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Black Bear Wilderness Area

Land Management Plan

2010

BLACK BEAR WILDERNESS AREA
LAND MANAGEMENT PLAN

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LAND MANAGEMENT PLAN SUMMARY

Black Bear Wilderness Area

Acres: 1650

Location: Northwest corner of Seminole County Township 19 Section 01 Range 29

Dates of Acquisition: November 1985 and March 1993

Key Resource Issues:

This site's approximately 1650 acres in northwest Seminole County features a variety of wetland habitats within the floodplain of the St Johns River. Shallow marshes, Hydric Hammock and Cypress Swamps form a mosaic of habitat diversity which host wildlife such as the white-tailed deer, swallow-tailed kite and the Florida black bear. Its' large size and proximity to other public lands, make this site an important piece in a puzzle connecting natural areas between the Wekiva / St. John's basins and the Ocala National Forest. A large portion of this site lies within the flood plain of the St. John's River therefore; the habitats present were historically maintained by rising and falling water levels as well as periodic fires. Over the years, levees, ditches and diversions of water along the St. John's River have altered the natural extremes and led to changes in these plant communities. As with all Seminole County Natural Lands, the primary management objective is to preserve and/or restore the natural, ecological functions of the land while providing a passive resource based recreational experience for citizens.

GENERAL DESCRIPTION:

- **Security** – Unlike some Natural Lands properties, there is no caretaker residing on this property. All possible locations for access whether designated or not, are gated, regularly evaluated and methods for control considered. The Seminole County Sheriff's Office or the Florida Fish and Wildlife Conservation Commission are contacted when necessary.

- **Restoration** – Restoration on this site will focus on the control of exotic species and the evaluation and possible restoration of hydrologic functions.

- **Fire** – Much of the forested habitat on this site will only carry fire during times of extreme drought and may be challenging to manage with prescribed fire. The site will be periodically evaluated for potential fire management.

- **Wildlife and Plants** – This site is an important resource for a variety of wildlife including several listed species such as the Florida black bear and the wood stork. The implementation of any management activities will take into consideration the needs and possible impacts on these and other species present. The SCNLP will continue to seek partnerships with other agencies and academic institutions to assist with wildlife management activities.

- **Invasive and Exotic Species** – Many exotic (non-native) species of plants such as air potato (*Dioscorea bulbifera*), coral ardesia (*Ardesia crenata*), wild taro (*Colocasia esculenta*) and Ceasar's Weed (*Urena* lobata) have become established and will be addressed with various methods of control.

- **Cultural Resources** – According to a 1994 survey by Ellis Archeology there are known cultural resources at this site however, no site numbers have been issued.

Key Land Use/Recreation Issues:
Much of the trail system on the BBWA has been established on an historic levee and for the most part stays dry year round. This site is however, located within the floodplain of the St. Johns River and may experience significant flooding during the rainy season.

General Description:
- Access – The primary access is a park and walk entrance located at the Southern end of the property at the north end of New York Avenue in Sanford Fl. An additional walk thru community access has been established at the north end of Mallard Ave. in the Seminole Estates subdivision. Future plans may include a seven to eight mile loop trail.

- Public recreation – This site is open for local equestrian use, hiking, non-motorized biking, wildlife viewing and fishing.

