0104/10

Hirneise, Debra

From: Rob Brinkman [RobBrinkman@cox.net]
Sent: Monday, October 22, 2007 8:39 AM
To: citycomm
Subject: Hatchett Creek Project
Attachments: Hatchett Crrek Sierra Club letter to Gainesville Commission.doc

Madame Mayor and Commissioners,

Please find attached a revised version of the letter that was submitted to the Plan Board on the Hatchett Creek project. I will send in a separate e-mail, due to file size constraints, an ACF evaluation of the site from six years ago that I reference in the beginning of the letter. I appreciate your attention to the concerns of the Sierra Club in this matter.

Sincerely,

Rob Brinkman, Chair
Sierra Club SSJ group

010410

Buck Bay Flatwoods
Little Hatchet Creek/Henderson

THE ALACHUA COUNTY FOREVER PROJECT RANKING REPORT

DRAFT 10/16/01, 10/25/01

SITE NAME: Buck Bay Flatwoods Project - Little Hatchet Creek (Henderson Tracts)

MATRIX SCORE: 6.24 of 10.00

SIZE: 417 acres

LOCATION / DESCRIPTION: The 16,046 acre Buck Bay Flatwoods Project lies north CR-232, east of CR-241, west of CR-225 and south of the Santa Fe River in unincorporated Alachua County. The project is a combination of both the Buck Bay Flatwoods and Monteocha Creek projects described in the Alachua County Ecological Inventory Project (KBN), KBN 1996. The project area is connected to Hague Flatwoods, Northwest Flatwoods, Hatchet Creek, and the Santa Fe River KBN projects. Murphree Well Field and its associated conservation easement area are located in the project area but are not included in the acreage because they are already designated for conservation (Map 1). The KBN Study ranked the Buck Bay Flatwoods Project twentieth, and the Monteocha Creek Project thirty-ninth of forty-seven environmental properties ranked in the Alachua County. The KBN write-ups are provided as Attachment 1. Three nominations were received for this project; the Little Hatchet Creek Flatwoods, nominated by the City of Gainesville, the Ironwood-Dougan Tracts, nominated by Linda Dougan, and the Thompson-Monteocha Tracts, nominated by The C. Fredrick Thompson Foundation, Inc. Staff expanded the project boundary to the Buck Bay Flatwoods KBN Project, and then added the Monteocha Creek project to make the connection to the Santa Fe River.

Little Hatchet Creek is the southern most area in the Buck Bay Flatwoods Project. The Henderson site is one of the keystone parcels in the Project. It is composed of two parcels totaling 417 acres, and is owned by Henderson Trustee & McCoy and Steadham. The site is a mosaic of wet and mesic flatwoods and swamps with 2 forks of Little Hatchet Creek flowing through it. The site wraps around the Ironwood Golf Course, with a 23-acre parcel located within the second lobe of the course. It is bounded by N.E. 53 Road to the north, N.E. 39 Avenue to the south, and N.E. 15 Street to the west. Ironwood village residential development is located immediately south of the site on the west side. There are two forested tracts to the east which are part of the Ironwood-Dougan nomination. It should be noted that several of the Murphree wellfield wells are directly across N.E. 53 Road from the site and Gainesville Regional Airport is within a mile (Map 2). The most outstanding feature on the site is a pond cypress dominated basin marsh on the northwest corner of the site. Disturbances include, a powerline easement, and several dirt roads and ditches. Both forks of Little Hatchet Creek have been dredged and a levee road was constructed next to them.

The City of Gainesville has submitted an application to Florida Community Trust to aid in the acquisition of this site. They are requesting a 60% match from the Alachua County Forever Program (ACF). If the grant is not funded the City would like 100% of the purchase price to be funded by ACF. They are willing to accept responsibility for the management of the property.

PROTECTING WATER RESOURCES: The Little Hatchet Creek Flatwoods are located in the confined aquifer zone of Alachua County according to Florida Geologic Survey Open File Report 21 (Map 3). This is a zone of relative aquifer confinement, characterized by higher elevations and no karst development. It is under lain by clays of the Hawthorne Group. The northern half of the site falls within the Primary Wellfield Protection Zone and the southern half of the property lies within the Secondary Wellfield Protection Zone for the Murphree Wellfield (Map 4). "Little Hatchet Creek drain(s) into Newnans Lake which in turn drains, in part,

into Alachua sink on Paynes Prairie, where the water enters the Floridan aquifer, and in part into Orange Lake, where some water enters the Floridan Aquifer and some goes into the St. Johns River Basin.", KBN 1996. The St. John's River Water Management District's Aquifer Recharge Map for Alachua County shows that the site falls in an area of high aquifer recharge, 12 inches or more per year (Map 5). However, the Water Resource Investigation Report 88-4057, USGS 1988 by Walter Aucott places the site on the border between the zone of 1 to 10 inches of recharge per year and the zone of greater than 10 inches of recharge per year. Except for the creeks themselves, there was very little standing water on the site, however approximately 65.5% of the site is within the FEMA 100-year flood hazard zone. The plant species and natural communities present on the site indicate that in a year with typical rainfall substantial areas of the property would be covered with standing water (Map 6). The superintendent of the golf course told staff that there are issues with flooding on the west side of the golf course. The swamps and wet flatwoods provide water storage areas and the creek acts as conduit for the removal of water during and after storm events.

PROTECTING NATURAL COMMUNITIES AND LANDSCAPES:

Natural Community Types	Condition
Wet Flatwoods	fair-good
Mesic Flatwoods	fair-good
Basin Swamp	good
Dome Swamp	good
Ditched Blackwater Stream	poor

The natural communities on the site vary in quality. The majority of the flatwoods are fire excluded with low herbaceous diversity. However, there is evidence of a recent wildfire in the southeast portion of the site probably within the last year or two. Additionally, there exists an area in the northeast corner of the site with higher herbaceous diversity and lower fuel levels that indicate a fairly recent burn. There are several gopher tortoise burrows and patches of wiregrass present in this area. Another area in the north part of the site has a high density of slash and longleaf pine regeneration and little understory. The site has not been bedded or recently logged. The basin and dome swamps are in good condition, however, the blackwater stream (Little Hatchet Creek) was dredged and a levee road constructed next to it. The dredging and diking of the creek have probably changed the natural hydrology of the swamps and flatwoods on the site. There were also small scraped areas that appear to have been created to facilitate drainage for the golf course. Exotic plants appear to be limited to the wetter disturbed areas. The Buck Bay Project area is connected to Hague Flatwoods, Northwest Flatwoods, Hatchet Creek, and the Santa Fe River KBN projects. Little Hatchet Creek is the southern most portion of the Buck Bay Flatwoods project and abuts the southeast corner of the Murphree Well Field conservation easement area. These areas are separated by N.E. 53rd Road. The Little Hatchet Creek site has significant internal fragmentation including Ironwood golf course, a powerline easement and levees along Little Hatchet Creek, as well as dredging of the creek proper. Approximately 23 acres of the proposed project is inside of the second lobe of the golf course. There were no outstanding geological features on the site.

