

**Lochloosa Creek Flatwoods
Rapid Ecological Project Assessment
Alachua County Forever**

Draft Date: November 5, 2002, April 8, 2003
Matrix Score: 7.87 of 9.44
Size: 22,782 acres
Number of Parcels: 110
Number of Owners: 34
Number of Buildings: 27

Location:

The 22,782 acre Lochloosa Creek Flatwoods (LCR) Project is the largest Alachua County Forever Project being considered at this time. It is located in the southeast quarter of unincorporated Alachua County, and is adjacent to the Lochloosa Wildlife Conservation Area (LWCA), Gum Root Swamp Conservation Area (GRSCA) and the southern tip of Balu Forest. The Alachua County Forever Austin Cary Flatwoods and East Newnans Lake projects are immediately north and east respectively of the LCR project. US 301, State Road 26 and County Road 234 approximate the west, north and east boundaries of the project, Map 1.

The LCR Project is a combination of two projects from the *Alachua County Ecological Inventory Project* (KBN Study) (KBN 1996); Lochloosa Creek Headwaters Flatwoods and Lochloosa Creek. 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 Lochloosa Creek Headwaters Flatwoods project was ranked 9th of 47 projects evaluated in the county, and categorized as above average. The Lochloosa Creek project was ranked 20th, and categorized as average.

The KBN Study summarizes the Lochloosa Creek Headwaters Flatwoods by stating that, “This is a big area of commercial pine flatwoods forest with large areas of good quality floodplain swamp along Lochloosa Creek, large areas of good quality basin swamp, and a number of cypress domes, small ponds, and small marshes. It is the main headwaters area for Lochloosa Creek. The pine flatwoods are mostly well drained, and there are gopher tortoises on some of the drier areas. The pine flatwoods are mostly slash pine plantations on sites that have been bedded” (KBN 1996).

The Lochloosa Creek Project is summarized in the KBN Study by the following paragraph, “This is a medium sized area along the lower part of Lochloosa Creek and its floodplain that is a vital connection between the St. Johns River Water Management District’s lands, both owned and under conservation easement, on the north side of Lake Lochloosa, and the large wildlife habitat areas to the north in eastern Alachua County. It is also valuable wildlife habitat in its own right, with fine floodplain forests, some upland areas, and a spring” (KBN 1996).

Protecting Water Resources:

The Lochloosa Creek Flatwoods project is located mostly in the confined aquifer zone of Alachua County. This zone of relative aquifer confinement 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 which form an aquiclude to the Floridan Aquifer System (Macesich, 1988). The remaining 5-10% of the project site is in the perforated aquifer zone. This is an area underlain by clays of the Hawthorn Group perforated by numerous karst features that allow direct access to the aquifer.

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The St. Johns River Water Management District's (SJRWMD) Aquifer Recharge map for Alachua County shows that the majority of the site falls within an area of moderately low recharge, with 4-8 inches of recharge to the Floridan Aquifer per year. The lower portion of Lochloosa Creek is delineated as a discharge area, and the remainder of property is shown as 0-4 inches of recharge. According to the USGS Water resources Investigation Report 88-4057, the property falls in an area of 1-10 inches of recharge per year (Aucott 1988).

Water in this area moves into Lochloosa Creek which flows into Lake Lochloosa, and from there into Orange Creek and the Ocklawaha River. There is a small amount of flow to the west into Newnans Lake (KBN 1996), Map 2.

As part of their 2003 Legislative Agenda, Alachua County is considering requesting that the entire Orange Creek Basin be included in the State's Surface Water Improvement (SWIM) Program. This area includes Paynes Prairie, Newnans Lake, Lake Lochloosa, Orange Lake, and the impaired urban streams and lakes in the City of Gainesville. At this time Newnans, Lochloosa and Orange Lakes have shown increased levels of degradation. The Chlorophyll A concentration in Newnans and Lochloosa Lakes exceeds levels reported for Lake Apopka prior to restoration. Lake Lochloosa, Paynes Prairie and Orange Lake were designated an "Outstanding Florida Water".