Black Bear Wilderness Area
Seminole County, Florida

LAND MANAGEMENT PLAN

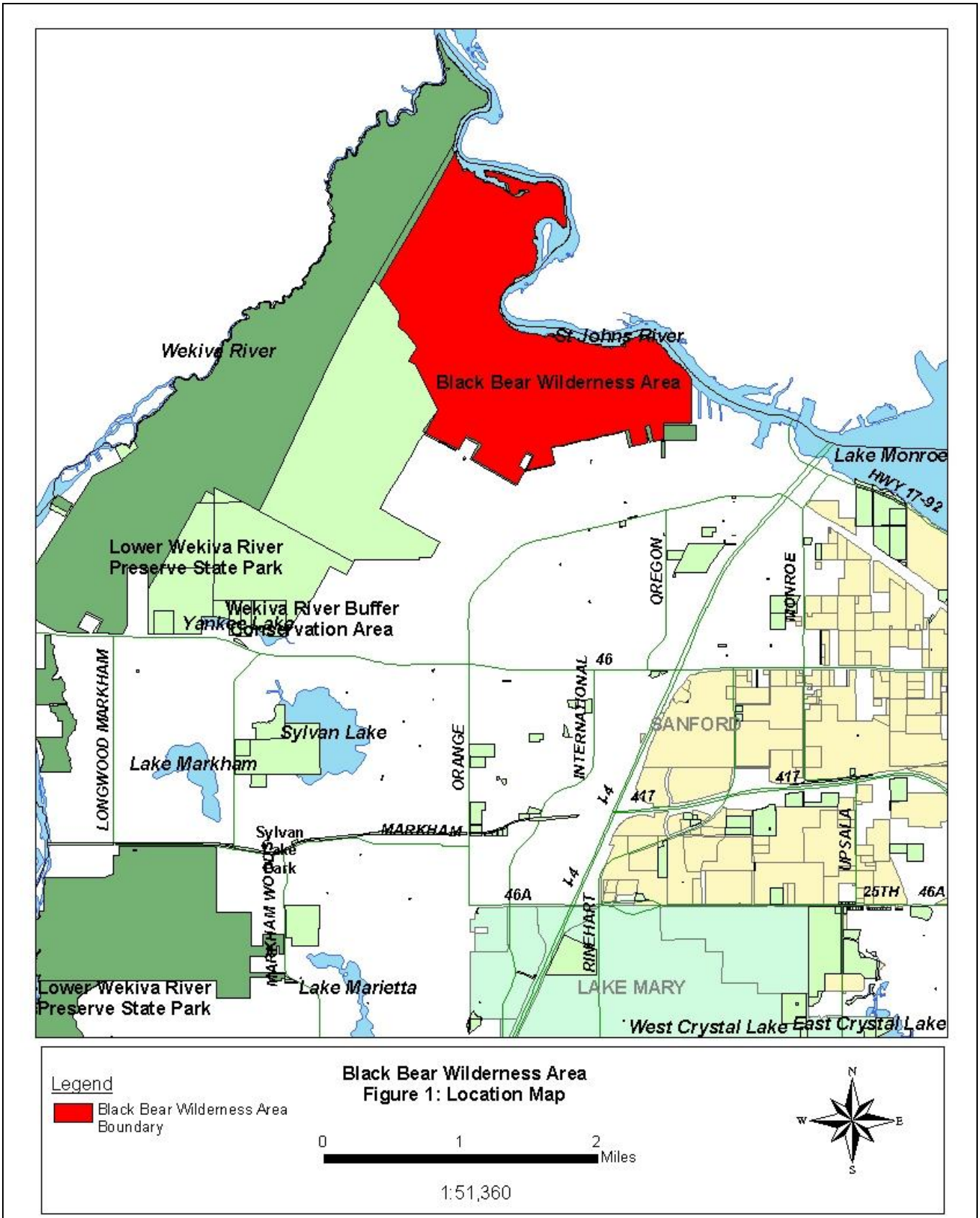
INTRODUCTION

This document provides guidelines for land management activities to be implemented within the Wilderness Area over the next ten years. Plans will be evaluated annually and updated if necessary.

WILDERNESS AREA OVERVIEW

Regional Significance

The 1650 acre Black Bear Wilderness Area is located in Northwest Seminole County, west of I-4. As a conservation corridor, this site connects critical habitat within the Wekiva River Basin. BBWA contains a variety of habitats and a levee trail system. The trail system takes visitors through the hydric hammock and onto an historic levee to its terminus at the St. Johns River. A great site for wildlife viewing, BBWA is home to countless species including the Florida black bear, American alligator, wood stork, and great blue heron. This area's remote nature, views of the St. Johns River and diverse wildlife population promise to make it one of the Natural Lands program's flagship wilderness areas.


Wekiva River
St Johns River
Black Bear Wilderness Area
Lake Monroe
HWY 17-92
Lower Wekiva River
Preserve State Park
Wekiva River Buffer
Yankee Lake
Conservation Area
OREGON
MONROE
46
LONGWOOD MARKHAM
Sylvan Lake
Lake Markham
ORANGE
INTERNATIONAL
SANFORD
417
I-4
MARKHAM
Sylvan Lake Park
MARKHAM WOODS
46A
25TH
UPSALA
RINEHART
Lower Wekiva River
Preserve State Park
Lake Marietta
LAKE MARY
West Crystal Lake
East Crystal Lake
Legend
Black Bear Wilderness Area Boundary
Black Bear Wilderness Area
Figure 1: Location Map
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Acquisition History

This property was purchased to preserve its diverse array of habitats which include Mixed Hardwood Swamp, Floodplain Swamp, Floodplain Marsh and Hydric Hammock. The acquisition of this site occurred through two efforts. The initial 300 acres was purchased in 1993 through the SCNLP and was initially known as the Riverside Ranch property. An additional 1300 acres was transferred to the SCNLP from the county's Environmental Services Department as part of the Wekiva Settlement agreement. An additional 20 acres along Michigan Ave. was donated in 2001.

