



St. Johns River Blueway

Florida Forever Application

Submitted by

St. Johns County

Prepared by
Muller and Associates, Inc.
with
John R. Meyer, Ph.D., Consulting Biologist
St. Johns County Planning Division
St. Johns County GIS Division
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St. Johns River Blueway

I. General description

Introduction

“Beyond yon promontory, projecting far into the great river, beyond the still lagoon, half a mile distance from me, what a magnificent grove arises on its banks! How glorious the Palm! how majestically stands the Laurel, its head forming a perfect cone! its dark green foliage, seems silvered over with milk-white flowers. They are so large, as to be distinctly visible at the distance of a mile or more. The Laurel Magnolia, which grows on this river is the most beautiful and tall, that I have any where seen Their usual height is about one hundred feet, and some greatly exceed that.” With these, and other ebullient descriptions, the St. Johns River’s edge near Toco Creek was introduced to the outside world by William Bartram in 1791, as he detailed his explorations of northeast Florida on the eve of the American Revolution (Harper, 1998).

Bartram’s account left no doubt as to the untamed nature of the valley. Less than one hundred years later, however, the scene had changed enough to allow for a more refined, albeit isolated, life along the river, as described by Harriet Beecher Stowe when she boated along Julington Creek near her home in Mandarin (Stowe, 1999). *“One magnolia I saw that deserved to be called an archangel among the sons of the forest. Full a hundred feet high it stood, with a trunk rising straight, round, and branchless for full fifty feet, and crowned with a glorious head of rich, dark, shining leaves, When its lily-blossoms awake, what a glory will it become, all alone out there in the silent forest, with only God to see!”*

Both of these early writers on the St. Johns scene were unabashed promoters of the potential of the region for human use, but it’s unlikely that they could have anticipated the degree of development that now threatens the integrity of the natural systems intertwined with the St. Johns River in western St. Johns County. Urban Jacksonville sprawls southward along State Highway 13 and Interstate 95 corridors, while development spreads up the roads and tributary streams between these traffic arteries. Left unchecked, this development will overrun the natural communities in western St. Johns County, and nullify attempts to restore the water quality of the lower St. Johns River.

The remaining undeveloped habitats in St. Johns County adjacent to the St. Johns River and the tributaries flowing into it are proposed as the St. Johns River Blueway Florida Forever Project. This project, in cooperation with numerous river-related conservation activities, would make a

substantial contribution to the health of the St. Johns River and related uplands. Lands included within the boundaries are recommended for acquisition with Florida Forever funding. Both fee simple and less-than-fee approaches are suggested, taking into consideration the level of protection needed and the landowner's desire. (Appendix I contains photographs of the area.)

Properties in this proposal are under tremendous development pressure, especially in the northern portion of the project. St. Johns County experienced a 47% increase in population from 1990 to 2000, double the rate for all of Florida (U.S. Census). For the fifteen-month period from April 1, 2000 to July 1, 2001, the county's population is estimated to have increased by 6.9%. Northern St. Johns County, in particular, is experiencing explosive growth, in part due to pressures from Jacksonville's growth. The Fruit Cove area, along SR 13 south of Julington Creek, is the fastest growing area in the county. From 1990 to 2000, the population in the Fruit Cove area increased 172%.

The growth is not expected to slow anytime soon. The Julington Creek and St. Johns Developments of Regional Impact (DRIs), both in the vicinity of the project, are indicators of significant future population growth. The population of the entire Northwest Sector of St. Johns County is predicted to increase by 88% between 2000 and 2010, and this does not take into account some developments undergoing approval which are anticipated to add 12,000 additional people (Joseph Bornstein, St. Johns County, pers. comm.). A drive along Highway 13 reveals development or active construction on much of the uplands, especially adjacent to the river or creeks.

This proposal represents but one portion of a multi-faceted approach to restore and protect the St. Johns River. Approval of the St. Johns River Blueway application will augment substantial land acquisition, management and coordination efforts already in place for the St. Johns River and this area of St. Johns County. Several managed areas (Julington Durbin Preserve, Watson Island State Forest, and Deep Creek Conservation Area) already anchor protection efforts in the immediate area. This project will protect additional lands that help secure the existing investment. Further upstream, numerous managed areas contribute to the effort to protect the life of the St. Johns River. The upper reaches of the river contain over 280,000 acres of publicly-owned land. This project would extend these protection efforts to an area of the river that has not received a great deal of attention.

The St. Johns River has received national recognition through its designation as an American Heritage River. This initiative is designed to preserve and enhance the water quality and ecological and cultural resources along the river through the cooperative actions of numerous partners. One effort is the Eco-Heritage Corridor, which will identify a land and water-based corridor along the St. Johns River to encourage residents and visitors to learn about, enjoy, and protect the resources of the region.

The area is also included in the Lower St. Johns River Basin Program, an effort of the St. Johns River Water Management District to protect and restore both the water quality of the river and its associated natural systems. This program was established in 1988 after the Florida Legislature recognized this portion of the river as a priority area for surface water restoration and protection

in the 1987 Surface Water Improvement and Management (SWIM) Act.

Public support for protection of this area is evidenced by the County's monetary commitment to Florida Communities Trust projects within the St. Johns River Blueway boundary, the Northwest Sector Plan that specifically addresses the growth pressures in the area, the Countywide Vegetative and Wildlife Survey now in progress, the Comprehensive Greenway/ Blueway Master Plan now underway, and the citizen's group advocating for the William Bartram Scenic and Historic Highway designation (see 'Related community efforts', below).

The proposal includes about 28,174 acres of privately-owned lands, comprised of 494 parcels. Some of the landowners possess more than one parcel.

Rich in diversity, the proposal includes the remaining waterfront uplands and wetlands along the St. Johns River and its tributaries in St. Johns County. Approximately 12 types of natural communities possibly supporting 70 or more Florida Natural Areas Inventory (FNAI) listed species are included in the proposal. Recognized by FNAI's Potential Natural Areas and Potential Habitat for Rare Species analyses and the Florida Fish and Wildlife Conservation Commission's Strategic Habitat Conservation Area efforts, this proposal would afford protection to wildlife and natural communities against the unyielding pressure of rapid development. The Blueway contributes to at least six of the Florida Forever goals and at least seven of the Florida Forever criteria. The St. Johns River Blueway Project offers an opportunity for Florida Forever to provide lasting protection for a resource of statewide significance. Florida citizens will enjoy and benefit from this project.

Directions to site

The proposed project is in St. Johns County, along the St. Johns River and its tributaries from the Duval/St. Johns County line south to the St. Johns/Putnam County line area near SR 206. Most of the project is in the vicinity of State Road/County Road 13 and 13A, the major north-south road in the area. The northernmost parcel borders Durbin Creek, across the creek from the property recently acquired by the St. Johns River Water Management District (SJRWMD). The northern border for the bulk of the proposal is Greenbriar Road/County Road 210, with the southern border just south of the County Road 13/State Road 206 intersection. From north to south, some of the communities near the proposed project include Orangedale, Picolata, Bakersville, Riverdale, and Hastings. Major east-west roads include (from the north) Greenbriar Road/County Road 210, County Road 16A, State Road 16, County Road 208, County Road 214, and State Road 206.

Access to some sites is via roads, while other sites are accessible only by boat. In all cases access to private property is only by prior permission from the owners.

Legal description

Much of the proposal has irregularly-shaped sections and irregular section numbers. The proposal includes all or portions of the following sections:

Township	Range	Section(s)
4 South	27 East	36
5 South	27 East	25, 26, 27, 32, 34, 35
6 South	27 East	2, 3, 8, 10, 11, 12, 13, 14, 15, 23, 24, 25, 31, 32, 34, 38, 39, 40, 43, 45, 46
6 South	28 East	18, 32
7 South	27 East	1, 2, 3, 9, 10, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 37, 38, 40, 42, 43
7 South	28 East	5, 6, 17, 18, 19, 20, 31, 38, 39, 40, 41
8 South	27 East	13, 24, 38, 39
8 South	28 East	5, 7, 8, 9, 16, 17, 18, 19, 20, 28, 29, 33, 37, 39
9 South	28 East	4, 6, 7, 9, 15, 16, 21, 22

Refer to the aerial photographs, maps, and tax card information (submitted to the ARC/Florida Forever program under separate cover) for more details.

II. Resources

Introduction

St. Johns County is situated on Florida's east coast in the northeastern region of the state. Its western edge traces the course of the St. Johns River. To the north it adjoins Duval County/Jacksonville, while its southwestern boundary is partially defined by the course of Deep Creek, which separates it from adjacent Putnam County. Geologically, the western county's surface rests upon Pleistocene deposits primarily resulting from the effects of fluctuating sea levels, such that the St. Johns River as an entity is younger than 100,000 years (Belleville, 2000).

This recent geological history has for the most part shaped the current geographic features and biological communities. With a gradient of less than one inch per mile, the lower St. Johns is biologically a complex mixture of marine and freshwater environments.

Project area and ecological resources

Field assessments were conducted from March through June 2002 in that part of St. Johns County lying along or within the watershed of the St. Johns River. A preliminary trip to the project area along the St. Johns River was conducted by Meyer on 29 March. On 16-17 April, more extensive ground observations were made by Meyer along the river and at crossings and access roads involving the major tributaries of the river. Additional ground observations were made by Muller on April 17-19 and June 3. On April 19, Muller and Meyer made an overflight of the area in the St. Johns County Sheriff's Department helicopter, piloted by Capt. Chuck West. Photos were taken to document the natural communities and development during both ground and aerial surveys. For purposes of discussion, the project area is broken into five sections based upon natural and human influences.