The LCR site contains not only the headwaters for Lochloosa Creek but the creek itself, in addition to Magnesia Springs. Lochloosa Creek is critical for the restoration of water quality in Lake Lochloosa, because it is responsible for most of the water discharged into the Lake.

Protecting Natural Communities and Landscapes:

Natural Communities

Sandhill	Bottomland Forest	Spring and short run
Former Sandhill	Floodplain Swamp	Other
Xeric Hammock	Basin Marsh	Rough Pasture
Upland Mixed Forest	Depression Marsh	Farm Pond
Wet Flatwoods	Basin Swamp	Improved Pasture
Mesic Flatwoods	Shrub Swamp	Low Impact Development
Hydric Hammock	Dome Swamp	Old Field Pine Plantation
Bog	Flatwoods/ Prairie Lake	Row Crops
Baygall	Swamp Lake	
Seepage Slope	Blackwater Creek	

The above list of natural communities is from the KBN Report. The ecological quality of the natural communities is good overall (KBN 1996).

The Project site is adjacent to the Lochloosa Wildlife Conservation Area (LWCA), the Gum Root Swamp Conservation Area (GRSCA) and the southern tip of Balu Forest. The ACF Austin Cary Flatwoods and East Newnans Lake projects are immediately north and east respectively of the LCR project. The preservation of the LCR project would connect the LWCA and the GRCA, in addition to preserving the headwaters of Lochloosa Creek and providing a connection to the large wildlife habitat areas to the north.

The project site is within the Florida Ecological Greenways Network (FEGN), in the priority 3 project area known as "Ocala NF-Lochloosa-Paynes Prairie-Newnans Lake". This FEGN project is the highest priority project in Alachua County. 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 (Hector et al. 2002).

The strategic location of the LCR Project on the east side of the county within an existing corridor of natural and silvicultural properties that form a large connected area for wildlife and natural resource conservation, is one of the critical features of this project. The area is a mosaic of public and private lands. Protection of this corridor is one of the best opportunities to protect and enhance natural resource values in our county, and more importantly it is of regional importance as one of several possible corridors that connect Ocala National Forest north to Okefenokee National Wildlife Refuge, and west to the Gulf Coast.

Approximately 10% of the LCR project falls within a Strategic Habitat Conservation Area for wading birds. 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).

Approximately 40 % of the site falls within the Florida Natural Areas Inventory (FNAI) priority four or five 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 (FNAI, June 2001).

About 25 % of the project area is delineated as Pine flatwoods, an Under-represented Natural Community. 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 on conservation lands 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
Free-mouth hydroid				
Amphibians				
Eastern Tiger Salamander	-/-	-/-	SU/S3	SM
Flatwoods Salamander	-/-	T/-	R/S2S3	SM
Gopher Frog	-/-	-/SSC	T/S3	SM
Striped Newt	-/-	-/-	R/S2S3	SM
Reptiles				
American Alligator	-/-	T/SSC	-/S4	SM
Canebrake Rattlesnake	-/-	-/-	-/S3	K
Eastern Diamondback Rattlesnake	-/-	-/-	-/S3	SM,K
Eastern Indigo Snake	-/-	T/T	SSC/S3	SM
Florida Crowned Snake	X/-	-/-	-/-	SM
Florida Pine Snake	-/-	-/SSC	SU/S3	SM
Gopher Tortoise	-/-	-/SSC	T/S3	F
Peninsula Mole Skink	-/-	-/-	-/-	SM
Short-tailed Snake	X/-	-/T	T/S3	SM
Spotted Turtle	-/-	-/-	R/S3?	SM,N
Birds				
Black-Crowned Night Heron	-/-	-/-	SSC/S3?	SM

