Upper Lake Lafayette Aquifer Protection Preserve
Florida Forever Management Prospectus

Prepared by the Florida Wildlife Federation
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This plan will provide guidance to manage the Upper Lake Lafayette Aquifer Protection Preserve (ULLAPP) property immediately following acquisition and prior to developing a comprehensive and detailed plan. This plan will function to secure the property and provide appropriate public access until more detailed plans are developed.

Within a reasonable time following acquisition and transfer of management responsibilities to the management agency Florida Wildlife Federation (FWF) will assemble a ULLAPP Management Advisory Committee. The Committee will consider management needs of the property and assist the FWF in the development of a 5 year land management plan. The Committee will be established and operated consistent with applicable state policies and procedures. At a minimum the Committee will include representatives from neighborhood groups, citizens, local governments and agencies with management expertise. The plan will include, but may not be limited to, provisions to protect natural resources, appropriate and sustainable public access and uses, solicit and engage public and private management partners, and secure funding for future management needs.

Management Policy Statement: To protect and conserve natural and cultural resources including but not limited to slopes, hardwood slope forest, wetlands, drainage features, springs and spring run, karst features and associated fish and wildlife resources. Upper Lake Lafayette is an active karst basin where lake bottom sinks and most importantly the large swallet, Fallschase Sink, drain water into the Floridan Aquifer, the local drinking water supply and source water for Wakulla Springs, the largest first magnitude spring in this region.

Qualifications for state designation: The property contains 10 archaeological sites, three of which have been destroyed. These sites consist of both prehistoric and historic artifact scatters, a habitation site, campsite, and the large platform mound. The large platform mound (8LE02) was described by archaeologist Gordon Willey in *Archaeology of the Gulf Coast* as "Lake Lafayette lies less than 10 miles southeast of Lake Jackson. About one mile northwest of the northwest tip of Lake Lafayette there is a flat-topped pyramidal mound of clay surrounded by fields which bear evidence of having an old village site. The mound is oriented north-northeast by south-southwest and is about 36 meters (ca. 120 feet) on a side at the base. The only visible excavations (in this case, potholes) are in the top. In 1940 a collection of pottery was gathered from the surrounding village. The village and site and mound must date from the Fort Walton period (1000-1500 AD)." The Florida Master Site File lists the historic dairy barn and abandoned house, both built in the frame vernacular style in or around 1940.

Lake Lafayette is a prairie lake formed by the slow dissolution of limestone over thousands of years. Originally a tributary of the St Marks River, this dissolution process

lowered the lake floor such that the lake and drainage basin rarely drain to the St Marks River, and instead drains westward toward Upper Lake Lafayette and Fallschase Sink. There are sinkholes (swallets) in the bed of the lake that periodically allow the lake to completely drain into the underlying Floridan Aquifer system. The largest of these sinkhole features is located adjacent to the Fallschase parcel in the bed of the lake. The 30-40 foot bluffs that we see today along the south and north shores are a product of this karst process. Karst features, including multiple still active sinks run north-south through the ULLAPP from Fallschase Sink to Buck Lake (offsite). As a prairie lake, the water levels change dramatically in response to rainfall ranging from a dry basin to a 300 acre lake. The limestone of Fallschase Sink is the Lower Miocene St. Marks Formation that comprises part of the Upper Floridan Aquifer in this area. The Upper Floridan Aquifer is the primary drinking water aquifer in Leon and Wakulla counties and also provides the water that discharges from numerous springs in the area including Wakulla, St. Marks, Wacissa and other smaller springs.

The parcel is upland hardwood slope forest premier example of an upland hardwood forest. Over fifty species of rare plants occur in this community throughout its range. The (*Hexastylis arifolia*) Little Brown Jug has been documented on the site.

Provides watershed protection for Upper Lake Lafayette, the Floridan Aquifer, and Wakulla Springs.

Approximately 95 percent of the proposal area is habitat for a range of three or more focal species (imperiled or rare wildlife).

Approximately 74 percent of the parcel lies within a designated Florida Wildlife Commission Strategic Habitat Conservation Area (SHCA) for the American Swallow-tailed kite (Elanoides forficatus) and Cooper's hawk (Accipiter cooperii).

Neotropical migrant species, which are in decline due to loss of habitat, utilize hardwood hammocks during spring and fall migration as stopover and foraging habitat. Migrants or winter resident migrants supported by these habitat types include hermit thrush (Catharus guttatus), winter wren (Troglodytes hiemalis), blue-headed vireo (Vireo solitaries), ruby-crowned kinglet (Regulus calendula), veery (Catharus fuscescens), chestnut-sided warbler (Setophaga pensylvanica), yellow-rumped warbler (Setophaga coronata), black-and-white warbler (Mniotilta varia), ovenbird (Seiurus aurocapillus), American redstart (Setophaga ruticilla), scarlet tanager (Piranga olivacea), and rose-breasted grosbeak (Pheucticus ludovicianus). Breeding birds that also use these habitats include yellow-billed cuckoo (Coccyzus americanus), chuck-will's-widow (Antrostomus carolinensis), yellow-throated vireo (Vireo flavifrons), wood thrush (Hylocichla mustelina), northern parula (Setophaga Americana), yellow-throated warbler (Setophaga dominica), pine warbler (Setophaga pinus), Kentucky warbler (Geothlypis formosa), hooded warbler (Setophaga citrina), and summer tanager (Piranga rubra).

The natural and manmade wetlands, combined with the clay upland soils on the project are suitable habitat for both larval and adult tiger salamander (Ambystoma tigrinum)

which is known to occur in the vicinity of the project area. The wetlands and small seepage streams provide habitat for other amphibians. The adjacent Upper Lake Lafayette supports the entire suite of wading birds that occur in the region including the endangered wood stork (Mycteria Americana). The project area is located less than five miles from the Chaires wood stork colony, the largest in the region. The exotic island applesnail (Pomacea insularum) is present in Upper Lake Lafayette and along the southern edge of the ULLAP and, while undesirable, this species is readily eaten by the limpkin (Aramus guarauna). Least terns (Sternula antillarum) are sometimes observed on Upper Lake Lafayette and adjacent Lake Piney Z.

ULLAPP provides the missing link in the existing wildlife corridor to the St. Marks River and St. Marks River Preserve State Park.

Recreational Opportunities

Greenways and Trails for hiking, running, and photography.

Lake Lafayette Passage Paddling Trail for canoeing/kayaking.

Bluff Viewscapes of Upper Lake Lafayette

Great Florida Birding and Wildlife Trail Addition for birding.

Abutting the Fallschase Sink, this parcel is part of a network of public lands surrounding Lake Lafayette, including the Lake Lafayette Heritage Trail, J.R. Alford Arm Greenway, L. Kirk Edwards Wildlife and Environmental Area, and St Marks River Preserve State Park. Intentions are to develop trails on this parcel to connect to this existing network for recreational use. Native Florida species will be conserved and managed to protect the soils and prevent erosion.

Manager: The Florida Wildlife Federation will manage the Upper Lake Lafayette Aquifer Protection Preserve land**.**

Conditions affecting the intensity of management: The property is adjacent to commercial development to the west and residential property to the southwest and north. Chain link fencing is present along most of the north property line adjacent to the Meadow Hills subdivision (one lot does not have chain link fencing). The north half of the eastern property line has post with 4" mesh wire fencing. This fencing ends at the south end of the southern-most pasture. The large platform mound is located less than 500 feet from the closest residential property and is covered by mature mixed forest. Invasive plant species have been observed onsite and will require immediate attention. Soil protection and vegetative cover will offer the best water quality protection for Upper Lake Lafayette.