species of Special Concern only in Monroe County, permits are required throughout the state for removal of a nest and a replacement structure must be erected to mitigate removal of the nest.

#### Additional Classification

Several of the wildlife identified above and other species observed on the Preserve have been identified as being among "Florida's Species of Greatest Conservation Need" (SGCN) by the Florida Fish and Wildlife Conservation Commission. The stated purpose and intent of this non-regulatory initiative is to "identify the broad range of Florida's species that are imperiled, or at risk of becoming imperiled in the future".



Table\_6. Species of Greatest Conservation Need, 2012

Scientific Name	Common Name	Federally Listed	State Listed	Rare	Biologically Vulnerable	Keystone Species	Taxa of Concern
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel		X		X		
<i>Ursus americanus floridanus</i>	Florida Black Bear		X*	X	X		
<i>Columbina passerina</i>	Common Ground Dove						X
<i>Colinus virginianus</i>	Northern Bobwhite				X		
<i>Sitta pusilla</i>	Brown-headed Nuthatch						X
<i>Mycteria americana</i>	Wood Stork	X	X		X		
<i>Egretta caerulea</i>	Little Blue Heron		X		X		
<i>Eudocimus albus</i>	White Ibis		X				
<i>Haliaeetus leucocephalus</i>	Bald Eagle				X		
<i>Elanoides forficatus</i>	Swallow Tailed Kite			X	X		
<i>Caprimulgus carolinensis</i>	Chuck-will's-widow						X
<i>Pandion haliaetus</i>	Osprey				X		
<i>Alligator mississippiensis</i>	American Alligator	X	X			X	
<i>Gopherus polyphemus</i>	Gopher Tortoise		X		X	X	
<i>Drymarchon couperi</i>	Eastern Indigo Snake	X	X		X		
<i>Crotalus adamanteus</i>	Eastern Diamondback				X		

\*Subsequent to the identification of the Florida Black Bear as a SGCN, this species has been de-listed by the State.

### **Cultural / Historical Resources**

Given the proximity of Lake Ashby the presence of cultural and/or historical resources could be reasonably expected to occur in this general area. However, there are presently no recorded occurrence(s) on the Florida Master Site File within the Preserve.

## **PAST MANAGEMENT SUMMARY**

### **Activities Undertaken During Public Ownership**

Since assuming management responsibility for the Preserve, the County has undertaken several activities. These activities may be broadly classified as (a) natural resource, (b) public use and (c) administrative.

#### **(a) Natural Resource**

A variety of stewardship activities have been undertaken including;

- planting of approximately 100 acres of slash pine in the abandoned pastures south of Rudman Road
- mechanical chopping, primarily in the northeastern portion of the Preserve,
- control and eradication of invasive and exotic species, using both mechanical and chemical means,
- harvesting/thinning of approximately 63 acres of timber in the area west of Pell Road, and
- conducting several prescribed burns, encompassing approximately 1370 acres, across the Preserve.

Other activities have included the establishment and maintenance of fire lines, creating a network of photo monitoring points, and monitoring for the presence of listed species.

#### **(b) Public Use**

A pair of trailheads, located on Lopez and Rudman Roads, and associated trails have been established in Preserve (Figure 20). The trailheads provide parking for vehicles and trailers and include informational displays for visitors. The associated trails, which are open for use by hikers, cyclists and equestrians, extend over 5.5 miles

A picnic pavilion has been erected on the trail system in central portion of the Preserve and a fire ring has been placed in the southwestern corner of the Preserve to facilitate use of this area as a primitive site for group camping. .

#### **(c) Administrative**

Gates have been installed at entrances to control access.

A mobile home and livestock stable previously sited in the extreme southwestern corner of the Preserve, south of Rudman Road, have been demolished and removed from the property. Activities at this locale also included general site cleanup and disconnection of electrical service.

The future land use and zoning classifications of the Preserve have been amended/changed to reflect public ownership as conservation land.



## **FUTURE MANAGEMENT STRATEGIES**

The County, through adoption of Resolution 2003-80, has established Goal and Objective statements intended to provide generalized policy direction for the management of conservation lands to the Division of Land Acquisition and Management. These statements provide general guidance for the protection, restoration and enhancement of natural, historical/cultural/archaeological resources, and public use of conservation lands. The following strategies, applicable to the Preserve, further these goals and objectives.

### **A. Resource Management**

**Water Resources:** The Preserve is dominated by a mixture of natural communities that are reflective of the nearly level, poorly drained conditions of the area. The continued health and viability of these communities and the broader systems of which they are part, is highly dependent upon maintenance of the natural hydrological pattern, surface flow and water levels.

#### **Water Resource Strategies**

- Consider replacing existing culverts with “low water crossings” or other innovative alternatives, where appropriate.
- Dredging and similar surface alterations is prohibited, except as may be necessary in the course of normal stewardship activities. If undertaken, said alterations shall be designed, constructed, and maintained to prevent permanent damage to water quality and natural flow.
- Stewardship activities are to incorporate, as appropriate, the use of Best Management Practices.
- The District may engage in construction or other activities necessary for water management purposes on the jointly-owned land, if such construction or activities are consistent with this Plan.
- Initiate a hydrological study of the Preserve’s surface waters (natural and artificial).
- The existing well located in the extreme southern portion of the Preserve (south of Rudman Road) may be retained. If retained, this well, located within a designated group camping area, shall be clearly marked as non-potable.

**Forest and Fire Management:** Activities will be undertaken for the purposes of obtaining and maintaining the Desired Future Condition (DFC) for the respective communities. Silvicultural practices to be undertaken in the context of furthering and restoring the overall health and vitality of a habitat may include selective harvesting and replanting. Typically, when a selective thinning is completed, prescribed fire is applied. The Preserve includes habitats and listed plant species that are dependent upon periodic fires for establishment and long-term viability. Accordingly, the overall management program for the property will include the use of prescribed fire. Prescribed fire, often in combination with mechanical treatments, is the preferred management technique to be employed for habitat maintenance and restoration. These, and other, concerns may necessitate the use of alternative mechanical methods that are intended to mimic the effects of fire. The timing and use of fire, or use of alternative methods, should be evaluated in the context of the overall forest management program as applied to maintain and obtain the DFCs.

#### Forest Management Strategies

- Implement appropriate silvicultural and restorative practices (such as, but not limited to, roller chopping, selective harvesting and artificial regeneration) as may be necessary to attain and maintain the natural habitats and restoration.
- Prescribed fire, or an appropriate alternative, shall be used as a primary management technique.
- Monitor for disease or insect infestations and, if necessary, implement appropriate control practices.
- Follow the applicable “Best Management Practices” (BMPs) when conducting management activities.
- Continue to manage the existing pine plantations as such. These areas will not be targeted for restoration to conditions associated with the corresponding natural community. Future planting/regeneration of the existing plantation may incorporate the small adjacent remnant area of abandoned field situated between the present plantation and the Preserve boundary.

#### Fire Management Strategies

- Implement a comprehensive prescribed burning program.
- Where appropriate, mechanical methods intended to mimic the effects of fire may be used to enhance the effects of or in lieu of prescribed burning.
- The timing and use of fire, or use of alternative methods, should be evaluated in the context of the overall forest management program.
- Internal roads or other features (e.g. trails) may be used where appropriate, as fire breaks.
- To the extent practical, allow prescribed fire to enter fire dependent wetland communities.

**Plant and Animal Species:** Several listed species, both plant and animal, have been observed on the Preserve. The overall diversity and condition of the natural communities provides valuable habitat for these and potentially other species. Similar to the broader community in which they occur, the health of many of these species is dependent upon periodic fire.

#### Species Management Strategies

- Coordinate management activities (including, but not limited to, prescribed fire and harvesting) with efforts to promote the maintenance of viable habitat for listed species.
- Monitor the property for the occurrence and health of listed species. Adapt stewardship activities, as may be necessary, to ensure the viability of listed species present on the Preserve.
- Ensure that public use and recreational development does not adversely impact listed species.
- Conduct periodic wildlife and plant surveys.
- As practical, use prescribed fire to facilitate the continued health and promote regeneration of listed plant species present on the property.

**Exotic / Invasive Species:** While isolated and comparably limited occurrences of exotic and invasive species (plant and animal) have been observed across the Preserve, the prompt and consistent implementation of a comprehensive program for the control and eradication of these undesirable species should reduce the existing populations and minimize future infestations.

