San Felasco Additions
Rapid Ecological Project Assessment
Alachua County Forever

Draft Date:	October 12, 2004
Matrix Score:	7.29 of 9.44
Size:	1,211 acres
Number of parcels:	40
Number of owners:	25
Number of buildings:	12

Location/Description:

The 1,211-acre San Felasco Additions (SFA) Project surrounds the San Felasco Hammock Preserve State Park, northwest of the City of Gainesville in Alachua County. Portions of the property are within the City of Alachua city limits, the remaining properties are in unincorporated areas of the county (Map 1). The project area is comprised of properties within the Florida Division of State Lands Optimum Park Boundaries for San Felasco Hammock Preserve State Park, as well as other forested lands adjacent or near the Preserve (Map 2). This includes Warren's Cave and some surrounding properties. Warren's Cave is owned by the National Speleological Society and is claimed to be the longest dry cave in Florida. The areas around San Felasco Hammock Preserve State Park are rapidly developing into single family residences; the project contains some of the last remaining tracts of undeveloped property in proximity to the Preserve.

The SFA Project includes properties within two projects from the *Alachua County Ecological Inventory Project* (KBN Study); North San Felasco Hammock and East San Felasco Hammock (KBN 1996). The purpose of the KBN Study was to identify, inventory, map, describe, and evaluate the most significant natural biological communities, both upland and wetland, that remain in private ownership in Alachua County and make recommendations for protecting these natural resources (KBN 1996). The North San Felasco Hammock project was ranked 23rd of 47 projects evaluated in the county, and categorized as average, and the East San Felasco Hammock project was ranked 28th and categorized as slightly below average (KBN 1996).

The North San Felasco Hammock project was described as follows, "This is an area of creeks, pond, hardwood forest, pine plantation, and pasture on the north side of San Felasco Hammock State Preserve. The two creeks both flow into the preserve from this area" (KBN 1996).

The KBN Study characterized the East San Felasco Hammock as, "This is an area of ponds, marshes, creeks, scenic pastures, and hardwood forest on the east side of San Felasco State Preserve. It also contains a large and valuable house and several smaller homes" (KBN 1996).

Protecting Water Resources:

Six percent of the SFA site is located in the confined aquifer zone of Alachua County, with the remainder located in the perforated zone. The confined aquifer zone is defined by Macesich as a zone of relative aquifer confinement that stretches from north-

central Alachua County southeastward comprising most of the eastern half of the county. It is a region of higher elevations underlain by at least 10 feet of clays or clayey sands of the Hawthorn Formation which form an aquiclude to the Floridan Aquifer System. The perforated zone is an area underlain by clays of the Hawthorn Group perforated by numerous karst features that allow direct access to the aquifer (Macesich 1988).

According to the St. Johns River Water Management District's Aquifer Recharge Map for Alachua County, 100% of the SFA project exists in a high aquifer recharge area where 12 inches or more of water is recharged to the aquifer on a yearly basis. According to Aucott (1988), the project is located in an area where greater than 10 inches of water per year is recharged to the aquifer.

Approximately 25% of the SFA Project is wetlands, contains hydric soils, or falls within the FEMA 100 or 500 year flood hazard zone.

The KBN report described the hydrologic resources as the following, "This is an active karst area with several sinkholes. It is underlain by the Hawthorn Formation, which provides for a perched water table (ponds, wetlands, and streams), but this formation is thin here, allowing for sinkhole formation. The formation is also at or near the surface, thus providing for the fertile soil that the mesic hammock vegetation requires (KBN 1996).

Protecting Natural Communities and Landscapes:
Natural Communities
Basin Marsh
Cave
Seepage Stream
Sinkhole
Sinkhole Lake
Upland Mixed Forest
Upland Pine Forest
Other
Improved Pasture
Low Impact Development
Rough Pasture
Row Crops
Site Conversion Pine Plantation

The above list of natural communities is from the KBN Study, from Environmental Protection Department staff visits and the Warren's Cave Nature Preserve Management Plan. The quality of the natural communities ranges from fair to good (KBN 1996).