PROTECTING PLANT AND ANIMAL SPECIES:

Common Name	**Endemic**	**Fed/State Status**	**FCREPA/FNAI Designation**	**Observed**
Birds				
Woodstork		E/E	E/S2	F
Snowy Egret		-/SSC	SSC/S4	F
Little Blue Heron		-/SSC	SSC/S4	F
Tri-Colored Heron		-/SSC	SSC/S4	F
SE American Kestrel		-/T	T/S3	Potential

Buck Bay Flatwoods Little Hatchet Creek/Henderson Hairy Woodpecker		-/-	SSC/S3	Potential
Reptiles				
Canebrake Rattlesnake			-/S3	Potential
Gopher Tortoise		-/SSC	T/S3	K, G, S
Eastern Indigo Snake		T/T	SSC/S3	K, G
Florida Water Snake	X			Potential
Florida Cricket Frog	X			Potential
Amphibians				
Flatwoods Salamander			-/G2G3-S2S3	Potential
Tiger Salamander			-/S2-S3	Potential

S=observed by Alachua Co. EPD staff and/or an LCB subcommittee member, K=documented through KBN Study, F=documented as potential habitat by the Florida Fish & Wildlife Conservation Commission's 1994 Alachua County, Florida Habitat Distribution Maps, G=Suitable habitat documented by City of Gainesville Staff.

Bobcat tracks were observed on the site during the site visit and the golf course staff reported that a female with kittens was seen recently. The combination of upland, wetland and transition areas provide great habitat for many amphibians. The site also provides valuable habitat for migrating birds.

Alachua County Forever staff compiled the attached plant list for Little Hatchet Creek (Attachment 2). Two listed species, cinnamon fern, and royal fern, were observed by staff during the site inspection. City of Gainesville staff recorded a small population of hooded pitcher plants, a state threatened plant.

Invasive exotic plants observed on the site include tallow and lantana.

ACHIEVING SOCIAL/HUMAN VALUES: The City of Gainesville is proposing to manage the project site as a passive recreation park with nature trails, in cooperation with the active golfing facility. The site will contribute to urban green space.

MANAGEMENT ISSUES: The City of Gainesville, Natural Areas Management will manage the site if acquired. Good stewardship of the site will require exotic plant control, regular prescribed burning and some hydrological restoration, in addition to site control and security. Access for management is good, with many roads throughout the site that could be used for access and fire breaks. The proximity to Gainesville Regional Airport and the power lines bisecting the property present management challenges that must be overcome to implement a successful prescribed fire program, although with proper planning and coordination the site can be burned.

ECONOMIC/ ACQUISITION ISSUES: The Alachua County Property Appraisers 2000 Just Value for the subject parcels is $1,490,306 or $3,576.79 per acre. [Parcel 08160-002-000 (46.22 acres) = $416,000; Parcel 08160-001-000 (370.44 acres) = $1,074,306] This figure is for comparative purposes between nominated properties, and is not necessarily an accurate reflection of the true cost of the property if acquired by the Alachua County Forever Program. The City of Gainesville has applied for a Florida Communities Trust Grant on the Site. If funded the City is requesting 60% of the purchase price for a match, if the grant is not funded they would like 100% of the cost of the property. At this time, the owners have not indicated whether or not they would be interested in entering into a conservation easement.

Development Review

Location	NE Gainesville/Ironwood.
Market Conditions	Little industrial or commercial development activity. Slow single-family residential. Some apartment construction.

Land Use	Site is flatwoods and swampy areas. FLU Map: Industrial, Commercial, Single-family Residential.
Zoning	R-1aa (single-family detached); ML (light industrial); AP (office); PUD (planned unit development).
Parcel Subdivision	The 403-acre project is in two parcels. No final site plans or subdivision approvals are shown.
Owner Intent	Willing to dispose. No development in process at this time.
Development Review Summary	This site is adjacent to Ironwood Golf Course, which was built in the early 1960s. Normally, such an amenity would result in single-family detached or multi-family development along the course. There has been only limited development, along the western side of the course. Apartments were recently built adjacent to Ironwood Villas. Significant natural resource issues (including the city's wellfield protection area) greatly influence feasibility of future development. Also, the site is partially under airport approach and departure paths, and within areas requiring noise mitigation due to operations associated with Gainesville Regional Airport. This is a very slow area in terms of demand for residential development. While land use and zoning has been in place for some time, little has developed. Given the natural constraints and airport compatibility issues that would be expected to continue for some time.

REFERENCES CITED:

KBN, A Golder Asssociates Company 1996. Alachua County Ecological Inventory Project. Alachua County Department of Growth Management, Gainesville, Florida.