Julington Creek to Remington Park

Forming the northwestern boundary of St. Johns County, Julington Creek, and its southern branch, Durbin Creek, wind inland through extensive bottomland forests almost to Interstate 95. South of the creek along State Highway 13, the quiet villages of Fruit Cove and Switzerland have been rapidly transformed into bustling mini-metropolises, complete with shopping malls and a four-lane highway. Along Race Track Road, which parallels Durbin Creek, a major development has virtually eliminated the Mesic Flatwoods, Sandhill, and Scrub natural communities. These xeric communities occupy the remnant sand dune ridges and contrast dramatically with the Floodplain Forest and Bottomland Forest communities along Durbin Creek. Only on the eastern edge of this palustrine system do significant natural communities remain. This region has been identified by the Florida Fish and Wildlife Conservation Commission (FWC) as a Strategic Habitat Conservation Area (<http://www.floridafisheries.com/enviro/index.html>).

Between Race Track Road and Remington Park, development has spread in two directions and now threatens to merge into one massive unit. Along the St. Johns River, Switzerland has

boomed as a bedroom community of Jacksonville. Southward along the river, the last remaining stretch of natural riverfront is being transformed into gated, upscale communities in the area of Remington Park. Prior to this development, the prevalent natural community was Hydric Hammock along the river, giving way to Mesic Flatwoods inland. Perpendicular to the river, Greenbriar Road provides an artery to the previously undeveloped interior, now showing signs of incipient massive development. New schools, currently isolated in forested areas, are unmistakable semaphores of what is on the drawing board for this region. In addition to the original Mesic Flatwoods natural communities, this area is dotted with what from the air appear to be Dome Swamp and Depression Marsh natural communities. Although not evident on any map, there is an old account of a spring somewhere in the Remington Park area (Belleville, 2000). It is unusual to encounter springs on the east side of the river this far north in the valley.

Remington Park to Orangedale

Beyond Remington Park, the pace of development slows, although this is undoubtedly temporary. A projection into the river known as Popo Point supports a mixture of Hydric Hammock and Bottomland Forest communities, with the raised land supporting the hammock occupied by a few dwellings. Of historic interest, this area was the location of Fort San Francisco de Pupo, a small Spanish fort contemporary with Fort Picolata farther south (Belleville, 2000). There is no indication for the traveling public that such a place existed, and access to the area is limited to private landowners. Acquisition of Popo Point by the state would be desirable, but the undeveloped area is primarily owned by the St. Joe Company and is not currently in the project boundaries (see Boundary Considerations, below).

Immediately south of Popo Point is Hallows Cove (Remington Cove on some maps), which initiates a stretch of shore between the river and Highway 13 that is essentially undeveloped south to Orangedale. This area is a mixture of Hydric Hammock and Bottomland Forest communities that would constitute a valuable addition to conservation lands, since so little of this remains undeveloped along this stretch of the St. Johns River.

Riverside development begins again in the Orangedale area, although for the most part this represents homes that have been there for decades. In Orangedale, at the juncture of Highway 13 with CR 210, there is a public fishing pier that projects into the river for some distance (the remnant of a former bridge to Green Cove Springs, the Old Shands Bridge Fishing Pier). A small amount of parking space is available, and the pier is used regularly by local fishermen. On the opposite end of Orangedale is the junction of Highway 13 with Highway 16, which crosses the river to Green Cove Springs. There is a significant swath of undeveloped Bottomland Forest community between the bridge and the highway junction. Acquisition of this tract would be desirable for conservation purposes, and it has the added draw of lying just east of the land once owned and farmed by William Bartram. It is unfortunate that the farm area itself has been developed, with no acknowledgement of its historic significance nor access to the public. According to Belleville (2000), Bartram's farm lay between the east footing of Highway 16 and Little Florence Cove.

Orangedale to Picolata

From Little Florence Cove to Jack Wright Island, lands between Highway 13 and the river have

been developed, albeit at a relatively low density. Jack Wright Island, which actually is a peninsula projecting into the river, is covered with a combination of Hydric Hammock, Bottomland Forest, and what appears from the air to be a relatively treeless Wet Flatwoods community. The outer part of the "island", where stood the Hydric Hammock, has recently been developed, but the remainder is untouched. Part of the undeveloped portion is the County's Jack Wright Island Park; the rest should be considered for acquisition before it is developed.

Beyond Jack Wright Island is Palmo Cove, which in reality is the combined mouths of Trout Creek and Sixmile Creek. There are extensive areas around Palmo Cove covered with Bottomland Forest community, which are, for the most part, undeveloped. On the south side of the cove, where the Bottomland Forest has historically given way to Hydric Forest and Mesic Flatwoods communities, earlier development has cleared or degraded these forests for agricultural or low intensity residences.

Trout Creek flows through a relatively narrow corridor of Bottomland Forest community northeastward for about five miles. Although the extent of the undisturbed streamside forest is not great, the surrounding higher ground, covered with agricultural lands and pine plantations in former Mesic Flatwoods community, presents extensive areas for development. Much of the east side of Trout Creek south of County Road 16A has been subdivided and has small houses and trailers; these are not included in the proposed boundaries, although acquisition of some of the parcels with inexpensive structures should be considered. The west side of the creek and north of 16A remains undivided and undeveloped. Development along the creek could greatly influence the quality of the natural community along Trout Creek. County-owned Trout Creek Park, with boat-launching facilities, lies near the mouth at the Highway 13 bridge over the creek.

In contrast to Trout Creek, Sixmile Creek traverses an extensive area of Bottomland Forest community for about three miles inland from the mouth. It continues in a somewhat narrower corridor of the same community for an additional four to five miles. As with Trout Creek, intensive residential development is relatively limited at the present. There are extensive areas of agricultural development and pine plantation in former Mesic Flatwoods community. Previous experience in the county indicates that these would be prime areas for residential development projects, especially given the proximity to the I-95 development corridor. It is unclear what effects extensive development would have on Sixmile Creek, but lowering of the water table and the unregulated use of residential pesticides, fertilizers, and other toxins could produce deleterious conditions such as now occur around the mouth of Julington Creek (Belleville, 2000).

South of Pacetti Point to the area where Highway 13 once again approaches the river, extensive, albeit older, residential development has replaced the riverside natural community. From this point to Bass Haven, there is a narrow strip of Bottomland Forest community around Colee Cove that up until present has been unsuitable to development. This strip, plus the much more extensive area of Bottomland Forest and Mesic Flatwoods communities to the southeast on the opposite side of the highway, should be acquired for conservation purposes. Protection of these lands would tie in with protection of lands along Sixmile Creek to the east. From Bass Haven southward to Picolata, the river side is developed with older, low-impact residences. But there is some evidence of the intrusion of higher end, more extensive development, similar to that found

in the area around Julington Creek. Although physical evidence of it no longer exists, at least above water, this was the site of Fort Picolata, a Spanish fort of the same era as Fort Pupo, described by William Bartram in the 1700s (Belleville, 2000).

Picolata to Riverdale

The stretch of the St. Johns River from Picolata to just beyond Toco Creek constitutes the largest block of uninhabited river shoreline in the county. Additionally, this block extends inland for several miles, including the drainage of Toco Creek. The Meldrim family owns much of this area, which includes Bottomland Forest, Hydric Hammock, and Mesic Flatwoods communities. In addition to its value as conservation land, there are two points of historic interest. The composer, Frederick Delius, made his home at Solano Point for a year in the late 1800s as he attempted citrus farming. This failed, but his residency produced one of his best-known compositions, an orchestral work entitled *Florida Suite*, inspired by life along the St. Johns River (Belleville, 2000). Another point of interest is Toco Creek, near which was a landing that marked the railhead of a small horse-drawn train that took travelers in the late 19th century across the intervening fifteen miles to St. Augustine (Stowe, 1999). Toco Creek itself is not a particularly long stream, but included within its drainage is a good amount of relatively untouched Bottomland Forest.

Riverdale is a small community of older riverfront homes, with no evidence of new development. Riverdale is situated in a fairly extensive patch of Hydric Hammock community. There is a small county park and boat ramp along the river. Farther inland, most of the surrounding area is given over to pine plantation and agricultural lands. For the most part, the Riverdale area represents what a drive along Highway 13 in St. Johns County was like thirty to forty years ago.

Riverdale to Hastings

From Riverdale southward to Racy Point, where Highway 13 turns sharply eastward to follow the river's edge, the shoreline of the St. Johns is dotted with older residences. Eastward from Racy Point to the area of McCullough Creek, the riverfront continues to be occupied by older residences. Residential development is limited to the shoreline. The interior is devoted to agricultural lands and pine plantations. McCullough Creek, although relatively narrow, extends inland for almost four miles, preserving a corridor of Bottomland Forest community through agricultural and timbering lands. There is a public boat ramp where Highway 13 crosses McCullough Creek.

Beyond McCullough Creek, Highway 13 moves away from the river, traversing agricultural and timbering lands until it approaches the Deep Creek Conservation Area of the SJRWMD near Hastings. The highway crosses one stream, Moccasin Branch, which winds inland through agricultural lands. Its Bottomland Forest community probably plays an important role in filtering out agrochemicals before the waters reach the St. Johns River. The integrity of this small stream should be maintained. The Deep Creek Conservation Area conserves a large block of flood-prone Bottomland Forest and Mesic Flatwoods communities to the northeast of the agricultural community of Hastings. There is currently a widening project on State Highway 207 where it crosses Deep Creek, possibly indicating the impending spread of new development in the area.