Approximately 77% of the project site is within the Florida Ecological Greenways Network (FEGN) un-named priority 6 project area. This greenway connects San Felasco Hammock State Park to the Santa Fe River via Hague Flatwoods, Murphree Wellfield Conservation Area and the Northeast Flatwoods. The Florida Ecological Greenways Network is a decision support model to help identify the best opportunities to protect

ecological connectivity statewide. It was developed by the University of Florida for the Florida Department of Environmental Protection. GIS data on land use and significant ecological areas were integrated in a process that identified a statewide Ecological Greenways Network containing all of the largest areas of ecological and natural resource significance and the landscape linkages necessary to link these areas together in one functional statewide network (Hoctor et al. 2002).

The SFA project includes properties surrounding San Felasco Hammock Preserve State Park and would add to protection of the Preserve, especially in light of the rapid development in its proximity. In addition, the project buffers Warren's Cave, located to the southwest of the Preserve. Warren's Cave, according to the National Speleological Society, is the longest dry cave in Florida, with over four miles of passageway. The cave currently has a management plan and is managed by the Florida Speleological Society. The plan describes the historical, geologic and biological resources of the cave and preservation objectives for the area. The plan does mention that, "the land immediately surrounding the Warren's Cave Reserve is slated for low density residential development. This will have definite impacts on the terrestrial fauna of the Reserve" (National Speleological Society).

There are no Strategic Habitat Conservation Areas within the SFA project area. Strategic Habitat Conservation Areas were developed by the Florida Fish and Wildlife Conservation Commission (FFWCC). They are private lands containing habitats critical to the continued survival of populations of inadequately protected plants and animals (Cox et al. 2000). These lands are essential to providing some of state's rarest animals, plants, and natural communities with the land base necessary to sustain populations into the future (Cox et al.1994).

Almost the entire project area is within the Florida Natural Areas Inventory (FNAI) priorities 2-6 Habitat Conservation Priorities. FNAI's Habitat Conservation Priorities prioritize places on the landscape that would protect both the greatest number of rare species and those species with the greatest conservation need (Florida Natural Areas Inventory June 2001).

Twenty- eight percent of the SFA project is delineated by FNAI as an Upland Hardwood Forest Under-represented Natural Community. FNAI Under-represented Natural Communities are those natural community types that were inadequately represented on conservation lands in Florida. A natural community is considered to be inadequately represented if less than 15% of the original extent of that community is currently found on existing conservation lands. Under-represented natural communities include, seepage slope, upland hardwood forest, pine rockland, tropical hardwood hammock, sandhill, scrub, upland glades, and pine flatwoods. This data was developed by the Office of Environmental Services, Florida Department of Environmental Protection and FNAI, (FNAI December 2001).

Protecting Plant and Animal Species:

Common Name	Endemic/ Large Home-Range	Fed/State Status	FCREPA/FNAI Designation	Observed
Amphibians				
Flatwoods Salamander	-/-	T/-	R/S2S3	SM
Gopher Frog	-/-	-/SSC	T/S3	SM
Eastern Tiger Salamander	-/-	-/-	SU/S3	SM

Striped Newt	-/-	-/-	R/S2S3	SM
Reptiles				
American Alligator	-/-	T/SSC	-/S4	SM,K
Eastern Diamondback Rattlesnake	-/-	-/-	-/S3	SM
Eastern Indigo Snake	-/-	T/T	SSC/S3	SM,K
Florida Crowned Snake	X/-	-/-	-/-	SM
Florida Pine Snake	-/-	-/SSC	SU/S3	SM,N
Gopher Tortoise	-/-	-/SSC	T/S3	F
Peninsula Mole Skink	-/-	-/-	-/-	SM
Short-tailed Snake	X/-	-/T	T/S3	SM,N
Spotted Turtle	-/-	-/-	R/S3?	SM
Birds				
Cooper's Hawk	-/-	-/-	SSC/S3	SM
Little Blue Heron	-/-	-/SSC	SSC/S4	SM,K
Osprey	-/-	-/-	T/S3S4	SM
Snowy Egret	-/-	-/SSC	SSC/S3	SM,K
Southern Bald Eagle	-/L	T/T	T/S3	SM, F
Southeastern American Kestrel	-/-	-/T	T/S3	SM
Swallow-tailed Kite	-/L	-/-	T/S2	F,K
Wild Turkey	-/L			F
Wood Stork	-/-	E/E	E/S2	SM
Yellow-Crowned Night Heron	-/-	-/-	SSC/S3?	SM
Mammals				
Bobcat	-/L	-/-	-/-	F
Florida Black Bear	X/L	-/T	T/S2	F
Northern Yellow Bat	-/-	-/-	SU/-	SM
Sherman's Fox Squirrel	-/-	-/SSC	T/S3	F

