Buck Bay Flatwoods Preserve Management Plan

Approved by Alachua County Board of County Commissioners May 26, 2015

Alachua County
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Table of Contents

I. INTRODUCTION 3
LOCATION 3
ACQUISITION HISTORY AND SIGNIFICANCE 3
NATURAL RESOURCES SUMMARY 3
PREVIOUS USES 3
RECREATION 4
II. PURPOSE 4
PRIORITIZED MANAGEMENT ACTIVITIES 4
LAND USE AND ZONING 5
III. NATURAL AND CULTURAL RESOURCES 5
TOPOGRAPHY 5
GEOLOGY 5
SOILS 6
HYDROLOGY 6
NATURAL COMMUNITIES 7
LISTED SPECIES 11
INVENTORY OF NATURAL COMMUNITIES AND BIOTA 12
RESTORATION 12
PRESCRIBED FIRE 13
INVASIVE EXOTIC PLANTS 14
FERAL ANIMALS 14
CULTURAL RESOURCES 14
SPECIAL MANAGEMENT CONSIDERATIONS 15
IV. FOREST RESOURCES 15
V. SITE DEVELOPMENT AND IMPROVEMENT 16
EXISTING PHYSICAL IMPROVEMENTS 16
PROPOSED PHYSICAL IMPROVEMENTS 16
ACCESS 17
EASEMENTS, CONCESSIONS, LEASES, AND REVENUES 18
V. STEWARDSHIP NEEDS 18
MAINTENANCE 18
SECURITY 19
STAFFING 19
VI. REFERENCES 20
VII. STEWARDSHIP PLAN IMPLEMENTATION TIMELINE AND BUDGET 21
EXHIBIT A: LOCATION MAP 25
EXHIBIT B: SOILS MAP 26
EXHIBIT C: WELLFIELD PROTECTION ZONE MAP 27
EXHIBIT D: NATURAL COMMUNITIES MAP 28
EXHIBIT E: BUCK BAY FLATWOODS PRESERVE PLANT SPECIES LIST 29
EXHIBIT F: BUCK BAY FLATWOOS PRESERVE ANIMAL SPECIES LIST 34
EXHIBIT G: EXISTING SITE IMPROVEMENTS 36
EXHIBIT H: CONCEPTUAL SITE PLAN 37
EXHIBIT I: MANAGEMENT PLANNING PUBLIC INVOLVEMENT 38
APPENDIX A – COPY OF RECORDED DEED 40
APPENDIX B – SOIL DESCRIPTIONS 43

Buck Bay Flatwoods Preserve
Management Plan Summary

Date of Plan: May 26, 2015 **Management Area:** 464 acres
Location: 6502 North County Road 225, Gainesville
Date Acquired/Cost: May 16, 2013 - $1,089,593
Funding Source: Wild Spaces and Public Places Surtax funds

Summary: Buck Bay Flatwoods Preserve is composed of two parcels of land located in northeastern Alachua County on County Road 225. Outstanding ecological features of Buck Bay Flatwoods Preserve include seven distinct natural communities, and a 4,000-foot section of Hatchet Creek, a locally significant blackwater stream. The property is adjacent to the City of Gainesville Murphree Water Plant, and lies within the primary and secondary protection zones of the city well fields, with active production wells located within one-quarter mile. Lands within the Preserve were acquired to improve and manage environmentally significant lands, to protect water resources, wildlife habitats and natural areas suitable for resource-based recreation.

Key Management Objectives:

1. Maintain, enhance or restore existing natural communities.
2. Inventory natural features of the site, including flora, fauna and natural communities.
3. Protect populations of significant and listed plant and animal species.
4. Develop and implement a prescribed fire management plan.
5. Protect water resources from adverse impacts.
6. Effectively and responsibly manage cultural resources.
7. Promote public outdoor recreation and environmental education consistent with preserving the historic and natural resources of the site.

Resource Management Issues:

- FIRE MANAGEMENT - Implement prescribed fire to restore and maintain fire-dependent natural communities within the Preserve.
- RESTORATION - Restore approximately 366 acres of pine flatwoods with timber management and prescribed fire, and monitor the condition of other natural communities.
- INVASIVE PLANTS - Control or eradicate invasive, non-native plant species.
- FERAL ANIMAL REMOVAL – Monitor and remove feral animals as needed.
- CULTURAL RESOURCES - Protect known sites from disturbance, and coordinate with Florida Department of State Division of Historic Resources regarding identification and protection of cultural sites.
- MONITORING - Monitor property through field inspections and photo points to assess the effects of management activities and public use on the resources.

Site Development and Maintenance

- PHYSICAL IMPROVEMENTS - Develop trailhead facilities and an interpretive kiosk.
- RECREATION - Develop a network of hiking trails.
- EDUCATION - Develop interpretive exhibits and trails.
- MAINTENANCE - Maintain all improvements.
- SECURITY - Conduct security patrols, install informational and regulatory signage.

I. INTRODUCTION

Buck Bay Flatwoods Preserve was acquired by Alachua County through the Alachua County Forever (ACF) Program with funds from the Wild Spaces and Public Places (WSPP) Surtax. The WSPP Surtax was approved by Alachua County voters in 2008 to acquire and improve conservation lands and create, improve and maintain parks and recreational facilities within Alachua County. This management plan was developed to ensure that the Preserve will be managed in accordance with the goals of the ACF Program.

Buck Bay Flatwoods Preserve is composed of two parcels of land located in northeastern Alachua County within the headwaters of Hatchet Creek. Outstanding ecological features of Buck Bay Flatwoods Preserve include seven distinct natural communities, and a 4000-foot section of Hatchet Creek, a locally significant blackwater stream. The property is adjacent to the City of Gainesville Murphree Water Plant, and lies within the primary and secondary protection zones of the city well fields, with active production wells located within one-quarter mile.

LOCATION

The 464-acre Buck Bay Flatwoods Preserve is located in northeastern Alachua County on County Road 225 (Exhibit A). The Preserve is accessible from the main gate at 6502 North County Road 225.

ACQUISITION HISTORY AND SIGNIFICANCE

Buck Bay Flatwoods Preserve lies within the Alachua County Forever Buck Bay Flatwoods Project, which was defined largely by the 1996 Alachua County Ecological Inventory Project (KBN). The KBN Buck Bay Flatwoods Project was ranked 20th of 47 ecologically significant sites evaluated in Alachua County.

Alachua County acquired Buck Bay Flatwoods Preserve with a fee simple purchase from Judyth B. Cox and Jacqulyn B. Moore on May 16, 2013 for $1,089,593. Appendix A contains a copy of the deed for the property.

Lands within Buck Bay Flatwoods Preserve were acquired to improve and manage environmentally significant lands, to protect water resources, wildlife habitats and natural areas suitable for resource-based recreation. The acquisition protects land within the primary and secondary protection zones of the city well fields, in addition to preserving significant natural communities.

NATURAL RESOURCES SUMMARY

The natural resources of Buck Bay Flatwoods Preserve feature several unique natural communities, including sandhill and a 4,000-foot reach of Hatchet Creek. Seven distinct natural communities occur within the Preserve. Many of the natural communities are in very good condition. The dominant natural community is mesic flatwoods. Other natural communities present are upland hardwood forest, wet flatwoods, depression marsh, dome swamp, floodplain swamp and blackwater stream.

PREVIOUS USES

Prior to acquisition, the parcels within Buck Bay Flatwoods Preserve were utilized for hunting, and silviculture. Analyses of historic aerial images indicate that

timber harvesting occurred on portions of the property prior to 1937, and most of the pine forest was clearcut sometime in the 1940's. Since that time, periodic timber harvests have been conducted on portions of the property, more than once in some locations. The most recent harvests appear to have occurred in the late 1990's within the dome swamps, and between 2001 and 2008 within the flatwoods.

RECREATION

Recreational opportunities within Buck Bay Flatwoods Preserve will include hiking, bicycling and horseback riding. Limited hunting is allowed on the property as part of a formal contract that will provide hunting privileges in exchange for site security and maintenance. The contract will end when the site is opened to the public, however other limited hunting opportunities may be provided on the property in the future.

An entrance and trailhead at the existing gate on County Road 225 will provide access to the Preserve. A trail network utilizing existing roads and firebreaks will be established. Interpretive materials will be developed to educate visitors about the natural and cultural resources of the area, and the recreational opportunities provided within the Preserve.

II. PURPOSE

The purpose of the Buck Bay Flatwoods Preserve project is to protect, preserve, and enhance the unique natural and cultural resources found on the property, to protect critical drinking water resources, and to provide an enjoyable and educational, natural resource-based recreational experience. Buck Bay Flatwoods Preserve is managed only for the conservation, protection and enhancement of natural resources, and for natural resource-based recreation that is compatible with the conservation, protection and enhancement of the site. The desired future condition of Buck Bay Flatwoods Preserve is the preservation of existing high quality natural communities, and restoration and/or enhancement of species diversity and wildlife habitat in areas impacted by previous land uses, while providing visitors with an enjoyable nature experience that enhances their understanding and appreciation of Alachua County's rich natural and cultural history.

PRIORITIZED MANAGEMENT ACTIVITIES

- Maintain, enhance and restore natural communities.
    - Implement prescribed fire in fire-dependent natural communities to manage fuel loads and to promote healthy functioning natural systems.
    - Pursue restoration of degraded natural communities.
    - Manage altered communities such that future restoration potential is enhanced or not degraded.
    - Remove feral animals.
    - Remove invasive exotic plants.
- Monitor and document effects of management activities.
    - Ensure that management activities do not harm listed species.
- Continue to inventory flora and fauna.
- Protect water quality and soil resources.
- Document, protect, and monitor cultural resources.

- Provide opportunities for educational, natural resource-based recreational experiences.
    - Develop a network of trails.
    - Develop interpretive materials appropriate to the resources of the Preserve.
- Implement creative solutions to accomplish basic stewardship needs such as staffing, site security and maintenance.
    - Maintain a hunting contract to provide site security and maintenance in exchange for limited hunting privileges.

LAND USE AND ZONING

Buck Bay Flatwoods Preserve is composed of two parcels. The western parcel (07873-000-000) is approximately 240 acres, has a land use designation of Rural/Agriculture and a zoning of Agricultural, and lies outside of the Urban Cluster. The eastern parcel (07872-016-000) is approximately 220 acres and is split by the Urban Cluster line. The western 120 acres of parcel 07872-016-000 lies outside of the Urban Cluster and has a land use designation of Rural/Agriculture and a zoning of Agricultural. The eastern 100 acres of parcel 07872-016-000 lies within the Urban Cluster and has a land use designation of Light Industrial. Of these 100 acres, however, the easternmost 40 acres are zoned "MP" (Industrial Manufacturing) while the remaining 60 acres are zoned Agricultural. The current Agricultural zoning classification is inconsistent with the Light Industrial land use designation.

Upon approval of the management plan, staff will initiate the procedures to change the future land use of both parcels to Preservation. Once the future land use change is complete, staff will initiate the procedure to change the zoning from Agriculture and MP to Conservation for both parcels.

III. NATURAL AND CULTURAL RESOURCES

TOPOGRAPHY

Buck Bay Flatwoods Preserve is located on the southern edge of the Northern Highlands physiographic region of Florida (Fernald and Purdum1998). Elevations within the Preserve range from approximately 166 feet at a high point in the northwest corner of the property, to approximately 147 feet in Hatchet Creek, where it crosses the northern property boundary. Human alteration of the natural topography is evident throughout the Preserve in the form of roads, swales, firebreaks and significant push piles associated with past land clearing. The natural channel of Hatchet Creek appears relatively unaltered within the Preserve, with the exception of erosion associated with a road crossing near the north boundary.

GEOLOGY

The geology underlying Buck Bay Flatwoods Preserve consists of Ocala limestone, overlain by the relatively impermeable Hawthorn Group, which is in turn overlain by undifferentiated sediments. The undifferentiated materials consist of sand, silt and clay of Recent to Pliocene age, while the Hawthorn Group is dominated by clay and clayey sand of Miocene age (Thomas, et al. 1985, Scott 1988). In this area of the

County the Floridan aquifer is confined by the Hawthorn Group, aquifer recharge is low, and aquifer vulnerability to pollution is lower than in the western portion of the County, where the Floridan aquifer is unconfined (Baker et al. 2005).

No minerals of commercial value are known to exist within the property.

SOILS

Nine soil types recognized by the Natural Resources Conservation Service are present within Buck Bay Flatwoods Preserve (Exhibit B) (Thomas et al. 1985). These soils range from well drained to very poorly drained, and are typically sandy in one or more horizons.

Significant soil erosion is not currently occurring within the Preserve, although evidence of past erosion is apparent where a road crosses Hatchet Creek near the Preserve's northern boundary. A stabilized road crossing at this location will minimize future soil erosion.

The soil types found within Buck Bay Flatwoods Preserve are briefly described in Appendix B.

HYDROLOGY

Buck Bay Flatwoods Preserve is located within the Hatchet Creek watershed, which covers about 65 square miles of rural lands within Alachua County. Buck Bay, the primary headwaters of Hatchet Creek, lies just to the west of the Preserve, within private timberlands, some of which are part of a formal conservation easement. Several of the wetlands within the Preserve also contribute to the baseflow of the creek, and are therefore part of the headwaters as well. Because forested wetlands produce much of the creek's baseflow, the water in the creek is highly colored with tannins. For this reason, Hatchet Creek is considered a blackwater stream. The creek enters the Preserve along the west boundary, and flows for approximately 4,000 feet through the Preserve before it crosses the north boundary and continues to the northeast toward County Road 225.

Information from an online fact sheet published for Hatchet Creek (ACEPD 2014) indicates that flow in Hatchet Creek fluctuates widely with rainfall. Annual average flow between 2008 and 2011 was 0.04 cubic feet per second (cfs), with a range from zero to 460 cfs. Water quality data for the creek indicates elevated levels of total phosphorus (TP) and total nitrogen (TN). Elevated TP may be influenced by erosion of the underlying Hawthorn Group formations, and elevated TP and TN may be a result of fertilizer use in the watershed. In spite of elevated nutrient levels, the in-stream biology of Hatchet Creek was ranked "exceptional" in 2008 – the macroinvertebrate population sampled at the County Road 225 crossing was the most diverse in Alachua County. A 2013 bio-recon assessment of the creek within the Preserve also resulted in a ranking of "exceptional" (Robin Hallbourg, Alachua County Environmental Protection Department, personal communication). In addition to Hatchet Creek, other important hydrologic features within the Preserve include several isolated dome swamps scattered throughout the preserve. No water level or water quality data are available for the dome swamps.