Summary of biological communities and rare and endangered species

Natural Communities

Twelve types of natural communities potentially occur within the St. Johns Blueway project (see table). Two of the natural communities found within the project area, Sandhill and Scrub, are ranked by FNAI as S2, Imperiled in Florida. Both are considered to be prime lands for development, and some have been affected by development in the Julington Creek DRI. An additional three (Depression Marsh, Dome Swamp, and Xeric Hammock) are ranked as S3, Very Rare or Local throughout Range in Florida. Xeric Hammock, prime real estate for development, possibly occurs in the Julington Creek DRI, while Depression Marsh and Dome Swamp communities are scattered. The most common natural communities in the project area are Mesic Hammock, which has been widely altered for pine plantations; Hydric Hammock, which is rapidly disappearing as residential development spreads; and Bottomland Forest, which occupies most of the lowland drainages of the St. Johns River and its tributary streams, along with scattered Floodplain Swamp communities. At least two occurrences of Floodplain Swamp are documented within the project area by FNAI. (Appendix IV contains FNAI rank explanations.)

Plants

Nineteen species of FNAI-listed plants are reported or confirmed in St. Johns County by FNAI from natural communities that potentially occur within the proposed project boundaries. Ten of these species are listed by the state of Florida as Endangered, while an additional four are listed by the state as Threatened (see table). Many of these imperiled species are restricted to some of the very natural communities that are being lost to development or the side-effects of development.

Rare plants documented by FNAI as occurring within the project boundaries include lake-side sunflower (FNAI rank G1G2 – Critically Imperiled or Imperiled globally; State Endangered), Bartram's ixia (FNAI G2 – Imperiled globally; State Endangered), celestial lily (FNAI G2; State Endangered), Florida toothache grass (FNAI G2; State Endangered), southern milkweed (FNAI G2; State Threatened), and Florida mountain-mint (FNAI G3 – Very Rare or Local throughout Range; State Threatened). At least eight occurrences of Bartram's ixia are recorded for the project area.

Barbara Fleming, St. Johns County park naturalist, reports an additional three state-listed rare plants from the Trout Creek area – yellow fringeless orchid (*Platanthera integra*, FNAI G4/S3S4, State Endangered), rose pogonia (*Pogonia ophioglossoides*, State Threatened), and Catesby's lily (*Lilium catesbaei*, State Threatened) (Barbara Fleming, pers. comm.).

Mammals

There are eight species of rare mammals listed by FNAI that are known or presumed to occur within the project area. One of these, the manatee, is federally and state listed as Endangered; the St. Johns River is designated as Critical Habitat for this species by the U.S. Fish and Wildlife Service. An additional species, the Florida black bear, is state-listed as Threatened. Five more of these listed species are ranked by FNAI as S2 or S3. Two of the species, southeastern weasel

St. Johns River Blueway

Potentially Occurring Rare Species and Natural Communities

Based on Florida Natural Areas Inventory St. Johns County Summary (April 1998)

Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	County Occurrence Status†
FISH						
<i>Acipenser brevirostrum</i>	shortnose sturgeon	G3	S1	LE	LE	C
<i>Acipenser oxyrinchus oxyrinchus</i>		G3T?	S1	N	N	C
<i>Agonostomus monticola</i>	mountain mullet	G5	S3	N	N	C
<i>Ameiurus brunneus</i>	snail bullhead	G4	S3	N	N	P
<i>Awaous tajasca</i>	river goby	G5	S1S2	N	N	P
<i>Micropodus brachyurus</i>	opossum pipefish	G5	S2	N	N	C
<i>Notropis cunningsae</i>	dusky shiner	G5	S4	N	N	P
<i>Petromyzon marinus</i>	sea lamprey	G5	SA	N	N	C
AMPHIBIANS						
<i>Notophthalmus perstriatus</i>	striped newt	G2G3	S2S3	N	N	P
<i>Rana capito</i>	gopher frog	G4	S3	N	LS	P
REPTILES						
<i>Alligator mississippiensis</i>	American alligator	G5	S4	T(S/A)	LS	C
<i>Chelymys guttata</i>	spotted turtle	G5	S3?	N	N	C
<i>Crotalus adamanteus</i>	eastern diamondback	G5	S3	N	N	C
<i>Drymarchon corais couperi</i>	eastern indigo	G4T3	S3	LT	LT	C
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	N	LS	C
<i>Pituophis m mugitus</i>	Florida pine snake	G5T3?	S3	N	LS	C
BIRDS						
<i>Accipiter cooperii</i>	Cooper's hawk	G4	S3?	N	N	P
<i>Aimophila aestivalis</i>	Bachman's sparrow	G3	S3	N	N	P
<i>Ajaia ajaja</i>	roseate spoonbill	G5	S2S3	N	LS	P
<i>Aramus guarana</i>	limpkin	G5	S3	N	LS	P
<i>Ardea alba</i>	great egret	G5	S4	N	N	C
<i>Egretta caerulea</i>	little blue heron	G5	S4	N	LS	C
<i>Egretta thula</i>	snowy egret	G5	S4	N	LS	P

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Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	County Occurrence Status†
<i>Egretta tricolor</i>	tricolored heron	G5	S4	N	LS	C
<i>Elanoides forficatus</i>	swallow-tailed kite	G4	S2S3	N	N	C
<i>Eudocimus albus</i>	white ibis	G5	S4	N	LS	C
<i>Falco columbarius</i>	merlin	G5	SU	N	N	P
<i>Falco peregrinus</i>	peregrine falcon	G4	S2	LE	LE	P
<i>Falco s paulus</i>	American kestrel	G5T3T4	S3?	N	LT	P
<i>Haliaeetus leucocephalus</i>	bald eagle	G4	S3	LT	LT	C
<i>Ixobrychus exilis</i>	least bittern	G5	S4	N	N	P
<i>Laterallus jamaicensis</i>	black rail	G4	S3?	N	N	P
<i>Mycteria americana</i>	wood stork	G4	S2	LE	LE	C
<i>Nyctanassa violacea</i>	yellow-crowned night-heron	G5	S3?	N	N	P
<i>Nycticorax nycticorax</i>	black-crowned night-heron	G5	S3?	N	N	P
<i>Pandion haliaetus</i>	osprey	G5	S3S4	N	LS**	P
<i>Pelecanus occidentalis</i>	brown pelican	G4	S3	N	LS	P
<i>Picoides borealis</i>	red-coc woodpecker	G3	S2	LE	LT	P
<i>Picoides villosus</i>	hairy woodpecker	G5	S3?	N	N	P
<i>Plegadis falcinellus</i>	glossy ibis	G5	S2	N	N	P
<i>Sterna antillarum</i>	least tern	G4	S3	N	LT	C
<i>Sterna caspia</i>	Caspian tern	G5	S2?	N	N	P
<i>Sterna maxima</i>	royal tern	G5	S3	N	N	C
MAMMALS						
<i>Corynorhinus rafinesquii</i>	Rafinesque's big-eared bat	G3	S3?	N	N	P
<i>Mustela frenata oivacea</i>	southeastern weasel	G5T4	S3?	N	N	P
<i>Neofiber alleni</i>	round-tailed muskrat	G3	S3	N	N	P
<i>Podomys floridanus</i>	Florida mouse	G3	S3	N	LS	P
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	G5T2	S2	N	LS	P
<i>Sorex longirostris longirostris</i>	southeastern shrew	G5T5	S4	N	N	P
<i>Trichechus manatus</i>	manatee	G2?	S2?	LE	LE	C
<i>Ursus americanus floridanus</i>	Florida black bear	G5T2	S2	C	LT**	C

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Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	County Occurrence Status†
VASCULAR PLANTS						
<i>Adiantum tenerum</i>	brittle maidenhair fern	G5	S3	N	LE	R
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	LT	C
<i>Baptisia calycosa var calycosa</i>	Canby's wild indigo	G2T1	S1	N	N	C
<i>Calamovilfa curtisii</i>	Curtiss' sandgrass	G3	S3	N	LT	R
<i>Calydorea coelestina</i>	Bartram's ixia	G2	S2	N	LE	C
<i>Chetroglossa palmata</i>	hand fern	G4	S2	N	LE	R
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	N	C
<i>Helianthus carnosus</i>	lake-side sunflower	G1G2	S1S2	N	LE	C
<i>Litsea aestivalis</i>	pondspice	G3	S2	N	LE	C
<i>Monotropsis reynoldsiae</i>	pigmy pipes	G1Q	S1	N	LE	C
<i>Nemastylis floridana</i>	fall-flowering ixia	G2	S2	N	LE	C
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	LT	C
<i>Pteroglossaspis ecristata</i>	wild coco	G2G3	S2	N	LT	C
<i>Pycnanthemum floridanum</i>	Florida mountain-min	tG3	S3	N	N	C
<i>Rhynchospora punctata</i>	pineland beakrush	G1?	S1?	N	N	C
<i>Rudbeckia nitida</i>	St. John's Susan	G1G2	S2	N	LE	C
<i>Ruellia noctifloraw</i>	hite-flowered wild petunia	G2G3	S2	N	LE	C
<i>Spiranthes polyantha</i>	green ladies'-tresses	G3G5	S1S2	N	LE	R
<i>Verbesina heterophylla</i>	variable-leaf crownbeard	G2	S2	N	N	C
NATURAL COMMUNITIES						
Basin Swamp		G4?	S3	N	N	C
Baygall		G4?	S4?	N	N	C
Depression Marsh		G4?	S3	N	N	C
Dome Swamp		G4?	S3?	N	N	C
Floodplain Swamp		G?	S4?	N	N	C
Hydric Hammock		G?	S4?	N	N	C
Maritime Hammock		G4	S2	N	N	C
Mesic Flatwoods		G?	S4	N	N	C
Sandhill		G2G3	S2	N	N	C

St. Johns River Blueway

Potentially Occurring Rare Species and Natural Communities

Based on Florida Natural Areas Inventory St. Johns County Summary (April 1998)

Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	County Occurrence Status†
Scrubby Flatwoods		G3	S3	N	N	C
Scrub		G2	S2	N	N	C
Xeric Hammock		G?	S3	N	N	C
OTHER						
Bird rookery				N	N	C

* See *FNAI Rank Explanations* sheet (Appendix IV) for definitions of Global and State Ranks, and State and Federal Status

** See *FNAI Rank Explanations* sheet (Appendix IV), *Special Animal Listings - State and Federal Status* section

† COUNTY OCCURRENCE STATUS

Vertebrates and Invertebrates:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base.