X= Endemic, L=species with large home ranges according to the Closing the Gaps in Florida's Wildlife Habitat System, S= observed by Alachua Co. EPD staff and/or an LCB subcommittee member, SM= documented on the Species Models maps created by the Florida Fish and Wildlife Conservation Commission, F= Focal species used for the most detailed analyses in the Closing the Gaps in Florida's Wildlife Habitat Conservation System, Florida Game and Fresh Water Fish Commission, 1994, N= Florida Natural Areas Inventory Element Occurrence, P= potential for species based on habitat types, K=documented in the Alachua County Ecological Inventory Project.

Listed plants found on the property according to the Alachua County Ecological Inventory Project include cardinal flower, cinnamon fern, and greenfly orchid. FNAI element occurrence data has four occurrences for the subject area, all associated with Warren's Cave. This includes Flyr's Brickelbush (*Brickellia cordifolia*), a state listed endangered plant with only seven known populations. The cave also includes the type locality for the pallid cave crayfish (*Procambarus pallidus*) which is considered rare in the state and has a limited geographic range.

Exotic plants found on this property include: tropical soda apple, mimosa, tung tree, chinaberry, and camphor.

The FFWCC 2002 bald eagle nest data shows one bald eagle nest in San Felasco Hammock State Park, which is located only half a mile from the project area.

Approximately 60% of the site is within Regional Biodiversity Hotspots**.** The purpose of the Regional Biodiversity Hot Spots maps, developed by FFWCC, is to "convey more detailed information on the known locations of as many components of biological diversity as possible, regardless of whether or not they fall within proposed Strategic Habitat Conservation Areas, to help meet the need for conservation information at regional and local levels" (Cox et al. 1994).

Achieving Social and Human Values:

Approximately 44% of the SFA site is a Priority 1-5 Natural Resource-based Recreation Area (Knight et al. 2000). The Natural Resource-based Recreation map was developed by FNAI in collaboration with DEP, FFWCC and the Florida Division of Forestry. The recreation potential of a site depends on available road access, presence of a water body or beach, proximity to urban areas, and size of the site. "These criteria were applied to Potential Natural Areas delineated by FNAI using aerial photography and revised using the 1995 Water Management District land cover data. Sites were ranked by recreation potential" (Knight et al. 2000).

The SFA Project is part of the Emerald Necklace Land Conservation Initiative - "a publicly accessible, connected, and protected network of trails, greenways, open space, and waterfronts surrounding the Gainesville urban area".

The SFA project is an easily accessible urban natural area located in a residential area. Recreational opportunities may be available from the adjacent San Felasco Hammock Preserve State Park. Warren's Cave currently has a recreational plan that allows for restricted visitation to the cave as well as utilization for research and educational endeavors (National Speleological Society). Acquisition of the SFA properties will enhance the nature based parks and preserves in this area.

Management:

"This area could be easily managed as part of or in conjunction with the adjacent state preserve. Restoration of the hammock areas would occur on its own. Some of the former upland pine forest areas could be allowed to become hammock forest. Restoring upland pine forest areas that are now hardwood forest or pine plantation would require a long program of prescribed burning and some planting. The pasture areas were all upland pine forest, and would need planting and then prescribed burning during an extended time for restoration to occur. If left as they are now, the pastures still need frequent burning and some herbicide applications to control the tropical soda-apple. Although there is a major highway to the north, there is a large wild area to the south [San Felasco Hammock], making it possible for prescribed burning to be used here with relative safety" (KBN 1996).

The Florida Division of State Lands may be willing to manage properties within the SFA boundaries, particularly those within the Optimum Park Boundaries for San Felasco Hammock State Preserve Park.

Economic & Acquisition:

There are 40 parcels and 25 ownerships in the 1,211 acre SFA Project. The property appraiser shows 12 buildings in their parcel database for the project area. The Alachua County Property Appraisers 2004 Just Value (land value) for the entire project is $ 6,307,500 or $5,208.51/ acre. The ACPA's total value (Just, Miscellaneous and Buildings) for the project area is $7,400,000 or $6130.90/acre. These figures are for comparative purposes between nominated properties, and are not necessarily an accurate reflection of the true cost of the property if acquired by the Alachua County Forever Program.