A half-acre borrow pit is located along the eastern Preserve boundary, adjacent to County Road 225. This borrow pit appears clearly on the 1937 and 1949 historic aerials, however becomes less visible in subsequent aerial photographs. Today, the borrow pit is flooded during periods of heavy rainfall, and dry during drought. Based upon the

dominant vegetation it appears to be a small area of mesic flatwoods grading into wet flatwoods.

In addition to the unique surface water features on the property, it is important to note that the Preserve parcels lie within the primary and secondary protection zones of the Murphree Wellfield. This issue is discussed more thoroughly within the Special Management Considerations section (Exhibit C).

NATURAL COMMUNITIES

Seven distinct natural communities and two human-altered landcover types (FNAI 2010) exist within Buck Bay Flatwoods Preserve (Exhibit D). The natural communities span a range from upland hardwood forest to the Hatchet Creek blackwater stream. The dominant natural community within the Preserve is mesic flatwoods, which covers approximately 295.1 acres, or 64 percent of the Preserve area.

The human-altered landcover types within the Preserve are a borrow area, along the eastern property boundary, and several clearing/regeneration areas, the largest of which are located southwest of Hatchet Creek. All of the natural communities and the human-altered landcover types identified within the Preserve are described in detail below and are summarized in Table 1.

Upland Hardwood Forest

A meandering band of upland hardwood forest occurs on a hill east of Hatchet Creek, covering approximately 5.7 acres. The upland hardwood forest community is in very good condition, with a diverse canopy including sweetgum (*Liquidambar styraciflua*), live oak (*Quercus virginiana*), southern magnolia (*Magnolia grandiflora*), swamp chestnut oak (*Q. michauxii*), loblolly pine, American holly (*Ilex opaca*), and flowering dogwood (*Cornus florida*). The shrub layer is sparse, and consists of small saplings of the canopy species, and occasional American beautyberry (*Calicarpa americana*) and assorted vines. Groundcover includes patches of partridgeberry (*Mitchella repens*), violets (*Viola* sp.), woodsgrass (*Oplismenus hirtellus*), ebony spleenwort (*Asplenium platyneuron*), and woodoats (*Chasmanthium* sp.)

Wet Flatwoods

Wet flatwoods occupy approximately 71.8 acres within Buck Bay Flatwoods Preserve, situated between large areas of mesic flatwoods and adjacent wetlands. The wet flatwoods are in good condition, and are characterized by slash pine (*Pinus elliottii*) and occasional longleaf pine (*P. palustris*), growing with sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), water oak (*Q. nigra*) and dahoon (*I. cassine*) in the overstory. Sparse saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*) and giant gallberry (*I. coreacea*) dominate the shrub layer in patches. Groundcover is abundant and diverse, and includes Carolina redroot (*Lachnanthes caroliana*), bottlebrush threeawn (*Aristida spciformis*), bluestem (*Andropogon* sp.), sugarcane plumegrass (*Saccharum giganteum*), Virginia chain fern (*Woodwardia virginica*), tenangle pipewort (*Eriocaulon decangulare*), Elliott's yelloweyed grass and other yelloweyed grasses (*Xyris elliottii* and *Xyris* sp.), *Sphagnum* moss, hooded pitcherplant (*Sarracenia minor*) and at least two species of sundew (*Drosera capillaris* and *D. intermedia*). The westernmost area of wet flatwoods, located south of Hatchet Creek, appears to have been clearcut as recently as the 1990's, and allowed to regenerate

naturally. The wet flatwoods located near the center at the southeast corner of the Preserve appear to have been bedded and planted in the 1980's, and thinned twice since then.

Mesic Flatwoods

The dominant natural community within Buck Bay Flatwoods Preserve is mesic flatwoods, covering approximately 295.1 acres. This community type ranges from fair to very good condition, owing to various levels of disturbance associated with past silvicultural management. The mesic flatwoods within the Preserve are fairly typical in species composition, characterized by slash, longleaf and loblolly pine (*P. taeda*) in the overstory, with patchy saw palmetto, wax myrtle (*Myrica cerifera*), and gallberry (*I. glabra*) in the midstory, and maidencane (*Panicum hemitomon*), blue maidencane (*Amphicarpum muhlenbergianum*), wiregrass (*Aristida stricta*), shiny blueberry (*Vaccinium myrsinites*), tailed bracken (*Pteridium aquilinum* var. *pseudocaudatum*), blackroot (*Pterocaulon pycnostachyum*) and broomsedge bluestem (*A. virginicus*) dominating the groundcover layer. Swamp azalea (*Rhododendron viscosum*) occurs in sporadic patches throughout the mesic flatwoods. Water and laurel oak (*Q. hemisphaerica*) are numerous throughout the flatwoods, likely a result of fire suppression, and sand pine (*P. clausa*) is sporadically present, perhaps persisting from previous cultivation. Some areas of the mesic flatwoods are bedded and densely planted with pines, while others have been thinned, and the beds have eroded sufficiently to appear more natural.

Within the mesic flatwoods, east of Hatchet Creek and near the Preserve's northern boundary, are several small and isolated patches of more xeric vegetation, characteristic of upland pine or sandhill communities. In addition to the typical flatwoods species described above, tree species present within these patches include persimmon (*Diospyros virginiana*), bluejack oak (*Q. incana*), sand live oak (*Q. geminata*), turkey oak (*Q. laevis*) and southern red oak (*Q. falcata*). Mid-story trees and shrubs present include flowering dogwood, sparkleberry (*V. arboretum*), dwarf live oak (*Q. minima*), American beautyberry, and several species of pawpaw (*Asimina* sp.). Groundcover is patchy within these xeric pockets, appearing to be most abundant and diverse in areas which are open to sunlight. Species persisting include wiregrass, narrowleaf silkgrass (*Pityopsis graminifolia*), sand blackberry (*Rubus cuneifolius*), and gopher apple (*Licania michauxii*). Active gopher tortoise (*Gopherus polyphemus*) burrows are frequent in the open areas. Because of the sporadic and small nature of these patches, they are not mapped as separate natural communities. It is likely that areas of xeric pinelands were once more extensive on the property, and became less distinguishable with decades of silvicultural management and fire suppression. With the introduction of prescribed fire and habitat restoration, these areas may expand and be more easily delineated.

Depression Marsh

Two small, isolated depression marshes exist within the Preserve, covering approximately 1.4 acres in total. Both depression marshes are in good condition, in spite of a lack of fire and ground disturbance associated with timber management activities in the adjacent flatwoods. Vegetation in the depression marshes is dominated by Carolina

redroot, purple bluestem (*Andropogon glomeratus* var. *glaucopsis*), Virginia chain fern, and numerous wetland sedges, with occasional titi (*Cyrilla racemiflora*) and swamp tupelo (*Nyssa sylvatica* var. *biflora*).

Dome Swamp

Several dome swamps occur within Buck Bay Flatwoods Preserve, some lying completely within the Preserve boundary, and others overlapping the property boundary with adjacent lands. Cumulatively, the dome swamps within the Preserve cover approximately 51 acres, and are in fair to good condition. Review of historic aerial photographs indicates that all of the dome swamps within the Preserve have been clearcut at least once, some within the past 20 years. In addition, most of the dome swamps contain internal fire plow scars as well as perimeter fire breaks. The edges of the swamps are typically vegetated with impenetrable thickets of fetterbush and titi, while the interiors of the swamps are dominated by pond cypress (*Taxodium ascendens*), swamp tupelo, slash pine and red maple (*Acer rubrum*) in the canopy, with buttonbush (*Cephalanthus occidentalis*), Virginia chain fern, lizard's tail (*Saururus cernuus*), assorted wetland grasses and *Sphagnum* moss in the understory. Abundant cypress stumps and ruts from logging equipment are evidence of past timber harvest activities, however pond cypress and other swamp species are regenerating naturally.

Floodplain Swamp

The floodplain of Hatchet Creek is largely composed of floodplain swamp, which typically occurs in parallel bands on either side of the creek channel. A small area of floodplain swamp associated with Hatchet Creek also extends southeast of the main creek corridor, near the center of the Preserve. All together, the floodplain swamp natural community is approximately 30.5 acres in size, and is in very good condition. Characteristic vegetation includes bald cypress (*T. distichum*), red maple, swamp laurel oak (*Q. laurifolia*), swamp tupelo, swamp dogwood (*C. foemina*), American hornbeam (*Carpinus caroliniana*), wax myrtle, titi, greenbrier (*Smilax* sp.) and wild azalea (*Rhododendron* sp.). Groundcover is sparse to nonexistent, and where it occurs it includes small patches of woodoats, string-lily (*Crinum americanum*), and poison ivy (*Toxicodendron radicans*).

Very small patches of bottomland forest intermittently occur adjacent to the floodplain swamp associated with Hatchet Creek. These areas are not distinguished on the natural community map due to their small size and intermittent nature. Tree stumps bear evidence of past logging activities within the bottomland forest, however it remains in good condition, characterized by mature swamp laurel oak, bald cypress, red maple and sweetgum, underlain by occasional dense patches of woodoats.

Blackwater Stream

Hatchet Creek is a blackwater stream which originates from extensive forested wetlands in the Buck Bay Flatwoods, located west of the Preserve. The creek enters the Preserve along the west boundary, and flows for approximately 4000 feet (covering approximately 1.2 acres) through the Preserve, before it crosses the north boundary and continues to the northeast toward County Road 225. Unlike many small streams in Alachua County, this portion of Hatchet Creek does not appear to be channelized or

topographically altered. Stream condition index (SCI) data from 2009 and 2013 indicate the water and habitat quality of Hatchet Creek in this area are "exceptional" (Hallbourg, personal communication). For these reasons, the blackwater stream community is considered in excellent condition. Very few plants exist within the blackwater stream, owing to intermittent scouring by storm events, and to heavy shading from the tea-colored waters and the floodplain swamp canopy. Isolated pools which form during dry periods are sometimes vegetated with duckweed (*Lemna* sp.). Tree roots and leaf packs in the streambed provide habitat to several macroinvertebrates, including damselfly, dragonfly, mayfly, caddisfly, dobsonfly, midge larvae, amphipods, worms, mites, and beetles.

Borrow Area (human-altered)

A 0.4-acre borrow pit is located along the eastern Preserve boundary, adjacent to County Road 225. This borrow pit appears clearly on the 1937 and 1949 historic aerials, however becomes less visible in subsequent aerial photographs. Today, the borrow pit is flooded during periods of heavy rainfall, and dry during drought. Based upon the dominant vegetation it appears to be a small area of mesic flatwoods, grading into wet flatwoods as it approaches the adjacent ditch and county road. The borrow area is dominated by mature slash pine, red maple, water oak, swamp bay, dense fetterbush, large gallberry, saw palmetto, wax myrtle, tailed bracken, broomsedge, shiny blueberry, and royal fern.

Clearing/regeneration (human-altered)

Several cleared areas exist on the property, five of which are large enough in scale to be included in the natural community map (Exhibit D). The mapped cleared areas total approximately 6.7 acres, and are in good to very good condition. Review of historic aerials indicates the cleared areas were created sometime between 2001 and 2005, following a timber clearcut on the property, and since that time they were maintained and used as food plots to support game hunting. All of the cleared areas show signs of cultivation or harrowing, and two of them contain large push piles of soil, indicating they were scraped. The push pile for one of the scraped areas is very large, and encroaches on the edges of a floodplain swamp community. Remarkably, each of the cleared areas contain abundant native groundcover similar in composition to that growing in the adjacent flatwoods. Species present in the cleared areas include Mohr's thoroughwort (*Eupatorium mohrii*), Curtiss' dropseed (*Sporobolus curtissii*), tenangle pipewort, Elliott's yelloweyed grass, bottlebrush threeawn, blackroot, and Virginia chain fern. As a result of repeated and long-term mowing and clearing, these areas largely lack trees and shrubs, however where they do occur, they are typically slash pine, saw palmetto or gallberry.

Table 1. Summary of natural communities, acreages, condition and rarity in Buck Bay Flatwoods Preserve

Natural Community	Approximate Acres	% of Area	Condition	FNAI Ranking[1]
Upland Hardwood Forest	5.7	1	Very good	G5/S3
Wet Flatwoods	71.8	15	Good	G4/S4
Mesic Flatwoods	295.1	64	Fair to Very good	G4/S4
Depression Marsh	1.4	<1	Good	G4/S4
Dome Swamp	51	11	Fair to good	G4/S4
Floodplain Swamp	30.5	7	Very good	G4/S4
Blackwater Stream	1.2	<1	Excellent	G4/S3
Human-altered landcover				
Borrow Area	0.4	<1	N/A	N/A
Clearing/regeneration	6.7	1	N/A	N/A

[1]Florida Natural Areas Inventory (FNAI) 2010

LISTED SPECIES

Plant and animal species occurring within Buck Bay Flatwoods Preserve are observed and recorded on an ongoing basis (Exhibits E and F). Listed plant species within the Preserve include spoonleaf sundew (*Drosera intermedia*) and hooded pitcherplant (*Sarracenia minor*), both on the State of Florida's Threatened Plant List, and cinnamon fern (*Osmunda cinnamomea*), Royal fern (*O. regalis* var. *spectabilis*) and pinxter azalea (*Rhododendron canescens*), all listed on the State of Florida's Commercially Exploited Plant List.

Listed animal species known to occur within the Preserve include gopher tortoise, which is listed as Threatened by the State and tracked by the Florida Natural Areas Inventory (FNAI). Gopher tortoises inhabit dry, upland habitats including sandhill, pasture, dry flatwoods, and xeric hammock, relying on deep sandy soils for burrows, and abundant, seasonally diverse groundcover for food. Active gopher tortoise burrows are numerous in xeric areas of the mesic flatwoods natural community.

FNAI-tracked species are reported to FNAI using current element occurrence data forms, which are available online at: http://www.fnai.org/fieldreportingforms.cfm. In addition, County staff supports researchers and other agencies tracking particular species by providing occurrence data and related land management information.

Listed Species Strategies

- Survey the Preserve for listed species and document population locations and habitats.
- Implement prescribed fire in fire-maintained communities to enhance gopher tortoise habitat and promote groundcover diversity.
- Report listed species occurrence data to FNAI using the appropriate Field Reporting Form.
- Provide species occurrence data and management information to researchers and other interested agencies.

INVENTORY OF NATURAL COMMUNITIES AND BIOTA

The flora, fauna and natural communities will continue to be surveyed and qualitatively described. All major management and restoration activities will be monitored on an annual basis or as needed using strategically placed photo points. The locations and data will be linked to a Geographic Information System (GIS) where changes will be documented. Baseline photos will be taken prior to initiating management activities.