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Black Rail	-/-	-/-	R/S3	SM
Cooper's Hawk	-/-	-/-	SSC/S3	SM
Great Egret	-/-	-/-	SSC/S4	SM
Little Blue Heron	-/-	-/SSC	SSC/S4	SM
Osprey	-/-	-/-	T/S3S4	SM
Snowy Egret	-/-	-/SSC	SSC/S3	SM
Southern Bald Eagle	-/L	T/T	T/S3	F
Tricolored Heron	-/-	-/SSC	SSC/S4	SM
Wild Turkey	-/L			F,K
Wood Stork	-/-	E/E	E/S2	SM
Mammals				
Bobcat	-/L	-/-	-/-	F
Florida Black Bear	X/L	-/T	T/S2	F
Northern Yellow Bat	-/-	-/-	SU/-	SM
River Otter	-/-	-/-	-/-	K
Round-tailed Muskrat	X/-	-/-	SSC/S3	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 include cardinal flower, greenfly orchid, wild pink azalea, royal fern, and cinnamon fern (KBN, 1996).

The Florida Fish and Wildlife Conservation Commission data shows one bald eagle nest on the project site and 16 others within two miles. The cluster of bald eagle nests around Orange, Newnans and Lochloosa Lakes has been apparent for the last twenty years, and is one of the densest populations in the state of Florida, personal communication Steve Nesbitt, FWCC.

About 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).

According to the KBN Study the only exotic plant found on the site was alligator weed and it was under effective biocontrol.

Management:

The area is dominated by silviculture and extensive good quality wetlands. Prescribed fire and invasive plant monitoring would be the primary tools. Management of this site would be fairly easy.

Achieving Social and Human Values:

Approximately 30% of the LCR area falls within a Priority one through four Natural Resource-based Recreation Area (Knight, et al. 2000), and is a priority 3 Ecological Greenway. The Natural Resource-based Recreation map was developed by FNAI in collaboration with DEP, FFWCC and DOF. 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 LCR 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 project would link the GRSCA with the LWCA and provide a larger more diverse area for recreational activities, and perhaps facilitate additional activities.

The LCR project site is easily accessible and relatively close to the urban areas. The property provides good opportunities for compatible resource based recreation.

Economic & Acquisition

There are 110 parcels and 34 ownerships in the 22,782 acre Lochloosa Creek Flatwoods Project. The Alachua County Property Appraiser (ACPA) shows 27 buildings on their parcel data. One ownership, Plum Creek, makes-up 86% of the total project acreage or 18,474 acres. The ACPA's 2002 Just Value or land value for the entire project is \$22,154,300 or \$972/ acre. The ACPA's total value (Just, Miscellaneous and Building) for the project area is \$23,056,800 or \$1012 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.

Three of the ownerships on the lower end of Lochloosa Creek are within the Lochloosa Wildlife Florida Forever Project. The project is on the "B" List under the "Small Parcels Projects" heading. This is defined as those acquisition projects that are important, but not of the highest priority, which are made up predominantly of small ownerships with individual values not exceeding one million dollars each, or individual acquisitions that are determined to achieve the Florida Forever goals, measures and criteria enough to qualify for acquisition but are valued at less than one million dollars. Florida Forever would contribute 45% of the purchase price. The SJRWMD is listed as an acquisition partner on the project, but they have not been contacted specifically on these parcels to determine their willingness to participate in the acquisition.

The Plum Creek properties, the parcels along Lochloosa Creek, and the Florida Forever parcels are the keystone parcels in the LCR Project, Map 3.

1)Plum Creek	18,474 acres
2)Brown (FL Forever)	851 acres
3)Colson	20 acres
4)Alachua Wade	500 acres
5)McMillan (FL Forever).	319 acres
6)Rayonier (FL Forever)	71 acres

Due to the extensive silvicultural operations in the area, conservation easements should certainly be an important component of the acquisition strategy for this area.