Sixty-five percent of the project area is within the City of Alachua and the remaining 35% is in unincorporated Alachua County. Seventy-six percent of the project area is within a Rural/Agriculture Future Land Use designation with the remainder falling within a Residential Land Use designation. This area is seen as very desirable for high-end residential development and is under substantial development pressure.

Other:

There are four archaeological site listings on the Florida Master Site File maintained by the Florida Division of Historical Resources within the project area.

Literature Citations:

Aucott, W. 1988. Water Resources Investigation Report 88-4057. USGS.

Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. Closing the Gaps in Florida's Wildlife Habitat Conservation System, Office of Environmental Services, Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Cox, J. and R. Kautz. 2000. Habitat Conservation Needs of Rare and Imperiled Wildlife in Florida. Office of Environmental Services, Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.

Florida Natural Areas Inventory. June 2001. Florida Forever Conservation Needs Assessment Technical Report

Florida Natural Areas Inventory. December 2001. Florida Forever Conservation Needs Assessment Version 1.1

Hoctor, T.S., J. Teisinger, M.G. Carr., P.C, Zwick. 2002. Identification of Critical Linkages within the Florida Ecological Greenways Network. Final Report. Office of Greenways and Trails, Florida Department of Environmental Protection. Tallahassee, FL.

Knight, G., A. Knight, and J. Oetting. 2000. Florida Forever Conservation Needs Assessment Summary Report to the Florida Forever Advisory council. Florida Natural Areas Inventory.

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

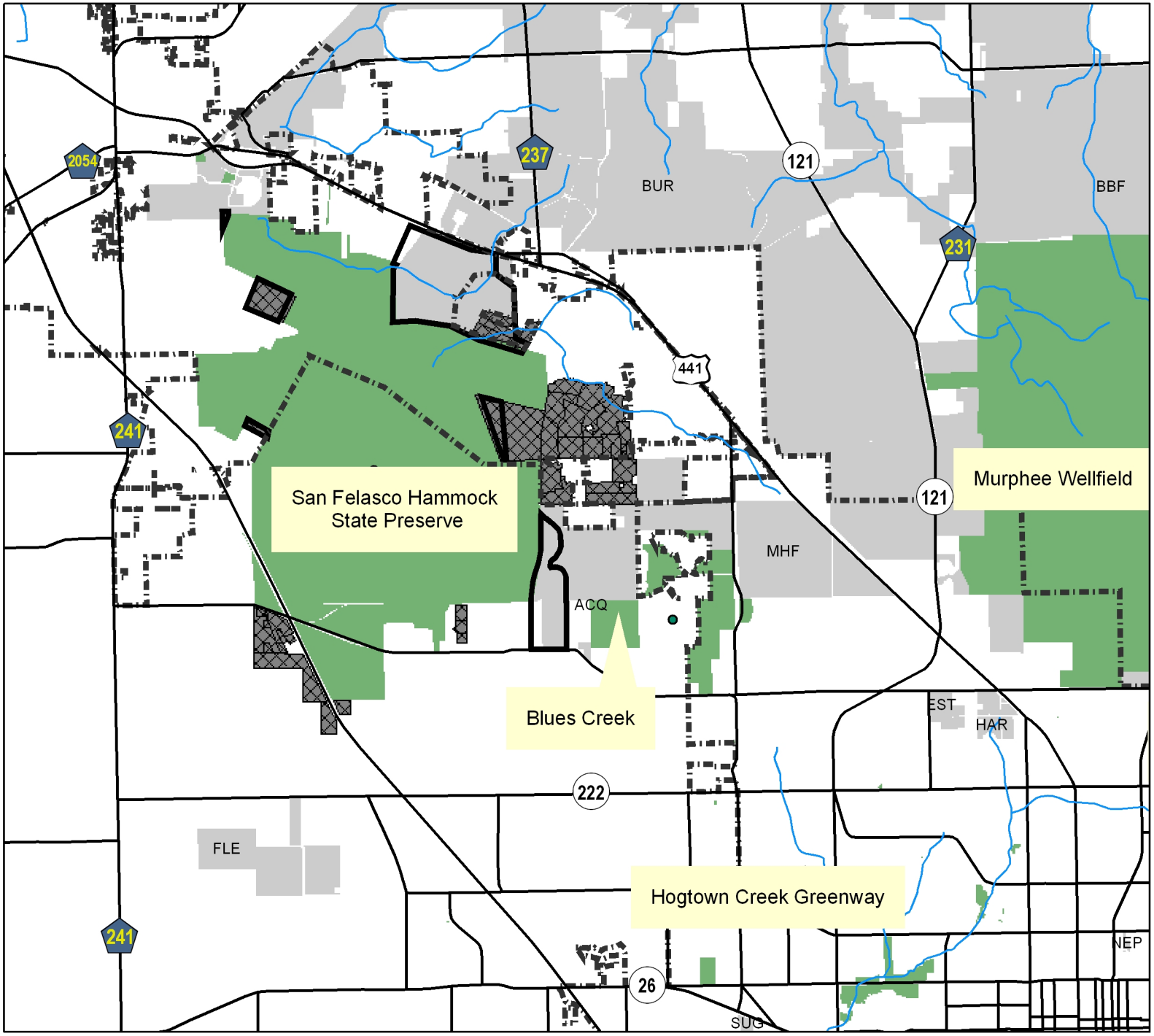
Macesich, M. 1988. Geologic Interpretation of the Aquifer Pollution Potential in Alachua County, Florida, Open File Report – 21. Florida Geologic Survey, Tallahassee, Florida.