Inventory Strategies

- Continue to survey flora, fauna and natural communities.
- Continue to compile lists and maintain spatial data.
- Develop GIS database for tracking monitoring activities.
- Establish photo points and monitor annually or as needed.

RESTORATION

Most of the wet and mesic flatwoods natural communities within Buck Bay Flatwoods Preserve require some level of restoration, ranging from small-scale, selective removal of exotic species to large-scale offsite hardwood control and longleaf pine restoration. Restoration efforts will rely heavily on the application of frequent prescribed fire in fire-dependent communities

Buck Bay Flatwoods Preserve contains approximately 200 acres of bedded pine plantation, and approximately 174 acres of natural pine stands which have been managed for timber production. Most of the pines, whether planted or natural, are established on mesic or wet flatwoods. Some stands have been sufficiently thinned to mimic natural pine stand density and distribution, while others remain densely planted in rows of a single age class. Restoration will entail thinning of pines and removal of offsite hardwoods, which will be achieved through timber harvests as well as the application of prescribed fire. Supplemental planting of longleaf pines or native groundcover may also be necessary, if natural recruitment and survival of desirable species is not sufficient to support fire management.

Several cleared areas, which were historically maintained as food plots for hunting, exist within the Preserve. Two of the clearings contain push piles which were created when the clearings were scraped. The push pile associated with the largest cleared area is significant in size and encroaches on an adjacent wetland. Restoration of this ecotone will entail removal of established vegetation from the pile, and redistribution of the scraped soil over the clearing, leaving the pile area and the clearing at an approximate natural grade. Additional undiscovered push piles may exist in other locations within the Preserve.

In spite of being cleared, scraped, and regularly mowed and cultivated, most of the cleared areas within the Preserve contain excellent groundcover which may be used as small seed sources for future restoration work. For that reason, these areas will be maintained with periodic mowing and fire to remain relatively free of trees and large shrubs.

Restoration Strategies

- Utilize prescribed fire to control offsite hardwoods and increase groundcover diversity within pine-dominated natural communities.
- Thin planted pines to create a more natural forest structure.

- Remove offsite hardwoods that cannot be controlled with prescribed fire.
- Plant wiregrass in areas it is unnaturally sparse or absent.
- Plant longleaf pine seedlings in areas which lack longleaf pine regeneration.
- Continue to control exotic plants with herbicide.
- Restore scraped and piled areas to natural grade when feasible.
- Maintain cleared areas for potential groundcover seed sources.
- Establish photo points and monitor restoration areas annually or as needed.

PRESCRIBED FIRE

Approximately 375 acres within Buck Bay Flatwoods Preserve are fire-dependent natural or human-altered communities. The fire history for the property is unknown, although large-scale wildfire occurred on lands to the northwest during the late 1990's. Fires naturally occur at a frequency of 1 to 3 years in pinelands across the southeast (FNAI 2010). Wet flatwoods which contain dense shrub layers and are dominated by slash pine may have fire return intervals between 5 and 10 years, while mesic flatwoods have an average return interval of 3.2 years. Natural fire return intervals in depression marsh and dome swamp communities are largely dependent upon the hydrologic conditions within those wetlands as well as the occurrence of fire in the surrounding uplands. Based upon these statistics, the target fire return interval for the pinelands and fire-dependent wetlands within Buck Bay Flatwoods Preserve will be 3 to 5 years. In order to meet that target, roughly 90 to 125 acres per year should be burned with prescribed fire.

Prescribed fire will be utilized throughout the Preserve to enhance groundcover diversity in all of the fire-dependent natural communities, to help restore natural community structure, and to reduce fuel loads thereby decreasing the risk of catastrophic wildfire. Fire preparation will typically include semi-annual mowing and/or harrowing of fire breaks. Buck Bay Flatwoods Preserve currently contains approximately 9 miles of internal roads and fire breaks, and approximately 1.5 additional miles are planned. Because of the Preserve's proximity to the Gainesville Regional Airport and major state and local roads, prescribed fire smoke management will be a major planning factor in determining the size and number of burn units, and therefore the location of fire breaks on the property.

Annual notifications are mailed to neighbors of the Preserve to inform them about prescribed fire activities planned for the upcoming year, and why prescribed fire is used as a management tool.

Seasonal fire management plans are drafted by County staff, and are implemented in close coordination with the Florida Forest Service. Each plan addresses burn objectives, fuel loading, smoke management, safety, wildfire incident protocol and neighbor notification.

Prescribed Fire Strategies

- Develop and implement seasonal prescribed burn plans for Buck Bay Flatwoods Preserve.
- Continue to participate in the North Central Florida Prescribed Fire Working Group.
- Coordinate prescribed fire activities with the Florida Forest Service and Preserve neighbors.
- Educate neighbors and visitors about the natural role of fire in Florida.

INVASIVE EXOTIC PLANTS

To date, only six non-native plant species are known to occur within Buck Bay Flatwoods Preserve. Three of these are currently listed as Category I invasive plants by the Florida Exotic Pest Plant Council (FLEPPC) – silktree (*Albizia julibrissin*), camphortree (*Cinnamomum camphora*) and Chinese tallowtree (*Sapium sebiferum*). These occur sporadically throughout the Preserve, and no large infestations are currently known to exist. The other three – centipede grass (*Eremochloa ophiuroides*), bahiagrass (*Paspalum notatum*), and vaseygrass (*Paspalum urvillei*), which are not listed by FLEPPC, are also scattered throughout the Preserve, typically in small, dense patches. All plant species identified in the Preserve, and their current status as exotics, are listed in Exhibit E. In addition, a link to the current FLEPPC list of Category I and II exotic plants that occur in Florida is provided in Section VI. References.

Staff regularly monitors the Preserve properties for new infestations of invasive plants and to determine the effectiveness of treatments and plan for follow-up treatments. In general, follow-up treatments of previously treated areas will take priority over initiation of new treatments.

Invasive Plant Strategies

- Continue to survey the property for invasive exotic plants.
- Treat exotic plant infestations as funding and staffing allows.
- Seek funding and grant opportunities to implement invasive plant control.
- Monitor treated sites and perform follow-up treatment.
- Develop an exotic species database for County managed lands.

FERAL ANIMALS

Feral hogs (*Sus scrofa*) are frequently encountered on the property by County staff, and significant areas of rooting damage are scattered throughout the Preserve. Fresh evidence of hog activity is frequently observed, suggesting a large population of hogs is consistently present on the Preserve. Hog trapping and removal is recommended to control the feral hog population and reduce unwanted damage to natural resources. No other feral animal species have been documented on the property.

Staff will continue to monitor the properties for populations of feral animals and will take actions as needed.

Feral Animal Program Strategies

- Implement an effective feral hog trapping and removal program.
- Continue to monitor the site for feral animal species.

CULTURAL RESOURCES

No archaeological or historic sites listed by the Florida Master Site File (FMSF) are recorded within Buck Bay Flatwoods Preserve.

The surveyor's notes from the 1845 section line survey indicate two historic roads – the Newnansville Road and the Hogtown Road – crossed the property. In addition, two roads that exist within the Preserve today appear to align with two roads depicted on an 1890 topographic map of the Arredondo quadrangle, indicating they may be remnants of the old roads. The current roads have been used and maintained by heavy equipment for decades, and their historic significance is currently undetermined.

Historic use of the site is confirmed by Herty cup fragments, which are common throughout the pine forests, and serve as evidence that the pine forests within the Preserve were once used for turpentine production.

Staff observed heat-treated chert flakes in one of the cleared areas near Hatchet Creek during the evaluation of the site. The area was disturbed by recent harrowing.

The discovery of potential sites will be documented with the Florida Master Site File. Land management activities will be planned to avoid disturbance to unknown sites, or to any future known sites.

Cultural Resource Management Strategies

- Record newly discovered sites with the Florida Master Site File.
- Routinely visit known sites and note any disturbance.
- Evaluate all land management activities for potential disturbance to cultural sites.
- Interpret cultural and historical resources of the Preserve to the public.

SPECIAL MANAGEMENT CONSIDERATIONS

The City of Gainesville Murphree Water Plant is adjacent to the southwest corner of the Preserve. In addition, the Murphree Wellfield is located west and south of the Preserve. The Murphree Wellfield is a system of multiple production wells which supply Gainesville with its public water supply. The Buck Bay Flatwoods Preserve parcels lie within the primary and secondary protection zones of the Murphree Wellfield (Exhibit C). The protection zones, and the regulatory codes which apply to lands within these zones, are identified in the Murphree Wellfield Protection Code, Chapter 355 of the Alachua County Code of Ordinances. Wells, septic systems, and the storage of hazardous materials within the protection zones are regulated in the Code.

IV. FOREST RESOURCES

Most of the pinelands and forested wetlands within Buck Bay Flatwoods Preserve have been managed for timber production for at least 60 years. A timber inventory and volume assessment was conducted in 2014, to estimate the value of the timber on the property at the time of acquisition. Five distinct pine timber stands were identified, distinguished by species composition, approximate age, and status of past thinning. Currently, there are nearly 200 acres that contain planted slash pines at various stages of growth and management, and an additional 174 acres of natural pine stands.

With the ultimate goal of restoring, enhancing and preserving the ecological values of the pine forests in Buck Bay Flatwoods Preserve, future forest management activities will focus on reestablishing uneven-aged, open pine forests with a diverse, native understory. Restoration will occur in phases over a period of many years, and will utilize pine timber harvesting, offsite hardwood and exotic species control, application of prescribed fire, and planting of native tree and groundcover species. Any revenue generated from forest management within Buck Bay Flatwoods Preserve will be used to fund restoration activities within the Preserve.

Forest Management Strategies

- Establish and implement a priority list and timeline for pine timber harvesting.
- Control offsite hardwoods and exotic species.

- Apply prescribed fire.
- Plant native tree and groundcover species as needed.
- Place revenues generated from forest management in a fund specifically designated for Buck Bay Flatwoods Preserve to fund restoration activities within the Preserve.

V. SITE DEVELOPMENT AND IMPROVEMENT

Site development and improvements are proposed to facilitate management operations on the Preserve, and to provide natural resource-based recreational opportunities.

Recreational opportunities within Buck Bay Flatwoods Preserve will include bicycling, hiking, horseback riding and nature observation. Uses and amenities will be developed after workshops with stakeholder groups, neighbors and as budget and staffing allow. Limited hunting opportunities may also be provided. Public access to the trails will be provided from a trail head at the entrance on County Road 225.

Until the Preserve is developed and open on a full-time basis, it will be open by appointment for staff-guided walks and volunteer events.

EXISTING PHYSICAL IMPROVEMENTS

Buck Bay Flatwoods Preserve contains approximately 8.8 miles of interior roads and two gates, which were established prior to County ownership (see Exhibit G). A low water crossing exists on the road that crosses Hatchet Creek. The crossing is in very poor condition and consists of assorted riprap and dislodged plastic pipes which may have been utilized as culverts.

Several intermittent sections of wire fence exist along the property boundary, as noted on the survey. The fences are in poor condition, and meander across the surveyed boundary, indicating they were likely constructed by adjacent property owners. Where the fences lie on County property, they will be left in place as long as they pose no hazards to operations on the Preserve. To date, no interior fences have been identified within the Preserve.

One groundwater monitoring well exists near the southeast corner of the western parcel, inside a small fence enclosure. The well is identified as FL-74, and was originally an FDOT well which was transferred to the City of Gainesville in 2011. Gainesville Regional Utilities currently holds a license agreement to maintain and monitor the well.

PROPOSED PHYSICAL IMPROVEMENTS

Proposed physical improvements to Buck Bay Flatwoods Preserve are depicted on the Conceptual Site Plan (Exhibit H). These improvements include additional fire breaks and fencing, several low water crossings, a paved apron and stabilized parking area, directional and interpretive signs, a footbridge and wildlife viewing areas.

Approximately 1.1 miles of additional fire breaks are anticipated, including new boundary breaks along the west property boundary, and along the north property boundary west of Hatchet Creek. In addition, two interior fire breaks are anticipated in the center portion of the property, connecting the existing main access roads. The exact on-the-ground locations and dimensions of the fire breaks are yet to be determined. Construction of fire breaks will entail mowing or other mechanical removal of existing

vegetation, and harrowing, discing or blading to mineral soil, leaving a drivable fire break that is wide enough to accommodate a standard brush truck. Mineral lines will be left at natural grade. Ground disturbance will be avoided in wetlands, and large or exceptional specimen trees will be avoided in the development of additional fire breaks.

Two existing low water crossings are planned for reconstruction, and four new low water crossings are planned for new construction to stabilize eroded and flood-prone sections of existing roads within the Preserve. One of the existing crossings planned for reconstruction crosses Hatchet Creek. Construction of low water crossings will entail re-contouring of existing soil within the roadbed, and backfilling with crushed rock or stone to a grade that matches the surrounding conditions. Geotextile fabric may be utilized beneath stone fill as necessary.

A marked trail system will be developed that utilizes existing roads. A small footbridge across Hatchet Creek is anticipated to create a trail loop on the west side of the Preserve. It should be noted that most of the lands within the Preserve are occasionally flooded. This affects access to roads and trails, and will naturally limit use of trail-related improvements. In some instances, trails may be closed to avoid hazardous conditions for visitors, or to minimize negative impacts such as soil erosion.

Public access to the trail system will be provided through a stabilized driveway entrance on County Road 225. The driveway will require a permit, and will be constructed to meet County Public Works driveway turnout standards for a paved County road. The driveway will provide public access to a stabilized pervious parking area.

To the greatest extent possible improvements will be located to minimize impacts to natural resources, to avoid impacts to listed plant and animal species, and to avoid known archaeological sites. Construction and maintenance of proposed physical improvements is contingent upon available funding and ability to obtain proper permits.

Site Development and Improvement Strategies

- Establish new fire breaks.
- Reconstruct two (2) existing low water crossings.
- Construct four (4) new low water crossings.
- Establish marked trails utilizing existing roads.
- Construct a footbridge crossing Hatchet Creek to create a trail loop.
- Design and construct a stabilized driveway entrance on County Road 225.
- Design and construct a stabilized pervious parking area and trail head.
- Design, fabricate and install trail signs and viewing areas.

ACCESS

Public access to Buck Bay Flatwoods Preserve will be from an existing gated entrance located at 6502 North County Road 225. An entrance drive, stabilized parking area and trail head is anticipated for this location.