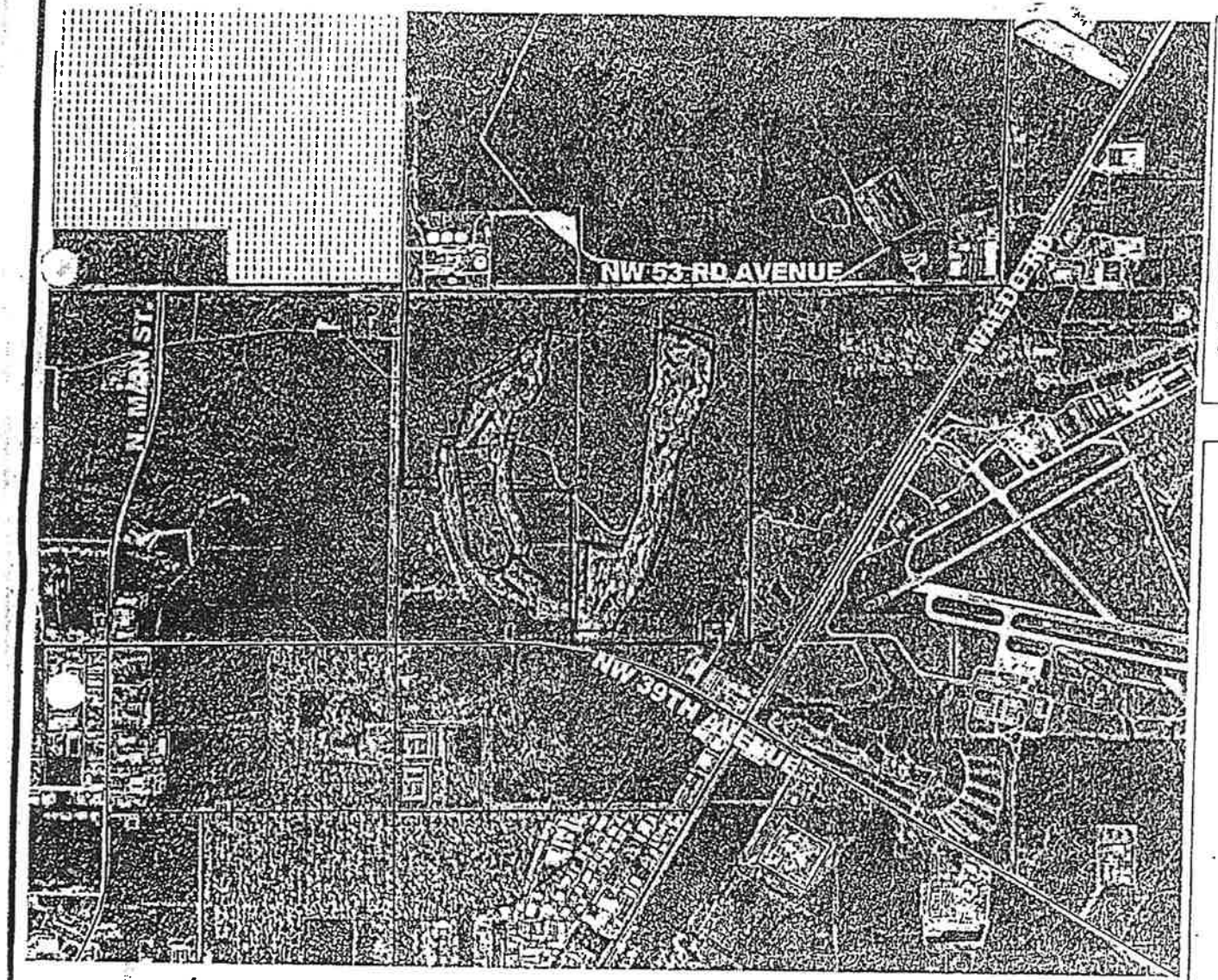
Macesich, M. 1988. Geologic Interpretation of the Aquifer Pollution Potential in Alachua County, Florida, Open File Report – 21. Florida Geologic Survey, Tallahassee, Florida.

Florida Game and Fresh Water Fish Commission (Florida Fish and Wildlife Conservation Commission) Office of Environmental Services, Habitat Distribution Maps for Alachua County, September 25, 1995.

LITTLE HATCHET CREEK (HENDERSON TRACTS) / BUCK BAY FLATWOODS PROJECT (Draft 10/24/01)

CATEGORY	Criterion	WEIGHTING	Enter Criteria Value Based on Site Inspection	Average Criteria Score	Average Criteria Score Multiplied by Relative Importance
(I-1) PROTECTION OF WATER RESOURCES	A. Whether the property has geologic/hydrologic conditions that would easily enable contamination of vulnerable aquifers that have value as drinking water sources;		3		
	B. Whether the property serves an important groundwater recharge function;		4		
	C. Whether the property contains or has direct connections to lakes, creeks, rivers, springs, sinkholes, or wetlands for which conservation of the property will protect or improve surface water quality;		3		
	D. Whether the property serves an important flood management function.		4		
			2		
(I-2) PROTECTION OF NATURAL COMMUNITIES AND LANDSCAPES	A. Whether the property contains a diversity of natural communities;		3		
	B. Whether the natural communities present on the property are rare;		2		
	C. Whether there is ecological quality in the communities present on the property;		3		
	D. Whether the property is functionally connected to other natural communities;		2		
	E. Whether the property is adjacent to properties that are in public ownership or have other environmental protections such as conservation easements;		4		
	F. Whether the property is large enough to contribute substantially to conservation efforts;		1		
	G. Whether the property contains important, Florida-specific geologic features such as caves or springs;		2		
	H. Whether the property is relatively free from internal fragmentation from roads, power lines, and other features that create barriers and edge effects.		4		
(I-3) PROTECTION OF PLANT AND ANIMAL SPECIES	A. Whether the property serves as documented or potential habitat for rare, threatened, or endangered species or species of special concern;		4		
	B. Whether the property serves as documented or potential habitat for species with large home ranges;		3		
	C. Whether the property contains plants or animals that are endemic or near-endemic to Florida or Alachua County;		4		
	D. Whether the property serves as a special wildlife migration or aggregation site for activities such as breeding, roosting, colonial nesting, or over-wintering;		3		
	E. Whether the property offers high vegetation quality and species diversity;		2		
	F. Whether the property has low incidence of non-native invasive species.		4		
(I-4) SOCIAL AND HUMAN VALUES	A. Whether the property offers opportunities for compatible resource-based recreation, if appropriate;		5		
	B. Whether the property contributes to urban green space, provides a municipal defining greenbelt, provides scenic vistas, or has other value from an urban and regional planning perspective.			3.1	
	AVERAGE FOR ENVIRONMENTAL AND HUMAN VALUES				4.1
	RELATIVE IMPORTANCE OF THIS CRITERIA SET IN THE OVERALL SCORE	1.3333			
(II-1) MANAGEMENT ISSUES	A. Whether it will be practical to manage the property to protect its environmental, social and other values (examples include controlled burning, exotics removal, maintaining hydro-period, and so on);		3		
	B. Whether this management can be completed in a cost-effective manner.		4		
(II-2) ECONOMIC AND ACQUISITION ISSUES	A. Whether there is potential for purchasing the property with matching funds from municipal, state, federal, or private contributions;		4		
	B. Whether the overall resource values justifies the potential cost of acquisition;		4		
	C. Whether there is imminent threat of losing the environmental, social or other values of the property through development and/or lack of sufficient legislative protections (this requires analysis of current land use, zoning, owner intent, location and		3		
	D. Whether there is an opportunity to protect the environmental, social or other values of the property through an economically attractive less-than-fee mechanism such as a conservation easement.		1		
	AVERAGE FOR ACQUISITION AND MANAGEMENT VALUES			3.2	
	RELATIVE IMPORTANCE OF THIS CRITERIA SET IN THE OVERALL SCORE	0.6667			2.1
	TOTAL SCORE				6.24