#### Exotic / Invasive Species Strategies

- Identify and promptly eradicate existing infestations to preclude future spread, with priority being given to Category I pest plants listed by the Exotic Pest Plant Council. Control and eradication efforts may include, but may not be limited to, chemical and mechanical procedures.



- Routinely monitor the management area for new or re-occurrence of exotic/invasive plant species. Promptly eradicate new occurrence or re-occurrence of these undesirable species.
- There shall be no planting of nuisance exotic or non-native plants as listed by the Exotic Pest Plant Council or its successor.
- Implement and monitor control practices for feral hog and other animal species.

**Cultural / Historical Resources:** There are no known cultural or historical resources located on the Preserve.

**Cultural / Historical Resource Protection Strategies**

- Monitor the Preserve for the presence of new sites, especially when undertaking significant ground disturbing activities. Report new sites, if detected, to the Florida Division of Historical Resources for inclusion in the Florida Master Site File.
- Identified sites are to be evaluated for significance and shall be adequately protected/preserved.

**B. Public Access and Use**

Public access and use(s) within the Preserve are depicted by the Conceptual Recreation Map (Figure 20). No new types of use(s) of the Preserve are proposed at this time.

**Public Access Strategies**

- Public access is to be limited to the designated points of entry.
- Maintain existing gates and fencing and erect new barriers as may be necessary.
- Maintain parking/trailhead areas.

**Public Recreation Strategies**

- Uses and structures shall avoid or minimize impact upon natural resources, listed species and identified cultural/historical resources.
- All recreational uses and activities on the District co-owned properties shall be consistent with the water management purposes of the District and are subordinate to the responsibilities of the District to manage the water resources.
- Except as may be permitted through issuance of a Special Use Authorization, the-use by the public of motorized off road vehicles (e.g. “four-wheelers”, motorcycles and all terrain vehicles) is prohibited.
- The various uses shall be evaluated, coordinated and undertaken to avoid or minimize potential conflicts between users and/or with adjacent landowners.
- A use may be discontinued, relocated or modified, as appropriate, if said use has been determined to adversely impact the resources of the Preserve or is incompatible with other uses or users.

# Wiregrass Prairie Preserve

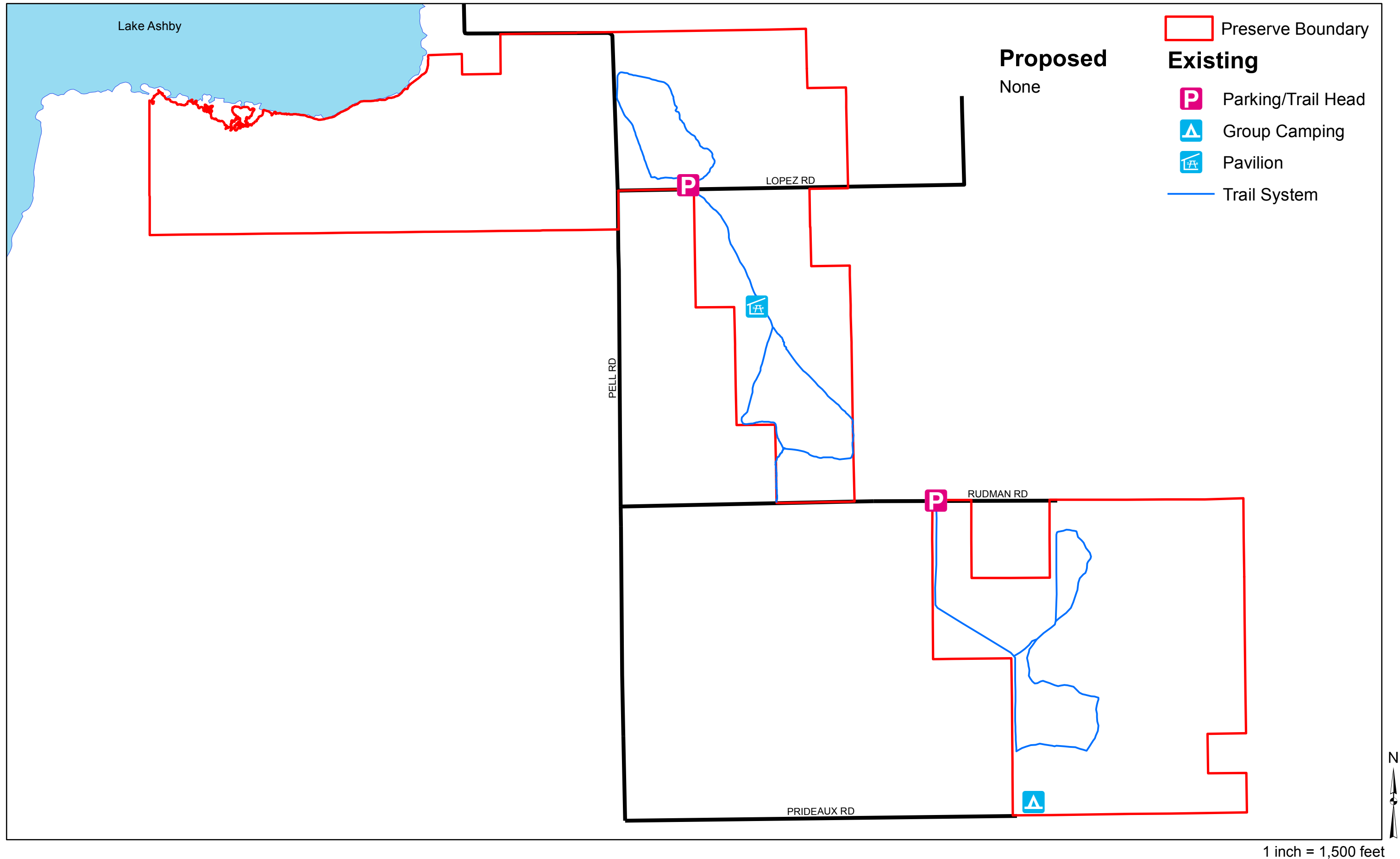


Figure 20. Conceptual Recreation Plan



**Environmental Education** :The quality and diversity of habitats characterizing the management area provide excellent educational opportunities. The County's Land Management staff includes foresters, biologists and an education specialist who are available to conduct on-site educational programs.

*Environmental Education Strategies*

- Displays (e.g. kiosks) interpreting and explaining natural resources and important management practices (e.g. prescribed burning) for visitors may be placed at appropriate locales.
- Periodically conduct on-site environmental education tours and activities.
- All educational uses and activities on the District owned properties shall be consistent with the water management purposes of the District and are subordinate to the responsibilities of the District to manage the water resources.

**C. Miscellaneous and Administrative**

*Security Strategies*

- County staff should routinely visit / monitor the Preserve.
- Maintain the relationships with the Volusia County Sheriff's Office and other law enforcement agencies for patrolling the Preserve.
- Ensure that property boundaries are clearly marked.
- Maintain and install appropriate fencing and gates.

*Physical Improvements (other than Recreational and Water Management)*

- Other than necessary for authorized recreational uses and management of the Preserve, no signs shall be erected and maintained. Billboards or outdoor advertising of any kind is expressly prohibited.
- No facilities shall be placed upon lands in which the St. Johns River Water Management District has an ownership interest, except those directly related to the operation and maintenance of the properties for conservation, public recreation and environmental education purposes identified in this Plan.

*Leases, Easements and Concessions*

- Leasing or use of lands within the Preserve for cattle /livestock operations or other private enterprise is not proposed.
- No concessions or commercial uses shall be permitted within the Preserve.
- Leases or other agreements may be established with State agencies and others for resource and other management activities

*Revenues*

- Revenues generated from resource management or other activities undertaken on the Preserve should be dedicated to further stewardship activities on the Preserve.
- Explore mechanisms and programs that may generate additional revenues for long term management of conservation lands, in accordance with Council approved directives and policies.



## REFERENCES

*Field Guide to the Rare Plants and Animals of Florida*, Florida Natural Areas Inventory, [www.fnai.org/FieldGuide/search\\_001.cfm](http://www.fnai.org/FieldGuide/search_001.cfm)

*FLEPPC. 2011. List of Invasive Plant Species*. Florida Exotic Pest Plant Council. [www.fleppc.org/list/11list.htm](http://www.fleppc.org/list/11list.htm)

*Florida's State Wildlife Action Plan – A comprehensive wildlife conservation strategy*. Florida Fish and Wildlife Conservation Commission. 2012.