National Speleological Society. Warren Cave Nature Preserve Management Plan. <http://www.caves.org/preserves/wcp/mp-wcp.html>

San Felasco Additions Draft date October 14, 2004

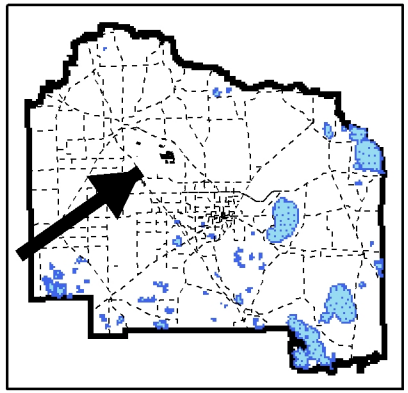
CATEGORY	Criterion	WEIGHTING	Enter Criteria Value Based on Site Inspection	Average Criteria Score	Average Criteria Score Multiplied by Relative Importance
(I-1) PROTECTION OF WATER RESOURCES	A. Whether the property has geologic/hydrologic conditions that would easily enable contamination of vulnerable aquifers that have value as drinking water sources;		4		
	B. Whether the property serves an important groundwater recharge function;		5		
	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;		2		
	D. Whether the property serves an important flood management function.		3		
(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;		4		
	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;		4		
	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;		5		
	G. Whether the property contains important, Florida-specific geologic features such as caves or springs;		5		
	H. Whether the property is relatively free from internal fragmentation from roads, power lines, and other features that create barriers and edge effects.		3		
(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;		5		
	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;		3		
	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;		4		
	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.		5		
	AVERAGE FOR ENVIRONMENTAL AND HUMAN VALUES			3.80	
	RELATIVE IMPORTANCE OF THIS CRITERIA SET IN THE OVERALL SCORE	1.3333			5.07
(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);		4		
	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;		5		
	B. Whether the overall resource values justifies the potential cost of acquisition;		3		
	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		4		
	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.		0		
	AVERAGE FOR ACQUISITION AND MANAGEMENT VALUES			3.33	
	RELATIVE IMPORTANCE OF THIS CRITERIA SET IN THE OVERALL SCORE	0.6667			2.22
	TOTAL SCORE				**7.29**

San Felasco Additions-Map 1



San Felasco Additions

- San Felasco Additions
- Alachua County Forever Projects
- Conservation Lands
- Optimum Boundary
- Roads
- Streams
- City Boundaries