Buck Bay Flatwoods - Little Hatchet Creek

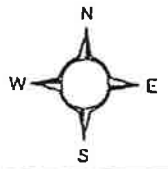


1996 Aerial

Legend

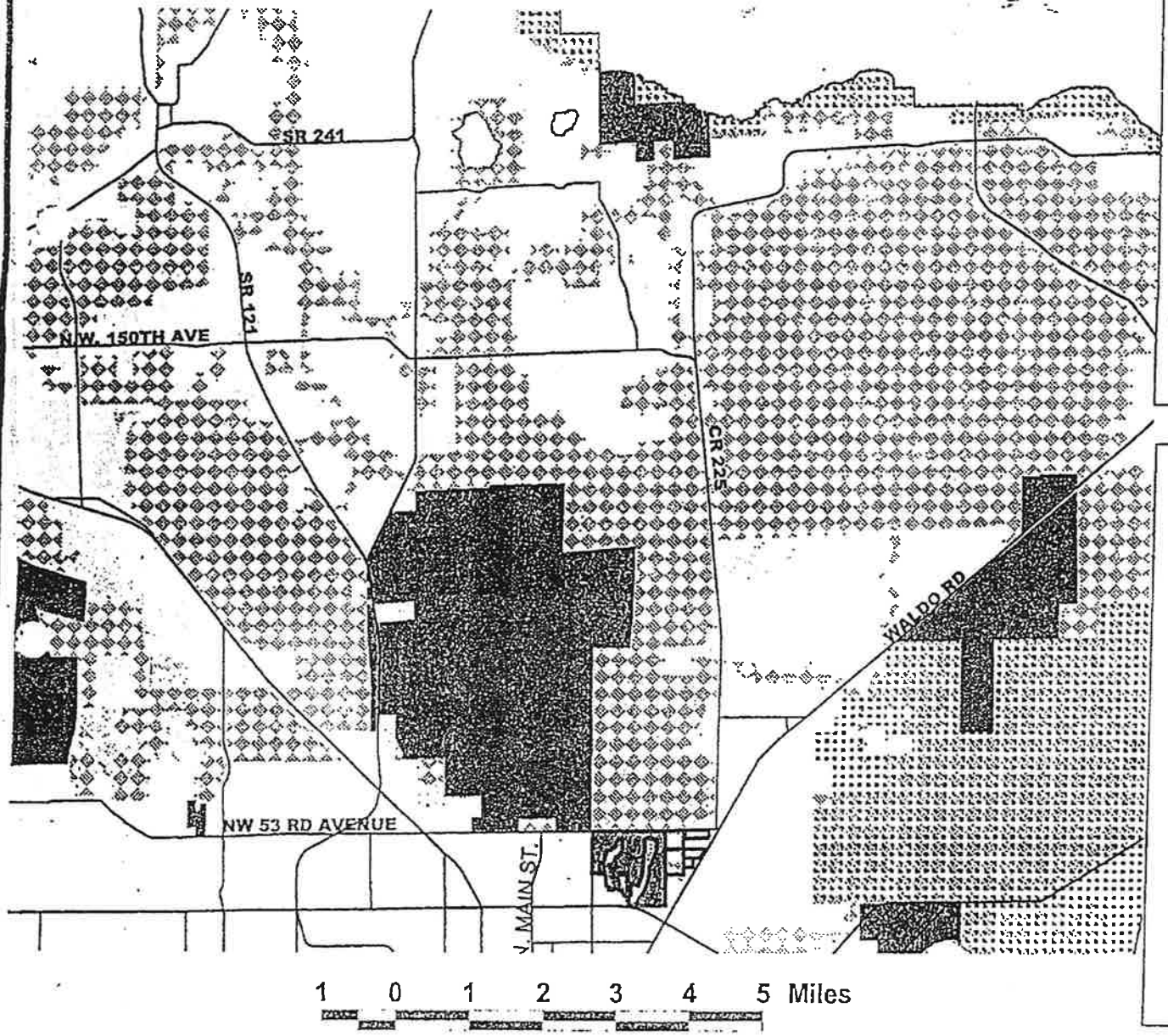
- Area under Evaluation
- Buck Bay Flatwoods
- Murphree Wellfield

Project location in Alachua County



Map 1

Buck Bay Flatwoods - Little Hatchet Creek

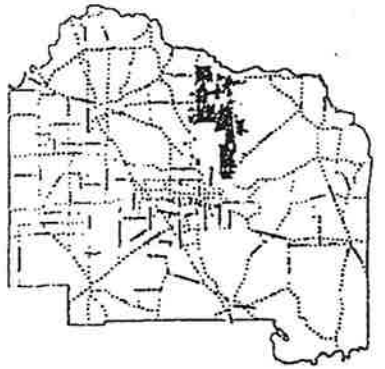


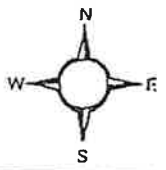
Location Map

Legend

- Little Hatchet Creek Project
- Area under Evaluation
- Lakes
- Strategic habitats
- Conservation Lands
- Potential Conservation Lands
- Buck Bay Flatwoods