A subset of the existing roads throughout the Preserve will be maintained for vehicular access by County staff, service and emergency vehicles. Only authorized vehicles will have access through the vehicular gates. The remaining existing roads will be abandoned. Some access roads may serve multiple uses as service roads, firebreaks and or recreational trails.

Access Strategies

- Designate and maintain a network of access roads and gates.
- Designate and maintain a network of recreational trails.

EASEMENTS, CONCESSIONS, LEASES, AND REVENUES

Currently there are no plans for establishing new easements, concessions or leases on Buck Bay Flatwoods Preserve.

A formal contract is currently in place for hunting, which provides limited hunting privileges on the property in exchange for site maintenance and security. The term of the contract is five years, and will be terminated when the Preserve is opened to the public.

An existing private road briefly crosses the Preserve boundary at the southwest corner of the property. Based upon historic aerial images, it appears this road has existed since at least 1974. No easement is currently in place for the road, nor is one anticipated.

A formal license agreement is currently in place with Gainesville Regional Utilities (GRU) for access, maintenance and monitoring of a groundwater well on the property. This agreement is valid until terminated by the County.

Any revenues collected from Buck Bay Flatwoods Preserve property, including funds generated from timber sales, will be placed in a segregated account solely for the upkeep and maintenance on the Preserve.

Easements, Concessions, Leases and Revenues Strategies

- Maintain a formal contract for limited hunting on Buck Bay Flatwoods Preserve until the Preserve is opened to the public.
- Maintain a formal license agreement with GRU for access, maintenance and monitoring to the groundwater well.
- Designate revenues from the Preserve in a segregated account to be used solely for upkeep and maintenance on the Preserve.

V. STEWARDSHIP NEEDS

MAINTENANCE

Perpetual maintenance of the site will entail regular work to keep fences, gates, roads, signs and other physical improvements in good, functional condition. Because many of the roads in the Preserve are utilized as fire breaks, annual fire break maintenance will include mowing, harrowing and clearing of the roads. In addition, regular maintenance mowing and vertical trimming may be necessary to keep roads open and in good repair for dual use as recreational trails.

Boundary signs and markers, interpretive trail signs and structures require periodic inspection, cleaning and repair to maintain their function.

EPD staff will conduct all maintenance activities utilizing County staff, volunteers, contractors and community service worker crews.

Maintenance Strategies

- Monitor fence lines quarterly for needed repairs.
- Mow and vertically trim roads, trails and fire breaks as needed to maintain them in open condition.
- Inspect boundary signs and markers annually and maintain as needed.
- Inspect interpretive signs and structures monthly and maintain as needed.
- Conduct maintenance activities utilizing County staff, volunteers, contractors, or community service workers.

SECURITY

General on-site security will be provided primarily by staff, contractors and/or volunteers. The property boundary is only partially fenced. Unauthorized off-road vehicular usage occurs at times. Unauthorized access will be evaluated and appropriate measures to discourage it will be implemented. These may include additional or more secure fencing or gates, placement of boulders or bollards, signage and additional security patrols. Informational and regulatory signage will be posted on the site. Design and placement of these signs will be coordinated with the Alachua County Sheriff's Office (ASO) and also the FWC Law Enforcement staff.

In order to facilitate emergency wildfire response on County Preserves, a map book was created and provided to FFS, FWC and the Alachua County Fire Rescue Department. The book includes aerial maps of the parcels marked with access points, gates, roads, firebreaks, and County staff contact numbers. This map book is periodically updated to reflect changes in ACF sites, and made available to appropriate response agencies.

Security Strategies

- Provide regular security patrols.
- Coordinate design and placement of informational and regulatory signage with ASO and FWC.
- Fabricate and install informational and regulatory signage.
- Periodically update wildfire response information.

STAFFING

Alachua County Forever staff will coordinate the management of Buck Bay Flatwoods Preserve with assistance from other county departments, contractors and volunteers.

VI. REFERENCES

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VII. STEWARDSHIP PLAN IMPLEMENTATION TIMELINE AND BUDGET

Task	Target Date	Estimated Cost	Funding Source	Potential Cooperators
Land Use and Zoning				
Amend future land use to Preservation.	06/2015	Staff time	GF	ACGMD
Amend zoning to Conservation.	12/2015	Staff time	GF	ACGMD
Listed Species				
Survey properties for listed species.	Ongoing	Staff time	GF	
Report Tracked species occurrence data to FNAI.	Ongoing	Staff time	GF	
Implement prescribed fire in fire-maintained communities to enhance gopher tortoise habitat and promote groundcover diversity.	Ongoing	Accounted for below under Prescribed Fire	GF	FFS, Contractors
Biota and Natural Community Inventory				
Continue to inventory plants, animals and natural communities.	Ongoing	Staff time	GF	FNPS, AAS, UF
Develop GIS database for tracking monitoring activities.		Staff time	GF	
Establish photo points in significant areas.	Ongoing	Staff time, $50/year	GF	
Restoration				
Utilize prescribed fire to control offsite hardwoods and increase groundcover diversity within pine-dominated natural communities.	Ongoing	Accounted for below under Prescribed Fire	GF	FFS, Contractors
Thin planted pines to create a more natural forest structure.	TBD	Staff time. Harvest will produce timber proceeds.	GF	Contractors
Remove and herbicide offsite hardwoods that cannot be controlled with prescribed fire.	TBD	Staff time. Harvest should be revenue neutral or produce timber proceeds. Herbicide cost TBD	GF	Contractors
Plant wiregrass in areas it is unnaturally sparse or absent.	TBD	Staff time, cost of seedlings TBD	GF	Contractor, Volunteers
Plant longleaf pine seedlings in areas which lack longleaf pine regeneration.	TBD	Staff time, cost of seedlings TBD	GF	Contractor, Volunteers
Control exotic plants with herbicide as needed.	Ongoing	Staff time	GF	FFWCC for herbicide bank
Restore scraped and piled areas to natural grade when feasible.	Ongoing	Staff time	GF	Contractor, Hunting Licensee
Maintain cleared areas for potential groundcover seed sources.	Ongoing	Staff time	GF	License Agreement Licensee

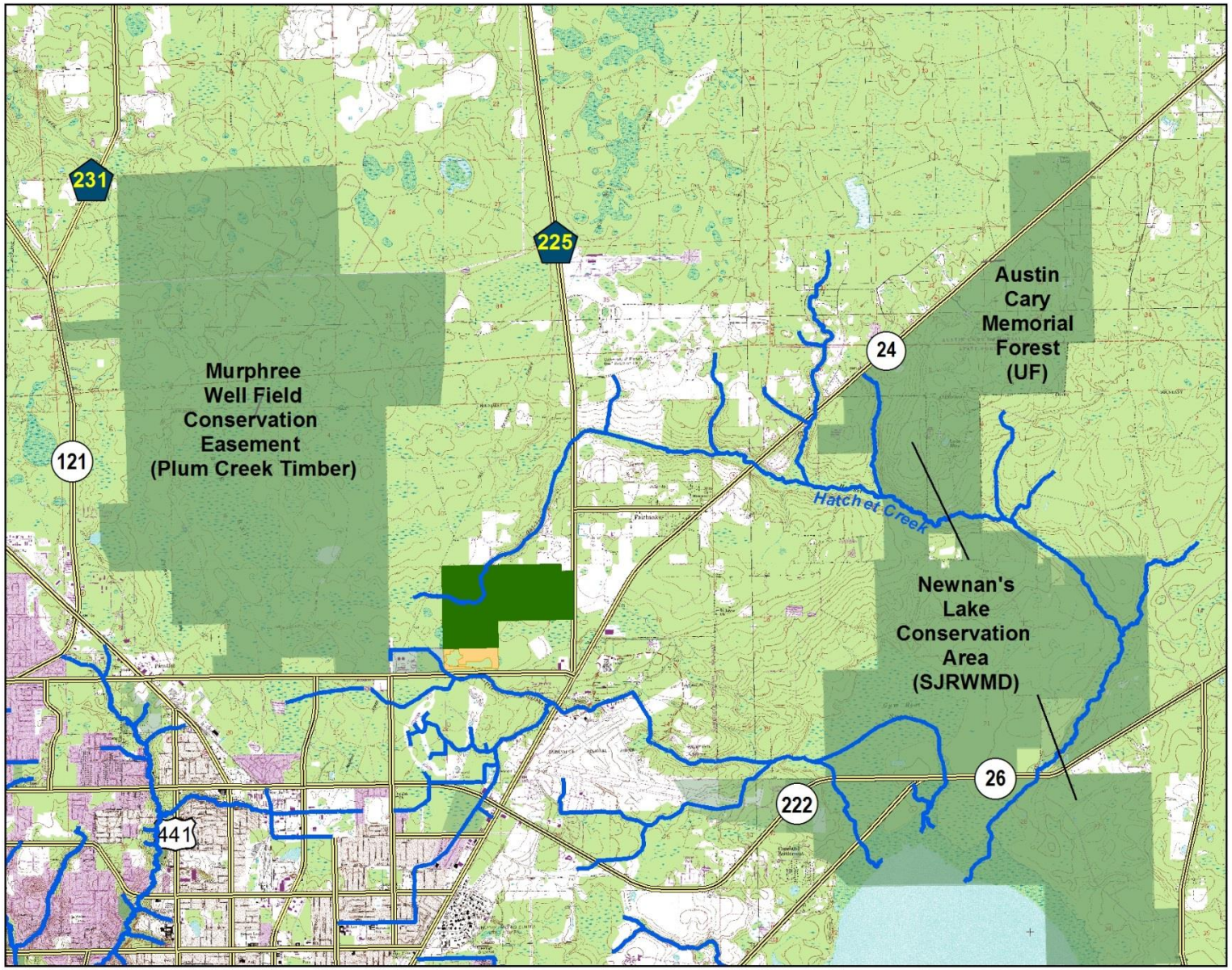
Task	Target Date	Estimated Cost	Funding Source	Potential Cooperators
Establish photo points and monitor restoration areas annually or as needed.	Ongoing	Staff time	GF	
Prescribed Fire				
Develop and implement seasonal prescribed burn plans for approximately 90-125 acres per year	Winter	Up to $3,125/year	GF	ACEPD, FFS
Create approximately 1.1 miles of new fire breaks.	04/ 2015	$2,500	GF	FFS, Contractors
Maintain approximately 10.5 miles of roads and fire breaks.	Mow twice annually, harrow as needed	Up to $1,500/year	GF	FFS, License Agreement licensee, Contractor
Notify Preserve neighbors annually of planned prescribed burning.	Annually in November	Staff time and $100/year	GF	
Educate neighbors and Preserve visitors about the benefits of prescribed fire.	Ongoing	Staff time, cost of interpretive materials	GF	FFS
Invasive Exotic Plants				
Continue to survey the property for invasive exotic plants.	Ongoing	Staff time	GF	
Treat exotic plant infestations as funding and staffing allows.	Ongoing	Staff time	GF	License Agreement Licensee
Seek funding and grant opportunities to implement invasive plant control.	Ongoing	Staff time	GF	FFWCC
Monitor treated sites and perform follow-up treatment.	Ongoing	Staff time	GF	License Agreement Licensee
Develop an exotic species database for County managed lands.	Ongoing	Staff time	GF	
Feral Animals				
Implement an effective feral hog trapping and removal program.	12/2014	Staff time	GF	ACAS, FFWCC, Contractors, License Agreement licensee
Monitor the site for feral animal species.	Ongoing	Staff time	GF	License Agreement licensee
Cultural Resources				
Record newly discovered sites with the Florida Master Site File.	As needed	Staff time	GF	DHR
Routinely visit known sites and note any disturbance.	As needed	Staff time	GF	DHR
Evaluate management activities for potential disturbance to cultural sites.	As needed	TBD	GF	DHR
Interpret cultural and historical resources of the Preserve.	Ongoing	Staff time	GF	
Site Development and Improvement				
Establish new fire breaks.	12/2014	Accounted for above under Prescribed Fire	GF	FFS, Contractors

Task	Target Date	Estimated Cost	Funding Source	Potential Cooperators
Reconstruct two (2) existing low water crossings.	4/2015	$2,500	GF	Contractors, License Agreement licensee
Construct four (4) new low water crossings.	4/2015	$5,000	GF	Contractors, License Agreement licensee
Establish marked trails utilizing existing roads.	11/2018	Staff time	GF	Volunteers
Design, permit and construct a stabilized driveway entrance on County Road 225.	6/2018	$12,000	Bond, Timber revenues, GF	Contractors, SRWMD, ACPW
Design and construct a stabilized pervious parking area and trail head with kiosk.	10/2018	$6,000	Bond, GF	Contractors
Design, fabricate and install entrance signs, trail signs and viewing areas.	10/2018	$6,000	Bond, GF	Contractors
Develop outreach and interpretive materials for kiosk, brochure and signage.	12/2018	Staff time	GF	Communications Office
Easements, Concessions, Leases and Revenues				
Maintain a formal contract for limited hunting.	Ongoing	Staff time	GF	License Agreement licensee
Maintain a formal license agreement with GRU for well access, maintenance and monitoring.	Ongoing	Staff time	GF	GRU
Designate revenues from the Preserve in a segregated account solely for upkeep and maintenance on the Preserve.	As needed	Staff time	GF	Contractors
Maintenance				
Mow roads and firebreaks as needed during the growing season to maintain them in open condition for visitor use.	As needed	(Some road maintenance accounted for above in fire) Additional costs TBD	GF	FFS, Contractors, Volunteers
Inspect boundary signs and markers annually and maintain as needed.	Annually	Staff time	GF	Volunteers
Inspect interpretive signs and structures quarterly and maintain as needed.	Quarterly	Staff time	GF	Volunteers
Security				
Perform regular security inspections.	Ongoing	Staff time	GF	Volunteers, Contractors, ASO
Coordinate design and placement of informational and regulatory signage with ASO and FWC.	12/2014	Staff time	GF	ASO, FWC
Fabricate and install informational and regulatory signage.	12/2014	$500	GF	Volunteers, ACPW, Contractors
Update wildfire response information.	As needed	Staff time	GF	FFS

Key to acronyms used in Table VII.