*Guide to the Natural Communities of Florida*. Florida Natural Areas Inventory and Florida Department of Natural Resources. 2010 Edition.

*Watershed Facts, Lake Ashby Basin*. St. Johns River Water Management District. <http://floridaswater.com/watershedfacts/factPages/ASH.html>

*Soil Survey of Volusia County, Florida*. U. S. Department of Agriculture, Soil Conservation Service in cooperation with University of Florida, Institute of Food and Agricultural Sciences.

Wunderlin, R.P., and B.F. Hansen, 2008., *Atlas of Florida Vascular Plants* (<http://www.plantatlas.usf.edu/>), [S.M. Landry and K.N. Campbell (application development)], Institute for Systematic Botany, University of South Florida, Tampa.



## **APPENDICES**



APPENDIX A

COOPERATIVE MANAGEMENT AGREEMENT BETWEEN THE COUNTY OF VOLUSIA  
AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT



**COOPERATIVE MANAGEMENT AGREEMENT  
WIREGRASS PRAIRIE PRESERVE  
VOLUSIA COUNTY**

THIS COOPERATIVE AGREEMENT (hereinafter called "Agreement") is made as of the 26 day of September, 2003, by and between THE GOVERNING BOARD OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, a public body existing under Chapter 373 of the Florida Statutes, whose mailing address is P.O. Box 1429, Palatka, Florida 32178-1429 (hereinafter called "DISTRICT") and VOLUSIA COUNTY, a political subdivision of the State of Florida, whose mailing address is 123 W. Indiana Avenue, Deland, Florida 32720 (hereinafter called the "COUNTY");

**WITNESSETH:**

**WHEREAS**, the DISTRICT and COUNTY each have a 50% undivided interest in approximately 1,350 acres of land in Volusia County, located on the south end of Lake Ashby, and west of Interstate 95 and the Samsula Canal, formerly known as the Menard property and now known as the Wiregrass Prairie Preserve property, as described in Exhibit "A" attached hereto and by this reference made a part hereof, (hereinafter called the "PROPERTY"); and

**WHEREAS**, the PROPERTY was purchased by the DISTRICT and COUNTY for the conservation and protection of the water resources, consistent with section 373.139 Florida Statutes; and

**WHEREAS**, the DISTRICT and COUNTY recognize that, in addition to water resource protection and management purposes, the PROPERTY has potential for other public uses if properly managed; and

**WHEREAS**, the COUNTY and the DISTRICT desire to manage the PROPERTY for recreation and conservation, consistent with sections 373.1391 and 373.1401 Florida Statutes as amended.

**NOW THEREFORE**, for and in consideration of mutual covenants and agreements hereinafter contained, the DISTRICT and COUNTY do hereby agree as follows:

1. The purpose of this Agreement shall be to designate the COUNTY as the lead management entity for the provision of conservation, protection, management, and enhancement of natural resources and to provide public recreation within the PROPERTY, along with other allowable uses as described and provided herein.
2. The term of this Agreement is for a period of ten (10) years, commencing on September 26, 2003, the effective date of this Agreement and ending on September 25, 2013. This Agreement will thereafter be automatically renewed, in twenty (20) year increments, unless terminated as otherwise set forth herein.
3. As additional parcels that adjoin the boundaries of the PROPERTY are acquired by the DISTRICT or COUNTY, each individual parcel may be automatically incorporated within the definition of the PROPERTY herein, subject to approval by both the COUNTY and the DISTRICT for such additions.
4. A Management Plan (the "Plan") for the PROPERTY will be developed by the COUNTY and reviewed and approved by the DISTRICT within twelve (12) months of the date of acquisition subject to the conditions outlined below:
  - a. The Plan shall include, and all future revisions of the Plan shall include, strategies for forest, ecological and fire management, long-term management, public recreational uses, access and use of existing roads, and establishment of environmental education programs. The costs of planning, development, construction, operation, management, and maintenance of the PROPERTY and associated recreational facilities shall also be included.
  - b. The Plan shall also include a maintenance/control plan for invasive/exotic species that specifically addresses tropical soda apple control on cattle lease areas.
  - c. Amendments to the Plan with respect to the PROPERTY may be proposed by either party to this Agreement at any time; however, both parties must agree in writing to the amendments.



5. The DISTRICT and COUNTY mutually agree that any use or development of the PROPERTY shall be subject to the minimum conditions and guidelines outlined below:
  - a. The function and condition of the PROPERTY with respect to water management, water supply and the conservation and protection of water resources will be maintained in its present condition or enhanced;
  - b. The PROPERTY shall be managed for multiple use, including forest management, and for public resource-based educational and recreational purposes (i.e., dependent on existing elements of the natural environment), which may include hiking, hunting, wildlife viewing, picnicking, nature study, jogging, fishing, boating, camping and other related passive outdoor activities as set forth in the Plan;
  - c. Educational and recreational activities planned or conducted on the PROPERTY shall be resource-based and the development of recreational facilities shall be restricted to trails, boardwalks, or other alterations, as set forth in the approved Plan which facilitates access for the recreational user;
  - d. The DISTRICT may engage in construction or other activities necessary for water management purposes on the PROPERTY if such construction or activities are consistent with the approved Plan for the PROPERTY;
  - e. All educational and recreational uses and activities on the PROPERTY shall be consistent with the water management purposes of the DISTRICT as provided in Chapter 373, Florida Statutes, and all uses are subordinate to DISTRICT responsibility under Chapter 373, Florida Statutes, to manage the water resources;
  - f. It is understood by both parties that there shall be no facilities on the PROPERTY except those directly related to the operation and maintenance of the PROPERTY for conservation, public recreational and environmental educational purposes as set forth in the approved Plan.
6. The DISTRICT hereby designates the COUNTY as the lead management entity for the administration of the cattle agricultural lease and the conservation, protection, management, and enhancement of natural resources on the PROPERTY.
7. The COUNTY with assistance from the DISTRICT and the Natural Resources Conservation Service (NRCS) shall prepare a "Conservation Plan" for the PROPERTY. The Conservation Plan shall be submitted to the DISTRICT for review within one (1) year of execution of this Agreement. The PROPERTY shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the PROPERTY without the prior written approval of the DISTRICT until the Conservation Plan is approved. Amendments to the approved Conservation Plan may be proposed by either party to this Agreement at any time. However, NRCS and both parties to this Agreement must agree in writing to the amendments.
8. Responsibilities of the COUNTY for the cattle agricultural lease shall include the following:
  - a. Develop and prepare a process to advertise, interview and select a cattle lessee for the PROPERTY.
  - b. Monitor the ongoing cattle grazing operation for compliance with the cattle lease agreement provisions.
  - c. Develop and implement the Conservation Plan.
  - d. Maintain an inspection schedule for the identification of tropical soda apple (TSA).
  - e. Coordinate with cattle lessee on the proper procedures for the quarantine of cattle for TSA.
  - f. Ensure implementation of Best Management Practices for the cattle operation by the lessee.
  - g. Monitor cattle stocking rates and grazing impacts to natural communities/range and improved pastures.
9. The COUNTY shall coordinate and oversee all public recreation activities on the PROPERTY, including trail construction and maintenance, trail brochure development and other passive recreation activities that are consistent with the Plan.
10. Revenues generated on the PROPERTY by the DISTRICT or the COUNTY or third parties hired by the DISTRICT or the COUNTY through compatible secondary-use management, such as the sale of timber, shall be utilized for the benefit of the PROPERTY to implement approved activities on the PROPERTY to the extent allowable under existing laws and consistent with the Plan.