The project site falls within unincorporated Alachua County. It is zoned Agriculture with a Future Land Use designation of Rural Agriculture, is approximately 3 miles from the Urban Services Line and 2 miles from the urban reserve. There is a moderately low amount of development pressure for rural residences in this 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.

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

Hector, 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.

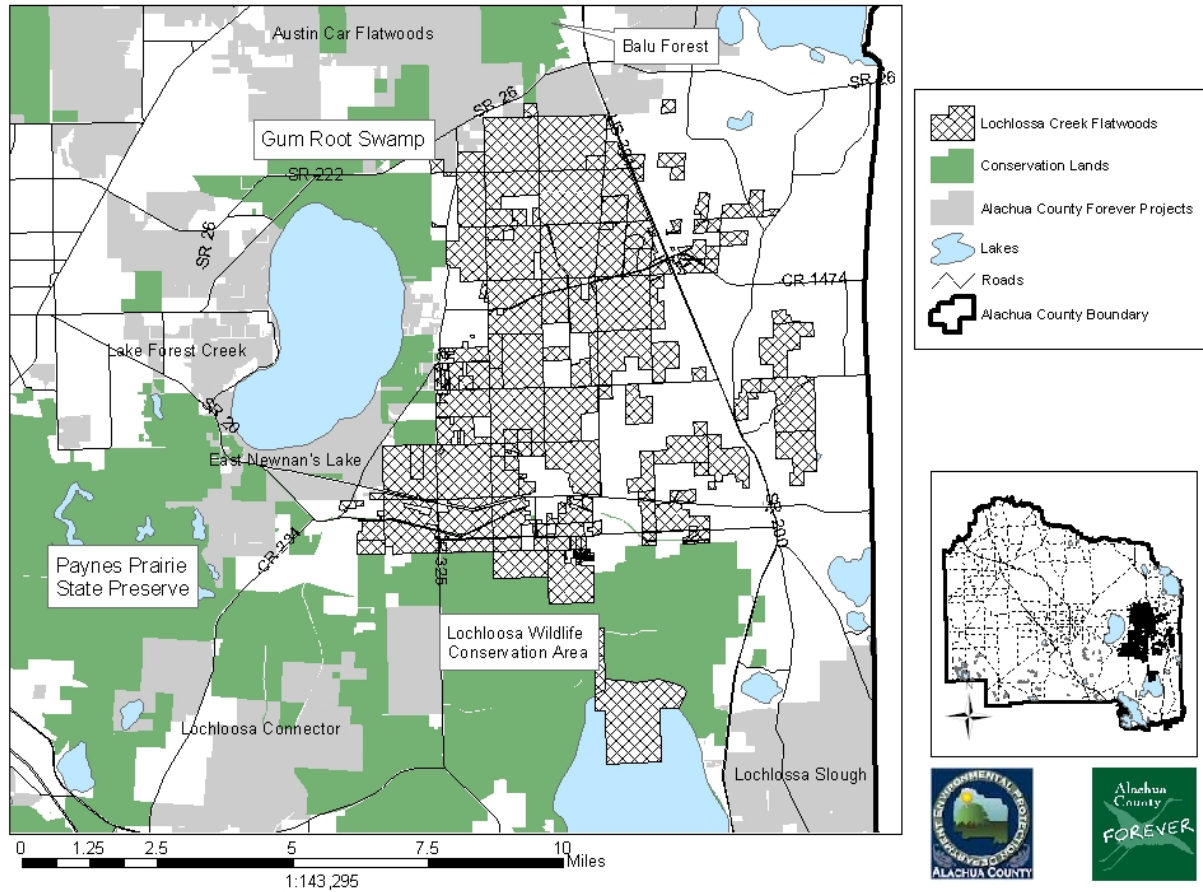
Knight, G., A. Knight, and J. Oetting. 2000. Florida Forever Conservation Needs Assessment Summary Report to the Florida Forever Advisory council. Florida Natural Areas Inventory.