P = (Potential) Occurrence status derived from a reported occurrence for the county, or the occurrence lies within the published range of the taxon.

N = (Nesting) For sea turtles only; occurrence status derived from documented nesting occurrences.

Plants, Natural Communities, and Other:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base or from a herbarium specimen.

R = (Reported) Occurrence status derived from published reports.

and round-tailed muskrat, are dependent upon aquatic communities, while three (big-eared bat, Sherman's fox squirrel, and southeastern shrew) are dependent upon mature forests, and the Florida black bear requires relatively large, unpopulated areas for its existence. Manatees regularly use the St. Johns river for feeding and to travel upstream to wintering grounds, such as Blue Springs, where as many as 110 animals may overwinter (<http://www.amelianow.com/spring01-manatee.htm>).

Birds

Twenty-seven FNAI-listed species are known to occur or have the potential to occur within the proposed boundaries. Of these, four species (peregrine falcon, bald eagle, wood stork, red-cockaded woodpecker) are federally listed as Endangered or Threatened and an additional two, southeastern American kestrel and least tern, are listed by the state as Threatened. Six more species are listed by the state as Species of Special Concern. FNAI documents occurrences of bald eagle, great egret, little blue heron (State Species of Special Concern), and osprey for the project area. One bald eagle, presumably a resident bird, was observed during the April 19th helicopter overflight in the vicinity of Solano Point. Several swallow-tailed kites were observed on April 18 in the Deep Creek area. In addition to the FNAI-listed species, the natural communities within the project area are known or presumed to provide feeding and/or breeding territory to a large number of resident and migrating bird species.

Reptiles

Six species of reptiles known from St. Johns County are listed by FNAI as rare species. All are presumed to occur within the proposed project boundaries. One of these, the federally and state Threatened eastern indigo snake (*Drymarchon corais couperi*), has the potential to occur in large areas of relatively undisturbed habitat on the east side of State/County Highway 13, and is especially sensitive to development as its large size marks it as an easy victim of ignorant new residents. Four additional species are FNAI-ranked as S3 species, three of which, the American alligator (*Alligator mississippiensis*), the gopher tortoise (*Gopherus polyphemus*), and the Florida pine snake (*Pituophis melanoleucas mugitus*), are state listed as Species of Special Concern. The gopher tortoise and Florida pine snake are most likely to be found in suitable xeric habitat inland from the main river. The eastern diamondback (*Crotalus adamanteus*) is on the decline virtually everywhere in northeast Florida (Meyer, pers. obs.), and it is unlikely to be awarded any protected status in the foreseeable future.

Amphibians

Two FNAI-listed species potentially occur within the project boundaries, the striped newt (*Notophthalmus perstriatus*), ranked S2S3 and the gopher frog (*Rana capito*), ranked S3 and state-listed as a Species of Special Concern. The striped newt potentially occurs in wetland/temporary pond situations, while the gopher frog is likely to be found in appropriate xeric communities in association with gopher tortoises. The project area lies within one of the richest areas of amphibian diversity outside of the tropics. The likelihood exists that as many as 18 species of anurans and seven species of salamanders occur within the project area. Conservation of additional lands in St. Johns County would aid greatly in protecting populations of these diverse animals, currently of concern because of the apparent world-wide phenomenon of amphibian population decline.

Fishes

From the mouth of Julington Creek southward, the salinity of the St. Johns River decreases as the influence of the tidal wedge lessens. At the level of the Shands Fishing Pier, the salinity measures only one part per thousand (Florida Dept. of Environmental Protection), essentially freshwater. Nevertheless, some primarily marine species such as mullet (*Mugil* spp.) and blue crabs (*Callinectes sapidus*) occur around the pier and are the object of fishermen. By far, the greatest sport-fishing emphasis is on freshwater species, such as black bass (*Micropterus* spp.), or euryhaline species such as striped bass (*Morone saxatilis*) and American shad (*Alosa sapidissima*), especially in the tributary streams.

There are at least eight species of FNAI-listed fishes that potentially occur within the project boundaries. FNAI documents the shortnose sturgeon (*Acipenser brevirostrum*), both federally and state listed as Endangered and FNAI-listed as S1, as present in the river adjacent to the project. The snail bullhead is an FNAI-tracked species also documented nearby in the St. Johns River. Two additional species potentially adjacent to or within the project boundaries (Atlantic sturgeon, river goby) are FNAI-listed as S1, and one (opossum pipefish) is listed as S2.

Biodiversity analyses

A review of the FWC Office of Environmental Services data bases shows that FWC considers two areas of this project to be Strategic Habitat Conservation Areas (SHCAs) for the state. Much of the Meldrim property between County Roads 208 and 214 contains a SHCA. The private lands surrounding the existing Deep Creek Conservation Area and the area between the Deep Creek Conservation Area and the Regional Agricultural Water Treatment Area to the south are also within a SHCA (Gina Moultrie, FWC, pers. comm., and Cox et. al, 1994).

The FWC priority wetlands analysis represents wetland habitats critical to 33 wetland-dependent species of vertebrates listed as endangered, threatened, or species of special concern. This analysis shows areas of wetland within the project provide habitat for 1-3 listed wetland species. Some areas support 4-6 wetland species, and much of the uplands provide habitat for 1-3 upland species considered in this analysis.

The FWC also conducted analyses for 'biodiversity hotspots' in the state. The results represent areas with a high degree of overlap for 54 declining species of wildlife plus known occurrences of flora, fauna, and natural communities. Many biodiversity hotspots of 3 to 4 species occur within the St. Johns River Blueway project. Other areas are designated hotspots for 5 to 6 species. Some areas (north of Trout Creek, the mouths of Sixmile and Tocoí Creeks, and the Deep Creek area) are designated as the highest category in the FWC analysis, representing habitat important for 7+ species (G. Moultrie, pers. comm., and FWC GIS data layers description).

There is considerable common area between the project boundaries and areas designated by FNAI as Potential Natural Areas and/or Potential Habitat for Rare Species (J. Oetting, FNAI, pers. comm. June 18, 2002). FNAI defines Potential Natural Areas as "lands which appear to be

relatively intact areas of natural vegetation based on aerial photography, as determined by FNAI scientists.” Potential Habitat for Rare Species is defined as “areas which, based on landcover type, offer suitable habitat for one or more rare species known to occur in the vicinity. Potential habitat layers have been developed for approximately 250 of the rarest species tracked by the Inventory, including all federally listed species.” The identification of much of the project in both of these categories illustrates the importance of these lands from both natural community and rare species perspectives.

From FNAI Element Occurrence Records, it appears that 20 occurrences of either rare or endangered species or outstanding natural communities are on or very near the proposal. Twelve types of natural communities may occur in the project, and at least two occurrences of Floodplain Swamp are documented within the project area by FNAI. Nineteen rare or endangered plant species potentially occur on the project. Five species of globally imperiled plants are documented from the area (see above). At least fifty-one types of FNAI-listed animals potentially occur in the project or the adjoining waters. Riverine species with occurrences recorded adjacent to or near the project include the shortnose sturgeon and the manatee, both of which are listed as endangered by state and federal agencies. Acquisition of the proposed project will directly benefit these species by providing buffer lands that will reduce the number of pollution sources and people located directly adjacent to the water.

Archaeological and historical features

A review of the Florida Master Site File of the Division of Historical Resources (DHR), Department of State, by township/range/section on June 11, 2002 (Patrick Gensler, DHR, pers. comm.) disclosed the varied archaeological and historic character of this region. Maps were provided for non-buildings sites. Only those sites within or in/very near the proposal are summarized here.

Four sites appear to be within the project; three other sites appear to be either in or very near the project. Reflecting the long settlement history of the area, artifacts documented in the Master Site File attest to more than 11 cultures and seven site types represented in the project area. Most historic structures are excluded since the proposal targets undeveloped lands. Cultures represented include Orange, St. Johns, St. Johns I, St. Johns IB, St. Johns II, Spanish, Spanish First Period, Spanish Second Period, American, Nineteenth Century American, and Twentieth Century American. Site types include prehistoric burial mound, prehistoric mound, prehistoric campsite, historic refuse, building, historic fort (Fort Picolata), and mill (Deep Creek Sawmill).

According to Miss Jo Meldrim, the Meldrim property supported one of the last active turpentine operations in northeast Florida. The remains of a turpentine camp, including small buildings, are on the Meldrim property. The University of Florida has expressed interest in relocating and preserving some of these buildings.

Since the proposal includes private lands, many of which are not accessible to the public, it is likely that undiscovered sites are included within the proposal’s boundary. The location of the

proposal along the St. Johns River and its tributaries increase this probability.

A more detailed review of the Master Site File is recommended. It would be helpful if the Division would evaluate the historic and archaeological significance of the features within the boundaries.

Potential recreational or other public uses of the land

The St. Johns River and its tributaries are used extensively for recreation purposes, especially boating-related activities. The acquisition and protection of remaining uplands will help ensure a quality outdoor experience. With the acquisition of the St. Johns River Blueway, additional recreational amenities could be offered to residents and visitors. The St. Johns River Blueway could provide bicycling, one of the regional recreation needs identified in the 2000 Statewide Comprehensive Outdoor Recreation Plan. The Plan also predicts a need for hiking and non-boat freshwater fishing beginning in 2010. The Blueway would be able to alleviate those needs. Opportunities for non-boat fishing decrease as development increases, especially since waterfront property is the first to be developed. Acquisition of the remaining undeveloped waterfront lands now would secure public access for the non-boating public, and also provide opportunities for water-related facilities in appropriate locations.