11. Any structures, improvements and facilities placed upon or moved in or upon the PROPERTY by the DISTRICT or the COUNTY shall be at the sole cost, expense and liability of the initiating party, and shall be identified in the approved Plan. The COUNTY shall not be liable for damage to structures, improvements and facilities initiated by the DISTRICT; nor shall the DISTRICT be liable for damage to structures, improvements and facilities initiated by the COUNTY.
12. Nothing contained in this Agreement or in the Plan or Conservation Plan prepared pursuant to this Agreement shall be construed as a waiver of or contract with respect to the regulatory or permitting authority of the DISTRICT or COUNTY as it now or hereafter exists under applicable laws, rules and regulations.
13. Each party shall pay all lawful debts incurred by that party with respect to the PROPERTY and shall satisfy all lawful and properly established liens of contractors, subcontractors, mechanics, laborers, and materialmen in respect to any construction, alteration and repair in and on the PROPERTY, and any improvements thereon authorized by such party, its agents or employees, and shall be responsible for its own legal costs and charges, including reasonable attorney's fees on appeal, in any suit involving any claims, liens, judgments or encumbrances suffered by that party as a result of the use or occupancy of the PROPERTY or any part thereof by such party, its agents or employees.
14. Neither the DISTRICT nor COUNTY shall use or permit the PROPERTY to be used in violation of any valid present or future laws, ordinances, rules or regulations of any public or governmental authority at any time applicable thereto relating to sanitation or the public health, safety or welfare, or relating to archeological and historical sites with respect to either party's activities in, and use of, the PROPERTY during development of improvements to the PROPERTY.
15. The DISTRICT and the COUNTY may enter into agreements with third parties to develop and implement the Plan or to subcontract day-to-day management responsibilities to environmental, educational or governmental organizations and agencies consistent with the approved Plan; provided however, that any such third party agreements entered into by the contracting party shall be subject to the prior written approval of the other party, and such third parties shall agree to comply with the terms and conditions of this Agreement. Neither the DISTRICT nor the COUNTY shall unreasonably withhold approval of such third party agreements to be entered into by the other. Any such third party agreements necessary for routine maintenance or previously agreed upon minor improvement of the site shall not require the DISTRICT's or COUNTY's written approval.
16. The DISTRICT, the COUNTY, and other governmental agencies or organizations involved in management related activities on the PROPERTY, shall, throughout the term of this Agreement, provide, maintain, and keep in force a program of insurance or self-insurance covering its liabilities as prescribed by Section 768.28, Florida Statutes. The DISTRICT's liability is further limited by the provisions of Section 373.1395, Florida Statutes. Nothing in this Agreement shall be construed as a waiver of the COUNTY'S or the DISTRICT'S sovereign immunity under Section 768.28, Florida Statutes or any other provision of law.
17. During the term of this Agreement, each party shall share equally any and all taxes (including but not limited to intangible personal property taxes and ad valorem taxes or special non-ad valorem assessments) that may be levied or assessed against the PROPERTY or the improvements and personal property of that party. The COUNTY and DISTRICT will cause any third party management agreements to include a provision passing on the responsibility for payment of such taxes to third party managers or users, in which event the DISTRICT or COUNTY will monitor the third party manager to ensure that such taxes have been paid. The DISTRICT or COUNTY may, at its own expense and in its own name and behalf or in the name and behalf of the other party, contest any such taxes or special assessments and each party will cooperate fully with the other party in any such contest.
18. Either party may terminate this Agreement with or without cause by giving ninety (90) days notice in writing of its intent to do so.
19. All notices, consents, approvals, waivers and elections which any party shall be required or shall desire to make or give under this Agreement shall be in writing and/or shall be sufficiently made or given (i) when mailed by Certified Mail, postage prepaid, return



other address as any party hereto shall designate by like notice given to the other party hereto:

DISTRICT: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT  
P.O. BOX 1429  
PALATKA, FL 32178-1429  
ATTENTION: DIRECTOR  
DIVISION OF LAND MANAGEMENT  
Fax: (386) 329-4848


COUNTY: COUNTY OF VOLUSIA  
123 W. INDIANA AVE.  
DELAND, FL. 32720  
ATTENTION: LAND MANAGEMENT MANAGER  
GROWTH AND RESOURCE MANAGEMENT  
Fax (386) 740-5277

Notices, consents, approvals, waivers and elections given or made as aforesaid shall be deemed to have been given and received on the date of the mailing, delivery or transmission thereof as aforesaid.

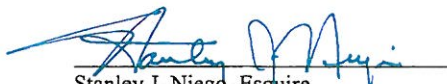
20. Whenever used herein the terms "DISTRICT" and "COUNTY" include all parties to this instrument, their employees, and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations, partnerships, public bodies, and quasi-public bodies.
21. This Agreement constitutes the entire agreement of the parties, and there are no understandings dealing with the subject matter of this Agreement other than those contained herein. This Agreement may not be modified, changed or amended, except in writing signed by the parties hereto or their authorized representatives.
22. This Agreement shall be construed and interpreted according to the laws of the State of Florida.
23. This Agreement shall not be construed more strictly against one party than against the other merely by virtue of the fact that it may have been prepared by counsel for one of the parties, it being recognized that both the DISTRICT and COUNTY have contributed substantially and materially to the preparation hereof.
24. For all purposes of this Agreement, the Effective Date hereof shall mean the date when the last of the DISTRICT or COUNTY has executed the same, and that date shall be inserted at the top of the first page hereof.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement, on the date and year first above written.

ST. JOHNS RIVER WATER MANAGEMENT  
DISTRICT

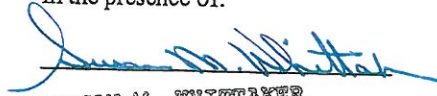
By:   
Kirby B. Green III  
Executive Director  
By authority of Section 373.083 (5), Florida  
Statutes, and SJRWMD Policy Number  
90-16 (Cooperative Agreements).

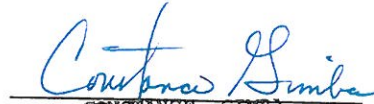
APPROVED:

  
Stanley J. Niego, Esquire  
Office of General Counsel  
SJRWMD



Signed sealed and delivered  
In the presence of:

  
\_\_\_\_\_  
SUSAN M. WHITAKER  
Print/Type Witness Name

  
\_\_\_\_\_  
CONSTANCE GINDRA  
Print/Type Witness Name

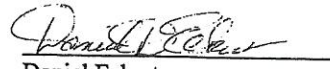
VOLUSIA COUNTY, FLORIDA

By:   
\_\_\_\_\_  
Frank Bruno  
County Council Chair

Attest:  
By:   
\_\_\_\_\_  
Cynthia Coto  
County Manager/Clerk

Executed on Sept. 4 2003  
(SEAL)

APPROVED BY:

  
\_\_\_\_\_  
Daniel Eckert  
COUNTY ATTORNEY



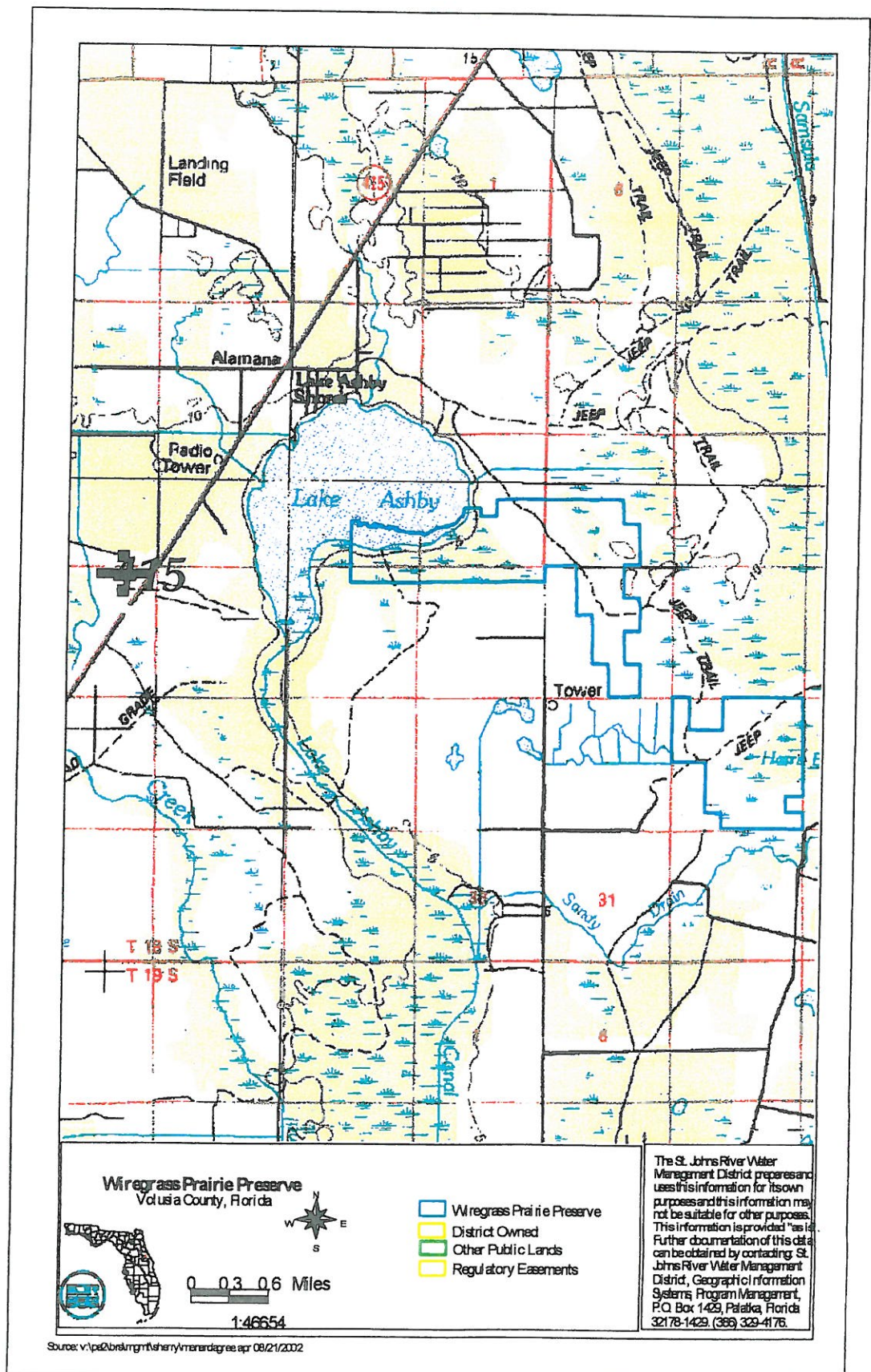




Exhibit "A"

Wiregrass Prairie Preserve (formerly known as the Menard property) Legal Description  
(Per Title Commitment)

PARCEL 1:

Tracts 1, 2, 3, 10, 11 and 12, Block 3; Tracts 1, 2, 5 through 12, inclusive, Block 2; Tracts 1 through 12, inclusive, Block 1; and Tracts 1 through 11, inclusive, Block 4; in Section 29, Township 18 South, Range 33 East, HOWE AND CURRIER'S ALLOTMENT, according to the map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida. Less and Except the South 1/2 of Tract 10, Block, 3 in Section 29, Township 18 South, Range 33 East, HOWE AND CURRIER'S, according to the map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 2:

Tracts 1 and 2, Block 3; Tracts 5 through 9, inclusive, Block 4; Tracts 5 through 9, inclusive, Block 1, Tracts 1 through 3, inclusive, and Tracts 11, 12 and the North 1/2 of tract 10, Block 2; in Section 19, Township 18 South, Range 33 East, HOWE AND CURRIER'S ALLOTMENT, according to the map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 3:

Tracts 1 through 12, inclusive, Block 3, the South 1/4 of Tract 4, and Tracts 5 through 9, inclusive, Block 4; in Section 18, Township 18 South, Range 33 East, HOWE AND CURRIER'S ALLOTMENT, according to the map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 4:

Tract 2, and the North 1/2 of Tracts 3 and 4, and all of Tract 5, Block 1, in Section 23, Township 18 South, Range 32 East, HOWE AND CURRIER'S ALLOTMENT, according to map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 5:

Tracts 2 and 5, and the North 1/2 of Tracts 3 and 4, Block 1; Tract 2, and the North 1/2 of Tracts 3 and 4, and all of Tract 5, Block 2, in Section 24, Township 18 South, Range 32 East, HOWE AND CURRIER'S ALLOTMENT, according to map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 6:

Tracts 1 through 4, and Tracts 6 through 12, inclusive, Block 4, in Section 13, Township 18 South, Range 32 East, HOWE AND CURRIER'S ALLOTMENT, according to map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida, and Government Lot 3, Section 13, Township 18 South, Range 32 East, Volusia County, Florida.

\*\*\*\*\*

PARCEL 7:

Tracts 1, 10, 11 and 12, and the South 1/2 of Tract 2, Block 3, in Section 13, Township 18 South, Range 32 East, HOWE AND CURRIER'S ALLOTMENT, according to map or plat thereof as recorded in Map Book 4, page 44, Public Records of Volusia County, Florida.

\*\*\*\*\*

PARCEL 8:

Government Lot 1, Section 14, Township 18 South, Range 32 East, Volusia, County Florida.

\*\*\*\*\*

PARCEL 9:

TOGETHER WITH the following portions of the platted Rights of Way as shown on the plat of Howe and currier's Allotment, as recorded in Map Book 4, page 44, of the Public Records of Volusia County, Florida:



- a) That certain un-named, un-dimensioned right-of-way lying North of Block 1, in Section 23, Township 18 South, Range 32 East and North of Block 2, in Section 24, Township 18 South, Range 32 East, which lies between the Northerly extension of the West line of Tract 5, Block 1 of said Section 23 and the Northerly extension of the East line of Tract 4, Block 2 of said Section 24; and
- b) That certain un-named, un-dimensioned right-of-way lying North of Tracts 2 and 3, Block 2, Section 24, Township 18 South, Range 32 East, and lying South of Tracts 10 and 11, Block 3, Section 13, Township 18 South, Range 32 East; and
- c) That certain un-named, un-dimensioned right-of-way lying North of Tracts 2, 3, 4 and 5, Block 1, Section 24, Township 18 South, Range 32 East, and lying South of Tracts 8, 9, 10 and 11, Block 4, Section 13, Township 18 South, Range 32 East; and
- d) That certain un-named, un-dimensioned right-of-way lying East of Tract 2, Block 1, Section 23, Township 18 South, Range 32 East, and lying West of Tract 5, Block 2, Section 24, Township 18 South, Range 32 East; and
- e) That certain un-named, un-dimensioned right-of-way lying East of Tracts 1, 11 and 12, Block 3, Section 13, Township 18 South, Range 32 East, and lying West of Tracts 6, 7 and 8, Block 4, Section 13, Township 18 South Range 32 East, and being bounded on the South by the Westerly extension of the North line of Block 1, Section 24, Township 18 South, Range 32 East; and
- f) That certain un-named, un-dimensioned right-of-way lying East of Tract 2, Block 2, Section 24, Township 18 South, Range 32 East, and lying West of Tract 5, Block 1, Section 24, Township 18 South, Range 32 East, and being bounded on the North by the Westerly extension of the South line of Block 4, Section 13, Township 18 South, Range 32 East; and
- g) That certain un-named, un-dimensioned right-of-way lying East of Tracts 1, 2 11 and 12, Block 3, Section 18, Township 18 South, Range 33 East, and lying West of Tracts 5, 6, 7 and 8, Block 4, Section 18, Township 18 South, Range 33 East; and
- h) That certain un-named, un-dimensioned right-of-way lying East of Tracts 1 and 2, Block 3, Section 19, Township 18 South, Range 33 East, and lying West of Tracts 5 and 6, Block 4, Section 19, Township 18 South, Range 33 East; and
- i) That certain un-named, un-dimensioned right-of-way lying East of Tracts 1, 2, 11 and 12, Block 2, Section 19, Township 18 South, Range 33 East, and lying West of Tracts 5, 6, 7 and 8, Block 1, Section 19, Township 18 South, Range 33 East, and being bounded on the South by the Westerly extension of the South line of block 1, Section 19, Township 18 South, Range 33 East; and
- j) That certain un-named, un-dimensioned right-of-way lying North of Tract 2, Block 3 and Tract 5, Block 4, and lying South of Tract 11, Block 2 and Tract 8, Block 1, Section 19, Township 18 South, Range 33 East, which lies between the Northerly extension of the West line of Tract 2, Block 3 and the Northerly extension of the East line of Tract 5, Block 4, of said Section 19; and
- k) That certain un-named, un-dimensioned right-of-way lying North of Tracts 2 and 3, Block 3, and Tracts 2, 3, 4 and 5, Block 4, Section 29, Township 18 South, Range 33 East, and lying South of Tracts 10 and 11, Block 2, and Tracts 8, 9, 10 and 11, Block 1, Section 29, Township 18 South, Range 33 East, and including that portion lying between the Westerly extension of the South line of Block 1 and the Westerly extension of the North line of Block 4, Section 29, Township 18 south, Range 33 East; and
- l) That certain un-named, un-dimensioned right -of-way lying East of Tracts 1, 2, 11 and 12, Block 2, and lying West of Tracts 5, 6, 7 and 8, Block 1, Section 29, Township 18 South, Range 33 East; and



m) That certain un-named, un-dimensioned right-of-way lying East of Tracts 1, 2, 11 and 12, Block 3, and lying West of Tracts 5, 6, 7 and 8, Block 4, Section 29, Township 18 South, Range 33 East.