NATURAL RESOURCES OVERVIEW

Natural Communities

Black Bear Wilderness Area contains four distinct plant communities. These include cypress dome swamp, shallow marsh, hydric hammock and mixed hardwood forest. Plant community descriptions and fire regimes are taken from FNAI, 2010.

Cypress Dome Swamp

This plant community is characterized as shallow, forested depressions, with a dome shaped profile because smaller trees typically grow along the outer edges where the water is shallow, with larger trees occupying the interior space where the water is much deeper. Dome Swamps develop in sandy flatwoods and in karst areas where there is a depression formed around or over a sink hole. The water is derived through runoff from surrounding uplands although some may be connected with underground channels. These areas serve as critical recharge areas for the underlying aquifer when adjacent water tables drop during long duration drought periods.

Common plant species include pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa sylvatica var. biflora*), and slash pine (*Pinus elliottii*). Other typical plants include red maple, dahoon holly, swamp bay, and loblolly bay. Fire is essential in maintaining the plant community structure. Without periodic fires, invasion of hardwood species and peat accumulation will convert the dome swamp to Bottomland Forest. Normal fire cycle might be as short as 3 to 5 years along the outer edge and as many as 100 to 150 years throughout the interior.

Shallow Marsh

Shallow Marsh habitat is characterized as an herbaceous or shrubby wetland often in a large and irregular shaped basin. Shallow marsh is typically formed in depressions that were former shallow lakes that have been filled with sediment from the surrounding uplands. Typical plant species include common reed (*Phragmites australis*), pennywort (*Gotu Kola*), American lotus (*Nelumbo lutea*), water primrose (*Ludwigia spp*), and elderberry.

Fire is critical in maintaining the community structure of Shallow Marsh habitat. The normal fire interval is 1 to 10 years. Muck fires during periods of drought are critical in preventing the succession of Shallow Marsh into Bog.

Hydric Hammock

This habitat often exists in association with hardwood swamps, forming a transition to higher upland habitats or on areas of slightly higher elevation in broad flood plains. Tree species found in this habitat include the cabbage palm (*Sabal palmetto*), hackberry (*Celtis occidentalis*), live oak (*Quercus virginiana*), water oak (*Quercus nigra*), and Sweet gum (*Liquidambar styraciflua*). Groundcover could include several ferns and vines such as cinnamon fern (*Osmunda cinnamomea*), virginia creeper (*Parthenocissus quinquefolia*), and trumpet vine (*Campsis radicans*).

Hydric hammocks occur on low, flat, wet sites where limestone may be near the surface. Soil is mostly level and poorly drained but very rich in organic composition. A normal hydrologic regime is critical in the development and maintenance of this habitat.

Mixed hardwood swamp

Bald cypress (*Taxodium distichum*), black gum (*Nyssa sylvatica*), and red maple (*Acer rubrum*) trees form a dense canopy which creates a shaded, cool microclimate for a diverse assemblage of wildlife. These swamps serve as important filters and flood storage areas for water making its way to the St. John's River.

Mixed Hardwood and Pine Forest

Characterized as well-developed, closed canopy forests, Mixed Hardwood and Pine Forests occur throughout the limited uplands located within Black Bear Wilderness Area. This plant community exhibits one of the highest levels of species diversity. Typical plants found in this habitat include southern magnolia (*Magnolia grandiflora*), American beech (*Fagus grandifolia*), loblolly pine (*Pinus*), water oak (*Quercus nigra* L.), and laurel oak (*Quercus laurifolia*).

Fire

Fire is an integral part of the Florida landscape. Before the influx of settlers, lightning fires would burn unimpeded through fire adaptive communities and landscapes until extinguished via changes in weather and/or fuel characteristics. Native Americans would also burn at various times of the year to attract wild game and to keep the landscape open for easy travel. Today, due to increased development pressures on conservation areas, fires must be managed under strict regulations and performed according to set criteria depending on the site.