Other activities, including nature study, picnicking, fishing and canoeing, are compatible with the resources. The hunting potential for the larger tracts will have to be evaluated. Tract size and proximity to highways and habitation would have to be considered, as well as other issues. Whether lands are acquired by fee simple or less-than-fee means will also affect the recreation potential for the project. Many of the smaller tracts near the developed areas could provide interpretive nature and hiking trails accessible to the rapidly increasing population. The larger tracts have the potential for many outdoor-based recreation activities.

The Durbin Creek, Deep Creek, Six Mile Creek, and Trout Creek are potential canoeing areas. Some of the smaller creeks would also provide shorter canoeing opportunities. In addition to canoeing, these areas offer birdwatching and fishing. With the purchase of additional lands along the creeks, bank fishing would also be more readily available to the public.

Acquisition of project lands will also give improved access to some existing public lands. Watson Island State Forest and Deep Creek Conservation Area have poor access now. Improved public access would probably lead to increased public use of these existing managed areas. Acquisition of the project could also enhance the St. Johns River Eco-Heritage Corridor, now in the planning stages by the Northeast Florida Regional Planning Council.

It is likely that a variety of agencies would manage lands acquired through the St. Johns Blueway. Where acquisitions are adjacent to or near existing managed areas, those managing agencies would be likely candidates to care for the acquisitions as additions. This includes the Florida Division of Forestry (Watson Island State Forest), St. Johns River Water Management District (Julington-Durbin Preserve, Deep Creek Conservation Area and Twelve Mile Swamp

Florida Forever Project), and St. Johns County (Trout Creek and Jack Wright Island). Some of the project tracts are large. If acquired in fee simple, additional managing agencies such as FWC and the Florida Park Service may be interested.

Florida Forever Goals and Criteria

The St. Johns River Blueway contributes to at least six of the Florida Forever goals (A, B, C, D, E, and G), and possibly more. The project also satisfies at least seven of the Florida Forever criteria (a, b, c, f, g, k, l). Justifications are summarized below and additional details are provided throughout the application.

Section 259.105, (4) and (9) Florida Statutes (and Chapter 18-24.002(1) F.A.C.) Florida Forever Goals

GOAL A: ENHANCE THE COORDINATION AND COMPLETION OF LAND ACQUISITION PROJECTS

The project will enhance Watson Island State Forest, Deep Creek Conservation Area, and the Julington-Durbin Preserve by adding contiguous natural areas; some areas will be protected by less than fee acquisition, and partnership funding is likely.

GOAL B: INCREASE THE PROTECTION OF FLORIDA'S BIODIVERSITY AT THE SPECIES, NATURAL COMMUNITY, AND LANDSCAPE LEVELS

The Project contains some Strategic Habitat Conservation Areas and portions of the project have been identified as FNAI Potential Natural Areas and Potential Habitat for Rare Species. The project contributes to an ongoing effort to protect the lands around the St. Johns River. It is expected to correspond with areas of the St. Johns American Heritage River Eco-corridor.

GOAL C: PROTECT, RESTORE, AND MAINTAIN THE QUALITY AND NATURAL FUNCTIONS OF LAND, WATER, AND WETLAND SYSTEMS OF THE STATE.

The project will help protect natural floodplain functions and the surface waters of the State along the St. Johns River and its tributaries in St. Johns County. Acquisition of the project will also help minimize damage from flooding by acquiring areas in the floodplain. There is potential for restoration of some lands in cooperation with the St. Johns River Water Management District.

GOAL D: ENSURE THAT SUFFICIENT QUANTITIES OF WATER ARE AVAILABLE TO MEET THE CURRENT AND FUTURE NEEDS OF NATURAL SYSTEMS AND THE CITIZENS OF THE STATE

Protection of wetlands and upland buffers will help ensure availability of water for natural systems and the State's citizens.

GOAL E: INCREASE NATURAL RESOURCE-BASED PUBLIC RECREATIONAL AND EDUCATIONAL OPPORTUNITIES

Many of the lands within the project, and waters adjacent to the project, will be available for public recreation and educational opportunities.

GOAL G: INCREASE THE AMOUNT OF FORESTLAND AVAILABLE FOR SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

The Meldrim property within the project will likely be a less than fee acquisition, and the Meldrim family will continue their strong stewardship of the land, which includes sustainable forestry.

Criteria - Section 259.105, Florida Statutes

(9)(a) The project meets multiple goals described in subsection (4).

Yes – see above.

(b) The project is part of an ongoing governmental effort to restore, protect, or develop land areas or water resources.

The project is within the area addressed by the SJRWMD's Lower St. Johns River Basin Program and the St. Johns American Heritage River Initiative.

(c) The project enhances or facilitates management of properties already under public ownership.

Acquisition of the project will enhance management of Watson Island State Forest, Julington-Durbin Preserve and Deep Creek Conservation Area.

(f) The project contributes to the solution of water resource problems on a regional basis.

Protection of wetlands and upland buffers will contribute to the quality and quantity of water in the region.

(g) The project has a significant portion of its land area in imminent danger of development, in imminent danger of losing its significant natural attributes or recreational open space, or in imminent danger of subdivision which would result in multiple ownership and make acquisition of the project costly or less likely to be accomplished.

Yes – see the Introduction and Boundary Considerations regarding rapid development, population increases, and sale of land for development.

(k) The project may be acquired, in whole or in part, using alternatives to fee simple, including but not limited to, purchase of development rights, hunting rights, agricultural or silvicultural rights, or mineral rights or obtaining conservation easements or flowage easements.

It is the intent of this proposal that portions of the project will be acquired using alternatives to fee simple.

(l) The project is a joint acquisition, either among public agencies, nonprofit organizations, or private entities, or by a public-private partnership.

SJRWMD has indicated its interest in participating in acquisition of portions of the project.

III. Additional Information and Public Support

Boundary considerations

The project boundaries were determined through the selection of undeveloped lands along the St. Johns River and its tributaries in St. Johns County. Boundaries were formulated based on examination of topographic maps and 1998 and 1999 aerial photographs; advice from St. Johns County staff, the St. Johns County Land Acquisition and Management Program (LAMP) board members, staff of the St. Johns River Water Management District; a helicopter overflight of the area; and field assessments. Some areas originally included in the proposal were excluded when field work showed development was underway, especially in the northern part of the project. Small parcels with habitable structures generally are not intended to be included in the proposal. In certain cases, less-than-fee acquisition of lands with structures may be desirable, depending on further development potential of the land, condition of the land, and potential for serving as a buffer. This is especially true for parcels bordering tributaries.

Initially, the preliminary boundaries included more lands adjacent to Durbin Creek, based on 1999 aerial photographs. However, field work and the overflight showed that much development has occurred since 1999. The Williams property, south of Durbin Creek and north of Race Track Road, remains in the project. This property is across the creek from SJRWMD's recent purchase of Julington-Durbin lands in Duval County. Together with the WMD land, the Williams property, whether acquired in fee simple or less than fee, will provide important protection to Durbin Creek.

The same rapid development situation occurred along County Road 210, especially south of Greenbriar Road and north of County Road 16A. Undeveloped in 1999 aerial photographs, several subdivisions now occupy lands west of 210. These are excluded from the proposal.

The St. Joe Company lands in the vicinity of Greenbriar Road, Hallows Cove and Kendall Creek were not included in the project at the request of a company representative (G. Willson, St. Joe Company, pers. comm. with Jim Muller). These lands are important components of the Blueway effort, and it is hoped that in the future at least a portion of them will be added to the project. However, the St. Joe Company is considering development options at this time and is not willing to have the lands included.

Another major holder of lands in the area is the Rayonier Corporation, including Rayonier Timberlands Operating Company and Rayland Company Inc., the development division of the company. Rayonier may consider selling some land to the state. However, major components of their lands in the northern part of the project are currently optioned, with the sales intended to close within six months (Ed Montgomery, Rayonier Corporation, pers. comm. with Jim Muller).

The willingness of the future owners to consider offers is not known, but should be investigated prior to any mapping efforts.

A major landholder within the project boundaries is Miss Jo Meldrim and her family. The family owns a broad swath of land south of County Road 208 and north of County Road 214. Adjacent to Watson Island State Forest, these are some of the finest lands in the proposal. Timbering operations are small and controlled. Miss Meldrim manages the lands, and is dedicated to protecting them. At this time she is not willing to sell, but she may consider a conservation easement. Given the size of her holdings and her careful management of the land, a conservation easement allowing management to continue as at present would be a significant contribution to the protection of the this area of the St. Johns River. Miss Meldrim may be willing to sell some lands in fee simple, such as parcels adjacent to Watson Island State Forest. This would provide access to the State Forest from County Road 13.

The 94-acre privately-owned Saturiwa Swamp Conservation Area is within the proposal. If a binding, perpetual conservation easement is not attached to this land, it should remain within the proposal with the intent of having a permanent conservation easement on the land.

A portion of the St. Johns DRI is included in the proposal. Although some roads are in place, the included lands are not yet developed and would provide a buffer to tributary lands. Less-than-fee and fee simple approaches should be considered for these, as well as other, lands in the project. If an owner is not willing to sell their land outright, the ability to affect development density and placement of development through a less-than-fee purchase could make a significant difference in resource protection.

The project boundaries must be considered dynamic. Development is continuing at a rapid pace, especially at the northern end of the project and on waterfront property. Boundaries will have to be adjusted to exclude parcels as they are developed.

Nearby Managed Areas

The St. Johns River Blueway is contiguous with several State, Water Management District, and local managed areas. The project is adjacent to the Watson Island State Forest, SJRWMD's Deep Creek Conservation Area, and SJRWMD's Regional Agricultural Water Treatment Area. SJRWMD's Julington-Durbin Preserve is across Durbin Creek from the proposal. Local parks adjacent to the proposal include Trout Creek, Jack Wright Island, and Deep Creek Boat Landing. The privately-owned Saturiwa Swamp Conservation Area is within the proposal.