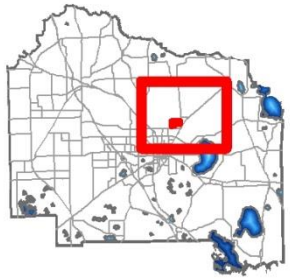
ACAS	Alachua County Animal Services
ACEPD	Alachua County Environmental Protection Department
ACGMD	Alachua County Growth Management Department
APW	Alachua County Public Works
ASO	Alachua County Sheriff's Office
DHR	Department of State Division of Historic Resources
FFS	Florida Forest Service
FNPS	Florida Native Plant Society
FFWCC	Fla. Fish and Wildlife Conservation Comm.
GF	General Fund
GRU	Gainesville Regional Utilities
SRWMD	Suwannee River Water Management District

Exhibit A - Buck Bay Flatwoods Preserve Location Map



Alachua County, Florida
Environmental Protection

- Buck Bay Flatwoods Preserve
- Conservation Lands
- Murphree Solar Park CE
- Gainesville Creeks
- Major Roads



Alachua County FOREVER

N W E S

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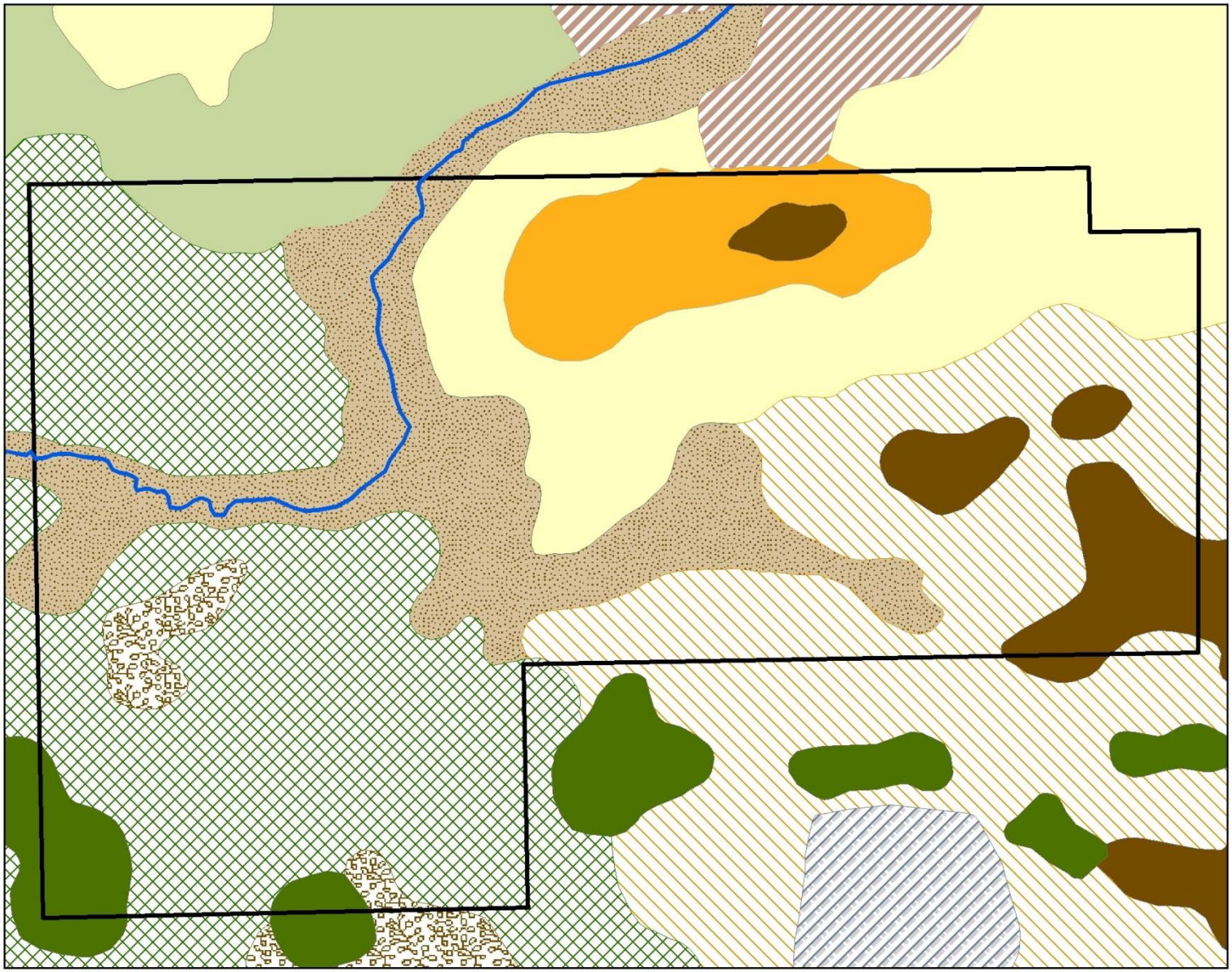
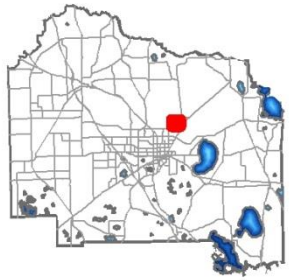
Exhibit B - Buck Bay Flatwoods Preserve Soils Map



Alachua County, Florida
Environmental Protection

- Preserve Boundary
- Candler fine sand, 0 to 5% slopes
- MWS soils, flooded
- Millhopper sand, 0 to 5% slopes
- Monteocha loamy sand
- Newnan sand
- Pits and Dumps
- Pomona sand
- Pomona sand, depressional
- Surrency sand
- Tavares sand, 0 to 5% slopes
- Wauchula sand
- Hatchet Creek



Alachua County FOREVER

N W E S

0 250 500 1,000 1,500 2,000 Feet

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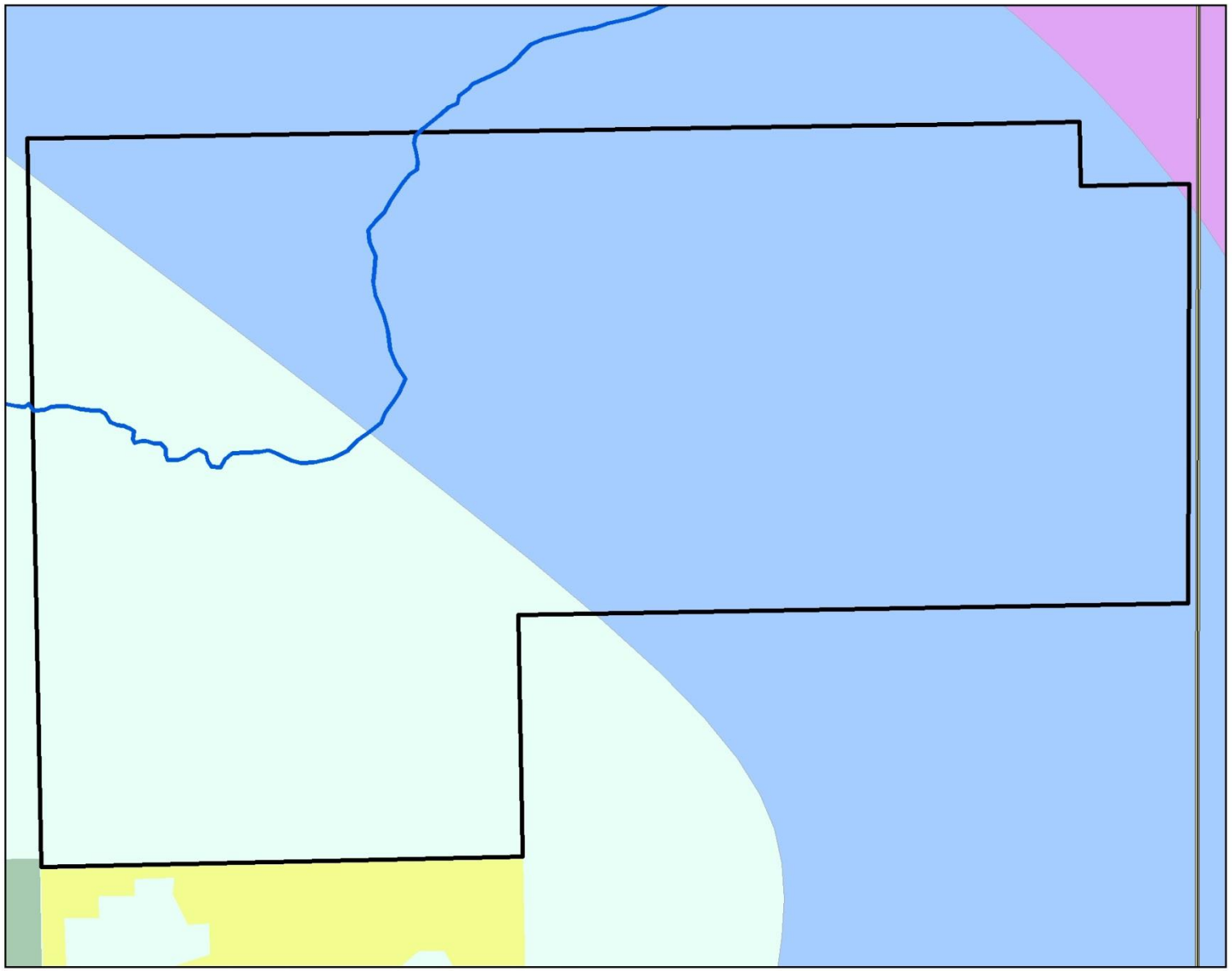
Exhibit C - Buck Bay Flatwoods Preserve Wellfield Protection Zones Map

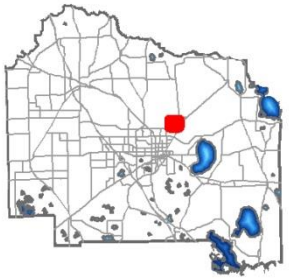


Alachua County, Florida
Environmental Protection

- Preserve Boundary
- Murphree Water Treatment Plant
- Murphree Solar Park CE
- Hatchet Creek
- Major Roads

Murphree Well Field Protection Zones

- Primary Zone (2-yr)
- Secondary Zone (10-yr)
- Tertiary Zone (25-yr)



Alachua County FOREVER

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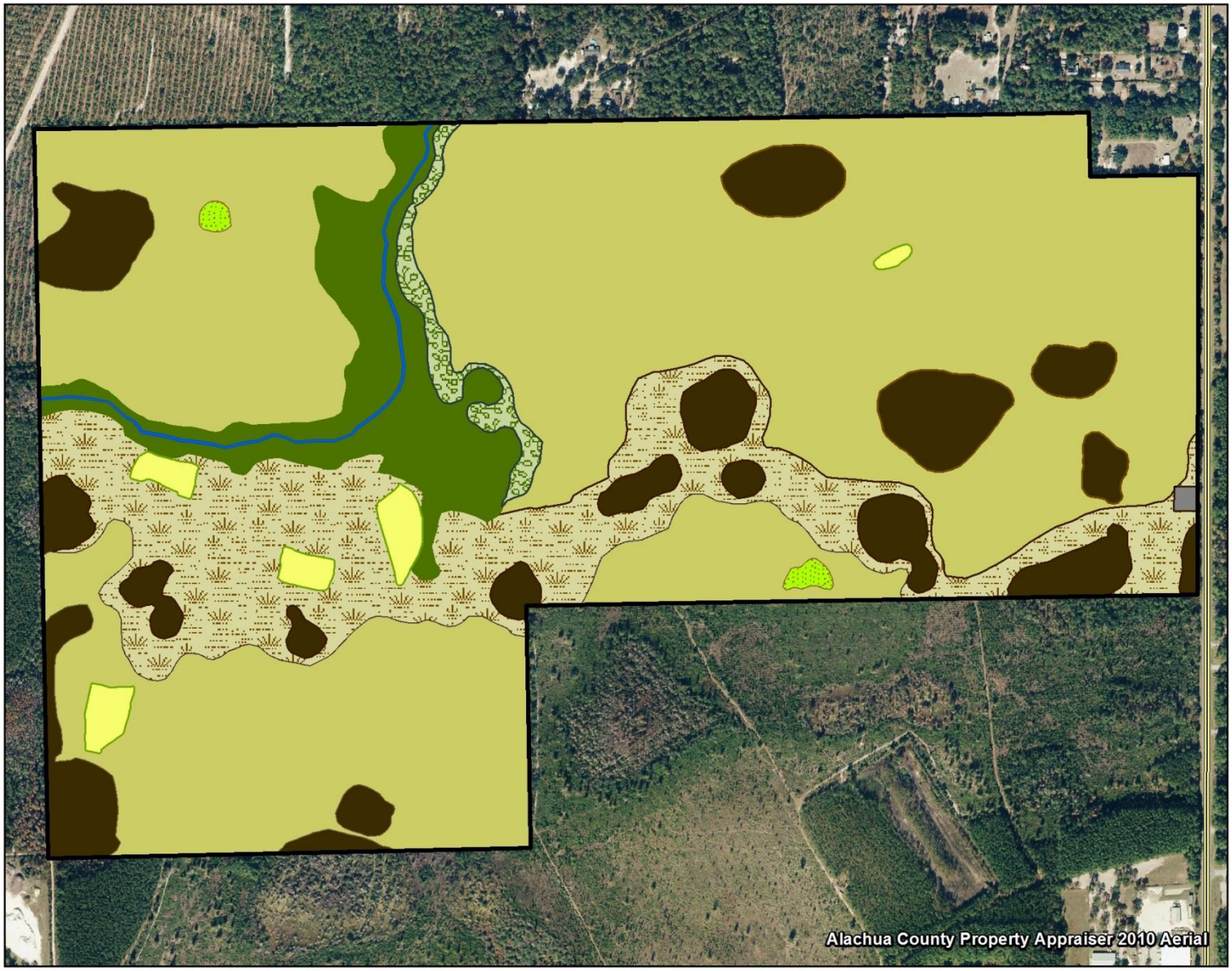
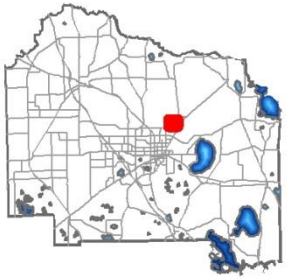
DISCLAIMER: This map and the spatial data it contains are made available as a public service, to be used for reference purposes only. The Alachua County Environmental Protection Department provides this information AS IS without warranty of any kind. The quality of the data is dependent on the various sources from which each data layer is obtained.

Exhibit D - Buck Bay Flatwoods Preserve Natural Communities Map

Alachua County, Florida
Environmental Protection



- Preserve Boundary
- Blackwater Stream (1.2 ac)
- Borrow Pit (0.4 ac)
- Clearing/regeneration (6.7 ac)
- Depression Marsh (1.4 ac)
- Dome Swamp (51 ac)
- Floodplain Swamp (30.5 ac)
- Mesic Flatwoods (295.1 ac)
- Upland Hardwood Forest (5.7 ac)
- Wet Flatwoods (71.8 ac)



Alachua County FOREVER

N W E S

0 250 500 1,000 1,500 2,000 Feet

DISCLAIMER: This map and the spatial data it contains are made available as a public service, to be used for reference purposes only. The Alachua County Environmental Protection Department provides this information AS IS without warranty of any kind. The quality of the data is dependent on the various sources from which each data layer is obtained.