Much of the forested habitat on this site will only carry fire during times of extreme drought and may be challenging to manage with prescribed fire. Use of prescribed fire on this site will be re-evaluated in the future.

Wildlife

Due to the proximity of BBWA to the St. John's River and other conservation lands, there is a variety of wildlife that can be found throughout the property. This diverse ecosystem supports wildlife such as the Florida black bear, white-tailed deer (*Odocoileus virginianus*), swallow tailed kite (*Elanoides forficatus*), and river otter (*Lutra canadensis*).

Listed Species

This site is an important resource for a variety of wildlife including several listed species such as the american alligator, Florida black bear and the wood stork. The implementation of any management activities will take into consideration the needs and possible impacts on these and other species present. The SCNLP will continue to seek partnerships with other agencies and academic institutions to assist with wildlife management activities.

Exotics

Florida's climate is not only attractive to humans, but also to invasive exotic species. An exotic species is defined as a species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida. Some examples of exotic species in Florida include Brazilian pepper (*Schinus terbinthifolius*), air potato (*Dioscorea bulbifera*), old world climbing fern (*Lygodium microphyllum*), cogongrass (*Imperata cylindrica*), feral hog (*Sus scrofa*), Cuban brown anole (*Anolis sagrei*), nine-banded armadillo (*Dasypus novemcinctus*), Eurasian collared-dove (*Streptopelia decaocto*), Cuban treefrog (*Osteopilus septentrionalis*), and walking catfish (Clarias batrachus). The State of Florida spends millions of dollars per year either directly or indirectly through grants, trying to control exotic species.

Since the impacts of invasive exotic species have both an environmental and economic impact, a non-governmental organization called the Florida Exotic Pest Plant Council was formed. This organization provides a list of Florida's most invasive exotic species. The list is split into two categories: Category I species are those that are altering native plant communities by displacing native species and Category II species are those that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. Black Bear Wilderness Area has exotics from both categories.

Many exotic species of plants such as air potato and wild taro (*Colocasia esculenta*) have become established and will be addressed with various methods of control. The property will continue to be treated for invasive exotic plant species through grants.

An exotic management plan for plants has been developed for all natural lands properties. A status of exotic animals will be developed over the next ten years.

Soils

Felda and Manatee Mucky Fine Sands, Depressional (Type 15)

These are very poorly drained soils occurring in depressions. Normal high-water elevation occurs from June through December and ranges from two feet above to one foot below the surface. Recreational development is limited due to severe ponding and the sandy nature of the soil.