Other managed conservation areas occur within five miles of the proposed project. Across the St. Johns River from Sixmile Creek is SJRWMD's Bayard Conservation Area. Twelve Mile Swamp, a partially-acquired Florida Forever project managed by SJRWMD, is about three miles east of the northern portion of the project. Several local parks, such as St. Johns River Park (Bennett property), the Old Shands Bridge Fishing Pier, Riverdale Park, and Switzerland Point School Park, are near the project.

From the perspective of this project, the existing managed areas providing protection to the St. Johns River are of particular relevance. This project is the continuation of long-term efforts to protect the St. Johns River. Most of these efforts have focused on the upstream areas. Unless we act soon, we will lose the opportunity to protect significant tracts along the river below Palatka.

Downstream public lands providing protection to the St. Johns River include the City of Jacksonville's Reddie Point, Yellow Bluff Fort Historic State Park, Cedar Point, Fort Caroline National Memorial, and the Timucuan Ecological and Historic Preserve.

Upstream from St. Johns County, the State, SJRWMD, federal government, local governments and private organizations have made tremendous investments in properties bordering the St. Johns River and its tributaries. According to the St. Johns American Heritage River 2001 State of the River report, the upper reaches of the river contain over 280,000 acres of publicly-owned land.

Some of the lands above Palatka and their managing entities are Horseshoe Point Conservation Area (SJRWMD), Dunns Creek Conservation Area (SJRWMD), Dunn's Creek (The Nature Conservancy), Ravine Gardens State Park (DEP), Murphy Creek Conservation Area (SJRWMD), Seven Sisters Islands (SJRWMD), Haw Creek Preserve State Park (DEP), Haw Creek Conservation Area (SJRWMD), Lake George Conservation Area (SJRWMD), Caravelle Ranch Conservation Area (SJRWMD and FWC), Caravelle Ranch Wildlife Management Area (FWC), Welaka State Forest (DOF), Cross Florida Greenway State Recreation Area and Conservation Area (DEP), Ocala National Forest (USFS), Lake George State Forest (DOF), and Lake Woodruff National Wildlife Refuge (DOF). Many additional managed areas and Florida Forever projects are further upstream.

The St. Johns River Blueway will augment the resource protection provided by the existing managed areas.

Related community and agency activities

A variety of activities are underway in St. Johns County and other jurisdictions along the St. Johns River that complement the St. Johns River Blueway proposal. Some of the more significant activities are highlighted below.

St. Johns American Heritage River

"The 310-mile St. Johns River in the State of Florida was officially designated an American Heritage River on July 30, 1998 in recognition of its ecological, historic, economic and cultural significance. A variety of partners, including federal agencies, state agencies, and the river community, have agreed to work together to preserve and enhance the water quality and ecological and cultural resources along the St. Johns River, to stimulate economic revitalization, and to cooperate with other state, local and federal agencies to serve their common interest in the St. Johns River. A Partnership Agreement, memorializing this partnership, was signed on

December 15, 1999.”

“The AHRI is managed by a Steering Committee consists of the following stakeholders: the Executive Director of the St. Johns River Water Management District, the Directors of the Florida Department of Environmental Protection, Northeast Florida District and Central Florida District, the Mayor of the City of Jacksonville (principal nominator of the St. Johns River application for the AHRI), a representative from each of the Advisory Committees, and representatives from the river community.”

“Three Advisory Committees representing the three basins of the river -- Lower, Middle and Upper, support the Steering Committee. These committees identify needs and priorities for their respective portions of the river. Membership of these advisory committees is determined through a locally-led process, beginning with local government officials, and include representatives from the environmental community, business community, tourism community, agricultural community, recreational interests, historic/cultural interests and citizens from the respective areas.”

“A number of federal agencies are partners in the AHRI on the St. Johns River. These include the Department of Agriculture (Forest Service, Natural Resource Conservation Service, and Rural Development), Department of Commerce (Economic Development Administration), Department of Defense (Army Corps of Engineers), Department of Housing and Urban Development, Department of the Interior (National Park Service, Fish and Wildlife Service, and U.S. Geological Survey), the Environmental Protection Agency, and the Small Business Administration. These agencies have agreed to provide technical assistance as appropriate, and to assist in identifying federal funding opportunities to support projects along the river (St. Johns American Heritage River Initiative. September 2001).”

The St. Johns American Heritage River Initiative is an excellent forum for activities that complement the St. Johns River Blueway. One particularly relevant AHRI project is the St. Johns River Eco-Heritage Corridor. This effort will “identify a land-based corridor and a river-based ‘blueway’ through the St. Johns River basins to allow residents and visitors to easily discover centuries of history, southern lifestyle, associated wildlife and the natural beauty of the surrounding landscapes.” The Northeast Florida Regional Planning Council is the lead agency on this project, which is an AHRI priority for 2001-2002 (St. Johns American Heritage River Initiative. September 2001).

Lower St. Johns River Basin (LSJRB) Program

The goal of SJRWMD’s Lower St. Johns River Basin (LSJRB) Program, initiated in 1988, is “to protect and restore basin surface waters to Class III (fit for wildlife and recreation) or better water quality and to protect and restore associated natural systems.” This program was established after the Florida Legislature recognized the LSJRB as a priority area in its 1987 Surface Water Improvement and Management (SWIM) Act. The continuing importance of the LSJRB program is recognized through a \$10.1 million annual appropriation from the Legislature. Program efforts

focus on reducing point and nonpoint sources of pollution, restoring degraded aquatic habitat, improving interagency coordination, and increasing public awareness of river issues (SJRWMD, no date [2001?]).

One project in the current year workplan is completion of a regional stormwater treatment facility at the Regional Agricultural Water Treatment Area, on Deep Creek south of State Road 207. Upstream of lands in the Blueway proposal, the property consists of wetlands and disturbed uplands. Runoff from agricultural fields will be distributed on a sprayfield to be located on the disturbed uplands. This will remove some of the agricultural-related pollutants from the water prior to its flowing down Deep Creek and into the St. Johns River (SJRWMD, no date [2001 or 2002]; Cliff Gandy, SJRWMD, pers. comm.). This and other efforts of the LSJRB program are complementary to the proposed Blueway project.

Land Acquisition and Management Program (LAMP)

St. Johns County's Land Acquisition and Management Program (LAMP) has a County-appointed board that identifies key environmentally sensitive lands and makes recommendations about money sources that can be used to acquire these lands. Active in its present form since June 1999, the LAMP Board was instrumental in convincing the Board of County Commissioners to fund preparation of the Northeast Florida Blueway Phase II Florida Forever proposal and the current proposal. The LAMP has identified the Boyd tract, near the confluence of the St. Johns River and Patty Branch, as a priority site, and is pursuing Florida Community Trust funds for that parcel. The Boyd Tract lies within this Florida Forever proposal. If FCT funds are obtained, the boundaries for the Florida Forever project will be adjusted.

Northwest Sector Plan

The County is conducting a visioning process for the northwest sector of the county, which includes the St. Johns River Blueway proposal. Because of rapid, intense development of the area, the citizens feel that the normal Comprehensive Plan process is not sufficient to address their needs. An extensive effort is underway to build "a foundation for consensus through understanding the context in which change has occurred, how it is likely to occur in the future, and how that change can be shaped to provide a legacy that protects what is valued as a place to live and work for existing and future residents." (Northwest Sector Progress Report http://www.co.st-johns.fl.us/BCC/gmsvcs/Planning/NW_Survey/Community_Profile/01_Inside-the-Progress-Report.pdf)

Countywide Vegetative and Wildlife Survey

The St. Johns Countywide Vegetative and Wildlife Survey is currently underway. This is an effort to create a comprehensive survey identifying all of the vegetative community types and their associated wildlife within unincorporated St. Johns County. The county intends to use this survey for a variety of purposes, including an assessment of the vegetative and wildlife resources within the County. Other intended uses include identification of priority land acquisition areas, future wetland mitigation sites, future wildlife corridors, future blueways and greenways, and a wide range of protective conservation strategies. Four of the sites being surveyed are included in this project.

Several of the sites are within the Northeast Florida Blueway.

Comprehensive Greenway/ Blueway Master Plan

The County is also funding a Comprehensive Greenway/ Blueway Master Plan for the county. A requirement of the County's 2015 Comprehensive Plan Conservation/ Coastal policy, this plan will assess and identify all applicable existing infrastructure facilities that can be used as part of the County's Comprehensive Greenway/ Blueway Master Plan. These include utility easements, county storm water easements, conservation easements, blueways, scenic highways, mitigation areas, wetland buffers, environmental sensitive areas, bike routes, multi-purpose paths and railroad right-of-ways. Also considered will be greenway/ blueway interconnections with municipalities within the county and adjoining counties. The Plan is scheduled to be completed in March 2003. The Northeast Florida Blueway and the St. Johns River Blueway are expected to be components of the master plan.

Wetland Buffer Requirement

Currently the County requires a 50 foot setback along the St. Johns River and its tributaries. If it is a legal lot of record, then the setback is 25 feet (Vickie Renna, St. Johns County Planning Division, pers. comm.).

William Bartram Scenic and Historic Highway designation

State Road 13 and County Road 13 were designated as the William Bartram Scenic Highway by the Florida Legislature in 1980, but this designation does not confer any protection or funding. Citizens of St. Johns County are pursuing designation of State Road 13 as a FDOT State of Florida Scenic Highway – the William Bartram Scenic and Historic Highway. The primary purpose for the designation is to preserve and protect the intrinsic resources (historical, archaeological, natural, scenic, recreational and cultural) of the highway area and to establish a sustainable balance between conservation and land use.