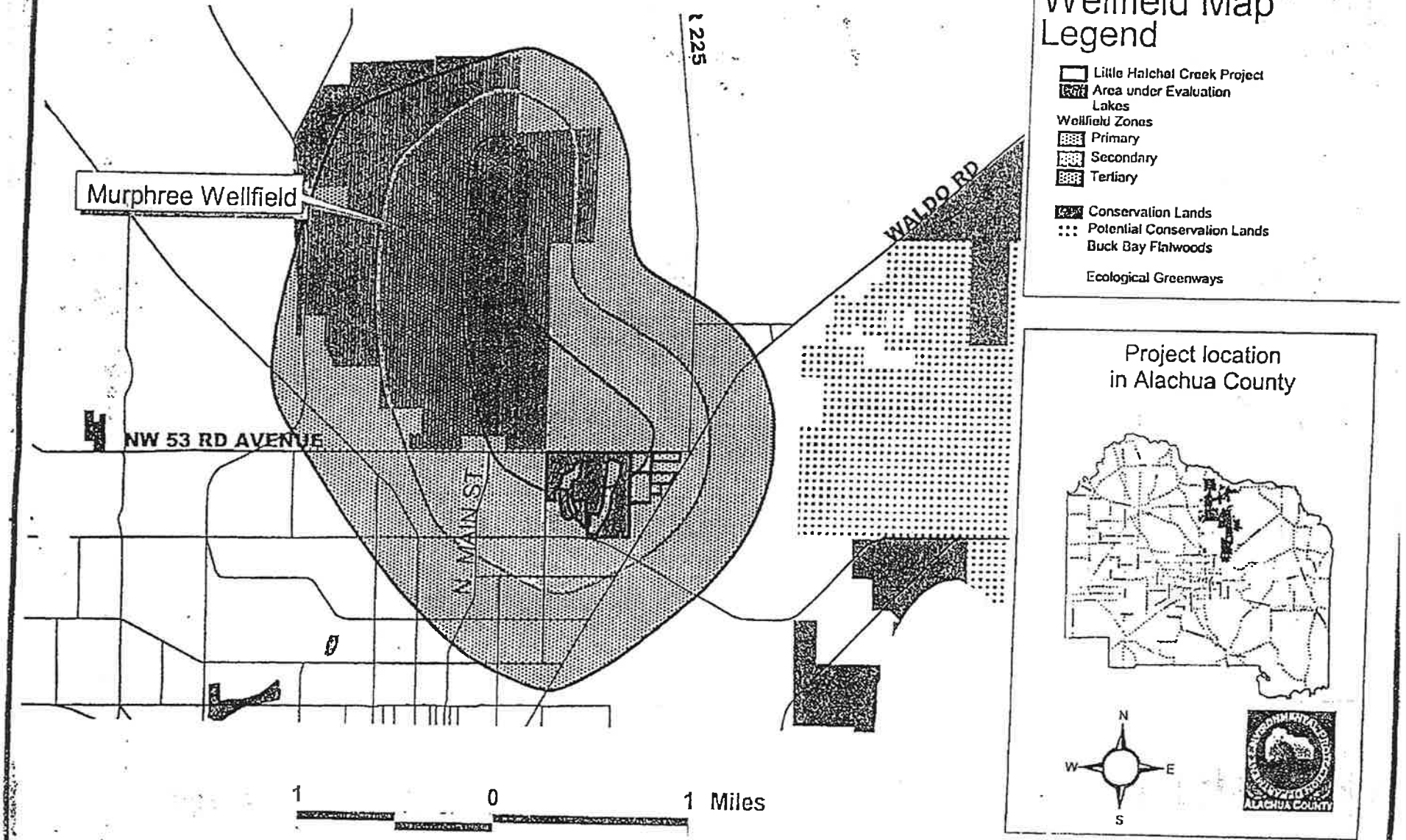
Project location in Alachua County





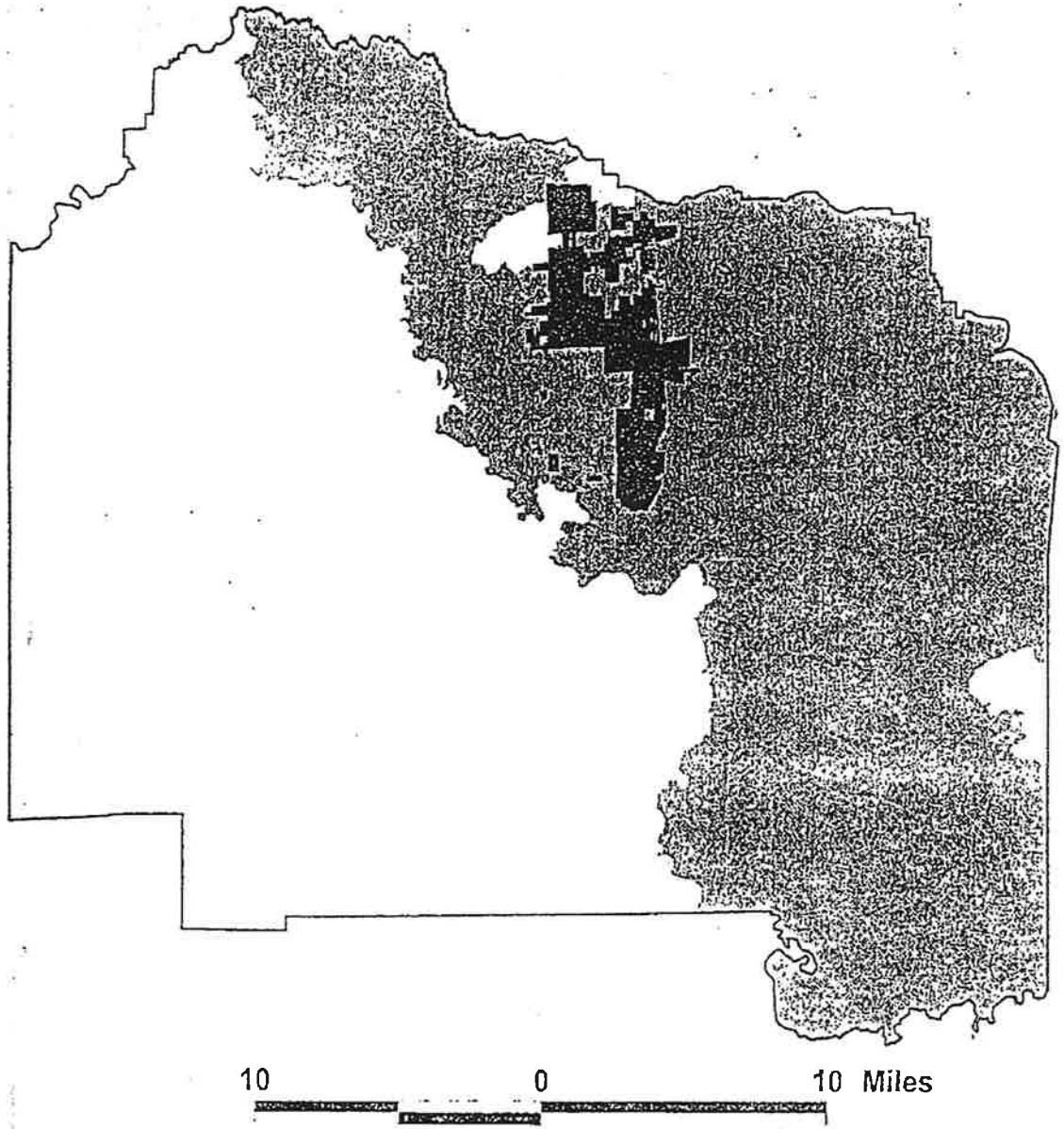
Map 4

Buck Bay Flatwoods - Little Hatchet Creek



Map 3

Buck Bay Flatwoods - Little Hatchet Creek



Aquifer Confinement

Legend

Project boundary

Aquifer Confinement