EXHIBIT E: BUCK BAY FLATWOODS PRESERVE PLANT SPECIES LIST

Scientific Name	Common Name	Origin	FDAC	FWS	FNAI
Acer rubrum	RED MAPLE				
Albizia julibrissin	SILKTREE	Exotic			
Aletris sp.	COLICROOT				
Alternanthera philoxeroides	ALLIGATORWEED				
Ambrosia artemisiifolia	COMMON RAGWEED				
Amphicarpum muhlenbergianum	BLUE MAIDENCANE				
Andropogon glomeratus	BUSHY BLUESTEM				
Andropogon glomeratus var. glaucopsis	PURPLE BLUESTEM				
Andropogon virginicus	BROOMSEDGE BLUESTEM				
Aristida spiciformis	BOTTLEBRUSH THREEAWN				
Aristida stricta	WIREGRASS				
Asimina angustifolia	SLIMLEAF PAWPAW				
Asimina incana	WOOLLY PAWPAW				
Asimina pygmea	DWARF PAWPAW				
Asplenium platyneuron	EBONY SPLEENWORT				
Axonopus fissifolius	COMMON CARPETGRASS				
Axonopus furcatus	BIG CARPETGRASS				
Baccharis halimifolia	GROUNDSEL TREE				
Bacopa caroliniana	LEMON BACOPA				
Balduina uniflora	ONEFLOWER HONEYCOMBHEAD				
Berchemia scandens	ALABAMA SUPPLEJACK				
Bidens bipinnata	SPANISH NEEDLES				
Bidens mitis	SMALLFRUIT BEGGARTICKS				
Bignonia capreolata	CROSSVINE				
Callicarpa americana	AMERICAN BEAUTYBERRY				
Campsis radicans	TRUMPET CREEPER				
Carex alata	BROADWING SEDGE				
Carex fissa var. aristata	HAMMOCK SEDGE				
Carex frankii	FRANK'S SEDGE				
Carex glaucescens	CLUSTERED SEDGE				
Carex longii	LONG'S SEDGE				
Carphephorus corymbosus	COASTALPLAIN CHAFFHEAD				
Carphephorus odoratissimus	VANILLALEAF				
Carphephorus paniculatus	DEERTONGUE				
Carpinus caroliniana	MUSCLEWOOD				
Centella asiatica	SPADELEAF				
Cephalanthus occidentalis	COMMON BUTTONBUSH				
Chasmanthium laxum	SLENDER WOODOATS				
Chasmanthium laxum var. sessiliflorum	LONGLEAF WOODOATS				
Cinnamomum camphora	CAMPHORTREE	Exotic			
Cirsium nuttallii	NUTTALL'S THISTLE				
Cladina subtenuis	REINDEER LICHEN				
Cnidoscolus stimulosus	TREAD-SOFTLY				
Cornus florida	FLOWERING DOGWOOD				
Cornus foemina	SWAMP DOGWOOD				
Crinum americanum	STRING-LILY				
Cynodon dactylon	BERMUDAGRASS				

Scientific Name	Common Name	Origin	FDAC	FWS	FNAI
Cyperus distinctus	SWAMP FLATSEDGE				
Cyperus haspan	HASPAN FLATSEDGE				
Cyperus strigosus	STRAWCOLORED FLATSEDGE				
Cyrilla racemiflora	TITI				
Desmodium sp.	TICKTREFOIL				
Dichanthelium aciculare	NEEDLELEAF WITCHGRASS				
Dichanthelium ensifolium	CYPRESS WITCHGRASS				
Dichanthelium ensifolium var. unciphyllum					
Dichanthelium sp.	WITCHGRASS				
Dichondra carolinensis	CAROLINA PONYSFOOT				
Diodia teres	POOR JOE				
Diodia virginiana	VIRGINIA BUTTONWEED				
Diospyros virginiana	COMMON PERSIMMON				
Drosera capillaris	PINK SUNDEW				
Drosera intermedia	SPOONLEAF SUNDEW		T		S3
Eleocharis baldwinii	BALDWIN'S SPIKERUSH				
Eleocharis geniculata	CANADA SPIKERUSH				
Eleocharis interstincta	KNOTTED SPIKERUSH				
Eleocharis montevidensis	SAND SPIKERUSH				
Eleocharis tuberculosa	CONECUP SPIKERUSH				
Elephantopus nudatus	SMOOTH ELEPHANTSFOOT				
Eragrostis elliottii	ELLIOTT'S LOVEGRASS				
Eragrostis virginica	COASTAL LOVEGRASS				
Erechtites hieraciifolius	FIREWEED				
Eremochloa ophiuroides	CENTIPEDEGRASS	Exotic			
Erigeron quercifolius	OAKLEAF FLEABANE				
Erigeron vernus	EARLY WHITETOP FLEABANE				
Eriocaulon decangulare	TENANGLE PIPEWORT				
Eryngium baldwinii	BALDWIN'S ERYNGO				
Eryngium yuccifolium	BUTTON RATTLESNAKEMASTER				
Eupatorium capillifolium	DOGFENNEL				
Eupatorium compositifolium	YANKEEWEED				
Eupatorium mohrii	MOHR'S THOROUGHWORT				
Eustachys petraea	PINEWOODS FINGERGRASS				
Euthamia caroliniana	SLENDER FLATTOP GOLDENROD				
Fimbristylis autumnalis	SLENDER FIMBRY				
Fraxinus caroliniana	POP ASH				
Fuirena pumila	DWARF UMBRELLASEDGE				
Fuirena scirpoidea	SOUTHERN UMBRELLASEDGE				
Galactia regularis	EASTERN MILKPEA				
Galium sp.	BEDSTRAW				
Gamochaeta antillana	DELICATE EVERLASTING				
Gamochaeta pensylvanica	PENNSYLVANIA EVERLASTING				
Gamochaeta purpurea	SPOONLEAF PURPLE EVERLASTING				
Gaylussacia dumosa	DWARF HUCKLEBERRY				
Gaylussacia frondosa var. tomentosa	BLUE HUCKLEBERRY				
Gelsemium sempervirens	YELLOW JESSAMINE				
Gordonia lasianthus	LOBLOLLY BAY				
Gratiola hispida	ROUGH HEDGEHYSSOP				
Helianthemum corymbosum	PINEBARREN FROSTWEED				
Houstonia procumbens	INNOCENCE				

Scientific Name	Common Name	Origin	FDAC	FWS	FNAI
Hydrocotyle umbellata	MARSHPENNYWORT				
Hypericum cistifolium	ROUNDPOD ST.JOHN'S-WORT				
Hypericum fasciculatum	SANDWEED				
Hypericum gentianoides	PINEWEEDS				
Hypericum hypericoides	ST.ANDREW'S-CROSS				
Hypericum mutilum	DWARF ST.JOHN'S-WORT				
Hypericum myrtifolium	MYRTLELEAF ST.JOHN'S-WORT				
Hypericum tetrapetalum	FOURPETAL ST.JOHN'S-WORT				
Hypoxis curtissii	COMMON YELLOW STARGRASS				
Hyptis alata	CLUSTERED BUSHMINT				
Ilex cassine	DAHOON				
Ilex cassine var. myrtifolia	MYRTLE DAHOON				
Ilex coriacea	LARGE GALLBERRY				
Ilex glabra	GALLBERRY				
Ilex opaca	AMERICAN HOLLY				
Itea virginica	VIRGINIA SWEETSPIRE				
Juncus marginatus	GRASSLEAF RUSH				
Juncus megacephalus	BIGHEAD RUSH				
Juncus repens	LESSER CREEPING RUSH				
Juncus scirpoides	NEEDLEPOD RUSH				
Juniperus virginiana	RED CEDAR				
Kalmia hirsuta	HAIRY LAUREL				
Lachnanthes caroliana	CAROLINA REDROOT				
Lachnocaulon anceps	WHITEHEAD BOGBUTTON				
Lechea sp.	PINWEED				
Leucothoe racemosa	SWAMP DOGHOBBLE				
Liatris tenuifolia var. quadriflora	SHORTLEAF GAYFEATHER				
Licania michauxii	GOPHER APPLE				
Linaria canadensis	CANADIAN TOADFLAX				
Liquidambar styraciflua	SWEETGUM				
Ludwigia maritima	SEASIDE PRIMROSEWILLOW				
Ludwigia microcarpa	SMALLFRUIT PRIMROSEWILLOW				
Ludwigia octovalvis	MEXICAN PRIMROSEWILLOW				
Ludwigia repens	CREEPING PRIMROSEWILLOW				
Lycopodiella caroliniana	SLENDER CLUB-MOSS				
Lyonia ferruginea	RUSTY STAGGERBUSH				
Lyonia fruticosa	COASTALPLAIN STAGGERBUSH				
Lyonia lucida	FETTERBUSH				
Magnolia virginiana	SWEETBAY				
Marshallia graminifolia	GRASSLEAF BARBARA'S BUTTONS				
Medicago lupulina	BLACK MEDICK				
Mikania scandens	CLIMBING HEMPVINE				
Mitchella repens	PARTRIDGEBERRY				
Mitreola sessilifolia	SWAMP HORNPOD				
Myrica cerifera	WAX MYRTLE				
Nyssa sylvatica var. biflora	SWAMP TUPELO				
Oclemena reticulata	WHITETOP ASTER				
Osmunda cinnamomea	CINNAMON FERN		C		
Osmunda regalis	ROYAL FERN				
Oxalis corniculata	COMMON YELLOW WOODSORREL				
Panicum anceps	BEAKED PANICUM				

Scientific Name	Common Name	Origin	FDAC	FWS	FNAI
Panicum hemitomon	MAIDENCANE				
Paspalum laeve	FIELD PASPALUM				
Paspalum notatum	BAHIAGRASS	Exotic			
Paspalum setaceum	THIN PASPALUM				
Paspalum urvillei	VASEYGRASS	Exotic			
Persea palustris	SWAMP BAY				
Photinia pyrifolia	RED CHOKEBERRY				
Phyla nodiflora	TURKEY TANGLE FOGFRUIT				
Physalis sp.	GROUNDCHERRY				
Pinus clausa	SAND PINE				
Pinus elliottii	SLASH PINE				
Pinus palustris	LONGLEAF PINE				
Pinus taeda	LOBLOLLY PINE				
Pityopsis graminifolia	NARROWLEAF SILKGRASS				
Plantago virginica	VIRGINIA PLANTAIN				
Pluchea foetida	STINKING CAMPHORWEED				
Pluchea rosea	ROSY CAMPHORWEED				
Poa annua	ANNUAL BLUEGRASS				
Polygala lutea	ORANGE MILKWORT				
Polygala nana	CANDYROOT				
Polygala setacea	COASTALPLAIN MILKWORT				
Polygonum hydropiperoides	SWAMP SMARTWEED				
Polygonum punctatum	DOTTED SMARTWEED				
Polypremum procumbens	RUSTWEED				
Proserpinaca pectinata	COMBLEAF MERMAIDWEED				
Prunus serotina	BLACK CHERRY				
Pteridium aquilinum var. pseudocaudatum	TAILED BRACKEN				
Pterocaulon pycnostachyum	BLACKROOT				
Ptilimnium capillaceum	MOCK BISHOPSWEED				
Quercus falcata	SOUTHERN RED OAK				
Quercus geminata	SAND LIVE OAK				
Quercus hemisphaerica	LAUREL OAK				
Quercus incana	BLUEJACK OAK				
Quercus laevis	TURKEY OAK				
Quercus laurifolia	LAUREL OAK				
Quercus minima	DWARF LIVE OAK				
Quercus nigra	WATER OAK				
Quercus pumila	RUNNING OAK				
Quercus virginiana	LIVE OAK				
Rhexia mariana	PALE MEADOWBEAUTY				
Rhexia nashii	MAID MARIAN				
Rhexia nuttallii	NUTTALL'S MEADOWBEAUTY				
Rhexia petiolata	FRINGED MEADOWBEAUTY				
Rhexia sp.	MEADOWBEAUTY				
Rhododendron canescens	MOUNTAIN AZALEA		C		
Rhododendron viscosum	SWAMP AZALEA				
Rhus copallinum	WINGED SUMAC				
Rhynchospora cephalantha	BUNCHED BEAKSEDGE				
Rhynchospora decurrens	SWAMPFOREST BEAKSEDGE				
Rhynchospora fascicularis	FASCICLED BEAKSEDGE				
Rhynchospora microcephala	BUNCHED BEAKSEDGE				

Scientific Name	Common Name	Origin	FDAC	FWS	FNAI
Rhynchospora miliacea	MILLET BEAKSEDGE				
Rhynchospora plumosa	PLUMED BEAKSEDGE				
Rhynchospora wrightiana	WRIGHT'S BEAKSEDGE				
Rubus argutus	SAWTOOTH BLACKBERRY				
Rubus cuneifolius	SAND BLACKBERRY				
Rumex hastatulus	HEARTWING DOCK				
Sabal palmetto	CABBAGE PALM				
Sabatia brevifolia	SHORTLEAF ROSEGENTIAN				
Saccharum giganteum	SUGARCANE PLUMEGRASS				
Sagittaria graminea	GRASSY ARROWHEAD				
Salix caroliniana	CAROLINA WILLOW				
Salvia lyrata	LYRELEAF SAGE				
Sanicula canadensis	CANADIAN BLACKSNAKEROOT				
Sapium sebiferum	CHINESE TALLOWTREE	Exotic			
Sarracenia minor	HOODED PITCHERPLANT		T		
Saururus cernuus	LIZARD'S TAIL				
Scirpus cyperinus	WOOLGRASS				
Scleria ciliata	FRINGED NUTRUSH				
Scleria triglomerata	TALL NUTGRASS				
Scutellaria integrifolia	HELMET SKULLCAP				
Serenoa repens	SAW PALMETTO				
Sida rhombifolia	INDIAN HEMP				
Smilax auriculata	EARLEAF GREENBRIER				
Smilax bona-nox	SAW GREENBRIER				
Smilax glauca	CAT GREENBRIER				
Smilax walteri	CORAL GREENBRIER				
Solidago fistulosa	PINEBARREN GOLDENROD				
Spermolepis divaricata	ROUGHFRUIT SCALESEED				
Sphagnum sp.	SPHAGNUM MOSS				
Sphenopholis obtusata	PRAIRIE WEDGESCALE				
Spiranthes praecox	GREENVEIN LADIESTRESSES				
Sporobolus curtissii	CURTISS' DROPSEED				
Sporobolus indicus	SMUTGRASS				
Sporobolus junceus	PINEYWOODS DROPSEED				
Stachys floridana	FLORIDA BETONY				
Stillingia sylvatica	QUEENSDELIGHT				
Syngonanthus flavidulus	YELLOW HATPINS				
Taxodium ascendens	POND CYPRESS				
Taxodium distichum	BALD CYPRESS				
Tillandsia bartramii	BARTRAM'S AIRPLANT				
Toxicodendron radicans	EASTERN POISON IVY				
Trichostema dichotomum	FORKED BLUECURLS				
Usnea strigosa	STRIGOSE BEARD LICHEN				
Utricularia subulata	ZIGZAG BLADDERWORT				
Vaccinium arboreum	SPARKLEBERRY				