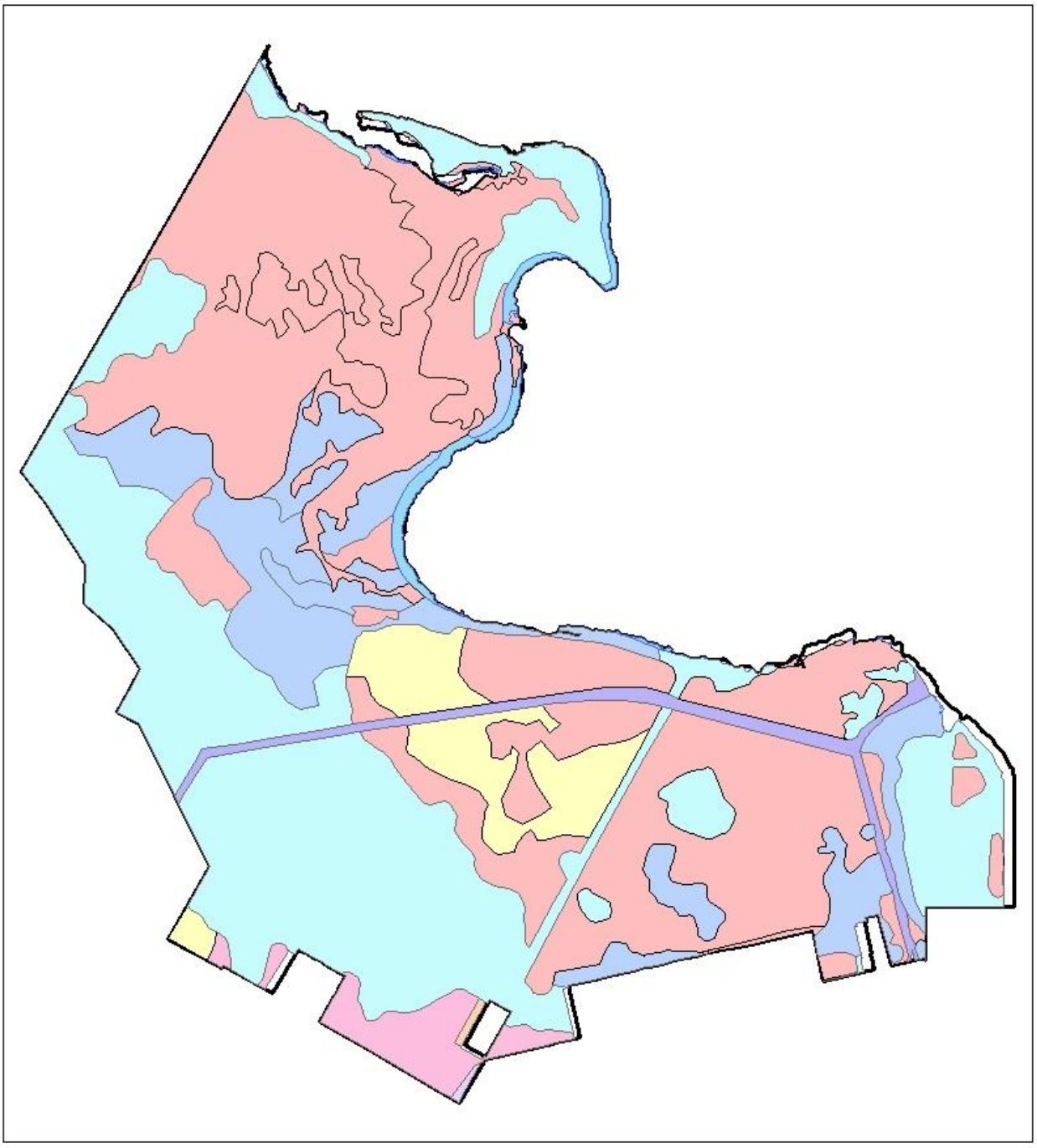
Delray Series (Type 9)
These are deep, very poorly drained soils that occur on low, broad flats in central and south Florida. The normal high-water elevation occurs from June through March, and ranges from the surface to 1 foot below. Recreational use is limited due to severe wetness and sandy nature of the soil.

Manatee Mucky Fine Sands, Depressional (Type 19)
These are very poorly drained soils occurring in depressions. Normal high-water elevation occurs from June through December and ranges from two feet above to one foot below the surface.

Samsula Series (Type 10)
These are nearly level, very poorly drained organic soils that occur in freshwater swamps and marshes. Like the Basinger series, normal high-water elevation occurs between June and February and ranges from 2 feet above to 1 foot below the surface. Recreational use is limited by severe ponding and excessive muck levels.

Nittaw Series (Types 22)
These are very poorly drained soils that occur in drainage ways and broad flood plains. Normal high-water elevation occurs between June and November, and ranges from the surface to one foot below. Recreational uses are limited due to flooding, wetness and excessive muck levels.

Immokalee Series (Type 16)
These are poorly drained sandy soils occurring on the lower Atlantic and Gulf Coastal flatwoods and are formed in sandy marine sediments. Normal high-water elevation occurs from June through November, and ranges from the surface to one foot below.