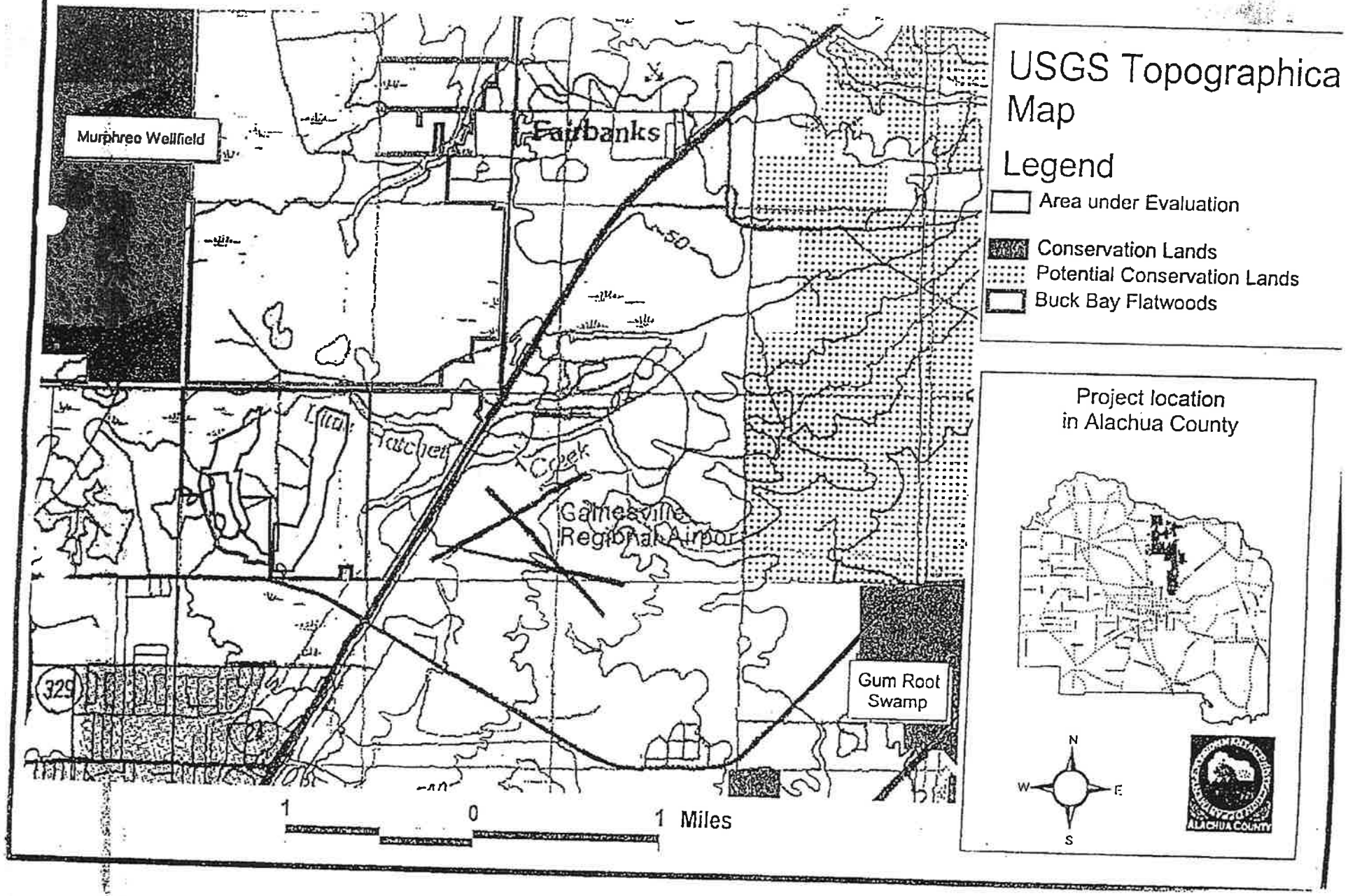
CONFINED

PERFORATED

UNCONFINED

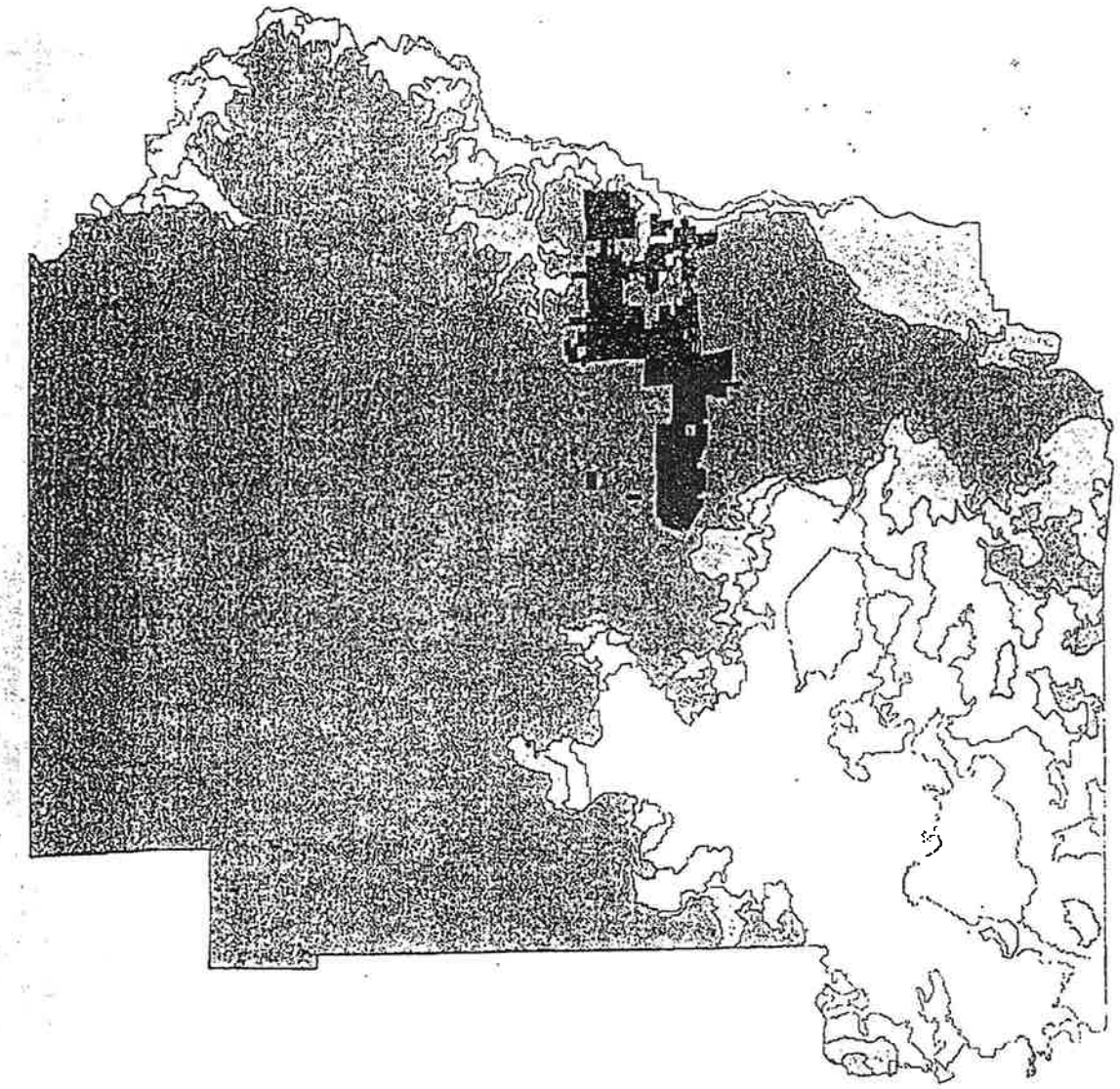
Project location in Alachua County

Buck Bay Flatwoods - Little Hatchet Creek



Map 5

Buck Bay Flatwoods - Little Hatchet Creek



Aquifer Recharge

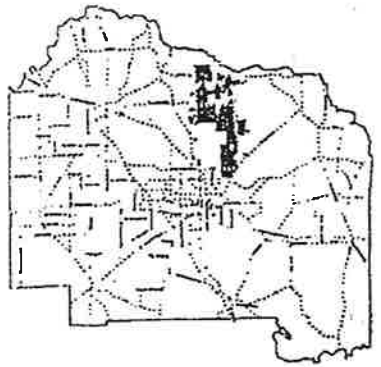
Legend (inches)