FDACS = Florida Department of Agriculture and Consumer Services; FWS = U.S. Fish and Wildlife Service; FNAI = Florida Natural Areas Inventory; C = Commercially exploited; S3 = Very rare or locally restricted in Florida; T = Threatened species

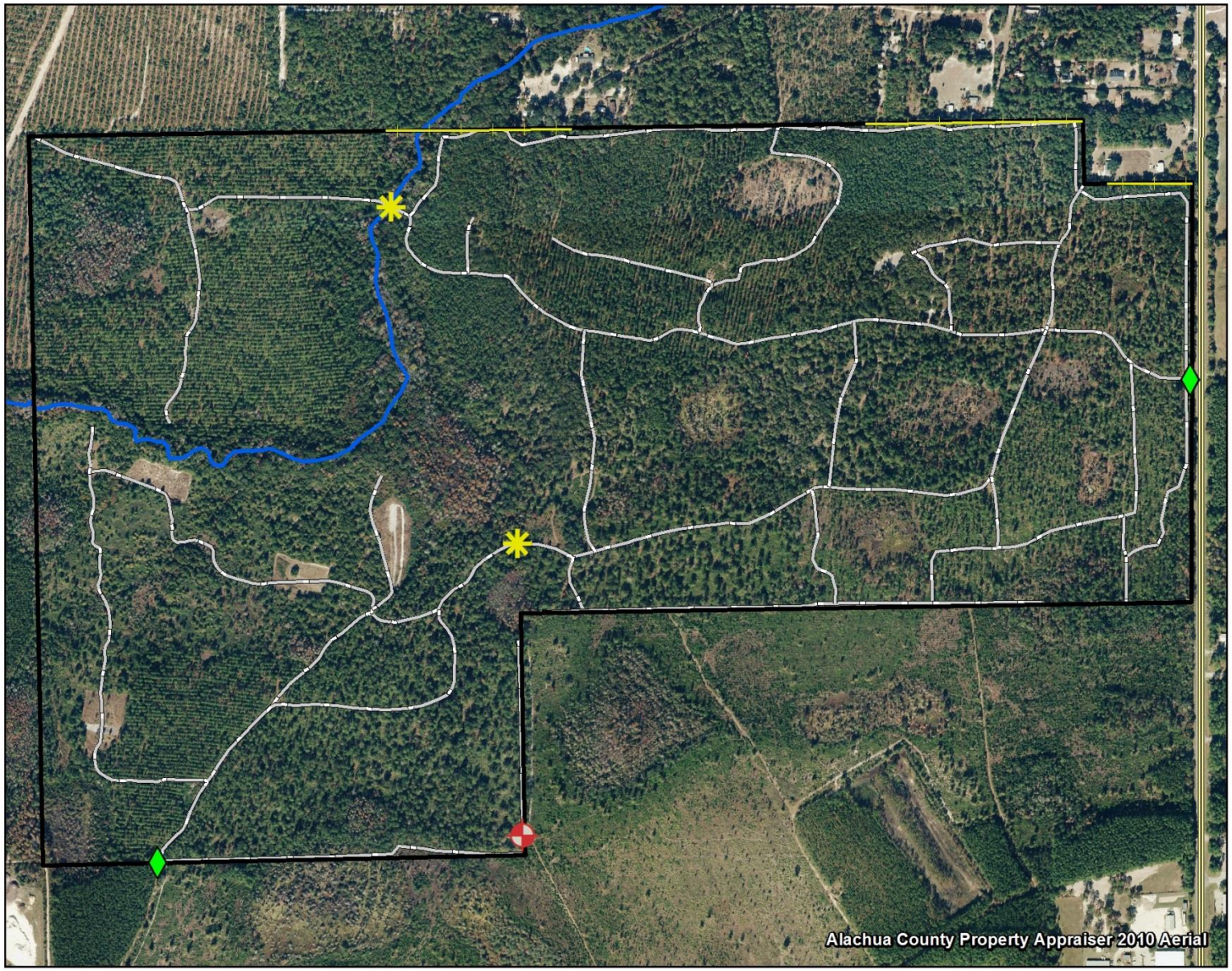
EXHIBIT F: BUCK BAY FLATWOODS PRESERVE ANIMAL SPECIES LIST

Group	Common Name	Scientific Name	SRANK	FEDERAL	STATE	Status
Birds	Tufted Titmouse	*Baeolophus bicolor*				
	Northern Cardinal	*Cardinalis cardinalis*				
	Yellow-billed Cuckoo	*Coccyzus americanus*				
	Northern Bobwhite	*Colinus virginianus*				
	American Crow	*Corvus brachyrhynchos*				
	Prairie Warbler	*Dendroica discolor*				
	Pine Warbler	*Dendroica pinus*				
	Gray Catbird	*Dumetella carolinensis*				
	Red-bellied Woodpecker	*Melanerpes carolinus*				
	Brown-headed Cowbird	*Molothrus ater*				
	Great Crested Flycatcher	*Myiarchus crinitus*				
	Northern Parula Warbler	*Parula americana*				
	Downy Woodpecker	*Picoides pubescens*				
	Eastern Towhee	*Pipilo erythrophthalmus*				
	Summer Tanager	*Piranga rubra*				
	Carolina Chickadee	*Poecile carolinensis*				
	Blue-gray Gnatcatcher	*Polioptila caerulea*				
	American Woodcock	*Scolopax minor*				
	Carolina Wren	*Thryothorus ludovicianus*				
	Yellow-throated Vireo	*Vireo flavifrons*				
	White-eyed Vireo	*Vireo griseus*				
	Red-eyed Vireo	*Vireo olivaceus*				
	Mourning Dove	*Zenaida macroura*				
Invertebrates	Ebony Jewelwing	*Calopteryx maculata*				
	Eastern Pondhawk	*Erythemis simplicicollis*				
	Little Blue Dragonlet	*Erythrodiplax miniscula*				
	Citrine Forktail	*Ischnura hastata*				
	Common Buckeye	*Junonia coenia*				
	Golden-winged Skimmer	*Libellula auripennis*				
	Bar-winged Skimmer	*Libellula axilena*				
	Great Blue Skimmer	*Libellula vibrans*				
	Red-spotted Purple	*Limenitis arthemis astyanax*				
	Giant Swallowtail	*Papilio cresphontes*				
	Palamedes Swallowtail	*Papilio palamedes*				

	Lovebug	*Plecia nearctica*				
	Crayfish	*Procambarus paeninsulanus*				
	Twolined Spittlebug	*Prosapia bicincta*				
	Eastern Lubber Grasshopper	*Romalea microptera*				
	Fire Ant	*Solenopsis invicta*				Exotic
	Carolina Saddlebags	*Tramea carolina*				
Mammals	White-tailed Deer	*Odocoileus virginianus*				
	Raccoon	*Procyon lotor*				
	Gray Squirrel	*Sciurus carolinensis*				
	Wild Pig	*Sus scrofa*				Exotic
Reptiles and Amphibians	Florida Cricket Frog	*Acris gryllus dorsalis*				
	Oak Toad	*Bufo quercicus*	S3	N	LT	
	Southern Racer	*Coluber constrictor priapus*				
	Gopher Tortoise	*Gopherus polyphemus*				
	Pinewoods Treefrog	*Hyla femoralis*				
	Eastern Coral Snake	*Micrurus fulvius*				
	Southern Chorus Frog	*Pseudacris nigrita*				
	Little Grass Frog	*Pseudacris ocularis*				
	Bronze Frog	*Rana clamitans*				
	Southern Leopard Frog	*Rana sphenocephala*				
	Ground Skink	*Scincella lateralis*				
	Dusky Pigmy Rattlesnake	*Sistrurus miliarius barbouri*				

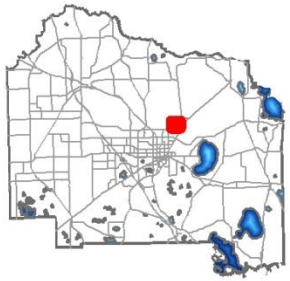
FWC = Florida Fish and Wildlife Conservation Commission; FWS = U.S. Fish and Wildlife Service; FNAI = Florida Natural Areas Inventory; LE = Endangered species; LS = Species of special concern; LT = Threatened species; SAT = Treated as Threatened due to similarity in appearance to another listed species; S2 = Imperiled in Florida; S3 = Very rare or locally restricted in Florida; S4 = apparently secure in Florida.

Exhibit G - Buck Bay Flatwoods Preserve Existing Site Improvements



Alachua County, Florida
Environmental Protection

- Preserve Boundary
- Existing Gates
- Existing Roads and Firebreaks
- Existing Low Water Crossings
- Existing Well
- Existing Fences
- Hatchet Creek



Alachua County FOREVER

N W E S

0 250 500 1,000 1,500 2,000 Feet

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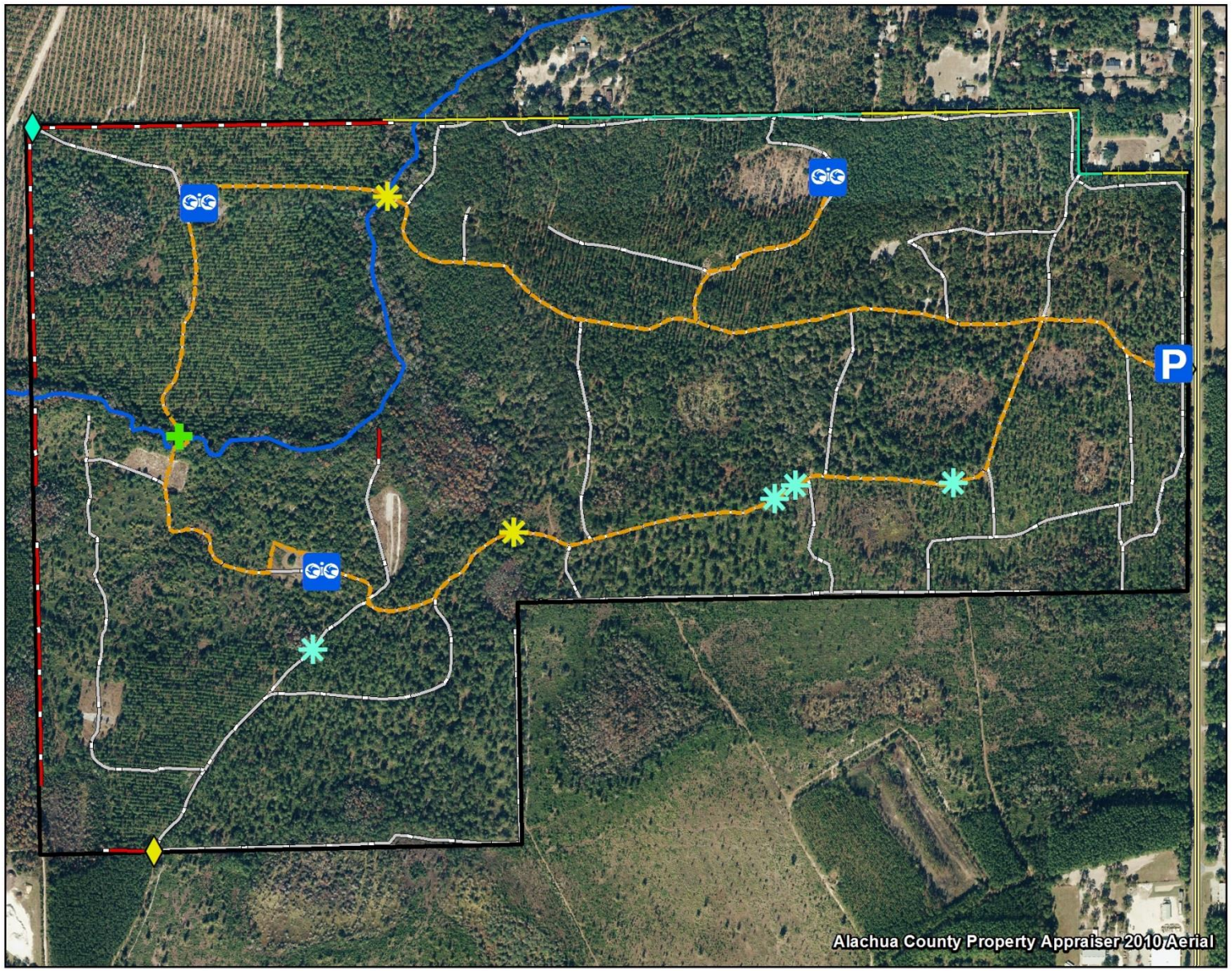
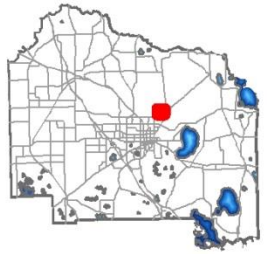
Exhibit H - Buck Bay Flatwoods Preserve Conceptual Site Plan



Alachua County, Florida
Environmental Protection

- Preserve Boundary
- Hatchet Creek
- Existing Fences
- New Fences
- Existing Gates
- New Gate
- Existing Roads and Firebreaks
- New Firebreaks
- Existing Low Water Crossings
- New Low Water Crossings
- Parking Area
- Recreational Trail
- Footbridge
- Observation Areas



Alachua County FOREVER

N W E S

0 250 500 1,000 1,500 2,000 Feet

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EXHIBIT I: MANAGEMENT PLANNING PUBLIC INVOLVEMENT

PUBLIC MEETING MINUTES

Buck Bay Flatwoods Preserve Management Planning Meeting

Date: March 31, 2015

Location: Alachua County Environmental Protection Department, Conference Room A

Present: Bob Simons, Nestor Montoya, Sandra Vardaman, Susie Hetrick

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I. Introduction and welcome by Sandra Vardaman, including discussion of the Alachua County Forever (ACF) Program.