Legend
Rural residential
Improved pasture
Mesic/Wet Flatwoods
Water
Floodplain Swamp
Cypress Dome
Wet Flatwoods
Floodplain Marsh
Transmission Lines
Black Bear Wilderness Area
Figure 2: Natural Communities Map
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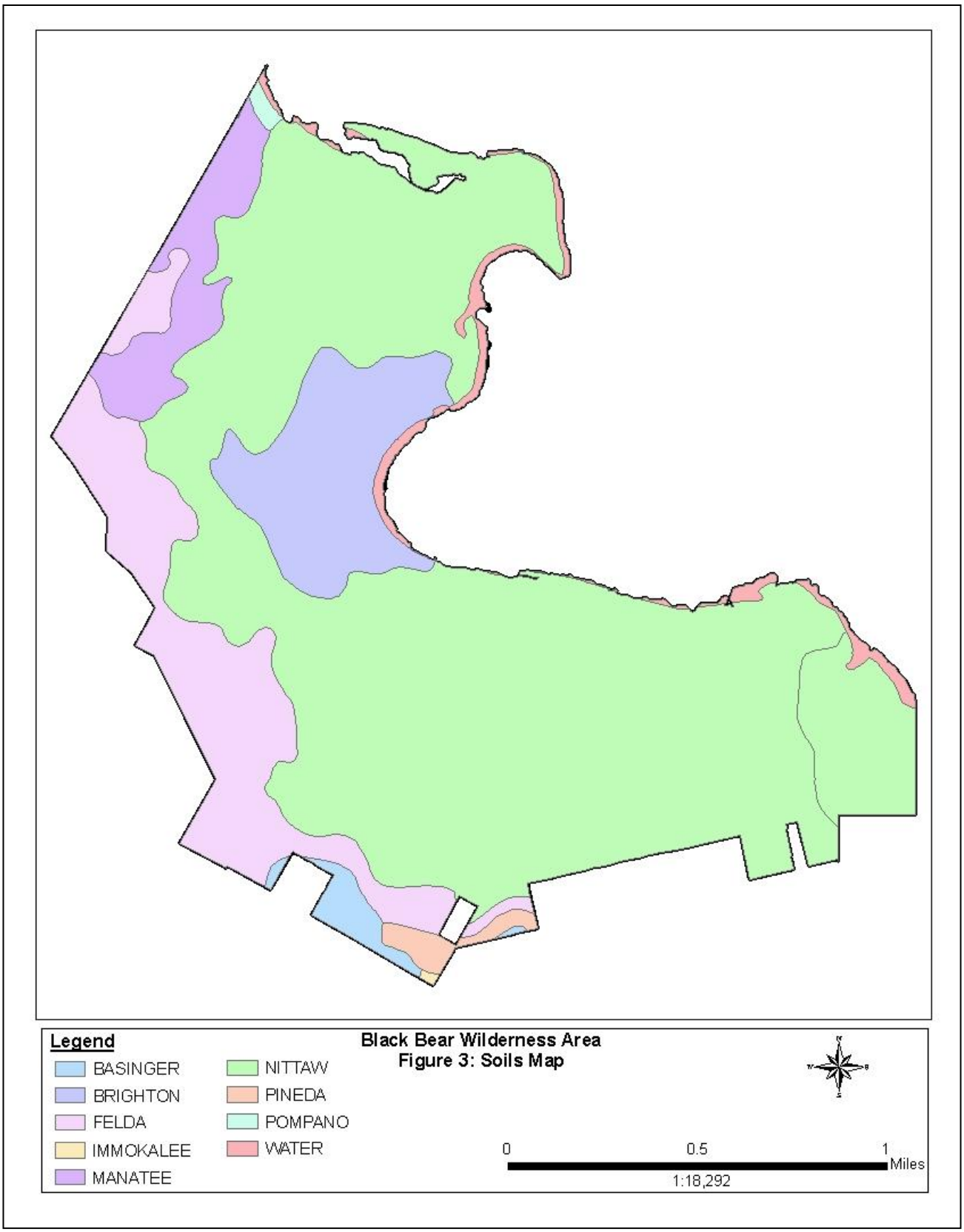
Legend
BASINGER
BRIGHTON
FELDA
IMMOKALEE
MANATEE
NITTAW
PINEDA
POMPANO
WATER
Black Bear Wilderness Area
Figure 3: Soils Map
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IMPLEMENTATION

Integral to the goals and objectives for managing acquired lands in an acceptable manner are protection and restoration of those lands where feasible. An important element in protecting the resources is to prevent dumping, poaching, and other illegal activities. Appropriate land management activities, such as prescribed burning, forest management, and removal of exotics, should be continued to protect the viability of the site.

Rules and Regulations

Seminole County Code Chapter 190 Section 4 establishes the provisions relating to management and use of the properties acquired or managed by Seminole County Natural Lands Program.

RESOURCE PROTECTION AND MANAGEMENT

Monitoring

Monitoring natural resources is an important tool in gauging the overall health of an ecosystem. The SCNLP has developed a monitoring plan that encompasses all sites. From 1996 until June 2004, baseline monitoring was conducted on the property. This included herp arrays, drift fences, cover boards, bird surveys, photo points, small mammal trapping, fish and turtle traps and bird/bat boxes.