The application has been submitted and Florida DOT has determined SR 13 to be eligible for designation. The second phase for designation is now underway. Once State Road 13 has received its State Scenic Highway designation, it may be considered as a possible candidate for Federal Scenic Byway designation. Designation as a Scenic Highway will make the area eligible for additional transportation enhancement funds that can be used for such activities as public education and recognition of historic and natural resources. The County envisions the Scenic Highway as an integral component of a recreational trail system linking community garden areas and passive parks. Riverfront parks and canoe trails are also envisioned.

Potential funding sources and acquisition efforts

Although St. Johns County does not have a regular land acquisition fund, the County and interested parties are trying to establish a funding source to acquire conservation lands in the County. A referendum originally planned for the fall 2002 ballot has been delayed, but it is hoped that an issue will be brought before the voters in 2003.

The St. Johns County Board of County Commissioners has regularly set aside \$300,000 a year to acquire conservation lands. The Vaill Point Property, in the Northeast Florida Blueway, was acquired with County money and matching Florida Communities Trust funds. The County is preparing a FCT application for the Boyd Tract on Patty Branch near State Road 13, which is within the St. Johns River Blueway boundaries. If the FCT application is unsuccessful, the County may be willing to provide matching funds for acquisition of this tract through Florida Forever. The County may also be willing to provide some funds for acquisition of other lands in the St. Johns River Blueway in future years.

The Florida Division of Forestry may be interested in providing some funds to acquire lands adjacent to the Watson Island State Forest. Acquisition of additional lands would make Watson Island more accessible. Forestry will have to consider the addition in comparison to other statewide priorities.

For some time, the St. Johns River Water Management District has been interested in lands within the Blueway boundaries. The District may be interested in a partnership to acquire lands near the Deep Creek Conservation Area, and may also be interested in helping to protect the Meldrim property (Ray Bunton, SJRWMD, pers. comm.). The District has an established relationship with the Rayonier Corporation. The District may be willing to provide matching funds for some purchases and to take the lead in negotiations with Rayonier.

SJRWMD's Lower St. Johns River Basin (LSJRB) Management Program may also be interested in partnering on land acquisition efforts. This program is responsible for conducting the research projects and implementing management plans intended to protect, restore and properly manage the surface water resources of the basin. In addition to their interest in protecting high quality natural areas, the program would also like to provide buffers to enhance and protect the water quality of the river. The federal farm bill has funds to replant agricultural lands as wetlands with a 15-year easement. The LSJRB program is interested in converting these to permanent easements. One possibility is for Florida Forever to help acquire the important buffer lands along the St. Johns River and its tributaries, and then the WMD can secure other funds to restore the areas.

Funds may also be available through the St. Johns American Heritage River efforts. The City of Jacksonville has successfully partnered with various agencies to acquire lands along the Lower St. Johns River. Using such innovative ideas as requesting funds to purchase floodprone areas, the City has received land acquisition funds from non-traditional sources such as the Federal Emergency Management Agency. Similar funding may be available for the St. Johns River Blueway.

IV. Ownership and Tax Information

Tax plat maps and printouts based on data from the St. Johns County Property Appraiser are being submitted under separate cover.

The proposal includes about 28,174 acres of privately-owned lands, comprised of 494 parcels. Many of the landowners possess more than one parcel; there are about 290 landowners. Six entities own more than 15,000 of the acres in the project: Rayonier, Meldrim, SJ Land Associates LLC, Klaerich, Ringhaver, and Plum Creek Timberlands LP.

Miss Jo Meldrim, Rayonier Timberland Corporation, and Robert Williams, some of the larger landowners, have been contacted by telephone or in person. They did not object to being included in the project boundaries. Other owners within the proposed project boundaries are being contacted by a mailout, informing them of the inclusion of their property in this project.

Zoning/Comprehensive Planning

According to the St. Johns County 2015 Future Land Use Map, land uses in the project include Residential Density A (1 unit/ac), Residential Density B (2 units/ac), Development of Regional Impact (adopted prior to 1990 Comprehensive Plan), Mixed Use District, Rural Commercial, Agricultural-Intensive, and Rural Silviculture. The project boundaries include portions of the St. Johns DRI, which is partially developed. No structures in this DRI are included in the proposal.

V. Closing Comments

The beauty and allure of this area of the St. Johns River was such that a young William Bartram was moved to purchase land and establish an indigo plantation. Although this effort failed, Bartram's writings have inspired countless readers and motivated many to visit and enjoy the serenity of this land. Without rapid commitment and action, the beauty described by Bartram may soon be visited only in his writings. It is already too late for the Fruit Cove and Switzerland areas, casualties of development's sweep along the waterfront and into the interior.

Despite these losses, there is still time to set aside thousands of acres of lands for conservation and enjoyment, both along the main St. Johns River and most of its tributary streams. This proposed protection will benefit the myriad species of plants and animals trying to cope with continually shrinking natural communities. Moreover, it will contribute to the recovery of the health of the St. Johns River so that it can be utilized by both aquatic organisms and the human residents and visitors who treasure its beauty. We cannot turn the clock back through Florida's history, but we can still appreciate the charm and power of Florida's own river, as did Harriet Beecher Stowe when she wrote, "*Between us and his cottage lie five good miles of molten silver in the shape of the St. Johns River, outspread this morning in all its quivering sheen, glancing, dimpling, and sparkling, dotted with sail-boats, and occasionally ploughed by steamboats gliding like white swans back and forth across the distance.*" (Stowe, 1999).

References

- Belleville, Bill. 2000. River of Lakes: A Journey on Florida's St. John's River. University of Georgia Press, Athens & London. 220 p.
- Bornstein, Joseph. St. Johns County Planning Division. 904-823-2715. Pers. comm. June 2002.
- Bunton, Ray. St. Johns River Water Management District. 386-329-4335. Pers. comm. March-June 2002.
- Cox, James, Randy Kautz, Maureen MacLaughlin, and Terry Gilbert. 1994. Closing the Gaps in Florida's Wildlife Habitat Conservation System. Florida Fish and Wildlife Conservation Commission. 239 pp.
- Fleming, Beverly. St. Johns County Recreation and Parks. Pers. comm. April 18, 2002.
- Florida Fish and Wildlife Conservation Commission. GIS data layers description. http://floridaconservation.org/oes/habitat_sec/GIS/landscape.htm
- Florida Natural Areas Inventory. April 1998. St. Johns County Summary - Rare Species and Natural Communities.
- Florida Natural Areas Inventory. 2000. Florida Forever Conservation Needs Assessment: Summary Report to the Florida Forever Advisory Council. 53 pp.
- Florida Natural Areas Inventory and Florida Department of Environmental Protection. 1994. Guide to the Natural Communities of Florida. 111 pp.
- Gandy, Cliff. St. Johns River Water Management District. 386-329-4500. Pers. comm. June 2002.
- Gensler, Patrick. Florida Department of State, Division of Historical Resources. 850-245-6440. Pers. comm. June 11, 2002. Florida Master Site File inquiry response.
- Harper, Francis. 1998. The Travels of William Bartram: Naturalist Edition. University of Georgia Press, Athens & London. 727 p.
- McLane, Kraig. St. Johns River Water Management District. 386-329-4500. Pers. comm.. June 2002.
- Meldrim, Jo. Pers. comm. June 2002.
- Meyer, John R., Ph.D. Consulting Biologist. 5525 Sauls Road, Callahan, FL 32011. 904-879-3252

Montgomery, Ed. Southeast Forest Resources, Rayonier. 904-321-5508. Pers. comm. 20 May 2002.

Moultrie, Gina C. Florida Fish and Wildlife Conservation Commission, Tallahassee Office of Environmental Services. 850-488-6661. Pers. comm. June 11, 2002. Wildlife information inquiry response.

Muller, James W. Muller and Associates, Inc., 3808 Sally Lane, Tallahassee, FL 32312. 850-668-4905.

Northwest Sector Progress Report. No date [2001?]. http://www.co.st-johns.fl.us/BCC/gmsves/Planning/NW_Survey/Community_Profile/01_Inside-the-Progress-Report.pdf

Oetting, Jon. Florida Natural Areas Inventory. Tallahassee, FL. 850-224-8207. Pers. comm. June 18, 2002. Data base information for the project.

Renna, Vickie. Principal Planner. St. Johns County Planning Division, 4020 Lewis Speedway, St. Augustine, FL 32095. 904-823-2519

St. Johns American Heritage River Initiative. 2001?. State of the River 2001. 4pp.

St. Johns American Heritage River Initiative. September 2001. St. Johns River American Heritage Rivers Strategic Plan.

St. Johns County data bases. Accessed April 2002 through June 2002.

St. Johns County 2015 Comprehensive Plan Future Land Use Map. Adopted May 10, 2000. Amended Feb. 23, 2001.

St. Johns River Water Management District. No date [2001?]. Lower St. Johns River Basin – SWIM Program. http://sjr.state.fl.us/programs/acq_restoration/s_water/ljsjr/ljsjrbSWIM/ljsjrbSWIM.html

St. Johns River Water Management District. No date [2001?]. Program Overview – Lower St. Johns River Basin. http://sjr.state.fl.us/programs/acq_restoration/s_water/ljsjr/overview.html

Stowe, Harriet B. 1999. Palmetto Leaves. University Press of Florida. 321 p.

U.S. Department of Agriculture, Natural Resources Conservation Service. 1983. Soil Survey of St. Johns County, Florida. 196p. + maps.

Willson, George. St. Joe Company. 850-224-1880. Pers. comm. April-June 2002.