II. Site overview, Natural Resources and Land Management, Recreational Opportunities and Conceptual Site Plan by Susie Hetrick.

III. Public Comments: – An informal discussion between attendees covered the types of recreational uses planned for the Preserve, dates and times the Preserve will be open, management funding, access fees, neighbor notifications for prescribed fire activities, and receiving feedback for the management plan from the County and Preserve neighbors. No written comments were provided.

IV. Meeting adjourned.

APPENDIX A – COPY OF RECORDED DEED

RECORDED IN OFFICIAL RECORDS
INSTRUMENT # 2791344 3 PG(S)
May 20, 2013 12:43:16
Book 4196 Page 1494
J. K. IRBY Clerk Of Circuit Court
ALACHUA COUNTY, Florida

Doc Stamp-Deed $7,665.00

28.00
7665.00

Return To: es

This instrument prepared by:
Charles L Holden, Jr., Esquire
Holden, Carpenter, Roscow & Kurdziel, PL
5608 NW 43rd Street
Gainesville, FL 32653
File No. 12-538

Tax Parcel No.:07872-016-000 & 07873-000-000

THIS WARRANTY DEED, made and entered into on this 16 day of May, 2013, by and between:

JACQULYN B. MOORE, an unremarried widow, whose address is 1316 Parkway Circle, Bossier City, Louisiana 71112, and **JUDYTH B. COX, a single woman**, whose address is 1826 NW 22 Street, GAinesville, FL 32605 and whose Social Security Numbers are _____ and _____ respectfully,

hereinafter called Grantor*, to:

ALACHUA COUNTY, a charter county and political subdivision of the State of Florida, by and through its Board of County Commissioners, whose address is P.O. Box 5547, Gainesville, Florida, 32627-5547, and whose Tax ID # is _____,

hereinafter called Grantee*:

(*Wherever used herein the terms "Grantor" and Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations. "Grantor" and "Grantee" are used for singular or plural, as context requires.)

WITNESSETH, that said Grantor, for and in consideration of the sum of Ten ($10.00) Dollars and other good and valuable consideration to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee, and Grantee's heirs and assigns forever, the following-described land situated, lying and being in **Alachua County, Florida**, to-wit:

SEE ATTACHED EXHIBIT "A" FOR LEGAL DESCRIPTION WHICH IS MADE A PART HEREOF.

Subject property is not the homestead property of the Grantors nor is it contiguous to the homestead property of Grantors.

Subject to restrictions, reservations, and easements of record, if any, and taxes for the year 2013 and subsequent years.

and said Grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, the Grantors have executed this Warranty Deed under seal on the day and year first above written.

Signed, sealed and delivered
in our presence as witnesses:

Kathryn A. Stevens

Jacqulyn B. Moore (SEAL)

LEGAL DESCRIPTION:

PARCEL NO. 3 (PER DEED BOOK 2155, PAGE 1283, AS FURNISHED)

THE NORTH HALF (N1/2) OF SEC. 14-9-20 LYING WEST OF THE MONTEOCHA PAVED ROAD, COMMENCING AT A POINT WHERE THE NORTH LINE OF SECTION 14-9-20 INTERSECTS THE WEST RIGHT OF WAY LINE OF STATE ROAD NO. 225, THENCE RUNNING WEST 600 FEET, SOUTH 350 FEET, EAST 600 FEET, NORTH 350 FEET ALONG WEST RIGHT OF WAY LINE TO THE POINT OF BEGINNING.

TOGETHER WITH

PARCEL NO. 4 (PER DEED BOOK 2155, PAGE 1283, AS FURNISHED)

THE NORTHEAST ONE QUARTER (NE1/4) AND THE NORTH ONE HALF (N1/2) OF THE SOUTHEAST ONE QUARTER (SE1/4) OF SECTION 15-9-20.

ALSO KNOWN AS AND BEING MORE CORRECTLY DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING AND BEING IN SECTIONS 14 AND 15, TOWNSHIP 9 SOUTH, RANGE 20 EAST, ALACHUA COUNTY, FLORIDA, WITH SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF SECTION 14, TOWNSHIP 9 SOUTH, RANGE 20 EAST, ALACHUA COUNTY, FLORIDA, SAID NORTHEAST CORNER BEING MARKED BY A 1-INCH METAL AXLE, AND RUN THENCE ALONG THE NORTHERLY BOUNDARY OF THE NORTHEAST 1/4 OF SAID SECTION 14, SOUTH 89°02'35" WEST, A DISTANCE OF 1572.61 FEET TO A POINT OF INTERSECTION WITH THE WESTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 225; THENCE DEPARTING SAID NORTHERLY BOUNDARY, SOUTH 00°06'27" WEST, ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 350.00 FEET TO A POINT OF INTERSECTION WITH A LINE LYING AND BEING 350.00 FEET SOUTH OF AND PARALLEL WITH SAID NORTHERLY BOUNDARY OF THE NORTHEAST 1/4 OF SECTION 14, SAID POINT OF INTERSECTION ALSO BEING THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL, SAID POINT OF BEGINNING BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE CONTINUE ALONG SAID WESTERLY RIGHT OF WAY LINE, SOUTH 00°06'27" WEST, A DISTANCE OF 2302.13 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY BOUNDARY OF SAID NORTHEAST 1/4 OF SECTION 14, SAID POINT OF INTERSECTION BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE DEPARTING SAID WESTERLY RIGHT OF WAY LINE, SOUTH 89°00'45" WEST, ALONG SAID SOUTHERLY BOUNDARY OF THE NORTHEAST 1/4 OF SECTION 14, A DISTANCE OF 1034.76 FEET TO THE SOUTHWEST CORNER THEREOF, SAID SOUTHWEST CORNER BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE CONTINUE SOUTH 89°00'45" WEST, ALONG THE SOUTHERLY BOUNDARY OF THE NORTHWEST 1/4 OF SAID SECTION 14, A DISTANCE OF 2646.28 FEET TO THE SOUTHWEST CORNER THEREOF; THENCE SOUTH 01°05'38" EAST, ALONG THE EASTERLY BOUNDARY OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 15, TOWNSHIP 9 SOUTH, RANGE 20 EAST, ALACHUA COUNTY, FLORIDA, A DISTANCE OF 1326.54 FEET TO THE SOUTHEAST CORNER THEREOF, SAID SOUTHEAST CORNER BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "H.L. WISE PLS 3456"; THENCE SOUTH 88°46'16" WEST, ALONG THE SOUTHERLY BOUNDARY OF SAID NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 15, A DISTANCE OF 2647.18 FEET TO THE SOUTHWEST CORNER THEREOF, SAID SOUTHWEST CORNER BEING MARKED WITH A 5/8-INCH IRON ROD WITH A PLASTIC CAP STAMPED "LB2856"; THENCE NORTH 01°07'59" WEST, ALONG THE WESTERLY BOUNDARY OF SAID NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 15, A DISTANCE OF 1332.71 FEET TO THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SAID SECTION 15, SAID SOUTHWEST CORNER BEING MARKED WITH A 5/8-INCH IRON ROD WITH A PLASTIC CAP STAMPED "LB2856"; THENCE NORTH 01°06'39" WEST, ALONG THE WESTERLY BOUNDARY OF SAID NORTHEAST 1/4 OF SECTION 15, A DISTANCE OF 2666.84 FEET TO THE NORTHWEST CORNER THEREOF, SAID NORTHWEST CORNER BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE NORTH 89°10'06" EAST, ALONG THE NORTHERLY BOUNDARY OF SAID NORTHEAST 1/4 OF SECTION 15, A DISTANCE OF 2650.30 FEET TO THE NORTHEAST CORNER THEREOF, SAID NORTHEAST CORNER BEING MARKED WITH AN UNMARKED 4-INCH BY 4-INCH CONCRETE MONUMENT; THENCE NORTH 89°03'52" EAST, ALONG THE NORTHERLY BOUNDARY OF THE AFORESAID NORTHWEST 1/4 OF SECTION 14, A DISTANCE OF 2654.24 FEET TO THE NORTHEAST CORNER THEREOF, SAID NORTHEAST CORNER BEING MARKED WITH A 1/2-INCH IRON PIPE; THENCE NORTH 89°02'35" EAST, ALONG THE NORTHERLY BOUNDARY OF THE AFORESAID NORTHEAST 1/4 OF SECTION 14, A DISTANCE OF 481.01 FEET TO A POINT OF INTERSECTION WITH A LINE LYING AND BEING 600.00 FEET WEST OF AND PARALLEL WITH THE AFORESAID WESTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 225, SAID POINT OF INTERSECTION BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE DEPARTING SAID NORTHERLY BOUNDARY, SOUTH 00°06'27" WEST, ALONG SAID PARALLEL LINE, A DISTANCE OF 350.00 FEET TO A POINT OF INTERSECTION WITH A LINE LYING AND BEING 350.00 FEET SOUTH OF AND PARALLEL WITH SAID NORTHERLY BOUNDARY OF THE NORTHEAST 1/4 OF SECTION 14, SAID POINT OF INTERSECTION BEING MARKED WITH A 4-INCH BY 4-INCH CONCRETE MONUMENT WITH A METAL DISK STAMPED "LB2856"; THENCE DEPARTING SAID LINE LYING AND BEING 600.00 FEET WEST OF AND PARALLEL WITH THE WESTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 225, NORTH 89°02'35" EAST, ALONG SAID LINE LYING AND BEING 350.00 FEET SOUTH OF AND PARALLEL WITH SAID NORTHERLY BOUNDARY OF THE NORTHEAST 1/4 OF SECTION 14, A DISTANCE OF 600.00 FEET TO A POINT OF INTERSECTION WITH SAID WESTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 225 AND THE POINT OF BEGINNING.

ALTOGETHER CONTAINING 463.657 ACRES OF LAND, MORE OR LESS.

APPENDIX B – SOIL DESCRIPTIONS

Mascotte, Wesconnett and Surrency (MWS) soils, flooded

This soil association consists of poorly and very poorly drained soils found in areas of flats, depressions, and on low stream terraces. The water table is within 18 inches of the surface for 1 to 4 months, and depressional areas hold standing water for several months during most years. Available water capacity is high to very high in the surface layer and medium in the subsurface layer and subsoil. Natural fertility is medium in the surface layer and low in the subsurface layer and subsoil. Organic matter content is high to very high in the surface layer. In Buck Bay Flatwoods Preserve, this soil type occurs within the forested wetlands, wet flatwoods and the floodplain forest associated with Hatchet Creek.

Millhopper sand, 0 to 5% slopes

This nearly level to gently sloping, moderately well drained soil typically occurs in 10- to 250-acre areas on uplands and on slightly rolling knolls in the broad flatwoods. The soils have rapidly permeable sandy surface and subsurface layers. The subsoil has moderately rapid permeability in the upper loamy sand layer, and moderately slow permeability in the mid subsoil sandy clay loam and lower subsoil sandy loam layers. The water table is at a depth of 40 to 60 inches for 1 to 4 months most years, and at a depth of 60 to 72 inches for 2 to 4 months. This soil type underlies mesic flatwoods and xeric pineland communities within the Preserve.

Monteocha loamy sand

This nearly level, very poorly drained soil is in wet ponds and shallow depressional areas in the flatwoods. This sandy or sandy loamy soil has a water table that is within 10 inches of the surface for more than 6 months during most years. Most areas are covered with water for more than 4 months. Available water capacity is high to very high in the surface layer and medium in the subsurface layer and subsoil. Natural fertility is medium in the surface layer and low in the subsurface layer and subsoil. Organic matter content is high to very high in the surface layer. Dome swamp communities occur on this soil type within the Preserve.

Newnan sand

This is a nearly level somewhat poorly drained soil occurring on nearly level to slightly convex slopes in broad areas within the flatwoods ranging from about 10 to 250 acres. The water table is at a depth of 18 to 30 inches for one to two months, and 30 to 60 inches for 2 to 5 months during most years. It recedes to more than 60 inches below the surface during drier periods. Newnan sand occurs within the mesic pine flatwoods of the Preserve.

Pomona sand

This nearly level poorly drained sandy soil has a water table that is less than 10 inches from the surface for 2 to 6 months during most years. Surface runoff is slow. The available water capacity is very low. Permeability is very rapid. The natural fertility is low. Organic matter content of the surface layer is moderately low to moderate. Pomona sand underlies mesic and wet flatwoods within the Preserve.

Pomona sand, depressional

This nearly level, very poorly drained soil is in shallow depressional areas and along narrow drainageways in the flatwoods. Soils are sandy with a spodic horizon at approximately 30 inches below the soil surface. Lower soil layers are loamy sands and sandy loams. In this Pomona soil, the water table is less than 10 inches below the surface for about 6 months or more. Water is on the surface for about 4 months or more during most years. The available water capacity is low in the surface and subsurface layers and low to high in the subsoil. Natural fertility is low. Organic matter content in the surface layer is moderately low. This soil type underlies wet flatwoods and the transition areas between mesic flatwoods and swamp communities within the Preserve.

Surrency sand

This nearly level, very poorly drained soil is typically located in ponds and depressional areas in the broad flatwoods and in areas of wet prairie on uplands. The areas are relatively small and range from about 10 to 40 acres. The surface and subsurface layers are sandy, over sandy clay loam subsoil. In normal years these hydric soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months or more. In other months the water table is usually below these depths. These soils are also ponded frequently for long duration with water approximately 2 feet above the surface. Within Buck Bay Flatwoods Preserve, Surrency sand underlies forested wetland communities.

Tavares sand, 0 to 5% slopes

This is a nearly level to gently sloping, and moderately well-drained soil, which is typically deep and sandy. The water table is at a depth of 40 to 72 inches below the surface for at least six months each year, and is deeper than 72 inches during times of drought. Surface runoff is slow, and permeability is rapid to very rapid. Organic content is low to moderate in the surface layer, and natural fertility is low. Tavares sand underlies mesic flatwoods within the Preserve.

Wauchula sand

This nearly level, poorly drained soil occurs in flatwoods with nearly smooth slopes. The surface and subsurface layers are composed of sands ranging from black to light brownish gray in color. The subsoil consists of sand in the upper part underlain by loamy, sandy loam, and loamy sand layers in the lower part. The water table in Wauchula sand is less than 10 inches below surface for 1 to 4 months, and 10 to 40 inches for 6 months in most years. During dry periods, the water table recedes below 40 inches. This soil type mesic flatwoods and wet flatwoods within the Preserve.