Legal Description (Prepared by Surveyor)

A Tract of land being a portion of HOWE AND CURRIERS ALLOTMENT according to the plat thereof as recorded in Map Book 4, Page 44, public records of Volusia County, Florida and lying in Sections 13, 14, 23 and 24, Township 18 South, Range 32 East and in Sections 18, 19 and 29, Township 18 South, Range 33 East, Volusia County, Florida described as follows:

Commence at the Northeast corner of Section 24, Township 18 South, Range 32 East, said corner also being the Northeast corner of Tract 2, Block 1 of said Section 24 of HOWE AND CURRIERS ALLOTMENT, according to the plat thereof, as recorded in Plat Book 4, page 44 of the Public Records of Volusia County, Florida, said corner being the point of beginning; Thence run South 01°09'17" East, along the East line of the Northeast quarter of said Section 24 and along the East line of said Tract 2, a distance of 663.86 feet to the Southeast corner of said Tract 2; Thence run South 89°39'17" West, along the South line of Tracts 2 and 5, and along the South line of the North 1/2 of Tracts 3 and 4, Block 1 of said Section 24, a distance of 2618.62 feet to the Southeast corner of Tract 2, Block 2 in said Section 24; Thence run South 89°34'37" West, along the South line of Tracts 2 and 5, and along the South line of the North 1/2 of Tracts 3 and 4, Block 2 in said Section 24, a distance of 2569.79 feet to the Southeast corner of Tract 2, Block 1 in Section 23, Township 18 South, Range 32 East; Thence run South 89°15'56" West, along the South line of Tracts 2 and 5, and along the South line of the North 1/2 of Tracts 3 and 4, Block 1 in said Section 23, a distance of 2639.18 feet to the Southwest corner of said Tract 5; Thence run North 00°21'30" West, along the West line of said Tract 5, a distance of 662.94 feet to the northwest corner of said Tract 5, said corner also being the Southwest corner of Government Lot 1 in Section 14, Township 18 South, Range 32 East; Thence run North 00°20'55" West, along the West line of said Government Lot 1 and its Northerly extension, a distance of 1943.27 feet to the intersection with the open water/vegetation line of Lake Ashby; Thence along said open water/vegetation line run the following courses: South 73°58'18" East, 435.39 feet; South 62°03'14" East, 117.50 feet; North 86°27'27" East, 304.32 feet; North 72°07'05" East, 178.67 feet; South 58°32'30" East, 178.20 feet; South 74°40'34" East, 393.48 feet; South 59°33'26" East, 266.42 feet; North 69°34'01" East, 66.05 feet; South 78°32'29" East, 423.62 feet; South 67°02'38" East, 138.74 feet; South 31°17'08" East, 47.35 feet; South 83°17'40" East, 329.04 feet; North 59°00'53" East, 199.19 feet; South 78°34'37" East, 141.00 feet; North 81°04'24" East, 74.07 feet; South 30°29'20" East, 33.05 feet; North 65°50'37" East, 90.63 feet; North 56°30'47" East, 277.30 feet; North 69°58'08" East, 91.78 feet; South 84°46'00" East, 204.65 feet; North 64°14'00" East, 112.51 feet; North 80°02'31" East, 208.98 feet; North 59°07'52" East, 107.65 feet; North 75°29'36" East, 46.48 feet; North 46°47'15" East, 495.99 feet; North 06°10'51" East, 129.25 feet; North 20°14'34" East, 173.15 feet to the intersection with the North line of the South 1/2 of Tract 2, Block 3 in Section 13, Township 18 South, Range 32 East of aforesaid HOWE AND CURRIERS ALLOTMENT; Thence departing said open water/vegetation line, run North 89°27'04" East, along the North line of said South 1/2 of Tract 2, a distance of 621.58 feet to the Northeast corner of said South 1/2 of Tract 2; Thence run South 00°02'49" West, along the East line of said Tract 2, a distance of 329.91 feet to the Northwest corner of Tract 6, Block 4 in said Section 13; Thence run North 89°29'45" East, along the North line of said Tract 6, a distance of 653.25 feet to the Northeast corner of said Tract 6, said corner lying on the West line of Tract 4 of said Block 4; Thence run North 00°02'20" East, along said West line of Tract 4, a distance of 660.55 feet to the Northwest corner of said Tract 4; Thence run North 89°25'56" East, along the North line of Block 4 in Section 13, a distance of 1959.50 feet to the Northeast corner of Tract 2, Block 4, said corner also being the East quarter corner of said Section 13; Thence run North 89°03'33" East, along the North line of Block 3 in Section 18, Township 18 South, Range 33 East, a distance of 2528.39 feet to the Northwest corner of Block 4 of said Section 18; Thence run North 89°03'33" East, along the North line of said Block 4, a distance of 667.96 feet to the Northeast corner of Tract 5 of said Block 4; Thence run South 00°04'03" West, along the East line of said Tract 5 and along the East line of Tract 6, Block 4, a distance of 994.85 feet to the Northwest corner of the South 1/4 of Tract 4 in said Block 4; Thence run North 89°04'19" East, along the North line of said South 1/4 of Tract 4, a distance of 667.57 feet to the Northeast corner of said South 1/4 of Tract 4; Thence run South 00°05'24" West, along the East line of Tracts 4 and 9 of said Block 4, a distance of 1658.34 feet to the Southeast corner of said Tract 9, said



corner lying on the North line of Block 1 in Section 19, Township 18 South, Range 33 East; Thence run South 89°05'37" West, along said North line of Block 1, a distance of 666.91 feet to the Northeast corner of Tract 5 in said Block 1; Thence run South 01°28'47" East, along the East line of Tracts 5 and 6 of said Block 1, a distance of 1335.06 feet to the Southeast corner of said Tract 6; Thence run North 89°13'28" East, along the North line of Tract 9 in said Block 1, a distance of 667.74 feet to the northeast corner of said Tract 9; Thence run South 01°30'51" East, along the East line of said Tract 9, a distance of 1336.60 feet to the southeast corner of said Tract 9; Thence run South 89°21'18" West, along the South line of said Tract 9, a distance of 668.56 feet to the Northeast corner of Tract 5, Block 4 of said Section 19; Thence run South 01°32'27" East, along the East line of Tracts 5 and 6 of said Block 4, a distance of 1330.55 feet to the Northwest corner of Tract 9 of said Block 4; Thence run North 89°24'13" East, along the North line of said Tract 9, a distance of 670.79 feet to the Northeast corner of said Tract 9; Thence run South 01°38'12" East, along the East line of said Tract 9, a distance of 1331.16 feet to the Southeast corner of Tract 9, said corner lying on the South line of said Block 4 in said Section 19; Thence run South 89°27'06" West along said South line of Block 4, a distance of 1346.05 feet to the Southwest corner of said Block 4; Thence run North 01°26'42" West, along the West line of said Block 4, a distance of 1329.95 feet to the Southeast corner of Tract 1, Block 3 of said Section 19; Thence run South 89°24'13" West, along the South line of said Tract 1, a distance of 636.84 feet to the Southwest corner of said Tract 1; Thence run North 01°22'22" West, along the West line of Tracts 1 and 2 of said Block 3 and along the West line of Tract 11, Block 2 in said Section 19, a distance of 1995.43 feet to the Southeast corner of the North 1/2 of Tract 10 of said Block 2; Thence run South 89°17'25" West, along the South line of said North 1/2 of Tract 10, a distance of 634.30 feet to the Southwest corner of said North 1/2 of Tract 10; Thence run North 01°18'01" West, along the West line of said Tract 10 and along the West line of Tract 3 of said Block 2, a distance of 1995.93 feet to the Northwest corner of said Tract 3, said corner lying on the South line of Block 3 of aforesaid Section 18; Thence run South 89°05'43" West, along said South line of Block 3 of Section 18, a distance of 1263.51 feet to the Point of Beginning.