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

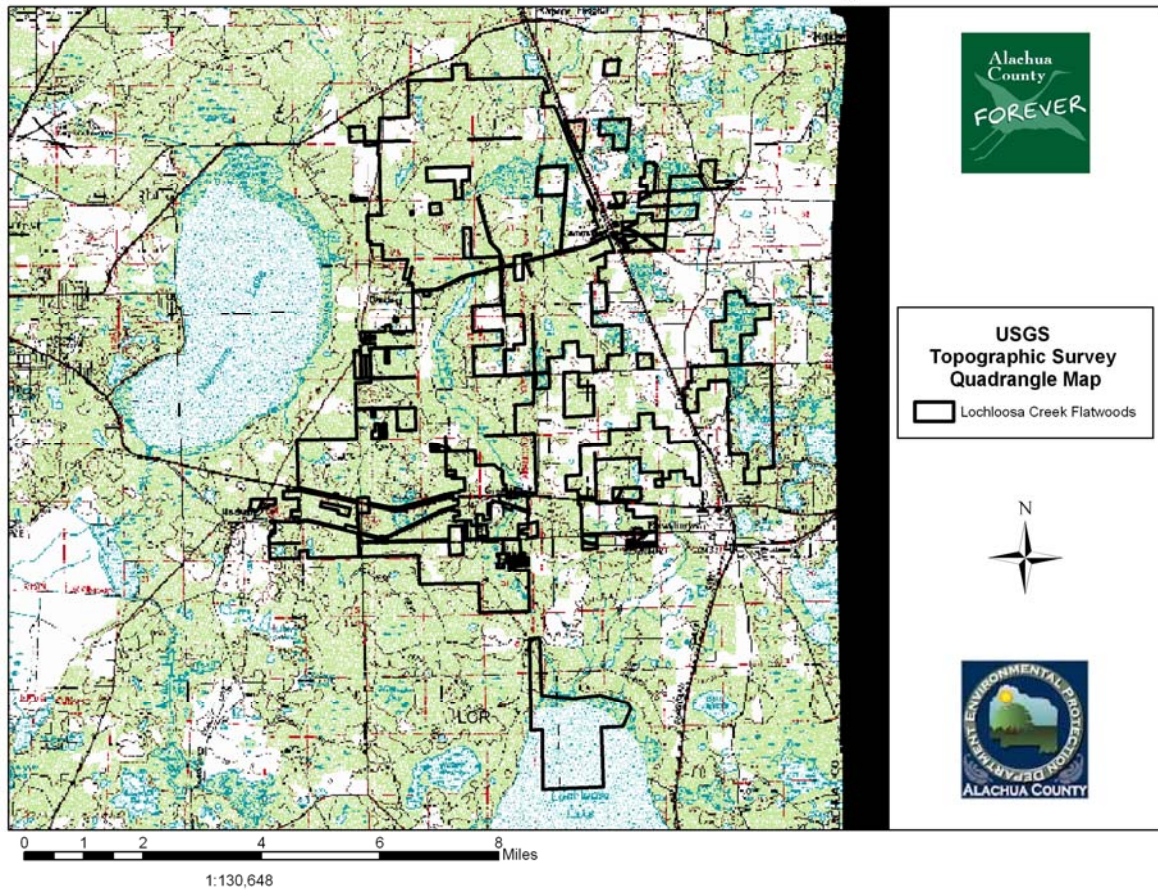
Macesich, M. 1988. Geologic Interpretation of the Aquifer Pollution Potential in Alachua County, Florida, Open File Report – 21. Florida Geologic Survey, Tallahassee, Florida.

Florida Natural Areas Inventory. December 2001. Florida Forever Conservation Needs Assessment Version 1.1 Supplement to the technical Report June 2001. Tallahassee, Florida.

Lochloosa Creek Flatwoods--Map 1



Lochloosa Creek Flatwoods-- Map 2



Lochloosa Creek Flatwoods--Map 3