In 2006, a new Natural Lands Program Monitoring Plan was developed. According to that plan, monitoring at BBWA now includes box turtle marking and photo points. Also, exotic treatment success will be monitored using photo points.

Monitoring Strategies

- Continue evaluating volunteer monitoring program
- Continue monitoring exotic species

Restoration

The hydric hammock and mixed hardwood swamps have been altered in the past through human related activity. The effects will be assessed and possible restoration will be evaluated.

Restoration Strategies

- Continue to evaluate the need for restoration activity

Forest Management

Florida Statutes require public agencies to evaluate lands they manage for timber production. Planting of upland forest species may be a component of future upland restoration projects.

Forest Management Strategies

- At this time there are no plans to conduct any forestry related activity within Black Bear Wilderness Area.

Fire Management

Currently, there are no plans to use fire as a management tool on this property due to the inaccessibility of the site.

Wildlife

Wildlife observations are on-going through the monitoring program and updates will be added to the Natural Lands database.

Wildlife Strategies

- Continue to record wildlife observations.
- Continue land management activities.

Listed Species

Surveys are conducted annually to verify the existence of listed plant and animal species.

Plants

None recorded

Animals

Listed animal species found in BBWA include the Florida Black Bear, American Alligator, Wood Stork, and Little Blue Heron.

Listed Plant and Animal Strategies

- Continue monitoring for listed species.
- Continue annual listed plant surveys.

Exotic Species

Surveys are conducted annually to verify the existence of exotic plant and animal species. There are several exotic plant and animal species within BBWA. These invasive species outcompete and displace native flora and fauna.

Plants

Many exotic (non-native) species of plants such as air potato, tropical soda apple, caesarweed, and wild taro (*Colocasia esculenta*) have become established and will be addressed with various methods of control.

Animals

The SCNLP has contracted two nuisance feral hog removal agents. Feral cats and dogs are trapped and turned over to Seminole County Animal Services when observed on the property.

Exotic Plant and Animal Strategies

- Get all Category I exotic species under maintenance control.
- Continue feral hog agent program.

Cultural Resources Protection

A review of the Master Site File quad sheets maintained by Department of State Division of Historical Resources indicates that there are two registered cultural sites on Black Bear Wilderness Area.