Appendix I

Photographs of the St. Johns River Blueway

Photographs by John R. Meyer, Ph.D. and James W. Muller ©2002



East side of St. Johns River from Popo Point southward to Orangedale; view from Shands Pier in Green Cove Springs



Highway 13 on west border of St. Johns County, designated the William Bartram Scenic Highway by the Florida Legislature



Road construction south of Switzerland widening State Road 13 to four lanes



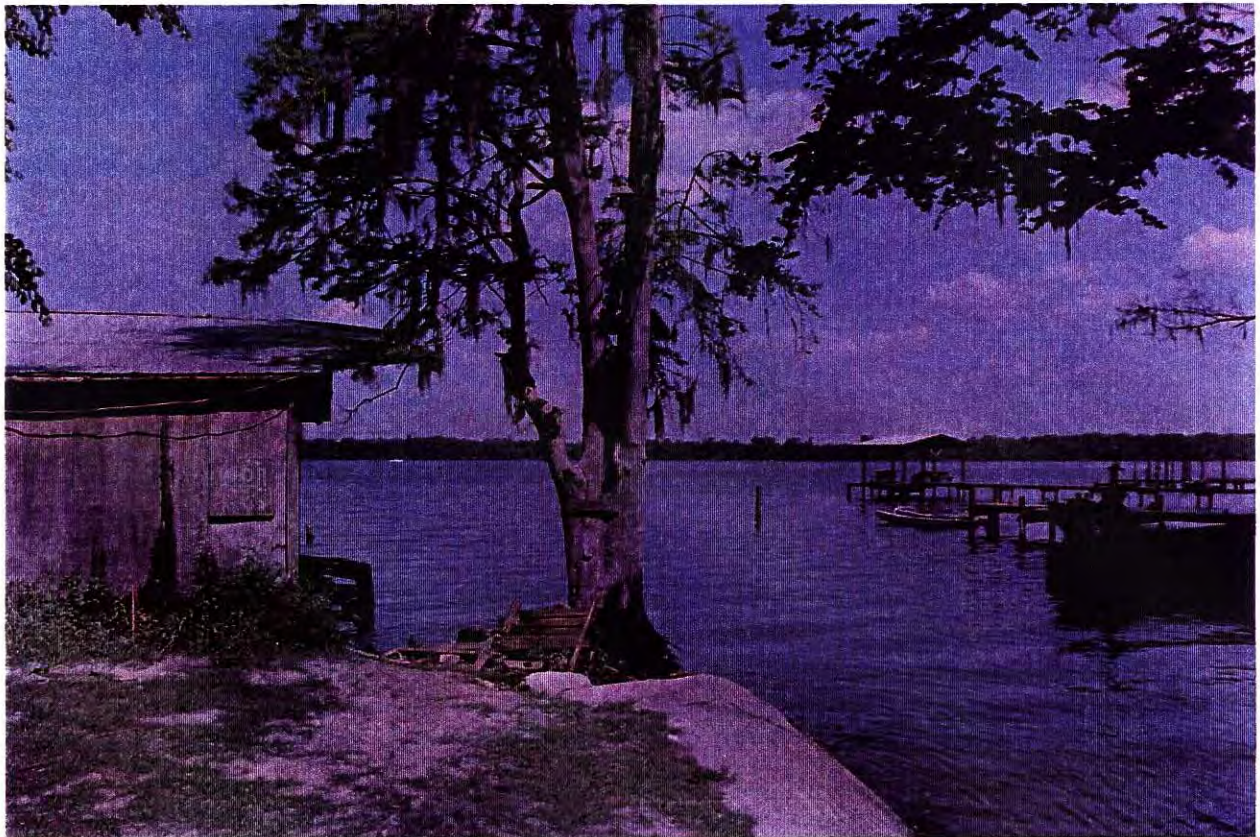
Entrance to "Bartram Plantation" development on Greenbriar Road.



Bartram Trail High School south of Greenbriar Road. View southwest towards St. Johns River



Cimarrone and South Hampton golf courses, looking northward across Greenbriar Road



Palmo Fish Camp



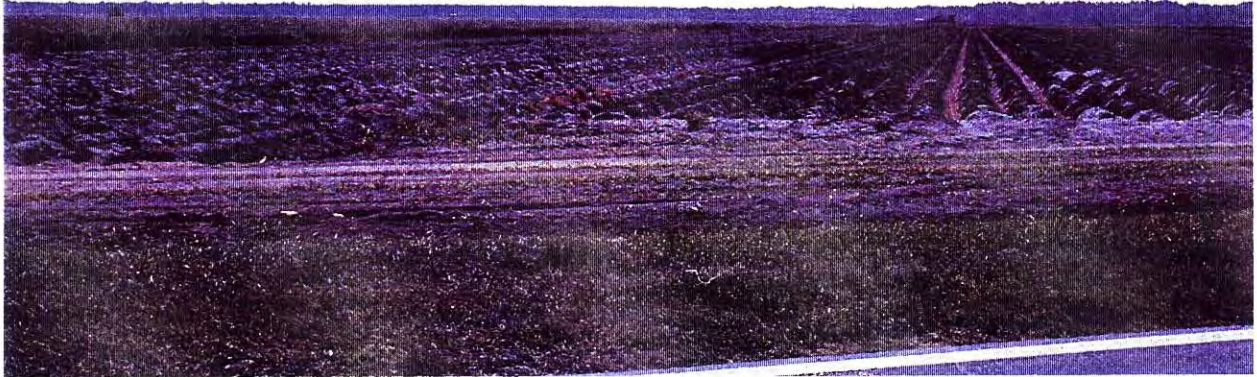
Gated residence in new development along the river at Remington Park



Example of new development placed in rural area (west side of CR 210 south of Greenbriar Rd.)



Palmo Cove viewed from above old Palmo Fish Camp



Farm lands east of proposal just south of Toco Creek



Agricultural area looking southwestward toward Harwood Landing Road and Trout Creek



Popo Point, looking westward across St. Johns River



Mouth of Kendall Creek north of Orangedale



Trout Creek at Highway 13 bridge looking westward toward Palmo Cove



Palmo Cove viewed from above the St. Johns River



Sixmile Creek, looking upstream from Highway 13



Floodplain Swamp community, located between Highway 13 and the St. Johns River at the south end of Colee Cove



Due east of the St. Johns River with Solano Cove in the near right. View is southward from Picolata



Extensive forested area between Highway 13 and the St. Johns River near Solano Cove



Mouth of Tocoí Creek viewed from the northeast



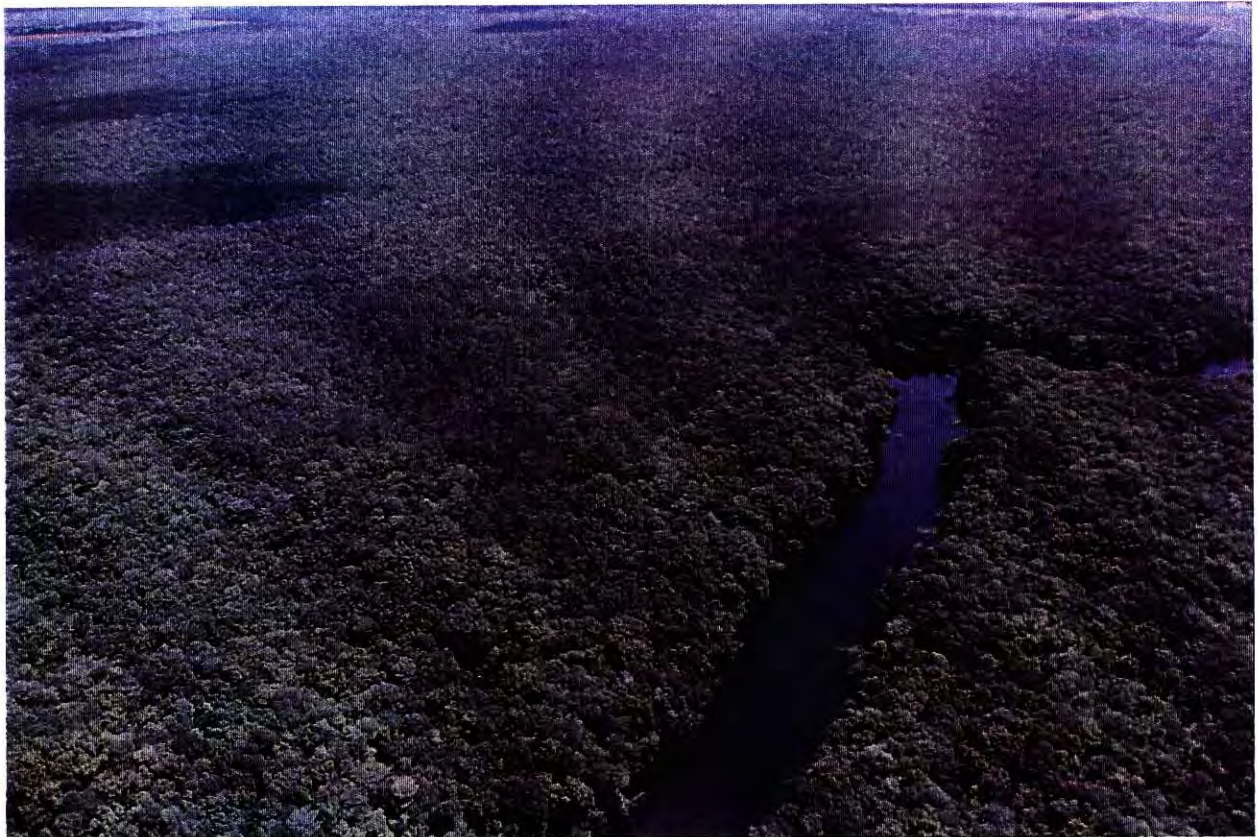
Cattail bed viewed while looking northward from boat ramp at Riverdale Park



Boat ramp at McCullough Creek



Deep Creek Conservation Area from the north above Highway 13



Deep Creek from the southwest nearing the mouth



Sign noting home of composer Frederick Delius off Highway 13 near Solana Cove