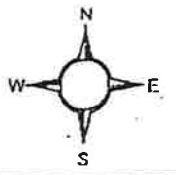
- Project boundary

Aquifer Recharge

- Discharge
- 0-4
- 4-8
- 8-12
- 12 or more

Project location in Alachua County





9 0 9 Miles

BUCK BAY FLATWOODS

PRIORITY: 20 (average) (from unweighted sub-parameter score)

KEY FEATURES: This is a large site of commercial pine flatwoods forest and associated wetlands directly north of Gainesville. It is a major headwaters area, rather like a miniature Green Swamp, supporting the following creek systems to varying degrees: Rocky Creek, Monteocha Creek, Rhuda Branch, Hatchet Creek, Little Hatchet Creek, and a bit of Hogtown Creek. The entire Rhuda Branch system is on this site as well as Sunshine Lake at the north end of the site. Wetlands occupy large areas and provide a lot of surface water storage and wildlife habitat.

USGS QUAD: Gainesville East, Monteocha
SIZE: 18,018 acres

BIO-COMMUNITY TYPES	ACRES	CONDITION OF BIO-COMMUNITY
Sandhill	72	fair
Former Sandhill	19	poor
Upland Mixed Forest	17	fair
Wet Flatwoods	538	fair
Mesic Flatwoods	11770	fair
Hydric Hammock	75	good
Wet Prairie	24	fair
Bog	45	good
Baygall	897	good
Seepage Slope Forest *	194	good
Bottomland Forest	33	good
Floodplain Swamp	119	good
Basin Marsh	168	good
Depression Marsh	160	good
Basin Swamp	1431	good
Dome Swamp	968	good
Prairie Lake	215	fair
Swamp Lake	1	good
Blackwater Stream		good
Old Field Pine Plantation *	12	
Site Conversion Pine Plantation *	15	
Rough Pasture *	597	
Improved Pasture *	245	
Row Crops *	107	
Low Impact Development *	147	
High Impact Development *	42	

* Categories not used by FNAI

CONNECTIONS:

Adjacent Areas	Quality of Connection
Hague Flatwoods	good
Hatchet Creek	good
Rocky Creek	fair
Monteocha Creek	fair
Northeast Flatwoods	fair

SITE BOUNDARY CONDITIONS: The boundaries are generally regular in shape and generally follow property boundaries, roads, section lines, and other surveyed lines except at the north end along Rhuda Branch and on the east side beside Hatchet Creek, where inholdings complicate the boundaries and interrupt connectivity.

GEOLOGIC/HYDROLOGIC FEATURES: This site is underlain by the relatively impermeable Hawthorn Formation which restricts percolation of water down into the Floridan Aquifer. The main body of this site has flat topography with abundant wetlands that store large supplies of surface water. It is mostly between 155 and 175 feet in elevation above mean sea level. The drainage is to many different creek systems. Rocky Creek and Monteocha Creek drain to the north into the Santa Fe River. Hatchet Creek and Little Hatchet Creek drain into Newnans Lake which in turn drains, in part, into Alachua Sink on Paynes Prairie, where the water enters the Floridan Aquifer, and in part into Orange Lake, where some water enters the Floridan Aquifer and some goes into the St. Johns River Basin. Rhuda Branch, which is entirely on the site, drains into Sunshine Lake, which has no outlet and presumably percolates down into the Floridan Aquifer. A small area drains into Hogtown Creek, which flows into Hail Sink, where it enters the Floridan Aquifer.

WILDLIFE HABITAT: The pine flatwoods areas are almost all slash pine plantations on sites that have been bedded, resulting in less than ideal habitat. Some of the wet flatwoods is poorly drained, providing poor site quality for pine growth but diverse and dense herbaceous ground cover that provides habitat for wildlife and native plants. There is no evidence of prescribed burning. Some of the more noticeable animals in the flatwoods include white-tailed deer (*Odocoileus virginianus*), cottontail rabbit (*Sylvilagus floridanus*), wild turkey (*Meleagris gallopavo*), common crow (*Corvus brachyrhynchos*), yellowthroat (*Geothlypis trichas*), rufous-sided towhee (*Pipilo erythrophthalmus*), black racer (*Coluber constrictor*), diamondback rattlesnake (*Crotalus adamanteus*), pine woods tree frog (*Hyla femoralis*), and oak toad (*Bufo quercicus*). The wetlands are mostly good quality basin swamp or bayhead with some cypress domes and some creeks. Some noticeable wildlife species include raccoon (*Procyon lotor*), barred owl (*Strix varia*), red-bellied woodpecker (*Melanerpes carolinus*), acadian flycatcher (*Empidonax virescens*), and cottonmouth (*Agkistrodon piscivorus*). Overall, the diversity is fairly good, there is a lot of wildlife cover, browse is fair to good, mast production is low, the upland ground cover is fair, there are some tree cavities in the wetlands, and there are a few burrows. The many isolated wetlands are important amphibian breeding sites and provide feeding habitat for wading birds (Moler and Franz, 1987).

RARE, THREATENED, AND ENDANGERED SPECIES: The Florida Game and Fresh Water Fish Commission's habitat maps for Alachua County (Arnold, 1995) show a small habitat for Florida gopher frog (*Rana capito aesopus*) on the edges of the site in two places, indicating the presence of this species and the presence of gopher tortoises. There is some suitable sandhill habitat west of Fairbanks between two branches of Hatchet Creek. Gopher tortoises (*Gopherus polyphemus*) were observed during the inventory in the middle of the site in mesic flatwoods. However, the vast majority of this site is not suitable for these species. The same set of maps (Arnold, 1995) show a good amount of habitat here for wood stork (*Mycteria americana*), snowy egret (*Egretta thula*), little blue heron (*Egretta caerulea*), and alligator (*Alligator mississippiensis*), and a lesser amount for tricolored heron (*Egretta tricolor*). This site is large enough to be potential habitat for red-cockaded woodpeckers (*Picoides borealis*), but is not close to being suitable in its present condition due to the young age of the pine trees. It is also potential habitat for a number of listed terrestrial orchids, butterworts, and rare wildflowers. Observed listed plants include Catesby's lily (*Lilium catesbaei*) as well as the common royal fern (*Osmunda regalis*), and cinnamon fern (*Osmunda cinnamomea*) (which are listed as commercially exploited).

EXOTICS: Two potentially destructive invasive exotics were found: taro (*Colocasia esculenta*) and Chinese tallow (*Sapium sebiferum*). The taro was not on the site but was observed about 200 yards south of the site on the Ironwood Golf Course property. Chinese tallow was observed in a spot or two on the site boundary. The vast middle of the site is free of invasive exotic plants.