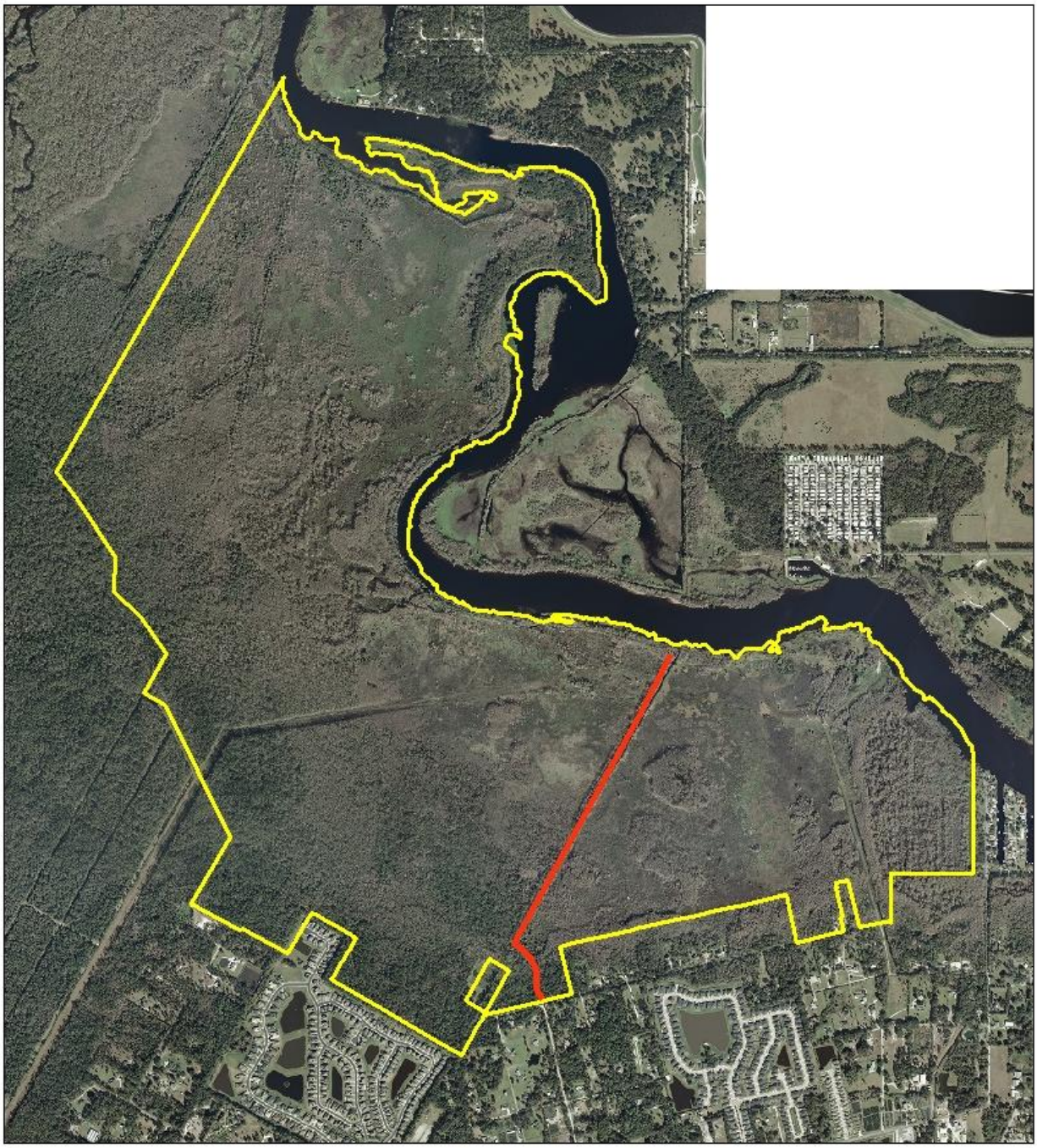
LAND USE MANAGEMENT

Access

There is one park and walk entrance located at the Southern end of the property at the north end of New York Avenue in Sanford and one community access point at the north end of Mallard Ave. in the Seminole Estates subdivision.

Access Strategies

- Continue regular maintenance on public access area.
- Maintain signs and kiosk.



Legend

Trails

Black Bear Wilderness Area
Recreation Map
2009 DOQ

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Recreation

Resource-based recreational opportunities provided on this property include hiking, biking, horseback riding, fishing, and wildlife viewing.

Recreation Strategies

- Continue regular maintenance of trails

Environmental Education

While no educational facilities exist on this property, as with all Seminole County wilderness areas, BBWA can be used as a classroom for outdoor enthusiasts and students of all ages.

Security

The security of Black Bear Wilderness Area will continue to be addressed through the existing partnerships with SCSO and FWC.

Security Strategies

- Continue with current security

ADMINISTRATION AND IMPLEMENTATION

Acquisition

Additional lands for BBWA may be purchased under the State's Florida Forever land acquisition program and the Seminole County Natural Lands Program.

Acquisition Strategies

- Continue to pursue adjacent parcels as available.

Implementation Chart

An implementation chart of activities and responsibilities follows.

Black Bear Wilderness Area
Management Activity Implementation Chart

TASK	RESPONSIBLE LEAD	DUE DATE	COOPERATORS
RESOURCE PROTECTION AND MANAGEMENT			
Restoration			
Evaluate need for restoration activity	NL	On-going	
Forest Management			
No current plan for forestry related activities			
Fire Management			
Evaluate need for prescribed fire on this property.	NL	2013	PS, DOF, DEP
Wildlife			
Continue to record wildlife observations	NL	On-going	Volunteers
Continue with land management activities	NL	On-going	PW
Listed Species			
Plants & Animals			
Continue with listed plant species survey	NL	On-going	Volunteers
Exotic Species			
Plants & Animals			
Get all Category I exotics under maintenance control	NL	2020	PW
Continue with exotic species monitoring	NL	On-going	Volunteers
LAND USE MANAGEMENT			
Access			
Continue regular maintenance of public access areas	NL	On-going	PW
Maintain signs and kiosks	NL	On-going	PW
Recreation			
Maintain regular maintenance of all recreational resources	NL	On-going	PW, Volunteers
Security			
Continue with current security	NL	On-going	
Acquisition			
Continue with current acquisition strategy	NL	On-going	

KEY

DOF **Division of Forestry**
PS **Public Safety**
PW **Public Works**
DEP **Department of Environmental Protection**

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