AND:

Commence at the Southeast corner of Section 29, Township 18 South, Range 33 East, Volusia County, Florida the same being the Southeast corner of Block 4 of HOWE AND CURRIERS ALLOTMENT, according to the map or plat thereof as recorded in Map Book 4, page 44, of the Public Records of Volusia County, Florida, said point also being the POINT OF BEGINNING of the herein described lands; thence on the South line of said Section 29, the same being the South line of Blocks 3 and 4 of said HOWE AND CURRIERS ALLOTMENT, South 89°20' 38" West, a distance of 3305.08 feet to the Southeast corner of Tract 10, Block 3 of said HOWE AND CURRIERS ALLOTMENT; thence departing said South lines and on the East line of said Tract 10, Block 3, North 00°31' 00" West, a distance of 664.53 feet to the Northeast corner of the South 1/2 of said Tract 10, Block 3; thence departing said East line and on the North line of the South 1/2 of said Tract 10, Block 3, South 89°19' 25" West, a distance of 661.22 feet to the Northwest corner of the South 1/2 of said Tract 10, Block 3, the same being a point on the West line of aforesaid Block 3 and on the East line of the West 1/2 of the Southwest 1/4 of aforesaid Section 29; thence departing said North line and on the West line of said Block 3 the same being the East line of the West 1/2 of the Southwest 1/4 of said Section 29, North 00°32' 03" West a distance of 1992.88 feet to the Northwest corner of said Block 3, the same being the Northeast corner of the West 1/2 of the Southwest 1/4 of said Section 29 and being a point on the South line of aforesaid Block 2; thence departing said East and West lines, and on the North line of the West 1/2 of the Southwest 1/4 of said Section 29 the same being the South line of Block 2 of said HOWE AND CURRIERS ALLOTMENT, South 89°15' 44" West, a distance of 1323.66 feet to the Southwest corner of said Block 2, the same being the Southwest corner of the Northwest 1/4 of said Section 29; thence departing said North and South lines and on the West line of said Block 2, the same being the West line of the Northwest 1/4 of said Section 29, North 00°25' 32" East, a distance of 2644.40 feet to the Northwest corner of said Block 2, the same being the Northwest corner of said Section 29; thence departing said West lines and on the North line of said Block 2, the same being the North line of the Northwest 1/4 of said Section 29, North 89°09' 50" East, a distance of 651.16 feet to the Northwest corner of Tract 4, Block 2, of said HOWE AND CURRIERS ALLOTMENT; thence departing said North lines and on the West line of said Tract 4, Block 2, South 00°11' 39" West, a distance of 1322.66 feet to the Southwest corner of said Tract 4, Block 2, thence departing said West line and on the South line of Tract 4, Block 2



and on the South line of Tract 3, Block 2, North 89°12' 49" East, a distance of 1312.99 feet to the Southeast corner of said Tract 3, Block 2; thence departing said South line and on the East line of said Tract 3, Block 2, North 00°16' 06" West, a distance of 1323.65 feet to the Northeast corner of said Tract 3, Block 2 the same being a point on the North line of said Block 2 and on the North line of the Northwest 1/4 of said Section 29; thence departing said East line and on the North line of said Block 2 the same being the North line of the Northwest 1/4 of said Section 29, North 89°09'50" East, a distance of 651.16 feet to the Northwest corner of Block 1 of said HOWE AND CURRIERS ALLOTMENT, the same being the Northwest corner of the Northeast 1/4 of said Section 29; thence on the North line of said Block 1, the same being the North line of the Northeast 1/4 of said Section 29, North 89°09' 50" East, a distance of 2604.66 feet to the Northeast corner of said Block 1, the same being the Northeast corner of said Section 29; thence departing said North lines and on the East line of said Block 1, the same being the East line of the Northeast 1/4 of said Section 29, South 01°17' 06" East, a distance of 2652.91 feet to the Northeast corner of aforesaid Block 4, the same being the Northeast corner of the Southeast 1/4 of said Section 29; thence on the east line of said Block 4, the same being the East line of the Southeast 1/4 of said Section 29, South 00°33' 54" East, a distance of 1341.88 feet to the Northeast corner of Tract 12, Block 4, of said HOWE AND CURRIERS ALLOTMENT; thence departing said East lines and on the North line of said Tract 12, Block 4, South 89°42' 13" West, a distance of 658.69 feet to the Northwest corner of said Tract 12, Block 4; thence departing said North line and on the West line of said Tract 12, Block 4, South 00°31' 39" East, a distance of 660.04 feet to the Southwest corner of said Tract 12, Block 4; thence departing said West line and on the South line of said Tract 12, Block 4, North 89°42' 44" East, a distance of 659.13 feet to the Southeast corner of said Tract 12, Block 4, the same being on the East line of said Block 4 and the East line of the Southeast 1/4 of said Section 29; thence departing said South line and on the East line of said Block 4 the same being the East line of the Southeast 1/4 of said Section 29, South 00°33' 54" East, a distance of 660.79 feet to the POINT OF BEGINNING.



APPENDIX B

NON-EXCLUSIVE PERPETUAL ACCESS EASEMENT



THIS DOCUMENT PREPARED BY  
AND SHOULD BE RETURNED TO:

Stanley J. Niego, Esquire  
St. Johns River Water Management District  
4049 Reid Street  
Palatka, Florida 32177

## NON-EXCLUSIVE PERPETUAL ACCESS EASEMENT

THIS EASEMENT is made and entered into this 9th day of May 2005, by **ST. JOHNS RIVER WATER MANAGEMENT DISTRICT**, a public body existing under Chapter 373 of the Florida Statutes, whose address is 4049 Reid Street, Palatka, Florida 32177, as to an undivided fifty percent (50%) interest, and **VOLUSIA COUNTY, FLORIDA**, a political subdivision of the State of Florida, whose address is 123 West Indiana Avenue, DeLand, Florida 32720, as to an undivided fifty percent (50%) interest ("Grantor") for the benefit of **JOSEPH A. FREIDELL**, whose address is Post Office Box 94, Oak Hill, Florida 32759 ("Grantee").

(Wherever used herein, the terms "Grantor" and "Grantees" include all the parties to this instrument and their heirs, legal representatives and assigns of the individuals, and the successors and assigns of corporations, partnerships [including joint ventures], public bodies and quasi-public bodies.)

### WITNESSETH

**WHEREAS**, Grantor is the owner of that certain existing road located upon real property located in Volusia County, Florida, as more particularly depicted on Exhibit "A" attached hereto and incorporated herein by reference (the "Easement Property"); and

**WHEREAS**, Grantee has requested, and Grantor has agreed to grant and convey to Grantee, a perpetual non-exclusive access easement and/or right of way over, on, upon, and across the Easement Property for the specific and limited purposes hereinafter set forth.

**NOW, THEREFORE**, in consideration of the mutual covenants, promises, terms and conditions set forth herein, and for other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The above recitals are true and correct, form a material part of this Easement, and are incorporated herein by reference.

2. **Grant of Easement.** Grantor hereby gives, grants, bargains, sells and conveys to Grantee a perpetual non-exclusive easement, twenty (20) feet in width, for access and/or right of way purposes over, on, upon, and across the Easement Property (the "Easement"), with full right and authority of ingress and egress over, on, upon, and across the Easement Property at all times for the purpose of access by Grantee, its invitees, contractors and agents, to and from certain real property and related appurtenances in the vicinity of the Easement Property owned by Grantee and as generally shown on Exhibit "A" attached hereto and by this reference made a part hereof ("Grantee's Property"). By acceptance of the benefits of this Easement, Grantee agrees to perform and comply with any obligations imposed on the Grantee herein.

3. **Limitation on Easement.** This Easement is given by Grantor to Grantee subject to the following terms, conditions and limitations: (i) the Easement granted herein is solely for the purpose of ingress and egress, for single family residential purposes only, to and from Grantee's Property by Grantee, its invitees, contractors and agents and for no other purpose whatsoever, ii) Grantee shall abide by Grantor's Land Acquisition and Management Rule 40C-9, Florida Administrative Code, and any other applicable rules and regulations when utilizing the Easement Property; and iii) Grantee shall repair damage to the Easement Property occasioned by Grantee or Grantee's invitees, contractor's or agent's use of the Easement Property for the purposes set forth herein.