RESTORATION AND MANAGEMENT POTENTIAL: The wildlife habitat values of the uplands would benefit greatly by a program of frequent prescribed fire, which could be accomplished on this large site, where there is plenty of room to do smoke management. The wetlands are in reasonable shape but are threatened by a potential

invasion of taro and Chinese tallow. The Chinese tallow is going to continually be a nuisance due to the large seed source from residential areas, and should be eliminated whenever possible. The taro is on the Ironwood Golf Course property. Taro is invasive and destructive of native wetland ground cover vegetation, and should therefore be aggressively targeted for eradication by the County or by the city of Gainesville before it gets to the site.

RECOMMENDED CONSERVATION STRATEGIES: Threats to the natural resources of this site include insufficient prescribed burning to maintain the native ground cover, intense site preparation, including both bedding and herbicides, during regeneration efforts in the pine flatwoods, and incremental loss of habitat to real estate development.

This site is so large and so valuable for timber production, that the most appropriate strategies are ones that allow the private landowners to continue to profitably grow timber. In order for such strategies to work, the agricultural exemption program must continue and unreasonable new regulations that would have the effect of banning clearcutting or prescribed burning must be avoided. One possible strategy would be to seek conservation easements to protect the resource values. Another would be to seek cooperative agreements between the landowner and public agencies equipped to do prescribed burning such as the Florida Division of Forestry to help promote or conduct prescribed burning in the fire adapted ecosystems. The points of connection to other sites are particularly important to protect. Enforcing dredge and fill regulations is important here for the protection of the resource values of the many isolated and poorly connected wetlands. It is also important that Forestry Best Management Practices be followed.

COMPREHENSIVE PLAN CONSIDERATIONS: This is a large headwaters area with many wetlands (perhaps 20 to 30% of the site). Most wetlands are connected, but many smaller ones are isolated. There is a small amount of open water, and there are some small creeks with adjacent floodplains.

SITE VISITS: David Clayton, 1996; Bob Simons, 8/23/96

SITE EVALUATION SCORING

Vegetation:	
Species Diversity	2.5
Exotics	4
Endangered Species Habitat	3
Wildlife Habitat	3
Hydrology:	
Floridan Aquifer	2
Surficial Aquifer Resource Protection	4
Vulnerability of Aquifer	2
Landscape Ecology:	
Community Diversity	3
Ecological Quality	2
Community Rarity	1
Functional Connectedness	3
Management Potential	4

Note: See Table 2-1 for parameter descriptions.

Little Hatchet Creek

SCIENTIFIC NAME	COMMON NAME	FAMILY	FDACS	FWS	FNAI	EXOTIC	DATE	Observers
Acer saccharum subsp. floridanum	FLORIDA MAPLE	SAPINDACEAE					10/12/01	sv,ab
Andropogon ternarius	SPLITBEARD BLUESTEM	POACEAE					10/12/01	sv,ab
Aristida beyrichiana	WIREGRASS	POACEAE					10/12/01	sv,ab
Asimina pygmea	DWARF PAWPAW	ANNONACEAE					10/12/01	sv,ab
Callicarpa americana	AMERICAN BEAUTYBERRY	LAMIACEAE					10/12/01	sv,ab
Carphephorus corymbosus	FLORIDA PAINTBRUSH	ASTERACEAE					10/12/01	sv,ab
Carphephorus odoratissimus	VANILLALEAF	ASTERACEAE					10/12/01	sv,ab
Gordonia lasianthus	LOBLOLLY BAY	THEACEAE					10/12/01	sv,ab
Gratiola hispida	ROUGH HEDGEHYSSOP	VERONICACEAE					10/12/01	sv,ab
Hypericum tetrapetalum	FOURPETAL ST.JOHN'S-WORT	CLUSIACEAE					10/12/01	sv,ab
Ilex glabra	INKBERRY; GALLBERRY	AQUIFOLIACEAE					10/12/01	sv,ab
Lachnanthes caroliana	CAROLINA REDROOT	HAEMODORACEAE					10/12/01	sv,ab
Lantana camara	LANTANA; SHRUBVERBENA	VERBENACEAE				EX	10/12/01	sv,ab
Licania michauxii	GOPHER APPLE	CHRYSOBALANACEAE					10/12/01	sv,ab
Liquidambar styraciflua	SWEETGUM	ALTINGIACEAE					10/12/01	sv,ab
Lyonia fruticosa	COASTALPLAIN STAGGERBUSH	ERICACEAE					10/12/01	sv,ab
Lyonia lucida	FETTERBUSH	ERICACEAE					10/12/01	sv,ab
Magnolia virginiana	SWEETBAY	MAGNOLIACEAE					10/12/01	sv,ab
Myrica cerifera	MYRTLE	MYRICACEAE					10/12/01	sv,ab
Nyssa sylvatica var. biflora	SWAMP TUPELO	CORNACEAE					10/12/01	sv,ab
Opuntia humifusa	PRICKLYPEAR	CACTACEAE					10/12/01	sv,ab
Osmunda cinnamomea	CINNAMON FERN	OSMUNDACEAE	C				10/12/01	sv,ab
Osmunda regalis var. spectabilis	ROYAL FERN	OSMUNDACEAE	C				10/12/01	sv,ab
Persea palustris	SWAMP BAY	LAURACEAE					10/18/01	sv,qt,jc,mp
Pinus elliottii	SLASH PINE	PINACEAE					10/12/01	sv,ab
Pinus palustris	LONGLEAF PINE	PINACEAE					10/12/01	sv,ab
Pityopsis graminifolia	NARROWLEAF SILKGRASS	ASTERACEAE					10/12/01	sv,ab
Pterocaulon pycnostachyum	BLACKROOT	ASTERACEAE					10/12/01	sv,ab
Quercus chapmanii	CHAPMAN'S OAK	FAGACEAE					10/12/01	sv,ab
Quercus nigra	WATER OAK	FAGACEAE					10/12/01	sv,ab
Rhus copallinum	WINGED SUMAC	ANACARDIACEAE					10/12/01	sv,ab
Sapium sebiferum	TALLOWTREE	EUPHORBIACEAE					10/12/01	sv,ab
Serenoa repens	SAW PALMETTO	ARECACEAE				EX	10/12/01	sv,ab
Smilax laurifolia	LAUREL GREENBRIER; BAMBOO VINE	SMILACACEAE					10/12/01	sv,ab
Sorghastrum secundum	LOPSIDED INDIAN GRASS	POACEAE					10/12/01	sv,ab
Taxodium ascendens	POND-CYPRESS	CUPRESSACEAE					10/12/01	sv,ab
Vaccinium myrsinites	SHINY BLUEBERRY	ERICACEAE					10/12/01	sv,ab
Woodwardia areolata	NETTED CHAIN FERN	BLECHNACEAE					10/12/01	sv,ab