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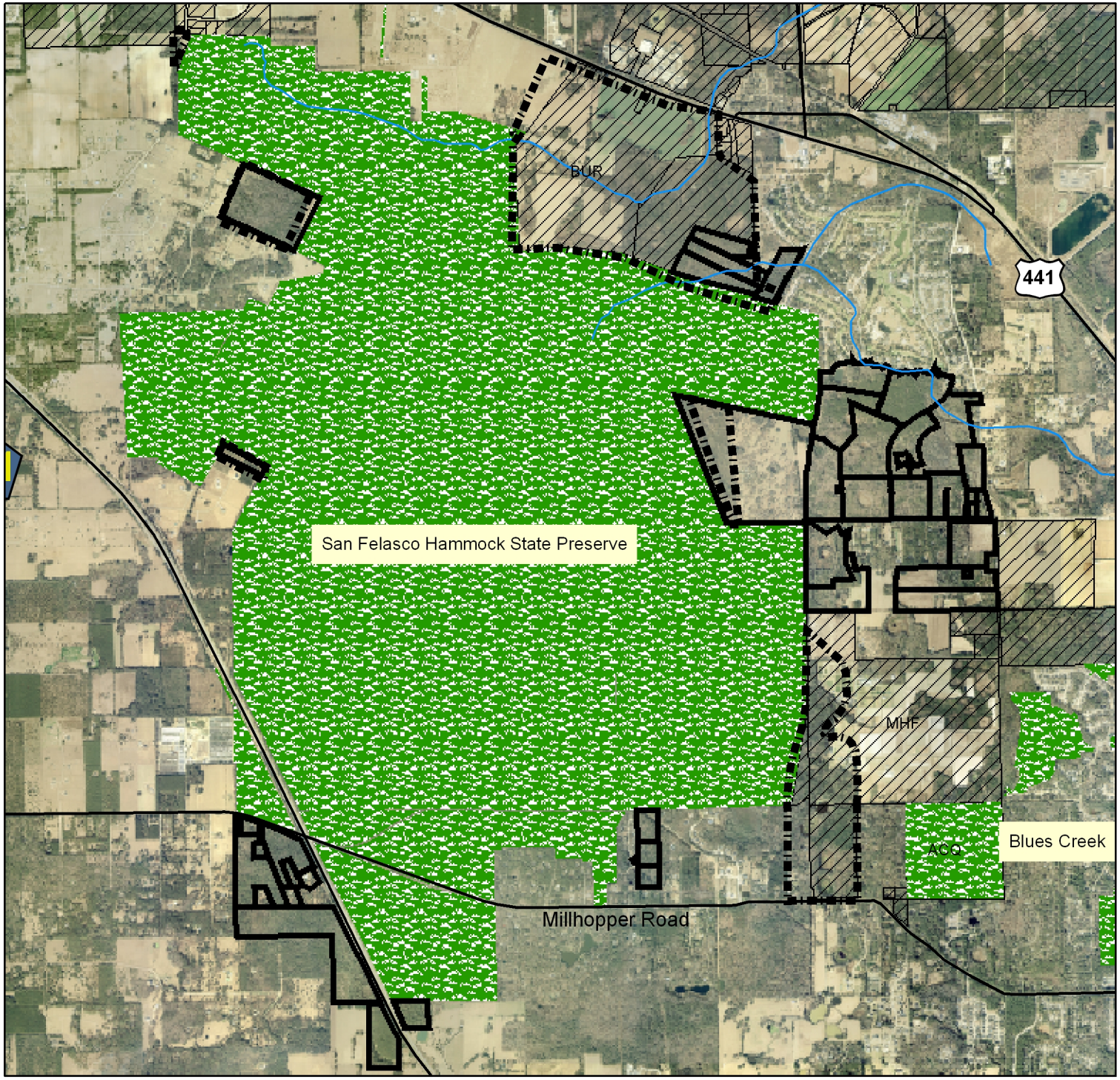
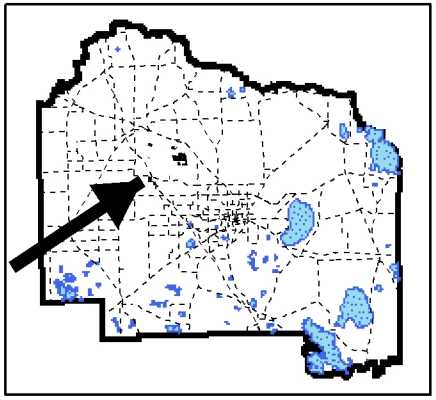
Alachua County FOREVER

ENVIRONMENTAL PROTECTION DEPARTMENT ALACHUA COUNTY

San Felasco Additions-Map 2



San Felasco Additions
Optimum Boundary
Alachua County Forever Projects
Conservation Lands
Roads
Streams



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