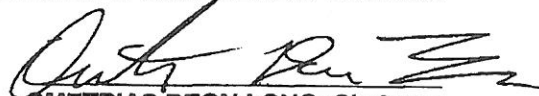
4. **Reservation of Use by Grantor.** This Easement is non-exclusive and the Grantor reserves to itself, its successors and assigns, the right to utilize the Easement Property for any purpose which does not unreasonably interfere with the use of the Easement Property by Grantee for the purposes set forth herein. Each party shall use the rights granted and reserved by this Easement with due regard for the rights of the other party to use and enjoy the Easement Property.

5. **Successors and Assigns.** The Easement shall be binding upon and inure to the benefit of the parties specified herein, their respective legal representatives, successors and assigns, and the benefit and burdens hereof shall run with the Easement Property in perpetuity.

6. **Modification.** This Easement may be modified or amended only upon the mutual written consent of Grantee and Grantor.

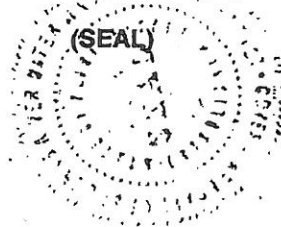
IN WITNESS WHEREOF, the Grantor has subscribed its name and has caused this Easement to be executed as of the day and year first above written.

GRANTOR  
GOVERNING BOARD OF THE ST. JOHNS  
RIVER WATER MANAGEMENT DISTRICT


  
OMETRIAS DEON LONG, Chairman


Attest:

  
ROBERT CLAYTON ALBRIGHT, Secretary



VOLUSIA COUNTY, FLORIDA

Attest:  
  
Print Name: CYNTHIA A. COTO  
Title: COUNTY MANAGER

  
Print Name: FRANK T. BRUNO, JR.  
Title: COUNTY CHAIR

DATE: 9 May 05

Approved by Counsel - Volusia County





STATE OF FLORIDA  
COUNTY OF PUTNAM

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 12<sup>th</sup> day of April, 2005, by **OMETRIAS DEON LONG**, Chairman of the Governing Board of the St. Johns River Water Management District, who is personally known to me.



Sandra L. Bertram  
MY COMMISSION # DD083638 EXPIRES  
January 29, 2006  
BONDED THRU TROY FARM INSURANCE, INC.

Sandra L. Bertram

NOTARY PUBLIC, State of Florida  
Print name: Sandra L. Bertram  
My Commission Expires: 1-29-2006

STATE OF FLORIDA  
COUNTY OF PUTNAM

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 12<sup>th</sup> day of April, 2005, by **ROBERT CLAYTON ALBRIGHT**, Secretary of the Governing Board of the St. Johns River Water Management District, who is personally known to me.



Sandra L. Bertram  
MY COMMISSION # DD083638 EXPIRES  
January 29, 2006  
BONDED THRU TROY FARM INSURANCE, INC.

Sandra L. Bertram

NOTARY PUBLIC, State of Florida  
Print name: Sandra L. Bertram  
My Commission Expires: 1-29-2006

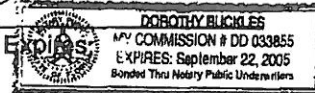
STATE OF FLORIDA  
COUNTY OF VOLUSIA

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 9<sup>th</sup> day of May, 2005, by Frank T. Bruno, Jr., County Chair of the Board of County Commissioners of Volusia County, Florida, who is personally known to me.

Dorothy Buckles

NOTARY PUBLIC, State of Florida

Print name: DOROTHY BUCKLES  
My Commission Expires: SEPTEMBER 22, 2005



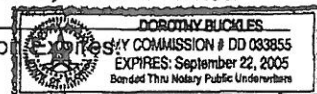
STATE OF FLORIDA  
COUNTY OF VOLUSIA

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 9<sup>th</sup> day of May, 2005, by Ray W. Pennebaker, Deputy County Manager of the Board of County Commissioners of Volusia County, Florida, who is personally known to me.

Dorothy Buckles

NOTARY PUBLIC, State of Florida

Print name: DOROTHY BUCKLES  
My Commission Expires: SEPTEMBER 22, 2005





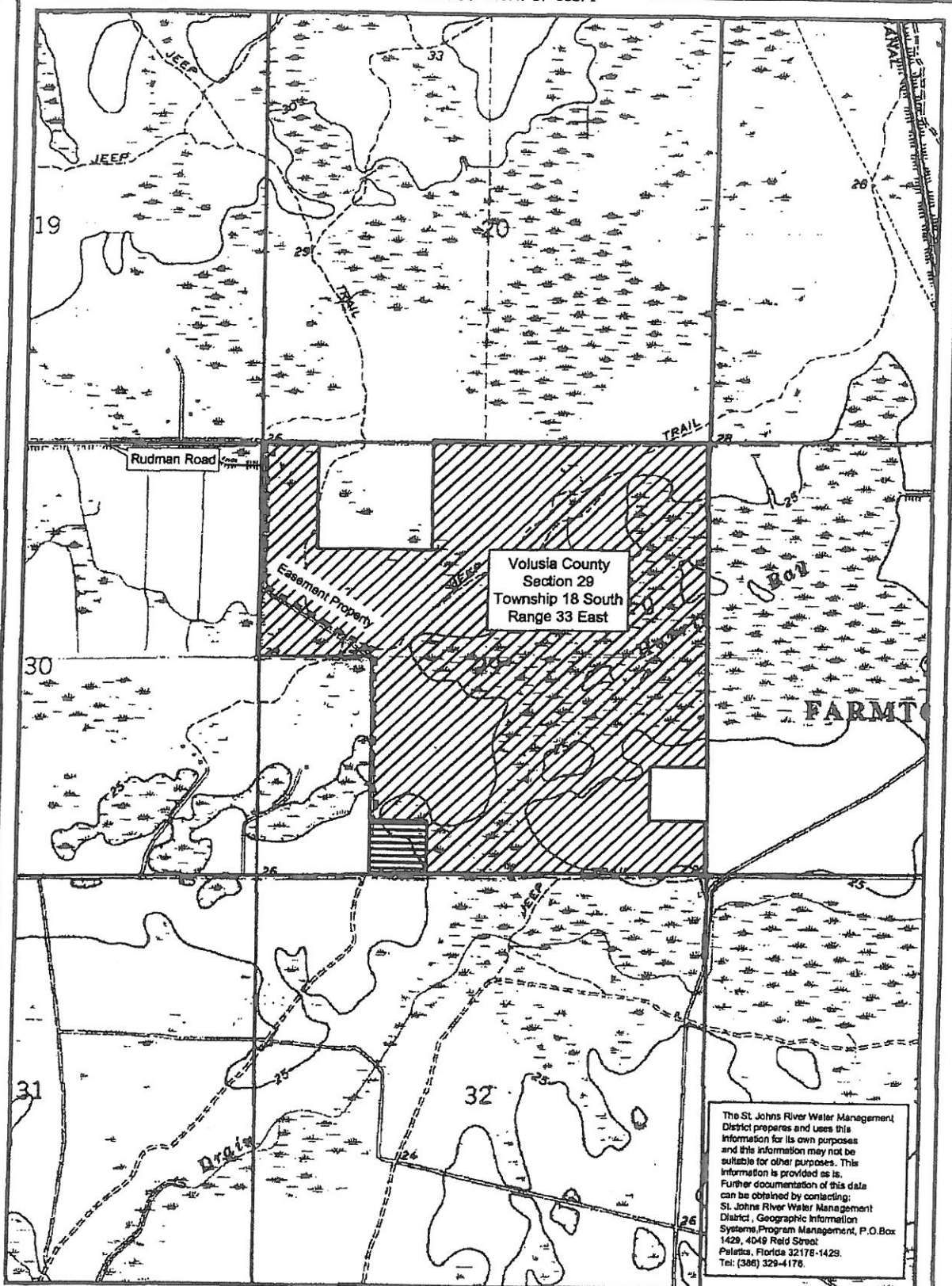






Exhibit "A"



-  Grantor's Property
-  Easement Property
-  Grantee's Property
-  Section lines



0 480 920 1,840  
Feet